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Robotic Process Automation

Benchmarking the Client Experience

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With market adoption of Robotic Process Automation reaching levels that support rigorous quantitative measurement and analysis, Knowledge Capital Partners has developed proprietary research tools and assessment models with the goal of establishing evidence-based performance benchmarks to inform technology selection and deployment. This interim report summarizes the experience of Blue Prism clients gathered from early data; further data gathering is underway for a final report in Q4 2017.

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Overview

Blue Prism, the inventor of the term Robotic Process Automation (RPA) and the market leader in enterprise RPA, recently engaged Knowledge Capital Partners (KCP) to survey their client deployments. We used proprietary KCP research tools, and this report summarizes our findings. Based on provisional, uncut, quantitative survey results as well as our ever-growing library of qualitative case investigations, the report covers two principal areas of evaluation and assessment:

- the attributes and capabilities of the Blue Prism software as appraised by active clients
- the business value realized by active clients from their Blue Prism deployments

Contents

Introduction: RPA is Challenging

The term "Robotic Process Automation" (RPA) was invented by Blue Prism[1], and first entered the services lexicon in 2012. The term was soon adopted by other software providers. By mid 2017 there were over 45 automation tools badged as 'RPA' or robotic process automation. But not all RPA tools are the same; in fact many are quite different from one another. Tools may differ on many dimensions. One dimension, for example, is deployment approach – on desktops, servers, or cloud-based. Another dimension is functionality – what the tool is capable of doing; still another is the degree to which it is stand-alone or enterprise-safe. RPA providers have not helped by providing their own definitions and over-claiming about what their RPA can achieve. This has led to much confusion in the marketplace, which has not helped to speed client understanding of the tools available, let alone how they fit with specific client requirements now and over the next five years.

For our purposes in this report, technology solutions can be defined by their deployment models and functionality. The two primary branches of process automation technology development are "autonomous" automation solutions that operate independently, without human involvement, and "assistive" automation solutions, which are designed to support human process execution.

Blue Prism automations fit the definition of autonomous Robotic Process Automation (RPA) as defined by the IEEE Working Group on Intelligent Process Automation: *"A preconfigured software instance that uses business rules and predefined activity choreography to complete the autonomous execution of a combination of processes, activities, transactions, and tasks in one or more unrelated software systems to deliver a result or service with human exception management."*

It exists alongside other automation tools defined by the IEEE as Robotic Desktop Automation (RDA): *"A computer application that makes available to a human operator a suite of predefined activity choreography to complete the execution of processes, activities, transactions, and tasks in one or more unrelated software systems to deliver a result or service in the course of human initiated or managed workflow".*

RPA software development kits (SDKs) also exist, but these tools are designed to be programmed by IT professionals and thus require a lot more IT development resources and effort to match RPA performance.

RPA is notable for using structured data in rules-based tasks to achieve a single correct result. Cognitive automation does not figure prominently in this study, but we offer a definition as tools designed to automate or augment tasks that use inference-based processes on unstructured (and structured) data to produce a set of likely outcomes or interpretations.

The RPA Marketplace

At Knowledge Capital Partners, our global team of researchers has been studying the rise of intelligent process automation the past few years With more than 25 years of extensive case research into IT and business process outsourcing, we have been keen to understand and assess how software-driven process automation and execution tools are re-shaping the existing IT-based services landscape, and to track adoption experiences.

The market for intelligent process automation is growing at an exceptional rate, often compared to the growth and impact of the world wide web. Certainly in 2016, RPA alone experienced a 68% growth rate in the global market, with 2017 looking likely to maintain this momentum. Some reports have predicted a US$ 8.75 billion market by 2024 [3] . At the same time, some observers have likened it to the proverbial "Wild West" phase of US history in terms of development potential: the promise of immense opportunity and riches; few impediments or restraints; an abundance of virgin territory open to pioneers for exploration and exploitation.

While unthreatened by the physical dangers that menaced earlier explorers, today's enterprise pioneers nonetheless face many common risks and challenges with their wilderness predecessors in navigating the new territory of process automation: scarcity of maps, milestones, and reliable guides; fluid jurisdictional boundaries; weak or non-existent laws and governance; resistance from indigenous civilizations and business models, to name a few. And not least, a surfeit of swagger, snake oil and fool's gold, with no reliable management and navigation tools at hand.

The Emerging Risks

In *'Service Automation: Robots and The Future of Work'* Willcocks and Lacity highlighted successful RPA deployments and how organizations were achieving triple wins for their shareholders, customers, and employees alike. In the last 18 months we extended our research to cases of cognitive automation and to less successful RPA journeys. In practice, automation success is far from guaranteed. Wider reports provide as yet anecdotal evidence of between 30-50% of initial projects stalling, failing to scale, being abandoned or moving to other solutions.[4] Our most recent research has examined in detail successful and more challenged automation deployments. Service automation – like all organizational initiatives that try to scale—emerges as fraught with risk. We have been able to identify these risks, and also the management actions that enable enterprises to mitigate risk and seize the opportunities inherent in the automation tools becoming available.[5] We are seeing significant risk –probable, impactful, and needing to be managed - appearing in eight areas.

RPA strategy risks. The greatest strategy risks involved missing the triple-win value of RPA (for shareholders, customers, and employees), by thinking too small, such as looking at automation as a tactical tool to cut costs on specific tasks within a department. Misunderstanding what RPA can do or burying the RPA initiative in a remote division also resulted in missed value for some companies. Not thinking strategically at all about automation, and seeing it as a tactical, even worse 'one-off' solution seriously inhibited RPA potential.

RPA sourcing risks. Clients risk leaving value on the table or incurring excessive costs by choosing the wrong sourcing model. Some organizations tried to do everything themselves, but they lacked the needed skills to govern, develop, and execute robotic operations. Some organizations picked the wrong advisors or partners who claimed RPA expertise. Some organizations relied on their traditional BPO providers for automation, but, often too little value was passed to the client.

Tool selection risks. Because of the hype and confusion in the market place, clients risk choosing the wrong tool(s), too many tools, or bad tool(s). In 2016, about 39 tools were being sold as "RPA" and about 120 tools were being sold as some form of cognitive automation. Because the space is relatively new to many clients, it is difficult to assess the actual capabilities and suitability of these tools. Clients must be wary of hype and "RPA washing".

Stakeholder buy-in risks. RPA initiatives require stakeholder buy-in from IT, employees, and customers, both internal and external. We found organizations often failing in two areas - not considering the broad range of stakeholders, and not communicating in a clear, sustained manner

Launch/project risks. Some companies picked projects in areas with the most headcount because they thought it would generate the most savings, but launch failed because the processes were constantly changing and required a lot of exception handling; it turned out those few hundred people were there for a reason. Failure also resulted from unrealistic project estimates, particularly for business cases that too aggressively aimed for immediate FTE savings.

Operational/execution risks. Operational risks happen when robots are moved from development into operations without proper verification or a proper operating model. In the worst cases, the robots stop working or execute processes incorrectly.

Change management risks. These link strongly with strategy, stakeholder buy-in, launch, as well as operational risks. Poor communication of the strategic intent, not actively seeking stakeholder buy-in, and not managing operational dynamics – together, these build cumulative multiple change management risks. More operationally, who's in charge of the robots?

Maturity risks. When the previously identified risks were mitigated, companies frequently experienced the triple-win value from their first RPA deployments. Companies next aimed to expand RPA across their enterprises. However, a sustainable enterprise RPA capability can be impeded by a number of risks. And some organizations were fixated still on RPA, and not the bigger picture of preparing for other automation advances and the next five years.

The KCP Research Base

At KCP our research into process automation initially focused on qualitative investigation into early deployments. We wanted to understand the drivers, effective management practices, risks and potential value available from deploying software robots.[6] This research base now covers dozens of RPA and cognitive automation deployments and service automation providers. But with market adoption now reaching levels that support rigorous quantitative measurement and analysis, we have developed further proprietary research tools and assessment models for process automation, with the ultimate goal of establishing evidence-based performance benchmarks to inform selection and guide deployments. In this paper we focus on the emerging qualitative and quantitative evidence for Blue Prism applications alone, and assess this, for Blue Prism adopters, against the mounting evidence of risk and challenges in the broader marketplace.

Our RPA benchmarking tool consists of 48 detailed question areas derived from the available research evidence accumulated through previous surveys and case study work by KCP associates. Benchmarking is by clients and covers management practices at every stage of an automation life cycle from strategizing, tool selection, sourcing approach, organizational ownership, through to building a mature capability and cognitive automation adoption so far. The benchmarking covers RPA providers considered and utilized, details of performances gained, and overall business value emerging. We elicit differentiated information using a 7-point Likert scale as a primary tool, where appropriate. For the limited purposes of this interim report we focus primarily on client-generated data relating to Blue Prism RPA software; the survey is currently being extended to a wider population for a final report later this year.

Tool Assessment

Our survey diagnostic measured the strength of Blue Prism client experiences overall, as well as specific client experience along the following dimensions:
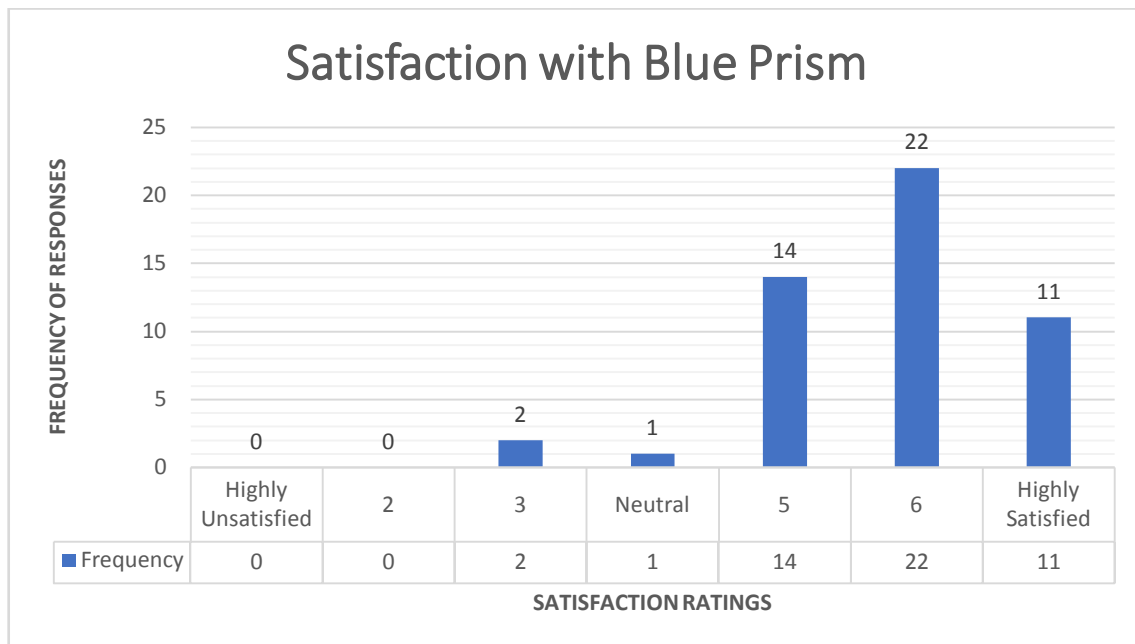
- Scalability
- Adaptability
- Security
- Service Quality
- Employee Satisfaction
- Ease of Learning
- Deployment Speed
- Overall satisfaction

From our qualitative research into process automation, these emerged as the most critical and essential characteristics and requirements for a successful enterprise-grade RPA implementation.[7] At its most strategic level, enterprise RPA enables organizations to gain significant agility by overlaying a user-controlled, enterprise-managed process execution platform capable of leveraging traditional ERP implementations and deployed enterprise applications. As a flexible, programmable execution platform, moreover, it also enables enterprises to integrate and operationalize emerging artificial intelligence capabilities directly into relevant business processes, avoiding long IT-led "waterfall" development cycles. In essence, it delivers a powerful new digital "operations engine" for the enterprise.

Top Line Findings

In our survey, enterprise ratings for the Blue Prism tool were uniformly high overall, as well as along all functional dimensions.

Q: What is your organization's *overall level of satisfaction* with the Blue Prism tool?

Satisfaction with Blue Prism

	Highly Unsatisfied	2	3	Neutral	5	6	Highly Satisfied
Frequency	0	0	2	1	14	22	11

FREQUENCY OF RESPONSES
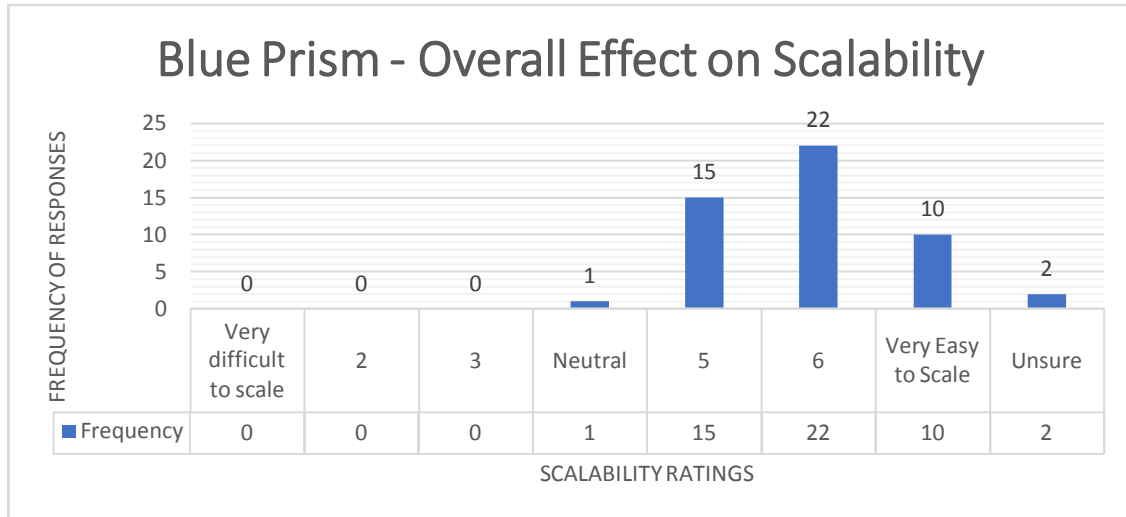
SATISFACTION RATINGS

n = 50

Overall level of satisfaction with the Blue Prism tool was extremely high in our survey. Respondents reported a 94% overall satisfaction rate, with two-thirds of respondents reporting their organizations were "very" or "highly" satisfied (ranking 6 or 7). Based on our 25-year research history into process improvement initiatives (BPM, shared services, outsourcing), these are exceptionally high satisfaction levels. For example our research into IT and Business Services outsourcing finds only 20% getting 'world class' performance, 25% getting good performance, 40% 'doing OK', while 15% experience poor outcomes.[8] The record on IT projects also continues to frustrate. The most recent (2017) Standish Group CHAOS report found only a third of IT projects were successfully completed on time and on budget over the past year – the worst failure rate the Standish Group has recorded.[9]

The indications are that as the RPA market has grown exponentially from early 2016, an increasing number of clients and deployments are experiencing real challenges. Why is this? Not managing the eight major risk areas detailed earlier is the major cause. But our ongoing qualitative research gives us further, more selective insights. Some RPA tools run into problems when clients attempt to scale

(see below). Many clients do not put in place the necessary IT, project and program governance (rules and constitution, who does what, roles and responsibilities), and often do not use built-in tools that contain technical governance. An RPA and cognitive skills shortage is already upon us. This means that retained capability and in-house teams are sometimes not strong enough – a situation not helped by sometimes skeptical senior management under-resourcing automation inititiatives and not taking a strategic approach. Consultants are also hit by skills shortages and cannot always provide the support necessary - likewise business services outsourcing providers. We are also finding that clients are often not giving stakeholder buy-in and change management nearly enough attention. Given these emerging challenges, the Blue Prism client satisfaction level is notable.

Scalability

Q: How do you rate the Blue Prism tool's *scalability*, defined as the ease with which the tool can cope and perform under an expanding workload?

Blue Prism - Overall Effect on Scalability

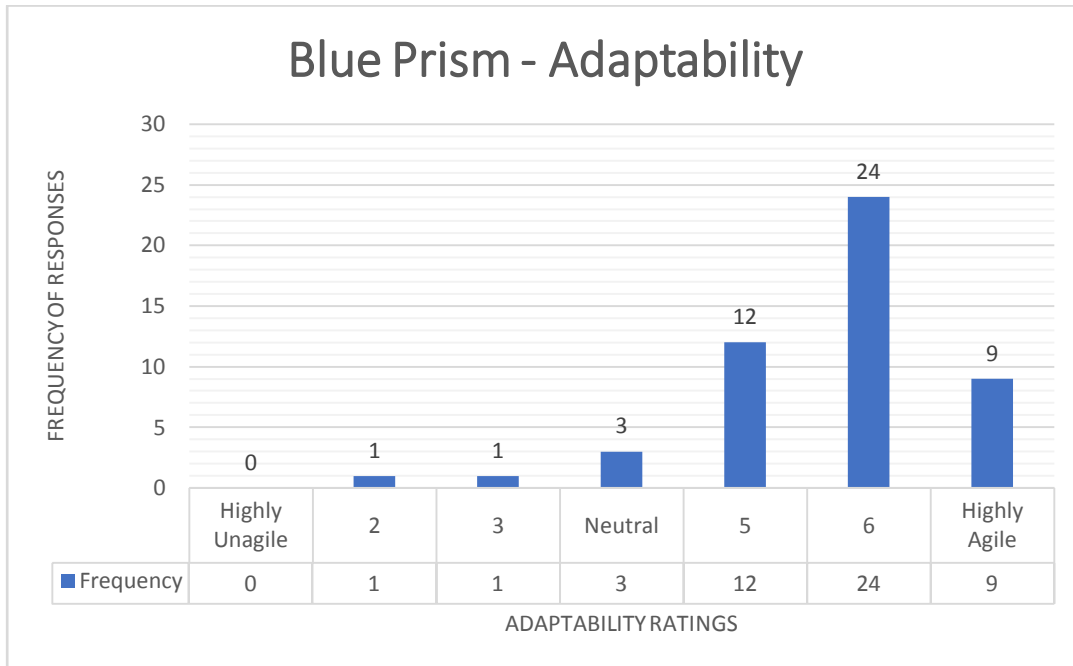|	Very difficult to scale	2	3	Neutral	5	6	Very Easy to Scale	Unsure
Frequency	0	0	0	1	15	22	10	2

FREQUENCY OF RESPONSES

SCALABILITY RATINGS

n = 50

Scalability is a critical requirement for an enterprise-grade technology platform, and on this dimension, 60% of respondents rated the Blue Prism tool as 6 or 7, with 94% overall rating it favorably for its ability to scale to meet additional or expanding workloads. In the digital economy, operations workloads and processing requirements can grow very rapidly with the introduction of new products or marketing programs, industry partnerships or acquisitions (often with little advance notice). The ability to add capacity and develop or replicate process programs to meet service demands is an essential capability.

Our additional qualitative research suggests that some RPA tools are not easily scalable, especially those based on a recording capability - what IEEE calls 'robotic desktop automation' as defined above, or requiring a lot of IT development because the RPA tool was not prior configured to fit with enterprise systems. Many RPA vendors do offer their tools as a quick implementation, 'fast and cheap' process win, but here what is gained at the front end of the deployment process is eroded very quickly when clients try to scale for wider and more intensive organizational usage. Other RPA vendors offer RPA which is effectively a disguised form of what we have described above as a 'software-development kit'. This needs a lot more IT development by the in-house team or the RPA vendor than first imagined, and incurs additional often unanticipated expense, time and resource.

Adaptability

Q: How do you rate the Blue Prism tool's *adaptability*, defined as the ease with which automations can be introduced into additional business processes or altered to accommodate new or changing process rules or data types?

Blue Prism - Adaptability

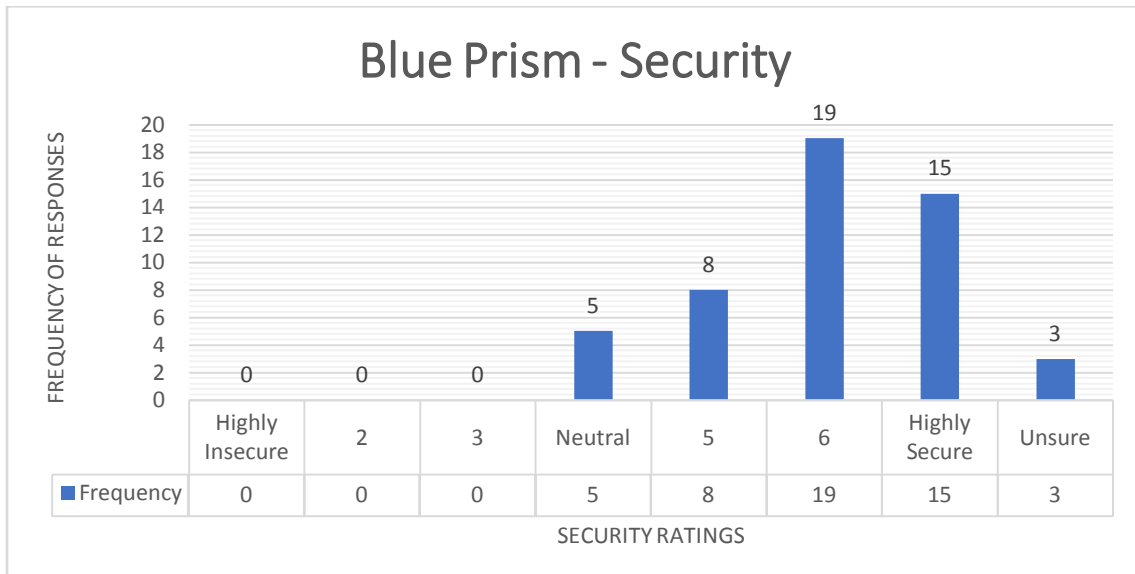|	Highly Unagile	2	3	Neutral	5	6	Highly Agile
■ Frequency	0	1	1	3	12	24	9

FREQUENCY OF RESPONSES

ADAPTABILITY RATINGS

n = 50

Adaptability reflects the tool's ability to be easily updated to include changes to existing processes or reprogrammed to carry out new or additional tasks, including accessing variable resources and handling new data types. On this critical capability, which measures the tool's overall utility as a multi-process execution platform, 66% of Blue Prism clients rated the tool's performance in the top two categories, and 90% rated it favorably overall. In the wider marketplace, it is difficult to assess the actual capabilities and suitability of many tools, not least because of the high level of 'RPA washing' with some vendors claiming their tools have all the attributes of all other vendor tools, and more besides. In practice, we find quite a lot of RPA 'rebadging' of existing products to make them more marketable. There is also quite a lot of over-claiming about how far some 'RPA' tools are adaptable enough to fit with enterprise systems, and cognitive technologies. There are many over-claims on the ability to provide comprehensive cognitive automation as opposed to discrete tools that can fit with some RPA deployments. On adaptability, the cognitive market is still very immature, though we expect a real take-up from late 2018, when the fit with RPA tools will probably be a lot more developed.

Security

Q: How do you rate the Blue Prism tool's *security*, defined as the ability to prevent unauthorized access to computers, software, and data?

Blue Prism - Security

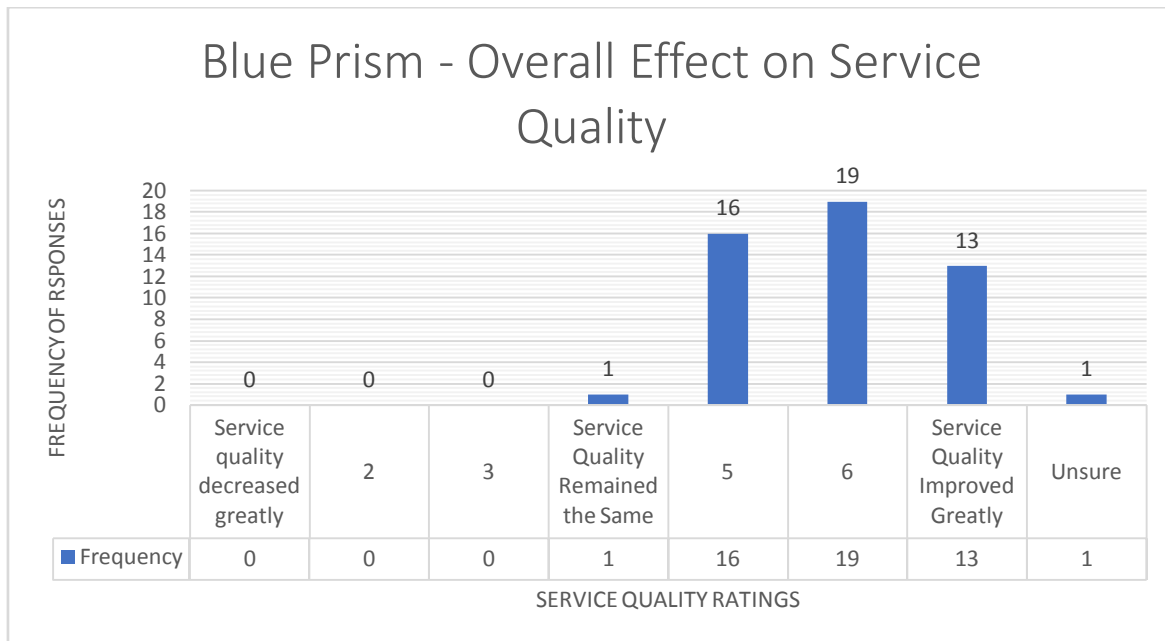| SECURITY RATINGS	Highly Insecure	2	3	Neutral	5	6	Highly Secure	Unsure
Frequency	0	0	0	5	8	19	15	3

n = 50

In a world where cybersecurity is a critical business priority and IT departments are stretched considerably, tasked as they are with constant vigilance, security is an essential requirement for operations platforms that support critical business operations. In 2015 the global costs of cybercrime exceeded $US 575 billion, and, according to Merrill Lynch the cybersecurity market in 2020 will be $US 170 billion. Increasingly with RPA business cases, we are finding not just IT personnel, but also senior managers asking questions about whether the software and processes are protected against deliberate malicious internal and external attack. But security also relates not just to malicious penetration, but also to unauthorized changes to processes, together with compliance to regulation, data protection and information security policies. Taken as a breed, RPA tools are vary variable in the extent to which they ensure automation runs in a secure environment. As must be obvious from reading this report, not all RPA tools are the same, and this includes the dimension of security.

On this dimension, the Blue Prism tool achieved amongst its highest rankings, with 68% of clients rating it a 6 or 7 (very or highly secure), and 84% of respondents rating it favorably overall. Other RPA tools can have a similar rating, but often these are at an early pilot or early deployment stage. Yet others who advanced into scaling and wider organizational utilization appear to start running into two interrelated problems that are inadequately addressed - security mishaps and governance omissions.

Service Quality

Q: How do you rate the Blue Prism tool's impact on the *service quality of automations* built using the tool, where service quality is defined as the ability to deliver services that conform to user/customer expectations of *accuracy, speed, and responsiveness*?

Blue Prism - Overall Effect on Service Quality

Frequency	Service quality decreased greatly	2	3	Service Quality Remained the Same	5	6	Service Quality Improved Greatly	Unsure
	0	0	0	1	16	19	13	1

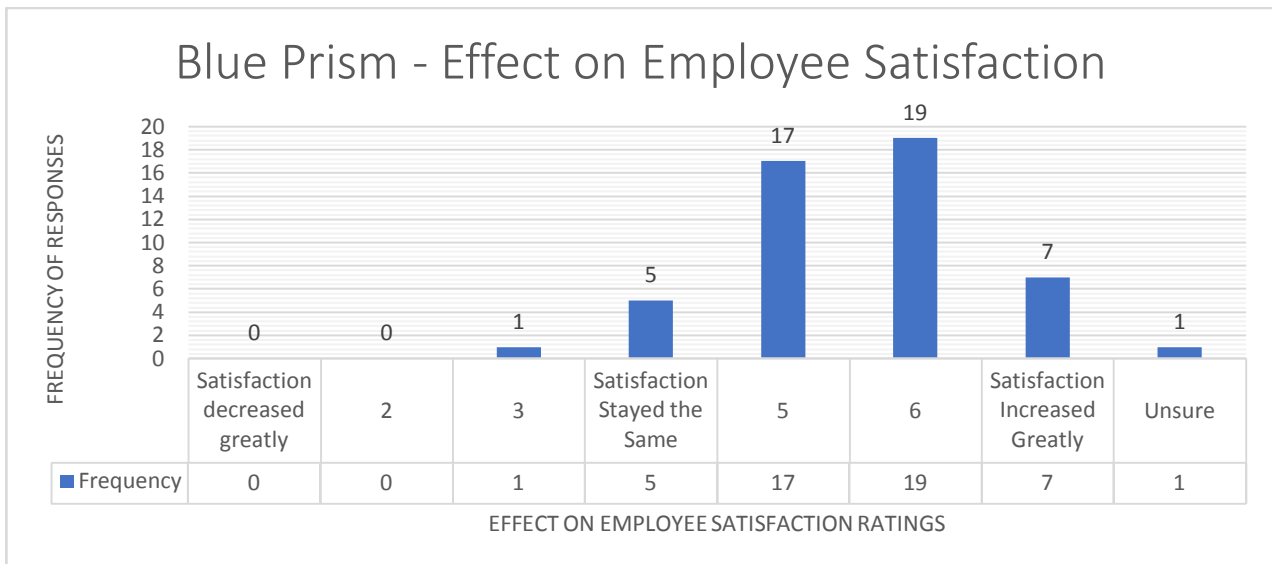FREQUENCY OF RSPONSES

SERVICE QUALITY RATINGS

n = 50

Service quality is a performance metric that operations leaders consider to be of equal or (more often) greater importance than cost as measure of value. All RPA vendors without fail claim improved service quality results from using their products. Service quality is not just about delivering a product as agreed, for example in a service level agreement (SLA) document, but also about the service experience. Thus, according to the well known SERVQUAL model it is also about reliability, empathy, assurance, tangibles (appearance) and responsiveness.[10] How far does this translate into actuality?

On this dimension, 96% of respondents said the Blue Prism tool had improved service quality, with 64% rating it a 6 or 7. Unlike humans, enterprise–grade robotic tools do not make errors due to tiredness, distraction, misreading inputs, or other forms of inattention. Processes, once optimized, are executed much more quickly and seamlessly, while performance can be 24x7, and most, or even all, of the year. Where the robots are reusable and reconfigurable, work peaks can be handled more easily, and regulatory compliance can also be automated and much more accurate. Certainly, in our case

research we found plenty of evidence of enhanced service quality from Blue Prism deployments at companies like Telefonica O2, Xchanging, Npower, Ascension Ministry Services Center, and Leeds Building Society, to name but a few.[11] Of course, if service quality is also about assurance and empathy and responsiveness, this means that humans will need to be involved in the service process and experience, and, indeed we are finding that one payoff from RPA is that it frees up staff to pay attention to these often neglected dimensions of service.

Employee Satisfaction

Q: For employees working in units with RPA-enabled services, what is the overall effect on *employee satisfaction with the tool,* given that some of their tasks are now performed by RPA software?

Blue Prism - Effect on Employee Satisfaction

FREQUENCY OF RESPONSES

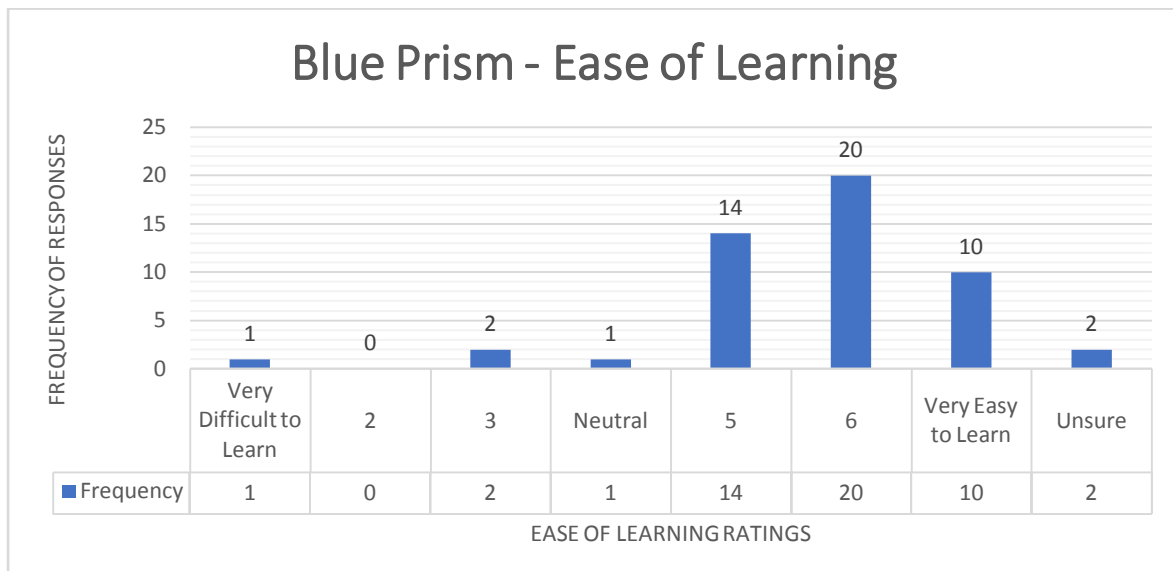|	Satisfaction decreased greatly	2	3	Satisfaction Stayed the Same	5	6	Satisfaction Increased Greatly	Unsure
Frequency	0	0	1	5	17	19	7	1

EFFECT ON EMPLOYEE SATISFACTION RATINGS

n = 50

Contrary to expectations of general workforce fear of robots, respondents report high levels of employee satisfaction with the Blue Prism tool. In our case research this was explained mostly by the fact that the software robots relieve employees of the repetitive, boring parts of their jobs, freeing them to undertake more value-added activities. This has been a spin-off from the fundamental attribute of RPA in the workplace. Willcocks and Lacity coined the phrase for their first book in 2016 that *'RPA takes the robot out of the human'.* This allows employees to concentrate on applying the distinctive human strengths and skills they bring to work, and also enables an optimal mix of human and machine capability to be applied to work processes. Our research evidence is that client companies are increasingly understanding the value of using RPA as a complementary rather than displacing technology.

On this dimension, 86% of respondents reported that employee satisfaction improved with the introduction of Blue Prism robots, with over half ranking the improvement a 6 or 7. Our case research amongst Blue Prism clients was consistent with this result. In case after case we found broader reasons for increased satisfaction, including heightened recognition, regard as an innovator, promotion, richer job content, new learning in a new technological field, and enhanced value in the labor market. RPA also enables employees to cope with the dramatic increase in amount of work being experienced

in most organizations over the last ten years. Doing more with the same or less human resources has become a necessary move enabled by automation tools. Initially, we assumed the myth that employees would resist RPA and cognitive technologies. So far our case research finds, that they embrace these technologies, are often excited and stimulated by technological developments, and see automation tools as investments in organizational and personal progress. Of course it may well be early days, and much depends on the speed of technological development and then implementation over the next ten years. Our own view is that this will be less dramatically fast than many are suggesting, not least because, so far, according to McKinsey, technologies (including digital) have taken between 8-28 years to become 90% optimized across multiple economic sectors.[12],

Ease of Learning

Q: How would you rate the Blue Prism tool's *ease of learning*, defined as the ease with which first-time users can learn to automate tasks using the tool?
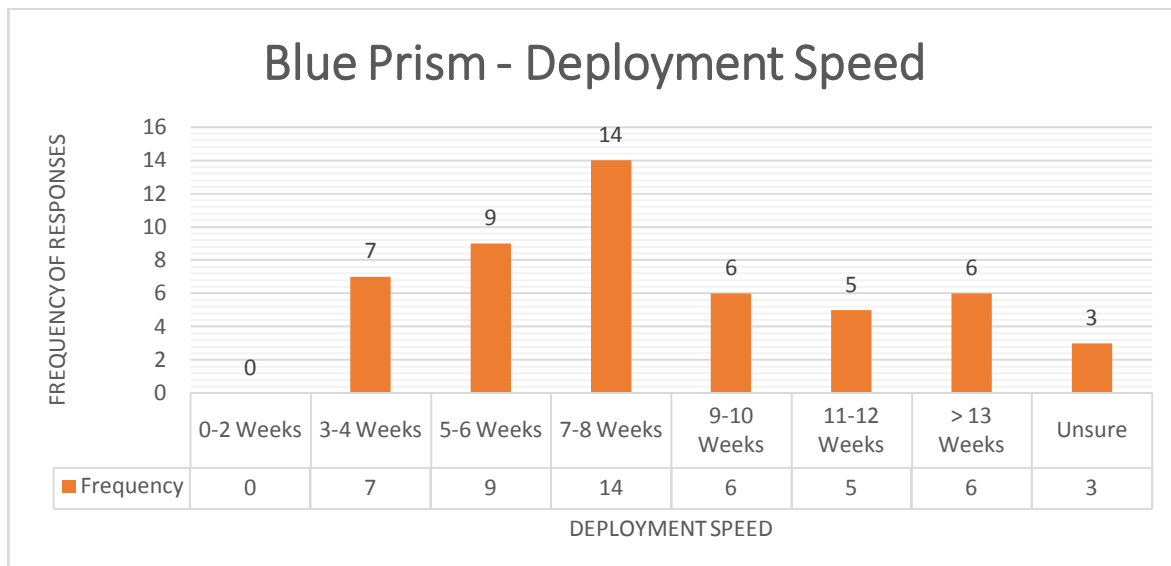
Blue Prism – Ease of Learning

EASE OF LEARNING RATINGS	Very Difficult to Learn	2	3	Neutral	5	6	Very Easy to Learn	Unsure
Frequency	1	0	2	1	14	20	10	2

n = 50

In terms of what might be labeled "user-friendliness," the Blue Prism tool received high marks from respondents, with 60% ranking it a 6 or 7, and 88% overall giving it positive evaluations. Users can be trained to program robots in a matter of hours and days, not weeks or months. The Blue Prism tool's object-oriented, drag-and-drop programming tools greatly simplify process "coding," enabling business process owners to specify (or modify) the steps, sequences, gates, and various interactions required to complete a process without altering the supporting applications software. This is an interesting finding because there are other RPA tools on the market that offer easier and simpler first productive use, and clients may well be attracted into utilizing these; what could be more attractive than quick wins from little initial effort. The problem here becomes what is surrendered for those quick, cheap, initial wins. Our case research shows such wins come at a price later on because of what these tools have not been engineered to do. The other issue that is worth bearing in mind here is that, in practice, RPA has been developed by companies like Blue Prism precisely to give a differentiating superior deployment experience relative to more traditional IT and business process management technologies and to empower business operations staff instead of forcing them into joining the (invariably long) IT priority queue for their specific requirements. This built-in advantage over alternative approaches is substantial enough to convince many clients of the user friendliness of RPA tools as developed by suppliers like Blue Prism.

Deployment Speed

Q: What is your organization's average speed to RPA deployment using the Blue Prism tool, defined as the time required to configure, test, and launch automations into production?

Blue Prism – Deployment Speed

	0-2 Weeks	3-4 Weeks	5-6 Weeks	7-8 Weeks	9-10 Weeks	11-12 Weeks	> 13 Weeks	Unsure
Frequency	0	7	9	14	6	5	6	3

FREQUENCY OF RESPONSES
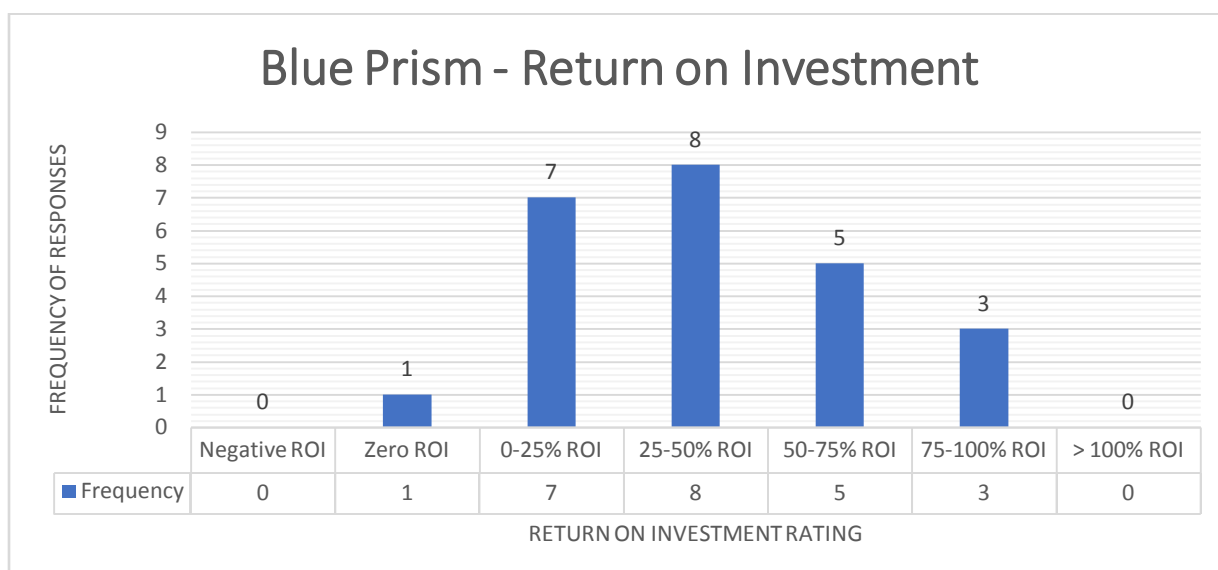
DEPLOYMENT SPEED

n = 50

In contrast to long "waterfall" IT programming and development cycles, the techniques for programming RPA tools can be learned and implemented relatively quickly. 32% of Blue Prism clients report they launched their automations in less than 6 weeks, and 60% in less than 8 weeks. This gels with our case findings in over 20 Blue Prism deployments (which typically register 6 weeks to five months, depending on project size and in-house capability) but also with client experiences of other RPA supplier tools. This compares very favorably with data on more traditional business process management tools, outsourced IT development, and IT projects, which typically take many months or even years to implement. Indeed, the IT project record was becoming so poor that increasingly client organizations have adopted 'Time Box' philosophy and 'Agile Development' and 'Scrum' methodologies to try to get business benefits from IT applications within six months or less. At Telefonica O2 the management ran a comparison between BPM and Blue Prism RPA in terms of deliverables, speed and ROI. They found that BPM could deliver the same outcome, but deployment would be much slower, more costly, lock up more IT resources and only deliver a positive but low ROI after more than two years. RPA had a three year ROI of some 650% to 800% for many automated processes.[13] The conclusion was that BPM and RPA were suitable for different sorts of processes and should be used in a complementary manner, rather than seen as replacements for each other.

Business Value

Our survey focused on 3 primary metrics for assessing the business value of the Blue Prism tool: return on investment, number of processes automated, and impact on compliance. **[Note: respondents were asked to reply for their most widely deployed tool; hence the smaller "n"]**

Return on Investment

Q: What is your organization's overall *one-year return on investment (ROI)* from the Blue Prism tool?

Blue Prism - Return on Investment

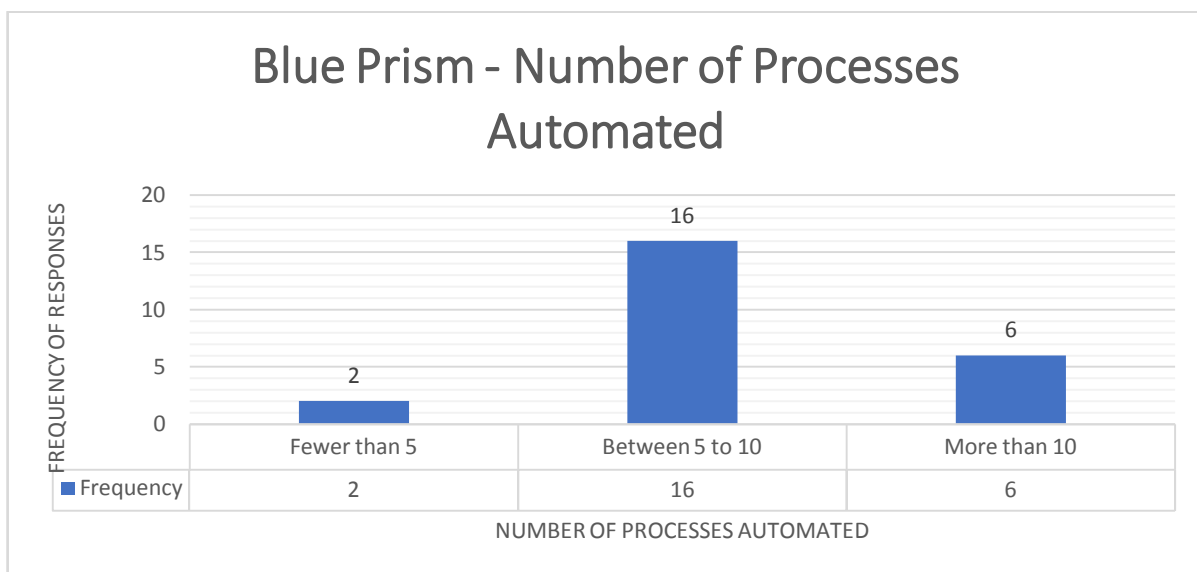|	Negative ROI	Zero ROI	0-25% ROI	25-50% ROI	50-75% ROI	75-100% ROI	> 100% ROI
■ Frequency	0	1	7	8	5	3	0

RETURN ON INVESTMENT RATING

n = 24

Results on one-year ROI for the Blue Prism tool are very impressive, with two-thirds of respondents reporting > 25% ROI in a single year, and fully a third of respondents reporting >50% ROI. As indicated in the previous section, RPA can offer fast positive ROI, especially where aimed at very low lying fruit, and this is the case even with robotic desktop automation. Clearly, with RDA, if you record a set of process tasks as is, then run the automated process, there are easy gains to be had immediately in terms of processing speed, and lower labor costs, with knock-on effects on process performance. Typically we are finding these gains quick and impressive against more traditional IT and business innovation project investments but also quite moderate in terms of what could be achieved - 40% or less ROI in year 1 with no guarantee that this will continue unless the process is further optimized, but with bigger costs kicking in if looking to scale robot deployment. Our findings so far on RPA show first year ROI landing between 30% and triple digit figures depending on how well client managers apply the 30 evidence-based action principles we identify in our work on risk mitigation.[14]

However, more broadly, we are finding that Blue Prism clients (and others) are quite frequently achieving a 'triple win' for shareholders, internal and external customers and employees, and this triple win is

not being adequately captured by just the high first year ROI performance. Many of these multiple business benefits were not necessarily anticipated or even included in the initial positive business case. Thus, we find some clients gaining shareholder value from all of operational efficiencies, increased compliance, scalability, adaptability, flexibility, and competitive advantage. Customers are also experiencing improved service consistency, round-the-clock availability, new services on line more quickly, enhanced customer journeys, improved and faster service quality. Meanwhile, employees can experience more interesting work, learning new skills, higher satisfaction, enhanced reputation and higher marketability (see above).

Process Automation

Q: How many processes have been automated in your organization using the Blue Prism RPA tool?

Blue Prism – Number of Processes Automated

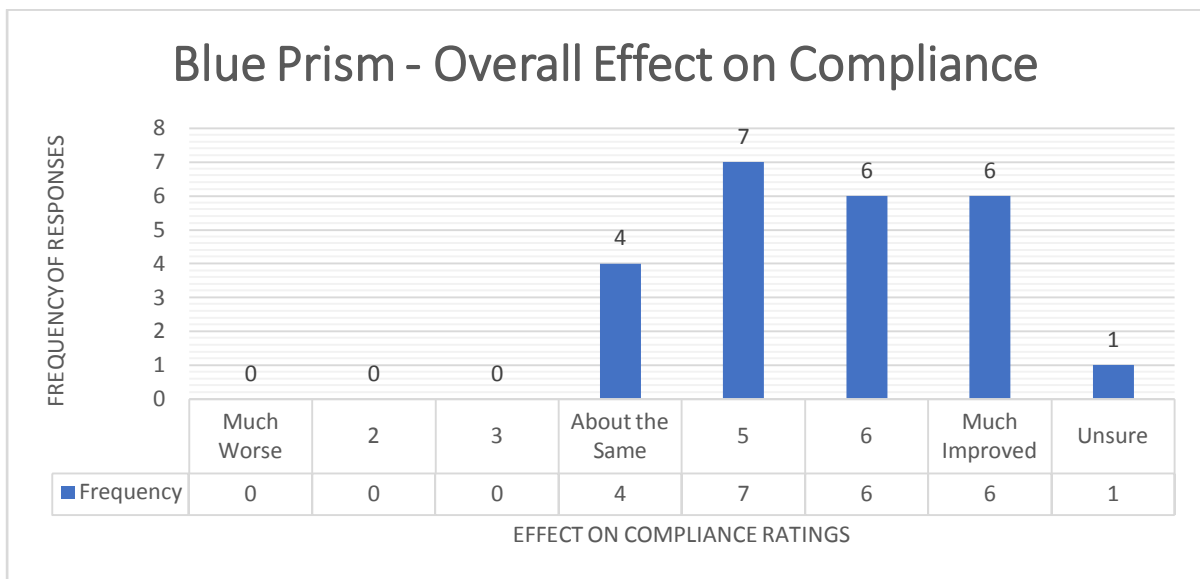|	Fewer than 5	Between 5 to 10	More than 10
Frequency	2	16	6

FREQUENCY OF RESPONSES

NUMBER OF PROCESSES AUTOMATED

n = 24

As evidence of the speed with which automations can be designed, programmed and implemented, 92% of respondents reported having automated 5 or more processes, with 25% having automated more than 10 processes. Our more mature Blue Prism cases companies like Telefonica O2 and Npower have, by mid-2017, automated over a third of their very large back offices. This level of deployment contributes directly into the reported ROI savings, and demonstrates the disruptive potential for enterprise RPA to establish a new digital operating platform, riding atop existing ERP instances and enterprise applications software. As already indicated, however, some RPA tools encounter greater problems than others as they try to scale and automate multiple processes, due to inherent limitations in the software (how far is the dumb configurable robotic software surrounded by smart software that

makes the RPA enterpise safe?). Other reasons for slow adoption lie with many factors we have mentioned above. Typically by mid-2017 these were: clients not sorting out governance or building sufficient retained capability, consultants/advisors and service providers hit by skills shortages, and/ or RPA providers unable to provide levels of support because focusing on selling in an exponentially growing market through 2016 and 2017.

Compliance

Q: What is the overall effect on **compliance** using the Blue Prism tool, where compliance is defined as an organizations's *adherence to laws, rules, regulations, and guidelines relevant to the business and its ability to provide supporting evidence?*

Blue Prism - Overall Effect on Compliance

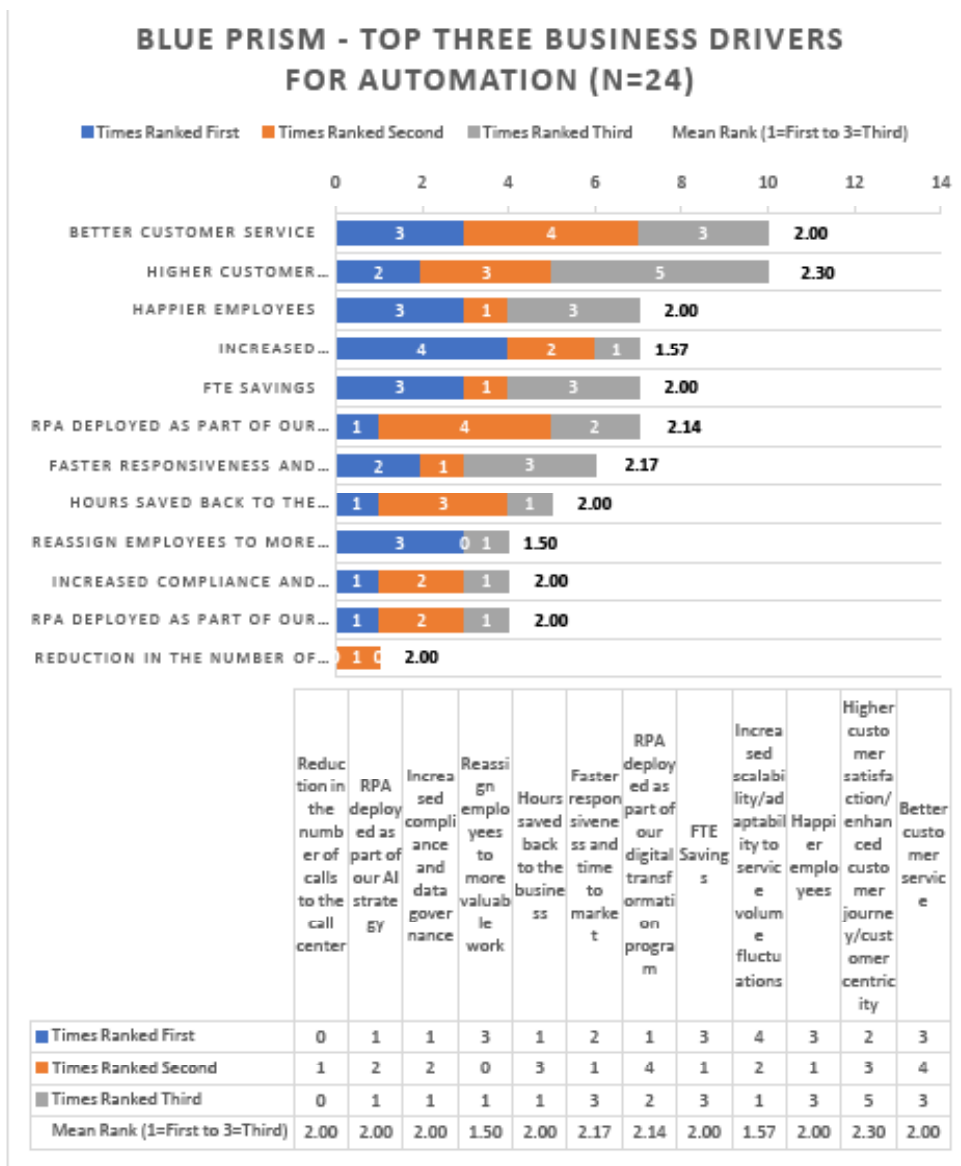|	Much Worse	2	3	About the Same	5	6	Much Improved	Unsure
Frequency	0	0	0	4	7	6	6	1

EFFECT ON COMPLIANCE RATINGS

n = 24

Fully 80% of respondents said that implementing the Blue Prism tool had improved enterprise compliance, with 50% ranking it a 6 or 7 – the highest evaluations on our scale. The ability of the Blue Prism tool to capture details of every process step enables enterprises to build a definitive transaction audit trail that supports process improvement and overall quality control and, for regulated industries, is superior to any manual system. We found that Blue Prism clients in regulated industries, especially utilities, insurance, banking and financial services greatly welcomed the improved regulatory compliance resulting from RPA, even where this gain was not factored into the original business case. Often the compliance payoff has emerged as almost a by-product. One insurance company we researched was slow into using Blue Prism tools, but experienced an emergency on having to comply with a new regulation or start paying hefty fines for non-compliance. The Blue Prism tool was deployed in a matter of two months to make the deadline while not incurring heavy additional costs or deploying large amounts of additional labor. The company reported accurate, consistent, cost-effective and relatively trouble-free compliance and used RPA as first choice keeping up with the frequent changes in

regulatory requirements. Similarly, Gazprom Energy were required to meet a new regulation. It would have taken 30 additional people 3 months to achieve the changes needed. Our case research found that it took Gazprom Energy six weeks to implement the changes, using the robots they already had but reusing them at no extra cost. On compliance we found Blue Prism clients using RPA software to implement new regulations quicker and cheaper, then running compliance more accurately, and faster with less expense and human labor.

In the next few questions we record and comment on Blue Prism clients' answers to questions about RPA overall in their organizations.

Business Drivers

Q: Looking at the entire RPA automation landscape, what are the TOP three business drivers for automation? (please rank 1-3)

|	Reduction in the number of calls to the call center	RPA deployed as part of our AI strategy	Increased compliance and data governance	Reassign employees to more valuable work	Hours saved back to the business	Faster responsiveness and time to market	RPA deployed as part of our digital transformation program	FTE Savings	Increased scalability/adaptability to service volume fluctuations	Happier employees	Higher customer satisfaction/enhanced customer journey/customer centricity	Better customer service
Times Ranked First	0	1	1	3	1	2	1	3	4	3	2	3
Times Ranked Second	1	2	2	0	3	1	4	1	2	1	3	4
Times Ranked Third	0	1	1	1	1	3	2	3	1	3	5	3
Mean Rank (1=First to 3=Third)	2.00	2.00	2.00	1.50	2.00	2.17	2.14	2.00	1.57	2.00	2.30	2.00

n = 24

Using the mean average, the top rated business drivers were higher customer satisfaction, faster responsiveness, and enablement of a digital transformation strategy. These drivers are clearly more strategic than the ones typically assumed to drive RPA, name cost savings. Taking in the whole picture, we see a rich set of drivers that include value to shareholders, customers and employees.

This is consistent with our case research findings that show multiple business benefits are possible, with the more strategic RPA adopters looking for these right from the beginning, including in the business case, rather than focusing overwhelmingly on FTE and cost savings. A part of strategic behavior on RPA is to anticipate there will be multiple benefits that may not be able to be captured in a normal cost-benefit business case analysis. As one example, we found a number of Blue Prism clients gaining a differentiating competitive advantage from RPA deployment. Two examples amongst many. Shop Direct used RPA to create processes that could interact more responsively with customers hit by flood damage in specific areas in the UK in 2016. Xchanging could turn around a piece of insurance business from a Lloyds of London insurance broker in 30 minutes instead of two days, enabling the broker to be paid much faster, and the end client receiving an insurance policy earlier.

Business Agility

Q: Please rate the overall effects of RPA across your organization along the following dimensions:

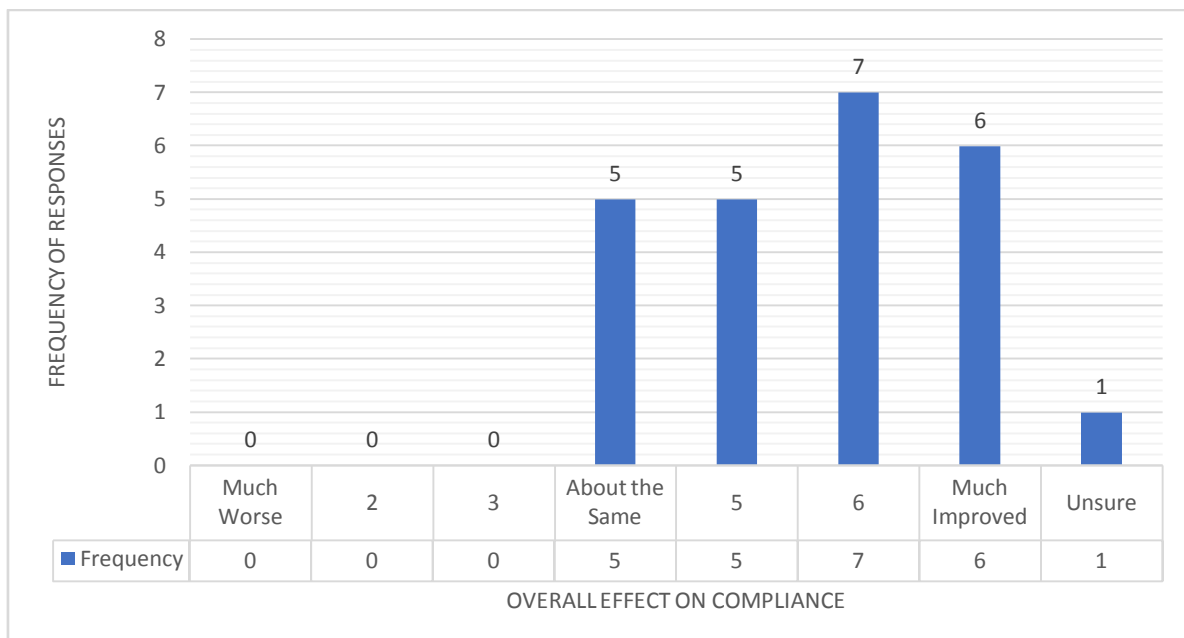|	Much Worse	2	3	About the Same	5	6	Much Improved
Frequency	0	0	0	3	7	8	6

OVERALL EFFECT ON BUSINESS AGILITY
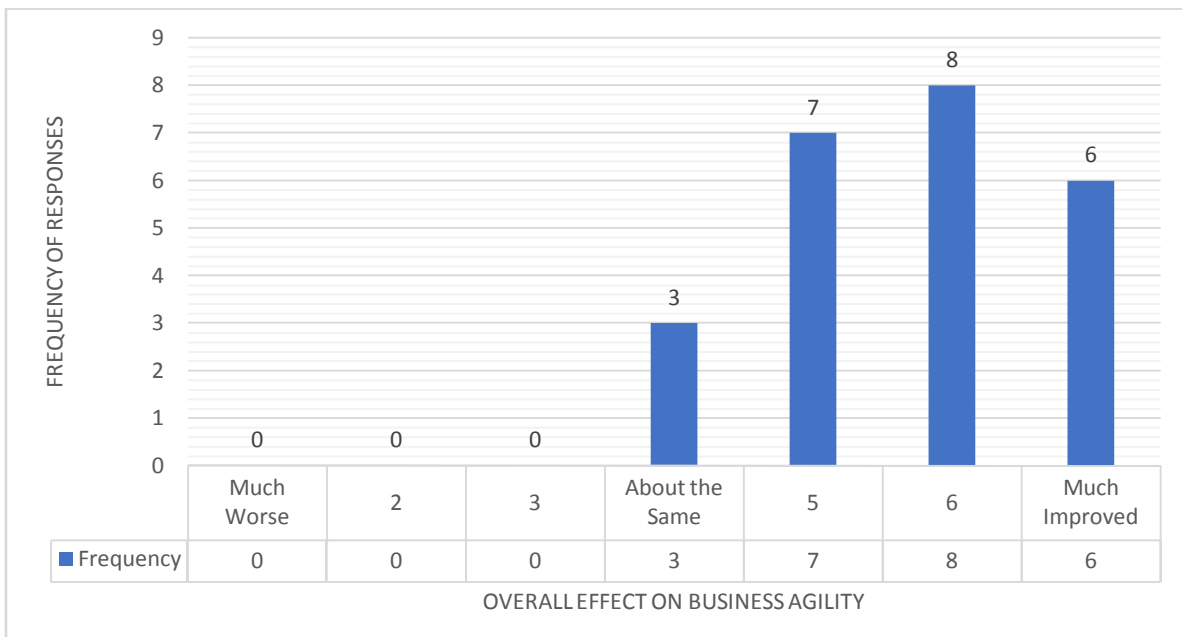
Business Agility.

n = 24

Nearly 60% of Blue Prism respondents ranked agility 6 or 7 as a primary RPA business value, with 88% citing an overall positive impact on organizational agility. Speed of deployment, adaptability across multiple process, and scalability associated with RPA as an operating platform appear to underpin these responses. In practice, as we have looked at other RPA tools in our cases studies and surveys, agility turns out to be a critical and hard won business value, the lack of which many RPA/RDA clients only experience further down in their automation journeys as they try to scale across an organizational unit, or even regionally or globally.

Compliance

Q: Please rate the overall effects of RPA across your organization along the following dimensions:

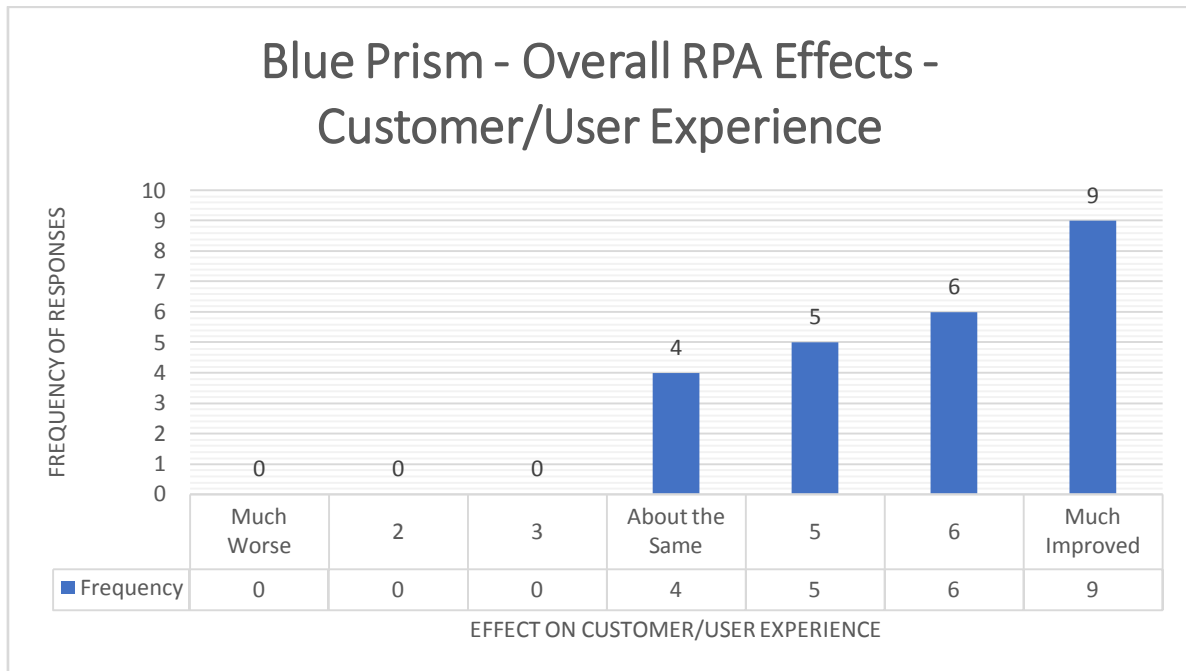|	Much Worse	2	3	About the Same	5	6	Much Improved	Unsure
Frequency	0	0	0	5	5	7	6	1

OVERALL EFFECT ON COMPLIANCE

Compliance.

n = 24

54% of Blue Prism respondents ranked RPA as 6 or 7 in improving their ability to meet organizational compliance requirements, with 75% overall reporting benefit in this area. Again, the ability of RPA to capture and store every transaction record, as well as minimize errors, contributes greatly to enterprise compliance.

Customer/User Experience

Q: Please rate the overall effects of RPA across your organization along the following dimensions: Customer/User Experience.

Blue Prism - Overall RPA Effects - Customer/User Experience

Frequency	Much Worse	2	3	About the Same	5	6	Much Improved
Frequency	0	0	0	4	5	6	9

FREQUENCY OF RESPONSES

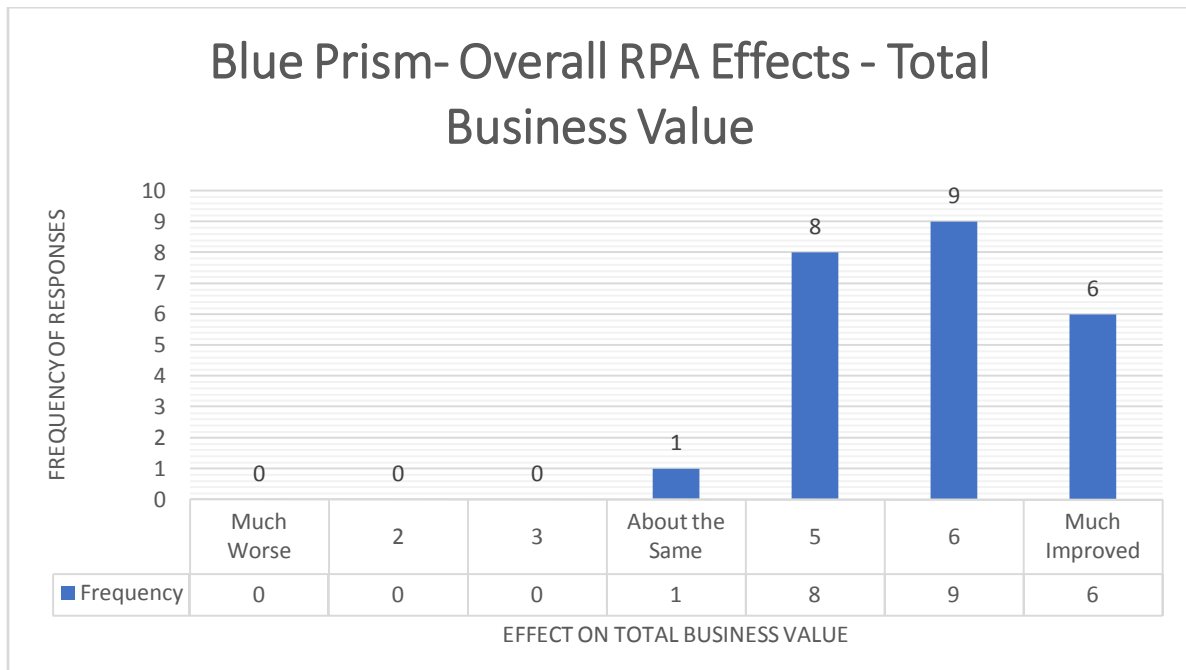EFFECT ON CUSTOMER/USER EXPERIENCE

n = 24

Fully 83% of Blue Prism respondents reported increase customer and user satisfaction as a primary business value, with 63% ranking it 6 or 7. These responses correlate strongly with the primary drivers of RPA as reported above: high shareholder value, improved customer experience, higher customer satisfaction, and happier employees.

Total Business Value

Q: Please rate the overall effects of RPA across your organization along the following dimensions:

Blue Prism- Overall RPA Effects - Total Business Value

Frequency	Much Worse	2	3	About the Same	5	6	Much Improved
Frequency	0	0	0	1	8	9	6

FREQUENCY OF RESPONSES

EFFECT ON TOTAL BUSINESS VALUE

Total Business Value.

n = 24

Finally, an impressive 96% of Blue Prism respondents reported that RPA generated measurable business value overall, with 63% rating it 6 or 7. RPA is clearly seen by experienced users as a powerful tool for improving their business operations.

Conclusion

From late 2016 the RPA market has been moving from what we call a first 'Hype and Fear' phase which we have seen in previous rounds of new technologies (and with outsourcing) through to a second phase where the focus is primarily on ROI. Here proofs of concept and pilots lead on to hard learning as risks emerge, and bad and good practices are identified. A small majority of clients are still at this stage, into a Phase 3 focus on what we call the "triple win" for shareholders, employees and customers alike, and a more strategic approach to automation and gaining business value.

By mid-2017 very few Blue Prism clients had reached Phase 4 where RPA has been institutionalized and integrated with other business and technological innovations. From our benchmarking exercise data, Blue Prism clients emerge rather well as relatively unscathed during the challenges and risks experienced by many across Phases 1 and 2, perhaps as a partial result of Blue Prism's own advice to clients on the need to *"plan for where this is going to be , not where it is now. You have to build a foundation for a tower block, not a bungalow."* [15] Blue Prism clients seem to be better positioned to move to Phases 3 and 4 than many other non-Blue Prism clients we have researched.

One of the fascinating phenomena in 2017 has been the speed with which the Hype and Fear phase of cognitive automation has escalated, to the point where the rhetoric on what has been variously called artificial intelligence, AI, or intelligent automation has overtaken RPA, making RPA tools look spent, and of less value precisely when RPA tools are experiencing exponential adoption, unlike cognitive automation technologies. Blue Prism clients, again, emerge as mostly better positioned on how to deal with the next phases of automation, seeing cognitive automation tools as relatively immature, useful to complement and extend RPA automation strengths, but with potentially massive business value as part of a larger service automation strategy.

At the same time, a significant amount of learning is on how to mitigate risks and on the effective management actions to take, as well as deeper understandings of the technology, what it can and cannot do, and how automation technologies can and need to develop. At Knowledge Capital Partners we invite interested organizations to participate in a deeper benchmarking study to enable to identify the actions needed to optimize present progress and then move into the next phase of their service automation journeys.

About The Authors

Dr. John Hindle is Managing Partner at Knowledge Capital Partners, and former Adjunct Professor at Vanderbilt University and New York University in London

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ABOUT THIS RESEARCH:

With market adoption of Robotic Process Automation reaching levels that support rigorous quantitative measurement and analysis, Knowledge Capital Partners has developed proprietary research tools and assessment models with the goal of establishing evidence-based performance benchmarks to inform technology selection and deployment. This interim report summarizes the experience of Blue Prism clients gathered from early data; further data gathering is underway for a final report in Q4 2017."

1. The term was invented by Blue Prism's Marketing Director Patrick Geary.

3. Many sources size the RPA market. Grand View Research had the largest estimates:http://www.grandviewresearch.com/press-release/global-robotic-process-automation-rpa-market. The Everest Group regularly quote much lower figures than this, for example predicting an $800 million market by 2018, but they are generally counting licence fees of RPA vendors (see Everest Group webinar on 28th March 2017 on *RPA Market and Technology Trends 2017*). Different reports include different factors, make different assumptions and are constructed with different degrees of rigor. For example, it is not clear how far cognitive automation fees, consultancy, systems integrator and IT automation earnings, and RPA fees from BPO outsourcing contracts are included in statistics. Source: Everest Group

4. See Fersht, P. (2017) Gartner: *"96% of customers are getting real value from RPA" – Really? www.Hfsresearch.com May 25th blog*. See also Edlich, E. and Sohoni, V. (2017), Burned by the bots: why robotic automation is stumbling. *June 2nd www.McKinsey.com. Ernst* and Young (2016) Get Ready For Robots: Why planning makes the difference between success and disappointment. *www.ey.com/Publications, December*

5. A full account appears in Lacity, M. and Willcocks, L. (2017) *Robotic Process Automation and Risk Mitigation: The Definitive Guide*. SB Publishing, Stratford.

6. See Willcocks, L. and Lacity, M. (2016) *Service Automation, Robots and The Future of Work*. SB Publishing, Stratford. Also Lacity, M. and Willcocks, L. (2017 op. cit. The research is extended into cognitive automation for a new book due in February 2018: Lacity, M. Willcocks, L. and Craig, A. (2018) *Robotic Process and Cognitive Automation: The Next Phase*. SB Publishing, Stratford.

7. See case studies in Willcocks and Lacity (2016) op. cit. Also more recently Lacity, M., Willcocks, L. and Craig, A. (2017), *"Service Automation: Cognitive Virtual Agents at SEB Bank." " The LSE Outsourcing Unit Working Research Paper Series;* Lacity, M., Willcocks, L. and Craig, A. (2017), "Robotizing Global Financial Shared Services", Journal of Financial Transformation, Vol. 45, forthcoming; Lacity, M., and Willcocks, L. (2016), *"A New Approach to Automating Services." Sloan Management Review*, Vol. 57, 1, pp. 41-49.

8. See Lacity, M. and Willcocks, L. (2015) *Nine Keys To World Class BPO*. (Bloomsbury, London)

9. In one typical 2012 study by McKinsey and University of Oxford of 5,400 IT projects, it was reported that 17% were going so badly, as to threaten the company's existence, while on average, large IT projects ran 45 percent over budget and 7 percent over time, while delivering 56 percent less value than predicted Our own research reports similar findings over many years, including for digital technologies. See for example Willcocks, Whitley and Venters (2014) *Moving to the Cloud Corporation,* Palgrave, London; Finnegan, D. and Willcocks, L. (2007)*Implementing CRM – From Technology to Knowledge*. Wiley, Chichester.

10. The SERVQUAL questionnaire was first published in 1988 by a team of academic researchers, A. Parasurman, Valarie Zeithaml and Leonard L. Berry to measure quality in the service sector

11. Our case research now covers over 20 Blue Prism deployments, and the case evidence is consistent with these latest survey findings.

12. McKinsey Global Institute (2017). *A Future That Works: Automation, Employment and Productivity.* January, McKinsey, San Francisco

13. See Willcocks and Lacity (2016) op. cit. chapter 3

14. See Lacity and Willcocks (2017) op. cit.

15. The quote is by Patrick Geary, senior executive, Blue Prism. See Willcocks and Lacity (2016) op. cit.