

# The Forrester Wave™: Robotic Process Automation, Q4 2019

The 15 Providers That Matter Most And How They Stack Up

by Craig Le Clair  
October 23, 2019

## Why Read This Report

In our 25-criterion evaluation of robotic process automation (RPA) providers, we identified the 15 most significant ones — Another Monday, AntWorks, Automation Anywhere, Blue Prism, EdgeVerve, Intellibot, Kofax, Kryon, NICE, Pegasystems, SAP, Servicetrace, Softomotive, UiPath, and WorkFusion — and researched, analyzed, and scored them. This report shows how each provider measures up and helps infrastructure and operations (I&O) professionals select the right one for their needs.

## Key Takeaways

### **UiPath, Automation Anywhere, Blue Prism, And EdgeVerve Lead The Pack**

Forrester's research uncovered a market in which UiPath, Automation Anywhere, Blue Prism, and EdgeVerve are Leaders; Softomotive, WorkFusion, NICE, Intellibot, Kofax, Kryon, Pegasystems, and Servicetrace are Strong Performers; and Another Monday, AntWorks, and SAP are Contenders.

### **Scale, Human-In-The-Loop, And Desktop Analytics Are Key Differentiators**

Traditionally, RPA has focused on the rule of five for task automations (fewer than five decisions, five accessed apps, and 500 clicks). This year, the market has taken a broader and more transformative view. Vendors that can provide robot design for citizens, process discovery that works, and proven scale will position themselves to successfully deliver intelligent process automation to their customers.

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## Scale, Desktop Analytics, Openness, And Human-In-The-Loop All Matter

Since our [2018 Forrester Wave™ evaluation](#), RPA software suites have embraced the practical components of AI to become intelligent process automation platforms. Why? Customers have expanded their goals beyond automations for isolated tasks. They now want to attack broader use cases and combine RPA with AI components such as text analytics, conversational intelligence, or decision management based on machine learning (ML). To support these goals, process discovery analytics, the ability to scale beyond a small number of production robots, central orchestration, and platform openness have all grown in importance.<sup>1</sup> Vendors have responded: Acquisitions, investments in AI research, and partnerships have accelerated. As a result of these trends, RPA customers should look for providers that have:

- › **Scale experience, capability, and pricing based on digital work performance.** Enterprises view RPA as an important first step to more-transformative automations. Automation centers, or strike teams, are forming to gain control of RPA point solutions and create innovation cells in the business.<sup>2</sup> RPA platforms support the journey with central management to connect diverse automations, multitenant solutions that support shared services, and pricing models and orchestration that make robots more efficient.
- › **Analytics and platform openness.** RPA's success at task automation is beyond question. The story on RPA plus AI, by contrast, is still developing. Progress was strongest this year for natural language understanding for incoming documents and email. But the ability to create smarter digital workers that can handle task variation (exceptions) or productive linkage with conversational intelligence is, so far, unproven. AI frameworks; integration points that are well organized, centralized, and modern; and a robust partner ecosystem will be essential.
- › **Proven desktop analytics and process assessment.** With the help of machine learning, human input and output provide a data set that can identify candidate tasks for automation. The data set is more powerful when combined with event logs from the applications that bots are acting against — a broader process view can then emerge.
- › **Human-in-the-loop support.** Today, attended-mode RPA tools can design human-to-robot communication. This interaction is currently a simple call and response (i.e., no text or voice support), and only professional bot programmers are building it. Leading platforms are more advanced. They're building low-code designer interfaces for rapid design in the business and new UI environments for full employee robot control.

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## Evaluation Summary

The Forrester Wave evaluation highlights Leaders, Strong Performers, Contenders, and Challengers. It's an assessment of the top vendors in the market and doesn't represent the entire vendor landscape.

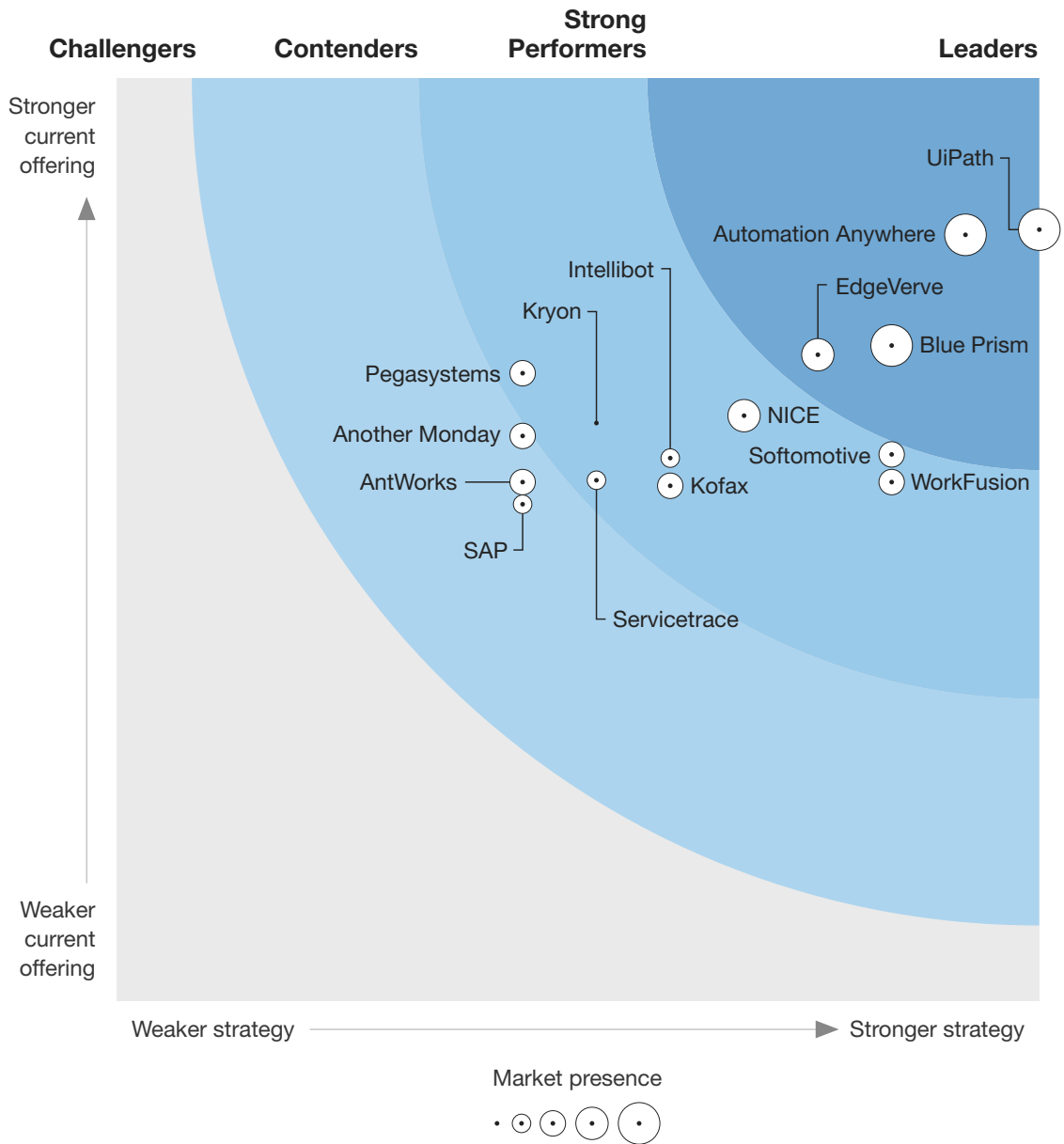
We intend this evaluation to be a starting point only and encourage clients to view product evaluations and adapt criteria weightings using the Excel-based vendor comparison tool (see Figure 1 and see Figure 2). Click the link at the beginning of this report on Forrester.com to download the tool.

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**FIGURE 1** Forrester Wave™: Robotic Process Automation, Q4 2019

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**Robotic Process Automation**  
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**FIGURE 2** Forrester Wave™: Robotic Process Automation Scorecard, Q4 2019

	Forrester's weighting	Another Monday	AntWorks	Automation Anywhere	Blue Prism	EdgeVerve	IntelliBot	Kofax	Kryon
<b>Current offering</b>	50%	3.06	2.81	4.15	3.55	3.50	2.94	2.79	3.13
Bot development/core UI/desktop functions	17%	2.50	3.00	5.00	3.00	3.70	4.00	3.30	3.80
Attended and unattended robot support	17%	2.50	2.50	3.80	2.60	3.50	2.50	2.50	3.40
Management/insight and deployment efficiency	17%	3.40	3.00	3.90	3.50	2.80	3.50	3.00	3.00
RPA analytics	17%	2.60	3.00	4.20	2.20	3.00	3.00	2.60	2.60
Scale factors	17%	3.67	2.33	4.33	5.00	4.33	3.00	3.00	2.33
Governance, SaaS, and community	17%	3.67	3.00	3.67	5.00	3.67	1.67	2.33	3.67
<b>Strategy</b>	50%	2.20	2.20	4.60	4.20	3.80	3.00	3.00	2.60
Partnership, marketplace, and community	40%	1.00	1.00	5.00	5.00	3.00	1.00	3.00	1.00
Innovation/market approach/access to capital	40%	3.00	3.00	5.00	3.00	5.00	5.00	3.00	3.00
Product roadmap and differentiation	20%	3.00	3.00	3.00	5.00	3.00	3.00	3.00	5.00
<b>Market presence</b>	0%	2.33	2.33	5.00	5.00	3.67	1.67	3.00	1.00
Enterprise RPA customers	33%	1.00	3.00	5.00	5.00	3.00	3.00	3.00	1.00
Enterprise customers	33%	3.00	1.00	5.00	5.00	5.00	1.00	3.00	1.00
Product revenue	33%	3.00	3.00	5.00	5.00	3.00	1.00	3.00	1.00

All scores are based on a scale of 0 (weak) to 5 (strong).

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**FIGURE 2** Forrester Wave™: Robotic Process Automation Scorecard, Q4 2019 (Cont.)

	Forrester's weighting	NICE	Pegasystems	SAP	ServiceTrace	Softomotive	UiPath	WorkFusion
<b>Current offering</b>	50%	3.17	3.40	2.69	2.82	2.96	4.18	2.81
Bot development/core UI/desktop functions	17%	3.00	3.80	3.00	2.50	3.80	5.00	2.50
Attended and unattended robot support	17%	2.70	4.20	3.40	2.50	3.00	3.80	1.80
Management/insight and deployment efficiency	17%	3.00	3.40	3.00	2.50	3.00	4.10	3.40
RPA analytics	17%	3.00	3.00	1.40	1.40	2.60	4.20	3.80
Scale factors	17%	3.67	3.00	3.00	3.67	2.33	4.33	3.00
Governance, SaaS, and community	17%	3.67	3.00	2.33	4.33	3.00	3.67	2.33
<b>Strategy</b>	50%	3.40	2.20	2.20	2.60	4.20	5.00	4.20
Partnership, marketplace, and community	40%	3.00	3.00	1.00	1.00	3.00	5.00	3.00
Innovation/market approach/access to capital	40%	3.00	1.00	3.00	3.00	5.00	5.00	5.00
Product roadmap and differentiation	20%	5.00	3.00	3.00	5.00	5.00	5.00	5.00
<b>Market presence</b>	0%	3.67	3.00	1.67	1.67	3.00	5.00	3.00
Enterprise RPA customers	33%	3.00	3.00	3.00	3.00	5.00	5.00	3.00
Enterprise customers	33%	5.00	3.00	1.00	1.00	1.00	5.00	3.00
Product revenue	33%	3.00	3.00	1.00	1.00	3.00	5.00	3.00

All scores are based on a scale of 0 (weak) to 5 (strong).

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## Vendor Offerings

Forrester included 15 vendors in this assessment: Another Monday, AntWorks, Automation Anywhere, Blue Prism, EdgeVerve, Intellibot, Kofax, Kryon, NICE, Pegasystems, SAP, Servicetrace, Softomotive, UiPath, and WorkFusion (see Figure 3).

**FIGURE 3** Evaluated Vendors And Product Information

Vendor	Product evaluated	Product version evaluated
Another Monday	AM Ensemble	N/A
AntWorks	ANTstein	SQUARE
Automation Anywhere	Automation Anywhere Enterprise (AAE)	A2019
Blue Prism	Blue Prism; Thoughtonomy Virtual Workforce — Evolution Edition	v.6.5; Edition R3
EdgeVerve	AssistEdge	18.0
Intellibot	INTELLIBOT	v2.0
Kofax	Kofax RPA	v10.6
Kryon	Kryon Automation Suite: Intelligent RPA and Process Discovery	19.3
NICE	NEVA	v7.1
Pegasystems	Pega Robotic Process Automation	Pega Robotic Process Automation 19.1; Pega Robot Manager 8.2.2
SAP	SAP Intelligent Robotic Process Automation	N/A
Servicetrace	XceleratorOne	2/5/2000
Softomotive	WinAutomation and ProcessRobot	WinAutomation v9; ProcessRobot v2019.1
UiPath	UiPath RPA Platform	v2019.4.4
WorkFusion	Intelligent Automation Cloud	10.0



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## Vendor Profiles

Our analysis uncovered the following strengths and weaknesses of individual vendors.

### Leaders

- › **UiPath sits in the cockpit of the RPA rocket ship.** UiPath's financial backing and savvy development and marketing make it hard to bet against. Now headquartered in New York and with 3,000 employees, it will close 2019 with a total investment of \$500 million after a Series D round and a valuation now at \$7 billion. Reference customers believe that UiPath is handling its growth spurt in a well-organized fashion as it attempts to cover today's and tomorrow's rich RPA frontier. This year, it's released a revamped robot community, an AI integration fabric, a native Microsoft Azure software-as-a-service (SaaS) solution, a mobile interface for Orchestrator, a process-discovery collaboration tool that starts with employee crowdsourcing, and an embedded text analytics tool with a preconfigured model for invoice processes.

References like UiPath's open approach and innovation culture. Enterprise developers who want a Windows-oriented environment will be comfortable; in 2019, UiPath became the open source custodian for Windows Workflow Foundation. This gives UiPath more control of the design environment to improve debugging tools and help develop StudioX, the new citizen developer UI, to enhance the existing design studio. Reviews cite UiPath's openness through well-organized and centralized RESTful APIs that incorporate Swagger and provide granular access to Orchestrator features.<sup>3</sup> The new AI fabric adds the ability to ingest and orchestrate external AI building blocks. References report that UiPath will go the extra mile to meet a client's need. They also applaud the low cost of getting started, well-organized partner channel, overall product stability, and strong security. They'd like to see a richer set of orchestration features, such as the ability to see the entire robot farm from a single point with utilization data, a thin client for robot design, a better licensing model for attended bots, and a cleaner upgrade process. Enterprises looking for shared services at scale and heading for Microsoft's Azure cloud are easy targets for this innovative and well-financed company.

- › **Automation Anywhere continues innovation and market expansion.** Automation Anywhere has one of the largest trained partner ecosystems — more than 550 staff in R&D, 800 partners, and 3,000 customers — and one of the most recognized names in RPA. This vendor has increased its global presence to cover all major geographical regions, with 40-plus offices that provide sales, support, and services. Unattended processes are still the majority (80%) of use cases, but the recent acquisition of Klevops has bolstered human and bot orchestration for attended automation.<sup>4</sup> The Automation Anywhere Enterprise A2019 designer is persona-based and provides an easier design environment for business users and developers to collaborate on both simple and complex use cases. The platform is web-based and cloud- and SaaS-ready and allows full web-based robot composition. New to this evaluation are a mobile phone app to manage bots and text analytics enhancements to IQBot that add support for handwriting.

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Automation Anywhere delivers a digital workforce with a low total cost of ownership. References report that basic bots are easy to build and start; some developers prefer granular control of screens, albeit with command lines and script instructions. References positively cite the bot store, community, MetaBot tool, and good control room audit logs but view reporting with Bot Insight as limited. They'd also like to see improvements in documentation and API access and more-direct access to for support and license issues, without such heavy reliance on third parties. Automation Anywhere remains one of the elite products in the field; clients select it for its thin client architecture, ease of use, ability to easily connect automations, granular controls for designing robots, and overall low cost of ownership.

- › **Blue Prism offers secure, scalable and central control.** Blue Prism is a publicly traded RPA company with more than 1,300 customers. As of the end of 2018, approximately 90% of its revenue came from unattended use cases, with continued focus on IT-led enterprisewide deployments. Blue Prism has a strong set of partners and takes certification seriously; it's the only provider in this evaluation to use an accredited third party.<sup>5</sup> Analytics initially took the megacloud direction (e.g., integration with Google's ML workflow, viewed from Blue Prism's process designer), but Blue Prism's connected-RPA vision has led to Blue Prism Labs, an AI lab with the first efforts targeting document-centric use cases, computer vision, and attended scenarios.<sup>6</sup> Attended use cases are more in-scope, with a deepening Trust Portal partnership and recently acquired Thoughtonomy additions used for human-in-the-loop use cases that will pass events to Blue Prism automations. The Visio-like design studio creates virtual business objects (VBOs) that link automations with external applications and is best suited for a more technical user. References tell us the overall approach is robust for ongoing changes, with more enterprise-ready features and supporting documentation than others in the field.

Blue Prism shows a strong innovation roadmap. The overall ask for a new Blue Prism customer, in terms of design skills and training, remains high, although the vendor has reduced prices to soften initial investment. It initiated a success accelerator program to allow customers more direct access without being blocked by service partners. Its Thoughtonomy acquisition brings an on-demand pool of digital labor and current Blue Prism initiatives that will continue its innovation track record.<sup>7</sup> But a snapshot today sees it losing ground to more recent entrants. Some APIs, for example, are dated and often must interact with queues rather than central control tower end points. Advanced process discovery, mobile interfaces, text analytics, and advanced surface automation are still to come, and attended use cases lag. But security, encryption where it counts, and overall stability make Blue Prism a safe bet for the enterprise market segment — particularly in financial services — for server-based unattended use cases.

- › **EdgeVerve brings a combined services and product approach.** EdgeVerve is a wholly owned subsidiary of tech giant Infosys Technologies. In January 2013, EdgeVerve launched its AssistEdge product and now has 360 customers spread across banking, commerce, trade, credit servicing, and customer service, with many large-scale deployments. EdgeVerve blends services expertise with platform features. The RPA product is flanked by frameworks for an automation center of

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excellence, RPA governance, and process discovery within an overall vision the vendor calls automation singularity: the convergence of AI and automation. The EdgeVerve software portfolio has the AssistEdge Engage product for guided customer service in contact centers, adding strength to attended use cases. The AssistEdge Discover product helps identify the right processes for automation.

EdgeVerve banks on its Albie cognitive engine and AssistEdge Discover. As we would expect from Infosys, a strong implementation team accelerates projects and lowers deployment costs. One reference reported that the initial engagement; requirements coverage; cost; and most importantly, services around design, build, and support from EdgeVerve/Infosys, were excellent. References would like to see tighter integration with the Albie platform that embeds Nia and other third-party ML platforms, better reporting on robot performance to adapt to minor application changes, and more out-of-the-box text analytics support for document use cases. EdgeVerve also needs to make the platform more independent of Infosys services. However, investments in multivendor bot management and strong desktop analytics with native process mining to provide automation insights bode well for the future. AssistEdge is best suited for enterprise-grade companies looking for attended and unattended capabilities for business applications such as customer service, finance and accounting, HR, CRM, and sourcing.

**Strong Performers**

- › **Softomotive takes a land-and-expand approach.** Since securing \$25 million in Series A investment, Softomotive has moved its headquarters to the UK and invested in development, professional services, and sales and marketing and opened offices in Austin, Texas; Dubai; Mexico City; and Seoul. Its market positioning is sound, with a business model focused on rapid deployment, good price points, attended use cases, and small-to-midsize businesses, with a growing presence in large enterprises.

Softomotive's customers can start small and get fast ROI. Softomotive has two products that support both attended and unattended deployment options: WinAutomation (standalone) for the desktop and ProcessRobot (server based), with a sidebot for attended and a solobot for unattended work. The design studio is easy to grasp, leading to traction against larger RPA platforms in some enterprise accounts, but like many in the field, drops to scripting or programming languages to support advanced use cases. Dragging actions for common loops and logic controls and simple configuration screens create robot actions and cover many design requirements. References refer to Softomotive as a solid offering that's flexible and easy to use, but they don't exercise it for complex use cases. It's light on trending areas like process discovery and analytics for unstructured content. Overall, Softomotive is a strong choice for individuals, small teams, and companies that want to start small with an easy-to-use designer, see immediate ROI, and then scale within the enterprise.

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- › **WorkFusion strives to accelerate humans to meaningful work.** WorkFusion continues to have the strongest embedded ML and insight for how AI can enhance RPA beyond task automation. More than 200 prepackaged use cases strive to reduce bot training by 40%. Most use cases (80%) have algorithms for data extraction, classification, unstructured decisions, and predictions for popular use cases like invoice processing. Regulated industries and large financial service firms make up 50% of its revenue, 80% of which is direct as opposed to partner led. References report excellent development teams and customer service. Enterprise domestic US customers dominate revenues compared with the rest of the field. In addition, this vendor depends on a small number of larger and more complex customer implementations.

WorkFusion represents a strong path for analytics-based RPA automation and remains a powerful but complex platform that is dependent on direct and highly skilled staff, which may inhibit growth. The end-to-end process is visualized from a design surface, but it needs separate design environments for bot creation and ML configuration. Human-in-the-loop capabilities for attended applications aren't the focus of this company. It has consolidated multiple open source databases (Mongo and My SQL) to MS-SQL Server Core, improving administration and scale. Since our 2018 evaluation, WorkFusion has simplified pricing and applied greater focus on industry-specific packaging. Enterprises that select this vendor often buy into the future, as did this reference: "Both platforms met proof-of-concept (PoC) RPA needs, but WorkFusion had a stronger vision and roadmap and stronger cognitive capabilities." Enterprises with unattended operationally rich challenges — particularly for unstructured content use cases with a focus on data versus surface and screen automations — will compare WorkFusion favorably with other RPA providers.

- › **NICE targets enterprise-grade attended operations.** In 2016, NICE RPA established itself as a dedicated line of business within NICE. Now, with 650 customers, it spans attended and unattended digital workloads, but most customers to date have valued NICE's contact center depth. NICE benefits from a large installed base of enterprise customers, which has grown in 2019. While still largely direct, it did add marquee integration partners such as Deloitte this year. This vendor emphasizes its depth in analytics and its rich contact center business context. For example, it highlights the ability to monitor an agent's screen in real time to provide guidance and compliance checks for proper data handling, such as meeting requirements for PCI or GDPR compliance.<sup>8</sup>

NICE surrounds automation with analytics. The 2019 focus is on analytics integration, including NICE Employee Virtual Attendant (NEVA) integration and Shape Analysis. Given the recent timing of this announcement, current references weren't able to validate integration with these advanced components. The solution has strict security standards that include a connectivity watcher that monitors attended and unattended bots for delays. References report that Automation Designer requires developer skills at this time and was not built to allow business end users to build automations. A designer new to this year's evaluation is easier to use but supports only unattended automations and will unify with attended automation design at the end of 2019. References say that self-service dashboard configuration, stronger scheduling controls, and governance support need improvement. Automation Finder now has 25 customers and uses machine learning against

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recorded data to identify and prioritize automations. While brand awareness is a gap, NICE, with \$1.4 billion in revenue and a 17-year track record of automation, is a safe choice, particularly for large attended use cases and existing customers.

- › **Intellibot brings modern architecture and broad process view.** Intellibot has a mere 20 clients and 50 staff, but it's gaining the attention of managed service partners in India that want a modern and scalable architecture at low cost. For example, the orchestrator is multitenant and uses the latest computer vision techniques to control applications. It also offers some pretrained ML models for specific ML applications such as text classification, named entry recognition, image object detection, and image classification. These models support transfer learning and can be enhanced depending on the customer-specific requirement. Intellibot leverages the Microsoft ecosystem for automation extensions, and Python drives analytics development.

Intellibot is well suited to sophisticated service partners with broad automation goals. The studio design surface enables attended, unattended, chatbot, and ML automation development. Robot interactions with applications are visibly chained together for a broader process view. For example, digital process automation (DPA), where a human is directed to a work queue to interact with a robot, governs attended-mode human interaction. The design environment allows granular controls suited for professional developers. Intellibot missed the first wave of the RPA market and is behind in trending areas such as process discovery. References would like to see all design functions (e.g., some text analytics) integrated with the primary design environment. Intellibot will become a strong OEM for managed service providers looking for a complete intelligent process automation platform to take to market.

- › **Kofax shifts its focus to intelligent process automation.** Kofax acquired Kapow Technologies in 2012 for its content migration smarts but soon found it was a more general automation platform that could design and manage web APIs to gather and process data from internal and external sites. Continued cash flow from the mature capture market and an established base of 30,000 customers bode well for its success in the robotics market. The architecture uses central servers that pull desktop events from a small agent into a container that manages the UI logic. Because of this, automations are less dependent on virtual desktop infrastructures (VDIs), which lowers infrastructure costs and enhances scale.

Document capture and extraction is Kofax's specialty. Proprietary computer vision, optical character recognition (OCR), natural language understanding, capture, and process (total agility) are strong adjacent technologies to support the Kofax IPA platform. Kofax was initially a good fit only for large-scale data pooling applications, but now, finance and accounting and mainstream RPA are in play. Improved integration between web/file capabilities and desktop capabilities is evident. With 750 RPA customers, Kofax has carved out a position in transportation and logistics. For example, with bots that move data among web portals, legacy systems customers and suppliers solve scheduling and ordering issues. References report the need for improved stability and debugging consistency among development, test and production, and desktop automation.

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Enterprises that need to ingest unstructured content from different channels, emphasize website data pooling, and have adjacent capture and content products and that prefer a consumption-based pricing model should investigate Kofax.

- › **Kryon positions itself as a full-cycle automation solution.** Founded in 2008, Kryon has 160 employees globally, with headquarters in Tel Aviv. It launched its first RPA product in 2012 and closed \$40 million in February 2019, bringing total external investment to \$52 million. It has an expanding global footprint, with 50% of its revenue now from the US. Patents for vision and ML combine with attended automation experience to create the heart of the system, the Discovery Bot, which analyzes human input and output with ML to identify automation opportunities. Kryon hopes the Discovery Bot will penetrate competitors' RPA deployments and bring its RPA behind it, particularly in telco, financial services, contact centers, and hospitality.

Kryon takes a process-discovery focus. Challenges result from a modest customer base of 130-plus and limited trained partners, despite strong OEM agreements with Amdocs, Software AG, and Verint and an increasingly close partnership with Microsoft. Kryon's analytics roadmap — with recent integration with Microsoft Cognitive Services — is strong, but it has fewer AI production integrations than the rest of the field (e.g., for trending text analytics use cases). References would like to see fewer software bugs and better debugging tools. Overall, Kryon is on par for unattended automation. Its design uses various scripting languages viewed as plug-ins, and it needs to move from a thick to a thin client. It's lagging in progress to the cloud. Customers can purchase process discover separately, but it could be better integrated into the core automation platform (e.g., to import captured data and move to and from the design studio). Kryon pricing is low relative to leading platforms, and it has become a premier OEM partner for RPA. Attended and hybrid automation, with a focus on process discovery, is the sharp point of the spear. Enterprises that want to reduce process discovery time, errors, and time with consultants should look at Kryon.

- › **Pegasystems merges robots, analytics, and DPA.** Pegasystems was the first DPA market participant to purchase an RPA provider (OpenSpan). RPA is more of a spoke to this vendor than a hub; the product is a free add-on with its DPA or analytics purchases. Integration partners we interviewed treat RPA as an entry point and are more tuned for large complex projects. Pegasystems' strategy is straightforward: provide quick value with RPA for task automation that requires minimal architecture, then follow with Workforce Intelligence (WFI), which may lead to modernization efforts that use the Pega Infinity DPA platform or its growing CRM and analytics portfolio. The RPA practice has diversified. While 80% of deals have attended bots, 38% of new deals have an unattended component.

Pegasystems has a solid attended platform with strong, ramping investment in unattended capabilities. The current design studio (the vendor has planned an upgrade in 2020) is based on visual studio scripting, preferred by some, but not all, developers. It's suitable for a business analyst but does require programming knowledge, like loops, to design an optimal bot. Analytics for surface automation aren't the focus; it prefers integration at the application process level. WFI uses bots



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that listen to desktop activity and transmits results to an ML environment hosted in the Amazon Web Services (AWS) cloud. While it doesn't inform robot design in this release, it does prioritize designs with the highest potential benefit. Concurrent scheduling for unattended allows a robot to work multiple tasks, saving virtual machines and raising robot utilization. Unstructured document use cases (e.g., PDFs and image files) aren't Pegasystems' analytic sweet spot, but natural language processing with chat, email, and emerging digital services is, and it tracks well with the RPA market direction. Tighter integration of RPA with the rest of the portfolio (e.g., for marketing, sales, support, and release management) will build on the successful OpenSpan acquisition. Pegasystems' worldwide presence, process depth, and attended expertise will continue to resonate, particularly for enterprises using other Pegasystems digital transformation tools.

- › **Servicetrace takes a top-down process lifecycle approach.** Servicetrace addresses large, and often complex, solutions in government, telecom, and manufacturing. A total of 120 customers include top German firms such as Airbus Industries, Daimler, and Vodafone. Its process lifecycle approach includes people, process scoring, robots, projects, infrastructure, teams, active and inactive roles, and privileges. Process scoring helps build an automation pipeline, starting with an assessment form for process owners to rate the risk, costs, and value of the project, but doesn't use recorded data to help score tasks for automation. It then assigns the winning processes to roles via a collaboration. A Business Process Model and Notation (BPMN) metadata layer supports human and robot management, including alien bots (e.g., Google AI or UiPath).

Servicetrace has a DPA approach with RPA support. The design studio starts with a business view of steps that can import BPMN data from DPA or process mining tools and doesn't directly compile to scripts for bot execution. Overall, references see potential in the platform's broad process design, which uses an embedded business process management (BPM) engine that supports management of both digital and human workers as well as external automations. Servicetrace needs to connect the broader process view more directly to create the practical automations that RPA buyers are seeking. References also cited the need for more productization that would allow customer configuration for governance, reporting, and other RPA features. Servicetrace is a good fit for firms with end-to-end process problems that require orchestration of diverse workers and automations and with deep security needs that are a struggle for traditional RPA platforms. Customers that want integration support directly from the vendor will particularly benefit.

## Contenders

- › **Another Monday offers a coordinated toolbox of automation building blocks.** Started in 2005 and providing custom automation solutions in Austria and Germany, Another Monday has just over 100 employees. The company focus is transformational automation programs, and it uses flexible pricing options to share project risk. Digital workers are supported as a managed service, with direct integration support for premier clients like Deutsche Telekom and Eon and a managed service through partners. This vendor emphasizes a distributed toolbox of decentralized capabilities, with a light orchestration layer well suited for customized assembly.

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Another Monday places a bet that a broader automation perspective will prevail. Process discovery takes a BPM-like approach to develop more-traditional process requirements. The designer provides flexibility and depth. Overall, the platform today depends too much on services from Another Monday and its limited partner channel. It needs to develop a build-your-own-bot approach to advance in the general market. A success-based and consumption-based remuneration scheme, where firms pay only for successful bots, is popular with references. The best fit for Another Monday is firms — particularly in utilities and manufacturing — that seek end-to-end automation as opposed to isolated task automation and where customization to meet unique requirements is a plus.

- › **AntWorks builds on an integrated automation platform.** AntWorks boasts 418 customers, with more than half of its revenue from Asia Pacific and EMEA. Its cofounders have a BPM background, and this shows in a broad workforce perspective. ANTstein is an integrated automation platform built on fractal-science-based AI and ML, combining data curation and digital workforce management for end-to-end process automation. It positions the content capture tool Cognitive Machine Reading (CMR) as a strong combination of RPA and analytics for unstructured content use cases and attacks unstructured data at a granular level that grabs greater context and improves on limitations of OCR for some use cases.

AntWorks builds on its talents in unstructured content use cases. One reference selected AntWorks for its ease of engagement, flexibility to accommodate a first-time user, and practical approach as well as ease of configuring the platform. Another cited the strength of its cognitive machine reading, which has the ability to read multiple languages without much difficulty. AntWorks is a new but advancing vendor that must strengthen its capabilities in RPA control, governance, process discovery, and reporting. But enterprises with data-rich challenges in trade finance or tax accounting or that are looking for handwritten content, printed text, stamps, check boxes, and signature verification should review the ANTstein platform, especially if they're struggling with traditional OCR solutions or have unstructured use cases. Enterprises — particularly those in Asia Pacific — should add AntWorks to their shortlists.

- › **SAP enters the RPA market with a combined API and UI integration approach.** SAP's Intelligent Robotic Process Automation (IRPA) has a prominent place in the SAP Business Technology Platform, which will consolidate the entire SAP portfolio on one platform. It's natural that the RPA focus will be more on automation centered on the installed SAP base and less on deployment of enterprise automation platforms. The RPA offering combines the internal API-based solution with SAP's acquired Contextor product, now combined with a single designer and control tower. The acquisition — although small — extends SAP's RPA product outside of the SAP ecosystem, with the ability to automate non-SAP applications for attended operations. The robot design in the unified product we reviewed uses Contextor's capture of objects (fields, attributes, and labels) from the application for bot development as well as using the preexisting graphical icon-based designer.



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SAP has well-established enterprise app partners, but pricing may be its biggest strength. Its transaction-based pricing is triggered when a bot is started, independent of bot size or length of a robotic task, with no charge for design or control functions. There's no indirect license fee that competing bots will continue to pay as they access SAP, as the vendor doesn't charge for intra-SAP integrations. But to succeed, the offering must integrate with Leonardo's machine learning services and expanding analytics and add prebuilt bots beyond the currently available S/4HANA bots. The RPA offering must also make sense for SAP implementation partners, which need to be deal accelerators. SAP must convince enterprises of its relevance outside the SAP platform. Given the pace of innovation in the broader market, the RPA initiative won't completely stem the tide of RPA vendors that target SAP apps, but users of Ariba, Concur, S/4HANA, and Success Factors should review the value of having a single vendor solution.

## Evaluation Overview

We evaluated vendors against 25 criteria, which we grouped into three high-level categories:

- › **Current offering.** Each vendor's position on the vertical axis of the Forrester Wave graphic indicates the strength of its current offering. Key criteria for these solutions include bot development/core UI/desktop functions; attended and unattended robot support; management/insight and deployment efficiency; RPA analytics; scale factors; and governance, SaaS, and community.
- › **Strategy.** Placement on the horizontal axis indicates the strength of the vendors' strategies. We evaluated partnership, marketplace, community, innovation/market approach/access to capital, and product roadmap and differentiation.
- › **Market presence.** Represented by the size of the markers on the graphic, our market presence scores reflect the number of each vendor's enterprise RPA customers and enterprise customers and its product revenue.

## Vendor Inclusion Criteria

Forrester included 15 vendors in the assessment: Another Monday, AntWorks, Automation Anywhere, Blue Prism, EdgeVerve, Intellibot, Kofax, Kryon, NICE, Pegasystems, SAP, Servicetrace, Softomotive, UiPath, and WorkFusion. Each of these vendors:

- › **Has a product orientation rather than a service orientation.** The RPA service and integration community is expanding rapidly. For this evaluation, each RPA vendor must actively market and promote an RPA software platform for the RPA market. Enterprises must be able to deploy RPA independently of the software provider, and the vendor must have business process outsourcing or systems integration partners.

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- › **Has strong breadth of RPA functionality.** Participants must support a broad range of use cases, such as attended operations in contact centers; unattended, server-based solutions for finance and accounting; data pooling and collection; or IT service management. Vendors must integrate and support these capabilities and administer them through a cohesive platform.
- › **Actively markets in at least two major regions.** Primary RPA regions are North America; EMEA; Asia Pacific; and Latin America. Each vendor must have existing clients in at least two regions and either a direct sales presence or partners that are actively distributing and implementing its solution.
- › **Meets the minimum revenue requirements.** RPA vendors must have at least \$10 million in total software revenue derived from RPA.
- › **Has significant market share or is an innovator developing new capabilities.** Vendors must have a market share presence for RPA or be a leader in providing innovative solutions. We asked each vendor to provide three customer references, representing a diversity of industries, company sizes, and geographies, that have had its RPA software in production for at least one year.
- › **Generates strong customer interest.** Through Forrester client inquiries, consulting engagements, media requests, and ongoing conversations with players in the market, we developed an understanding of the demand for the vendors and solutions included in this evaluation.

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## Supplemental Material

### Online Resource

We publish all our Forrester Wave scores and weightings in an Excel file that provides detailed product evaluations and customizable rankings; download this tool by clicking the link at the beginning of this report on Forrester.com. We intend these scores and default weightings to serve only as a starting point and encourage readers to adapt the weightings to fit their individual needs.

### The Forrester Wave Methodology

A Forrester Wave is a guide for buyers considering their purchasing options in a technology marketplace. To offer an equitable process for all participants, Forrester follows [The Forrester Wave™ Methodology Guide](#) to evaluate participating vendors.

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In our review, we conduct primary research to develop a list of vendors to consider for the evaluation. From that initial pool of vendors, we narrow our final list based on the inclusion criteria. We then gather details of product and strategy through a detailed questionnaire, demos/briefings, and customer reference surveys/interviews. We use those inputs, along with the analyst's experience and expertise in the marketplace, to score vendors, using a relative rating system that compares each vendor against the others in the evaluation.

We include the Forrester Wave publishing date (quarter and year) clearly in the title of each Forrester Wave report. We evaluated the vendors participating in this Forrester Wave using materials they provided to us by September 9, 2019, and did not allow additional information after that point. We encourage readers to evaluate how the market and vendor offerings change over time.

In accordance with [The Forrester Wave™ Vendor Review Policy](#), Forrester asks vendors to review our findings prior to publishing to check for accuracy. Vendors marked as nonparticipating vendors in the Forrester Wave graphic met our defined inclusion criteria but declined to participate in or contributed only partially to the evaluation. We score these vendors in accordance with [The Forrester Wave™ And The Forrester New Wave™ Nonparticipating And Incomplete Participation Vendor Policy](#) and publish their positioning along with those of the participating vendors.

### Integrity Policy

We conduct all our research, including Forrester Wave evaluations, in accordance with the [Integrity Policy](#) posted on our website.

### Endnotes

- <sup>1</sup> Forrester surveyed the top RPA service providers and found that over 50% of deployed RPA solutions have scaled to beyond 10 robots. See the Forrester report "[The RPA Services Market Will Grow To Reach \\$12 Billion By 2023.](#)"
- <sup>2</sup> For information on automation strike teams, see the Forrester report "[Architect Your Automation Strike Teams To Accelerate Transformation](#)" and see the Forrester report "[Staff Your Automation Strike Teams With Forrester's Framework.](#)"
- <sup>3</sup> Swagger is an open source software framework backed by a large ecosystem of tools that helps developers design, build, document, and consume RESTful web services.
- <sup>4</sup> Source: "Automation Anywhere Acquires Klevops to Maximize Collaboration Between Humans and Bots," Automation Anywhere press release, August 1, 2019 (<https://www.automationanywhere.com/company/press-room/automation-anywhere-acquires-klevops-to-maximize-collaboration-between-humans-and-bots>).
- <sup>5</sup> Source: "Blue Prism Certification," Pearson VUE (<https://home.pearsonvue.com/blueprism>).
- <sup>6</sup> Blue Prism's connected-RPA vision, Prism Labs, brings together PhD-level research scientists and engineers across multiple AI fields, a brain trust on the future of work that will inform and spearhead developments on the company's embedded AI capabilities. Source: "Blue Prism Expands R&D Capabilities Adding Dedicated AI Labs and Outlines Roadmap for Embedded AI Capabilities," Blue Prism press release, January 31, 2019 (<https://www.blueprism.com/news/blue-prism-expands-r-d-capabilities-adding-dedicated-ai-labs-and-outlines-roadmap-for-embedded-ai-capabilities/>).

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<sup>7</sup> Blue Prism purchased Thoughtonomy in July 2019. Source: “Blue Prism Closes Thoughtonomy Acquisition; Boosting Intelligent Automation and Cloud Delivery Capabilities,” Blue Prism press release, July 17, 2019 (<https://www.blueprism.com/news/blue-prism-closes-thoughtonomy-acquisition-boosting-intelligent-automation-and-cloud-delivery-capabilities>).

<sup>8</sup> PCI is the Payment Card Industry. GDPR is the European Union General Data Protection Regulation. Real-time monitoring could detect a potential PCI violation, such as saving a Social Security number in the same database as authentication data.

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