UiPath™

Automating Finance & Accounting
How robotic process automation (RPA) will transform F&A

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Introduction

Innovation is the name of the game for businesses trying to stay one step ahead of their competitors. Regardless of the type of business you run, accounting and finance is a critical source of operational innovation and competitive differentiation in sectors as diverse as consumer electronics and automotive manufacturing.

Unfortunately, in many organizations, legacy processes are hindering the digital transformation of basic accounting operations. Robotic Process Automation can be a powerful on-ramp to the digital transformation of these processes.

Having spent over a decade developing the technology, UiPath is a leading provider of RPA software.

In the pages below, we will build the argument for why businesses should rethink the way they currently execute processes and explore how the role of finance professionals is changing, the challenges with legacy systems and how RPA offers the opportunity for businesses to become leaders in digital transformation.

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F&A: a changing function

As a result of the 2008 global financial crash, businesses across the world place a higher premium on financial health, starting with cost control and risk management. To improve the financial health of the business, accounting departments have been under pressure to deliver greater performance against budgets. Greater scrutiny has been placed on all areas of accounting operations, reporting and management support.

As a result, business models and accounting roles are changing. Chief Financial Officers (CFOs) and their representatives increasingly drive more informed strategic decisions across business disciplines. Finance professionals now also occupy seats at the highest levels of the organization where they are expected to use their commercial and technical skills to advise senior business leaders.

CFOs are now a crucial partner in enabling the growth of the business, providing the appropriate financial data and insights. They also ensure that the business complies with the relevant regulations while mitigating its risk exposure. However, as this strategic focus has grown, finance and accounting professionals have struggled to meet the volume and variety of the existing operational transactions their job encompasses. In many cases, financial professionals would rather be spending less time on routine accounting operations and more on higher value work that drives more strategic outcomes.

The challenges of digital F&A transformation

To this end, there has been an industry-wide shift to undertake digital transformation initiatives to improve efficiency, minimize business risk and improve transparency within the organization. However, this transformation has come with its own set of challenges including legacy systems, paper-based documents, unstructured formats, natural language interactions and fragmentation. These challenges must be addressed if an organization is to truly make the most of digital technologies in its accounting function.

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The impact of F&A legacy systems

The introduction of enterprise resource planning (ERP) software in the early 1990s set a precedent for multinational businesses to fundamentally change the way they interact with accounting and finance data.

"In many cases [ERP systems] force companies to re-engineer their business processes to accommodate the logic of the software modules for streamlining data flow throughout the organization," (The Evolution of ERP Systems: A Historical Perspective.) As well as re-engineering their processes, many large organizations have spent decades investing heavily in modules and add-ons to these ERP systems, assigning much of their workforce to using and maintaining them. Accounting processes have been engineered to fit around applications such as Oracle® E-Business Suite, SAP®, Oracle® JD Edwards EnterpriseOne, and Oracle® PeopleSoft Applications.

This has made large organizations sluggish in responding to digital transformation. In comparison, newer, born-in-the-cloud businesses have a much easier journey because they don't rely on cumbersome legacy applications, they were born digital.

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Extracting data is still very manual

Another challenge is that many accounting documents such as invoices, purchase orders, expense statements, and even checks, to name just a few, are still processed on physical paper.

They're often scanned in as images to create a digital copy and they're then archived in physical storage. This compounds the problem; data from the scanned image is not electronically readable unless a specialized optical character recognition (OCR) software is employed and, secondly, the physical paper-copy still needs to be stored, adding an extra cost to the process.

Even once the data has been extracted, it often takes the form of unstructured information or consists of natural language that is understood by humans but is not easily used by most software. Contracts and customer interactions that are audio-recorded are a good example of this. Natural

language needs to be reworked into a structured format that can be easily processed by computer systems. Once it's extracted and structured, the data still often needs to be manually recorded into the system to be processed digitally.

## Business process management: not the complete solution we hoped for

To date, many of the process management methods that businesses have used to overcome these challenges have not been ideal. One method that businesses have tried in the past is to create programs that improve efficiency of some of the repetitive accounting processes that humans do.

A typical Accounts Payable (AP) invoice processing workflow for a human might be as follows. First, they receive a paper invoice or an invoice by e-mail, which is approved manually or over email, printed and then submitted to AP. An AP clerk takes this invoice,

reads it, verifies the approvals and extracts the data, inputting it directly into the accounting package — or for large firms that receive hundreds of invoices a day, this may be extracted into a spreadsheet first and then imported into accounting software.

Once it's in the accounting software, the invoice is ready for payment and processed for payment disbursement based on the payment terms and the frequency of payment batch runs. AP professionals perform these payment runs manually by batching up invoices for payments, checking and removing duplicates and finally disbursing either for physical check prints or electronic funds transfer (EFT) to banks.

Prior to robotic process automation, IT programs and their processes revolved around making the process efficient and visible through business process management methods. They streamlined the flow, but at a heavy development cost, and even then, it cannot be said to have truly automated the process. This is where robotic process automation (RPA) comes in.

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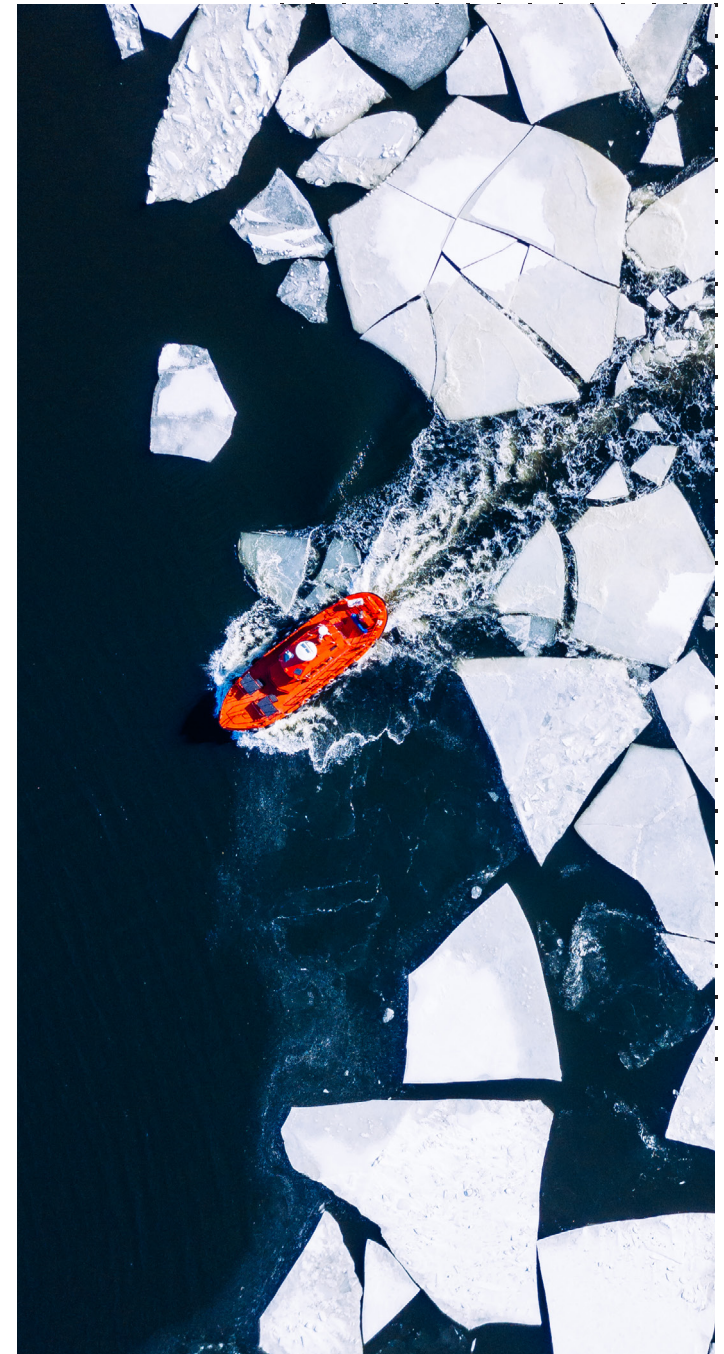
Robotic Process Automation: lightweight, flexible automation

The institute for Robotic Process Automation (IRPA) defines RPA as, "the application of technology that allows employees in a company to configure computer software or a 'robot' to capture and interpret existing applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems".

Rather than hard-code automation workflows and Application Programming Interfaces (APIs) into software programs, RPA mimics a person's actions on top of existing systems. RPA works in the same way that a human worker reads and interprets data from a physical document and transfers this to multiple applications on their computer.

Robots can seamlessly move data across boundaries, from one application to another, mimicking activities such as clicking, typing, and moving between windows. In addition,

these robots can use native and add-on Artificial Intelligence and Machine Learning models to enhance overall capability and learn from experience.

For accountants and finance professionals, RPA can play a crucial role in transforming your operations. Where, in the past, organizations have off-shored many of their transaction-heavy accounting processes to labor arbitrage regions such as India, South East Asia and the Middle East, RPA can improve efficiency and effectiveness, without the increased risks, degraded customer experience, and increasingly vanishing low labor arbitrage benefits from traditional outsourcing or off-shoring key business processes.

Because digital labor in the form of RPA can supplement and augment the human workforce, it allows people to achieve more with fewer resources in less time. Accounting firms and service providers can begin to move away from the

traditional approach of full-time-equivalent (FTE) revenue models, where revenue is determined by individual time-based productivity, towards outcome-based revenue models that consider value-add versus traditional transactional metrics.

The robots used in RPA are much more cost effective at processing large volumes of recurring tasks. The robots can work around the clock without fatigue and, although there are initial setup costs and ongoing maintenance costs, the return on investment (ROI) with RPA is much higher.

However, for many accounting departments, ROI may not be the only driving factor. Here, RPA also provides better risk management and compliance, higher accuracy, better cycle times and improved throughput. This is essential for end-of-month reporting and for accounts receivable, lowering the days sales

outstanding (DSO) value. Robots free up your expensive F&A resources to work on higher value activities and focus on outcomes, which not only improves employee engagement but competitiveness and customer experience as well.

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Picking Processes and People

With the use of RPA, for the first time, accounting departments can reliably automate many of the processes they were previously unable to.

→ **The fitness criteria for choosing which processes to automate are:**

It must be a highly manual, repetitive and high volume process

It must be a rule-based process

It must have a low exception rate (low variation between processes)

The inputs must be electronic or machine readable

The processes and their underlying Applications must be stable

One of the key considerations is variation. For example, if 90% of your transactions can be mapped in ten steps, but 10% require an additional two steps to be completed after step three, this becomes an exception to the rule that needs to be managed. Here, exception paths need to be built into the workflow to manage the variation. While these processes can also be automated, it will take time to build workflows into the robotic process, so the business has to make a decision as to whether the

additional time delivers value. This is where the role of humans alongside RPA will change. As robots take over the routine, repetitive transactional processing tasks, finance and accounting professionals will be expected to become expert exception handlers. They will need to perform the complex, judgement-based, transactions that the robots are not able to perform.

The role of managers in accounting departments of the future will move away

from managing people to driving higher value activities from their staff, including exceptions and decisions that require human intervention, while the orchestration engine oversees operational performance. Finance and Accounting professionals will move away from data gathering, data entry and book-keeping and instead take on more advisory roles where their judgement and consultative skills will see them become business partners.

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Finance and Accounting
process automation entry points

Here, we've picked out a list of the processes in finance and accounting that are highly suited to RPA. Though the listing is not comprehensive, it provides a good suggestion of F&A sub-processes that can be explored by any organization that is embarking into driving RPA-led digital transformation of its F&A function.

Procure to Pay	Accounts Receivable	General accounting	Tax, treasury and compliance	Financial planning, analysis and reporting
Purchase order entry and delivery	Sales order entry	General ledger and subledger reconciliations	Data aggregation for tax liability	Data aggregation for reports Report preparation (including the below)
Vendor verification and setup	Customer data set up	Bank reconciliations	Convert data to tax basis	■ Trial balance and balance sheet
Vendor master-data management	Customer data management	Inter-company reconciliations	Complete tax return workbooks	■ Profit and loss
Vendor queries/helpdesk	Billing/invoicing	Manual journal entries	Prepare tax returns	■ Cashflow
Invoice receipt and classification	Collection activities (dunning)	Reclassification journal entries	File tax returns and payments	■ Variance analysis
Invoice data extraction	Cash application	Fixed asset accounting	Tax accounting entries	■ Management reports
Invoice data entry and interface	Credit risk management	Inter-company settlements		■ Statutory/regulatory reports
Two and three-way purchase order/invoice/	Dispute verification and resolution	Financial close activities		
receipt matching	Chargeback management			
Non-purchase-order invoice coding				
Vendor statement reconciliation				
Accounts payable accrual journal entry				
Expense compliance audit				
Payment processing				

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Considerations for automation

A great place to start if you're considering using RPA is to start by automating straightforward processes such as invoice data entry and cash applications. These are best suited to carry out proof-of-concept studies before beginning your RPA journey. You can follow this with other processes such as billing and invoicing, as well as customer and vendor data set-ups.

Moving on to general accounting processes, these are often fragmented as a result of being been generated from

periodic and event-driven activities. Here, the best way to automate general accounting processes is to take a more agile and iterative approach to realize the most value from automating the process effectively.

Another consideration to make for general accounting activities, such as manual journal entries, is to use attended rather than unattended automation as these processes could require the need for expert judgement or a customized computation specific to the event or scenario.

> " The best way to automate general accounting processes is to take a more agile and iterative approach to realize the most value from automating the process effectively.

The results of RPA can be dramatic

Process	Client	% of Robotization	Benefits
Purchase order entry automation	Global automotive supplier, Germany	100%	8 months ROI 100% accuracy rate 78% improved processing time
Credit note processing	Media company, Switzerland	100%	3 months ROI 100% reduction in manual effort and accuracy 60% improved processing time
Travel and expense report processing	Consumer goods company, Germany	100%	15% manual effort reduction 75% improved processing time 100% accuracy
Accounts payable: Three-way matching automation	Medical/pharmaceutical company, Switzerland	100%	2 months ROI 90% improved processing time 10% manual effort reduction
Travel and expense report processing	Consumer goods company, Germany	100%	15% manual effort reduction 75% improved processing time 100% accuracy
GRN-to-Invoice match and release hold	Building materials supplier, UK	53%	100% compliance on TAT SLA 54% FTE reduction
Automate vendor payments	Global property insurer	—	70% productivity improvement 50% operations cost reduction
Invoicing/billing automation	HR service provider, Germany	70%	3 months ROI 10% manual effort reduction 75% faster processing 60% cost reduction
Cash application	Retail company, India	100%	100% accuracy 80% volume automated
Month-end accounting	Accounting services provider, Germany	75%	5 months ROI 25% manual effort reduction 65% improed processing time 100% accuracy
Daily P&L reports generation	Global financial services company	100%	67% improved processing time Faster/earlier report delivery 100% reporting accuracy

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RPA: the onramp for artificial intelligence in the enterprise

RPA, artificial intelligence (AI), machine learning (ML) and other advanced cognitive technologies are complementary to one another. While pure RPA can perform rule-based repetitive tasks, this can be enhanced by embedding AI, ML and cognitive technologies.

This acts to not only future-proof RPA, but to be the on-ramp for AI into the enterprise. It often starts with AI computer vision to allow easier, faster and more stable automation for virtualized environments. This is particularly useful for situations where traditional business process management methods that use SAP, Flash, PDF and images etc. fail or are difficult to use.

Exception management is another area of interest. UiPath is already using machine learning to enable robots to self-recover from simple exceptions. More advanced algorithms for exception management can be

created by closely monitoring employee behavior to create robots that can solve complex exceptions.

Case in point: cash application

Cash applications are a good example to illustrate how RPA can be complemented by cognitive and machine learning technologies.

The inputs to a cash application typically involve open or aging receivables and payments received, which are imported into suspense accounts from bank statements to be applied and cleared.

Other inputs into cash applications include payment remittance advice instructions from customers in the form of email notifications, supporting documents attached to checks as well as free-form messages or notes within bank transactions.

In these situations, cognitive and machine learning technologies can carry out a variety of actions. These

include extracting payment information from images of checks, extracting and curating remittance information from emails and the supporting documents and bank transaction messages, as well as matching the payments to open receivables using the remittance information.

In these situations, RPA is used to process the open receivable using information from the accounting system, to fetch bank statements and feed them into the accounting system, and to automate the process of matching payments to open invoices and then closing them.

While many organizations using SAP, Oracle or another modern ERP have partially automated the cash application process using native features of these ERPs and have achieved a certain degree of automation (typically around 40-50%), there are still a large amount of exceptions or fall-outs that require human effort. This is where RPA, combined with AI and ML comes to the rescue to take the percentage of automation much further (to around 80-90%).

> " Cognitive and machine learning technologies can carry out a variety of actions including extracting payment information from images of checks and extracting and curating remittance information from emails.

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How UiPath RPA works

UiPath has spent over a decade developing one of the world's leading RPA platforms. Our Enterprise RPA Platform consists of three products: UiPath Studio, UiPath Robot and UiPath Orchestrator.

Studio is the designer tool used to create diagrams of business processes. Based on the Microsoft Workflow Foundation, and visually similar to Microsoft Visio, Studio is an advanced visual process modeling tool. It allows users to drag-and-drop different elements in a process to design different types of workflows, sequences, flowcharts and transactional business processes.

Studio contains a built-in library of over 300 predefined actions such as clicking and typing that allow it to interact with a variety of desktop applications, web browsers and OCR engines.

Studio is also designed to work with all types of e-mail clients including SMTP, IMAP and POP3 Server-based ones such as Gmail, Outlook and Exchange. The predefined activities are great at reading e-mails, downloading attachments and composing and sending new e-mails.

The great thing about Studio is that users don't need to know any coding. They can simply use the record feature and carry out a task and the tool will automatically create a workflow that can be amended visually.

UiPath Robot runs the processes designed in Studio in the same way that a human user would. It can work either by assisting the human user, or completely autonomously without supervision for virtual or remote environments.

UiPath Orchestrator is a web-based platform that allows users to manage all the robots they've created, using the platform to enable remote control, monitoring, release management and centralized scheduling of the robots.
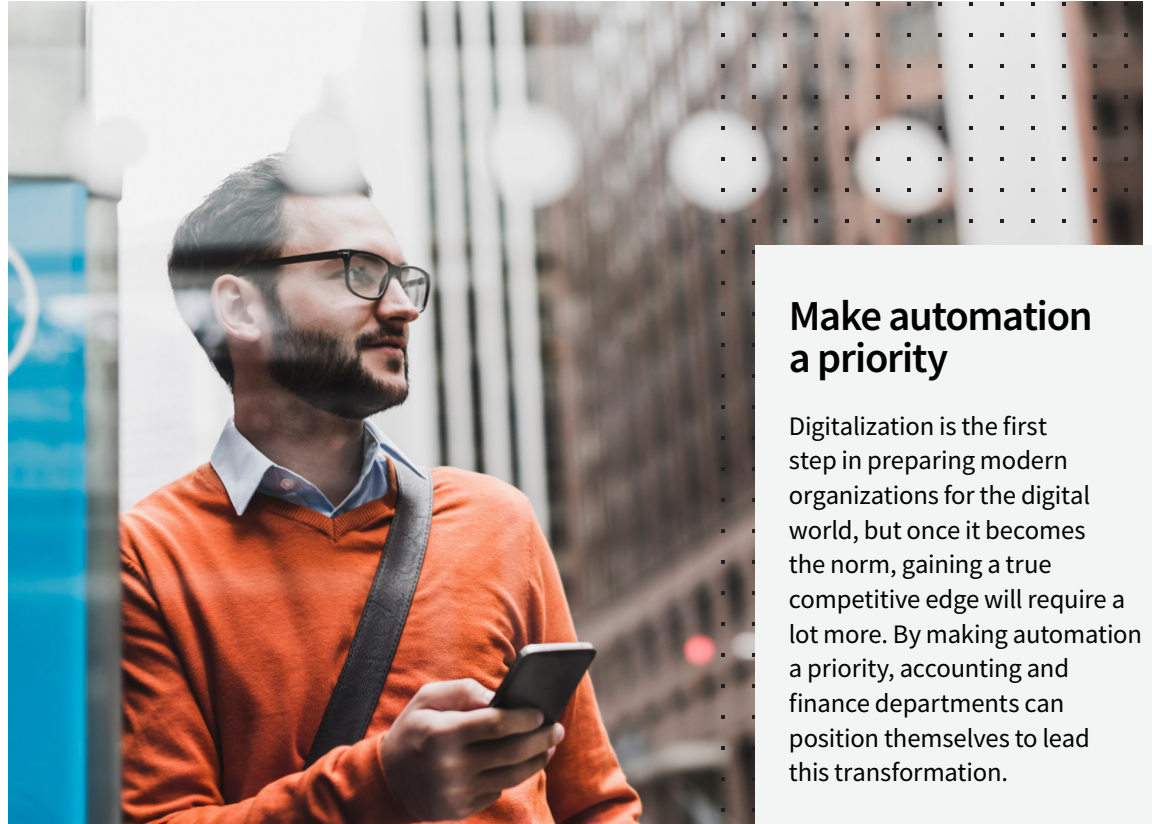
Make automation a priority

Digitalization is the first step in preparing modern organizations for the digital world, but once it becomes the norm, gaining a true competitive edge will require a lot more. By making automation a priority, accounting and finance departments can position themselves to lead this transformation.

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