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# When and How to Use Robotic Process Automation in Finance and Accounting

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## Summary

Robotic process automation should be evaluated on speed to value and total cost of process ownership in the context of your existing finance activities. This research helps application leaders spot and evaluate RPA use cases in finance and accounting.

## Overview

### Key Challenges

Fragmented finance systems and processes mean that many organizations are highly inefficient and ineffective from still relying too heavily on manual processes and spreadsheets. This adds cost, data keying errors, complexity and audit concerns to finance processes.

Robotic process automation (RPA) technologies can automate manual finance processes, especially in a fragmented finance system landscape. However, many organizations are confused about what their actual processes are, let alone how to deploy RPA to deliver business value in finance.

RPA is just one way to automate processes, and it has no finance best practices embedded in the toolsets. A key challenge, therefore, for organizations is knowing when to use RPA and when not to.

### Recommendations

Application leaders tasked with modernizing finance and procurement applications:

Use RPA in finance and accounting where people have been performing the routine work of collating, rekeying and posting data between systems. RPA will likely need to be used together with other tools to structure unstructured and semistructured data or paper such as invoices and freight bills or voice calls.

Do not use RPA when you can deploy best-practice automation options such as ERPs, specialist finance SaaS or BPaaS offerings. Decide which solution to choose by considering deployment times, need for best practice, organizations application refresh strategy and total cost of ownership.

Use best-practice finance and accounting tools and dedicated AI-based tools where greater independence in decision making is required, for example, for reconciliation-style processes.

Assess the readiness of your finance organization to encompass the business change needed when adopting RPA. This tool will likely change the responsibilities of finance employees.

## Strategic Planning Assumption

By 2020, robotic process automation will eliminate 20% of non-value-added tasks within the office of finance.

### Introduction

#### **What Can RPA Be Used for in Finance and Accounting Activities?**

We are in an early adoption phase with RPA. This phase will continue through 2020, as most organizations are rationalizing their current business applications and RPA will be used to "bridge the gap" before newer finance systems are adopted. Tools that will deliver best-practice functionality will come from the packaged core financial, financial close or financial planning and analysis (FP&A) solution. The current interest in RPA is to use it as a way to automate some of the manual processes when users interface with systems.

In finance and accounting (F&A), adoption of RPA several use cases exist, including:

- Collecting through email/spreadsheets and posting entries into a centralized general ledger.

- Processing all data required for intercompany transfers that may be within a single general ledger (GL) or extend beyond multiple GLs.

- Routing of invoice data through PDFs and then rekeying invoice data from an accounts payable tool or a central invoice repository into accounts payable systems of record.

- Supporting order entry processes, including order taking, customer credit checking, stock checking for parts to fulfill orders and pricing calculations.

- Collecting data from the enterprise as part of the financial close process before entering it into a financial close business application.

- Collecting operational and financial plan data from enterprise sources, collating it, combining it and processing it offline before it is entered into a financial planning and analysis (FP&A) system.

- Checking if vendors are already listed in the vendor master file, and adding them if they are not in the file.

Here are some examples of where RPA and financial close solutions can be used:

- Extracting data from bank statements into reconciliation management templates.

- Gathering journal entry details from emailed spreadsheets to prepopulate journal entry routing solutions or core-financials-based journal entry screens.

- Collecting nonfinancial system metrics, PDFs/backup details and input for disclosure solutions.

- Prepopulating Sarbanes-Oxley Act Section 404 (SOX 404) process assurance confirmations.

- Automating the email confirmation process when needed across the financial close cycle.

- Comparing account balances when a separate reconciliation management solution (business application) is not used.

Automating the manual processes needed to prepare input for intercompany transfer processes and solutions.

Uploading bank account balances from bank systems to treasury systems and placing the data in a format the treasury system can process. Much of this is still manual today.

Distribute treasury system reports to local finance personnel to communicate balances.

## Analysis

While more than 2,500 Gartner clients in 2017 have made inquiries about organizations (according to 2017 Gartner inquiry data) or are exploring how RPA can improve their financial management process efficiency and effectiveness, many do not need RPA. RPA is not needed if organizations have invested in more fully automated finance systems. Many finance and accounting shared-service centers or business process outsourcers are using RPA tools to automate finance work.

There are three typical use cases for generic RPA tools:

Consolidating data into reports or standardized formats.

Moving data from place A to B to C and so forth.

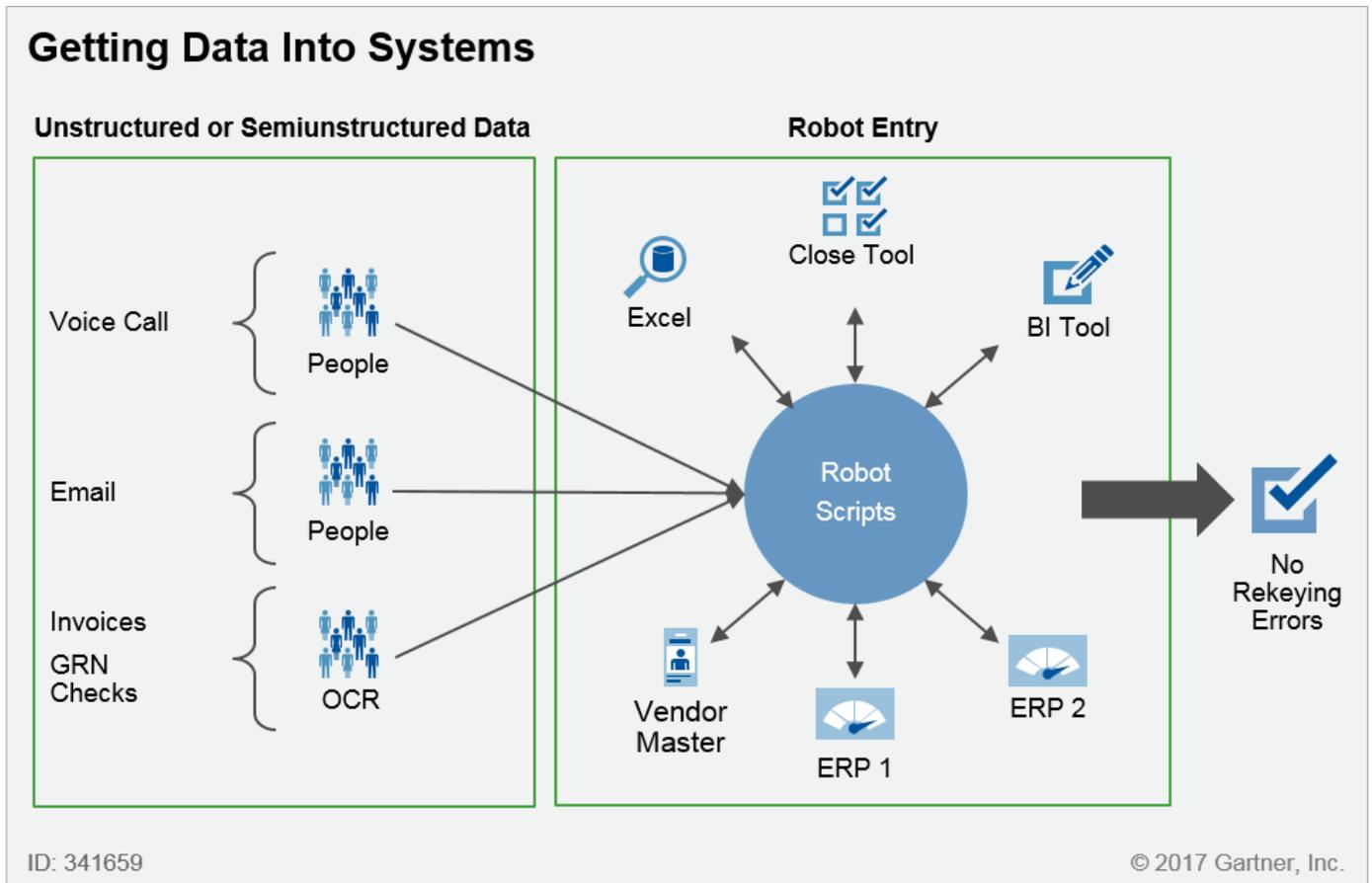
Automating a structured, predetermined workflow or building a workflow.

### **Use RPA for Routine Work, and Use It Together With Other Tools**

Use RPA in finance and accounting where people have been performing the routine work of collating, rekeying and posting data between systems. RPA will likely need to be used together with other tools to structure unstructured and semistructured data or paper such as invoices and freight bills or voice calls.

Figure 1 shows a typical problem in which RPA could be used in finance and accounting to enter structured, semistructured and unstructured data into systems.

**Figure 1.** Finance Problem One — Getting Data Into Systems



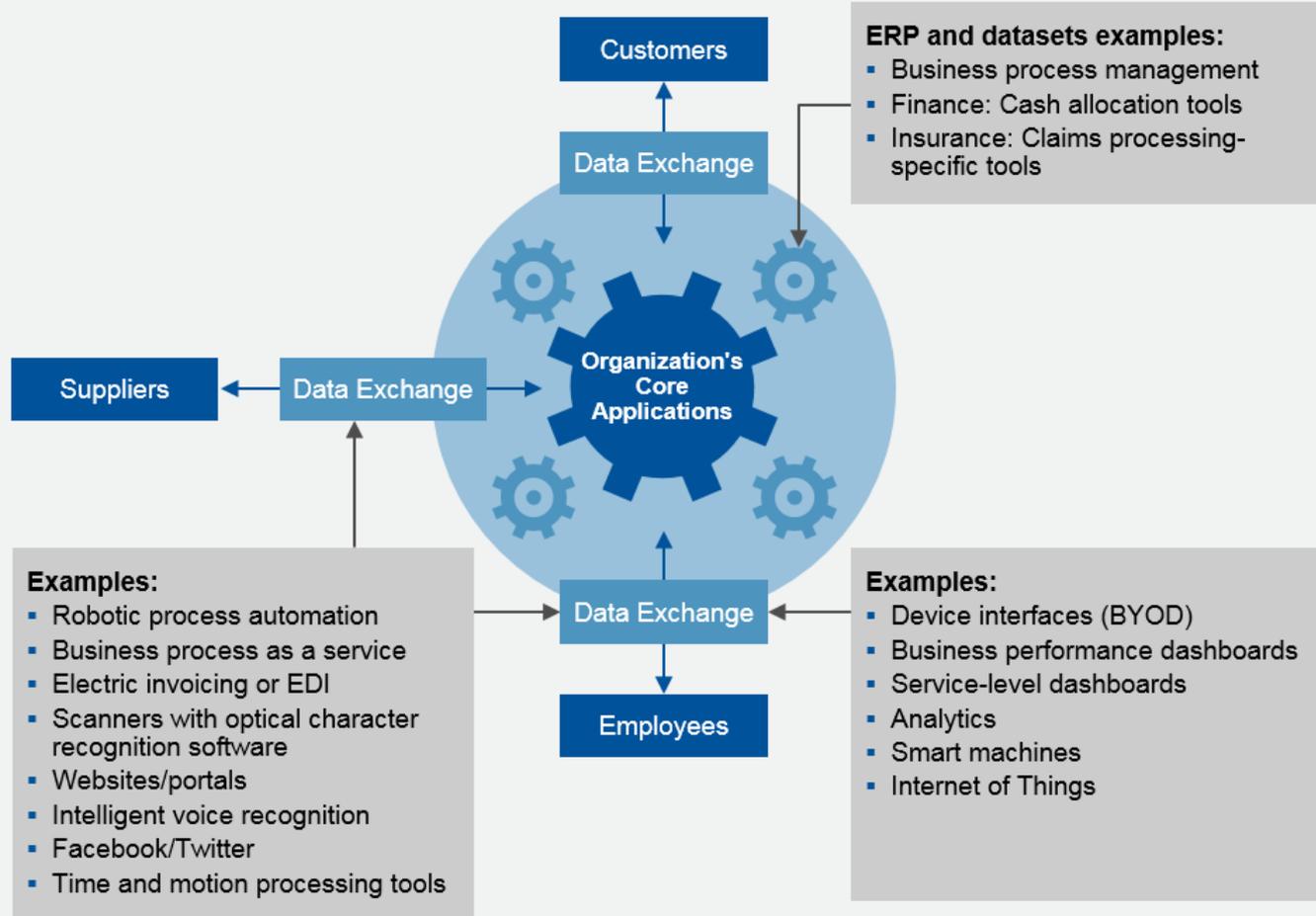
BI = business intelligence; GRN = goods received note; OCR = optical character recognition

Source: Gartner (December 2017)

Many organizations have people rekeying data between finance systems and/or entering data into finance systems from digital images or paper, as shown in Figure 2.

**Figure 2.** Finance Problem Two — Moving Data Between Finance Systems

## How Is Your Data Handled via People, RPA, BPaaS and Systems?



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BYOD = bring your own device; BPaaS = business process as a service; EDI = electronic data interchange

Source: Gartner (December 2017)

### Use Best-Practice Automation Options Over RPA If They Are Available

Do not use RPA when you can deploy best practice automation options such as ERPs, specialist finance, SaaS tools, business process as a service (BPaaS) and artificial intelligence (AI) tools. Make decisions on deployment, application refresh strategy and total cost of ownership based on time frame.

Use best-practice finance and accounting tools and dedicated AI-based tools where greater independence in decision making is required, for example, for reconciliation-style processes.

See Note 1 for various automation options.

Consider which standard F&A processes may have use cases for RPA:

Source-to-pay – Accounts payable, expenses, procurement administration, vendor master data

Order-to-cash – Order entry processes, cash allocation

Record-to-report

Several industry-specific processes

The opportunity to benefit from RPA in finance and accounting will ultimately depend on the following factors in your organization's finance layout:

How else can you solve each particular challenge in non-RPA tools or with employees?

What process functionality are you lacking in your ERP and business application extension (e.g., financial close or FP&A)? The most typical functionality that is lacking in F&A is a low-cost way to get the invoice content into an ERP, hence the massive choice of scanning, optical character recognition (OCR) and electronic invoicing suppliers. Many firms have invested in accounts payable invoice automation (APIA) solutions; however, these solutions still require significant manual work to interact with the system.

What savings can be made using RPA? Organizations should demonstrate in their business cases the improved finance business outcomes and any potential savings of personnel savings. However, many companies are not saving money by reducing finance personnel as the web of process exceptions is too convoluted. Organizations should prioritize striving for costs relative to using RPA for transactional use cases.

How robust have these RPA tools have proved to be, and do they have demonstrated integration with existing business applications? Many business applications are opening up their solutions for RPA integration through web services and will be creating partnerships as well as making acquisitions to support RPA.

## Considerations for Using or Not Using RPA in Finance and Accounting

At its most basic level, the RPA tool handles single transactions. At its most sophisticated, a "pool" of robots is capable of being deployed as required to follow process maps, move structured data, run straight-through processes in a "lights-out data center," and be allocated to different processes in real time controlled via operational dashboards. An RPA tool can be triggered manually or automatically, move or populate data between prescribed locations, document audit trails, conduct calculations, perform actions, and trigger downstream activities.

There are various architectural structures of RPA tools, ranging from ones that operate on individual desktops with limited ability to take different data feeds to ones that operate on enterprise servers and are able to perform multiple scheduled tasks while meeting enterprise security criteria.

Note that RPA tools are not smart, do not learn, and are not trained. They automate the most basic tasks and create integration with offline processes such as email and spreadsheets. An RPA tool follows the process flow in the same way an Excel spreadsheet does, except the RPA tool can work across multiple applications on mainframes, client server, web and via the user interface screen interfaces. The tools can and will be used with a person, an AI tool or two, the Internet of Things (IoT), business process management (BPM) tools, and ERPs in an additive fashion as required. The crucial part is to become clear on what you actually need to do and how to accomplish the next best actions for the organization to achieve better or optimal outcomes should you use RPA or a different tool or a person.

RPA can be considered in situations in which organizations have found that other integration or automation options are perhaps too expensive or too time-consuming (taking months or years). RPA should be considered both in light of other technical options and with some process change management skills. Use cases for RPA need the data to be structured already by a person or other tool, such as optical character recognition, and then the RPA tool could be used to achieve:

**Speed-to-value** – Consider how long it will take you work out the current way your organization performs the process and whether it is better to spend time understanding that (weeks or months) and then encapsulating it in RPA or to buy a best practice finance tool that might take three months to deploy but would bring you best/better practice.

**Total cost of process ownership** – Consider how much the full IT stack and manual labor and any rework of wrong data takes today. To evaluate this cost organizations could use business analysis tools, such as ActiveOps, StereoLOGIC or Celonis, for example. Then compare the short-term costs of using an RPA tool over the next two to five years versus a finance software tool.

Generic use cases for RPA include:

Automate an existing manual task or process.

Reduce or remove head count from batch data input and output tasks or data rekeying.

Link to external systems that cannot be connected to other IT options.

Avoid major system integration projects or specific new major application deployments.

In some cases, an RPA tool can automate basic tasks found in business applications, including some basic workflow capabilities. Most organizations will integrate RPA with business applications to address manual processes, such as collecting and sending data to various users. Other organizations may achieve business value from considering an RPA solution as a stand-alone tool in highly repeatable tasks.

Application leaders should understand that while most of the functionality that we see in business applications can be considered "best practice," the ability to then build best-practice deployments of this functionality into manual processes is typically not in most enterprise application implementations. Also, these interactions with financial management business applications are usually very different from one firm to another. Unfortunately, for example, many organizations continue to leverage offline tools such as Excel and email in a haphazard fashion when they are working with business applications. This is further complicated as most RPA tools vendors do not have an implementation division to deploy RPA, and are working with consultants, system integrators and/or business process outsourcing (BPO) providers. In many new business application implementations, the focus is often on how to leverage the application's inherent best practices, focusing on what happens in the application. Often the surrounding processes that are used to collect, confirm and report on the interactions with the system are assumed that they will remain manual and often cumbersome. An RPA project will study these manual interactions as well as loosely coupled processes with other systems to target automation in these areas. In many cases, these will be highly customized RPA implementations to account for the various idiosyncrasies found in the client organizations. Sometimes these variations of business process will vary greatly by unit with an enterprise, while the core requirements and resulting implementation of the business application can be fairly standard.

### **Determine If Your Finance Organization Is Ready for RPA**

Assess the readiness of your finance organization to encompass the business change needed when adopting RPA. This tool will likely change the responsibilities of finance employees and may need significant additional change management steps to achieve sensible deployments.

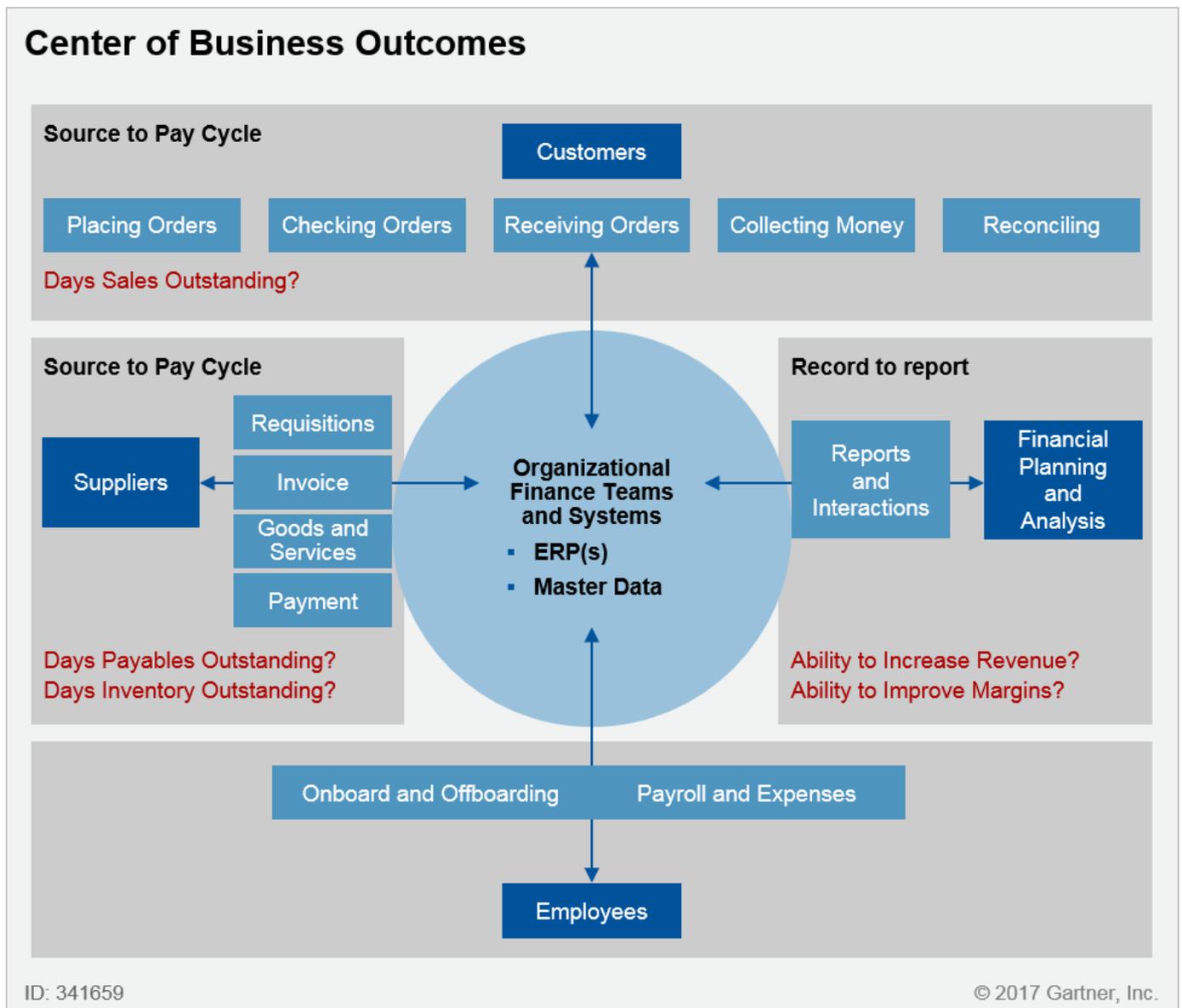
### **How Many People Can RPA Replace in Finance and Accounting?**

The number of people an RPA tool can replace will depend very much on the type of systems and the deployment plan, such as considering processing to batches and current control over latency of the systems involved and processes that are being addressed. Early adopters of specific RPA tools have experienced significant impacts in the daily tasks and productivity for ranges between two employees to as many as 20 employees for a single engagement. In some cases, employees' tasks were displaced and other cases significantly augmented or enabled to change productivity levels as well as total elapsed time.

### Achieving Excellent Finance and Accounting Business Outcomes

Figure 3 shows the outcomes that finance and accounting should be looking to achieve.

**Figure 3.** Business Outcomes for Finance and Accounting



Source: Gartner (December 2017)

### Acronym Key and Glossary Terms

<b>AI</b>
<b>APIA</b>

artificial intelligence	accounts payable invoice automation
<b>BI</b>	
artificial intelligence	business intelligence
<b>BPaaS</b>	
artificial intelligence	business process as a service
<b>BPM</b>	
artificial intelligence	business process management
<b>BPO</b>	
artificial intelligence	business process outsourcing
<b>BYOD</b>	
artificial intelligence	bring your own device
<b>EDI</b>	
artificial intelligence	electronic data interchange
<b>ERP</b>	
artificial intelligence	enterprise resource planning
<b>F&amp;A</b>	
artificial intelligence	finance and accounting
<b>FP&amp;A</b>	
artificial intelligence	financial planning and analysis
<b>FTE</b>	
artificial intelligence	full-time-equivalent
<b>GL</b>	
artificial intelligence	general ledger
<b>GRN</b>	
artificial intelligence	goods received note
<b>IoT</b>	

artificial intelligence	Internet of Things
<b>OCR</b>	
artificial intelligence	optical character recognition
<b>RPA</b>	
artificial intelligence	robotic process automation
<b>SaaS</b>	
artificial intelligence	software as a service
<b>SOX 404</b>	
artificial intelligence	Sarbanes-Oxley Act Section 404

## Evidence

The analytical positions in this research document are based on interviews with Sutherland Global Services, Mindfields, Symphony Ventures, Accenture, Tata Consulting Services, Wipro, Blue Prism, Infosys, DXC Technology, Genpact and IBM.

## Note 1

### Which Non-RPA Tools Can I Use to Automate Finance Processes?

Table 1 shows a variety of automation tools that could be used for finance processes.

**Table 1.** Process Enhancement Technologies and Services for F&A

<b>F&amp;A Activities and Deal Management Technologies</b>	
<b>Financial Governance Applications</b>	
Software Tool Suppliers and Service Partner Examples	Oracle, Trintech, BlackLine, SAP, Chesapeake, JET Express, SmartStream, Greenlight, Hyperion
<b>Scanning, Digital Imaging, Mailroom and Archiving</b>	
Software Tool Suppliers and Service Partner Examples	Bottomline Technologies, Data Dimensions, Xerox, IBM, Iron Mountain, Hewlett Packard Enterprise (HPE), Exela Technologies, Pitney Bowes, Williams Lea Tag, Swiss Post, MuleSoft, FileNet, Parseq, Civica, Captiva, OnBase, OmniPage
<b>Optical Character Recognition (OCR) Software</b>	

Software Tool Suppliers and Service Partner Examples	Brainware by Hyland, EMC Captiva, IXOS Software, Kofax, OmniPage, OpenText, Prosar-Aida, ReadSoft, Top Image Systems, SmartStream, Parseq, Google, ABBYY
<b>Electronic Invoicing</b>	
Software Tool Suppliers and Service Partner Examples	SAP Ariba, Tungsten Network, Coupa, Unit4, Paybox (formerly Direct Insite), IXOS Software, Microsoft, NetSuite, Veritiv (formerly xpedx), Basware
<b>Finance Process Benchmarking</b>	
Software Tool Suppliers and Service Partner Examples	APQC, The Hackett Group, PwC
<b>Business Process Management Suites</b>	
Software Tool Suppliers and Service Partner Examples	Apollo, Basware, OpenText Documentum, FileNet, Lombardi, Microsoft, Newgen Software, OnBase by Hyland, Oracle, SAP, Savvion (acquired by ProgressSoftware), Wonderware Skelta BPM, WebSphere, Camunda, Activiti, IBM
<b>Procure-to-Pay Applications and Specialist Partners</b>	
Software Tool Suppliers and Service Partner Examples	SAP Ariba, SAP, Oracle, PeopleSoft, JD Edwards, Hubwoo, IBM, BravoSolution, GEP, Basware, Newgen Software, Mybiz (see "Magic Quadrant for Procure-to-Pay Suites for Indirect Procurement" )
<b>Order-to-Cash Applications and Specialist Partners</b>	
Software Tool Suppliers and Service Partner Examples	SunGard (acquired by FIS), ReconNET, Nice, Avaya Proactive Contact, Oversight, VWA, NCO, OmPrompt, Ikaros, Xerox Customer Value Group, AutoRek
<b>Financial Control Software</b>	

Software Tool Suppliers and Service Partner Examples	FileNet, Trintech, Microsoft, Nimbus, Service-Flow, SmartStream
<b>Business Intelligence, Analytics and Finance Corporate Performance Management</b>	
Software Tool Suppliers and Service Partner Examples	Hyperion, Oracle, SAP, SAP Crystal, Saturn Infotech (acquired by Jade Global), QlikView
<b>Telecom Expense Management</b>	
Software Tool Suppliers and Service Partner Examples	Rivermine (acquired by Tangoe), Tangoe, ProfitLine (acquired by Tangoe), Symphony Teleca (acquired by Harman)
<b>Travel and Expense Management</b>	
Software Tool Suppliers and Service Partner Examples	Concur, Expensify, SAP, Oracle, Ramco Systems, Lexware, American Express
<b>Tax and Statutory Reporting Services and Technologies</b>	
Software Tool Suppliers and Service Partner Examples	BDO, Deloitte, KPMG, PwC, TMF Group, SAP, Oracle, Trintech
<b>Client Reporting</b>	
Software Tool Suppliers and Service Partner Examples	Trintech, Service-Flow, Percolator
<b>Profit Recovery and Analytics</b>	

Software Tool Suppliers and Service Partner Examples	EiPP-Avolent, Oracle, Hyperion, Microsoft, Ramco Systems
<b>Process Automation Tools</b>	
Software Tool Suppliers and Service Partner Examples	Automic, WinAutomation, AutoHotkey, OpenSpan (acquired by Pegasystems), Jitbit Software, Cotel, Redwood Software
<b>Independent Robotic Process Automation Platforms</b>	
Software Tool Suppliers and Service Partner Examples	UiPath, Blue Prism, Automation Anywhere, Nice, AntWorks, Another Monday, EdgeVerve Systems, AutomationEdge, Cognizant, EnableSoft, Epiance, Jacada, Kryon Systems, Kofax, OpenConnect, Softomotive, Syntel, WorkFusion
<b>Virtual Customer Assistants</b>	
Software Tool Suppliers and Service Partner Examples	IPsoft Amelia
<b>Unstructured Data Readers</b>	
Software Tool Suppliers and Service Partner Examples	Celaton
<b>Financial Close</b>	
Software Tool Suppliers and Service Partner Examples	Oracle, SAP, SAP Ariba, Trintech, Jira Software, BlackLine, Automic, MSD

Source: Gartner (December 2017)



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