

## IDC PERSPECTIVE

# IDC Perspective: Six Capabilities from Leading RPA Service Providers That Advance Financial Services Institutions Toward Intelligent Automation

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THIS IDC EXCERPT FEATURES: AVANADE

EXECUTIVE SNAPSHOT

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### FIGURE 1

#### Executive Snapshot: Overview of Intelligent Automation and Intelligent Digital Workforce

The term "intelligent automation" is used by the financial services industry to point to the intelligent digital workforce. IDC Financial Insights' Intelligent Digital Workforce comprises intelligent digital workers — essentially software robots that can perform both deterministic and nondeterministic tasks by continuously capturing, understanding, and analyzing both structured and unstructured data. They represent both rules- and judgement-based automation.

#### Key Takeaways

- Choose an RPA and intelligent automation service provider based on six key capabilities — ability to deliver desired business outcomes; process identification and optimization; ability to deliver enterprisewide scale; security, governance, and post-deployment support as the core tenets; intelligence powered by AI technologies and innovative tools; and availability of talent and strong ecosystem support — to achieve more favorable, scalable, and sustainable results.
- By 2022, IDC Financial Insights expects that 75% of tier 1 Asia/Pacific banks and insurance companies will deploy intelligent automation solutions at scale to achieve an exceptional business value and deliver a more real-time and contextual customer experience.

#### Recommended Actions

- Create a well-defined automation strategy and secure management sponsorship.
- Redesign and optimize processes to increase automation potential.
- Change management is critical for the success of any automation project.
- Institutions must carefully evaluate how the selected service provider and its solutions can fundamentally solve their business problems and optimally support them in achieving hyperscale and hyperperformance with automation.
- As the new approach to intelligent automation takes hold, the institution will create demand for new roles and skills and must also be ready for an unprecedented level of reskilling.

Source: IDC, 2020

## IN THIS EXCERPT

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The content for this excerpt was taken directly from "IDC Perspective: Six Capabilities from Leading RPA Service Providers That Advance Financial Services Institutions Toward Intelligent Automation" (Doc #AP45867520). All or parts of the following sections are included in this excerpt: Situation Overview, Vendor Profile, Advice for the Technology Buyer, and Learn More.

## SITUATION OVERVIEW

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IDC Financial Insights continues its series of reports on automation and artificial intelligence (AI) in financial services. This report is fourth in the series, where we start by looking at robotic process automation (RPA) and how the proposition around it has steadily moved toward intelligent automation and leveraging an intelligent digital workforce. RPA has often been cited as the essential first step toward automation, but we believe it could be more accurately described as part of a continuum of technology-enabled initiatives that brings intelligence into the automation of business processes. IDC Financial Insights defines this continuum of technology-based initiatives focused on process automation as the "Automation Continuum." This continuum also underscores a notable evolution of demand and capabilities toward an intelligent digital workforce from the rules-based digital workforce.

Although we expect to see most of the traction and advancement (in terms of currency) toward intelligent automation from leading financial services institutions (FSIs) in Asia/Pacific (excluding Japan) (APEJ), we will also see a compelling growth in demand from small to midsize institutions that are about to take their first step in embracing digital workforce solutions. In our opinion, the markets to watch out for both intelligent and digital workforce solutions in APEJ are Australia, Singapore, India, China, Hong Kong, South Korea, Thailand, Malaysia, Indonesia, and the Philippines. These markets are hotspots for various digital trends, driving institutions to invest in everything digital to increase business growth, enhance customer engagement, and improve operational efficiencies. As per our definition, FSIs include banks, insurance companies, and securities and investment services firms.

Even as the adoption of RPA and intelligent automation gained significant momentum in 2019, many FSIs were not able to scale their automation deployments. Moreover, many early adopters that tried to infuse intelligence with cognitive/AI technologies and innovative tools in automation did not see the value they expected from their intelligent automation initiatives. The purpose of this IDC Perspective is to support Asia/Pacific FSIs in their automation journey by addressing their key challenges and assisting them, especially in their vendor selection exercise, by identifying and analyzing the key capabilities of a good intelligent automation service provider. This report also presents the profiles of eight service providers that provide intelligent automation offerings in the region for the financial services industry. The report focuses on the unique propositions of their key capabilities and their resolve to deliver an end-to-end intelligent automation to their clients. We address the following five questions:

- What is intelligent automation and intelligent digital workforce?
- What are the key trends and market developments in the automation market in 2020?
- What are the key capabilities of a good intelligent automation service provider?
- Who are the key service providers in this region and what are their unique capabilities?
- What are the key considerations for Asia/Pacific FSIs when they embark on and/or advance in their automation journey?

## Defining Intelligent Digital Workforce

The financial services industry in Asia/Pacific is now keen to pursue intelligent automation and the deployment of an intelligent digital workforce to help them deliver better customer engagement and experience while improving operational efficiencies, increasing employee productivity and morale, and ensuring robust security, governance, and compliance.

What is digital workforce in financial services? Broadly defined, IDC Financial Insights' Digital Workforce comprises digital workers — essentially software robots that, when initiated at predefined times or triggered by an external event, can automatically execute deterministic, repetitive, standardized, high-volume, and rules-based tasks by capturing and analyzing structured data and working across several interoperable systems (such as applications and other technologies). The term "RPA" is also used by the industry to point to the digital workforce. Treated like their human counterparts, the digital workers are assigned separate IDs and passwords to sign in to company applications to complete their allocated tasks. We have seen examples of banks and insurance companies that are anthropomorphizing their digital workers (making them more human-like) by naming them and making them accountable for security and governance purposes. For example, Singapore's OCBC Bank in 2017 named its first digital workers "Bob" and "Zac." Other examples include "Amy" and "Eve" at UOB Bank (Singapore), and "Alex" at AXA Affin General Insurance (Malaysia). Some of the tasks performed by digital workers in financial services include billings and collections, loans processing, credit card applications processing, performance and financial reporting, insurance claims handling, and policy administration and servicing.

The digital workers help to significantly reduce the turnaround time to complete a process. Early indicators point to a reduction of 50–90% (see *Robotic Process Automation in Asia/Pacific Financial Services: Key Learnings from 10 Early Adopters*, IDC #AP43545718, February 2018, for more benefits for Asia/Pacific financial services). Employees are freed up from mundane tasks, allowing them to focus on more critical initiatives that require judgement and complex decision-making. For example, it allows them to focus more on improving customer engagement or engaging in business development. Deploying a digital workforce helps improve employee morale by awarding more enriching and rewarding jobs to human employees. The digital workforce may also be viewed as a preemptive action considering the future workforce, as there seems to be little to no inclination from younger talent to do mundane, repetitive tasks that can be easily executed with the help of technology. It is important to note that these digital workers can exist in both attended and unattended forms and can be delivered on-premise, on the cloud, or in a hybrid model.

But what is the intelligent digital workforce? IDC Financial Insights' Intelligent Digital Workforce comprises intelligent digital workers — essentially software robots that can perform both deterministic and nondeterministic tasks by continuously understanding, capturing, and analyzing both structured and unstructured data. They represent both rules and judgement-based automation, and, like their human counterparts, they are both self-learning and self-healing workers that can discover patterns to predict decisions and even offer recommendations to improve them. In other words, the intelligent digital workforce is progressively graduating from merely mimicking human actions to augmenting human intelligence, as well as evolving quickly to achieve the potential of autonomously emulating this intelligence.

The term "intelligent automation" is also used by the industry to point to the intelligent digital workforce. This workforce has the potential of delivering meaningful customer service and support, improved decision making, and valuable customer insights. Some of the key enabling technologies for intelligent

digital workforce solutions are business rules management software, event-streaming processing software (process mining and insights software and stream processing software), capture software, process-centric application platforms, RPA, event-driven middleware, integration software (API management software and integration platforms), predictive analytics, business process management, workflow management, content management, AI, and data management. Additionally, IDC defines cognitive/artificial intelligence, or AI, as systems that learn, reason, and self-correct. The system hypothesizes and formulates possible answers based on available evidence, can be trained through the ingestion of vast amounts of content, and automatically adapts and learns from its mistakes and failures. Some of the technology components of cognitive/AI include machine learning, or ML (both supervised and unsupervised machine learning), natural language processing (NLP), Q&A processing, dialogue-based interactions, natural language generation, structured data analysis, speech recognition, and visual processing.

It is worth noting that although RPA is compatible with many other technologies within intelligent automation, it can also compete with these technologies. For example, some FSIs have now started to evaluate APIs and compare their benefits and challenges with the RPA software. Another point to note is that before we get to a future state where the use of AI is more pragmatic, responsible, and customer-centric, there are many considerations that need to be addressed, such as customer consent, data quality, biases, ethics, and security, to realize its truly transformational results. Even though there is still time before we experience that state of truly autonomous, ethical, and infallible AI (see *Many Things from the Shiny New Thing: 20 Early Adopters of Artificial Intelligence in Asia/Pacific Financial Services*, IDC #AP43052218, October 2019), there is a burgeoning interest from FSIs to understand and experience how AI can help them to deliver exceptional business value, enhance customer engagement, and create new products and services.

## Key Trends and Market Developments

IDC Financial Insights expects to see huge changes and developments in the financial services industry in APEJ in 2020, especially in terms of rapidly growing demand for intelligent automation and AI; the focus on achieving scale; the deployment of hybrid and flexible workforce; changing organizational structures with a demand for new roles and skills; and increasing efforts in retaining and building automation talent. Based on our various discussions with FSIs and leading players in the market, we list below some noteworthy trends and market developments that are shaping the automation market in Asia/Pacific:

- **Intelligent automation is gaining both recognition and currency.** FSIs are now, more than ever, interested to bring in intelligence to the automation of their business processes with a combination and integration of technologies such as RPA, cognitive capture, AI technologies, chatbots, and analytics. These institutions want to act on both structured and unstructured data to generate data-driven insights, achieve operational efficiencies, and deliver a more personalized customer experience. The financial services industry has already started to see significant value from intelligent automation and will continue to invest in suitable use cases. The automation story is also moving beyond just achieving financial benefits to also deriving nonfinancial ones, including the invaluable benefits of increased customer centricity and improved employee morale. The use of AI will also circumvent low-code methods to make the adoption of intelligent automation easier for nontechnical business users. This trend also highlights that the ecosystem partnerships and innovation will further accelerate to deliver favorable outcomes for clients.
- **Achieving scale will be a key priority in 2020.** Institutions are agreeing that approaching RPA and intelligent automation tactically with only lead to limited results. The objective is to scale

automation strategically throughout the enterprise to generate value for the business and customers. As very few organizations have been able to scale in the region until now, there will be a bigger drive from many leaders to scale their automation initiatives in 2020. This will also necessitate tackling key automation challenges, as well as designing new business models, delivery models, and products and services. Another point to note here is that how you define scale is also very subjective: some define it by number of robots, while some define it by number of automated tasks and processes. Although the definition of scale will depend on many factors, including the institution's size, its organization structure, and the automation potential, our conversations with leaders of FSIs underscore that an institution might not want to limit its thinking to whether it has achieved scale or not; it must continue to automate as long as there is a business value to be realized.

- **The adoption of RPA on the cloud will accelerate.** IDC Financial Insights anticipates an era of accelerated cloud adoption for the financial services industry, especially banking in the Asia/Pacific, in the next few years. A confluence of positive factors has led this to development, primarily, the greater willingness by banks to take on various models of cloud (private, public, and hybrid), increased regulatory clarity on cloud use by banks, and the sheer growth of requirements of banks (compute, storage, networking, and application workloads) that inevitably call for cloud. The institutions today want to have the ability to make deployment model choices, as well as to achieve consistency in how these models enable how automation and AI solutions are built, tested, deployed, and managed. This availability of choices will impact adoption decisions in 2020 and beyond. "Automation as a service" within an institution would lead to a more efficient and effective business transformation model. Therefore, many automation and AI players are going after the cloud-based automation opportunity. We also expect increasing deployments of RPA and intelligent automation on the cloud to reduce total cost of ownership (TCO), as well as offer usability, agility, and scalability. As per our *Worldwide and Regional Public IT Cloud Services Forecast, 2019-2023*, public cloud platforms have become the primary launchpads for digital technology innovations, including automation and AI, security, digital infrastructure, data services, and more. The developers seeking access to the latest IT innovations are likely to find them on one or more of the major public cloud platforms. In fact, many intelligent automation products have now re-engineered to support a cloud-native architecture.
- **Process and task mining will proliferate.** Process mining and discovery features identify and recommend processes that are suitable for automation with a higher probability of delivering targeted business results. Process mining can also help by identifying how to restructure the processes. The leading institutions are also utilizing AI-enabled process mining and discovery to track, record, monitor, and finalize automation candidates. Along with process mining, institutions will also use task mining to monitor and evaluate the performance of their workforce.
- **Demand for new automation roles will continue.** Now this is big. As FSIs expand their automation to multiple teams and take an enterprisewide approach, we will see the rise of new formal roles, such as Executive Sponsor, Automation Change Manager, Automation Program Manager, Agile Product Owners, Scrum Masters, Automation Process Analyst, Automation Trainer, Automation Developer, Head of Intelligent Automation Center of Excellence (COE), and even Chief Automation Officer. These roles will be visible especially in FSIs that are serious about achieving significant business value from their automation strategy.
- **There will be more focus on upskilling and reskilling talent.** A shortage of automation and AI talent plagues the Asia/Pacific region. Moreover, institutions are now keen to broaden their employees' skill sets and investing in upskilling and reskilling them to lead and manage their automation deployments. Automation initiatives require a lot of domain and process experts

and therefore, it becomes key for institutions to encourage their talent to upskill and reskill themselves. Apart from software vendors, many service providers are now offering trainings, certifications, and specialized programs in various formats to build up automation and related skills for business users, IT staff, and developers within their client organizations. They are also setting up many initiatives to train, upskill, and reskill their own employees to deal with the exponential growth in their automation business. Leading service providers are also partnering with universities to accelerate the availability and competency of this talent. We also believe that the fresh new talent with good digital and automation skills entering the market will also accelerate the adoption of automation.

- **Attended automation will make significant inroads into the front office in 2020.** FSIs that are placed high on the digital transformation index have started to invest more in automating front-office processes. Attended automation can help the front-office staff to deliver a real-time, seamless, and personalized customer experience. For example, attended bots can help the front-office staff to pull out a single view of the customer instantly to address the customer's queries and concerns in real time. Moreover, we believe that automation in its current form cannot completely replace human employees' judgment and decision making. A human in the loop and human oversight will remain critical in many current tasks and processes. Therefore, it may be prudent to focus on using automation and AI to augment human judgment via attended automation. Some of the use cases for attended automation are customer onboarding, customer service, claims processing, policy servicing, loan origination, know your customer (KYC) and anti-money laundering (AML) checks, fraud investigation, transaction verification and execution, and daily P&L reporting.
- **Multivendor strategy will gain more prominence in 2020.** There is a growing inclination among institutions to work with more than one vendor for their different automation needs and a multitude of reasons, including the growing demand for more intelligent automation offerings and key capabilities, the need to reduce concentration risk on a single vendor, and the desire for better licensing terms. However, exceptions may exist here. This inclination would also drive increased partnerships and reliance on service providers, which will work with various vendors to deliver an end-to-end integrated and intelligent automation at scale. Based on their client needs and business problems, the service providers will play an important role in recommending suitable solutions to their clients from among various tools and solutions available in the market.
- **Market consolidation will continue.** The market is overcrowding following quick advances in the demand for automation, the convergence of various tools and disciplines, and the emergence of new automation vendors and service providers. In November 2019, Microsoft renamed Microsoft Flow into Power Automate, added RPA features to it, and launched Power Virtual Agents. Micro Focus also launched an RPA product in July 2019 to help its clients build, secure, and scale automated business processes. IDC Financial Insights believes that this overcrowding will lead to more mergers and acquisitions in the automation space (for both software and services players) in the next two to three years. Since 2018, we have seen some notable acquisitions, including:
  - ABBYY acquired TimelinePI, a comprehensive process intelligence platform provider
  - Appian acquired Novayre Solutions SL, a developer of the Jidoka RPA platform
  - Automation Anywhere acquired Klevops, a workflow provider
  - Blue Prism acquired Thoughtonomy, a cloud-based RPA provider
  - Kofax acquired Nuance Document Imaging, a division of Nuance Communications
  - Nintex acquired EnableSoft, an RPA software company
  - Pegasystems acquired In The Chat, a digital messaging platform provider
  - SAP acquired Contextor, an RPA software company

- Sykes acquired Symphony, an RPA service provider
- UiPath acquired ProcessGold (Process Mining), StepShot (Process Documentation), and Smart Data (Capture Software)
- **Reusability is speeding up automation.** Many service providers are helping their FSI clients to speed up the time to realize business value and avoid a redundancy of resources by leveraging reusable components. The reusable components, such as templated use cases and preconfigured bots that connect with several applications, will help institutions to accelerate the delivery life cycle, achieve scalability with speed, and reduce the cost of automation. These reusable components also address the demand for vertical- and function-specific offerings for automating vertical and functional processes. Breaking down the operating silos and making reusable components available across the organization will also help realize these benefits rapidly.

## The Six Key Capabilities of an Intelligent Automation Service Provider

IDC Financial Insights highlights that FSIs, which choose an intelligent automation service provider based on the below-listed capabilities, typically achieve more favorable and long-term results from their automation deployments.

### *Ability to Deliver Desired Business Outcomes*

Before an institution embarks and advances in its automation journey, it must begin by identifying a business problem or a business goal in mind. As per our recent conversations with some of the leading FSIs in the region, the top 3 current priorities and goals for deploying automation tools and solutions are improving operational efficiencies, reducing costs, and enhancing customer experience. Other key priorities are driving higher revenue growth, building capabilities for the future, improving employee productivity and satisfaction, and complying with the new or existing regulations (see IDC's *Intelligent Automation Services Buyer Perception Survey, 2019*). This survey also highlighted that the ability to deliver desired outcomes is one of the most critical factors for identifying a suitable automation service provider and ensuring the success of the overall engagement. Therefore, it is key for FSIs to select and work with partners that can deliver their desired business outcomes. The partner must be able to design and deliver on an end-to-end automation vision and strategy to achieve optimal results.

Based on its clients' priorities, the automation service provider will create a target operating model (TOM), which will include an automation framework, expected ROI and other benefits, identified risks and costs gaps, defined roles and responsibilities, and risk management and governance structure, among other things. The model should also emphasize future scalability enablement and facilitation. The service provider must demonstrate a combination of domain knowledge, industry insights, and technical capabilities, as well as offer the entire stack of RPA and intelligent automation services. Additionally, it must provide functional and vertical-specific solutions. The service provider should ensure an appropriate integration and collaboration with the client team and showcase the ability to meet client-developed project timelines and expected ROI, apply proven methodologies/tools, integrate intelligent automation solutions with the client's existing IT environment, handle changes in the project scope, and deliver reliable, accurate, and trustworthy bots. Overall, the partner must be able to support the clients through their entire journey, including discovery (e.g., defining the problem statement, initial process analysis, selection of automation candidates, selection of solutions), process management and optimization, and automation implementation (e.g., decisions about tools and technologies, POCs, and pilots). The service provider must also be able to showcase its innovation by highlighting how it transfers the innovation to its clients via innovative service delivery, the quality and

depth of thought leadership the firm generates, and the ability to bring ROI models to the table to support the business case for RPA and intelligent automation adoption.

### ***Process Identification and Optimization***

One of the primary challenges in getting started with automation is identifying the right tasks and processes to automate. Initial results and subsequent investments are highly dependent on automating the right processes. RPA, especially in its first stages, is best deployed in business processes that are standardized, rules-based, and high-volume and can be used for POCs. Once you have identified the right processes to automate, we recommend refraining from trying to automate everything at once. Choose the quick wins first and move forward toward more automation opportunities. We recommend that the institutions must also create a long-term plan to build a process catalogue consolidating the existing process documentation in the organization, together with top-down suggestions and bottom-up feedback to identify opportunities. Using their various proprietary use case frameworks, modelling templates, and process discovery workshops, the service providers will help their clients by assessing processes, studying automation opportunities, creating a process prioritization matrix, identifying bottlenecks and gaps, and determining expected ROI and other benefits. The process prioritization framework will be based on the levels of complexity, benefits, effort, and readiness of process owners.

The second important point is about process redesigning and optimization. IDC Financial Insights highlights that only a few processes can be automated in their present state, and that most of the processes must be redesigned and optimized to make them suitable for automation. Most of the automation deployments in the last two years in the region have been for "as-is task/process." The process excellence mindset is either missing or intentionally deferred to a future date by most of the institutions. On an average, only 10–20% of processes are redesigned and optimized by the leading adopters in APEJ. Although institutions do agree that process transformation and optimization will bring them real significant value, most of the deployments have been undertaken without taking this exercise for various reasons. One of them is mounting pressure on the teams to showcase business value rather quickly with RPA. However, we do believe that it is very important to redesign, re-engineer, and streamline processes through various methodologies and tools such as Lean, Six Sigma, and business process re-engineering (BPR). In the next two to three years, we will see greater realization among FSIs to undertake process redesigning and optimization. It is also worth noting that process redesigning, at least in the short term, can also constrain the extent of automation in the process. Systemic enhancements are a long-drawn process, especially when they cause disruptions to core systems and result in significant efforts and costs. Therefore, these enhancements usually get restricted to large-scale implementation initiatives.

Institutions must deal with many complex issues, including capturing, storing, and analyzing semi-structured and unstructured data to truly achieve end-to-end process automation. Consequently, a huge number of business processes are usually not considered feasible, especially in the early stages of automation maturity. We also believe that the availability of reusable bots and components, functional- and vertical-specific offerings, and process mining and discovery features by the service provider will further shorten the time to realize business value. Process mining and discovery can also help identify tasks that are ripe for automation. We also expect to see more software vendors and service providers to leverage advanced process mining and discovery features in their solutions in 2020. Currently, there are many AI-based process mining and discovery tools in the market, which enable users to track, collect, record, monitor, and facilitate automation by itself.



## ***Ability to Deliver Enterprisewide Scale***

To be sure, most Asia/Pacific FSI have implemented automation projects in a couple of business units only — an enterprisewide approach is still missing. Most FSIs have implemented less than 15 processes, some even less than 15 tasks. Currently, less than 10% of FSIs could be considered to have achieved scale. However, we saw more and more institutions agreeing in 2019 that a piecemeal approach to automation will only accrue limited results, and in some cases, even outright failure. This acceptance has encouraged management and teams to expand automation deployments from a single team or few teams to an enterprisewide scale across the organization in 2020 and beyond. We also highlight that there is a massive change in the perception of the capabilities of RPA and intelligent automation tools and services within the last two years. It is, therefore, critical that your service provider should be able to help you achieve significant business and customer value by deploying automation at scale. We also believe that RPA and intelligent automation offerings on the cloud will accelerate the speed of accomplishing scale and democratize these capabilities within the institutions. The reusable components will also speed up and reduce the cost of automation.

In the next two years, we will see more investments from FSIs in establishing COEs to drive and communicate best practices in automation and enable more robust management and control, security and audit, and overall governance and maintenance of the intelligent digital workforce. The COE must focus on the vision and best practices for the operating model, talent management, delivery management, knowledge management, vendor and contract management, and innovation. It must include all key stakeholders and ensure cross-functional collaboration. The establishment of dedicated COEs will also make it easier for institutions to address regulatory compliance challenges in the region. Based on their requirements and needs, institutions will choose how to structure their COEs: centralized, federated, and, in some cases, even decentralized models.

To achieve scale, it is also essential that you can secure executive commitment and sponsorship within the institution. Many early adopters have now recognized the need to identify "Automation Champions" to secure support from the management, business, and IT teams and therefore the success of their deployments. We will also see more institutions disintegrate their internal silos and focus on change management and upskilling and reskilling to achieve an enterprisewide scale. Focusing on top-down concerted communications and involving the stakeholders early for their relevant parts of the project with defined roles and responsibilities will help with organizational change management.

## ***Security, Governance, and Post-Deployment Support as the Core Tenets***

The mere utterance of the terms "robots" and "artificial intelligence" in any meeting is enough to raise unrelenting questions about security and governance, including concerns about securing customers and their data and even the institution itself against rogue automation. Contrary to popular belief, robots improve the accuracy, consistency, and security in transactions and processes. They do not commit human-like errors and they operate within well-defined rules. The use of robots guarantees better compliance with higher due diligence and precision. With the new regulatory compliance mandates that focus on the governance of business processes, there is also a strong, supportive view of how a digital workforce can ease compliance for institutions. However, all these statements and opinions are based on an underlying assumption that institutions can ensure stricter security and governance controls to secure the automation from bad internal and external actors — basically, that the machines work as planned and these actors do not influence them for their own advantage.

Our advancement toward a more digital world and digital workforce fundamentally requires that we start treating our digital workers like our human employees. That is, digital workers must be accountable and responsible for their actions and, therefore, all security parameters including access, control, and auditability must apply to them as well. To support this viewpoint, an automation solution must ensure that the client has granular role-based access, control, and management across all key aspects of the solution. The role-based access approach guarantees that only authorized users can access sensitive data and/or execute bots and provides a secure and effective way for an institution to manage its digital workforce. To achieve auditability and traceability, the solution must track changes made to a bot, data, system, and user's permissions. These logs will not only help identify errors and bottlenecks in the automation process but also detect fraud or misuse by bad actors.

Post deployment, some institutions can face issues, such as unavailability of talent and skills, evolving capabilities of tools, IT change management issues and frequent upgrades, timely access to infrastructure and applications, and interdependencies of the systems. It also then becomes necessary to combine your resources with that of your service provider to deal with these issues quickly and efficiently. To address these issues and promote the success of their automation deployments, early adopters are leveraging agile development methodology, which ensures that the scrum teams can develop and test RPA and intelligent automation in quick and repetitive cycles. Early adopters have created Agile squads in partnership with their services partners and vendors and secure a high degree of collaboration between operations, technology, sourcing, infrastructure, and other teams. The quick and constant feedback from the users is also critical for the development team to make adjustments and keep the objectives of the project intact throughout the development and testing cycles. Early adopters also include a long hypercare phase so as to have an incident tracking framework and root cause/feedback loop for framework improvement and preventive actions. This allows them to guarantee quality assurance, stabilize the systems and proceed in a structured manner, as well as accelerate the speed of automation afterward. A well-defined governance structure will ensure that there are continuous review meetings and audits, real-time operations monitoring and intelligence, and centralized reporting. The institutions must also make sure that benefits are measured, reported, and realized as projected. This can also be executed by developing robots to measure the performance of other robots. The governance structure will also highlight escalation paths and reporting relationships.

### ***Intelligence Powered by AI Technologies and Innovative Tools***

Most of the deployments in Asia/Pacific institutions until now are at the basic level of automation, which is not at all a bad thing for a start. Based on our recent survey, less than 10% of the total automated use cases are for intelligent automation, which necessitates the use of intelligence powered by AI technologies and innovative tools. However, we are steadily advancing toward a state where the use of intelligent robots will be more common and the efficient automation of more complex, non-standardized, and less repetitive tasks will be possible. Institutions will need to consider a holistic approach, where RPA, intelligent automation, and AI will combine with other innovative tools and technologies to deliver exceptional business value and superior customer and employee experience. In the next two to three years, we will see more service providers supporting and encouraging the advancement of their clients toward more intelligent automation deployments. We will soon see more intelligent robots in FSIs in the form of intelligent robo-advisors, intelligent chatbots, and virtual agents that are self-learning and self-adapting and offer intelligent assistance and advisory services to improve customer retention and loyalty. IDC Financial Insights expects that these intelligent automation offerings will also accelerate how AI is consumed within financial services.

Currently, unstructured data amounts to approximately 80% of the total data found in an institution. With its ability to deal with various types of data (both structured and unstructured) from multiple and disparate sources, the intelligent automation solutions can recommend, design, and launch on-demand usage-based products that align with current market expectations. Today, most of the leading solutions in the market have added and integrated AI technologies such as ML, NLP, and machine vision. One area where FSIs are seeing improved results is intelligent document processing. For example, many FSIs have already invested in automating invoice processing and insurance claims processing. In 2019, we also saw institutions utilizing intelligent document processing for credit card applications, mortgage applications, remittance processing, collateral documents, customer and corporate agreements, and account maintenance–related legal documents. Some other tasks and processes where intelligent automation is being increasingly considered are procure to pay (invoice processing, as also mentioned earlier), order to cash, record to report, customer onboarding and service, KYC and AML, check processing, loan origination, insurance underwriting, compliance, financial reporting, contract management, vendor and partner onboarding, and employee onboarding. Despite the promises and potential of intelligent automation, only few organizations have been able to advance their journey due to issues such as lack of understanding of the capabilities of intelligent automation and AI; technical and integration complexities; commercial infeasibility; strict and short timelines; a huge amount of time required to train the models; non-availability, inaccessibility, and inadequate quality of data (including shortage of model training data), data privacy and compliance requirements, and lack of technical infrastructure, among other things. For more details on these challenges, please refer to our report, *Many Things from the Shiny New Thing: 20 Early Adopters of Artificial Intelligence in Asia/Pacific Financial Services* (IDC #AP43052218, October 2019). Additionally, the convergence of automation technologies, especially AI with other technologies such as big data, IoT, and blockchain, can also deliver transformational results for FSIs. However, it can be a complicated and time-consuming process to achieve these results.

### ***Availability of Talent and Strong Ecosystem Support***

Finding the right automation talent is a challenge in Asia/Pacific. The upsurge in the interest and adoption of automation in many industries in the region has resulted in a shortage of skilled resources. The demand for these resources has far surpassed the supply. IDC believes that the success of an automation project is measured by how well an implementation service provider manages the quality of its resources and staff turnover during a project's lifetime. The success is also measured, in part, by the headcount, as well as the breadth of skills the service provider has in its automation practice. The leading service providers are training their current resources on various automation tools through their specialized learning and training programs. It is also essential for institutions to evaluate how these service providers can help their employees to build these relevant skills and capabilities to lead and manage their automation deployments.

We believe that the strength and depth of the support extended by the ecosystem will be one of the key differentiating factors that will drive the demand for one automation service solution over another. Like any other ecosystem, the most important component of the automation ecosystem is partners, which offer related services and technologies that complement the features and functionalities of the solutions. It is necessary for institutions to evaluate now the overall ecosystem of the shortlisted service providers in their vendor selection process. The service providers will continue to form alliances and partnerships with various RPA and intelligent automation software vendors, as well as third-party vendors (e.g., optical character recognition [OCR], ML, AI, NLP, analytics, process mining) to enhance their solutions' capabilities. We are also seeing leading AI platform vendors such as Google, IBM, and Microsoft undertaking partnerships with intelligent automation vendors as they

develop their own cognitive/AI-enabled process automation capabilities. IDC expects that these efforts and partnerships will accelerate throughout 2020 and beyond.

## Ready Propositions for an Intelligent Automation Solution

IDC Financial Insights' research on various automation projects in the Asia/Pacific region shows that the institutions in the region are choosing automation service providers based on their key offerings and capabilities, demonstrated vertical and function-specific use cases, local references, pricing terms, and the availability of talent and local support. In this Excerpt, we look at the proposition of Avanade, one of the eight players that offers intelligent automation solutions for the financial services industry in Asia/Pacific.

### *Avanade*

Avanade is one of the leading providers of innovative digital and cloud services, business solutions, and design-led experiences. It was founded by Accenture LLP and Microsoft Corporation in 2000. Avanade's intelligent automation proposition brings together RPA, cognitive services, and ML with conversational virtual agents to intelligently automate business processes with a virtual workforce. These automated processes leverage foundational technologies from Microsoft and other partners that support workflow, analytics, "smart" APIs, and business applications such as Dynamics 365. Over the last three years, Avanade has automated more than 800 processes and deployed over 300 bots for its financial services clients in the Asia/Pacific region. The company works with some of the leading banks and insurance companies in the region.

- **Ability to deliver desired business outcomes.** Avanade believes in an end-to-end automation view with a focus on a human-centered approach that it co-creates with its clients. By introducing co-creation to the life cycle, it builds processes together with the client, while maintaining a firm focus on enabling and reskilling the client's workforce to deploy or monitor their digital workforce. Avanade offers proprietary tools and assets to its clients to focus on business value realization. The company implements the desired target operational model to set up the foundations to enable successful and scalable automation. It applies its COE framework and methodology to help clients identify the level of complexity to automate, track expected benefits from their automation journey, and apply this methodology to scale to run more than 100 or 1,000 robots. Avanade conducts a production proof-of-value with which the client can confirm the ROI, educate team members, and verify the architecture's performance, scalability, and reusability. The COE becomes the focus for the RPA infrastructure, change management, security and scalability, support and execution, and IT governance. Change management is steeped in Avanade's methodology; it recognizes the need to analyze the jobs affected by RPA, including how to account for both formal and informal job functions, how to migrate from flexible to rigid processes, how to set expectations for results that may take months to show, and how to address legal, social, and other RPA implications.
- **Process identification and optimization.** Avanade collaborates with the client to select the potential and target processes. It leverages its Heat Map to first identify which business units, business owners, and processes to target. It utilizes its Automation Advisory to record the steps and actions being taken on a specific target process or task. It then takes an elevated view of the map and applies it to capture keystrokes and uses its business value realization tool to correlate the business value expected from automating that process. Subsequently, Avanade creates a Discovery Matrix (process automation viability) to map complexity against business impact, where the process with the highest business impact with the lowest complexity will be prioritized. It also defines business and technology requirements and designs the future automated state of the process. Avanade also uses process re-engineering

as a prelude to automation and streamlines and eliminates redundant tasks during the design phase. For large business process re-engineering initiatives, the company recommends its clients to engage Avanade in the early stages of their automation journey.

- **Ability to deliver enterprisewide scale.** Avanade uses Microsoft-based automation tools to establish a highly secure and scalable RPA infrastructure and deploy a virtualized workforce that can mimic the actions of a human. It believes that RPA should be both scalable and resilient to make an optimal contribution to the clients. This requires an ability to allocate and manage workloads, communicate among digital workers, ensure business continuity, and respond to (and recover from) interruptions while executing process automation. The target operating model is how it takes on the COE approach, where the team analyzes the expected maturity, vision, and guidelines and establishes the future operating model based on the Avanade COE Functional view. The company evaluates the client from these six different points of view: operating model, talent management, delivery management, innovation, knowledge management, and vendor and alliance management. It performs one assessment with the client and provides a score for each of those views, as well as recommend adjusting any gaps to move forward on the automation journey. It enables its clients to choose whether they want to build and maintain their COEs internally or have Avanade host them or use a combination of internal and external resources. Although some clients may prefer on-premises or hybrid cloud solutions for various reasons, Avanade encourages its clients to consider the cloud to facilitate RPA's ability to integrate new and intelligent technologies. An RPA solution with open cloud platforms (e.g., Microsoft Azure) can eliminate vendor lock-in and preserve clients' options as new technologies are introduced. Avanade also supports different structures of the COE model: centralized and federated, depending on its client needs.
- **Security, governance, and post-deployment support as the core tenets.** Avanade ensures that RPA is implemented with controls for 100% policy compliance with data and access security protocols. It has a design framework that Application Infrastructure Architecture & Solutions (AIAS)-compliant that enables the two-tier automation H model, allowing internet- and intranet-segregated bots/processes to talk to each other using a messaging queue. The designed internet bots are responsible for cognitive API calls and placing those calls in the queue for the intranet bots. In the build and test phase, the company automates the identification process using the RPA tool, testing to verify validation checkpoints (SIT), and verifying with end- users to agree on acceptance criteria (UAT). All test phases and test data are reviewed and agreed with the client, and UAT test planning/execution is performed by the client's key business users. Once approved, the automated processes are planned for deployment in production. UAT-tested processes are moved into production all at one go within a two-week time frame. It also offers critical care to deploy processes within 72 days to ensure stability. Its governance model includes addressing issues of business case validation, planning, due diligence, and change implementation, among other things. After go-live, Avanade manages the implemented bots and provides full visibility and transparency to manage, change to adapt to the new business requirements, and control the service-level agreement with a single source of truth. It offers ease of development and maintenance to ensure lean operations and a competitive TCO, which ultimately contributes to RPA's success as a strategic platform.
- **Intelligence powered by AI technologies and innovative tools.** Avanade takes a holistic approach to its intelligent automation methodology based on five main implementation phases: Discover (with Insight), Describe (with Impact), Co-Create (with Agility), Scale (with Excellence), and Sustain (with Improvement). Moreover, intelligent automation combines RPA with ML, cognitive services, virtual agents, and workflow automation, among many other technologies, with RPA. The role of these solutions is not only to improve process efficiency,

drive workplace productivity, and lower costs, but also to drive better employee and customer experiences. In addition to automating repetitive, high-volume tasks, Avanade also offers NLP engagement and interaction, intelligent tools to learn from employee behavior, and analytics-driven insights personalized for a specific customer. To integrate automation with AI and ML, Avanade trains and builds talent from both within and those in the client's organization. It scales automation delivery through training and Innovation Pods.

- **Availability of talent and strong ecosystem support.** Avanade applies its Future Workforce approach to implement workforce transformation programs: reimagining how and to where work is shifting, pivoting the workforce to create new forms of value, and scaling up 'new skilling' to enable people to work with machines. One of the examples of Avanade-developed training courses is Automation Hour Executive Workshop, which has three different modules for the client to choose from based on factors such as objectives, workshop participants/audience, level of interactivity, and desired outcomes. The three modules of Automation Hour are: (1) a hands-on approach designed to upskill employees, where they participate in a build a bot hackathon; (2) a demo-based approach, where Avanade shares examples of its work and best practices built for similar organizations from the same industry; and (3) a business-oriented approach designed for C-level executives to recognize the potential business value realization through automation. Additionally, Avanade is the first authorized training partner for Blue Prism and delivers support and training on Blue Prism RPA solutions. It provides training at highly scalable automation factories in its Global Advanced Technology Centers. These trainings are a blend of standard Blue Prism training courses and Avanade-developed training courses. Avanade also supports and designs "automation as a service" based on its clients' multivendor strategy. This enables the team to recommend the right platform for each client requirement.

## ADVICE FOR THE TECHNOLOGY BUYER

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RPA and intelligent automation will play a pivotal role in addressing business problems and goals in 2020. A new focus will be apparent among FSIs to derive unprecedented value for business, customers, and employees through a combination of automation and AI, by improving operational efficiencies, reducing costs, driving business growth, enhancing customer and employee engagement, and delivering contextual customer experience. In 2020, many FSIs in APEJ will also demonstrate their efforts to scale their automation deployments, or at least create a vision to do so. Moreover, the institutions will start to think about how to optimize their hybrid workforce — an optimal combination of digital workers and nondigital workers (i.e., human employees). We believe that the next two to three years will be crucial as more and more institutions appreciate the achievement of significant benefits with intelligent automation, more successful functional- and vertical-specific use cases are presented in the market, and more advanced features and propositions are made available by the software vendors and service providers. By 2022, IDC Financial Insights expects that 75% of tier 1 Asia/Pacific banks and insurance companies will deploy intelligent automation solutions at scale for increased automation, intelligent decision making, and improved operational efficiencies to achieve an exceptional business value and deliver a more real-time and contextual customer experience. We also believe that the intelligent automation solutions will significantly accelerate how cognitive/AI technologies are consumed within financial services.

Despite the hype and the curiosity that has led to a double-digit and even triple-digit growth for many vendors and service providers, we believe that it is important, now more than ever, to cut through the noise and paint a credible picture of the current market situation. Most of the automation deployments in Asia/Pacific FSIs currently lack scale: less than 10% of FSIs could be considered to have achieved

scale. A siloed, piecemeal approach to automation is still more common than an enterprisewide strategy. Moreover, only 10–20% of processes, on average, are redesigned and optimized by the leading adopters in the region. Additionally, less than 10% of the total use cases automated are for intelligent automation, which necessitates intelligence powered by AI technologies and other innovative tools. Many early adopters that tried to instill cognitive intelligence in the automation of their business processes have not been able to deliver steady and accurate results or justify ROI from these deployments due to many challenges. However, all these benchmarks also exemplify a massive untapped opportunity for the institutions, as well as for the vendors and service providers.

This IDC Financial Insights report tries to address these challenges by helping FSIs to identify and choose suitable RPA and intelligent automation service providers based on their key automation capabilities and, as a result, achieve successful and sustainable results from their automation initiatives. Even though most of the institutions may choose to spend more time and effort on choosing the most appropriate solution, it is important to note that the competence of a solution to deliver the best quality outcomes, advice, and decisions will also depend on the institutions' ability to address their own internal readiness for automation and AI. Institutions must understand that having cutting-edge technology, the best solutions, and skilled talent will not suffice to seal their success. They also need to put in effort and investments on fixing key challenges, including issues related to integration, security and governance, infrastructure readiness, and organizational structure and culture to expand the automation footprint within the organization. Moreover, we do believe that integrated intelligent automation will bring the next level of value addition, but to achieve this value, it is critical to break down the operating silos that are still quite prevalent within institutions.

## LEARN MORE

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### Related Research

- *Many Things from the Shiny New Thing: 20 Early Adopters of Artificial Intelligence in Asia/Pacific Financial Services* (IDC Financial Insights #AP43052218, October 2019)
- *Robotic Process Automation Game Changers Advance Financial Services Institutions Toward Intelligent Digital Workforce* (IDC Financial Insights #AP44597519, February 2019)
- *IDC FutureScape: Worldwide Financial Services 2019 Predictions – APEJ Implications* (IDC Financial Insights #AP43051118, January 2019)
- *Oh, How Things Have Changed: A Rethink of Cloud in Asia/Pacific Banking* (IDC Financial Insights #AP43050818, October 2018)

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