Intelligent Automation: The next step in the business process transformation journey
Automation is a hot topic in financial services today, having proven itself as an operational efficiency driver—freeing up human resources to take on more strategic roles. Not only that, because financial services is such a highly regulated industry, automation can be transformational in terms of addressing significant demands for auditability, security, data quality, and operational resilience. As technology becomes more sophisticated, automated processes—when implemented correctly—show great promise for delivering new business solutions and generating even greater benefits to financial firms. Some of you have likely been examining every process in your organization and asking the question, “Can we automate this?”

Say you’ve established a center of excellence, and your teams are analyzing and prioritizing data analytics initiatives to tackle first. And maybe you’ve placed your first glorious bot into production and begun the real journey toward transforming your firm. It’s at about this moment...when the first automation occurs...that the next important question surfaces: “How can we make this automation more intelligent?”

Let’s pause to consider how far we’ve come over the past 20 years in making financial services business processes more effective and cost efficient. First there was six-sigma and the focus on re-engineering processes. Next came business process management—the use of software to allow business rules-driven routing. These capabilities also played a significant role in supporting business process outsourcing.

For example, within the insurance sector, workers’ compensation claims processing typically involved a lot of manual, paper-based steps—primarily in the form of reviewing medical records, doctors’ notes, and bills. Insurers were looking for a way to streamline operations to reduce cycle time and costs while making sure they were still paying claims fairly. Doing so involved building processes and technology around early claims triage to properly assess which claims needed “high touch” versus “low touch” models, then automating decision-making and workflow with basic rules-based systems. Procedures and processes were built, and work was outsourced to handle the steps in the claims settlement process that required human involvement. There is still a lot of room for improvement in terms of aggregating disparate data sources and report generation, but this early work is a signal the industry is headed in the advanced automation direction.
All of these types of developments are the parents and grandparents of today’s intelligent automation (IA). IA is the new generation in enterprise transformation, taking the financial services industry to the next level in harnessing technology to drive better process effectiveness and cost efficiency in ways not previously possible.

What’s important to recognize is that with this new generation of technology capabilities, the enterprise is making processes more effective and cost efficient through automation, and ushering in an era where essentially, machines can “think.” And that’s changing the financial services environment in a number of ways, including opening the door to new products and services that weren’t possible in the past. For example, IA is helping firms with their regulatory compliance and preventing fraud through automated communications monitoring that identifies relationships and entities across multiple communication threads.

In essence, IA is becoming your new “business partner,” aiming to help you make better decisions, faster—accelerating your competitive edge and evolving your business. So how do you take the next step in this transformation to make your automated processes more intelligent?
In the simplest terms, IA is the automation of a repeatable process, but through an intelligent system. It’s the logical next step in transforming manual, time-consuming and cost-heavy activities to become more streamlined, cost-efficient and productive.

As mentioned previously, in the early days of enterprise transformation, firms deployed people in this effort and in the form of a methodology-based business process. While these endeavors yielded benefits, they often presented challenges in terms of expensive, time-consuming and inconsistent deployment. As technology has advanced, enterprises have increasingly adopted automated technology solutions to drive even greater efficiency.

However, IA has the potential (and in many cases, is already fulfilling that potential) to go well beyond simply driving improved efficiency to deeply simplifying the business environment as we know it. With IA, it’s not just about automating your processes; it’s literally about making them smarter. It’s not just about streamlining the workflow; it’s about making better business decisions. And it’s not just about conserving human resources; it’s about humans and machines interacting on an even more sophisticated level. With IA, machines augment human skills and capabilities to deliver new business solutions that would not otherwise be possible.

While automation is paying off in terms of improved process effectiveness and cost efficiency—saving enterprises time while reducing human-generated errors, the early days’ challenges around re-engineering work processes have given way to challenges in terms of culture shifts. In other words, organizations are wrestling with how to embrace IA processes as the new coworker. While we expect change to always be accompanied by challenges, the writing is on the wall that IA solutions should increasingly be partnered with human counterparts to create the workforce and workplace of the future.

The question is, how will you position your firm for improved performance in this next phase of the enterprise transformation?

82% of executives we surveyed agree that organizations are being increasingly pressed to reinvent themselves and evolve their business before they are disrupted from the outside or by their competitors.²
Before deciding how to make your firm’s automated processes more intelligent, it’s important you have a basic understanding of the IA technology landscape—which is best viewed on a spectrum ranging from less sophisticated to more advanced.

Robotic process automation (RPA) is the first step most organizations take in implementing IA solutions. RPA tools mimic the same manual path through an application a human would take, using a combination of user interface (UI) interaction or descriptor technologies. An RPA tool can be triggered manually or automatically to move or populate data between prescribed locations, document audit trails, conduct calculations, perform actions, and trigger downstream activities.

RPA is at the lower end of the intelligence spectrum, basically acting as a virtual agent to execute tasks. It’s a good solution for aggregating data, performing rudimentary analysis, and then visualizing the data (for example, in a dashboard as a chart or graph). RPA is “low hanging fruit” for firms looking for early wins in automating manual, time-intensive tasks. For example, data analysts should find RPA very useful in terms of doing much of the preliminary work in analyzing a large amount of data around which the analyst can then build a story for decision-making purposes.

Advanced natural language generation (Advanced NLG) systems are more sophisticated than RPA and mimic the analytic and authoring capabilities of a human analyst by automating processes that analyze and communicate insights gleaned from data. These systems are best at interpreting and generating information from data at scale, in language that is human sounding and insightful.

Advanced NLG is at the higher end of the intelligence spectrum, essentially acting as an automated analyst that analyzes and interprets structured data, then communicates relevant insights in narrative form. In addition to automating sophisticated analysis, NLG capabilities free up human analysts to work on more strategic tasks—such as decision-making. Because of its robust data analysis, insight derivation, and communication capabilities, Advanced NLG is particularly useful in engaging customers and accelerating time to market, as well as providing clear and accurate narratives regarding business performance.

There are many RPA and NLG-only solutions that can deliver a significant return on investment. However, RPA and Advanced NLG are complementary technologies and in many cases, can be used together for enhanced benefit—with RPA as the data aggregator and Advanced NLG as the power behind the analysis and communication. Here’s an example of how they can work together within the financial services sector.
Risk reports on counterparties are required for firms that purchase or sell loans. There are thousands of entities and dozens of loan types a large financial institution has to address in the reporting process. Automated data collection processes (RPA) gather the required information across all loans and counterparties. An Advanced NLG system then analyzes the data and prepares the reports in an easily readable format. This combined IA process provides the oversight authority with a higher quality report and the reporting entity with greater capacity, while removing mundane tasks from employees’ hands.

When firms combine NLG with RPA, they can scale IA for a larger end-to-end transformation. You need structured data to efficiently deploy NLG within your firm. RPA provides the fix for this by aggregating the data from multiple systems into one, ready-to-write-about file. RPA provides additional value by triggering the API (application program interface) call that tells the NLG system what story to write. Because the system is likely configured for a variety of personas, audiences receive the information they care most about in a personalized manner, thereby increasing engagement. Once the story leaves the NLG system, RPA bots distribute it to readers by triggering email templates, sending text messages, and posting content on websites. The end result? An automated process on the higher end of the intelligence spectrum.
The first step in adopting IA is identifying the ripest business cases for automation. Answering the following questions about any particular activity can help determine whether or not IA is the right choice:

- What amount of time is spent on the activity? (If very little time is spent, automation might not be worth the investment.)
- How many steps or people are involved? (Firms should look for the greatest opportunity for return on investment in terms of human and technical resources.)
- What systems already exist to perform some of these steps? (Are there other options for creating process efficiency that are being overlooked and that could yield a better return?)

For example, suspicious activity reporting requires data aggregation, model fine-tuning, suspicious activity identification, and alert generation—as well as final report writing. This effort is likely to be highly people-intensive. Might there be better ways all the analysts and others could spend their time in supporting the business than working on these reports? If so, this would be an excellent use case for IA.

Once a good candidate for IA has been identified, the next step is to “teach” the system about your business. IA is very broadly applicable in the consumer world (think Apple Inc.’s Siri®), but for a system to be valuable in the enterprise, it needs to understand the unique business specifics. For example, RPA virtual workers handle multiple data feeds from multiple sources and can schedule tasks to be performed in a certain order to improve particular processes. Advanced NLG systems leverage domain-specific ontologies to perform business-relevant analysis and express the output in language that is contextual to your firm and its audience.

Lastly, intelligent systems should be held accountable for the results they produce. Transparency—the ability to accurately monitor and measure both performance and results—is extremely important when implementing IA. Systems should be able to “explain themselves” through traceable decision-making—tracking information all the way back to the original source. Additionally, after implementing IA, firms should be able to accurately assess:

- How much time is being saved.
- The amount by which operational costs are being reduced.
- How IA is leading to better outcomes.
- What the organization is able to accomplish that wasn’t possible before IA.
Technology in general is all well and good, and its benefits have been amply demonstrated. Automation is helping organizations save time and money, and increasingly firms and their employees are becoming more comfortable with automation in the workplace.

But IA is a little different. It’s triggering a culture shift. Its effective implementation depends in large part on how well humans and machines are able to work together at a higher level than they do through less sophisticated automation.

Currently, IA systems work in partnership with humans, as humans have to teach the machines the reasoning steps necessary for transforming raw data into valuable and actionable insights. When the partnership works, there are numerous possibilities for applying IA to strengthen performance, increase revenue, and please customers.

“The companies that will grow and dominate their industries will be those that systematically embrace automation across their organizations, using it to drive the changes to their products, services, and even business models as they continue to transform themselves and their industry.”

AUGMENTING HUMAN SKILLS AND KNOW-HOW THROUGH IA
YOUR IA JOURNEY TO BUSINESS PROCESS TRANSFORMATION

IA is still in its infancy, but its growth could be explosive.

To stay competitive and keep up with the industry, firms are encouraged to examine their processes and identify where IA makes sense and how it can add value. Whether it’s adding a robotic “greeter” to assist customers, implementing an automated investor advisory service that creates formulas based on customer profiles, or applying Advanced NLG to engage with clients in language that is personalized and insightful, every firm should have a need IA can fill.4

Here are three suggestions for incorporating IA as a valuable part of your operations:

1. Start with a small business use case to establish a quick win, then build on that success.
2. Make sure to assemble the right team, composed of both business subject matter specialists and technologists.
3. Begin the design process with the end state in mind by creating a reverse timeline. Make the starting point achieving the desired business value, then work your way backward to implementation.

Now, go make your automations intelligent.

REFERENCES

2 Ibid
3 Ibid
4 Ibid
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