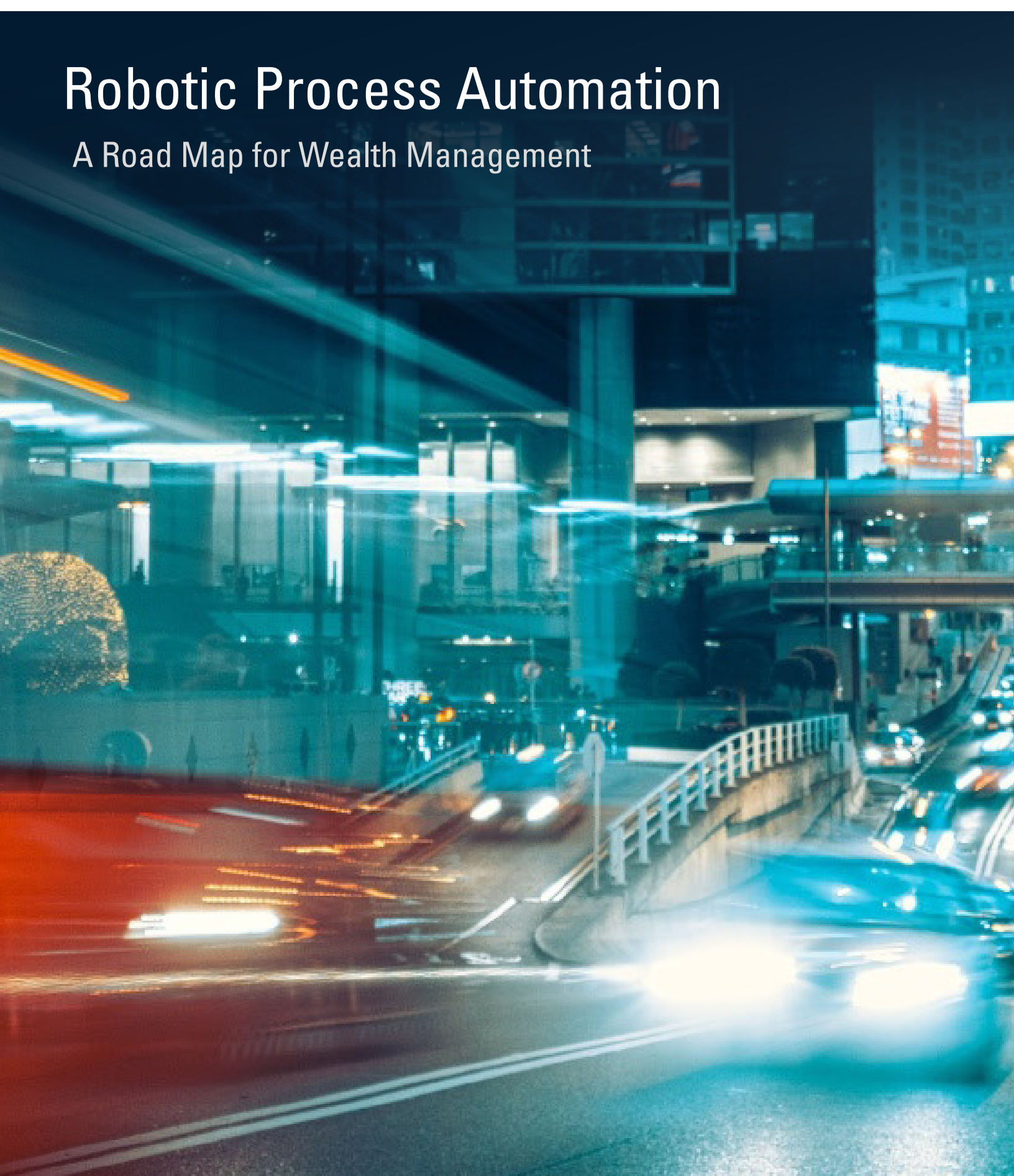


Robotic Process Automation

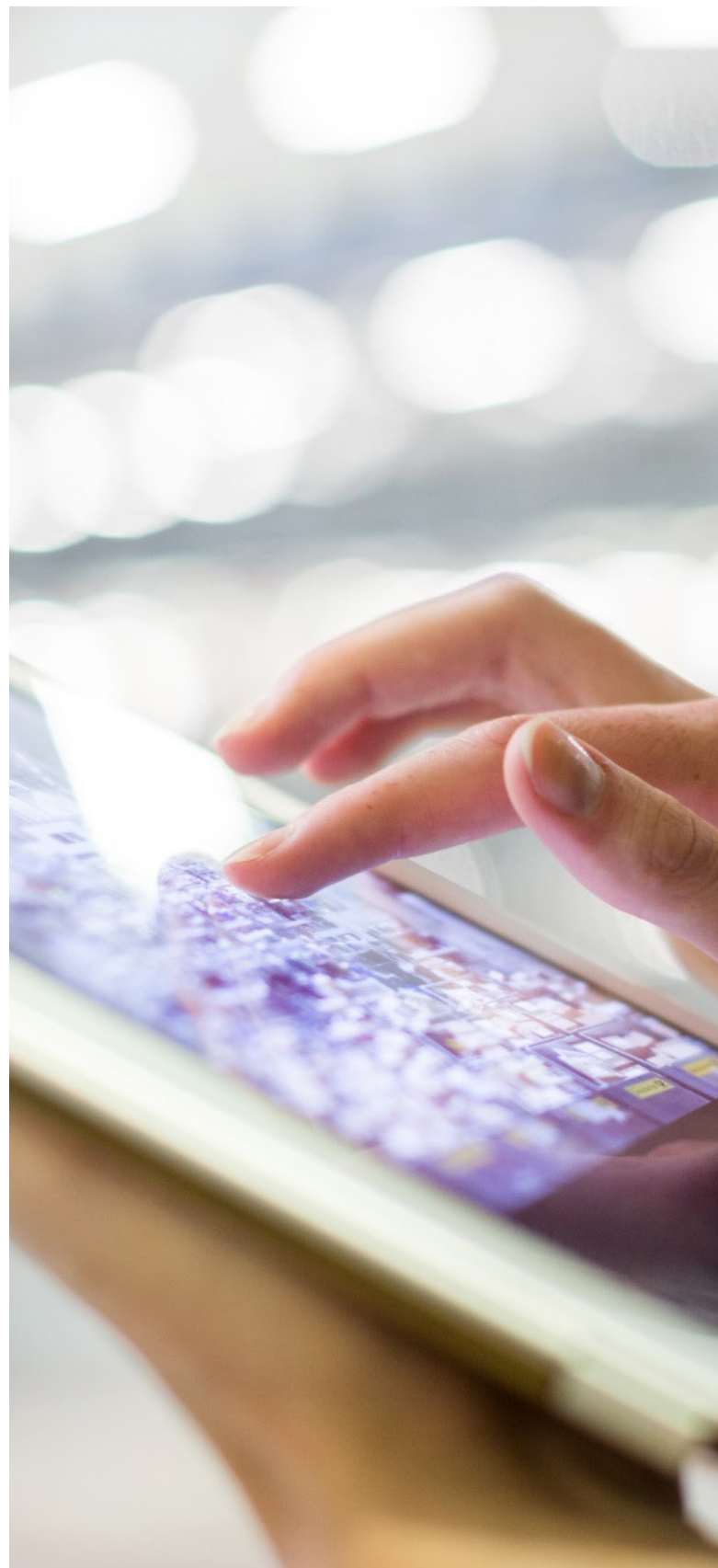
A Road Map for Wealth Management



Robotic process automation (RPA) traces its origins to manufacturing, textile and other industries that have historically relied on manual physical labor. Today's RPA technologies can help financial services organizations streamline operations, improve efficiencies and create a competitive advantage. Companies that hope to thrive in the future must understand the capabilities of this technology and its long-term potential.

Early adopters report that practical implementation of RPA presents several challenges which can derail the automation initiative and result in a failed project. Financial services firms that have successfully implemented RPA follow a road map to select workflows for automation; create consensus that transcends organizational silos; and implement a strategic communications plan. This white paper condenses their experience and presents actionable takeaways for institutions that want to maximize their ROI on RPA.

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A Brief Introduction to RPA

The roots of robotic process automation (RPA) can be found in the use of mechanical devices to perform repetitive tasks in the beginning of the industrial era. During the 1700s and 1800s, textile factories installed machines to automate the once labor-intensive tasks of spinning yarn, weaving fabric and stitching sheets of cloth together. Henry Ford's famous moving automobile assembly line started rolling in 1913 and decreased the time required to build a Model T from 12 hours down to just two hours and 30 minutes.

Today computers and robots have a prominent place in virtually all manufacturing operations. From welding to assembly to finishing, widespread automation has increased production rates, streamlined quality control and reduced costs.

However, these improvements did not come without trade-offs. New technology was often met with resistance by craftspeople whose livelihoods were threatened. The battle cry of mobs of yarn spinners and weavers during the anti-machine riots of 1779 was "Men, not machines!"

Decades later, the same resistance dynamic is playing out as artificial intelligence-based software is sweeping through knowledge industries such as banking, insurance and financial advising. Companies strive for efficiency and scale, while professionals wonder whether new technology will displace them.

As financial advisory firms continue to explore the potential benefits and risks associated with RPA, they face a future where extensive automation will become a requirement for survival. [McKinsey & Company predicts](#) that between 110 million and 140 million full-time employees could be replaced by automation and software tools by 2020. The same firm argues that as many as [45 percent of all employee activities can be automated through technology](#). An automated future isn't science fiction – it's inevitable.

Is There a Business Case for RPA in the Wealth Management Industry?

RPA has demonstrated an impressive success rate in upgrading well-developed business infrastructure because this methodology can be adopted on a process-by-process basis, without the need to overhaul every business process simultaneously. Many large financial services firms share common attributes that make RPA an attractive investment for long-term efficiency. Those attributes, listed below, are similar to those shared by the manufacturing plants that successfully transitioned from manual labor to automated assembly lines over a hundred years ago.

- **Multiple geographic locations**, which can augment the benefits of automation by creating greater scale and spreading the initial cost of the investment over a broader organizational footprint
- **Business processes that were built based on limited technology capabilities**, which can create a potential for oversized improvements within the firms that implement these solutions
- **An abundance of manual or partially automated** connections to key third parties such as vendors, customers and regulators, which can present an environment that's ripe for disruption

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What Are the Different Types of Automation?

Automation means using technology to carry out a task that would otherwise be done by a human worker. Automation can be applied to a broad range of activities, from fully mechanical to fully virtual, and from simple to extremely complex. Because practical applications of automation within the financial services industry are so diverse, there is some confusion about terminology used to describe them. These definitions will help draw out similarities and key distinctions between them.

Business Process Automation (BPA)

Business process automation is the automation of activities that accomplish a certain business goal. BPA is primarily focused on transforming the infrastructure of business processes; therefore, it often involves significant changes to a firm's workflows. Unlike robotic process automation that relates to a specific program or piece of software, implementing BPA is a higher-level project that's focused on reorganizing and streamlining workflows for optimal efficiency.

Robotic Process Automation (RPA)

Robotic process automation refers to software that is coded to use computer programs in the same way as a human operator would. The program's algorithm relies on certain predefined triggers or events to start the next task or move on to the next process without the need for a human or manual trigger. Implementing an RPA initiative typically doesn't require a firm to dramatically reorganize its workflows because RPA can be integrated into existing business processes. Some of the examples of using RPA in the financial services industry include rebalancing, processing onboarding forms for a new client and updating investment information for real-time portfolio reporting.

Technological proof of concept and a mature infrastructure environment aren't the only characteristics that favor automation. The financial services industry is compelled to meet rising client expectations amid fierce competition and fee compression. Firms are racing to improve client experience, optimize their business processes and costs, and better manage business and compliance risks.

A Cautionary Tale

The advance of RPA hasn't been painless. The financial services industry must grapple with the challenge of having to overlay this new technology on a complex web of interrelated workflows, legacy systems, human interactions and expectations. RPA might promise greater efficiency, better risk management and quick payback, but those results aren't guaranteed.

A recent report from consulting firm [PricewaterhouseCoopers \(PwC\)](#) notes that many financial institutions are disappointed with the results of their RPA implementation projects. Too often firms are caught between a strategic mandate to quickly adopt promising new technologies and the need to build a strong business case before they make the investment. Looking at the causes of failure in recent RPA implementation projects, the PwC report identifies several factors that must be addressed to ensure success. Companies must apply automation strategically, be consistent in building their vision for technology and maintain a realistic set of expectations.

Therefore, companies must begin their journey with a clear understanding of which RPA competencies and outcomes have been proven, and which ones are a stretch. They must make the right choices about which tasks should be automated first for the optimal balance between ROI and risk management. Finally, they must think about how they speak of automation to employees and clients to increase the likelihood of buy-in and adoption.

Intelligent Process Automation (IPA)

Intelligent process automation combines process redesign with automation and machine learning (ML). In addition to conventional rules-based automation, IPA integrates decision-making capabilities through cognitive technologies such as advanced analytics and natural language generation (NLG). IPA software can adapt to new scenarios and learn from past mistakes. Applications may include using a targeted email tool that learns from each recipient's behavior and customizes content to achieve higher open rates and stronger client or prospect engagement.

Expert Systems

An expert system is a form of artificial intelligence that emulates the decision-making process of a human. Unlike RPA, which is built to follow well-defined rules, an expert system is designed to solve complex problems by using bodies of knowledge and an inference engine. An example of an application of an expert system in the financial services industry is mortgage loan application processing. In this case, the expert system does not approve or deny loans, but checks that all required conditions for the loan are satisfied, calculates the term of repayment, and identifies the collateral that must be obtained from the borrower.

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Automating the Right Tasks in Wealth Management

Rebalancing



Client Onboarding



Reconciliation



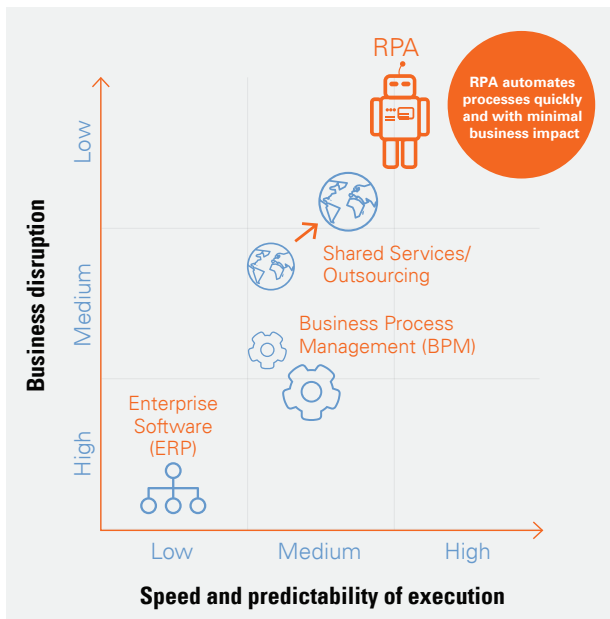
Automating the Right Tasks

Today's robotic process automation is highly capable and reliable; however, it's not infallible or applicable to every business process. In order to maximize the benefits of any RPA implementation, firms must begin their decision process by understanding the general characteristics of the processes that best lend themselves to robotic automation.

RPA can improve middle- and back-office operations quickly and cost-effectively, and firms get the most value from choosing to automate processes that share the following similarities:

- Low-complexity tasks that follow consistent rules and have few exceptions
- Tasks that are intensively manual
- Tasks with standardized and well-documented workflows
- Tasks that are otherwise prone to human error
- Tasks that utilize structured data
- Tasks that are high volume

Well over a third – and in many cases perhaps as much as 80 percent of currently outsourced business process work – [can and will be automated using tools such as RPA](#).



Source: Deloitte Analysis

It is best to choose workflows that generate the most pain for the staff, clients and management while also managing the potential risk exposure due to automation.

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After the initial technology investment, firms are likely to see decreased cycle times, improved accuracy and greater scalability. Many also report improved employee morale (tasks that are good candidates for automation are often tedious and repetitive, hence less intrinsically enjoyable) and a smoother client service experience. Moreover, human resources can be redeployed to higher value-added activities.



Automating the Right Tasks: Rebalancing

At its core, the process of portfolio rebalancing is a perfect candidate for RPA because:

- The rules for rebalancing are consistent and well-defined across multiple levels: household, account and/or position
- The process uses structured data in the form of asset holdings, target allocation percentages, historical and current price information, tolerance bands and tax rates
- Rebalancing is a high-volume process that is time-consuming and prone to human error, especially if simple tools such as Excel or home-grown databases are used to support it

By using fully automated rebalancing software, an advisor can set tolerance bands that are appropriate for each client's portfolio. The software is programmed to continually monitor every portfolio and to rebalance only those that are triggered by predefined settings, such as when the model drifts outside the preset parameters. Although most rebalancing programs require a review and approval of recommended trades by an advisor, the entire workflow leading up to the trade review is run via RPA.

Automated position monitoring and trade order generation have vastly improved the efficiency of the portfolio management workflow. From tax loss harvesting to substitute securities and client restrictions, modern rebalancing tools offer intuitive user interfaces, configurability and efficiency. This effect is similar to that of an assembly line, allowing for mass customization and effectiveness on an unprecedented scale.

Automating the Right Tasks: Client Onboarding

New client onboarding is a key touchpoint that shapes every client's first experience with their advisor. Clients and advisors both benefit when the onboarding process runs smoothly, accurately and promptly. That result depends on seamless completion of multiple business processes that have traditionally been handled in the back office, from establishing agreement on legal terms to performing background checks.

Client onboarding is also a good candidate for applying RPA because:

- The tasks that comprise client data intake and system setup are predictable, standardized and well-defined
- The data that goes into account opening forms is structured
- Data entry and lookup that has historically been performed by an administrative associate or an advisor is repetitive and prone to human error

By offering client onboarding as an automated self-service through an advisor's website, data gathering can be completed in the comfort of the client's home or on a tablet at the advisor's office. Once the client completes the risk tolerance assessment, investment models are recommended based on his or her appetite for market risk.

Many automated onboarding solutions can perform an internal consistency review, run verification checks, collect required signatures and push the data into other applications (from CRM to portfolio design and financial planning tools) automatically, thereby eliminating the need for duplicate data entry.



Automating the Right Tasks: Reconciliation

Account reconciliation is the act of comparing the advisor's records with those of the custodian, identifying any discrepancies and resolving them. For advisors with hundreds of accounts, manual reconciliation can consume multiple days of full-time effort. A manual approach makes it impossible to perform reconciliations frequently, condenses all the work into a narrow timeframe, compounds stress and compromises accuracy.

Financial services firms have found that the process of reconciling investment accounts is a good candidate for RPA because:

- The task of comparing holdings across record-keeping systems follows well-defined rules
- The nature of exceptions can be standardized, with separate automated workflows created for each category of exceptions
- The underlying investment data is characterized by a high degree of structure and high volume

Without automation, trade reconciliation is a tedious and time-consuming workflow of manually checking the proper settlement of each transaction. Today's software can automatically compare trade files against next-day records from the custodian to identify missing trades, pricing discrepancies, quantity errors and more. Some systems can also resolve a large percentage of the errors, so human involvement is limited to resolving the exceptions that cannot be handled by the software.

Best Practices for RPA Implementation

Despite its widespread use and accessibility in our daily lives, the acceptance of RPA in the financial services industry is far from complete. The [2017 Financial Services RPA Survey from PwC](#) presents only 30 percent of participants who report widespread to broad RPA adoption, with 22 percent of respondents still exploring their options.

By following in the footsteps of firms that have successfully implemented RPA, companies can shorten their learning curve, avoid mistakes and set themselves onto the path to maximum technology adoption and improved ROI.

Business Process Analysis

Companies must begin their journey toward process automation by breaking workflows down into concrete steps and identifying capabilities required to complete each task. This step is critical to ensure that the chosen workflow is a good candidate for RPA.

The challenge that many financial services firms face is that their workflows blend repetitive rules-based tasks with other tasks that require the use of intuition, judgment and creativity. Bifurcating those task categories is important if the firm is to implement RPA judiciously.

Be Prepared to Answer These Common Stakeholder Questions

- What exactly is robotic process automation?
- Why are we implementing RPA now? Why this process?
- What will happen to my job? Will I lose my job?
- What will happen if something goes wrong during the deployment?
- What does this mean for the company in the long run?



Building Consensus and a Communications Plan

Since RPA is still new and has the potential to eliminate jobs, it is important to meet with all of departments that will be impacted by the RPA project and obtain their buy-in.

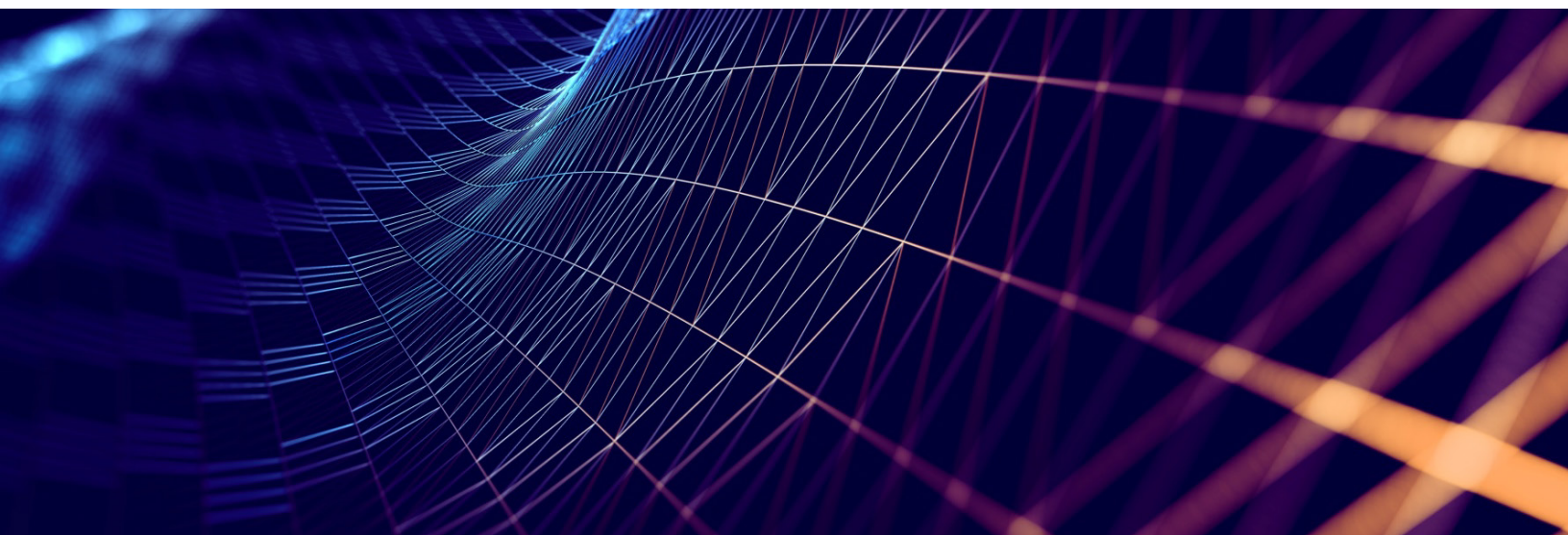
Large financial institutions that have successfully deployed RPA have reported that arriving at consensus about RPA priorities can be difficult, especially if multiple organizational silos are involved. According to the [2017 Financial Services RPA Survey from PwC](#), gaining agreement on the right approach to RPA implementation is ranked as the most common challenge (shared with finding subject matter expertise). Firms that attempt to skip or skimp on the consensus-building process risk having their RPA project fail. “Several robotics programs have been put on hold, or CIOs have flatly refused to install new bots,” according to a [2017 report by McKinsey & Company](#), “till solutions have been defined to scale the program effectively.”

In order to build consensus, begin by making the selection process as objective as possible through gathering and analyzing measurable data. An enterprisewide RPA strategy has unquestionable efficiencies; however, some financial services firms have demonstrated success using a hybrid model where some department-level autonomy is permitted for certain RPA components. Pilot projects can also demonstrate proof of concept for workflow automation in smaller, less expensive and more risk-controlled environments.

Managing human issues is at the heart of a successful RPA implementation. In order to avoid the perception that the goal of an RPA deployment is to eliminate employees, leadership must communicate the benefits of the initiative throughout the firm. Providing a list of the processes RPA will and will not be affecting, as well as a detailed explanation of how any workers who see their roles diminished will be handled, goes a long way toward laying the groundwork for a successful implementation. Human resource managers should also redefine hiring, training and human resources procedures.

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Strategic messaging and staff engagement throughout the process can alleviate much of the angst and anxiety, especially in valuable employees who have the longest institutional memory. Despite best efforts, companies should be prepared to see a broad spectrum of employee attitudes ranging from eager acceptance to active or passive resistance, and even sabotage. It's wise to continually assess the temperature of the organization during the implementation of new job responsibilities, reporting overlays, pay structure and supervision.



Post-Implementation Support

Change is never easy. Shepherding a company toward a go-live date for new technology is a big challenge that doesn't end after deployment. In fact, continued monitoring and post-implementation support is crucial for companies to protect their corporate brands, ensure excellent client service and minimize risk exposure.

Some of the best practices for post-RPA implementation support include:

- Monitor ROI on automation, but keep in mind that the range of time to achieving a positive ROI can be long (six months to two years, with the average of 14 months, [according to research from PwC](#))
- Continue to invest in training, program management and technology integration opportunities
- Test and refine internal controls that ensure the integrity of newly automated processes. Business continuity and disaster recovery plans must be updated to cover an RPA failure event
- Convey the company's commitment to technology as a means of creating excellent client service and exceptional stakeholder value. RPA should be presented as a natural part of the company's evolution, not an opportunity to reap quick cost savings
- Re-evaluate human resource procedures and mandates as they relate to hiring, training, employee mobility, compensation, succession and support for exiting employees

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What RPA Means for Your Business

Just as automation has forever changed the face of manufacturing, it's now disrupting the financial services industry. RPA presents a compelling model for boosting efficiency and enhancing collaboration between humans and technology. However, it also creates tough challenges for leaders who must decide when and how these technologies will be implemented.

Some common issues include building consensus and buy-in, securing resources to fund and champion the new technology, and managing employee morale. These challenges can be overcome, but only if the organization invests the time to define its strategic priorities, clarify its purpose in implementing RPA, and re-affirm its commitment to staff and clients.

Firms that build RPA capabilities receive tangible competitive advantages through improved scale, efficiency and client experiences. They also position themselves to take advantage of future developments in this area.

As RPA technology moves from proof of concept into full-scale adoption, its capabilities will expand. Today's RPA software relies on humans to write code and train bots, but in the future, intelligent process automation (IPA) will enable those bots to gain knowledge through machine learning and natural language processing.

RPA has proven its usefulness and tremendous potential. As advances continue, companies that hope to reap the benefits of scale and efficiency must begin by adopting RPA today.



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