

SSON REPORT ON INTELLIGENT AUTOMATION IN MODERN ENTERPRISES **2020**

Taking Enterprises from 'tactical' to 'strategic'

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Key strategies take automation from 'tactical' to 'strategic'

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EXECUTIVE SUMMARY

Enterprises across the global and especially Shared Services is on the precipice of realising the next-generation operating model – a digital enterprise where human and bot workers work synergistically to offer a frictionless, end-to-end service experience. From here onwards, automation will move past point solutions to take on a more holistic focus across the entire process stream. What is coming to the fore is the blurring of the front and back office to become an end-to-end, hyperconnected enterprise.

The shift is an on-going phenomenon over the years, reflecting a maturing market where adoption rates for intelligent automation are registering consistent, year-on-year increases. This year, adoption rates have peaked at an all-time high, with almost half of all Shared Services professionals stating that they are leveraging IA in their operations.

As enterprises make further advances in their digital journey, vendors will look towards delivering integrated solutions that can support service delivery beyond the transactional, in support of the strategic. The following pages will take readers through the journey of ‘tactical’ to ‘strategic’ automation by explaining how we see this playing out and highlight the key focus areas that Shared Services should consider in order to unlock strategic benefits from automation.

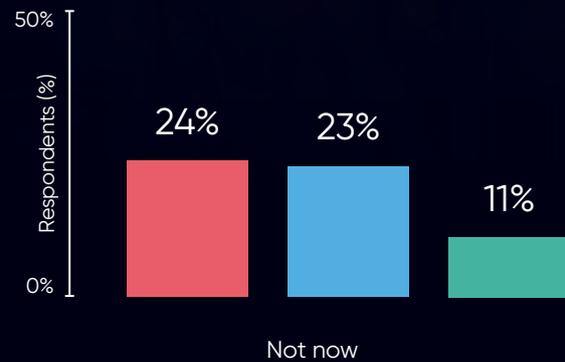
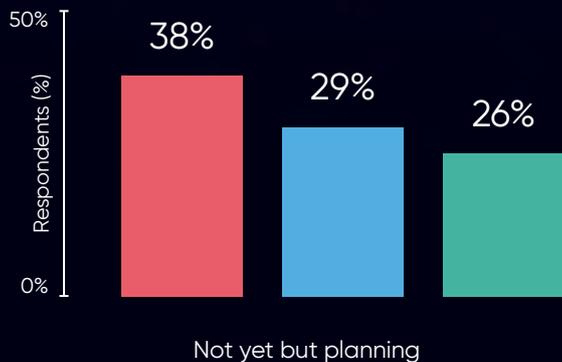
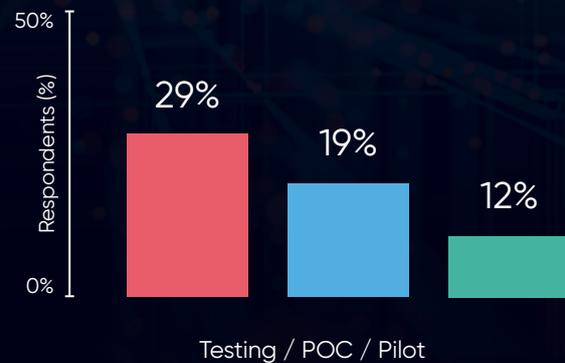
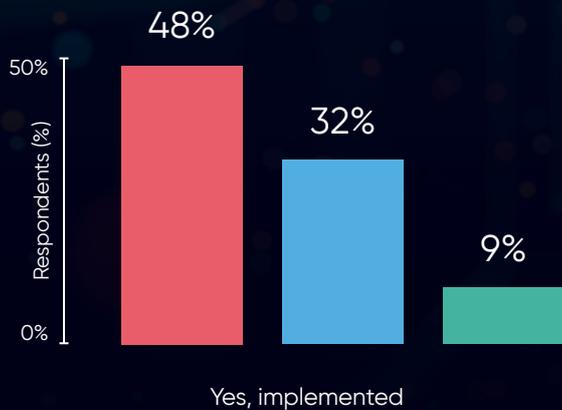


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Is Intelligent Automation part of your operations?

● 2020 ● 2019 ● 2018



SOURCE: SSON annual industry survey

We are at a point in our civilisation where the real impact lies in evolving the future, not just being a part of it. Enterprises are in a race to be resilient and thrive, not just survive. They are looking to be at the bleeding edge of innovation, while building a robust foundation for success. To this effect, automation, led by RPA, has become the most crucial growth lever. When combined with other smart technologies, automation is a tool to create unprecedented value across the enterprise, delivering creativity, efficiency, and intelligence at scale.

Our partner for this report, EdgeVerve, a leading Automation and AI Infosys subsidiary, believes that approaching automation as a holistic intelligence-driven exercise central to enterprise growth, creates a range of advantages. The rise of the digital twin, an idea that EdgeVerve has been bullish about, will be a defining moment as enterprises start to trade on imagination and hyper-personalization at scale. By combining the efficiency and accuracy of a digital worker with the empathy and creativity of human counterparts, the human-digital twin does not just support decision-making, but could even help automate the process. EdgeVerve believes that this concept will drive the future, and that's why it is a critical component of their overarching solution design philosophy – Automation Singularity.

EdgeVerve defines Automation Singularity as “a highly customer-centric and agile oriented state of constant improvement and optimisation through the future workforce, opening up an expanded horizon of possibilities. Human specialists drive customer orientation using their creativity and empathy and are complemented by digital workers with extreme productivity and consistency. Automation Singularity serves as a beacon for enterprises to conceive, design, structure, and deliver products and services. The idea of Automation Singularity is a journey where a variety of automations (including attended and unattended automation) along with AI capabilities will unleash unprecedented value touching every process, every employee, and every system in the enterprise.”

An experience of working with large enterprises across the globe pointed EdgeVerve to the need for an enhanced vision of automation that drives expansion and profitability. By bringing human and evolved digital workers closer together than ever before, Automation Singularity creates a transformative blend of advanced capabilities to build the enterprise of the future. It is a journey that broadly comprises three stages – Deterministic Automation, Intelligent Automation, and Human-empowered Automation. As companies progress along this continuum, they will move from:

- 1 **A human-only workforce to a human-digital twin**
- 2 **Rudimentary process-level data to sophisticated process-contextual data**
- 3 **Deterministic operations to contextually-driven dynamic operations**

EdgeVerve believes that their vision for Automation Singularity, including ideas like hyperautomation, signals the next era for enterprises. However, the quality of execution is every bit as important, perhaps even more than an understanding of the idea. Consequently, their model of the enterprise road to Automation Singularity features three key disciplines – Discover, Automate, and Orchestrate – ensuring maximum effectiveness at every stage of automation maturity. This model is driven through their Automation platform, **AssistEdge**, a cohesive automation platform, and their consulting capabilities that allow them to create custom solutions for highly specific needs.



WHAT IS 'TACTICAL' VERSUS 'STRATEGIC'?

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In order to understand the scale of change, it is important to define tactical and strategic. A tactical approach to automation is characterised by quick-fix solutions where benefits are finite. Automation is limited to task-level, piecemeal efforts focused on cost-cutting and headcount reductions. Rarely do these interventions move the needle on performance. In contrast, a strategic approach to automation impacts a larger number of processes across the process stream. Automation supports wider business goals, and can be rolled out across the entire organisation instead of being confined to a single function.

According to responses from 150 Shared Services professionals surveyed by SSON, a majority are currently deploying automation at a tactical level. Amongst all Shared Services professionals who are using IA, 67% are using it for simple, transactional tasks, while 33% have effectively managed to deploy automation in more processes.

As Enterprises and Shared Services jumps on the automation bandwagon, we are approaching a tipping point where the low-hanging fruit will be exhausted. How will automation use in Enterprises and Shared Services progress in the 2020s? We believe that it will move past the easy wins to an overarching digital operating model that will make great strides with organisational strategy.

Is Intelligent Automation part of your operations?

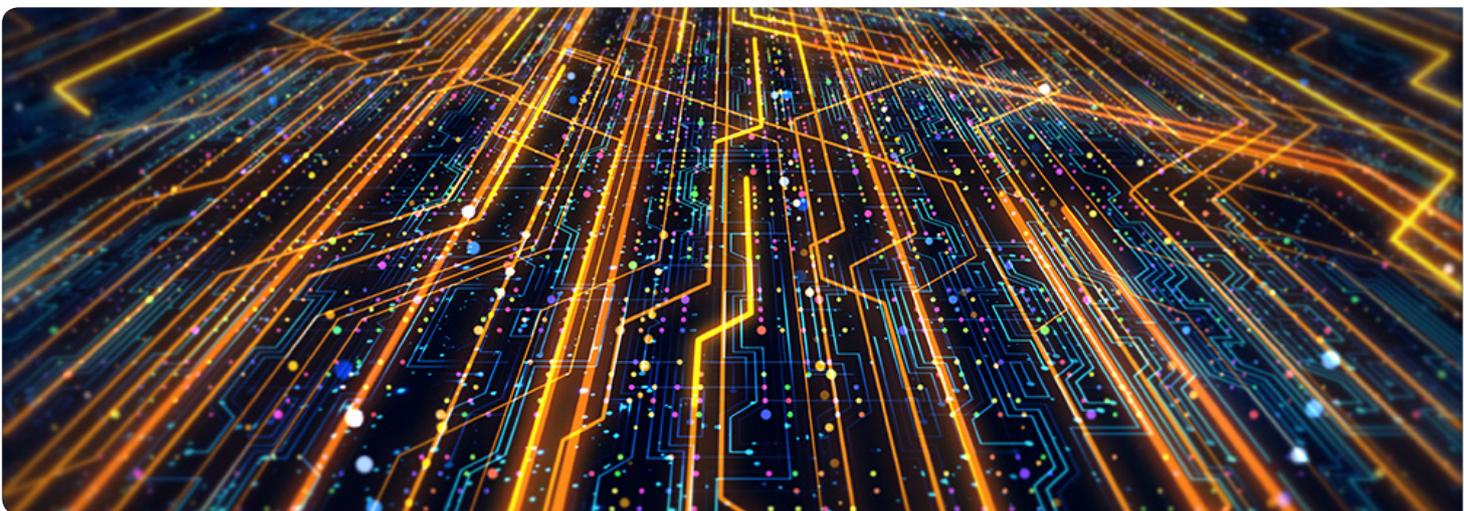
67%

Yes, implemented, but usage is limited to simple, rather than advanced tasks

33%

Yes, implementation is advanced & applied across numerous processes in the company / scaling

SOURCE: SSON's State of the Shared Services & Outsourcing Industry Survey 2020



DEVELOPMENT OF AUTOMATION SOLUTIONS

Before the existence of Robotic Process Automation (RPA), data entry and capture could be automated with Excel-based macros and scripts. By recording user-initiated actions or writing code, users could apply formatting and calculations to large data sets. Success was largely dependent on spreadsheet layouts, and formatting and code had to be rewritten when there were exceptions. As the typical business user's workday grew to revolve around multiple applications such as web browsers, desktop virtualisation tools (e.g. Citrix, VMWare) and Excel, the inability of macros to communicate with multiple applications highlighted their inadaptability.

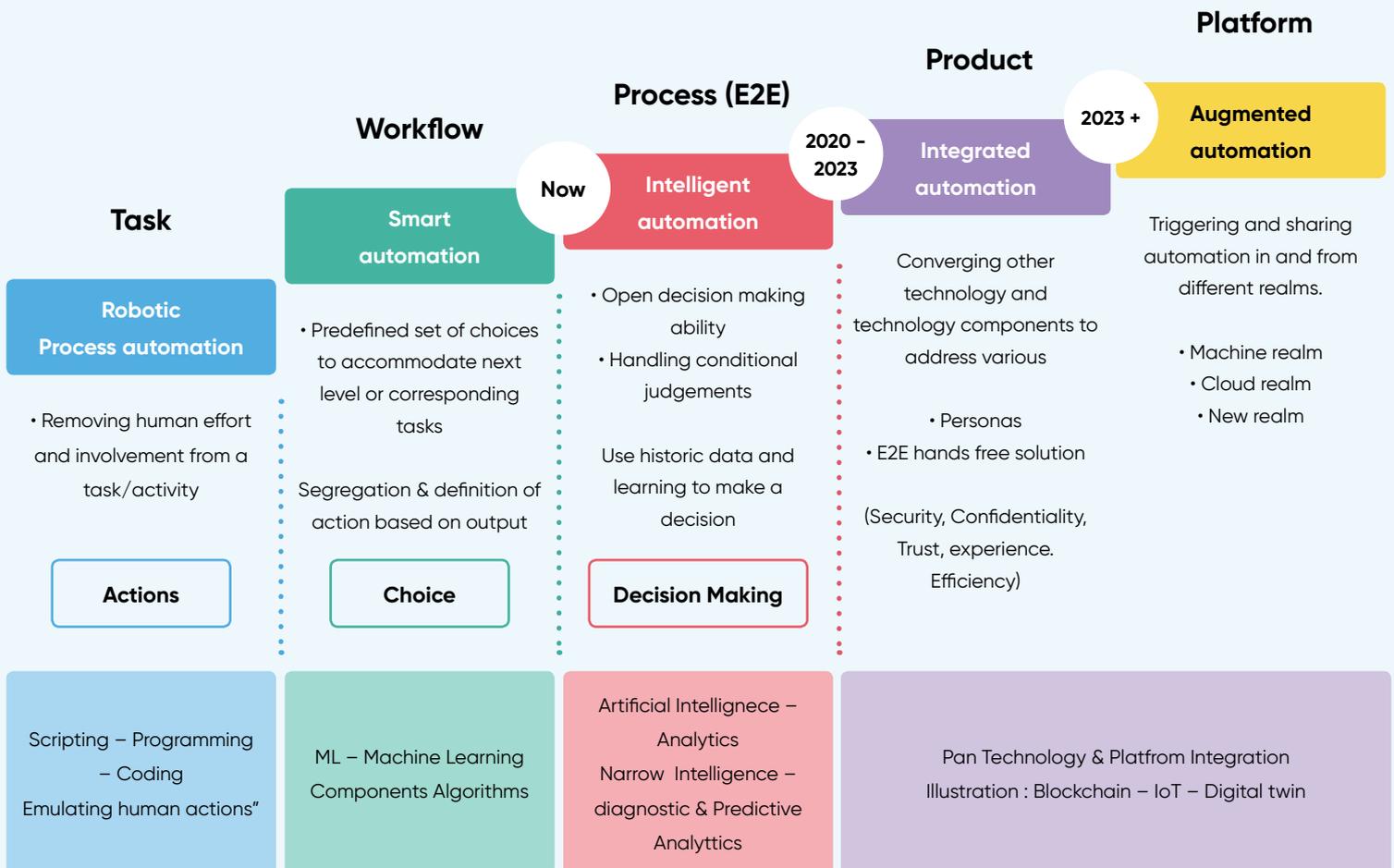
The limitations of Excel-based automation drove the demand for more dynamic solutions. The first RPA solutions that entered the market were able to perform screen-scraping, where data is transferred between two programmes. 'Bots' were embedded with Optical Character Recognition (OCR) capabilities to capture data for input. However, first-generation RPA hit a wall when crucial information fell outside defined coordinate parameters, or a single document contained too many images. Since bots could not detect anomalies in the document and adapt to identify relevant information, exception handling was tedious. Workarounds had to >>

Automation Maturity Roadmap

PREVIOUSLY

PRESENT

NEAR FUTURE



SOURCE: Digital Transformation Strategist - Ashwin Gaidhani, 2019

be put in place, such as the deployment of more bots or the retraining of the solution, thereby limiting the scope of RPA to the transactional.

Since then, RPA solutions have evolved to deliver a gamut of workflow and process management capabilities. Popular RPA offerings now come in-built with computer vision and machine-learning capabilities to augment the work of human workers. Software bots are able to provide recommendations for the optimal course of action to be acted upon by a human manager at the end of the loop. Data capture and aggregation of human and bot performance from desktop applications, ERP, CRM, and HRS platforms are providing an immediate view of the front and back office in consolidated dashboards for optimised performance.

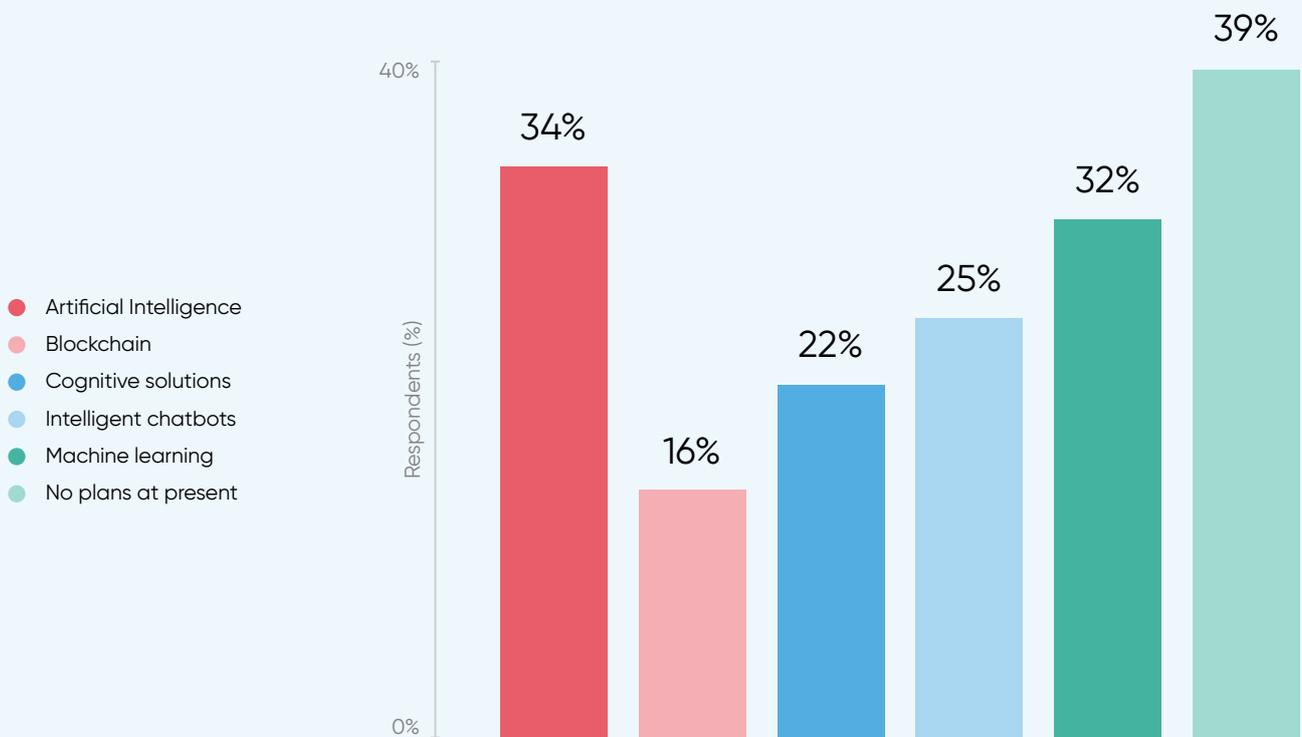
These developments are seeing RPA positioning shift from a standalone tool to an integrated toolbox of

solutions with inbuilt digital operations management and operational analytics for management to optimise collective performance.

In the 2020s, automation will shift from 'Smart' to 'Intelligent' automation with contextual decision-making. The shift will allow automation to touch on higher value-added areas such as customer satisfaction and strategic planning. This largely aligns with the objectives of Shared Services professionals: Utilising automation for broader use cases. Unsurprisingly, the most cited areas of exploration are Artificial Intelligence (34%) and Machine Learning (32%).

Whether Enterprises and Shared Services are ready to leverage such tools will ultimately depend on how professionals deal with recurring bumps in their digital transformation journey.

Which other IA solutions do you plan to integrate in future?



SOURCE: SSON's State of the Shared Services & Outsourcing Industry Survey 2020

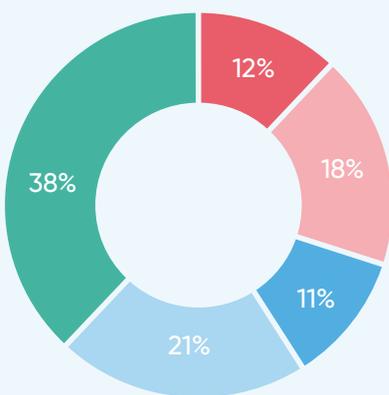
The next section of the report will cover major hurdles unearthed in SSON Analytics' recent Visual Analytics Workbook: ***Intelligent Automation in modern Shared Services - a catalyst for opportunities, driving strategy and service excellence.*** Results are based on responses from 700+ Shared Services professionals globally. This data report will list key takeaways accompanied by bite-sized tips to enable your automation initiative to move from tactical to strategic.

#1. ORGANISATIONAL BUY-IN MATTERS FOR LONG-TERM SUCCESS

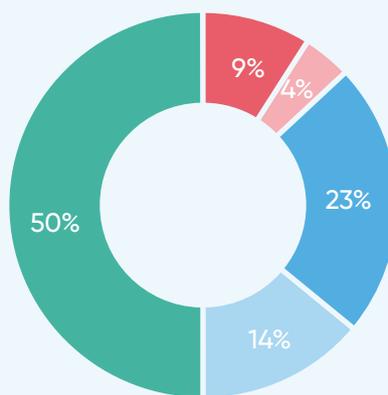
Without sufficient stakeholder buy-in, organisations will find it tough to ramp up automation efforts within the organisation. For a third of respondents, the lack of essential stakeholder buy-in has caused such difficulties in their automation journey. This was especially significant for respondents in Latin America (47%), ANZ (41%) and North America (39%). >>

What is your experience with the digital workforce (i.e., robotic automation) so far?

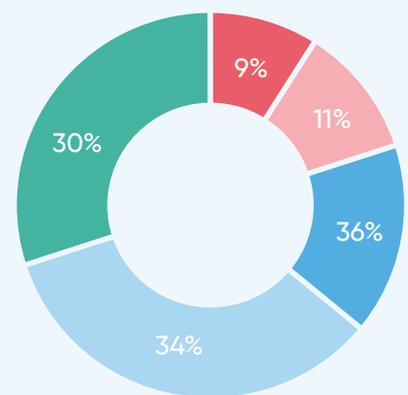
- Employee anxiety overshadows potential
- Incomplete ecosystem impeding ability to scale
- Individual's work is more fulfilling ("digital assistant")
- Insufficient change management hindering effectiveness
- Significantly improved /performance gain realized



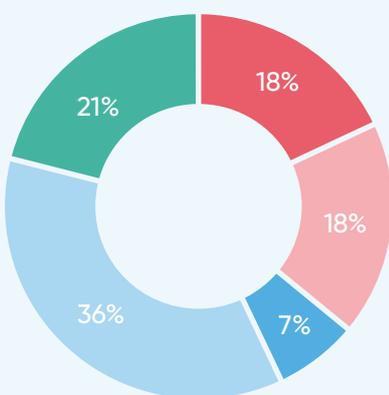
Asia



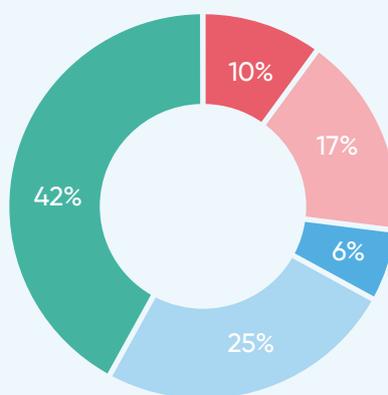
Australia and New Zealand



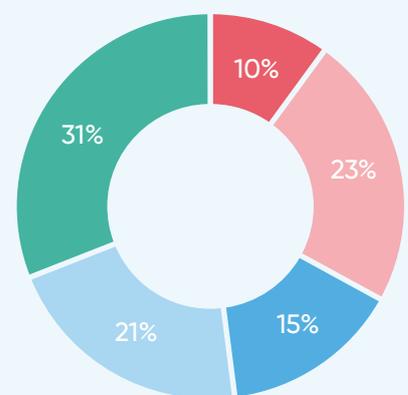
Central and Eastern Europe



Latin America / Caribbean



North America



Western Europe

SOURCE: SSON's State of the Shared Services & Outsourcing Industry Survey 2020

>> #1. Organisational Buy-In Matters For Long Term Success Continued



Senior management

Senior management involvement is crucial in driving digital strategy throughout the organisation. Management has to understand that digital transformation is not a one-off initiative but a continuous journey encompassing various stages. They must be ready to rewire existing processes to position the enterprise for future success. For some, automation will introduce changes to job responsibilities. Job scopes will be redesigned and employees have to undergo reskilling, which results in interruptions to Business-As-Usual (BAU) activities. If the top does not set a broad strategy and commitment to digital transformation, the initiative runs the risk of being undermined.



Cultivating strategic relationships with business units

To gain lasting buy-in from stakeholders, it is important to establish strategic relationships with business units from the get-go. Audit, HR and IT are the key partners to engage:

AUDIT

Increased investments in IA may raise audit's suspicions and they may demand a cost breakdown and delegation of responsibilities to assess the risks behind the initiative. Without transparency of cost flow and proper documentation of roles and responsibilities, audit can easily put the brakes on the programme.

HR

Ensuring that employees are equipped with necessary skills in data analytics and automation will lead the automation programme beyond the transactional. This will require HR's involvement in determining skilling needs, developing career paths and rewriting role descriptions. In addition, as transactional tasks are taken over by software bots, employees may find their existing workflows impacted by automation. To properly manage the transition, HR has to implement reskilling or upskilling programmes to move employees towards higher value-added roles.

IT

Invite IT on-board as a coalition partner at the planning phase to design automation according to enterprise security requirements. Doing so will ensure that automation use is in line with existing requirements regarding company hardware, servers and databases. As automation use scales across the organisation, IT infrastructure has to evolve accordingly to keep up with an increased system load. Keeping IT in the loop regarding automation use will allow it to make necessary adjustments to infrastructure over time. Finally, IT will also accommodate to any shifts or upgrades in technology, so that automation solutions in place do not 'break'.



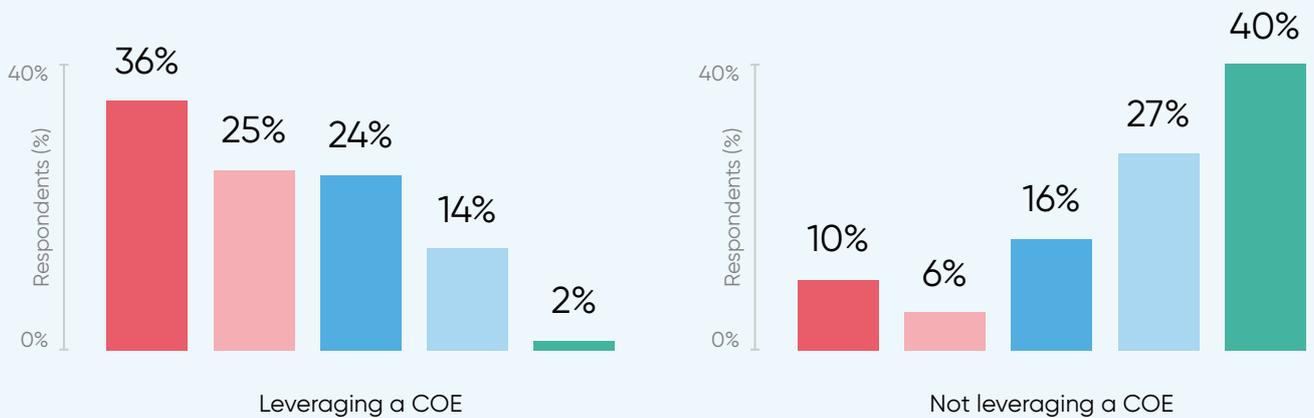
#2. LEVERAGE CENTRES OF EXPERTISE (COE) TO DRIVE SUCCESSFUL AUTOMATION

The Centre of Expertise is the nexus of the automation programme, governing the organisational setup of the initiative, providing expertise and outlining rules surrounding automation use. The COE plays a number of important roles: 1) Ensuring that no business unit holds sway on which automation projects are prioritised, 2) Supervising automation use across the organisation, 3) Monitoring data flows for automation to safeguard organisational data from security breaches.

From survey results with Shared Services professionals, it is clear that the COE provides benefits to the overall automation programme by enabling scaling and facilitating the implementation of the programme.

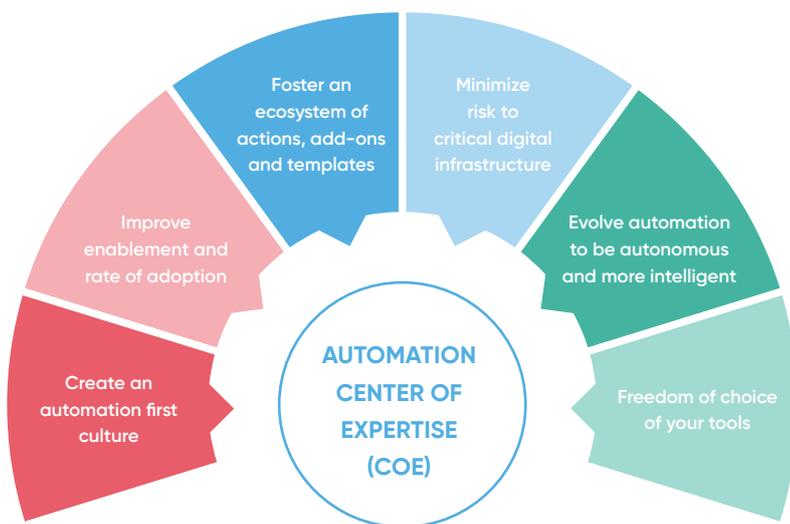
Is Intelligent Automation (eg. RPA) part of your operations?

- Yes, implemented and now scaling
- Yes, implemented
- Testing / POC / Pilot
- Not yet but planning
- Not now



SOURCE: SSON's State of the Shared Services & Outsourcing Industry Survey 2020

Advantages of a COE



Enterprises and Shared Services that leverage automation through a Centre of Excellence (COE) are more than twice as likely to be scaling and/or implementing automation, suggesting that the COE provides the right organisational set-up for scale, and the best direction and control to guarantee that the programme is sustainable and can meet growing needs over time.

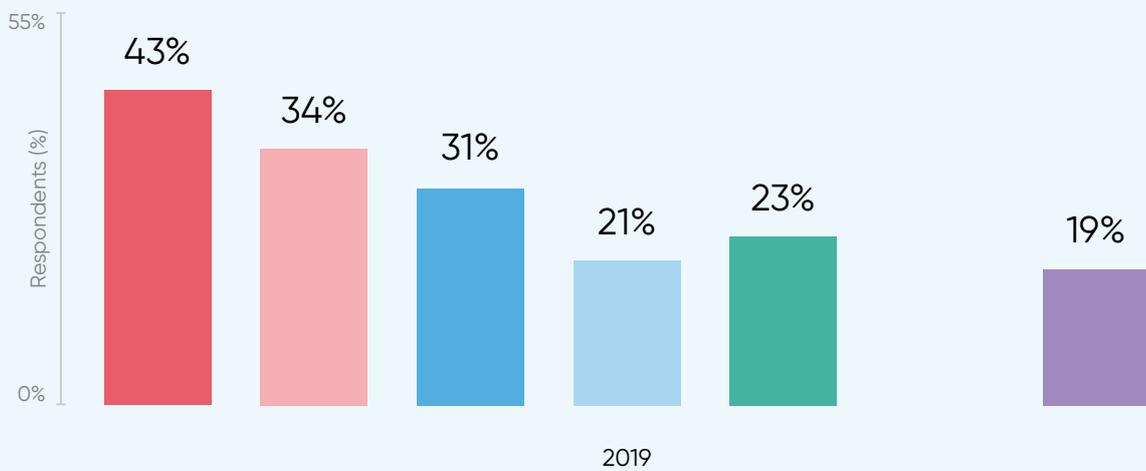
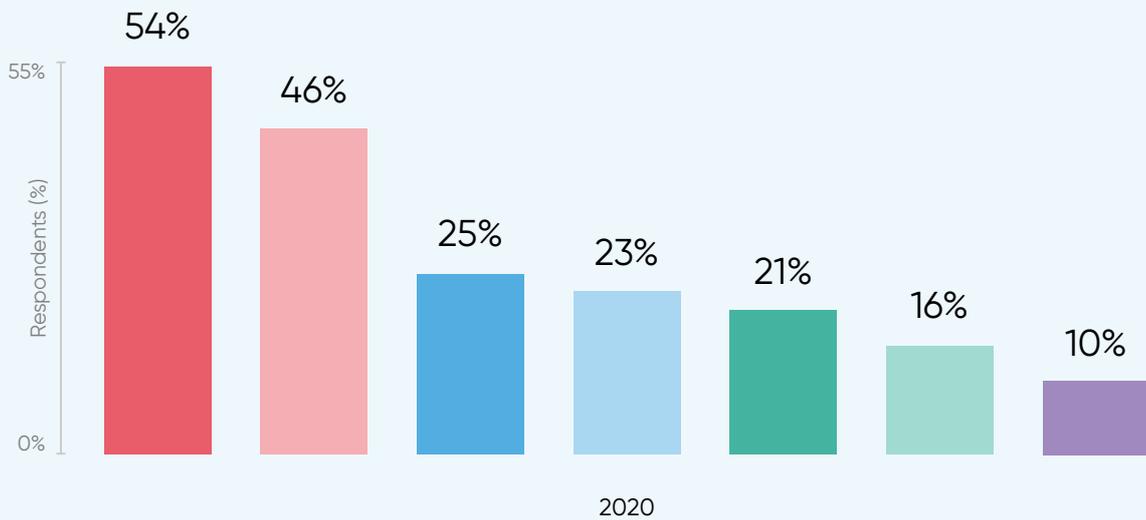
SOURCE: Drive Business Innovation And Agility With An Automation Centre of Excellence (Broadcom, n.d.)

#3. TRANSPARENCY IN PROCESSES HIGHLIGHTS AUTOMATION OPPORTUNITIES

In the past couple of years, incorrect process selection has consistently been identified as the leading cause of difficulty – even failure – in IA/RPA projects. Failing to identify the right process can derail the automation initiative. Without proper insight into organisational processes, automation can magnify inefficiencies and yield unsatisfactory outcomes. >>

Where your IA/RPA project has run into trouble, what do you attribute this to?

- Process not mature enough / not fit for the solution
- Insufficient change management
- Essential stakeholders insufficiently on board
- Limited by insufficiently developed data management plan
- Solution provider not fit for our project / business needs
- We don't have the necessary skills in-house
- We haven't experienced trouble with our IA / RPA



SOURCE: SSON's State of the Shared Services & Outsourcing Industry Survey 2020

» #3. Transparency In Processes Highlights Automation Opportunities

Before embarking on automation, it is of paramount importance to begin with a solid understanding of organisational processes. Apart from reviewing process documentations, identify where actual gaps in processes lie. Too often, there are discrepancies between the way processes are documented and carried out on the ground. Processes can be complicated by informal workarounds and deviations that are not captured in process documentation. Below are some steps on how organisations can develop intimacy with their processes to better identify processes for automation:

1 Convene with business process owners to understand:

- > Why the process exists
- > The benefits the process offers to stakeholders
- > Is there a way to combine this process, eliminate or simplify it?

2 Model the process with diagrams

Refer to previous process documentation or industry standard operating procedure (SOP)

3 Combine models with process logs

With a bird's eye view of your processes, identify variants and discrepancies in the process. It is at this point where process intimacy is developed.

4 Identify candidate tasks for automation

5 Align and standardise processes where applicable

Standardised rules about processes have to be in place to support the deployment of bots. Before considering automation, processes should be optimised and aligned to prevent lengthy workarounds. In certain cases, automation may not be necessary to drive efficiency in your processes.

6 Segregate and segment processes according to the benefits derived from automating the process (e.g. Operational or strategic)

- > Operational relates to productivity and efficiency
- > Strategic relates to resource optimisation and customer satisfaction

**Processes that require a great deal of human input and decision-making may not be suitable for automation.*

KEY TERMS

Process discovery

Involves the recording of key-strokes and actions used in the process

Process blueprinting

Recreating the end-to-end service delivery process with diagrams or flow charts

Process mining

A systems-oriented, technical process of capturing processes through system and process logs.

#4. DATA – THE NEW OIL OF INDUSTRY 4.0, GREASES THE WHEELS OF AUTOMATION

The lifeblood of the digital transformation is data. For organisations to put the right foot forward in creating strategic benefits, the data management strategy has to be brought to the table as early as possible. At this point, Shared Services professionals are still not data-ready to leverage IA. 67% of Shared Services are experiencing difficulties in accessing data for IA use. This can be due to silos and closed processes regarding data sharing. Apart from issues surrounding access to data, data quality and infrastructure are common concerns that stand in the way of organisational data-readiness.

In order to maximise gains from automation, transparency has to be built into data flows to facilitate data consolidation for analysis. Depending on how data is stored across the organisation, this can be a time-consuming process that requires collaboration amongst different functions across the entire organisation. However, this is a crucial step that will lay the groundwork in establishing a single source of truth for data to be managed and refined for analysis.

After consolidating data sources, data has to undergo cleansing and formatting. It is crucial to work out the parameters and frameworks that data should be organised in, to prevent issues further down the line,

such as inaccuracies in machine-learning models. As the saying goes, 'Garbage in, garbage out'. Feeding uncleaned data into machine-learning models will introduce complications to your automation programme.

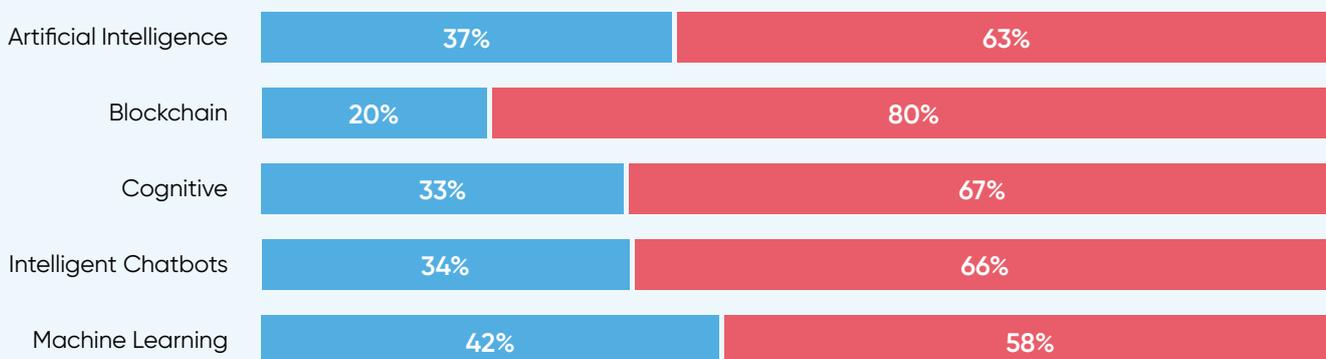
The next frontier of data is looming on the horizon: the ability to make use of unstructured data. Presently, it is largely an unrealised store of value that holds the key to impacting a wider range of use cases outside of RPA's capability. As more organisations begin their foray into Machine Learning in the 2020s, organisations will have to tackle the challenge of formatting their unstructured data, which will require heavy human interaction at the beginning.

Firstly, human users will need to be involved in validating the outcome of the model and the training dataset to make incremental improvements to the accuracy and relevance of the results. Secondly, organisations have to possess a sufficiently large data set that the model can extract and learn from. Furthermore, data mining has to be run on an on-going basis for pattern recognition and identifying unknown trends in data that are influential.

A working machine-learning model should be able to anticipate and suggest possible outcomes and impacts based on constraints, and integrate datasets from CRM, ERP, HRS platforms, cloud and on-premise data sources.

Do you have ready access to the data required to leverage new IA solutions?

● Yes ● No



SOURCE: SSON's State of the Shared Services & Outsourcing Industry Survey 2020

#5. THE RIGHT TOOL CREATES DESIRED OUTCOMES

If processes are the soul of the programme, the automation tool kit is the body that is directly involved in driving everyday performance improvements. Instead of adopting band-aid solutions, search for a solution that can grow with enterprise requirements. To assess if a solution is able to scale beyond task-based automation, a number of important factors have to be considered: 1) Subscription model, 2) Desktop or server-based solutions, 3) Ease of integration, 4) Exception handling capabilities, 5) Self-learning abilities,



Subscription model

To scale automation across more functions in the organisation, users should not be constrained by a per-bot subscription model. The example below will illustrate how the per-bot subscription model may not be as cost-effective: An organisation's Finance function requires more bots to assist with the close process a couple of times annually. If the company was on a per-bot subscription model, they would have to pay for the maximum capacity for the entire year, even though additional capacity is only needed twice a year.

In considering the right solution to enable scale, organisations should select a flexible licensing model that will allow them to get the most out of their automation instead of being constrained by limitations on bots. The key to taking automation to scale is to break out from a per-bot subscription model, to one where costs are sensitive to usage patterns, allowing users to scale dynamically, and achieve maximum impact with their automation while reducing the total cost of ownership.



Desktop v.s. Server-based solutions

Desktop-based solutions can severely limit efforts to optimise automation use. Users have to dedicate desktop space for a single automation and are not able to run multiple automations simultaneously. On the flipside, server-based solutions offer more convenience in the integration of different applications and services,

and are able to scale dynamically during periods of high system loads. Although they may be more costly to implement at the beginning, they are able to run multiple automations simultaneously and are more cost-efficient in the long-run.



Integration costs

A multi-vendor strategy is becoming the leading automation strategy for organisations looking to scale. Depending on organisational needs and the goals of the digital transformation initiative, the most suitable RPA strategy may differ from a single platform or multi-vendor integration.

In recent years, Technical Alliance Partnerships (TAP) have blossomed to support the diverse needs of enterprises in varying industry verticals and technology stacks, accelerating time-to-value for customers interested in leveraging end-to-end automation. Technical Alliance Partnerships are strategic alliances amongst vendors where the TAP partner's offerings are embedded in the vendor's solution to support multi-vendor integration, whilst also driving sales opportunities with TAP partners.

During the development and testing process, partners work alongside vendors on the technical specifications underlying the integration, while testing and building the product to ensure that it is in line with customer expectations. As vendors increasingly cultivate alliances and partnerships to offer more capabilities across the AI spectrum, the possibility of having an integrated solution that supports third-party applications is fast becoming a reality.



Exception handling capabilities

Exceptions typically range from two types - Application and business exceptions. Application exceptions refer to instances where bots are unable to interact with programmes due to server instabilities, security/access constraints or software updates, which alter the



software environment (e.g. UI or features). Business exceptions refer to errors resulting from a deviation of standardised business processes, such as missing or incorrectly formatted data in forms or spreadsheets. When bots are required to process data that are not within specified parameters, a business exception will be triggered.

A common example is when bots are processing a form where there is missing information. The bot is unable to proceed with processing the form as it does not have all the required information. Supervisors are immediately notified of the issue before the bot moves on to the next transaction.

In configuring bot logic for exception handling, process owners need to pay attention to business exceptions flagged by the bot and work with programmers to specify information in configuring automation to handle typical business exceptions. This reduces the administrative burden on human co-workers after deployment, whilst also facilitating end-to-end processing.

It is impossible to account for all scenarios. Targeting to cover all possible scenarios will increase the project timeline along with associated costs. To assess the success of the exception handling strategy, focus on the ratio of how much it contributes to the automation rate without negatively affecting the business case, as opposed to assessing the percentage of scenarios covered (Synpulse Magazine, 2019).



Self-learning abilities

The ability for bots to learn will be crucial for straight-through processing. As opposed to reinforcement learning, where humans are required to train software bots to manage exceptions, bots with contextual intelligence can intuitively identify and pick up on nuances in human decision-making to provide recommendations or make decisions at a specified confidence level. Software bots are able to learn on the fly, where every human decision will make the model smarter without the need to input additional code.

AUTOMATION STRATEGY	Single platform <i>(aka Best of suite)</i>	Multi-vendor integration <i>(aka Best of breed)</i>
Total cost of ownership	Lower	Higher due to integration costs across disparate tools
Flexibility	Offers limited flexibility for customisation as requirements evolve. Suitable for processes that are low in complexity.	Offers a high amount of flexibility. Able to adapt to varying process complexities to support end-to-end automation.
Time to value	Fast-tracks deployment, as little to no time is spent on integration.	Slower as integrations between tools requires time to build and test.
Ability to scale	Other business units may have specific expectations that may not be catered by a single solution provider	Provides a range of choices for business units to find a best-fit approach for their requirements
Risk	Maximised with vendor lock-in	Risk is spread across multiple vendors

SOURCE: SSON Analytics, 2020

The 2020s will be an opportune time for organisations to make the leap from tactical to strategic automation. While RPA has been a gateway for Enterprises and Shared Services to digitise manual processes, automation use in Enterprises and Shared Services has reached an inflection point and professionals will now have the opportunity to imbue intelligence in their automation to support end-to-end service delivery.

ABOUT EDGEVERVE



EdgeVerve Systems Limited, a wholly owned subsidiary of Infosys, is a global leader in AI and Automation, assisting clients thrive in their digital transformation journey. Our mission is to create a world where our technology augments human intelligence and creates possibilities for enterprises to thrive. Our comprehensive product portfolio across AI (Infosys Nia), Automation (AssistEdge) and AI enabled Business Applications (TradeEdge, FinXEdge, ProcureEdge) helps businesses develop deeper connections with stakeholders, power continuous innovation and accelerate growth in the digital world. Today EdgeVerve's products are used by global corporations across financial services, insurance, retail, consumer & packaged goods, life sciences, manufacturing telecom and utilities. Visit us to know how enterprises across the world are thriving with the help of our technology.

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ABOUT ASSISTEDGE



AssistEdge offers a cohesive automation platform that enables enterprises to scale in their automation journey. It offers enterprises with a comprehensive suite of products enabling them to drive initiatives around process discovery, intelligent automation and digital workforce orchestration. AssistEdge has helped enterprises unlock value in the form of reduced service time, faster sales cycles, better resource allocation, accelerated revenue recognition and improved efficiency among others.

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ABOUT SSON ANALYTICS | sson | ANALYTICS

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Thousands of global business services, outsourcing and automation professionals rely on our data to understand the shared services landscape in their region through a variety of interactive data tools, analytics reports and customised data insights.