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THE CAPCO INSTITUTE JOURNAL OF FINANCIAL TRANSFORMATION

AUTOMATION

Rethinking robotics?
Take a step back

ASHWIN GADRE | BEN JESSEL | KARAN GULATI

AUTOMATION

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Rethinking robotics? Take a step back

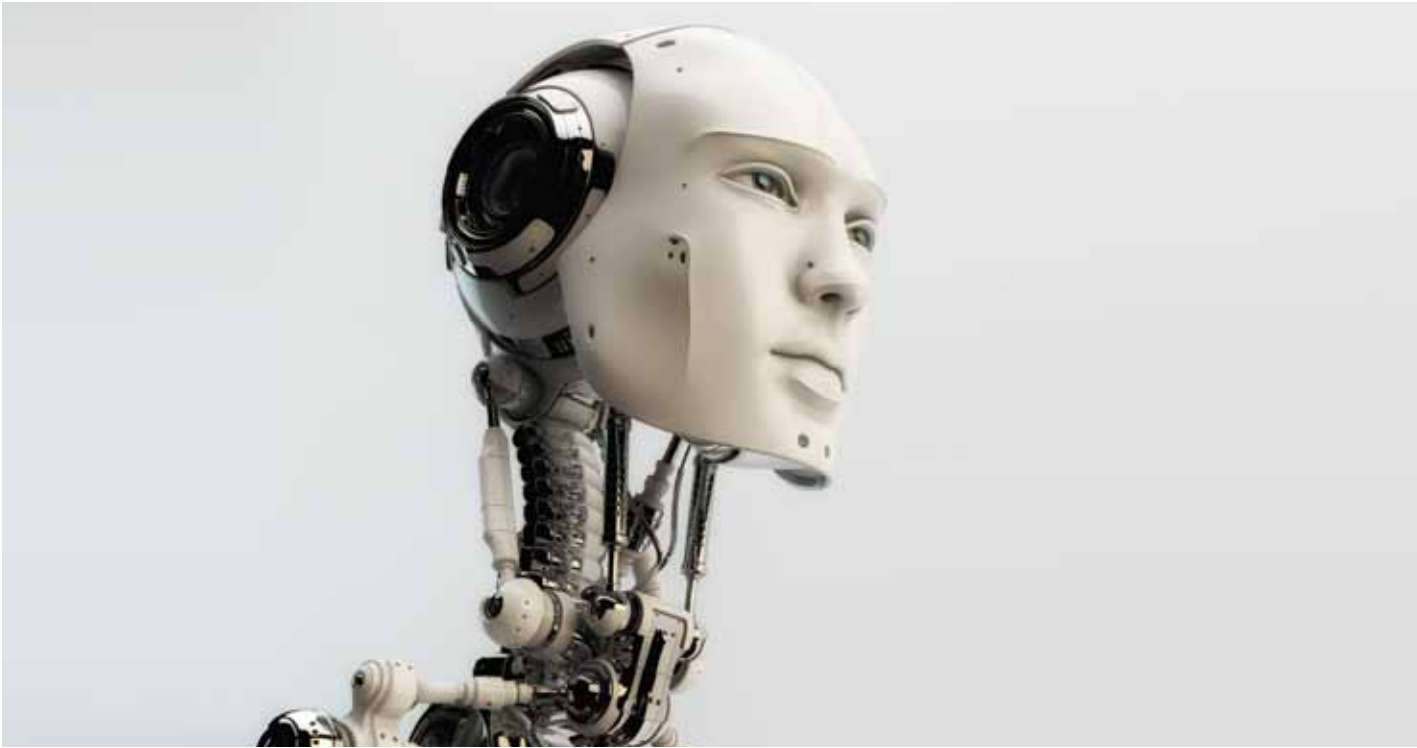
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ABSTRACT

In these times, no conversation about disruptive technologies is complete without reference to “robotic process automation” (RPA, or robotics as it is colloquially known). Although the technology is not new – screen scrapers and automated workflow have been around for over a decade – the pace of adoption and the fact that this is now being actively experimented with and piloted in most major financial institutions is a new phenomenon. This is due to the confluence of two unique market events: maturation of robotics technology and the efforts by financial institutions to mitigate inefficiency. Similar to any rapid mainstream adoption of new technology, however, success is not always assured. In the case of robotics, adopters have faced mixed results. In this article, we examine why the adoption has been so troublesome. We will explain why the institutions that have been successful in adopting robotics have done so not by focusing on the technology but by taking a step back and looking at the actual business problem at hand, and then considering robotics as part of a broad toolset that is available to them.



1. INTRODUCTION

Since the financial crisis, financial services firms have been engaged in a war against inefficiency. With a low interest rate environment and increased regulation, margins have become compressed to the point that the biggest driver to profitability is now a financial institution's ability to control its costs and improve efficiency.

In retail banking, a low interest rate environment along with caps on transaction fees mandated through the Durbin agreement have severely limited the sector's ability to generate revenue, whereas the increasing cost of regulation (estimated at over U.S.\$70 billion¹ since 2011), inefficient processes, and aging technology have been a drag on the bottom line.

As a result, banks' costs to maintain an average checking account are nearly U.S.\$349, yet on average they generate only U.S.\$268 in revenue for each account. This leaves banks needing to find nearly U.S.\$81 per customer in either increased revenue or cost efficiencies to make up the difference.² A similar story exists in the corporate and investment banking world – the revenue drivers of pre-2008 are no longer there, yet the cost burdens have continued to increase.

Banks had responded to margin erosion before, in the 1990s and early 2000s, by moving their non-value added operations offshore to India, the Philippines, and other low cost locations. Consequently, many banks have already optimized their operations from the perspective of minimizing the cost through labor arbitrage.

However, having a cheaper workforce is one thing, doing more with fewer people is another. Financial institutions are now beginning to realize that having outsourced many of their back- and middle-office capabilities to other organizations that run them in different locations means that they have lost control of their ability to optimize the process themselves. As a result, we are seeing financial institutions starting to take control of their operations and look for ways to both drive efficiency out of their processes and replace humans with technology through automation.

The opportunity for financial institutions is clear by looking at the divergence between highly efficient banks and those that have yet to grasp the nettle of becoming

¹ <http://on.wsj.com/2xcmYIK>

² <http://bit.ly/2fGCjv3>

more efficient. Benchmarks clearly demonstrate that the difference can be as much as a four-fold increase in efficiency with leading institutions able to serve over twelve hundred customer accounts for each employee in comparison to ones at the bottom of the efficiency heap who are only able to support a quarter of that amount.³

2. ENTER ROBOTICS – POTENTIAL TO UNLOCK OR AN OVERHYPED TECHNOLOGY?

With so much pressure on finding a way to drive efficiency, financial services firms are looking at new technologies, such as robotic process automation (RPA) to help them bring down their costs. While robotics is not new, it is one that has evolved to a point that financial institutions see it as a technology that has now reached maturity and has – for the most part – been proven.

The technology itself started from humble beginnings through small scripts that were written to repeat certain jobs or to provide quick integrations between systems that did not have any interoperability. Over time, the technology has evolved to one that is “fourth generation,” which means that increasingly tasks that used to take many lines of computer program could be carried out by clicking and dragging icons in a software

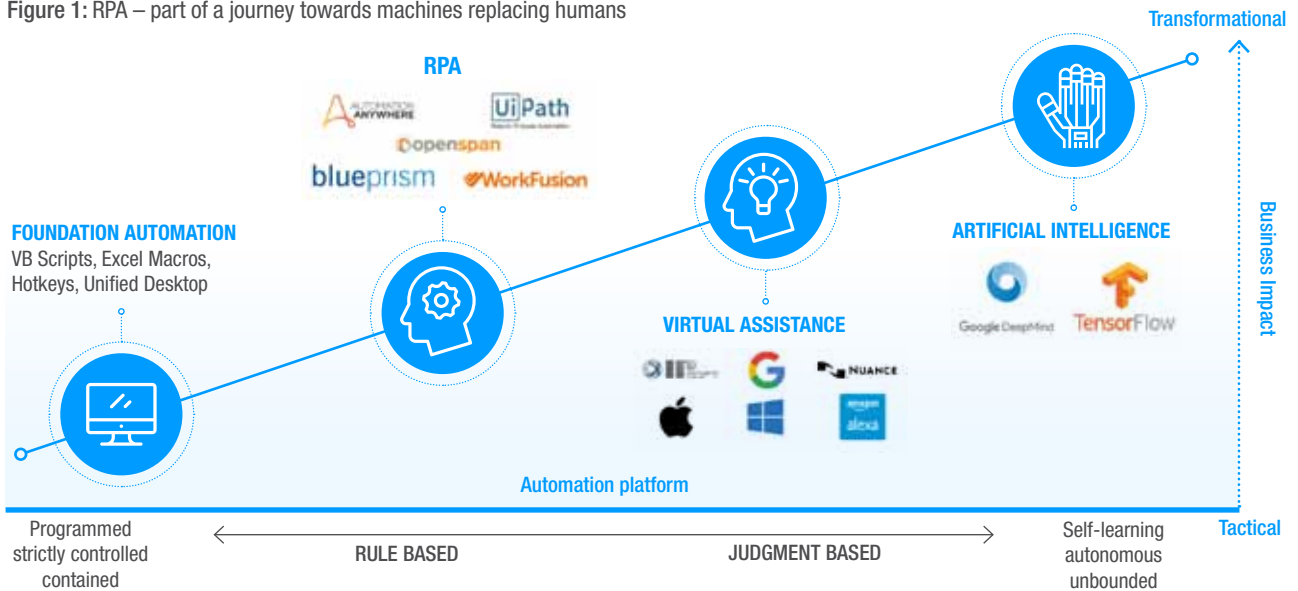
program, with the underlying code and configuration being developed by the software package.

RPA tends to be used to integrate systems where it is too costly to integrate them at a deeper level and so the technology is often cited as a tactical band-aid. While that may be the case, it has a significant role to play in enabling organizations to achieve operational efficiency.

Because RPA requires rules to make decisions, it is ill-suited to the kind of human decisions that require an element of judgment or where a business problem involves making sense out of large volumes of data sets, deriving a rule based on examining correlations. That technology is within the realm of cognitive agents, machine learning and artificial intelligence, which is an immature field that is rapidly evolving.

However, mainstream adoption is in its infancy and the jury is out on its efficacy. As is usual with this part of the hype cycle, there is an equal weight of claim and counterclaim concerning its ability to drive out costs, with Gartner reported as claiming that 96%⁴ of organizations achieved benefits from robotics whereas other organizations have reported that less than half of robotic endeavors have succeeded. Our own experience has been that more appear to be failing than succeeding.

Figure 1: RPA – part of a journey towards machines replacing humans



³ <http://on.bcg.com/2hLorE8>
⁴ <http://bit.ly/2xdT00e>

Notwithstanding the lack of a single empirical view on the success of the technology, we have formed a viewpoint, from our experience of being in the market, as to what separates the organizations that successfully adopt robotics – whether they be the 4% or the 50% – from the failures.

3. SEPARATING THE BOYS FROM THE MEN – WHAT SUCCESSFUL ORGANIZATIONS DO TO SUCCEED IN PROCESS AUTOMATION

We have surveyed numerous organizations and identified common traits among firms that have been successful in improving and automating their operations.

3.1 They focus on the process, not the technology

The idiom of “when your tool is a hammer, everything looks like a nail,” rings particularly true with robotics. And what we mean by that is that organizations that struggle with robotic adoption are the ones that approach it from the perspective of the technology, not from the business problem. The problem with this is that these organizations end up focusing on the wrong problems to solve, or always attempt to solve everything with robotics as opposed to being discriminatory and understanding that robotics is just one tool in a toolkit of multiple approaches to taking out costs and removing inefficiency.

One of the most common scenarios where we see this is where an ambitious technology executive looking to demonstrate to the business that they are looking to provide the business with value will procure a robotics tool (more often or not Blueprism or Automation Anywhere). They will issue a mandate to the technology organization to identify opportunities to use it. It is certainly a noble ambition, but these initiatives tend to wither on the vine as the technology team is not able to understand the business domain sufficiently to identify what problem to solve, and are unable to get buy-in from the business, who are usually confused as to why the technology team appears to be forcing the tools on them.

This can also happen from the business side of the organization, and while results can be better, going hunting for a problem armed with a solution rarely leads to a satisfactory outcome.

We commonly see this with the advent of robotics labs within organizations, which are designed as “Centers of Excellence” for the use of robotics in the organization. While there is nothing wrong with the establishment of such an organization per se, the danger comes from how the lab then engages the business community – they often do it from a technology solution perspective rather than from a business challenge one.

This challenge has become exacerbated by the proliferation of cheap robotics tools that are easily available. This is because a potentially dangerous technology is placed into the hands of people in the organization that may not have the sophistication or structured thought process to fully appreciate that the best way of solving a business challenge is through deconstructing the business problem as opposed to starting with the technology, which leads us onto the second aspect that leading organizations do well.

3.2 They understand the business problem they are trying to solve

Frequently, seemingly straightforward processes are in fact far more complex than they look at first view, and many organizations in their enthusiasm to adopt robotics do not give enough time to fully appreciate some important nuances. This can be because they do not get business SMEs involved or are just too aggressive in their approach.

This leads to many problems: The wrong processes end up being automated or the right processes are not automated properly. One of the most common issues, here, is that the robotics team will solve one bottleneck in an overall business process, only for the workload to flow to another bottleneck with the result that the organization ends up spending significant amount of time and money to end up with little improvement in throughput.

In other cases, robotics teams misunderstand the level of implicit decision-making and human judgment that a process actually needs, ending up with a process that takes far longer than it did before it was automated.

This is because robotics is a rule-based system and robots cannot make determinations based on their own judgment. When a robot identifies an input for which it is not equipped with a rule, it has to escalate a case to a human in an exception queue, where the issue must sit until it is resolved. An exception queue is designed to provide a human level of support in processing when



robots face challenges. These tend to be staffed by generalists, since many of the specialists that the robot has been designed to replace have left the organization as their roles have been automated. When poor robotic design ends up with generalists having to spend more time than expected, the exception queue rapidly becomes a bottleneck in the process. Ultimately, this leads to a slower process than before automation was even considered.

One way that successful organizations can mitigate this is by bringing the business process into a lab, where staff that have the responsibility of improving and automating a process can work side by side with an operations professional. One of the benefits of such labs is that the optimization team get to have a ring-side seat on how a process is carried out versus how they are told it should be carried out by a process owner who graduated from a hands-on operational role some time ago and may no longer be in touch with the actual realities on the ground.

3.3 They involve technology stakeholders in their automation efforts so that they avoid the dangers of “shadow IT”

The process of making a technology reliable and

supportable is a slow, and complex one, and is often misunderstood by the technology department’s business stakeholders who just perceive technology as being slow and unresponsive.

With robotic platforms that can be deployed and built upon without the involvement of the technology department, a lot of power is placed in the hands of the business, enabling them to circumvent the technology department. While the business may delight in the ability to rapidly deploy robotics, without relying on technology stakeholders there ends up being severe ramifications down the road because of supportability of the robotics solution.

Not only does this technology become invisible to the technology team, whose mandate is to ensure that technology that supports business process is reliable and managed, but it also introduces a fragile technology into the organization. Robotics is fragile, as it integrates the user interfaces of “line of business” and corporate applications. One small change in one of those systems – such as changing the name of a field on an application form – can break a robot!

In some cases, these robotic workarounds developed by non-technology teams end up supporting business

critical processes. When they break, organizations have the twin challenge of having to fix a critical business process and having a technology team that has no knowledge of the robotic system, and, therefore, are unable to fix it. With regulatory requirements placing increasing requirements on organizations to fully document the presence of business critical technology, the rise of this technology is a major concern for the technology and compliance departments.

Successful organizations understand that technology needs to be part of the solution from design through to implementation and support. Getting buy-in from technology is hard because they do tend to view the technology as inherently unstable. In addition, in many cases it is a way of pushing investment decisions concerning replacing or integrating technology down the road, which can oftentimes run contrary to the technology department's desire to avoid quick-fixes and move the organization off legacy technology that is expensive to support.

3.4 They are in it for the long haul

Many organizations make the mistake of assuming that they will be able to receive a return on investment (RoI) that will be comparable to other projects in a change portfolio that are built with mature technology. Similar to the adoption of lean, six sigma, and kaiban, which required a mandate from the top, and many years of integrating the discipline into the organization at all levels, robotics will need to take the same path. We frequently experience conversations with our clients where they state that they have struggled to get buy-in for their robotics program because they cannot justify the RoI.

In the same way that to climb mount Everest you must start with the foothills, successful organizations understand that the adoption of robotics is a long journey that starts off with simple projects with limited upside that builds towards a sophisticated efficiency generating capability over time.

3.5 They actively manage and do not “set and forget”

For organizations that have managed to get as far as implementing a robot in a production environment that is supported by IT, there remains one final hurdle that concerns the misbelief that a robotics journey ends with the transfer into production support. In fact, robots need almost as much care, attention, and management as

the real humans that they replace, or now sit aside.

Robotics is not a panacea – small changes to line of business systems can render these robots inefficient, and in some cases, cause them to break. Furthermore, they are often not effective in circumstances where there is a level of ambiguity. For example, it is common for a robot to be unable to distinguish between a \$ sign and a five.

Whereas a human being can make the distinction through either better visual recognition or by looking at the context of the overall document or record that it is situated into and make an educated guess, a robot will often need to refer this to an “exception queue” of humans for further review.

The implication here is that robotics, in some cases, can actually be less efficient than humans and cause bottlenecks. Robotics is an inexact science, and the nature of the information that the tools have to deal with is often variable. Consequently, the discipline of monitoring the effectiveness of a robot or team of robots needs to be effectively built into any robotic operation. One has to recognize that robots will fail, they will need care, and attention and without this management, they will cause more harm than good.

3.6 They leverage their existing technology

Robotics is an effective tool for integrating lines of business and corporate systems, but it is not well suited as a business application in-of-itself. It is a form of band-aid where the cost of integrating systems that are silo-ed, and are not interoperable, is too high. That is why robotics must be approached from the perspective of leveraging existing technology with robotics providing the glue.

We have seen organizations mistakenly attempt to replace core applications with systems they have built through robotics platforms. Robotics is not an effective long-term tool for this kind of approach.

For example, some organizations attempt to replace their operational ticketing system with a home-grown robotic solution. In most cases, it is far better to leverage an existing system's functionality, and integrate the robot into the application than to build a new system from the ground up using robotics.

4. FOCUSING ON THE PROCESS FIRST, NOT THE AUTOMATION

With automation being so in vogue, we have seen a tendency in the industry to focus on automation as the solution for resolving business problems and achieving efficiency. Instead of taking a methodical approach to focus on the business challenge, many are looking at ways of improving the process and then looking at automation as part of a broad array of tools that can be applied to generate business value.

Oftentimes, simply reviewing and improving a manual process can be far more effective than automating it, for reasons such as the need to use human judgment, ensure a degree of customer intimacy, or for quality control or regulatory reasons.

Optimizing a process should always be the first port of call, irrespective of whether the process is eventually automated or outsourced. The famous outsourcing idiom “your mess for less” was quip that was often used in the 1990s to describe the pitfalls of outsourcing or automating a process without fixing the underlying problems associated with the process first. The same applies to automation: automating a bad process just increases the speed of failure and inefficiency. In many cases, we have seen process times increase as a result of organizations attempting to automate a bad process, or one that transpires as being inappropriate for robotics.

Many thousands of column-inches have been written about business process automation over the years and while we will not cover them here in detail, some key aspects are important to recap as they are foundational to an overall automation journey.

Business process optimization concerns the identification of a business issue, and recognition that it lies within a domain of problems that involve processes, skills, data quality, and governance. It requires practitioners to holistically assess a function and sub-processes, to identify the best strategy for implementation. Process optimization is about taking a top down view of all key business units in a functional area and defining the landscape in which they operate. It should help answer the following questions: is the process efficient? Are there bottlenecks? Do all parties have quality data that are accurate and actionable? Are there vendor dependencies that create risk for clients? Are there transformation efforts currently underway in a business area?

It is important to answer these questions because frequently organizations seek to fix – and in some cases, automate – the wrong functions. There is ultimately a balancing act between the effort required to improve a process and the value that it will bring to the organization. It is not just the time taken to rewrite operational manuals and retrain staff; there are also changes to technology, organizational resistance considerations, as well as risks associated with optimizing business critical processes.

Ultimately, there is a prioritization activity that process optimizers go through to determine whether the benefit is worth the cost. Usually, this filtering results in an extended list of process areas to automate, which requires further definition through documenting a detailed current state process map that captures complexity and value add time for each step, key interactions between teams, dependencies, and automation potential.

Figure 2: Taking a structured approach to process optimization

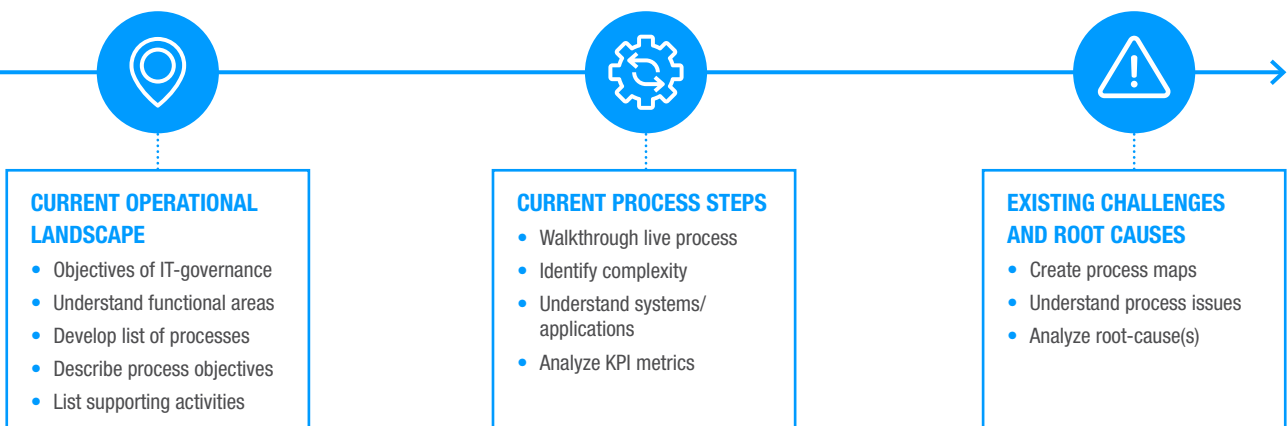
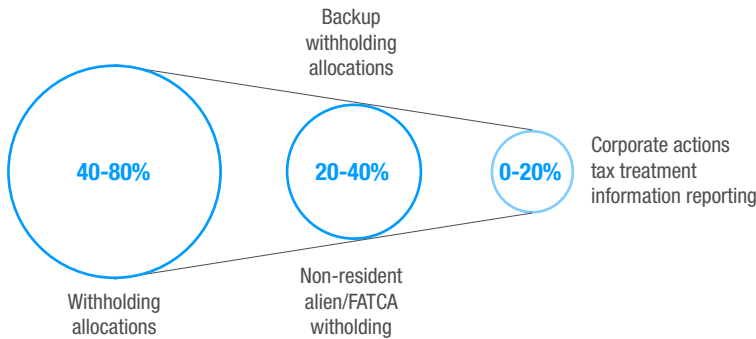


Figure 3: Typical savings of automation applied to various aspects of tax operations

LEVEL OF AUTOMATION OPPORTUNITY IN TYPICAL TAX OPERATIONS PROCESSES



Creating this artifact at a granular level is a “value stream exercise” that analyzes a function from the top down. The value stream “map” incorporates additional information, such as a system landscape that highlights the number of unique platforms and applications within a process. This level of detail helps to identify dependencies and pain points that originate from sources not previously considered, such as third party applications.

Often this can result in surprising discoveries as to what the root cause of an issue is, which could be operating model issues, system or infrastructure gaps, data quality, and workforce management, to name a few.

Taking a holistic view to process identification allows an organization to drive meaningful conversations on automation opportunities, and strategize on a possible suite of optimized solutions. Considering linkages and dependencies between functions, processes, sub-activities, and systems increases your odds of identifying and addressing the right problems.

5. IDENTIFYING THE RIGHT PROCESSES TO IMPROVE AND AUTOMATE

Broadly speaking, automation candidates fall into several key areas, such as document heavy processing, processes that involve comparisons and data entry between different systems, especially in time critical situations, and customer service functions that deal with high volumes of very similar inquiries.

5.1 Automating document heavy processes

Document heavy processes, where data needs to be extracted from structured documents and then entered

into systems, are strong candidates for automation, provided that the documents involved are structured and similar.

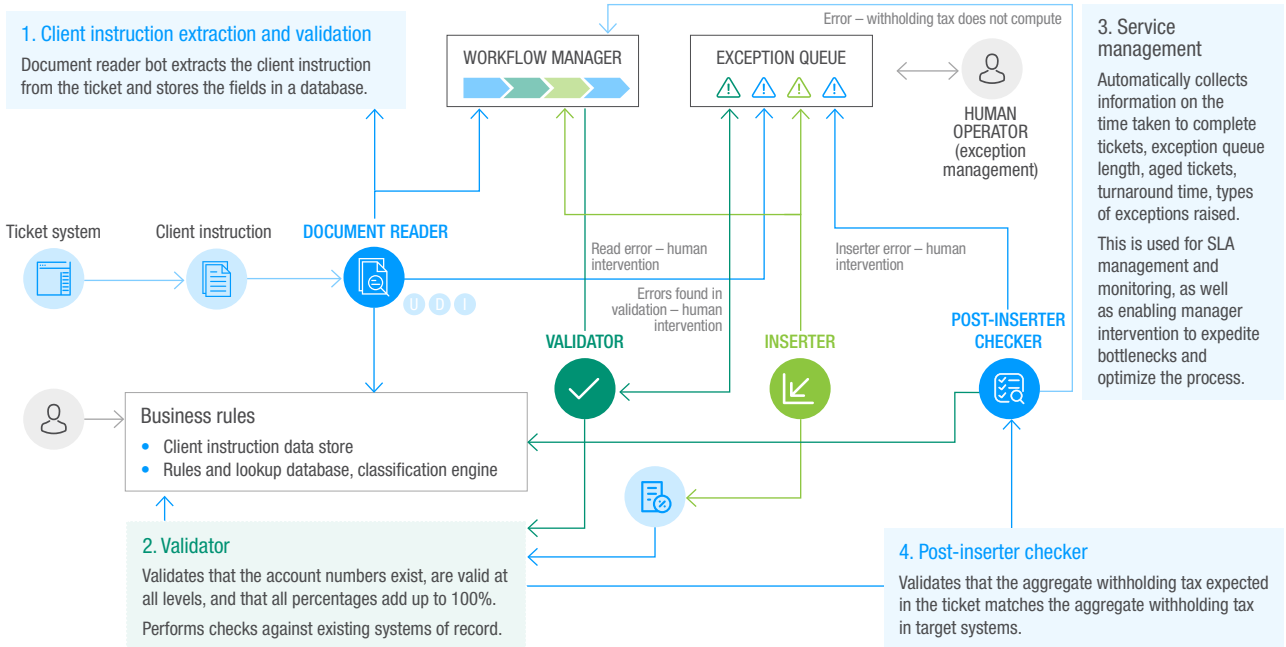
Typically, processes that involve humans extracting from documents are not only inefficient, but introduce significant risk into an organization because human error is common, especially where they have to perform tedious repetitive tasks.

This type of process is often found in tax operations functions in banks that are managing or administering funds on behalf of their clients. A key aspect of this management involves ensuring that the tax treatment of their clients is managed effectively. In this scenario, clients provide instructions on a regular basis to their financial institution that articulates how funds should be allocated for tax treatment purposes. The institution calculates the tax to be levied for a given fund, including how much tax to withhold – in the case of non-U.S. beneficiaries – as well as determine the tax treatment for corporate actions associated with the underlying securities in a client’s portfolio.

Accuracy is extremely important, as any errors can have a significant effect on the how much tax a client must pay and reclaiming of overpayment of tax from the IRS is a complicated and time consuming matter.

Typically, these financial institutions seldom stipulate to their clients as to what format to use, which means that there is significant time spent by operations staff in deciphering instructions, and working out what information to extract. Furthermore, the work can be very repetitive – we have seen clients submit instructions that contain anything from one to 10,000 instructions, which can take anything from a day to a

Figure 4: Example robotics architecture for tax operations



month to process purely based on the time that it takes to copy information from a document and paste it into a form of a tax platform.

Automation is a natural candidate for some aspects of this; it is perfectly feasible for a robot to extract and input data into line of business systems in seconds, as opposed to months.

However, this is only possible if the documents that the robot is working from are identical, in terms of structure, which in the real world is seldom the case. Robots can be trained to recognize documents and work out where to extract the information from, but they need to be trained on each type of document, which can be a significant overhead.

Usually, these situations follow an 80/20 rule – the majority of documents are indeed similar, with the least amount of volume involving documents that tend to be different. The key to successfully automating tax operations resides in the ability to understand where the efficiencies lie and focusing efforts on where the data is standardized, leaving areas where it is not for humans to handle.

Not all areas of tax operations are good opportunities for automation, such as in corporate actions processing,

where financial institutions need to determine the tax treatment for a given security that has undergone a corporate action, such as a stock split, dividend payment, or takeover.

Corporate actions have forever been the bane of financial institutions because there is often inconsistency between data feeds that report corporate actions, and the tax treatment of securities involved requires a high degree of objective human judgement that draws upon prior experience and reasoning. While robotic systems perform well in environments where they can follow clear robust rules, they struggle in situations where the decision process is more complex and less rules driven, as they tend to be in this case.

As we have seen, while tax operations provide some significant opportunities for automation, there are many issues that need to be taken into consideration, such as the degree to which decisions require judgment and experience, as well as the extent to which instructions from clients tend to be sufficiently standardized in their format.

Tax operations tend to be good candidates for automation, as they are large functions that can involve hundreds of staff. Hence, a small uplift in efficiency can build a business case relatively easy. In our experience,

as a rule of thumb, automation yields benefits when the amount of staff in scope for automation is within the fifty-to-one-hundred range. Departments with fewer tax operations specialists tend to not yield a sufficient saving to justify the cost of implementing automation.

5.2 Data entry between multiple systems

Currently, business processes in financial instructions tend to be supported by a myriad of line of business systems that are often not integrated. They exist as siloes of information, with humans providing the heavy lifting of ensuring that the data in one system is correctly copied into another.

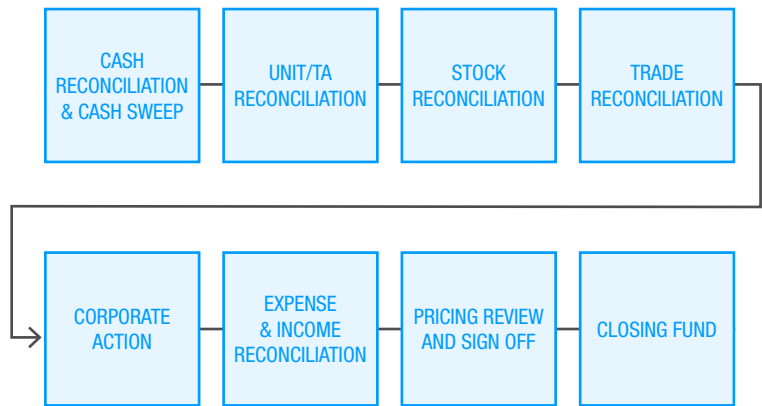
This is a particularly common phenomenon in fund accounting. While in theory, modern accounting technology should have rendered the role of fund accounting to obsolescence, the reality in most major fund management organizations is that the fund accountant's role today is one of checking that the various siloed and independent systems that report on the various part of the business correctly reconcile.

Furthermore, not only do fund accountants need to be content with consulting and reconciling data across multiple systems, but they must do so for a process that is time critical; fund accountants typically have no more than a few hours from receiving pricing information once markets have closed to “striking a NAV,” whereby they calculate the value of the funds that they administer.

Even in technology progressive fund management organizations, the process is laborious and fraught with challenges concerning data quality, and the timing of information provided by other teams they are dependent on. As with tax operations, corporate actions processing plays a significant role in the calculation process, and the interpretation of the treatment of associated securities can also be subject to human interpretation.

Whereas the aspect of the process involving checking that siloed systems reconcile is a natural fit for robotics, the determination of the underlying reasons for data not reconciling and resolving this tends to be a challenge that is less suitable for robotics, as there can be so many different underlying causes for the records being different. There are currently many tools on the market that already perform sophisticated reconciliations, and the danger of attempting to solve for reconciliation in fund accounting is inadvertently investing large amounts of money to develop a solution where there are better options available in the market.

Figure 5: A typical fund accounting process



The key to success when automating fund accounting, therefore, becomes the art of being able to not just automate the comparison of data between systems, but to also address the common aspects of reconciliation associated with the root causes of data issues between systems, while leaving the more complex aspects to human beings or packaged solutions such as FIS' Intellimatch™ to resolve.

An additional factor is automating processes that lie within the critical path of a process. With fund accounting, much of the work effort occurs within a compressed timeline towards the end of the day. It is these activities that dictate the overall staffing required to support the fund accounting function, and the effort put towards automation of activities outside this window are often wasted.

5.3 Contact centers/customer service

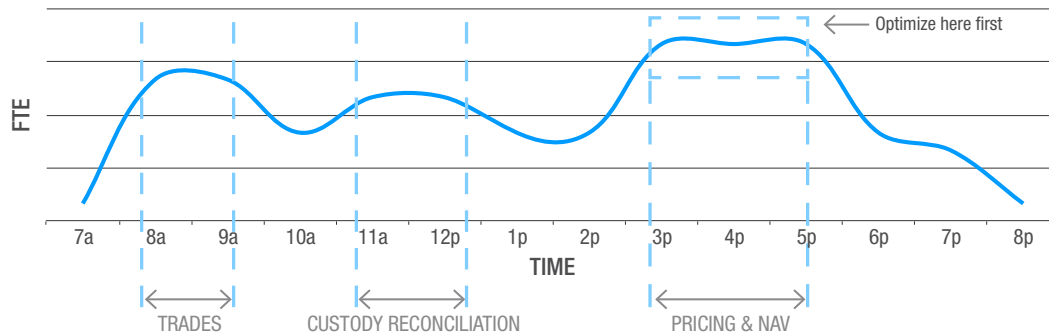
Customer services is a significant cost for financial institutions, especially those that have a large customer base, such as in retail banking or wealth management.

Customer service and contact centers have been targets of automation for nearly a decade. Almost every phone interaction with an organization, financial or otherwise, tends to involve “interactive voice response” (IVR) systems that triages call, much to the annoyance of the caller. It is a minor irritant to the caller but a significant cost saving for the bank and generally considered as the price worth paying for the cost of free banking.

However, the stakes are far higher in wealth management, where it is entirely possible to, on two consecutive calls, handle a client with a net worth of

Figure 6: Automating the right part of the fund accounting process

Typical operations of a fund accounting organization – why the NAV window is the focus of optimization



Ultimately the pricing and NAV window tends to have the highest workload and time criticality, and drives the overall staffing for fund accounting. This is why we focus on process improvement and automation initially in this window before looking at the next highest area

\$10,000 and another with over \$10 million assets under management.

Clearly, financial organizations want to prioritize the clients that generate them the most revenue. It is also important to prioritize inquiries that are administrative by nature – such as inquiries about balances – and those where the bank has an opportunity to increase the revenue they receive from their client.

Separating these calls is not easy; IVR is a blunt tool to use to stratify customers and types of inquiries and has the potential to annoy and deter wealthy clients.

We have seen wealth management firms setting lofty goals to drive all administrative calls to a virtual robotic agent, with the remainder handled by a specialist.

In addition to this, some have gone a step further and used automation to provide customer service agents with data about the customer, which enables them to provide the customer with a personalized service. These customer-relationship-systems-on-steroids provide an instantaneous view of profitability for a given customer, a view on open cases that the client has raised, as well as recommendations of products and services to suggest to the client based on their specific situation, risk appetite, and investment profile.

This is the true frontier of customer services – focusing on the calls that generate value for the customer and the institution and then providing the client with an experience that makes them feel like the organization knows them personally.

The use of IVR technology to help clients with administrative questions is increasingly being replaced with intelligent virtual assistants that have cognitive capabilities that go beyond simply reading from a script and triaging based on a pre-defined set of responses. Technologies, such as IPSoft's Amelia, are capable of being trained in much the same way as human can be. They can read and learn operating procedures, take large documents and synthesize their meaning, and provide answers to questions that they have not been explicitly trained to ask, purely through their cognitive “human like” capacity to learn through reading.

With customer services, we are starting to approach what futurologists have coined “the uncanny valley” – a point where computers resemble human beings so closely that they are nearly indistinguishable from each other. However, the technology is far from perfect, and organizations that have been successful in adopting this technology have been able to delineate the mature aspects of the technology from the cutting-edge elements.



6. CONCLUSION

Robotics is at the peak of a hype cycle where claims of its efficacy and ability to transform organizations are characteristically overblown. We are seeing first adopters approaching this technology with a degree of inconsistency in their success, which has been due to a combination of unrealistic expectations and taking a myopically technological approach to solving problems, even when the solution is far better suited to a non-technology route.

We have also seen how leading organizations have approached automation in a balanced way, approaching it from a holistic process perspective, based on understanding the problem and assessing the overall business case associated with fixing an issue.

There is clearly a very large amount of inefficiency in the business process of financial services across the front-, middle-, and backoffice, which can be significantly reduced through a combination of process automation, improvements to the overall operating model, and improving the consistency of data.

In many cases, there will be scope to take the additional step of introducing automation. But that will require more than a business case to drive forward.

Only once the organization has articulated an intent from the senior ranks of the company to embark on an automation journey – that also takes a structured approach to evaluation that is inclusive of both the business operations and technology stakeholder groups – should such a decision be taken.

But at that point, the step forward is not merely an incremental one, it is – in the words of Neil Armstrong – a giant leap, which will enable these enlightened organizations to significantly differentiate themselves from the competition.

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