

# **Robotic Process Automation (RPA) Buyer's Guide**

## **Understanding Automation Anywhere Enterprise RPA Capabilities**

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## Executive Summary

Robotic Process Automation (RPA) will have a profound effect on the way businesses are run. The task-centric “bot” is the basic building block. Automation Anywhere builds “Digital Workers” by combining bots with cognitive automation and analytics to augment human workers by performing complete business functions from start to finish. Automation Anywhere commissioned Tolly to analyze key elements of RPA offerings to help provide a structured approach for buyers to evaluate various solutions on the market.

With groundbreaking, new technologies like RPA, the critical buying decision needs to be made without the benefit of long experience. The offerings are so leading edge that few have years of experience and it is easy to make a mis-step with only glitzy marketing to go by.

In this guide, we'll introduce you to what we see as the four pillars of any RPA offering: AI/Cognitive, Security, Scalability & Analytics. In this section we'll summarize each of the areas and provide an overview of what Automation Anywhere Enterprise (AAE) offers in each area. (Summarized in Table 1.) In the body of the paper, we'll drill down into additional details of each area. We'll provide you with specific and important capabilities that can form the basis of an informed buying decision. This can provide a template for comparison with other RPA offerings.

### AI/Cognitive

The power of bots correlates to the richness and effectiveness of the AI and cognitive abilities they possess. Ultimately, a bot's effectiveness is determined by its intelligence. IQ Bot is an AI capability or skill within the Automation Anywhere digital workforce platform that brings structure to unstructured data. It's specially designed for the 80% of business processes that currently are heavily reliant on people to locate and organize unstructured data. With IQ Bot, users can automate unstructured data processing end-to-end using the latest AI technologies like computer vision (CV), natural language processing (NLP), fuzzy logic, and machine learning (ML) without the help of data scientists or highly trained experts. AAE provides Digital Workers which are a combination of bots, cognitive automation and analytics built to augment human workers by performing complete business functions from start to finish. Bots can be built to run entirely unattended or they can work together with your staff as attended bots where they can increase the productivity of your people.

### Security

The applications that RPA will touch will likely be at the core of your business. Security is paramount. AAE provides a rich set of security functions. Fine-grained, role-based access control (RBAC) allows your security authorization to be as detailed as you need. Bot code is protected by run-time obfuscation. Bots can be further protected by disabling user interaction and running in stealth mode - hidden from the user.



Applications are secured in myriad ways including: credential vault, run-time credential encryption, AES-256 encryption for stored data and TLS 1.2 encryption for data in transit. AAE provides detailed audit logs and integrates with security information and event management (SIEM) systems as well as single-sign-on (SSO) enterprise systems.

### Scalability

Scalability is all about efficiency. AAE provides a universal recording application, bot building blocks and a well-stocked bot store of pre-built bots to get you going with a minimum of effort. When you are up and running, AAE's offering provides the elastic capabilities to handle peaks and valleys in your workload by dynamic scaling. AAE supports major cloud providers giving you the flexibility to leverage those resources to handle workload. Whether on-premise or cloud-based, bots-per-server is an important scalability metric. Automation Anywhere notes that it has demonstrated 1,000 bots running on a single server. Higher density of bots-per-server translates into lower CAPEX/OPEX costs.

### Analytics

Analytics allow you to measure value. AAE provides analytics that provide cogent, business-level information. Dashboards show bot activity that can be viewed by vendor processed or, say, invoice totals. The ROI calculator provides an at-a-glance view of personnel costs avoided by having bots handle a given process.

In the following sections, we'll review some of the important considerations that you should validate during your RPA solution selection process.

## Key Benefits Summary of Automation Anywhere Enterprise (AAE)

Area	Automation Anywhere	Significance
AI/ Cognitive	IQ Bot provides native AI and ML. for business users, using the latest AI technologies like computer vision (CV), natural language processing (NLP), fuzzy logic. Also provides 3rd-party integration.	Native AI provides tight integration and immediate value. Leveraging latest AI technology maximizes effectiveness of learning techniques.
Security	Fine-grain, role-based access control, secure bot run-time environment that covers credentials and code. Data encryption at rest and in transit. Integration with SSO/SAML and SIEM.	Protects your applications (bots), data and user credentials with the coverage, flexibility and granularity you need. Works with existing enterprise security environments.
Scalability	Tools to allow bot development to scale: universal recorder, building blocks and pre-built bots. Product and cloud integration to provide elastic scalability. Single-server supports 1,000 bots.	Allows you to implement quickly and respond to spikes in your business. 1,000 bots per server keeps server CAPEX under control.
Analytics	Built-in Center of Excellence (CoE) dashboard, ML-powered analysis using business data, ROI calculator that provides immediate feedback on savings.	Business-oriented analytics (in addition to tech-based) provide clear insights into quantifying. Cost benefits of RPA.

Note: Information covered in this document derived from Automation Anywhere documentation, demonstrations and interviews with AA experts.

Source: Tolly, August 2019

Table 1



## AI/Cognitive

Artificial Intelligence and cognitive learning capabilities are those elements that provide the intelligence to handle unstructured data. As noted earlier, IQ Bot is the integrated AI component of Automation Anywhere Enterprise.

**Business User Focus.** All too often product developers build products that other product developers would find easy to use- but that doesn't help the rest of us. Long training time for bot builders and users could indicate lack of focus on business users. Ask for a demo of some training to give you a better feel for the learning curve. Understand training differences for those people that build bots and those people that use them.

**Document Processing Support.** This is the process of taking a "paper" document - PDF for example - and preparing it to be used as a data source or target in the RPA system. Having this support implemented natively in the RPA solution assures you of solid integration with the product.

Providing 3rd-party integration support translates to extra flexibility to expand the capabilities of the system further. Having both native and 3rd-party support gives you the broadest set of options.

### AI/Cognitive Part 1

Category	Topic	Definition	Automation Anywhere	Vendor X
Business User Focus	Standard training for robot builders	Recommended training for those building bots	Generally 3 days onsite but online options also available	
	Standard training for end users	Recommended training time for those using bots	Under an hour	
Document Processing Support	Native	Product provides native support	Yes (IQ Bot)	
	3rd-Party AI Integration	Product provides for integration with other AI add-ons	Yes	

Source: Tolly, August 2019

Table 2



**Setup Time.** Understand the steps and time required to set up an application to use RPA. Template-based systems require that you manually map the fields of each input document to be used by your RPA system. This will increase setup time and is prone to human error. Automated analysis and setup of documents will reduce setup time dramatically and improve mapping quality. In this approach, your user need only monitor the process and confirm or fix any fields in question.

**Out-of-Box (OOB) Use Cases.** While RPA has vast applicability, there are certain very common use cases that include invoice and claims processing - tasks common to many businesses. Confirm the specific use cases that your vendor offers OOB. Availability of relevant use cases OOB will speed your RPA ramp up and likely improve your ROI.

**Machine Learning (ML) for Continuous Improvement.** As you use your system more, you learn more about it. With ML, it works both ways. As your users validate documents ML-based systems can learn from these corrections so that similar future work will be faster and more accurate. As ML is a general term, be sure to ask your vendor to detail the specific ML capabilities of its RPA system as well as its future plans in the area.

**AI/Cognitive Part 2**

Category	Topic	Definition	Automation Anywhere	Vendor X
Setup Time	Template-based	Solution requires manual setup of documents	No. Does NOT require manual document setup	
	End-to-end automation without human involvement	Automated analysis and field mapping for converting documents for RPA use	Yes. IQ Bot automatically processes a range of documents and prompts user to confirm accuracy.	
Out-of-Box Use Cases		Business use cases provided	Invoices, insurance claims, etc.	
Machine Learning for Continuous Improvement		Automated learning to improve quality of input	Learns from human input during validation to automatically correct mistake for next time. Inherently smart, increases accuracy over time.	

Source: Tolly, August 2019

Table 3



## Security

Without effective security, RPA could be the source of serious security breaches. Because RPA has access to user credentials and integrates into core business processes, potential security issues need to be understood and appropriate protection provided.

**Fine-grain, role-based access control (RBAC).** In RPA, the process takes on the role of the user. Thus, all of the granular control of privilege levels we expect of user need to be expected of RPA systems. Some users need only view data, others add or update. Some users should have time or day restrictions on access. Have your vendor illustrate how granular their access control capabilities are.

**Bot Code Security.** The bots themselves hold proprietary business processes. Make sure that your vendor protects that code by obfuscation or other means.

**Application Security.** This is an end-to-end challenge and security is required throughout. Find out where and how credentials are stored. Verify that strong encryption is used for storage and that the credentials remain encrypted in memory when the bot is running.

Confirm how data is handled both when “at rest” (i.e. stored) and when “in transit” across a network. All data should be protected by strong encryption in both cases.

### Security Part 1

Category	Topic	Definition	Automation Anywhere	Vendor X
Fine-grain, role-based access control (RBAC)	Access control granularity	Provide detailed levels of access based on various criteria.	Very granular. Provided on administration (licenses, users, roles), bots, devices, pools and credentials	
Bot Code Security	Code obfuscation	Secure run-time bot code from compromise	Obfuscates with AES-256 encryption	
Application Security	Credential vault	Repository to protect credentials used by bots	Encrypted and secured by a master key	
	Run-time encrypted credentials	Feature to protect credentials while bot is running	Encrypts credentials in run-time environment	
	Data at rest	Protection provided for data when stored	Encrypts with AES-256	
	Data in transit	Protection provided for data when transmitted	Encrypts with TLS 1.2	

Source: Tolly, August 2019

Table 4



**Application Security (cont.).** Check to see how passwords are stored. Ideally, your vendor should support password hashing. As your bots run, you may have situations where don't want the user to be able to interact at all with the bot. Be sure that you can disable the keyboard and mouse. In other cases, you may not even want someone sitting at the computer to be aware that a bot is running. Check for "stealth mode."

**Audit** Verify that your system logs all important events with a level of detail appropriate to your security needs. Without logs, it can be impossible to trace the source of a security problem. Detailed logs are essential to provide proof of compliance with many government regulations and industry initiatives such as HIPAA, SOX, GLBA & PCI DSS.

**Enterprise Level Integration.** Today, no system stands-alone in the enterprise. In order to work effectively and deliver maximum value it is important to integrate with enterprise security systems. Many enterprises have enhanced credential security and reduced login management and complexity by using "Single Sign-On" (SSO) systems. Multi-vendor interoperability is provided by using the Security Assertion Markup Language (SAML) which is an XML-like language for security applications. Microsoft ADI and industry-standard Kerberos support are also considerations. Similarly, many enterprises implement security information and event management (SIEM) systems to handle security data and alerts from disparate systems. Make sure that your RPA vendor provides support for these capabilities.

**Security Part 2**

Category	Topic	Definition	Automation Anywhere	Vendor X
Application Security (cont.)	Password hashing	Secure passwords by obfuscating using hashing	Implemented	
	Disable keyboard/ mouse	Protect running bot from interaction by user	Implemented	
	Stealth mode	Make running bot invisible to computer user	Implemented	
Audit	Logging	Provide detailed event logs of activity. Assists in compliance with various government requirements and industry initiatives	Implemented	
Enterprise Level Integration	SSO/SAML Support, Active Directory, Kerberos	Integrate with single sign-on and security assertion markup language environments	Implemented	
	SIEM Support	Integrate with security information and event management systems	Implemented	

Source: Tolly, August 2019

Table 5



## Scalability

Your automation initiative will likely start out small as you learn how to harness the power of RPA. It is essential, though, that your RPA solution doesn't limit your company's automation journey. From quick bot creation through elastic capability, be sure to understand the scalability aspects of your RPA solution.

**Bot Creation Experience.** All RPA success stories, naturally, start with a successful bot. It is important to have tools and resources to help you build (or buy) bots rapidly to scale up your RPA deployment.

When building your bot, it is very useful to have a utility that can record the user actions and translate those into the basis for your automated process. See how your vendor handles this challenge.

Many applications have many tasks in common. If your RPA vendor provides "building blocks" that can be used in creating bots, that can eliminate a lot of tedious work and help speed development of the bot. Get details on the number and type of building blocks or common code elements your RPA vendor can provide you.

Investigate what is available in a vendor's bot store. Pre-built bots let you avoid building everything from scratch and accelerate bot creation and deployment.

**Dynamic Workforce Augmentation.** Once bots are built, our scalability focus turns to run time options and capabilities. Here, too, there are several aspects to consider.

Many businesses experience peaks that demand a temporary increase in processing. Retail stores during holiday periods and insurance companies after a natural catastrophe are two common examples. Ask your vendor what they offer to help companies respond to temporary needs to scale up to more bot runners.

### Scalability Part 1

Category	Topic	Definition	Automation Anywhere	Vendor X
Bot Creation Experience	Universal recorder	Tools for rapid bot creation	Fast bot creation experience with the use of a universal recorder	
	Building blocks	Reusable code elements that can be leveraged to build new bots rapidly	Reusable automation components: an extensive library of 600+ prebuilt commands.	
	Bot store	Marketplace offering pre-built bots	Bot store with 500+ task-based bots.	

Source: Tolly, August 2019

Table 6



**Cloud Support.** Cloud services such as Microsoft Azure and Amazon AWS have become key resources for enterprises to enhance flexibility and provide elastic resources. Verify the specific support that your RPA vendor provides for cloud providers that are important to your company.

**Concurrent Bots.** Finally, it is important to understand the relative efficiency of the bot implementation to understand how many simultaneous bots can run on a single server. You will need to know the capacity so that you can predict the number of servers you will need to run which, of course, impacts physical or cloud server requirements and, ultimately, TCO/ROI.

**Total Cost of Ownership (TCO).** Companies struggling to reach large scale adoption in their automation initiative, often find the bottleneck primarily around cost estimations. Licensing is only one of the several cost elements and can constitute less than one-fourth of the TCO. The other cost elements include those related to infrastructure, configuration, maintenance and support of a bot, amongst others. When selecting a vendor, shift the conversation beyond the initial discounts during license purchases and have a deeper conversation around all the costs associated to different scenarios as the organization scales-up on its automation journey.

**Scalability Part 2**

Category	Topic	Definition	Automation Anywhere	Vendor X
Dynamic Workforce Augmentation	On-demand scaling	Capability to respond to spikes in demand	Offers product that can dynamically scale bot runner machine count up/down	
Cloud Support	Major cloud providers	Support for leveraging providers like AWS, Azure, etc.	Supports all five leading cloud providers and partnership with Microsoft	
Concurrent Bots	Single-server capacity	Bot load handled before requiring additional hardware	Can demonstrate 1,000 bots running on a single physical server	
Total Cost of Ownership	TCO metrics	Total of cost components over time	Focuses on 3-5 year "lifecycle" TCO value	

Source: Tolly, August 2019

Table 7



## Analytics

Success needs to be quantified. Organizations need actionable real-time intelligence to constantly monitor the efficiency and effectiveness of their digital workforce and easily quantify processes' operational performance.

**Embedded Analytics In Core Platform.** Analytics should not be an afterthought. Be sure to ask about analytics capabilities that are built-in to your RPA platform and confirm what type of insights they provide.

**Business Insights.** Make sure that the RPA platform provides operational insights to monitor performance of your bots but also business data from every business process they touch. Transaction rates and response time are important to know but bots can also provide insights into the heart of your business. Think about being able to instantly check how consistent your cash flow is, how many invoices were paid this quarter, or how long does it take to onboard a new employee.

**ROI Calculator.** At the end of the day, RPA is all about helping to run your business more efficiently and more profitably. Make sure that you take a longer view of several years and realize that initial licensing costs ultimately could be only a small part of the investment. Look for products that can help you see how much you are saving on a transaction-by-transaction basis to be sure that your RPA system is delivering on its promise.

### Analytics

Category	Topic	Definition	Automation Anywhere	Vendor X
Embedded Analytics In Core Platform		Integrated analytics	Center of Excellence (CoE) dashboard is built-in to core system	
Business Insights		Business-level data related to bot processing.	Yes. Some examples are invoice totals, breakdown by vendors	
ROI Calculator		Formulas for quantifying return on investment	CoE dashboard allows company to see real-time cost savings by process & department.	

Source: Tolly, August 2019

Table 8



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The Tolly Group companies have been delivering world-class IT services for 30 years. Tolly is a leading global provider of third-party validation services for vendors of IT products, components and services.

You can reach the company by email at [sales@tolly.com](mailto:sales@tolly.com), or by telephone at +1 561.391.5610.

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### About Automation Anywhere

#### OUR MISSION:

To enable companies to operate with unprecedented productivity and efficiency by automating any part of the enterprise that can be automated with the most intelligent and intuitive robotic process automation platform we call "The Intelligent Digital Workforce".

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