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Magic Quadrant for Robotic Process Automation

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Robotic process automation remains a popular software market for improving operational efficiency with tactical automation most often happening via screen scraping. This Magic Quadrant evaluates 15 enterprise RPA vendors to help you make the best choice for your organization's task automation needs.

Strategic Planning Assumptions

By 2024, 95% of RPA vendors will offer automation via both API and UI integration.

By 2024, 80% of enterprise customers who have deployed attended automation primarily on a desktop will pivot to wider UX covering web, mobile and voice interfaces.

Market Definition/Description

Gartner defines robotic process automation (RPA) as the software to automate tasks within business and IT processes via software scripts that emulate human interaction with the application user interface.

RPA is used across different business functions to perform tactical task automation.

RPA software enables a human process or task to be recorded or programmed into a software script.

This script can be deployed and executed into different runtimes. The runtime executable of the

deployed script is commonly referred to as a "bot." Scripts for bots can be developed by programming or by using low-code and no-code graphical user interfaces (GUIs) that are native to the RPA software platform.

As RPA products continue to evolve and develop, organizations should use this software to:

- **Move data in or out of application systems without human interaction:** Referred to as "unattended automation," the emphasis here is on straight-through task automation. Scripts are designed to replicate the actions of a person interacting with those systems or documents, which usually do not have available APIs. Typically, unattended automation is triggered by a system and bots executed on a server.

- **Automate tasks with a human in the loop:** Referred to as "attended automation," RPA software can extract information from systems and related documents, shaping it and preparing it for consumption by the human worker at the point of need. Typically, attended automation is triggered by a human agent and bots executed on a local device.

Several personas may use RPA software including:

- Business technologists (citizen developers)

- Software engineers (technical developers)

- Business end users of control panels (orchestrators)

- Business process experts (process designers)

- Bot administrators

- IT infrastructure support engineers

- Automation center of excellence (COE) leads

Mandatory capabilities of enterprise RPA platforms are:

- Ability to integrate with enterprise applications via UI interactions

- Support for script development with standard programming languages or vendor-specific, low-code representations (including graphical development)

- Ability to record a task and convert it into a script that can be deployed

- Support for both attended and unattended automation

- Ability to orchestrate and administer users, scripts and the runtime, including configuration, monitoring and security

Optional capabilities of RPA platforms include:

- Augmented citizen developer capabilities: Built-in, AI-driven smart workflow development with guided navigation or chatbot-assisted features

- Task mining and discovery features

- Autogeneration of workflows via task mining

- Intelligent document processing (IDP) features such as image capture, classifications and model training

- API connectors including HTTP/REST, SOAP, Open APIs and others

- A low-code user experience (UX) for building GUI front ends for bots

Gartner's view of the market is focused on transformational technologies or approaches delivering on

the needs of end users. It is not focused on the market as it is today. In this Magic Quadrant, we evaluate providers of RPA software products, not service providers that use RPA capabilities licensed from another vendor.

Magic Quadrant

Figure 1: Magic Quadrant for Robotic Process Automation

Source: Gartner (July 2022)

Vendor Strengths and Cautions

Appian

Appian is a Visionary in this Magic Quadrant. Its product, Appian RPA, focuses on augmenting and interacting with sophisticated processes, such as those involved in end-to-end case management. It also offers a low-code application platform, rich multiexperience capabilities, process mining, business process automation and decision automation. Appian RPA runs as a cloud service.

Appian has geographically distributed operations, and its customers tend to be large enterprises. Its RPA product roadmap includes additional low-code development capabilities, an improved task recorder and tighter integration into the Appian suite.

Strengths

- **Product Portfolio:** Appian's platform focuses on business process automation and other high-value applications that require sophisticated rules and analytics. Its differentiating RPA features include full-stack automation capabilities such as automation planning, prebuilt integration with various AI/ML services (for example, image recognition and autoML), workflow orchestration and end-to-end life cycle support for DevOps.

- **Overall Viability:** Appian has a large ecosystem of customers and implementation partners, along with a feature-rich product designed to meet large enterprise process automation requirements. Its RPA tool is integrated with its low-code application platform and its business process automation platform to deliver end-to-end automation.

- **Market Understanding:** With its 2021 acquisition of process mining vendor, Lana Labs, Appian has further bolstered its goal of becoming a full-suite process automation platform. By combining RPA with IDP, process mining, LCAP, and BPA, Appian provides a full-featured platform that can meet the needs of a wide range of buyers with varying levels of hyperautomation maturity.

Cautions

- **Price to Value:** Appian's platform is primarily aimed at large-scale transformations within global enterprises, which can be quite complex and create a heavy application footprint. Customers that are focused on relatively small, targeted use cases may prefer simpler, more cost-effective RPA tools. Appian's RPA pricing model changed in 2022 to offer bot-based pricing and as a stand-alone SKU from the larger BPA platform. Yet some buyers have indicated that Appian's RPA licenses were more expensive than some of the other options.

- **RPA Focus:** Appian has low visibility in the RPA market compared to other established vendors. Appian's strong narrative around its BPA and low-code platform overshadows its RPA offering. Until recently, buyers could only access Appian RPA as an add-on to the Appian platform. While Appian has changed this policy to allow new customers to buy access to Appian bots directly, new RPA buyers should compare the cost and value of Appian to that of pure-play RPA vendor offerings.

- **Product Features:** Appian does not support an on-premises orchestrator, but this feature is on its product roadmap. Although Appian has its own process discovery solution, it does not yet autogenerate RPA workflows from task mining actions. Some of Gartner's customers have indicated that the design experience of Appian's RPA lacks the rich functionality of its main BPA/low-code platform and that debugging requires more technical expertise.

Automation Anywhere

Automation Anywhere is a Leader in this Magic Quadrant. Its RPA product, Automation 360 (A360), includes RPA as a service, the Automation Anywhere Robotic Interface (AARI), AI/ML (IQ Bot), process discovery (both Discovery Bot and Fortress IQ), analytics (Bot Insight) and marketplace integration (Bot Store).

Automation Anywhere has global operations, and its customer base is distributed across large enterprises and SMBs. Its Automation product roadmap includes embedded RPA bots into partner platforms (such as IVR, chatbots and web applications), shifting from itemized pricing to a use case packaging and autogenerating RPA bots from task mining via FortressIQ.

Strengths

- **Innovation:** Automation Anywhere has a strong reputation for developing innovative features including AISense for computer vision, IQ Bot for AI/ML enablement, multipersona development, the cloud-based Automation 360 platform and AARI for UX. Its recent acquisition of process discovery provider Fortress IQ will help accelerate the company's support of automated process discovery and autogeneration of bots to support those processes.

- **Cloud Focus:** As a cloud-based Automation platform, Automation 360 offers RPA development, governance and deployment across public cloud platforms such as Google Cloud Platform and AWS. Automation 360 is architected as a cloud-native automation platform, giving customers on-demand access across four releases a year, instant provisioning for new users, and managed security and reliability features.

- **Market Understanding:** Automation Anywhere has an innovative strategy to embed automation in business applications so that users can realize the benefits of automation without leaving their application of choice. Business users can launch automations from familiar user experiences in web applications from vendors like Genesys, Avaya, Cisco, Salesforce and others. This strategy reduces barriers to RPA adoption and creates flexible options for enterprises to weave both attended and unattended automation into their core applications.

Cautions

- **Product Upgrade:** Most Gartner client inquiries with existing Automation Anywhere customers focus on the challenges of upgrading from the company's legacy platform (v11) to the Automation 360 platform (first released in 2019). Automation Anywhere provides tools to support migration, but Gartner has heard mixed feedback about the effectiveness of those tools. However, the vendor has launched Upgrade Launchpad, a new self-service option to guide customers, as well as an accelerator program for enterprise customers that require additional assistance.

- **Process Discovery and Collaboration:** Automation Anywhere's Automation 360 platform currently does not offer embedded process discovery that can autogenerate process templates. This has been highlighted by the vendor as a roadmap investment. Automation Anywhere's roadmap also addresses the integration of its newly acquired capabilities via FortressIQ. Automation Anywhere offers limited real-time collaboration between different developer personas.

- **Operations:** Gartner customers in Europe and China indicate that they experienced several inconveniences due to Automation Anywhere's withdrawal of sales and support presence in these regions. Automation Anywhere has relatively higher visibility in North America and partly in Europe, but faces tougher competition and limited visibility in some Asia/Pacific countries including China.

Cyclone Robotics

Cyclone Robotics is a Niche Player in this Magic Quadrant. Its RPA product, Cyclone Robotic Process Automation, primarily includes Digital Workforce (its unified RPA platform) and EasyPie (its RPA SaaS offering).

Cyclone Robotics' operations are mainly in Asia/Pacific, and it has customers of all sizes across all industries. Its RPA product roadmap includes support for cross-regional disaster recovery, process intelligence and business rule engine integration.

Strengths

- **Innovation:** Cyclone Robotics has invested heavily in AI to deliver services like its Intelligent Assistant (formerly known as CIRI) and the Cyclone AI Skill Platform. It provides a strong foundation of IoT and edge computing capabilities and supports standards-based BPMN orchestration. Intelligent Assistant is an AI-enabled, attended RPA feature that can automate routine workflows (available on desktops and mobile devices).

- **Product Strategy:** Cyclone Robotics is focused on offering end-to-end automation by expanding beyond standard RPA use cases. It delivers AI/ML features, low-code UI creation, and support for IoT and edge automation use cases.

- **Overall Viability:** Cyclone Robotics raised $150 million in support of its plans to solidify its presence in the Asia/Pacific region and to expand into new regions. With more than 80% of its client base in Asia/Pacific, Cyclone Robotics has a significant market share in this region. It provides localized industry expertise for its Asia/Pacific-based customers.

Cautions

- **Business Model:** To maintain its high growth rate, Cyclone Robotics will need to heavily invest in project delivery and customer success programs. Cyclone Robotics' current level of investment may not be sufficient to sustain this rapid growth rate and may impact its end customers due to limited partner growth, slower product development and challenges in scaling customer support.

- **Geographic Strategy:** Cyclone Robotics is positioning itself as the largest automation vendor in China, but its visibility outside Asia/Pacific remains low compared with its competitors. Cyclone Robotics has little presence outside Asia/Pacific, though it has expanded into EMEA and plans to expand into North America in 2022. Customers outside Asia/Pacific must determine if Cyclone Robotics can provide adequate product support and guidance via its partners.

- **Product Capability:** Feedback from Gartner clients includes reports of stability concerns with Cyclone Robotics and their RPA product UX, along with slow response times and lack of connectivity. Some customers mention unexpected downtime and failure in reporting exceptions. Cyclone Robotics claimed that many of these issues were related to its RPA product versions released prior to 2020. As per Cyclone Robotics, its post-2020 RPA product releases have addressed these concerns.

IBM

IBM is a Niche Player in this Magic Quadrant. Its RPA product, IBM Robotic Process Automation, provides enterprise-grade capabilities that are available on cloud and on-premises. It can be purchased as a stand-alone offering or within IBM's Cloud Paks.

IBM's operations are geographically distributed, and its customer base is spread across large enterprises and SMBs. Its RPA product roadmap includes a desktop-based process recorder, the ability for partners to create RPA commands, and an Intelligent Digital Employee orchestrator that dynamically sequences IBM's RPA, iPaaS, chatbots and human tasks.

Strengths

- **Sales Execution/Pricing:** IBM offers flexible licensing options. It has monthly subscription licenses for its stand-alone RPA SaaS and on-premises offerings, as well as perpetual licenses for on-premises. RPA entitlements are also provided within all Cloud Paks. This flexibility allows customers to get started with IBM RPA at a low cost.

- **Product Support:** IBM offers a wide array of training, customer support and engagement options, with 17,000 automation practitioners. In addition, customers using IBM RPA can reduce infrastructural overhead by executing multiple bots concurrently on the same device. IBM RPA also offers document and spreadsheet editors to create Word and Excel files without needing to install Microsoft Office apps.

- **AI Focus:** IBM RPA offers native AI with citizen-developer-friendly classification and decision models. It enables customers to create NLP-driven bot assistants for building self-service automations. IBM RPA also simplifies chatbot creation by enabling customers to use the same RPA scripting language as attended and unattended bots or using the RPA commands in the IBM RPA Studio.

Cautions

- **Developer UX:** IBM RPA's UI has an IT-centric look and feel, and many of its functions are geared toward professional developers. While many features are suitable for citizen developers, IBM RPA customers may need more technical skills for the advanced capabilities.

- **Visibility:** Potential RPA customers lack awareness of IBM's RPA capabilities and, as a result, are unlikely to migrate their solutions to IBM. Gartner receives few inquiries on IBM RPA, and it is not frequently included in Gartner customers' RPA shortlists.

- **RPA Focus:** IBM's messaging about its RPA offering gets diluted by its broader automation narrative around Cloud Paks, BPA and Watson Orchestrate. IBM promotes its RPA capabilities as one of many features within its broad automation platform. It is difficult for customers to assess if IBM is focused on competing in the RPA market as opposed to the wider business process automation markets.

Laiye

Laiye is a Niche Player in this Magic Quadrant. Its RPA product, Laiye RPA, includes IDP, conversational AI and pretrained AI models. The product is well-suited to the diverse Chinese OS market, as it can automate in Windows, Android and Linux environments.

Laiye's operations are mainly in China and Asia/Pacific region, and it continues to expand in EMEA and Americas. Its customers are mostly SMBs but it is currently working on expansion into the market for large enterprises. Its RPA product roadmap includes autoML capabilities, enhancements to its low-code development environment, cloud-native orchestration, enhanced computer vision, IDP capabilities, a bot marketplace and expanded features for its integrated conversational agents.

Strengths

- **Product Features:** Laiye's platform includes RPA, IDP, conversational AI, process mining and other capabilities that are focused on end-to-end automation. Laiye's platform integrates with Azure Cognitive Services and Google Cloud AI to support AI/ML models and autoML.

- **Partner and Developer Ecosystem:** Laiye's growth and expansion strategy relies on more than 600 partners and more than 700,000 community developers, and it is expanding its training and presence at multiple universities.

- **Operations:** Based on its $160 million Series C funding in April 2022, Laiye is well-positioned to grow beyond China. It has begun expanding into Europe. Its recent acquisition of French chatbot provider Mindsay adds both technical capabilities and European staff to support expansion efforts. Near-term viability should not be a concern for potential Laiye buyers outside of China.

Cautions

- **Customer Ecosystem:** Most of Laiye's customers are small and midsize companies. Laiye states that it has expanded its global footprint with 20% of its revenue generated from European and American customers that are also large enterprises. Large enterprises considering Laiye RPA must ensure the vendor can support their requirements.

- **UI Integration:** In contrast to other RPA competitors, Laiye doesn't provide direct UI connectors for common applications like SAP, PeopleSoft, Salesforce, Workday and Google Workspace, which may affect the resilience of automations that interact with these systems. However, Laiye includes these UI connectors on its product roadmap.

- **Competition:** Laiye faces tough competition both in its main Chinese market and internationally. Laiye's primary competitive advantage is its integration of conversational AI and IDP, but other competitors offer similar integration through partnerships.

Microsoft

Microsoft is a Leader in this Magic Quadrant. Its RPA product, Power Automate, is a cloud-first automation platform built on Azure. Power Automate for Desktop (PAD), which is a part of the broader Power Automate ecosystem, is included with user machines running Windows 11. Power Automate provides API integration and orchestration, IDP, task mining, OCR, AI and other integrated features.

Microsoft's operations are geographically diversified, and its customer base is distributed across large enterprises and SMBs. Its RPA product roadmap includes consumption-based pricing and autoscaling of automation. Microsoft acquired Clear Software in October 2021 to enhance its iPaaS, BPA and Power Automate offerings; and it acquired Minit in March 2022 to enhance its process mining capabilities.

Strengths

- **Microsoft 365 and Power Platform:** Power Automate is an appealing RPA product for many customers due to its proximity to other components in the Power Platform and Microsoft 365 ecosystem. Microsoft customers can often procure Power Automate within their Microsoft 365 enterprise license at a discount, which can lower the initial startup cost for RPA, and provides a familiar look and feel for frequent users of Microsoft applications.

- **Microsoft Ecosystem:** Microsoft has a large global customer base, and more than 500,000 organizations use Power Automate. The Power Platform has a robust partner ecosystem, with more than 500 implementation partners and a community of more than two million users. Power Automate integrates with Microsoft's ecosystem of popular apps and with non-Microsoft enterprise applications.

- **Marketing Strategy:** Microsoft offers a limited free version of PAD to all Windows 10 and 11 users. It offers a paid premium offering on a per-user, per-month basis, which provides more capabilities such as API connectors, task mining and IDP. Microsoft plans to introduce a consumption-based pricing model by the second half of 2022 to remove price-related barriers to RPA adoption, and to reduce the per-unit cost of bot execution.

Cautions

- **Product UX:** Power Automate users typically struggle to navigate between different interfaces as the platform offers a hybrid of Microsoft's API-centric, cloud flow, RPA desktop flow from Power Automate for Desktop, and connectors and apps from Teams. Power Automate for Desktop is the cornerstone of Microsoft's RPA, but automation often begins in the Power Automate web portal.

- **Unattended Automation:** Microsoft's Power Automate platform is a hybrid of API-centric automation on cloud, and screen scraping via its Power Automate Desktop. Compared to some of the other established RPA vendors, Microsoft's screen scraping ability to capture contents from applications within Citrix is less robust. Gartner's customers who used Power Automate indicated that they are more likely to use its API connectors with the cloud orchestrator than using its unattended RPA.

- **Life Cycle Management:** Power Automate requires multiple Microsoft components available within Azure and Power Platform to support end-to-end life cycle management of automations. Microsoft offers governance features such as COE templates, Azure's native security, role-based access

control and compliance control points (via Dataverse). Gartner's customers found that complete life cycle management of automation requires configuration and integration of several components within and outside of Power Automate.

NICE

NICE is a Leader in this Magic Quadrant. Its RPA product includes NEVA, a desktop RPA assistant that focuses on attended automation for global contact centers; Automation Finder for process discovery; Automation Studio and OCR.

NICE's operations are geographically diversified, and its customers tend to be SMBs and large enterprises. Its RPA product roadmap includes enabling RPA developers to create a customizable API-based connector to any application. NICE also plans to introduce NEVA Discover in the cloud, which will include AI- and ML-based automation discovery, process analytics and monitoring before and after executing automation.

Strengths

- **Innovation**: NICE has expanded its Automation Finder by enabling semisupervised learning to drive accurate prioritization of discovered processes. NICE's elastic cloud architecture is based on microservices that are fully dockerized and containerized with Kubernetes. NEVA can use voice analytics to pick up any phrase and recommend the next best action.

- **Vertical/Industry Strategy**: NICE targets global enterprises and contact centers by offering specialized attended bots to augment its workforce management functionality for a range of industries. Its automation community, open SDK and center of excellence enhance developer collaboration and are supplemented by a cloud-based automation studio and video-based courses and tutorials.

- **Sales Execution and Pricing**: NICE is positioned fifth in terms of total RPA revenue, based on Gartner's market share research for RPA in 2021. NICE offers a relatively low entry price for its RPA product and allows customers to choose from several pricing structures, including subscription, perpetual, use-case or transaction-based models.

Cautions

- **Market Visibility**: General customer perception is that NICE mainly offers attended automation that is targeted at contact centers and customer support. In more general cases, NICE does not always come up as a first choice for many potential RPA customers. This may signify a gap in NICE's marketing strategy, which falls short of creating the right visibility for its RPA product.

- **Product Features**: NICE's RPA has relatively limited real-time collaboration features for developers — specifically between business and IT — and does not yet support some advanced features such as error logging videos, autoML and native IDP. NICE requires users to log in to two tools to discover, design, develop and deploy automation.

- **Customer Experience**: Feedback from Gartner client inquiries and Peer Insights reviews during the past year indicate that using NICE's RPA requires significant software engineering skills. NICE maintains that the UX is significantly improved in its recent NEVA studio. Older versions of NICE's developer GUIs and orchestration consoles still look outdated compared to many other leading RPA vendors.

Nintex

Nintex is a Niche Player in this Magic Quadrant. Its RPA product, Nintex Kryon RPA, is part of the Nintex Process Platform, which also includes workflow automation, digital forms, intelligent document automation, e-signatures, process discovery, process mapping (Nintex Promapp), LCAP and BPA capabilities. Nintex acquired Kryon in February 2022 and is leveraging Kryon's Full-Cycle Automation Suite.

Nintex's operations are mainly in North America, EMEA, Australia and New Zealand, and its RPA customers tend to be midsize and large enterprises across numerous verticals. Its RPA product roadmap includes a citizen-developer-friendly GUI called Studio Plus, a new smart recorder with computer vision, and enhanced task mining and process discovery capabilities.

Strengths

- **Product Portfolio**: Nintex Kryon RPA includes a web-based interface with strong security controls and specific features to automate processes in SAP ERP. It supports bidirectional end-to-end process orchestration between RPA bots and Nintex Workflow via Nintex Gateway, an application that connects Nintex Workflow Cloud to on-premises RPA and other third-party systems.

- **Business Model**: As a relatively new player in the RPA market, Nintex has plans for both organic and inorganic growth. The acquisition of Kryon enables Nintex to leverage its Full-Cycle Automation Suite — including process discovery and task mining capabilities — which complements its RPA product. This is the third process automation acquisition that Nintex has made since 2021. It also acquired K2 Software (BPA) in October 2020 and AssureSign (eSignatures) in June 2021.

- **Customer Ecosystem**: Nintex has strong name recognition, with more than 10,000 automation and 2,500 RPA customers in over 90 countries. Existing Nintex customers may find value in its hundreds of prebuilt automation templates and connectors for RPA and workflow automation.

Cautions

- **Product Features**: Nintex Kryon RPA lacks some features found in many competing products. Those gaps include limited IDP, limited collaboration between different developers, and no CI-CD. Nintex has plans to reduce many of these gaps as part of its upcoming roadmap.

- **Post-M&A Experience**: Nintex now has two RPA products: its own native RPA and the newly acquired Kryon product. Going forward, Nintex will be selling one RPA product — Nintex Kryon — to all customers. Vendors typically lag in integrating disparate capabilities into a single, cohesive product. Customers need to monitor how Nintex evolves its Nintex Kryon offering, and whether it will meet their business requirements.

- **Operations:** Nintex has a small but growing team focused on its RPA platform, which may present challenges as the company pursues its plans to scale up to meet the demands of larger RPA initiatives. As of this writing, Nintex confirms that the Kryon integration was completed in June 2022. Nintex is now able to extend all support and professional services to legacy Kryon customers. Nintex also needs to streamline its support for its cloud and on-premises workflow tools (including K2 Software's) that may require additional RPA integration.

Pegasystems

Pegasystems is a Visionary in this Magic Quadrant. Its RPA product, Pega Robotic Process Automation, is part of the Pega Infinity platform. It complements the vendor's broader business process automation capabilities and other features such as low-code, CRM, and multiexperience and business rules support.

Pegasystems' operations are geographically distributed, and its customers tend to be large enterprises. Its RPA product roadmap includes AI-assisted development within its App Studio, an ISV launchpad for its developer community and service partners to build their own solutions on the Pega Cloud SaaS platform, and enhancements to X-Ray Vision for improving self-healing capabilities.

Strengths

- **Product Portfolio:** Pega RPA includes a design studio, an orchestration manager and a bot manager for attended and unattended automations. It tightly integrates with Pega Infinity, which provides a feature-rich platform for customers looking beyond RPA to event-driven, end-to-end automation. Pega RPA also offers a wide array of UI connectors that are only offered by a few leading RPA vendors.

- **Innovation:** Pegasystems' innovations include its Process AI, which complements its existing task mining capabilities via Pega Workforce Intelligence. Pegasystems also offers X-ray Vision technology for mapping low-level screen objects to screen concepts, microservices orchestration, strong BPA features and prebuilt AI/ML models for decision automation.

- **Pega Ecosystem:** Pegasystems has a large ecosystem of customers and partners, as well as a strong Pega Community to meet the end-to-end automation requirements of large enterprises. Pega has deep, long-running relationships with many large enterprises that have implemented hyperautomation with the complete Pega stack. This helps Pega to create reusable accelerators for the automation needs of its customers.

Cautions

- **Complexity:** Pegasystems focuses on delivering business outcomes that extend beyond most tactical task automations. As such, Pega Infinity implementations can be quite complex and create a heavy Pega footprint. These implementations require deep integration, and extensive software configuration efforts. Pega RPA is tightly coupled with its core Infinity platform architecture and lacks the flexibility of lighter automation tools. Customers focused on relatively small, targeted use cases may prefer simpler, more cost-effective RPA tools.

- **Customer Experience:** Pega RPA has strong advocates and strong detractors, which results in disparate ratings. Its occasionally low satisfaction ratings on Gartner Peer Insights are usually associated with overly ambitious projects. Nevertheless, adopting the Pega Infinity platform requires significant customer commitment and time investment.

- **Sales Strategy and Pricing:** The Pega Infinity platform offers premium features at a premium price. Although Pegasystems has introduced several updates to its pricing model, it continues to target large enterprises with big budgets. This may not be ideal for new RPA buyers seeking a lower entry price point for RPA.

Salesforce (MuleSoft)

Salesforce (MuleSoft) is a Visionary in this Magic Quadrant. Salesforce, the parent company of MuleSoft, acquired Servicetrace in September 2021 and is combining its newly acquired RPA capabilities with the MuleSoft Anypoint Platform and the Salesforce Platform. Its RPA platform, XceleratorOne (X1), will be enhanced and renamed as MuleSoft RPA as of August 2022. It combines RPA, BPA, AI-ML, native OCR, IDP and task mining capabilities into a single platform.

Salesforce's operations are geographically distributed, and its RPA customers tend to be midsize and large enterprises. Its RPA product roadmap includes a process recorder with web application detection, enriched monitoring and reporting via Tableau, process cost analytics, enhanced IDP features, a new interface to Slack, improved cloud/PaaS features, and an enhanced marketplace with reusable automation and preconfigured bots.

Strengths

- **Overall Viability:** Salesforce (MuleSoft) is expected to invest more resources in its RPA product. It will soon offer a new automation package that includes RPA with Composer, which will be sold alongside Anypoint Platform and other Salesforce applications, enabling wider access to its RPA capabilities. There are plans to launch a full-scale go-to-market initiative for MuleSoft RPA by August, 2022.

- **Innovation:** At the core of this vendor's offering is its differentiating "self-building bot" capability. This provides autorecording of user execution actions, such as mouse actions and keystrokes, to autocreate a workflow with a BPMN 2.0 path. It also offers an impressive feature set, including AI/ML-based native OCR, computer vision with pattern recognition, an intelligent process recorder, and an embedded open-source BPM engine powered by Camunda.

- **Value for Money:** Existing Servicetrace customers indicate that they are satisfied with the value of the original Servicetrace product that Salesforce acquired, as it provides innovative RPA features at a relatively low price point. The pricing model includes multiple flexible options, such as per-bot, per-X1 module, per-minute and per-process type. MuleSoft has not changed its product pricing since the acquisition.

Cautions

- **Post-M&A Unknowns:** MuleSoft RPA may not be available to potential buyers until August 2022. Salesforce (MuleSoft) has yet to launch a full-blown go-to-market effort for its rebranded MuleSoft RPA product, resulting in limited market visibility. Although MuleSoft has communicated its offering vision and future plans, as of this writeup it has not yet directly provided information about its RPA offering on its website. Customers who choose MuleSoft RPA soon discover any unknown limitations of the platform.

- **Operations:** Although Salesforce (MuleSoft) has a global footprint and market presence, its RPA customer base and operations stem from its acquisition of Servicetrace. Almost all of MuleSoft's RPA customers acquired via Servicetrace are in EMEA and APAC. MuleSoft has shared plans to integrate RPA into its global infrastructure, support, and success models, but customers in other regions evaluating MuleSoft RPA should validate this progress before buying.

- **Product Feature:** Salesforce (MuleSoft)'s RPA capabilities primarily stem from Servicetrace X1. The X1 platform had some gaps in its feature set, such as limited cloud capabilities, IDP, autoML and other missing features. MuleSoft plans to address these gaps in a redesigned product that is about to be released in August 2022. Potential customers of MuleSoft RPA must monitor how Salesforce (MuleSoft) evolves the RPA capabilities and services in its future roadmap.

Samsung SDS

Samsung SDS is a Niche Player in this Magic Quadrant. Its RPA product, Brity RPA, includes a conversational AI platform with native ML and RPA-as-a-service features.

Samsung SDS's operations are mostly in Asia/Pacific, but it plans to expand into North America and EMEA in 2022. Its customer base is distributed across large enterprises and SMBs. Its RPA product roadmap includes Designer Basic (a citizen-developer-friendly studio), automatic completion of activities and remote bot triggering as well as new connectors for Google Drive, Microsoft Word, PowerPoint and other applications.

Strengths

- **RPA Enhancements:** Brity RPA offers an intuitive experience for citizen developers that supports automatic design with recording and process discovery. It also includes a chatbot, integrated OCR and native AI. In 2021, Samsung SDS enhanced its AI-driven step recommendations (autofilling) and self-healing capabilities in the latest version of Brity RPA. Brity RPA can also support automation over VDIs such as Citrix, VMware and RDP.

- **Business Model:** Samsung SDS's business model focuses on expanding beyond its 77 strategic partners to establish a robust Brity Works community and a marketplace that can sell vertical-specific automation assets.

- **Overall Viability:** Although Samsung SDS operates primarily in Asia/Pacific, its RPA business achieved year-over-year revenue growth of 46% in 2021 (as estimated by Gartner). This growth exceeds the RPA market average and has positioned Samsung SDS as the tenth largest vendor in terms of market share by RPA revenue.

Cautions

- **Product Features:** Brity RPA is only supported on the Microsoft Windows OS. Samsung SDS offers a limited number of prebuilt connectors for enterprise applications from vendors such as SAP and Microsoft, but indicated that it would include connectors for Salesforce and Workday by the second quarter of 2023. It offers limited or no support for key third-party security vaults such as Cyberark and real-time collaboration features for developers.

- **Operations:** Despite its strong revenue growth in 2021, Samsung SDS still has a relatively small team of employees supporting its RPA operations. Samsung SDS needs to scale its support for Brity RPA outside of South Korea and APAC to meet the demands of customers in other regions.

- **Marketing Strategy:** While Samsung SDS is expanding into North America and Europe, its limited geographic presence may deter organizations outside APAC. Samsung SDS is working to expand its marketing outreach program via social media and partner channels, but it lacks the visibility of many other vendors. As such, Gartner clients do not typically shortlist Samsung SDS when evaluating RPA products.

SAP

SAP is a Visionary in this Magic Quadrant. Its RPA product, SAP Process Automation, is part of its Business Technology Platform (BTP) stack and provides customers with an AI-powered unified solution for RPA, workflow management and business rules. It is a rearchitected offering that provides an intuitive user experience for citizen developers, along with rapid development and enterprise-grade security.

SAP's operations are geographically distributed, and its customers tend to be large enterprises. Its RPA product roadmap includes multicloud automation deployments, automated upgrading of agents from the cloud, on-premises VM clusters, embedded headless bots, a node.js open-source ecosystem and autogeneration of self-healing automations.

Strengths

- **SAP Ecosystem:** Given SAP's large-scale ERP ecosystem and global customer base, customers can benefit from its crowdsourced components and connectors that enable RPA capabilities for both SAP and non-SAP apps. SAP Consulting is enabled and incentivized to support process automation customers.

- **Product Strategy:** SAP has improved its product by adding intuitive, visual drag-and-drop tools and industry-specific content. This includes advanced workflow management; new AI-driven, embedded IDP; and low-code/no-code visual tooling. It offers more than 300 prebuilt bots and more than 80 workflows across multiple business functions. SAP has a strong vision for end-to-end automation that includes RPA, process mining, BPA and cloud ERP capabilities.

- **Sales Execution/Pricing:** SAP made some recent changes to its pricing model by introducing new pricing tiers and consumption-based flexibility. SAP's pricing models allow customers to choose from flexible licensing options, such as credit-based or pay-as-you-go options for pay-per-use models; advanced user licenses for workflow creators; and participant-only licenses for standard workflow users. These models can enable large-scale deployments while supporting diverse user personas.

Cautions

- **Visibility:** Process Automation can automate both SAP and non-SAP processes, but many Gartner customers indicate that they perceive SAP's RPA product as SAP-centric. SAP has renewed its focus on process automation in 2022 via its updated product drive, but Gartner has yet to receive customer feedback about the enhanced quality of product, support and services.

- **RPA Focus:** SAP promotes RPA as one of the key capabilities of its broader automation platform. In contrast, most pureplay RPA vendors specifically champion their RPA capabilities and market any improvements they make to their core products. Potential buyers of SAP Process Automation should compare the cost and value of SAP Process Automation to that of pure-play RPA vendor offerings.

- **Cloud-Only Orchestration:** SAP Process Automation supports RPA orchestration on cloud. It currently does not provide on-premises orchestration, but supports on-premises runtime agents. Customers should plan to use SAP Process Automation's cloud orchestration component with its runtime agents.

SS&C Blue Prism

SS&C Blue Prism is a Leader in this Magic Quadrant. Its suite of RPA products is offered through its Intelligent Automation Platform. SS&C Technologies acquired Blue Prism on 16 March 2022. The new unified company — SS&C Blue Prism, will continue to offer and support Blue Prism's RPA capabilities, and combine with SS&C Chorus' BPA platform and document processing capabilities.

SS&C Blue Prism has geographically distributed operations, and its customers tend to be large enterprises. Its RPA product roadmap includes a technology-agnostic orchestration platform, AI-enabled autonomous development, and an on-demand SaaS offering delivered through a strategic multicloud alliance with a variety of cloud providers including AWS and Azure.

Strengths

- **Product Portfolio:** SS&C Blue Prism's RPA product provides a wide variety of connectors to enterprise applications and centrally managed automation for highly regulated markets. It also includes IDP (Decipher), human-to-digital worker collaboration (Interact), a marketplace (Digital Exchange), governance (Automation Lifecycle Management and a Robotic Operating Model methodology), process and task mining (an OEM from ABBYY Timeline) and ERP accelerators. SS&C Blue Prism also plans to consolidate its core RPA product with SS&C's Chorus BPA platform and low-code intelligent automation. As of 15 June, SS&C Blue Prism also released "Blue Prism Desktop" to support attended desktop automation.

- **Business Model:** SS&C Blue Prism's business model revolves around the strength of its core RPA product, its integration with Chorus BPA, and a strategic multicloud alliance with a variety of cloud providers including Azure and AWS. SS&C Blue Prism will offer a unified platform with a wide range of capabilities, which could be compelling to enterprise customers.

- **Overall Viability:** SS&C has more than 100 offices in 40 countries and serves more than 20,000 customers. Blue Prism has more than 168,000 active RPA users and a community of more than 50,000 users across 5,000 companies. SS&C Blue Prism customers have the prospect of an improved offering with robust customer service and support.

Cautions

- **Post-M&A Experience:** As with all M&A activities, customers should prepare for minor disruptions. Customer support issues and changes to product architectures are a common effect of any acquisition. Customers may also have to work with new sales and support staff and may see changes to pricing and licensing after integration efforts are complete .

- **Market Responsiveness:** SS&C Blue Prism historically lagged in developing product features such as citizen-developer-friendly automation, attended RPA and recorder capabilities, which it eventually enhanced in the past year. As SS&C Blue Prism focuses on rearchitecting its product portfolio, customers should monitor how it approaches new feature development.

- **Customer Experience:** Customer feedback in Gartner Peer Insight indicates that, in certain cases, automating processes with Blue Prism RPA may require a longer design cycle than some of its competitors. For some initiatives, customers may choose to work with a partner instead of directly working with SS&C Blue Prism.

UiPath

UiPath is a Leader in this Magic Quadrant. Its RPA product, the UiPath Platform, offers rich governance features, a citizen-developer-friendly UX, enhanced computer vision and cloud RPA as a service.

UiPath has global operations and serves every buyer segment from SMBs to global enterprises. Recent platform enhancements include cloud RPA (SaaS) robots, API automation for modern systems, point-and-click configuration of document ML models, DevOps life cycle control, and integration of UiPath Apps (LCAP) with its RPA. Its near-term product roadmap includes Studio Web, a new web-based design environment that can be used to create automations in the cloud.

Strengths

- **Product Strategy:** UiPath has strong brand awareness and greatly influences the market narrative about process automation. Its vision includes an integrated, low-code platform that includes RPA, app development, IDP, process mining, test automation, cloud delivery, and API integration. The

UiPath Platform targets a broad range of user personas across the process automation life cycle, from software engineers to business technologists and fusion teams.

- **Overall Viability:** UiPath has a strong presence and ability to execute in the RPA market. It is by far the largest RPA vendor by revenue. With its large partner ecosystem and global customer demand, UiPath has a compelling vision for building a platform that can meet customers' need for automation.

- **Customer Ecosystem:** UiPath has a diverse customer base of more than 10,000 enterprises across all vertical industries. Customers who need to automate industry-specific processes can leverage UiPath's sizable, RPA-specific partner ecosystem. This ecosystem provides industry experience, benchmarks and precreated assets to augment the industry capabilities offered via the UiPath Marketplace. UiPath recently announced its prebuilt automation solutions for finance, healthcare and other vertical use cases.

Cautions

- **Customer Service:** Like every fast-growing company, UiPath struggles to balance growth, profitability and customer service. In Gartner Peer Insights and analyst inquiries, UiPath customers have complained about slow response times. While customer service complaints have been limited, UiPath needs to ensure that it does not sacrifice service quality for growth.

- **Product Strategy:** UiPath has opportunities to improve some of its complementary technologies (like IDP, process mining, test automation, or LCAP), even though it offers strong core RPA capabilities. While these technologies work well enough for customers beginning their automation journeys, in many cases customers with scaled, mature hyperautomation practices may not rely on the full UiPath product portfolio.

- **Pricing:** To simplify its diversifying portfolio, UiPath has introduced deployment-agnostic licensing as well as usage-based pricing for serverless cloud RPA, IDP, AI, and task mining. Early feedback from customers suggests that they find it difficult to understand UiPath's new pricing options. Some customers complain about UiPath's comparatively higher RPA prices with its traditional itemized model, which may be addressed by its newly introduced licensing model.

WorkFusion

WorkFusion is a Challenger in this Magic Quadrant. Its RPA product, WorkFusion Intelligent Automation Cloud, is an integrated, end-to-end automation platform with native AI as well as autoML and NLP capabilities.

WorkFusion's operations are mainly in North America, with some presence in Asia/Pacific and EMEA. Its customers tend to be large enterprises, especially those that are highly regulated in the banking, finance and insurance sectors. Its RPA product roadmap includes expanding its prepackaged solution for industry use cases, enhancing its user persona experiences, and automatic deployment of cloud resilience.

Strengths

- **AI/ML Focus:** WorkFusion has demonstrated superior AI/ML capabilities by augmenting its RPA platform with prepackaged, pretrained ML models for finance use cases, such as loan processing, account creation and claims intake. WorkFusion has also reduced the time and effort required for deployment.

- **Vertical/Industry Strategy:** WorkFusion specializes in automation for the banking and financial services industries. Its prebuilt AI/ML models, autoML features and industry-specific library of RPA components make it a good option for banking and financial services organizations.

- **Overall Viability:** WorkFusion recently raised $220 million in funding to support its plans to expand both geographically and into other industries. Based on Gartner's estimates, WorkFusion also ranks sixth in terms of overall market share by RPA revenue in 2021. This growth supports WorkFusion's viability in the RPA market, where many vendors are continuously challenged by megavendors entering this market.

Cautions

- **RPA Vision:** WorkFusion's primary focus on large organizations in banking, finance and insurance may deter customers in other industries. WorkFusion also has a much smaller geographic footprint and partner ecosystem than some of the other RPA vendors. WorkFusion's website does not have a direct narrative around RPA and focuses on Digital Workers, which is a new packaging of its solutions. This new approach will require WorkFusion to educate its customers on the value of Digital Workers.

- **Developer Experience:** Gartner client inquiries and Peer Insights reviews continue to indicate that WorkFusion's product requires significant technical knowledge, such as Java and advanced AI/ML with Python. WorkFusion focuses on enabling more complex, high-value use cases, instead of rapid, small-scale automations. Customers also mentioned that its platform requires complex and effort-intensive infrastructure maintenance. WorkFusion plans to improve its infrastructure support and ease of use in a major upcoming release.

- **Product Features:** WorkFusion's RPA product still has some visible gaps despite its long-running presence in the RPA market. It offers limited real-time collaboration between developers, exception handling and process discovery/task mining capabilities compared to other established RPA vendors.

Vendors Added and Dropped

We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor's appearance in a Magic Quadrant one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

Added

- Salesforce (MuleSoft)

Dropped

- EdgeVerve was dropped from this Magic Quadrant report as it did not meet the inclusion criteria for specific native RPA capabilities.

- Kryon Systems was dropped from this report as it has been acquired by Nintex, which is now included. Nintex includes Kryon's RPA product as Nintex Kryon RPA.

- NTT AT was dropped from this report as NTT has indicated that it was no longer focused on the RPA market, and did not meet the inclusion criteria for an active go-to-market and selling strategy.

- Servicetrace was dropped from this report as it has now been acquired by Salesforce (MuleSoft) which is now included.

Inclusion and Exclusion Criteria

To qualify for inclusion, each vendor must:

- Have a clear history of selling and marketing a generally available RPA licensed product for at least two complete years (as of 31 January, 2022).

- Sell and market RPA as a stand-alone product stock-keeping unit (SKU).

  - Customers can buy and subscribe to the enterprise RPA platform exclusively, without the purchase or installation of other products, platforms or professional services.

  - Products with embedded RPA capabilities are excluded. Examples of RPA as a non-stand-alone product SKU include, but are not limited to vendors selling RPA with:

    - Business process automation platforms

    - ERP or CRM applications

    - Low-code application platforms

    - Office productivity tools

    - Test automation tools

    - Content management systems

- Offer a commercially supported enterprise offering. The vendor must not offer the platform as open-source software.

- Sell RPA software directly to paying customers without the need to engage professional services. The vendor must provide at least first-line support for these capabilities. It must not sell its RPA product solely with, and for the use of, its professional services and consultants.

- Enable customers to deploy RPA independently of the software provider.

- Demonstrate an active go-to-market and selling strategy for its RPA software, with the sole focus of primarily selling RPA (as demonstrated on its website, Gartner Peer Insights forum, social media and direct/indirect marketing materials that explicitly mention RPA or robotic process automation).

- At a minimum, the RPA platform must offer the following native capabilities (as of 31 January 31 2022):

  - Enterprise IT capabilities, including disaster recovery (DR) environments, high-availability support, continuous integration/continuous deployment (CI/CD), SDLC management and multipersona collaboration within the RPA software.

  - At least five UI connectors to support UI interaction, excluding Selenium or general test automation/web scraping tools.

  - Support script development with standard programming languages or vendor-specific low-code representations, including graphical development.

  - A recorder to capture tasks and convert them into scripts that can be deployed.

  - Support for both attended and unattended automation.

  - Orchestration and administration of the scripts and the runtime, including configuration, monitoring and security (a central orchestrator or control panel/administrative component is a must).

  - Ability to deploy bots in all of the following environments:

    - Desktops

    - Virtual machines (VMs)

    - Public and private cloud

In addition, each vendor had to meet at least one of these criteria:

- Have at least **$35 million** annual revenue in FY21 from RPA software and/or subscription licensing sold as a stand-alone SKU.*

Or:

- Have at least **$25 million** annual revenue in FY21* from RPA software and/or subscription licensing sold as a stand-alone SKU and at a minimum **40 unique** paying enterprise customer organizations (logos) for RPA licensed software and subscriptions in FY21 in at least three of the following geographies:*
  - North America
  - Latin America
  - Europe, Middle East and Africa
  - Asia/Pacific, including Japan and China

Annual revenue, and customer numbers as applicable to Criteria A and B imply revenue recognized, excluding discounts. YOY growth and total number of customers as of 2021 from RPA as stand-alone software and/or subscription licensing only (not including professional services, maintenance, and other non-RPA software licenses). Consider calendar year 2021 if total revenue for FY21 is not available.

We exclude vendors that:

- Offer only PaaS or back-end services without a desktop runtime component, an orchestration component and front end development tool/IDE to build the scripts.

- Require a specific third-party component or product to support core RPA capabilities that is not already part of the vendor's platforms (branded, sold and supported directly by the vendor, for example).

- Only sell RPA licensed software along with development/professional services, where the tool is used exclusively by the vendor's consultants/service providers.

- Require the purchase and/or installation of other unrelated products or platforms offered by the same vendor (such as a CRM application or content management system).

- Do not offer a commercial enterprise offering for RPA (they only offer a platform as open-source software, for example) or will be retiring the platform by the end of 2021.

Honorable Mentions

Hyland: Hyland acquired a Germany-based RPA vendor Another Monday in August 2020 to complement its content services platform software. Hyland offers industry-leading intelligent document processing with its comprehensive suite of products including capture, case management, content life cycle management, and process automation tools for streamlined and efficient business process management. It has already deployed RPA projects integrated with its broader content services portfolio and continues to invest in the development of its RPA offering. Hyland's RPA offering did not meet the revenue and customer geography criteria for inclusion in this Magic Quadrant.

ServiceNow: In March 2021, ServiceNow announced the acquisition of Intellibot, a vendor based in Hyderabad, India. As a leading provider of enterprise-grade low-code, IT service management and digital workflow software, ServiceNow replatformed Intellibot by launching RPA Hub, which is available under Automation Engine — an enterprise automation platform that combines RPA and API-first automation. ServiceNow's RPA product did not qualify for this Magic Quadrant because its RPA product is not offered or sold as a stand-alone product, and the company did not meet the revenue and growth criteria for inclusion.

Evaluation Criteria

In Magic Quadrants, Gartner positions vendors on two axes: Ability to Execute and Completeness of Vision. These axes reflect numerous criteria that measure each vendor's performance and its future vision. Vendors receive scores based on Gartner's methodology for Magic Quadrants. Vendors are invited to provide data for the evaluation criteria via questionnaires and briefings, but evaluations also reflect the results of Gartner customer surveys and information gathered from client inquiries.

Ability to Execute

Gartner evaluates vendors based on how well their processes, systems, methods and procedures enable them to be competitive, efficient and effective. Each vendor is evaluated for its Ability to Execute.

Table 1: Ability to Execute Evaluation Criteria

Evaluation Criteria ↓	Weighting ↓
Product or Service	High
Overall Viability	High
Sales Execution/Pricing	High
Market Responsiveness/Record	Low
Marketing Execution	High
Customer Experience	High
Operations	Medium

Source: Gartner (July 2022)

Completeness of Vision

Gartner also evaluates vendors based on how well they demonstrate an understanding of the RPA market's current and future direction — including in relation to innovations, customer needs and competition — and the degree to which this vision aligns with Gartner's vision. This includes the ability to anticipate market forces and create new market opportunities.

Table 2: Completeness of Vision Evaluation Criteria

Evaluation Criteria ↓	Weighting ↓
Market Understanding	High
Marketing Strategy	High
Sales Strategy	Medium
Offering (Product) Strategy	High
Business Model	Medium
Vertical/Industry Strategy	Medium
Innovation	High
Geographic Strategy	Low

Source: Gartner (July 2022)

Quadrant Descriptions

Leaders

Leaders have an insightful understanding of a market's realities, a reliable track record, the power to influence a market's direction, and an ability to attract and retain customers.

In the RPA market, Leaders demonstrate an understanding of enterprise customers' needs and of opportunities to expand functionality and add new products and services to their core RPA offerings. Simply put, a Leader must have a market-leading vision and the ability to deliver on that vision.

A Leader may not always be the best choice for every customer. A focused, smaller vendor can sometimes provide superior support and commitment. Other vendors may provide a specialized capability that is essential for some organizations, such as enhanced security or specific features or functions (required, for example, by call centers and individual desktop use cases). A vendor that focuses on RPA for a specific vertical market or within a limited geographic area may not be a Leader in the overall market, but it may be a competitive option within its chosen market or area.

Challengers

Challengers excel at attracting a large customer base, but are often limited to one part of the market.

In the RPA market, a Challenger may have a strong following for attended RPA, but lack traction, commitment or sophistication in the unattended RPA market. A Challenger must demonstrate sustained excellence in execution and a significant following — a combination that few vendors have achieved in this dynamic, nascent market.

A Challenger may become a Leader if it adopts aggressive, innovative strategies to expand its focus to encompass the entire market. It would also need to demonstrate exceptional insight into the market's direction and continue to execute excellently.

A Challenger may alternatively become a Visionary by sacrificing growth and instead focusing on developing innovative, differentiating features and capabilities.

Visionaries

Visionaries are a market's innovators. They propel a market forward by responding to emerging customer demands and offering customers new opportunities to excel.

Visionaries must also show insightful understanding of market trends and innovative strategies for marketing and sales as well as product and business management. Typically, these vendors appeal to leading-edge customers — even if they have minimal mainstream presence or name recognition. A Visionary's ability to deliver sustained, dependable execution in the mainstream enterprise market has yet to be tested sufficiently.

In the RPA market, a Visionary may invest in leading-edge RPA offerings that are not yet readily adopted by mainstream enterprise customers. Visionaries excel in understanding the demands of enterprises that are looking for fully inclusive automation support, as they often provide related tools like AI, chatbots and process management.

A Visionary could eventually grow to become a Leader. Alternatively, a Visionary may become a Niche Player if it decides to limit its target market by focusing on its core competencies, technologies or existing customers.

A Visionary could also become a Challenger by developing its specialties in order to advance in terms of execution.

Niche Players

A market's Niche Players typically specialize in one vertical or functional area, or have a strong product that is limited to one part of the market.

In the RPA market, Niche Players also include vendors that focus on other software markets, but that are moving into the RPA market.

In the RPA market, Niche Players:

- Focus primarily on related tools, rather than RPA capabilities — for example, process discovery or ML tools.

- Have yet to demonstrate excellent execution and success.

- Have limited geographic reach.

- Exhibit an unclear vision

- Focus only on a subset of use cases.

Because of their relatively small size, Niche Players often represent the best choice for a specific category of customer or a particular use case. Niche Players typically offer specialized expertise, focused support practices, flexible terms and conditions, lower costs, and greater commitment to a particular market segment and its customers.

In this fast-evolving market, opportunities exist in all directions. Some Niche Players are poised to improve their execution and evolve into Challengers. Others may become Visionaries by developing innovative solutions that attract interest beyond their niche segments. Still others may strengthen and broaden their businesses to become Leaders.

Context

RPA automates repetitive tasks by emulating transactional steps currently taken by humans, mainly via orchestrated UI interactions.

RPA platforms translate a human process or task into RPA software language to create a script to follow (commonly known as a "robot" or "bot"). Additionally, a runtime is allocated to execute the script by a control dashboard/orchestrator. Software engineering leaders can develop bots programmatically or by using low-code/no-code GUIs that are native to the RPA software platform.

Market Overview

The RPA software market remains a rapidly growing segment of the enterprise software market. The RPA software segment's revenue grew by 31% to $2.4 billion in 2021, well above the average worldwide software market growth rate of 16% (see Market Share Analysis: Robotic Process Automation, Worldwide, 2021)

The RPA software market is highly competitive, with a constantly evolving vendor landscape. The market includes more than 60 vendors as of mid-2022 and has experienced frequent mergers and acquisitions during the past year.

APIs Complement Screen Scraping

While RPA vendors traditionally focused on automating tasks via screen scraping, newer entrants to the RPA market — including integration vendors and large software vendors — are successfully promoting an API-first approach for process automation. In response to this increased competition, many pure-play RPA vendors are continuously enhancing their API integration capabilities so that they can offer customers both UI scraping and API-first automation approaches. We have observed the emergence of broader automation platforms that offer a wide range of integration capabilities.

Fluid Vendor Landscape — Frequent M&As

The RPA market is growing rapidly and is constantly in flux. Incumbent RPA vendors are jockeying for position by evolving their products, while large vendors in adjacent markets are beginning to offer RPA capabilities. Gartner finds that the 10 largest RPA vendors account for more than 75% of the market (up from 70% in 2021), and that the three largest vendors still account for 52% (same as last year).

The entry of large vendors such as IBM, Microsoft, Salesforce (MuleSoft) and SAP is rapidly transforming the market landscape. These megavendors are targeting their existing customer bases with aggressive offers and low entry price points. As a result, vendors with comparatively little revenue and limited geographic presence are struggling to scale their businesses and are frequently the target of acquisition.

In the past year, several major acquisitions have occurred in the RPA market. SS&C Technologies acquired Blue Prism in March 2022; Nintex acquired Kryon in February 2022; and Salesforce (MuleSoft) acquired Servicetrace in September 2021. Nonetheless, smaller vendors have maintained a sizable presence in China and Asia/Pacific by offering comprehensive AI/ML products with RPA and low-code development capabilities.

Beyond RPA to Hyperautomation

Software engineering leaders and business technologists are scaling beyond tactical automation to deliver greater efficiency, efficacy and business agility. RPA technologies play an essential role in hyperautomation — a discipline that helps to combine several technologies in an orchestrated manner to deliver end-to-end, intelligent, event-driven automation.

Software engineering leaders should partner with business leaders to evaluate RPA technologies by mapping the products' key capabilities to their business-aligned automation use cases. They must assess the scope, complexity, volume and routineness of each use case to select the right use cases for RPA.

Acronym Key and Glossary Terms

AI	artificial intelligence
APAC	Asia/Pacific
AWS	Amazon Web Services
BPA	business process automation
BPMN	Business Process Model and Notation
GUI	graphical user interface
IDP	intelligent document processing
IoT	Internet of Things
iPaaS	integration platform as a service
ISV	independent software vendor
LCAP	low-code application platform

ML	machine learning
OCR	optical character recognition
RPA	robotic process automation
SDK	software developer kit
UI	user interface
UX	user experience

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability: Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

Market Responsiveness/Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

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