

# Market Guide for Robotic Process Automation Software

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Robotic process automation tools cut costs, eliminate keying errors, speed up processes and link applications. Enterprise architecture and technology innovation leaders must understand the differences in technical functionality of RPA tools to select the right software platform.

## Key Findings

- Many organizations that have bought RPA are achieving improved customer satisfaction and process savings. Others have found it harder to deploy effectively due to having very few standardized, repetitive and unautomated tasks; the lack of governance; security; and the shifting of manual process debt to technical debt.
- There are differences in generic RPA tools for attended solutions operating on a person's workstation versus unattended tools deploying on virtual machines. However, almost no variation exists by industry, process type or customer geography, unlike process-specific automation tools. Definitions of what is an RPA bot vary mildly by functionality and widely by how much you pay for the runtime.
- Confusion often exists regarding the relationship of artificial intelligence with RPA. It is also challenging to know which tool to use when. Advanced organizations build centers of business outcomes, incorporating business, IT and human resources with the remit of managing the total cost of a process — not just total cost of ownership — and avoiding automating a mess.

## Recommendations

For enterprise architecture and technology innovation leaders mastering emerging and strategic trends:

- Choose a set of highly impactful business scenarios to analyze specific RPA candidates to assess the RPA's characteristics and ensure a better probability of delivering value.
- Evaluate the price and limitations of control panels, runtime, the practicalities of creating scripts for the bots to execute, and technical deployment options to control and securely deploy bots.

- Choose RPA tools to fit with your incumbent suppliers of business process management, optical character recognition, ERP, artificial intelligence, system integration and business process outsourcing. RPA tools can be paired with all of the above.

## Strategic Planning Assumptions

By 2020, 20% of organizations that used RPA will have replaced it with another tool, either for a lower total cost of process or improved straight-through processing.

Through 2019, organizations will see price reductions in generic RPA tools, driven by multiple new entrants, with at least three current RPA tool vendors being acquired.

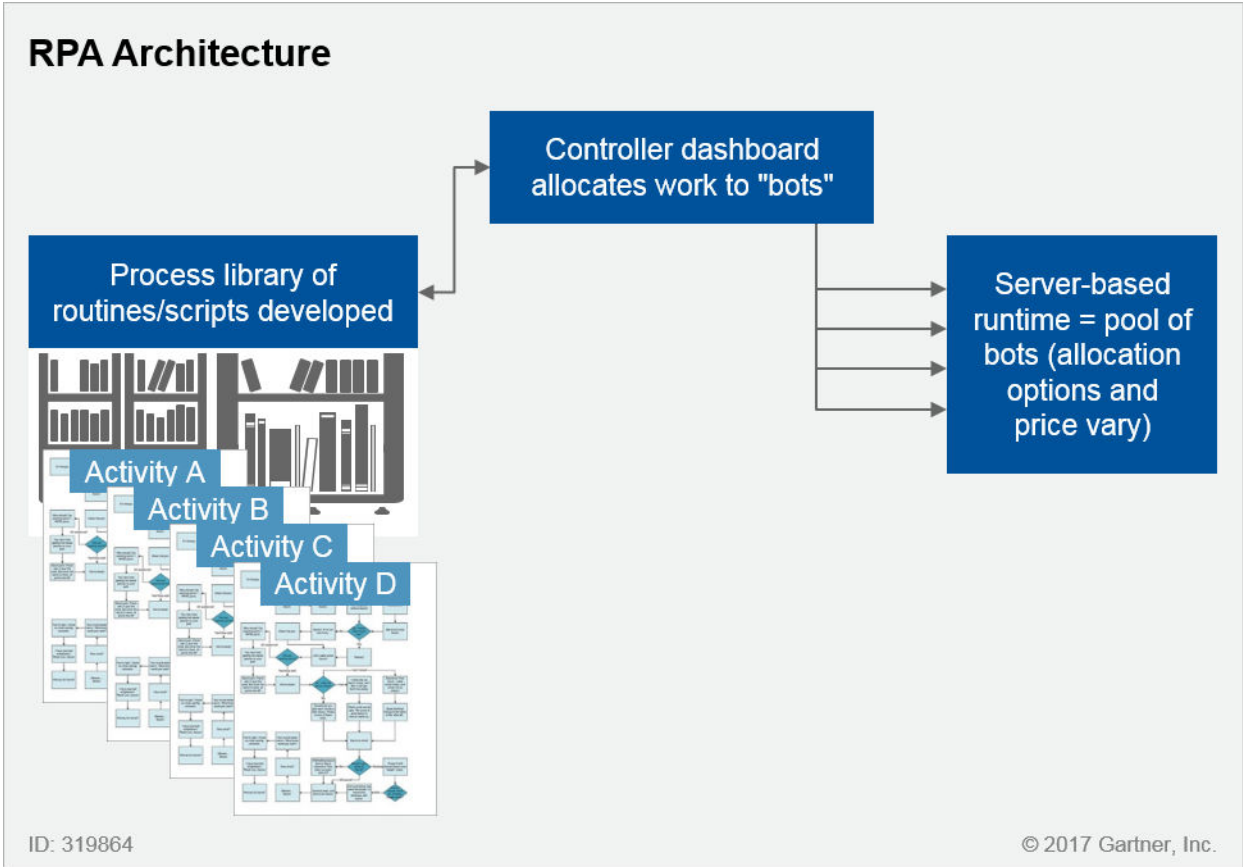
## Market Definition

### Definition of RPA Software

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Robotic process automation (RPA) tools perform "if, then, else" statements on structured data, typically using a combination of user interface (UI) interactions, or by connecting to APIs to drive client servers, mainframes or HTML code. An RPA tool operates by mapping a process in the RPA tool language for the software "robot" to follow, with runtime allocated to execute the script by a control dashboard (see Figure 1).

Figure 1. Typical RPA Architecture



Source: Gartner (December 2017)

Table 1 provides examples of various sources of RPA tools and their respective providers.

Table 1. Indicative Listing of Types of RPA Tool Vendors

| Specialist RPA Software Providers  | Software Providers With Multiple Software Products, Including RPA  | IT or BPO Service Providers That Provide Proprietary RPA Software Platforms      |
|--|--|--|
| AutomationEdge<br>Automation Anywhere<br>Blue Prism<br>Contextor<br>EnableSoft<br>Epiance<br>Kryon Systems<br>OpenConnect<br>Softomotive<br>UiPath | AntWorks<br>HelpSystems<br>Infosys (EdgeVerve Systems)<br>Jacada<br>Kofax<br>Nice<br>Pegasystems<br>Perpetuuti<br>Verint<br>Redwood Software<br>Servicetrace<br>SpiceCSM<br>Winshuttle<br>WorkFusion | Another Monday<br>Cognizant<br>Conduent<br>Sutherland<br>Syntel<br>Tech Mahindra |
| BPO = business process outsourcing   |  |  |

Source: Gartner (December 2017)

## RPA Software Functionality Variations

Each RPA tool has a slightly different approach to how it handles the following issues:

- **Unattended deployment versus attended deployment** — Buyers need to understand how the tool will be primarily used. Some RPA tools mostly support unattended automation, running on a virtual machine. Others have a heritage of running on employees' workstations as a robotic desktop automation (RDA) tool, typically found in call centers, working side-by-side with a customer service representative.
- **Crafting "instructions" for the bot to run** — Buyers should consider ease of scripting, or the level of coding knowledge, and amount of IT programming and compiling needed to complete working scripts. However, even if a tool claims it is easy for business people to use without IT, you still need to be clear about governance, best practices in scripting, and where and how IT is involved (see "Robotic Process Automation: Eight Guidelines for Successful Results").

Some RPA tools come with their own metalanguage to build the "instructions/scripts." Some tools have a record button to make an initial pass at the typical path of a process. This can make these tools more suitable for simple tasks.

- **Generic RPA tools or process-specific automation tools** — Most RPA tools have no preprogrammed, process-specific knowledge of vertical or horizontal processes. Others come with configurable, dedicated process automation tools, which have configurable instructions of typical manual steps in ERP-centric processes.

- **Some limited or no artificial intelligence (AI) or machine-learning capabilities** — RPA tools can work with other types of tools with different capabilities. However, an RPA tool only has the ability to process structured data, performing rule-based tasks. Many RPA providers have added additional tools to work with their RPA tools. These tools will likely need different deployment schemes, such as machine learning or optical character recognition (OCR). Additional functionality is typically charged at separate rates, with separate success rates.
- **Price point and licensing agreements** — License models are tremendously diverse across the vendor landscape, making it impossible to compare on a like-for-like basis. Alternatives include:
  - Annual or perpetual license per "bot," which includes the script-building tools and dashboard, which can be delivered as SaaS or on-premises.
  - Consumption-based pricing model, that is, you pay for what you use or renting robots. This is delivered via SaaS.
- **Other tool characteristics include:**
  - Automatic performance documentation — Most RPA tools document all actions in audit trails.
  - Dashboards orchestrate work between people and bots, or between bots. The sophistication of the dashboards varies for controlling multiple robot activities.
  - Identity access management and security establish what levels of security are required and how the tool will handle access criteria.
  - Most RPA tool vendors do not have a services or implementation division to deploy RPA. They work with consultants, system integrators (SIs) and BPO providers. Several RPA tools can only be deployed by the tool's seller.

## Market Direction

RPA tools are at the Peak of Inflated Expectations in Gartner's Hype Cycle, as organizations look for ways to cut costs and quickly link legacy applications together. RPA vendors have experienced a huge surge in global interest in the last 12 months from shared-service center heads and managers of BPO contracts. This is fueled by the promise of fast ROI. However, the potential to achieve strong ROI is entirely dependent on the applicability of RPA in each individual organization. Gartner expects to see the following:

- **Renting RPA or on-demand SaaS** will be available on a consumption-based pricing model.
- **An expanding set of RPA vendors** — More software vendors will jump in and rebrand or launch RPA software. RPA vendors will add more process- or task-specific capabilities to their software. In addition, vendors with RPA-like capability and specific-process expertise are adopting the term "RPA" to gain visibility.

- **"AI" functionality is being incorporated** into the software product suite as RPA providers add or integrate machine learning and AI technology to deliver more types of automation. RPA tool vendors will either partner for AI functionality, or they will continue to invest in developing AI-style capabilities, either charged as extras or integrated to work with the basic tool. The RPA vendor partnering or building these tools could become the primary way that AI tools are consumed in an organization.
- **Transition services will grow to help users switch from one RPA tool to another.** The ease of switching will depend on how diligently the governance process was enacted, documenting all the statements of work and collectively managing the bot scripts.
- **More specialist automation service companies** are forming from consultants and SIs, such as Mindfields, Symphony, Information Services Group (ISG) and Virtual Operations, to support market demand for automation-specific advice.
- **Preconfigured scripts of business-process "best/better practices"** will be added to provide process-specific functionality.
- **Process mining, process discovery and business analysis tools** will be added to help understand processes and benchmark business cases for when to use an RPA tool.

## Representative Vendors

*The vendors listed in this Market Guide do not imply an exhaustive list. This section is intended to provide more understanding of the market and its offerings.*

Table 2 gives an overview of providers included in this Market Guide that offer RPA software and SaaS. Several BPO, consulting, system integration and RPA managed services companies are also listed here, as they have their own in-house RPA tools or RPA-powered platforms. These tools are deployed only by the service provider themselves, but the tools have all of the RPA properties to deliver automation in a client's applications. Examples of service suppliers with a software tool include Another Monday, Conduent, Cognizant, Infosys, NTT Data, Syntel and Thoughtonomy. These companies may also deploy or sell other RPA software.

Table 2. Providers Offering RPA Software and/or SaaS

| RPA Software and SaaS Provider | RPA Product Name                                 | Total Company Revenue — Year-End 2017 Estimate | On-Premises or SaaS Delivery                 | Adoption of Attended Bots | Adoption of Unattended Bots |
|--------------------------------|--|--|--|---------------------------|-----------------------------|
| AntWorks                       | ANTstein   | Privately held                                 | Software and SaaS                            | 100%                      | -                           |
| Automation Anywhere            | Automation Anywhere Enterprise, MetaBot, BotFarm | Privately held                                 | Software and SaaS                            | 20%                       | 80%                         |
| AutomationEdge                 | AutomationEdge                                   | \$2 million                                    | Software and SaaS                            | 20%                       | 80%                         |
| Blue Prism                     | Blue Prism V6                                    | \$32 million                                   | Software (available as SaaS via partners)    | Available via TrustPortal | 100%                        |
| Cognizant                      | HPA  | Not applicable                                 | SaaS   | -                         | 100%                        |
| Conduent                       | Conduent Automation Services                     | Not applicable                                 | Software                                     | -                         | 100%                        |
| Contextor                      | Contextor Interactive Assistant                  | €3.6 million                                   | Software                                     | 80%                       | 20%                         |
| EdgeVerve                      | AssistEdge                                       | Part of Infosys, a \$9.7 billion firm          | Software                                     | 40%                       | 60%                         |
| EnableSoft                     | Foxtrot  | \$4 million                                    | SaaS   | 50%                       | 50%                         |
| Epiance                        | EpiGenie RPA                                     | \$5 million                                    | Software                                     | -                         | -                           |
| Jacada                         | Jacada Enterprise Automation                     | \$17 million                                   | Software and services                        | 70%                       | 30%                         |
| Jidoka                         | Jidoka   | €2.5 million                                   | Software and SaaS                            | 10%                       | 90%                         |
| Kofax                          | Kapow  | Privately held                                 | Software on-premises or cloud-hosted service | 30%                       | 70%                         |
| Kryon Systems                  | Leo  | Privately held                                 | Software and SaaS                            | 20%                       | 80%                         |

| RPA Software and SaaS Provider | RPA Product Name                               | Total Company Revenue — Year-End 2017 Estimate | On-Premises or SaaS Delivery           | Adoption of Attended Bots | Adoption of Unattended Bots |
|--------------------------------|--|--|--|---------------------------|-----------------------------|
| Nice                           | Nice Robotic Automation                        | \$1 billion                                    | Software and SaaS                      | 70%                       | 30%                         |
| NTT Data                       | -  | Not applicable                                 | Software                               | -                         | -                           |
| OpenConnect                    | OpenConnect                                    | Privately held                                 | Software                               | 100%                      | -                           |
| Pegasystems                    | Pega Robotic Automation & Intelligence         | \$22.8 million                                 | Part software, part SaaS               | 60%                       | 40%                         |
| Redwood Software               | Redwood Robotics                               | \$45 million                                   | Software and SaaS                      | 100%                      | -                           |
| ServiceTrace                   | RPA  | -  | Software                               | -                         | -                           |
| Softomotive                    | ProcessRobot, WinAutomation                    | Privately held                                 | Software                               | 40%                       | 60%                         |
| Syntel                         | SyntBots                                       | \$932 million                                  | Software and SaaS                      | -                         | 100%                        |
| Tech Mahindra                  | Unified NexGen Operations (UNO)                | Not applicable                                 | -                                      | -                         | -                           |
| Thoughtonomy                   | Thoughtonomy Virtual Workforce                 | \$10 million                                   | SaaS platform incorporating Blue Prism | 40%                       | 60%                         |
| UiPath                         | UiPath Studio                                  | \$25 million                                   | Software or SaaS via partners          | 30%                       | 70%                         |
| Verint                         | Verint Robotic Process Automation              | \$1.1 billion                                  | Software                               | 50%                       | 50%                         |
| WorkFusion                     | Smart Process Automation (SPA) and RPA Express | \$35 million                                   | Software and SaaS                      | -                         | -                           |

Source: Gartner (December 2017)



## Vendor Profiles

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### AntWorks ([www.ant.works](http://www.ant.works))

**Product description:** AntWorks' ANTstein combines RPA as the transportation mechanism, which works with natural-language processing (NLP), and AI tools. Ingestion, interpretation, extraction and automation are achieved in a single integrated platform with machine learning working in the background. Leveraging cognitive computing algorithms, it ingests multiformat, unstructured data and images. It then interprets and extracts the data using a combination of cognitive machine vision and NLP. Business rules are then applied, before transporting the data (using the RPA tool bots) to the destination system.

**Percentage split between attended and unattended use cases:** 100% unattended

**Business process discovery approach (manual or automated):** Both. Wherever the process yields are parametric, the discovery process is automated. In other subjective situations, it is manual.

**Robot runtime control dashboard:** Yes

**Product name:** ANTstein

**Delivery:** Software and SaaS

**Additional machine-learning/AI functionality:** The proprietary machine-learning and AI platform was built using a fractal network and hybrid neural networks on fractal convergence, offering pattern recognition, deep learning and adaptive learning.

### Key Facts:

- **Headquarters:** Singapore **Year Founded:** 2015
- **Revenue estimate:** Not public
- **Customer geographies:** U.S., EMEA, Asia/Pacific (APAC)
- **Consulting, integration and BPO partners:** EXL, Genpact, NIIT, KPMG, EY, Capgemini, Accenture, qBotica
- **Specialist software partners,** for example, for OCR, SaaS, business process management (BPM) or conversation platforms: None
- **Number of customers:** 200 **Notable customers:** Aon, KPMG, Central Union Bank, JLT, Accenture, HDFC Life, NIIT
- **Licensing models:** Annual subscription, perpetual, annual SaaS
- **RPA pricing:** Purchasing an ANTstein module at \$25,000 provides scripting tools and runtime for one bot. An enterprise license version is available, dependent on volume of usage.

- **Pricing for additional machine-learning/AI functionality:** \$5,000; \$7,000; and \$9,000 per bot, depending on functionality, such as machine learning or NLP.
- **Technical support team locations and size:** Chennai (125); Lynchburg, Virginia (55)
- **Industries represented:** Banking, insurance, insurance broking, healthcare, legal, retail, travel, manufacturing, services and communications

**Automation Anywhere** ([www.automationanywhere.com](http://www.automationanywhere.com))

**Product description:** Automation Anywhere Enterprise (AAE) uses RPA taskbots, metabots and an embedded analytics tool, Bot Insight. In addition, cognitive IQ Bots can be added to the platform. BotFarm provides RPA as a service for on-demand scaling.

**Percentage split between attended and unattended use cases:** 20% attended, 80% unattended

**Business process discovery approach (manual or automated):** AAE Process inVision provides a graphical interface to document existing processes and operational infrastructure, which is automatically fed into the AAE RPA platform. Implementation teams ensure that all enterprise processes have been correctly documented and are optimally sequenced for rapid deployment.

**Robot runtime control dashboard:** AAE Control Room delivers in-the-moment and historical information, 24/7, on the health and performance of bots and machines.

**Product name:** Automation Anywhere Enterprise (digital workforce platform), IQ Bot (cognitive bots), Bot Insight (operational and business analytics), and BotFarm (RPA as a service, bots on-demand)

**Delivery:** Software and SaaS

**Additional machine-learning/AI functionality:** Machine learning and AI are embedded across Automation Anywhere's suite of products. The products also integrate with commercial AI platforms, such as IBM Watson. AAE leverages computer vision to automate processes involving desktop virtualization solutions such as Citrix. IQ Bot is designed for unstructured data, which learns from humans correcting it.

### Key Facts:

- **Headquarters:** San Jose, California **Year Founded:** 2003
- **Revenue estimate:** Not disclosed
- **Customer geographies:** U.S., Canada, U.K., France, Germany, Netherlands, India, Australia, New Zealand, Brazil, Switzerland, Japan and Singapore
- **Consulting, integration and BPO partners:** 39 global partners, including Hitachi
- **Specialist software partners:** BPM partner: IBM

- **Number of customers:** 700. **Notable customers:** ANZ, JPMorgan Chase, GM, Dell EMC, Verizon, Société Générale, BBVA Compass, AT&T, Citigroup, A.P. Moller-Maersk (Maersk), UBS
- **Licensing models:** Annual subscription or SaaS
- **RPA pricing:** Not available. The AAE RPA platform provides four flexible pricing methods that cater to a wide spectrum of customers' specific needs related to volume of bots deployed. Otherwise, an enterprise-level agreement or usage-based (hourly) pricing is available for on-demand BotFarm.
- **Pricing for additional machine-learning/AI functionality:** Not available. IQ Bot provides both a server-based and a volume-based pricing model depending on volume.
- **Technical support team locations and size:** 50 people in India, the U.S., EU and Japan
- **Industries represented:** Banking, financial services and insurance; high tech; telecom; manufacturing; and healthcare

AutomationEdge ([www.automationedge.com](http://www.automationedge.com))

**Product description:** The RPA product includes the Process Studio's functionality of UI automation for the web, thick clients, Citrix, mainframes and reusable components in multiple scripting languages, including Java, PowerShell, Python, Shell, VBScript and .NET. In addition, Ready Bot modules come with prebuilt capabilities for bots for IT. For example, the product offers a library of more than 250 ready actions for IT systems to automate common IT processes, and bots for business operations such as Salesforce, Banned Entity List, name matching and ERP.

**Percentage split between attended and unattended use cases:** 20% attended, 80% unattended

**Business process discovery approach (manual or automated):** Both

**Robot runtime control dashboard:** Provides orchestration, auditing and logging, dashboard and reporting, self-service request management, scheduler, and user credential management functionality

**Product name:** AutomationEdge

**Delivery:** Software and SaaS

**Additional machine-learning/AI functionality:** Machine learning, NLP, Chatbot, and a virtual support assistant for IT, HR, ERP and CRM

#### Key Facts:

- **Headquarters:** Houston, Texas and India **Year Founded:** Incubated: 2014 by Vyom Labs
- **Revenue estimate:** \$2 million
- **Customer geographies:** North America, Europe and Middle East, and India

- **Consulting, integration and BPO partners:** EY, Accenture, Finesse, PKF Proserv, Trinamix, Q3Edge, La Esfera, Cloudbyz, Flycast Partners
- **Specialist software partners:** OCR: Nuance OmniPage. Conversational platform: Kore.ai, On Cloud, Dialogflow and Wit.ai. Service desk: BMC, ServiceNow, Cherwell and Salesforce
- **Number of customers:** 30 **Notable customers:** Mashreq, HDFC Bank, Axis Bank, Yes Bank, American Express, Coty, ICICI Lombard GIC, HDFC Life, IDBI Federal Life Insurance, Cadence
- **Licensing models:** Annual subscription and perpetual
- **RPA pricing:** \$6,500 per year per unattended robot; and \$2,000 per year per attended robot
- **Pricing for additional machine-learning/AI functionality:** \$2,000 per robot (for NLP, machine learning and chatbot integration)
- **Technical support team locations and size:** India (12), U.S. (3), Dubai (1)
- **Industries represented:** Banking and financial services, insurance, high-tech, managed service providers, manufacturing, oil and gas, and government

### Blue Prism ([www.blueprism.com](http://www.blueprism.com))

**Product description:** The scalable enterprise RPA platform enables control, high availability, high performance, failover and disaster recovery. Blue Prism's robotic operating model provides oversight with processes defined in a tool that resembles a Visio diagram.

**Percentage split between attended and unattended use cases:** 100% unattended. "Attended RPA" is available via a partnership with TrustPortal, which offers a digital front end for the attended deployment of RPA.

**Business process discovery approach (manual or automated):** Blue Prism robots have been designed to automatically "discover" business processes.

**Robot runtime control dashboard:** The console controls, monitors, executes and schedules process execution on the distributed robots. It uses automated runtime distribution. Version 6.0 (V6) enables users to know if a robot was slowed or stopped, and if an escalation was created. It can also show a screen shot of where the robot stopped.

**Product name:** Blue Prism V6

**Delivery:** Software and reference architectures for Blue Prism's partners include Microsoft, Amazon Web Services (AWS) and IBM

**Additional machine-learning/AI functionality:** V6 uses machine learning for workload management, computer vision technology and best-of-breed AI technologies from partners.

### Key Facts:

- **Headquarters:** London and Austin, Texas **Year Founded:** 2001

- **Revenue estimate:** \$32 million
- **Customer geographies:** Global — EMEA, North America, APAC and Latin America
- **Consulting, integration and BPO partners:** Accenture, Avanade, Appian, Capgemini, Deloitte, EY, IBM, ISG, KPMG, NEOOPS, Reveal, Symphony
- **Specialist software partners:** Appian, Captricity, Celaton, Expert System, IBM, Minit, CyberArk, TrustPortal, Microsoft
- **Number of customers:** More than 500. **Notable customers:** BNY Mellon, American Express, HSBC, Pfizer, ING, Maersk, Nokia, Nordea, P&G, Raiffeisen Bank International, Siemens, Westpac Group, Zurich
- **Licensing models:** All — annual, perpetual and SaaS
- **RPA Pricing:** \$12,000 per robot per year
- **Pricing for additional machine-learning/AI functionality:** Not available (N/A)
- **Technical support team locations and size:** Global network with offices in London, Newton-le-Willows, Austin, Chicago, Miami, New York, San Francisco, Washington D.C., Bangalore, Sydney and Tokyo
- **Industries represented:** Financial services, insurance, healthcare, telecom and retail

### Contextor ([www.contextor.eu](http://www.contextor.eu))

**Product description:** Contextor's RPA software suite is Contextor Interactive Assistant RPA. Contextor Studio is an integrated development environment, with Visual Studio for workflow design; and a set of documentation and widgets or software development kits (SDKs). Contextor Control Room offers unattended RPA. Contextor Galaxy is an optional component to improve processes through business activity monitoring. Connectors and libraries include legacy systems, client/server applications, and native integration with virtualized architectures such as Citrix Independent Computing Architecture (ICA) and Microsoft Remote Desktop Protocol (RDP).

**Percentage split between attended and unattended use cases:** 80% attended, 20% unattended

**Business process discovery approach:** Contextor Discovery and Studio audit and replay business processes with activity capture, such as logging user action clicks, keyboard typing and application switching.

**Robot runtime control dashboard:** Contextor Control Room is the module for unattended RPA, providing robot supervision, process scheduling and task management, such as progress reporting and alerts.

**Product name:** Contextor Interactive Assistant

**Delivery:** Software

**Additional machine-learning/AI functionality:** See partnerships

### Key Facts:

- **Headquarters:** Orsay, France and Brussels, Belgium **Year Founded:** 2000
- **Revenue estimate:** €3.6 million
- **Customer geographies:** Worldwide
- **Consulting, integration and BPO partners:** Accenture, Aurexia, Avanade, Capgemini, DXC Technology, EY, IBM, McKinsey & Co., Orphoz, Palmer, Roland Berger, Sopra Steria, TNP, Acensi, Adria Business & Technology, Algotech, comways, iNet, Kleptika, Concentrix, New Frontier Group, ProceDo, Robotic Desktop, Silah Gulf, Spread Tecnologia and Sogedes Systems
- **Specialist software partners:** Abbyy, arabot, Erdil (NLP), IBM Watson, Microsoft, Inbenta, Nuance and ScanStore
- **Number of customers:** 100 **Notable customers:** American Express, Axa, BNP Paribas, Société Générale, bpost, EDF, Engie, Orange, Vodafone Kabel Deutschland, Arvato
- **Licensing models:** Annual license or perpetual license with volume-related reductions
- **RPA pricing:** Annual attended RPA bot: €1,200. Unattended RPA bot: €30,000 for one bot, one visual studio plus Control Room. €5,000 per year per add-on bot, Visual Studio: €10,000. Galaxy activity monitoring: €40,000 per year plus 20% of attended, Citrix or RDP: €5,000 per server farm.
- **Pricing for additional machine-learning/AI functionality:** Not available
- **Technical support team locations:** Paris and Brussels
- **Industries represented:** Banking, finance, insurance, telecommunications, energy, utilities and retail

### EdgeVerve Systems ([www.edgeverve.com](http://www.edgeverve.com))

**Product description:** The AssistEdge suite is a scalable RPA platform that helps enterprises modernize customer service, improve business processes and enhance operational productivity. AssistEdge is a nine-year old product, which is now an integral part of the Infosys Nia AI platform. Infosys Nia converges AI technologies, such as big data/analytics; advanced, high-performance and scalable machine-learning capabilities; knowledge management; and cognitive automation capabilities.

**Percentage split between attended and unattended use cases:** 40% attended, 60% unattended

**Business process discovery approach (manual or automated):** The AssistEdge Integrated Device Monitoring (IDM) module discovers processes by capturing user actions and underlying business intelligence.

**Robot runtime control dashboard:** The Control Tower provides role-based access to users to create, monitor, schedule and manage robots remotely. It also provides detailed runtime views.

**Product name:** AssistEdge

**Delivery:** Software

**Additional machine-learning/AI functionality:** Prebuilt as an integral part of Infosys NIA platform

#### Key Facts:

- **Headquarters:** Bangalore, India **Year Founded:** 2014
- **Revenue estimate:** Not available
- **Customer geographies:** Global — Americas, Europe and Asia/Pacific
- **Consulting, integration and BPO partners:** Infosys
- **Specialist software partners:** N/A
- **Number of customers:** More than 180. **Notable customers:** BT, Vodafone, Cisco, Ricoh
- **Licensing models:** All-inclusive price per bot and no minimum commitment on the number of bots, enterprisewide license, and transaction-based pricing
- **Pricing for additional machine-learning/AI functionality:** Varies on basis of use case
- **Technical support team locations and size:** Global — Americas, Europe, Asia/Pacific
- **Industries represented:** Financial services, insurance, retail/consumer packaged goods (CPG), telecom/cable, manufacturing/hi-tech, healthcare and life sciences

EnableSoft ([www.enablesoft.com](http://www.enablesoft.com))

**Product description:** Foxtrot is a scalable RPA software created by EnableSoft that empowers companies to accelerate their speed of business. With Foxtrot, businesses can amplify operational efficiency and lower human capital costs through automation. Whether integrating existing processes or building a program from scratch, Foxtrot is the fastest time-to-value RPA solution available.

**Percentage split between attended and unattended use cases:** Approximately 50/50

**Business process discovery approach (manual or automated):** No

**Robot runtime control dashboard:** In beta

**Product name:** Foxtrot

**Delivery:** SaaS

**Additional machine-learning/AI functionality:** N/A

### Key Facts:

- **Headquarters:** Orlando, Florida **Year Founded:** 1995
- **Revenue estimate:** \$4 million
- **Customer geographies:** U.S., Australia, the Caribbean and Europe
- **Consulting, integration and BPO partners:** Basico, Virtual AI, Optivate, Transformious
- **Specialist software partners:** Constellation Software
- **Number of customers:** 537 **Notable customers:** More than 500 financial institutions including Union Bank, Navy Federal Credit Union, Standard Bank, the Johnson Financial Group, BankPlus and Ashland Credit Union. Healthcare organizations include Scott & White Health Plan, Care1st Health Plan Arizona and New Bedford. Others include organizations such as Pay It Forward Scholarships.
- **Licensing models:** SaaS
- **RPA pricing:** \$20,000 per year for five enterprise users (develop and runtime). \$3,000 one-time implementation fee. FoxBots (runtime) are \$1,150 each per year. A license manager controls and audits licenses.
- **Pricing for additional machine-learning/AI functionality:** N/A
- **Technical support team locations and size:** Eight people in Orlando, Florida
- **Industries represented:** Finance, healthcare and 12 additional industries

**Epiance** ([www.epiPLEX500.com](http://www.epiPLEX500.com))

**Product description:** Epiance EpiGenie Robotic Process Automation (ERPA) can be used to automate both completely automatable and partially automatable processes. ERPA adopts a continuous process improvement approach to automation. Intelligence on process execution is continuously gathered and incorporated into process improvement initiatives, delivering business gains in multiple stages. EpiGenie RPA can be implemented rapidly using visual gadgets and workflows, with minimal programming or scripting knowledge. The process workflow has unique technology advantages for capturing processes running under Citrix and legacy systems.

The ERPA platform addresses business issues through a combination of performance enhancement forms, rapidly creating automation scripts and assembling gadgets to form intelligent robots that can automate a process either fully or partially. These performance accelerators reduce the complexity of the application, thereby reducing errors and time to complete a transaction.

**Percentage split between attended and unattended use cases:** N/A

**Business process discovery approach (manual or automated):** Both, via Epiance Process Analyzer



**Robot runtime control dashboard:** Delegates project execution to individual robots, manages roles, creates and schedules robots, monitors robot run status, and generates various control reports.

**Product name:** EpiGenie Robotic Process Automation (ERPA)

**Delivery:** Software

**Additional machine learning/AI functionality:** ERPA works with NLP and machine-learning tools.

### Key Facts:

- **Headquarters:** Bangalore, India **Year Founded:** 2001
- **Revenue estimate:** \$5 million
- **Customer geographies:** Worldwide
- **Consulting, Integration and BPO partners:** Intelenet Global Services
- **Specialist software partners:** Homegrown, open-source solutions; Apache OpenNLP; IBM Watson and Microsoft Cognitive Services
- **Number of customers:** 20 **Notable customers:** Intelenet Global Services, Hinduja Global Solutions (HSG), TeamLease, CRISIL
- **Licensing models:** Annual and perpetual
- **RPA pricing:** \$4,000 perpetual per bot per machine, or \$1,500 annual per bot
- **Pricing for additional machine-learning/AI functionality:** AI included in the price above
- **Technical support team locations and size:** Professional services team available
- **Industries represented:** Primarily large BPOs, telecom industries, banking, financial services, insurance and healthcare

Jacada ([www.jacada.com](http://www.jacada.com))

**Product description:** Jacada's RPA software is called Jacada Enterprise Automation. Attended automation is referred to as "Agent Desktop Automation." The unattended automation provided by Jacada Enterprise Automation is simply referred to as "Jacada Robotic Process Automation." Jacada has opted to take a "dual designer" approach to RPA implementation. Enterprise automation projects tend to rapidly grow in complexity. To this end, the Jacada product set provides a purpose-built tool for the business to model workflows, logic and interfaces. An open-standard C# code generation approach on Visual Studio allows IT developers to do low-level automations. This enables subject matter experts to cleanly define the flow and logic, and be involved with any low-level complexity. Jacada also supplies integration technology, BPM and conversational designer products.

**Percentage split between attended and unattended use cases:** 70% attended, 30% unattended

**Business process discovery approach:** Both manual and automated

**Robot runtime control dashboard:** The administrative dashboard is used to schedule bot execution, queues and task assignments; perform auditing and logging; retry parameters; and provide execution metrics, such as dollar savings.

**Product name:** Jacada Enterprise Automation

**Delivery:** Software and services

**Additional machine-learning/AI functionality:** Focused on its virtual agent product coupled with RPA

### Key Facts:

- **Headquarters:** Atlanta, Georgia **Year Founded:** 1990
- **Revenue estimate:** \$17 million
- **Customer geographies:** Australia, Belgium, Canada, Germany, India, Ireland, Israel, Mexico, Netherlands, Norway, Poland, Portugal, Russia, Singapore, South Africa, South America, Spain, Sweden, the U.K. and the U.S.
- **Consulting, integration and BPO partners:** Accenture, Deloitte
- **Specialist software partners:** None
- **Number of customers:** 121 **Notable customers:** U.S. Navy, Nationwide, Staples, Telefonica, O2 and PSEG Long Island
- **Licensing models:** Perpetual for attended automation, annual for unattended automation
- **RPA pricing:** Attended automation is priced per agent seat, with a minimum purchase of 100 seats. Unattended automation is priced per robot with a minimum of a 10-robot purchase.
- **Pricing for additional machine-learning/AI functionality:** N/A
- **Technical support team locations and size:** Five, located in Atlanta and Israel
- **Industries represented:** Retail, government, telecom, insurance, healthcare, financial, public utilities

Jidoka ([www.jidoka.io](http://www.jidoka.io))

**Product description:** Jidoka is a Java-based RPA development, deployment and orchestration platform. Jidoka software robots operate in a distributed architecture consisting of a server and client nodes, which are governed by a web-based console interconnected by encrypted communications. The Jidoka console centralizes advanced monitoring, audit and exception-handling features, along with enterprise-grade permission and secure authorization capabilities.

Jidoka's design-centric approach, development tools and REST API enable complex and robust robot construction, and allow integration into larger operating environments. Collaborative robots (cobots), human-assistance development modules and chatbots are added into the console.

**Percentage split between attended and unattended use cases:** 10% attended, 90% unattended

**Business process discovery approach:** Manual, based on a robust and agile documented methodology, which includes a configurable robot ROI estimation tool.

**Robot runtime control dashboard:** The multilingual console, Central Control Room, allows enterprise-grade governance, control and analysis through real-time robot and node management, monitoring and audit features. Advanced real-time metrics, scheduling, exception handling and notification features are available, too.

**Product name:** Jidoka

**Delivery:** Software and SaaS

**Additional machine-learning/AI functionality:** Chatbot using NLP

#### Key Facts:

- **Headquarters:** Seville, Spain; with offices in Madrid, Spain; and Bogota, Colombia **Year Founded:** Novayre Solutions was founded in 2008. The RPA platform, Jidoka, was launched in 2011.
- **Revenue estimate:** €2.5 million
- **Customer geographies:** Spain, Portugal, the U.K., South Africa, India, the U.S., Mexico, Brazil, Colombia, Chile, Costa Rica, Panama, Peru
- **Consulting, integration and BPO partners:** Deloitte (Spain), KPMG (Colombia), EY (Mexico), UST Global, Stixis Technologies, Entelgy, Double-O Consulting, FSI, Konecna, Deloitte's Servicios Generales de Gestión (S2G)
- **Number of customers:** 40. **Notable customers:** PepsiCo Mexico, S2G, Petro-7, Axpo Group, Konecna, EVO Banco, Hospital Universitario Virgen del Rocio
- **Licensing models:** On-premises perpetual or annual license. SaaS on a pay-per-use monthly license. RPA as a service is provided by Jidoka's partners.
- **RPA pricing:** Rates are based on nodes and server licensing, not per bot. On-site deployments start from \$11,000/year (in three yearly payments) and are discounted if paid upfront. Private cloud deployment starts from \$750/month plus a \$2,200 one-time set-up fee per node. Developer seats (SDK) from \$3,850/year.
- **Pricing for additional machine-learning/AI functionality:** N/A
- **Technical support team locations and size:** Spain and Colombia

- **Industries represented:** Financial services, utilities, consumer and industrial products, public sector, defense, technology, tourism, and healthcare

Kofax ([www.kofax.com](http://www.kofax.com))

**Product description:** Kofax Kapow is an RPA platform with analytics and process intelligence. The Kapow Design Studio provides an intuitive nonprogramming robot design environment where designers interact with applications, websites and other data sources to visually map out the automation flow. Robot designers are able to incorporate business logic to handle exceptions, transform data and send alerts to users as part of the overall robot automation. Kapow also includes a feature called "snippets," which are prebuilt automation steps that can be reused across several robots and maintained separately from the robot.

**Percentage split between attended and unattended use cases:** 30% attended, 70% unattended

**Business process discovery approach (manual or automated):** The Kapow product is both a stand-alone platform and tightly integrated with other Kofax offerings, such as Kofax TotalAgility, Kofax Capture and Kofax Transformation. The Kofax TotalAgility platform includes omnichannel capture, process management, process intelligence and analytics, mobile, eSignature, and customer communications.

**Robot runtime control dashboard:** The Kapow Management Console manages the deployment and scheduling of robots. It manages user roles and permissions, and access to detailed logs of production results and errors. It also monitors resource usage of robot servers and shares robot process information.

**Product name:** Kofax Kapow

**Delivery:** Software on-premises or cloud-hosted service

**Additional machine-learning/AI functionality:** Kofax Transformation and Kofax TotalAgility offer machine learning for document classification, separation and data extraction for structured, semistructured, and unstructured documents.

#### Key Facts:

- **Headquarters:** Irvine, California **Year Founded:** 1985
- **Revenue estimate:** N/A (Not publicly disclosed)
- **Customer geographies:** Americas, EMEA, APAC
- **Consulting, integration and BPO partners:** More than 1,000. Kofax partners, 165 trained and certified on Kofax Kapow
- **Specialist software partners:** OEM partners (for example, RPA Technologies, which provides software and services in the Japanese market)

- **Number of customers:** More than 500 **Notable customers:** Union Bank, Delta Dental of Colorado, Arrow Electronics, Safe-Guard Products International, Davies Turner, Pitt Ohio
- **Licensing models:** Perpetual and subscription (annual term)
- **RPA pricing:** By how many robots (automations) can be executed concurrently
- **Pricing for additional machine-learning/AI functionality:** Consumption model based on number of document pages, processes and concurrent users
- **Technical support team locations and size:** 189 people in more than 20 countries
- **Industries represented:** Banking, insurance, logistics/transportation, manufacturing, healthcare, government, technology

### Kryon Systems ([www.kryonsystems.com](http://www.kryonsystems.com))

**Product description:** Kryon uses visual image recognition/OCR technologies, for which it has five patents for visual algorithms and deep-learning technologies. Kryon's RPA solutions enable automated process discovery, as well as the development, deployment and management of automated processes on any business application without integration. Kryon's RPA solution, Leo, can be leveraged for both unattended and attended automation, as well as hybrid automation. Leo Studio enables the rapid development of automation scenarios, including a comprehensive set of drag-and-drop UI building blocks to deliver robust automation scenarios. Kryon offers AI for scanned documents including an out-of-the-box solution for invoice processing.

**Percentage split between attended and unattended use cases:** 20% attended, 80% unattended

**Business process discovery approach:** An automated process discovery tool captures and recognizes processes using Kryon's visual technologies and database APIs. Using AI technologies, Leo identifies the most efficient processes that can be automated and then imported into Leo Studio for editing and publishing.

**Robot runtime control dashboard:** Leo Console provides live tracking and monitoring of robotic tasks, full visibility of the virtual workforce actions. Leo Console's reports and analytics provide business insights.

**Product name:** Leo

**Delivery:** Software and cloud solution

**Additional machine-learning/AI functionality:** Kryon's automated process discovery incorporates AI technologies (deep learning and neural networks, machine learning, classification and clustering, NLP, image recognition, and information extraction), enabling Leo to identify processes that can be automated.

**Key Facts:**

- **Headquarters** — Tel Aviv, Israel **Year Founded:** 2008
- **Revenue estimate:** Private company — not disclosed
- **Customer geographies:** North America, Europe, India, APAC
- **Consulting, integration and BPO partners:** PwC, Symphony, HCL Technologies, Wipro, Reply, msg global solutions, OpenConnect, Verint, Amdocs
- **Specialist software partners:** Software AG, Abbyy, IBM Watson, Ayehu
- **Number of customers:** 100 **Notable customers:** Microsoft, USAA, Verizon, Singtel, Allianz, DXC Technology, HP Inc., Wyndham Hotel Group, Cognizant
- **Licensing models:** Annual
- **RPA pricing:** Five robots start at \$53,900 annually. Enterprise packages of 100 unattended robots, 40 attended robots and 20 studios available at \$470,000 annually.
- **Pricing for additional machine-learning/AI functionality:** \$10,000 for 100,000 pages
- **Technical support team locations and size:** U.S., Singapore, Israel, Australia
- **Industries represented:** Insurance and financial services, telecom, software, hospitality, BPO, healthcare, manufacturing

Nice ([www.nice.com](http://www.nice.com))

**Product description:** Nice RPA comprises software robots that automatically execute work on a virtual machine or employee's desktop, interacting with applications, legacy systems and files. Using the Nice Automation Authoring Studio, an administrator can record, configure and test automation scripts.

RPA robots are managed, prioritized and scheduled using the Nice Automation Management Console. Nice RPA can automate or guide workers in the moment. In addition, Desktop Analytics tracks employees' desktop activities and identifies process improvement opportunities. Nice offers a framework to integrate into a third-party AI solution, and it has an OCR engine embedded into its RPA solution.

**Percentage split between attended and unattended use cases:** 70% attended, 30% unattended

**Business process discovery approach (manual or automated):** Nice Desktop Analytics can identify automation opportunities and baseline manual process execution time.

**Robot runtime control dashboard:** An integral part of the product

**Product name:** Nice Robotic Automation, Nice Desktop Analytics

**Delivery:** Software, hosted, SaaS

**Additional machine-learning/AI functionality:** Embedded OCR, and unstructured text and voice analytics are deployed by Nice and its partners using Nice's SDK integration framework.

### Key Facts:

- **Headquarters:** Israel **Year Founded:** 1986
- **Revenue estimate:** \$1 billion (year-end 2016)
- **Customer geographies:** Americas, EMEA, APAC
- **Consulting, integration and BPO partners:** Accenture, IBM, Deloitte, Capgemini, Symphony, Virtual Operations, Cognizant, Infosys, KPMG, PwC, EDM, Group Elite, Almato, RES, Pegamento, SVL Business Solutions, Weber Solutions, Saven Technologies, Servion, Tata Consultancy Services (TCS), Amdocs, BearingPoint, Wittel
- **Specialist software partners:** Abbyy, IPsoft, Celaton, CyberArk, Microsoft, IBM, Amazon and Google
- **Number of customers:** 450 **Notable customers:** Telefonica, IKEA, Help Line (the contact center serving the ICBPI group of banks in Italy), Banca Popolare di Sondrio, Nationwide, Blue Cross of Idaho, OnProcess Technology, and EE
- **Licensing models:** Perpetual, term based and automation as a service
- **RPA pricing:** N/A
- **Pricing for additional machine-learning/AI functionality:** N/A
- **Technical support team locations and size:** 70 people in the U.S., Israel and India
- **Industries represented:** Government, banking, insurance, telecommunications, retail, utilities and healthcare

**OpenConnect** ([www.openconnect.com](http://www.openconnect.com))

**Product description:** OpenConnect has the following RPA-related products: AutoiQ, WorkiQ, Analyze, and ConnectiQ. These four tools work together to create a unified automation platform. OpenConnect software robots can work in either the background (in unattended mode) or in an attended mode.

**Percentage split between attended and unattended use cases:** 100% unattended. Partnering with Kryon Systems for attended use cases.

**Business process discovery approach (manual or automated):** Business process discovery is a partially automated process that can utilize the WorkiQ-captured information that was used to identify top human performers and the process map automatically generated by the Analyze software.

**Robot runtime control dashboard:** The control dashboard is an integral part of the product, a unique OpenConnect capability, which allows work to be orchestrated between robots. It also enables the product to manage third-party RPA products.

**Product name:** AutoiQ

**Delivery:** Software

**Additional machine-learning/AI functionality:** Provided through third-party arrangements.

#### Key Facts:

- **Headquarters:** Dallas, Texas **Year Founded:** 1982
- **Revenue estimate:** Undisclosed; privately held
- **Customer geographies:** Americas, EMEA, APAC
- **Consulting, integration and BPO partners:** Concentrix, Cognizant
- **Specialist software partners:** Worksoft, Kryon
- **Number of RPA customers:** 100 **Notable customers:** Undisclosed
- **Licensing models:** Annual minimum of five robots per license.
- **RPA pricing:** Priced per robot between \$1,500 and \$9,000.
- **Pricing for additional machine-learning/AI functionality:** \$40,000
- **Technical support team locations and size:** Nine people are Dallas-based, can be on-site as needed
- **Industries represented:** Health insurance sector, with additional customers in finance, insurance and manufacturing

**Pegasystems** ([www.pegasystems.com](http://www.pegasystems.com))

**Product description:** Pega Robotic Automation & Intelligence — Bots are configured in the Pega Robotic Automation Studio. It comes with preconfigured connectors for mainstream commercial tools, HTML and mainframes. Pega Robotic Process Automation offers unattended automation, while Pega Robotic Desktop Automation provides attended automation. Pega Workforce Intelligence is a big data application powered by pattern-matching machine learning for organizations to understand levels of production focus and drive continuous improvements. With Pega Robot Manager, clients can create and manage work queues, bots and humans when used with Pega's business process and case management tools.

**Percentage split between attended and unattended use cases:** 60% attended, 40% unattended

**Business process discovery approach:** Automated



**Robot runtime control dashboard:** Yes

**Product name:** Pega Robotic Automation & Intelligence

**Delivery:** Pega's RPA solutions are typically deployed on-premises. The control tower (BPM/case management) and Workforce Intelligence are available on the cloud.

**Additional machine-learning/AI functionality:** Workforce Intelligence, option to add Pega Customer Decision Hub for advanced AI.

### Key Facts:

- **Headquarters:** Cambridge, Massachusetts **Year Founded:** 1983
- **Revenue estimate:** \$22.8 million (2016)
- **Customer geographies:** North America, EMEA, Latin America and APAC
- **Consulting, integration and BPO partners:** 12 BPO partners, an extensive network of SIs and consultants are now delivering 70% of projects.
- **Specialist software partners:** Unify with the Pega platform for BPM, CRM, case management, chatbots, business rules and additional AI.
- **Number of customers:** More than 200. **Notable customers:** Bank of America, Standard Chartered, Macquarie, Telstra, ANZ, Scotiabank, UnitedHealth Group, Florida Blue, Sun Life Financial
- **Licensing models:** Monthly, annual, perpetual, consumption basis
- **RPA pricing:** Stand-alone RDA: \$50/month per user. Perpetual \$1,550 plus 20% annual maintenance. RPA unattended robotics \$350/month per robot. Perpetual \$10,850 plus 20% annual maintenance.
- **Pricing for additional machine-learning/AI functionality:** Workforce Intelligence (AI machine learning and big data) \$35/user/month for 250 users, list price annual cost \$105,000
- **Technical support team locations and size:** 60 people provide technical support from Atlanta, Georgia
- **Industries represented:** Government, banking, manufacturing and communications

**Redwood Software** ([www.redwood.com/robotics](http://www.redwood.com/robotics))

**Product description:** Redwood Robotics' robots interact directly with any application without the need for UI scripting and maintenance, or a virtual machine. Where the process requires UI manipulation, it dynamically allocates and releases a Windows desktop session on a Windows server. A growing catalog of typically used plug-and-play routines help customers quickly build their robotic processes without scripting efforts.

**Percentage split between attended and unattended use cases:** 100% unattended

**Business process discovery approach:** Manual process discovery

**Robot runtime control dashboard:** The solution delivers process orchestration and workflow, and it manages human-robotic interactions without the need for human effort or control towers. The orchestration builder coordinates robots and people working to robotize and deploy large complex business processes. Customers and partners can also build their own plug-and-play robots.

**Product name:** Redwood Robotics

**Delivery:** On-premises, cloud or hybrid

**Additional machine-learning/AI functionality:** N/A

### Key Facts:

- **Headquarters:** Houten, Netherlands **Year Founded:** 1993
- **Revenue estimate:** More than \$45 million (2016)
- **Customer geographies:** Worldwide
- **Consulting, integration and BPO partners:** Deloitte, KPMG, EY, PwC, Accenture, Genpact, Wipro, Cognizant
- **Specialist software partners:** Kofax, SAP, Oracle, Salesforce, Workday
- **Number of customers:** 3,000 **Notable customers:** Royal DSM, Genentech, Arla Foods, ArcelorMittal, Allianz, Burberry, Jumbo, SAP, Grainger, bol.com
- **Licensing models:** Annual subscription model
- **RPA pricing:** €15,000 per license
- **Pricing for additional machine-learning/AI functionality:** N/A
- **Technical support team locations and size:** 100 people in the Netherlands and the U.S.
- **Industries represented:** Banking, financial services, insurance, retail, consumer products, healthcare, pharmaceutical, government, communications, telecom, media and manufacturing

**Softomotive** ([www.softomotive.com](http://www.softomotive.com))

**Product description:** The Softomotive RPA platform consists of two different tools, ProcessRobot and WinAutomation. ProcessRobot is the enterprise-level environment that supports distributed architecture and central management for implementing an RPA center of excellence (COE). WinAutomation is a stand-alone, self-contained robot aiming for rapid deployment within an organization. The two tools can be used independently or in combination, forming multiple topologies to cover different customer needs.

**Percentage split between attended and unattended use cases:** Attended 40%, unattended 60%

**Business process discovery approach:** ProcessRobot is equipped with process recorders that are able to record any user web-based or desktop-based activity.

**Robot runtime control dashboard:** Business managers are able to build dashboards and instantly access detailed reporting in order to monitor their digital workforce performance live and in real time.

**Product name:** ProcessRobot, WinAutomation

**Delivery:** Software

**Additional machine-learning/AI functionality:** IBM Watson, Google and Microsoft Cognitive Services. Chatbot support is scheduled and will be available in a forthcoming release.

### Key Facts:

- **Headquarters:** London, England; Athens, Greece **Year Founded:** 2005
- **Revenue estimate:** Privately held
- **Customer geographies:** U.S., India/APAC, U.K., Continental Europe
- **Consulting, integration and BPO partners:** More than 40 partners, including KPMG, IBM, Mphasis, Cognizant and TCS
- **Specialist software partners:** Microsoft, Google and Abbyy for OCR and data extraction from unstructured sources; Microsoft, Google and IBM Watson for cognitive functionality.
- **Number of customers:** More than 100 enterprise, and more than 7,000 total customers including small and midsize businesses (SMBs) **Notable customers:** JPMorgan Chase, Xerox, Manulife, Sony, Deutsche Telekom, Siemens, Teva, DXC Technology
- **Licensing models:** Perpetual or Annual
- **RPA pricing:** N/A
- **Pricing for additional machine-learning/AI functionality:** N/A
- **Technical support team locations and size:** More than 30 total in Athens, Greece and Bangalore, India
- **Industries represented:** Mostly banking, financial services and insurance sector; IT; telecommunications; healthcare; government

Syntel ([www.syntelinc.com](http://www.syntelinc.com))

**Product description:** SyntBots comes with an enterprise-scale process orchestrator, scheduler, interactive operations dashboard and virtual workforce manager on a distributed architecture and in

a 100% high-availability solution. Syntel's services are powered by the SyntBots intelligent automation platform, which uses cognitive computing and AI to transform IT operations, DevOps, legacy modernization and business processes across the enterprise.

**Percentage split between attended and unattended use cases:** 100% unattended execution

**Business process discovery approach:** SyntBots Process Recorder provides automated process capture, automation complexity estimation and ROI estimates. It captures the business process workflow in Business Process Model and Notation (BPMN), and assists with time and motion analysis.

**Robot runtime control dashboard:** Displays process operation metrics as well as business metrics. Configurable audit trail reports on process execution are available for governance and compliance.

**Product name:** SyntBots

**Delivery:** Software and SaaS

**Additional machine-learning/AI Functionality:** Machine vision (OCR), optical mark recognition, region matching and image search. Virtual assistants and chatbots through Amazon Echo and Google Home. NLP and autonomous decision making are available through more than 60 algorithms for machine and deep learning.

### Key Facts:

- **Headquarters:** Troy, Michigan **Year Founded:** 1980
- **Revenue Estimate:** \$932 million revenue for all Syntel services
- **Customer Geographies:** North America, Europe, Asia
- **Consulting, integration and BPO partners:** Syntel delivers the entire life cycle of solution consulting, integration and BPO execution.
- **Specialist software partners:** Syntel leverages the SyntBots platform for end-to-end solution implementation. However, based on unique client requirements, Syntel integrates components from partners such as Microsoft and Google.
- **Number of customers:** 123 **Notable customers:** American Express, State Street, FedEx
- **Licensing models:** Services powered by SyntBots are available as an end-to-end managed service to run the automated operations or at a process level in the Automation COE model.
- **RPA pricing:** Services pricing: Managed services (complete ownership) with committed SLAs or process-based pricing in the Automation COE model.
- **Pricing for additional machine-learning/AI functionality:** None
- **Technical support team locations and size:** More than 250-member platform team based across all Syntel global delivery centers

- **Industries represented:** Banking and financial services, retail, logistics and telecom, healthcare and life sciences, insurance, manufacturing

Thoughtonomy ([www.thoughtonomy.com](http://www.thoughtonomy.com))

**Product description:** The Thoughtonomy Virtual Workforce combines cloud, RPA and AI into a SaaS intelligent automation platform that clients and partners can use to build process knowledge.

**Percentage split between attended and unattended use cases:** 40% attended, 60% unattended

**Business process discovery approach:** Manual or using third-party tools

**Robot runtime control dashboard:** Thoughtonomy Connect web-based management console

**Product name:** Thoughtonomy Virtual Workforce

**Delivery:** SaaS in public or private cloud deployments

**Additional machine-learning/AI functionality:** IADA autonomous orchestration uses intelligent data extraction to interpret and extract data from semistructured sources, and learns over time. It uses cognitive data processing (CDP) using AI to interpret natural language from free text, such as email or unstructured documents.

#### Key Facts:

- **Headquarters:** London, England **Year Founded:** 2013
- **Revenue estimate:** \$10 million
- **Customer geographies:** Global
- **Consulting, integration and BPO partners:** Atos, Fujitsu, CGI, Agilisys, EY, UniteBT, Symphony, Serco Group, Randstad
- **Specialist software partners:** Blue Prism
- **Number of customers:** 150 **Notable customers:** Aegon, Damac Properties, Engie, Nexen, innogy, Hovis, Next, Rentokil Initial, TransUnion, WPP, Aldermore Bank, Volkswagen Financial Services, Medicines and Healthcare products Regulatory Agency (MHRA), Aksigorta, Siemens, Travis Perkins, Ford, Ultima
- **Licensing models:** SaaS and Workers as a Service — Fixed capacity. Workforce as a Service — Dynamic capacity is paid for as used. Work as a Service — Consumption is based on either (a) cost per transaction, or (b) hours "given back," that is time released from human workers.
- **RPA pricing:** £800 to £1,500 per "virtual worker" (approximately five to 15 full-time equivalent [FTE]) per month for 36 months on a consumption-based model
- **Pricing for additional machine-learning/AI functionality:** IADA and Intelligent Data Extraction (IDE) are included. Rest are priced on application (POA)

- **Technical support team locations and size:** 35 FTE in London, England and Austin, Texas
- **Industries represented:** Business process and IT outsourcers, financial services, insurance, manufacturing, retail, utilities, media, telecom, technology, services, public sector, healthcare

UiPath ([www.uipath.com](http://www.uipath.com))

**Product description:** UiPath is an RPA tool that builds computer vision capability into its robots. UiPath is also able to integrate AI technologies to allow customers to move from rule-based to cognitive and machine-learning process automation. UiPath Studio is the workflow designer. UiPath Robot is programmed to execute processes. It operates with remote connections via Citrix or any legacy systems.

**Percentage split between attended and unattended use cases:** 30% attended, 70% unattended

**Business process discovery approach:** Manual building autodiscovery capability

**Robot runtime control dashboard:** UiPath Orchestrator provides virtual workforce management. Process operations analytics and monitoring use Elasticsearch and Kibana for process execution logs and audit trails. Kibana enables the design and configuration of process operation dashboards.

**Product name:** UiPath

**Delivery:** Software or SaaS via partners

**Additional machine-learning/AI functionality:** For text analysis: Google Translate, Google Text Analysis, IBM Watson Text Analysis and Microsoft Text Analytics. For computer vision, language detection and named entity recognition: Sentiment analysis from Oracle Cloud Applications combines RPA with BPM and case management capabilities. Machine learning is combined with Oracles' Adaptive Intelligence Applications, including chatbots.

### Key Facts:

- **Headquarters:** New York, New York **Year Founded:** 2015
- **Revenue estimate:** \$25 million
- **Customer geographies:** Global
- **Consulting, integration and BPO partners:** More than 200 partners including EY, Deloitte, PwC, Cognizant, Capgemini, Accenture, Genpact
- **Specialist software partners:** Integration with three OCR engines (Google, Microsoft and Abbyy). BPM and CRM integration are in scope.
- **Other technology partners and integrations include:** Oracle, Enate, Newgen OmniFlow Intelligent Business Process Suite (iBPS), Microsoft Office 365, Microsoft SharePoint, Celonis, K2, Abbyy and many others.

- **Number of customers:** More than 450 **Notable customers:** GE, Equifax, Generali Group, HP Inc., Dentsu, Accenture, Capgemini, Cognizant, Sumitomo Mitsui Banking Corp. (SMBC)
- **Licensing models:** Annual subscription
- **RPA pricing:** Not Available
- **Pricing for additional machine-learning/AI functionality:** No additional costs
- **Technical support team locations and size:** 35 people in Bangalore, India and Japan
- **Industries represented:** Consulting services and BPO, banking, financial services, insurance, manufacturing, healthcare, communications, retail, consumer electronics, government, energy, transportation

Verint ([www.verint.com](http://www.verint.com))

**Product description:** Verint RPA comprises software robots that automatically execute work on a virtual desktop, interacting with applications, legacy systems and files. Using the Verint Automation Authoring Studio, an administrator can record, configure and test automation scripts.

RPA robots are scheduled using the Verint Automation Management Console. Verint Process Assistant is a desktop automation solution that helps employees by automating work or guiding them in the moment.

**Percentage split between attended and unattended use cases:** 50% attended, 50% unattended

**Business process discovery approach (manual or automated):** Verint Process Discovery can identify automation opportunities and baseline manual process execution time.

**Robot runtime control dashboard:** Verint's Automation Management Console can schedule and monitor the robot workforce. It includes advanced scheduling, alert notifications and live monitoring.

**Product name:** Verint Robotic Process Automation, Verint Process Assistant, Verint Desktop and Process Analytics

**Delivery:** Software

**Additional machine-learning/AI functionality:** Verint Robotic Process Automation can use Verint Text Analytics or IBM Watson for unstructured text classification and sentiment analysis.

### Key Facts:

- **Headquarters:** Melville, New York **Year Founded:** 1994
- **Revenue estimate:** \$1.1 billion (financial year-end 31 January 2017 according to Verint 10-K filing)
- **Customer geographies:** Americas, EMEA, APAC

- **Consulting, integration and BPO partners:** None, currently
- **Specialist software partners:** N/A
- **Number of customers:** For all offerings, Verint has over 10,000 customers. **Notable customers:** Verint does not disclose the names of its customers.
- **Licensing models:** Perpetual and subscription
- **RPA pricing:** Verint Robotic Process Automation is priced per robot, on a perpetual license. Verint Process Assistant is priced per named employee, on a perpetual license.
- **Pricing for additional machine-learning/AI functionality:** N/A
- **Technical support team locations and size:** 60 offices worldwide
- **Industries represented:** Financial services (banking and insurance); travel and hospitality

#### WorkFusion ([www.workfusion.com](http://www.workfusion.com))

**Product description:** Smart Process Automation (SPA) combines RPA, machine learning, AI-based automation, OCR and workflow into one enterprise-focused platform. WorkFusion's product roadmap includes launching a self-service WorkFusion Automation Cloud and further expansion of its AI-based analytics capabilities.

**Percentage split between attended and unattended use cases:** N/A

**Business process discovery approach (manual or automated):** N/A

**Robot runtime control dashboard:** A control tower dashboard is used for end-to-end automations spanning RPA bots, machine-learning-based bots and manual tasks, which can all be orchestrated, monitored and audited.

**Product name:** Smart Process Automation (SPA) is the flagship subscription-based software combining RPA, machine learning/AI functionality, workflow and OCR. RPA Express is free RPA software.

**Delivery:** SaaS and software

**Additional machine-learning/AI functionality:** SPA includes machine-learning-powered AI capabilities to provide on-premises training of AI, and is a good choice for organizations dealing with sensitive data.

#### Key Facts:

- **Headquarters:** New York, New York **Year Founded:** 2011
- **Revenue estimate:** \$35 million
- **Customer geographies:** Global customer base



- **Consulting, integration and BPO partners:** PwC, Capgemini, EY, Deloitte, Accenture, Cognizant, HCL Technologies, TCS, Infosys, Wipro, Virtusa, LTI, Genpact, Hexaware, EXL, EPAM, FIS
- **Specialist software partners:** WorkFusion has OEM relationships with Abbyy (OCR) and Tableau (business intelligence). Other technologies used for the platform are open-source frameworks or customized.
- **Number of customers:** 100 customers for SPA and over 4,000 customers of RPA Express software. **Notable customers:** Citigroup, Chubb, Humana, Nielsen, Axis Bank, Deutsche Bank, IHS Markit, Standard Bank
- **Licensing models:** SPA: Annual SaaS subscription. RPA Express: Free
- **RPA pricing:** \$10,000/year per process
- **Pricing for additional machine-learning/AI functionality:** \$25,000/year per process
- **Technical support team locations and size:** 75 people located in the U.S., Europe and India
- **Industries represented:** Primarily banking, financial services, insurance, healthcare, commerce, oil and gas, travel, telecom, utilities, and legal

## Market Recommendations

Prior to evaluating RPA tools:

- Rationalize your business strategy and key business scenarios to understand which RPA use cases will need to be evaluated. This should include working with structured digitalized data that needs rekeying between systems, as well as consolidating, manipulating or interrogating data. Notably, focus on scenarios where your organization does not want to replace applications and limited other options are available.
- Rapidly implement a pilot on a small set of processes to prove the ROI and effectiveness of RPA before scaling up deployments. This will allow you to see what RPA tools you might need and determine how to evaluate the tools' capacity, capabilities and limitations.
- Build a strategy to evaluate which tool to use when as part of a center of business outcomes, which oversees a center of automation. The potential to achieve ROI is entirely dependent on the applicability of RPA in each individual organization. Collate the type of demand for RPA, such as rekeying, collating and/or sorting data, where automation has not previously been cost-effective for manual processes. At the same time, reimagine processes for automation and baseline manual activities.

## Gartner Recommended Reading

*Some documents may not be available as part of your current Gartner subscription.*

"Robotic Process Automation: Eight Guidelines for Effective Results"

"Use Cases for Robotic Process Automation: Providing a Team of 'Virtual Workers'"

"Achieving Excellent Business Outcomes via Business Process Outsourcing and Captive Shared-Service Centers"

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