



INTELLIGENT AUTOMATION

PROPELLING BPOs TO THE NEXT ORBIT

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Preface

Wide-scale digital disruptions and the unprecedented pace of change in customer expectations are propelling the Business Process Outsourcing (BPO) industry to constantly reinvent itself. The BPO industry has already shifted gears from traditional outsourcing to give rise to an era of modern outsourcing by leveraging advanced technologies such as Robotic Process Automation (RPA) and Artificial Intelligence (AI) to derive productivity gains and reduce operational expenses. Today, the BPO industry is at the intersection of RPA and AI technologies, where Simple Automation scenarios are being augmented by AI technologies to give rise to the era of Intelligent Automation (IA).

AI technologies such as Natural Language Processing (NLP), Computer Vision (CV), and Machine Learning (ML) are amplifying the capabilities of RPA and leading to more end-to-end automation scenarios. Enterprises are counting on their BPO partners to automate their processes using these new-gen technologies. Hence, to be able to position themselves as key strategic partners to enterprises, BPOs need to be on top of their IA game.

This Zinnov whitepaper is designed to gauge the future of the BPO industry with the rising prominence of IA. This is the third and the final paper in the series of whitepapers focused on studying the proliferation of RPA across the BPO industry.

This whitepaper assessed more than 200 RPA/IA-related deals across the BPO industry. It highlights the advantages offered by IA and how it accentuates RPA/Simple Automation. The whitepaper also elucidates how enterprises can successfully adopt and scale IA.

Visionary BPO firms need to hustle and step up their IA adoption, because there is only one way forward for the BPO industry – **disrupt or get disrupted.**

1. The next phase of BPO evolution – IA

Over the last three decades, the BPO industry has been on a continuous transformational journey. Be it the transformation of core services, amplification of value proposition, or an increasingly technology-focused culture, the BPO industry has witnessed it all. In fact, the BPO industry is still evolving, as it continues to make significant advancements in creating real-time customer-centric solutions.

The first whitepaper of this series, "RPA Disrupting the BPO Industry," asserted that the BPO transformation journey can be imagined and studied through six phases of growth and evolution. Having come a long way from managing non-core processes in the '90s, the modern-day BPO companies are viewed as key strategic partners, driving high value for their customers. To achieve this, the industry has made persistent efforts to enhance its offerings, optimize delivery models, and revamp its market positioning. A key propellant fueling the growth of the BPO industry through all the generations, has been an innovation-centric approach backed by constant technology advancements.

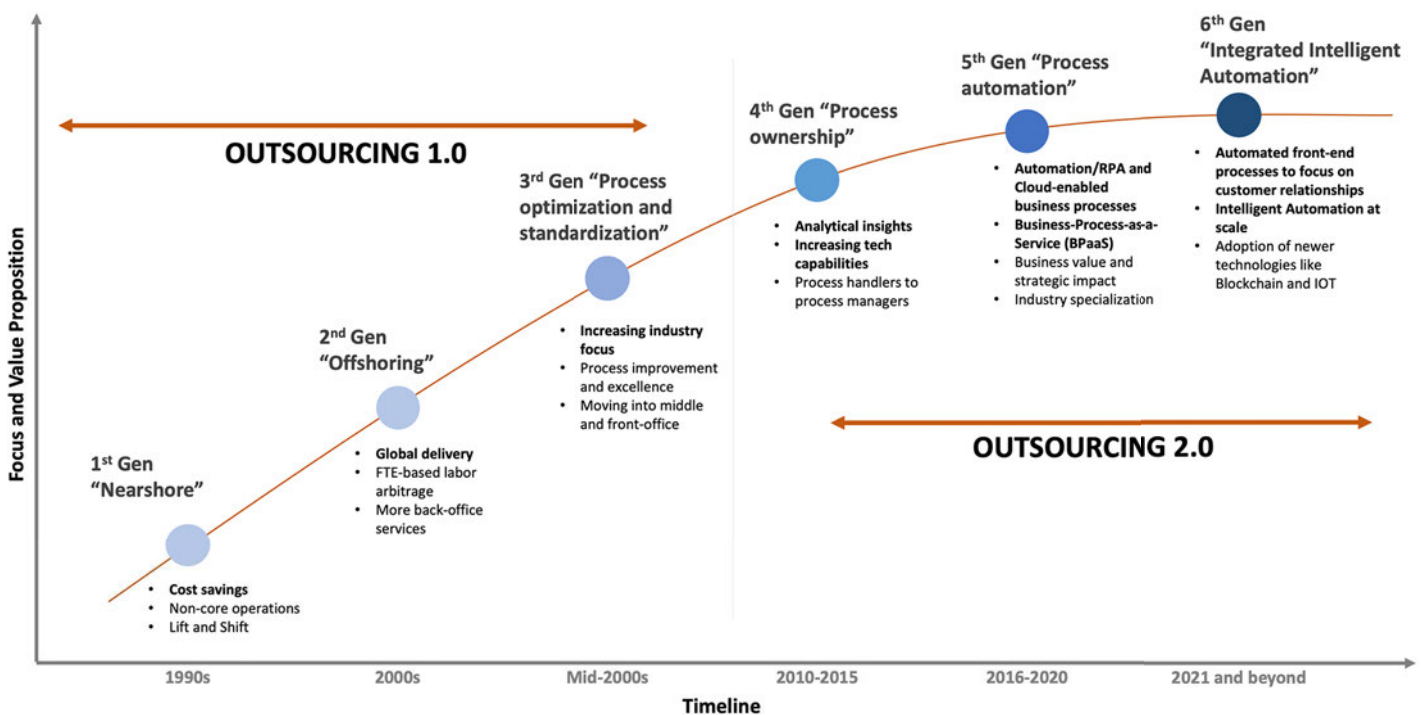


Figure 1: Evolution of the BPO industry

The ongoing fifth generation of the BPO evolution journey is marked by the growing adoption of Cloud-based services, along with the rapid proliferation of RPA. Not only has the automation of repetitive and mundane tasks delivered significant cost savings to BPO customers, but also set new benchmarks for optimizing processes across all industries. Despite this, the BPO industry continually strives to go beyond cost savings and make an impact across several key performance metrics such as accuracy rates, productivity rates, turnaround times, and customer satisfaction. This ambition to innovate and improve consistently is what is propelling the BPO industry towards the sixth generation of its evolution.

We stand at the threshold of "Integrated Intelligent Automation" era, which is redefining the service and delivery standards set by the previous generations. So, what exactly is IA? Why is it required, and how is it different from Simple Automation? The ensuing segment elucidates the additional efficiencies in Simple Automation which are offered by IA that make it an absolute must for both enterprises and BPOs.

1.1 IA – A new wave of automation

IA combines RPA with AI, along with several other new-gen technologies including ML, OCR/Intelligent Document Processing (IDP), NLP/Natural-Language Generation (NLG), or CV. IA possesses the unparalleled ability to synthesize vast amounts of data and automate entire workflows, constantly learning and adapting through it all. Although RPA and AI have existed for a long time, the technologies have made tremendous progress over the years owing to greater computing power, improvements in ML techniques, and a consequent rise in the cognitive abilities of systems. The marriage of RPA, or "Simple Automation," and AI, has thus led to the emergence of IA, which is changing the way businesses operate, across industries.

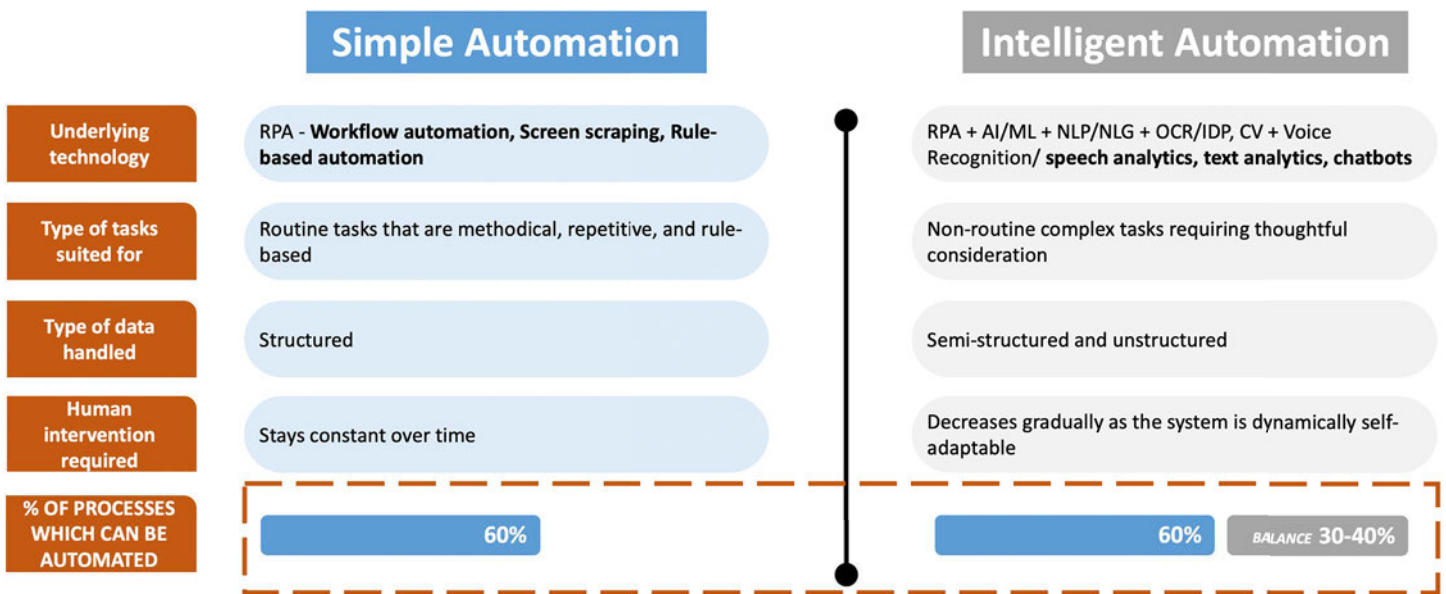


Figure 2: Simple Automation vs Intelligent Automation

Simply put, IA is the evolutionary step of "Simple Automation." (Figure 2) While the deterministic nature of "Simple Automation" is best-suited for routine and rule-based tasks, IA caters to processes that are less standard, more intricate, and involve structured as well unstructured information. Besides its applicability across back-office, mid-office, as well as front-office processes, IA tools are particularly useful in accelerating complex decision-making by mirroring human intelligence. Further, what sets IA apart is its self-learning capability that helps it adapt to the ever-dynamic business environments that the enterprises operate in.

Having identified the distinctive attributes of the two forms of automation, it is essential to understand what drives the need for IA and how it can further augment the value delivered by "Simple Automation." Modern-day enterprises continually seek ways to be ready for the future, and hence expect to see demonstrable value in all the transformative efforts they undertake. Automating repetitive manual tasks helps achieve efficiencies and improve productivity. However, "Simple Automation" is unable to access a vast majority of enterprise and customer data that is available in semi-structured or unstructured formats. Such inaccessible data includes vital content stored in several different forms including contracts, emails, voice, video, images, etc. This is where IA proves to be useful, as it recognizes and classifies unstructured data, extracts critical information stored in multiple formats, and comprehends its meaning and intent, thereby accelerating decision-making.

Other advantages offered by IA are **new revenue opportunities** and **improved customer experiences**. Leveraging in-depth insights available through vital data analysis allows enterprises to create solutions that are tailored to meet customer expectations. As enterprises get better at understanding what exactly their customers need, it becomes easier to design a more targeted strategy and construct a stronger value proposition that includes further scope for cross-selling and upselling opportunities. Enterprises looking to scale their automation efforts and transform all their functions and operations need to look beyond “Simple Automation,” which only caters to a specific set of rule-based processes. For more complex processes that require an acute understanding of human behavior and sentiments, IA needs to be leveraged.

The BPO industry is not new to IA and its inherent advantages. The advent of IA presents the BPO industry with an opportunity to forge a deeper and more purposeful relationship with enterprises by allowing IA to play a critical role in enterprises efforts to achieve greater efficiencies. Enterprises want to move beyond siloed RPA implementations in disparate business processes that only fetch short-term wins such as immediate cost reduction. However, IA can dramatically improve business outcomes. And there is no entity better placed than the trusted outsourcing partners, who have managed critical business processes for decades, to deliver transformative solutions to enterprises. Thus, the onus is on the BPO partners to augment their offerings with IA and establish an irreplaceable niche in the strategic growth plans of their enterprise customers.

2. BPO workloads impacted by IA

The first whitepaper of this series "RPA Disrupting the BPO Industry" presents a comprehensive analysis of 200 RPA deals across BPO players and enterprises over the last four years. It highlights the major industry-specific processes that have been impacted by RPA or "Simple Automation." To further augment this study, we did a similar analysis of the same set of case studies to discover the IA adoption levels.

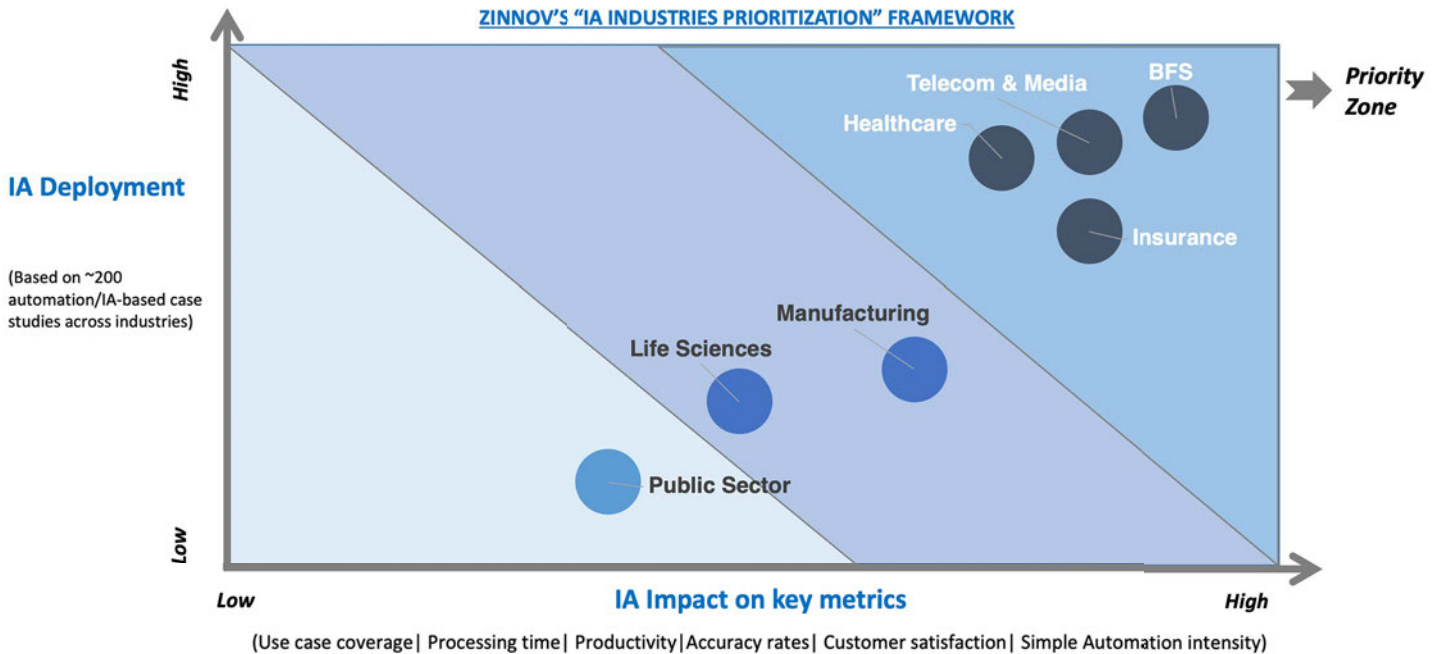


Figure 3: IA adoption across Industries

For this analysis, we plotted the level of IA deployment in enterprises across industries with its impact on key metrics such as use case coverage, return on investment (ROI) parameters including processing time, accuracy rates, and Simple Automation intensity (Figure 3).

Our assessment revealed that Banking & Financial Services (BFS) and Telecommunications & Media have the highest adoption of IA, followed by Healthcare and Insurance.

Enterprises in the BFS industry have seen tremendous ROI gains by deploying automation in processes like account opening, loan processing, claims processing, etc., leading to enhanced customer experience, an increase in employee productivity, and faster processing times. With IA, use cases such as fraud detection have also gained prominence as automation makes higher impact. The Telecommunications industry has seen RPA deployment across use cases like telemarketing and customer query handling, which is allowing telecom providers to deliver higher quality services and customer experience.

The innovation in intelligent technologies provides unexplored business opportunities for banks and financial institutions that deal with massive amounts of ever-expanding data. Using IA, banks could also satiate those customers who demand highly personalized services such as tailored advice by using data and analytics to anticipate individual needs.

The following case of a large international bank will help establish the prominence of IA, and how it improves the efficacy of tasks involved. A Fortune 100 bank with an annual revenue in excess of USD 50Bn, was struggling to keep up with the high volume of daily requests for account opening, ranging from 8,000 to 40,000 requests a day. The challenges included catering to such a high volume of requests and capturing vital customer data that was received in multiple formats, and from multiple sources. This task required high FTE involvement, which exposed the processes to higher possibilities of errors. So, what options did the bank have, to turn this around?

		Step 1	Step 2	Step 3	Step 4	Step 5	Outcomes
Traditional Process	Customer submits form for account opening	Human reviews complex data	Human manually enters the data into system	Human reconciles against 100+ rules and regulations	Human verifies data accuracy / KYC	Human approves and forwards request for account opening	Minimum 48 hours for entire process
Simple Automation		Human reviews complex data	Human manually enters the data into system	RPA bot compares the digital data with rules	RPA bot conducts KYC	RPA bot approves KYC and forwards request to human for final approval	<ul style="list-style-type: none"> • 60% faster account opening • 50% increase in productivity • 70% accuracy
Intelligent Automation		OCR/ICR/OMR converts image into text	Intelligent bot infers data and enters into the system	Intelligent bot compares data with rules (and ML capability in case of errors)	Intelligent bot conducts KYC with human-in-the-loop for exception handling	Intelligent bot approves KYC and forwards request to human for final approval	<ul style="list-style-type: none"> • 90% faster account opening • 70% increase in productivity • 100% accuracy

Figure 4: Case in point - Account opening request at a large bank

- The bank first employed simple process automation to this manual process. The bank was able to automate three out of the five steps using Simple Automation, since the review of data and the data entry still had to be done manually (Figure 4). After implementing Simple Automation, the bank started leveraging IA to drive better outcomes. In addition to Simple Automation, advanced technologies like OCR, Intelligent Character Recognition (ICR), and ML algorithms were being leveraged to understand the data and facilitate data entry. A human-in-the-loop was used for exception handling and error reduction. Hence the bank was able to automate all five steps end-to-end using IA.
- The interesting part to note is the outcome that was achieved in the case of Simple versus Intelligent Automation. While Simple Automation made the entire process 60% faster, IA made the same process 90% faster. Similarly, productivity increased from 50% to 70%, and accuracy increased from 70% to 100% with intelligent technology. Overall, IA led to a massive enhancement of outcomes for the bank.

Under "Simple Automation," accurately capturing and automating the intricate nuances involved in processes driven by textual and conversational elements is extremely challenging. IA covers the full spectrum of automation associated with the processes including textual and conversational components, from text mining, or text generation using NLP/NLG, to interpreting conversations using speech analytics.

2.1 IA impacts conversational and textual elements

Before we delve into the nitty-gritties of the BPO industry leveraging IA's newfound capabilities, it is important to understand how IA impacts the conversational and textual elements of a process. For years, attempts have been made to enable intelligent, natural-sounding, quality conversations between humans and machines. However, human conversations are riddled with complexities and nuances that require an acute sense of the discussion context and the associated sentiments. Overcoming these obstacles, IA makes use of NLP to produce automated messaging and speech-enabled applications capable of generating human-like dialogues and providing intelligent responses.

The following case study shines light on real-world scenarios in which BPOs are applying IA to capture conversational elements and create end-to-end automated customer experiences.

Illustrative case study – A Telecom Infrastructure provider used conversational chatbot to handle customer queries

Company: The key source of income for the BPO client was selling parts to large telecom providers. This requires the firm to be in regular contact with its customer base to discuss product information and availability.

Challenges faced: The customer support team was burdened with innumerable repetitive inquiries related to product part numbers, received via multiple channels including company website, email, and phone calls. This required the support team to manually check multiple separate databases to retrieve the requested information, resulting in lag in responses and longer wait times for customers.

IA solution: The company's BPO partner first mapped out the customer journey and identified the applicability of a conversational chatbot that could reduce call volume for agents. In addition to searching databases to retrieve parts information, the chatbot used NLP to share real-time results to customers. Another bot was deployed internally to help contact center agents automate the ticket creation process by integrating with the company's CRM system.

16% reduction in call volume

90% chatbot accuracy rating

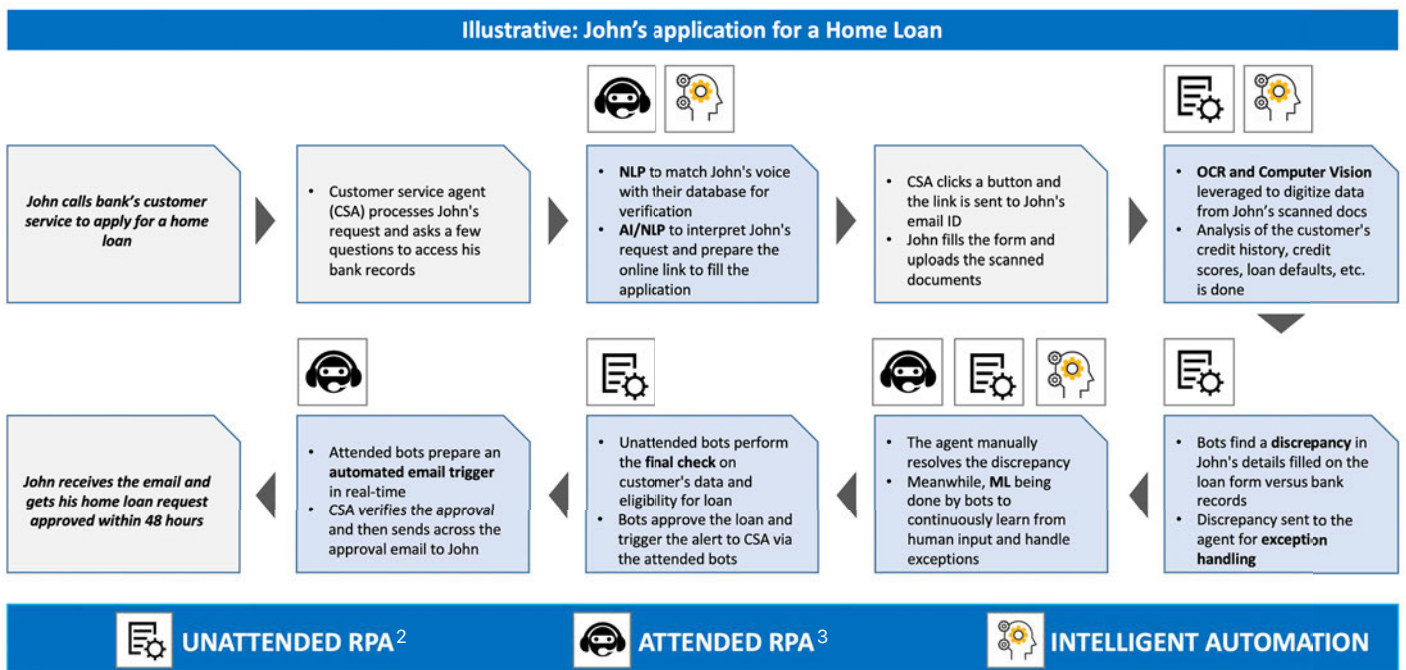


Figure 5: Role of RPA/IA in enhancing a typical customer service process

There are three core forms of automation that are being leveraged, namely Unattended RPA², Attended RPA³, and IA (Figure 5). Through these examples, the role, the scope, and the impact of automation can be studied systematically.

²Unattended bots majorly handle back-office operations independent of human involvement. These can be run on the company server at scheduled times

³Attended bots typically target front-office operations, where bots work alongside humans

Illustrative case study – A regional bank used IDP and ML to automate the lending process

Company: A US-based regional bank with assets worth USD 142Bn and 1100+ branches spread across 10 states. The bank was focused on expanding its lending business which required extensive financial spreading and credit risk analysis.

Challenges faced: The entire lending process was handled manually, including consolidating and reviewing credit history and analyzing past records. This inefficient, error-prone process lacked a consistent and standardized output. This delayed credit decisioning also resulted in high overhead costs.

IA solution: The BPO partner customized an IA solution aligned with the bank's existing credit guidelines/decisioning. The solution accurately captured, extracted, and mapped the credit data using IDP from both images and PDFs. Using ML algorithms, the extracted data was interpreted, analyzed, and clustered into relevant information groups. The bank's specific lending policies were applied to the interpreted data for final analysis on loan acceptance or rejection.

80% reduction in processing time

60% cost reduction on a complex business process

Illustrative: Rachel processing medical insurance claim of a patient

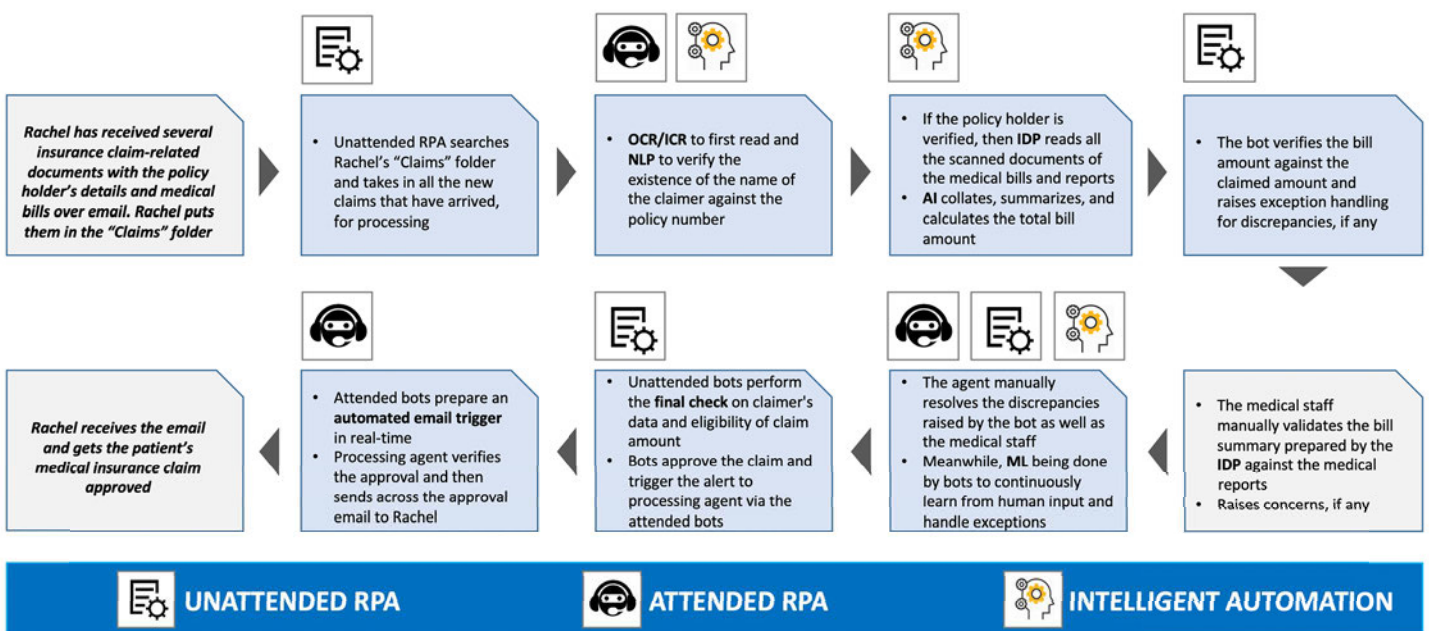
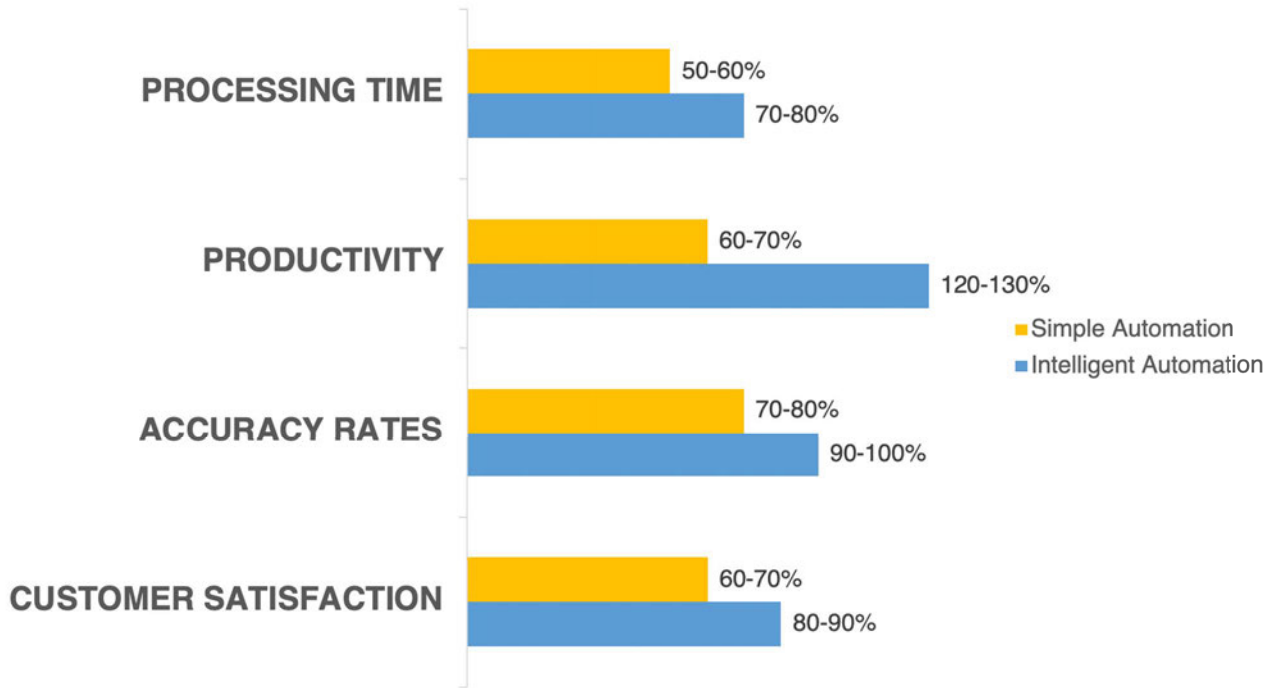


Figure 6: RPA/IA optimizing a typical medical-insurance claim process

To better understand IA's authority and capabilities, we conducted a comprehensive comparative assessment of approximately 100 "Simple Automation"-based BPO deals and around 100 IA-specific BPO deals over the last four years. The analysis reveals that both "Simple Automation" and IA deliver significant results for enterprises across key performance metrics including processing time, accuracy rate, productivity, and customer satisfaction. However, true automation can only be achieved under IA, as it consistently offers incremental gains across both routine and highly complex processes. IA's characteristic advantage lies in its ability to effectively tackle processes that require judgement, intuition, creativity, persuasion, and problem-solving. These are basically all the skills that previously required human inputs and intervention.

Impact Analysis* - Simple Automation VS IA



**analysis based on the study of ~100 IA and ~100 "Simple Automation" case studies across BPO players and enterprises*

Figure 7: Impact Analysis between Simple Automation and Intelligent Automation

Therefore, BPO firms need to reevaluate their approach and assess the applicability of "Simple Automation" and IA when assisting their customers in decisions related to automation of business processes. Additionally, BPO firms also need to revamp their offerings by adding IA capabilities to be able to cater to the evolving needs of enterprises.

3. How can enterprises harness the power of IA?

Enterprises want to see real change. Their desire to unlock concealed efficiencies and drive higher cost savings is growing at a phenomenal pace. Considering this, the advent of IA could not have been better timed, as it can propel enterprises towards their desired objectives. But, holistic adoption of IA at scale is easier said than done, as it entails significant investment and typically involves long implementation cycles. So, how does a modern-day enterprise embrace IA?

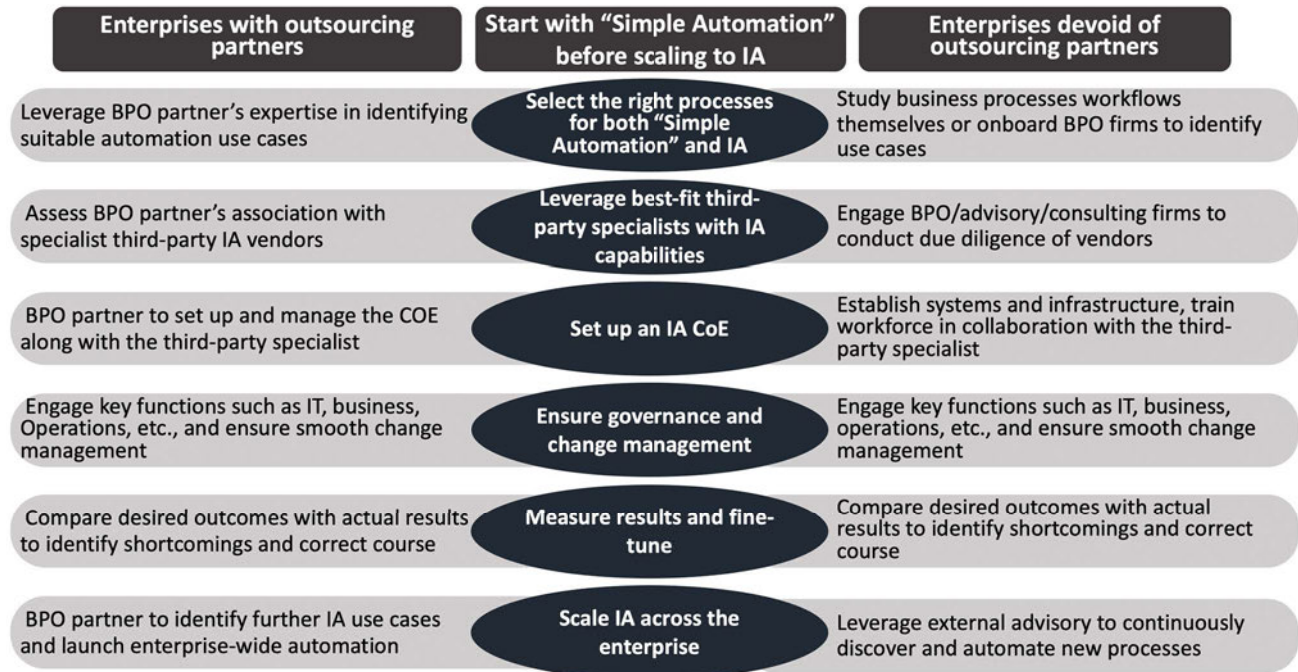


Figure 8: Intelligent Automation adoption playbook

Enterprises need to initiate their automation journeys by first piloting "Simple Automation" scenarios, and then slowly progressing towards IA (Figure 8). This is the ideal approach, as RPA has widespread applicability across conventional processes. Successful piece-meal "Simple Automation" efforts pave way for larger IA adoption as enterprises begin to realize tangible business outcomes. To achieve the desired results, it is important to ensure that the right processes or use cases are selected for automation. Erroneous selection of processes or use cases can lead to unwarranted costs and higher time-to-ROI. The level of human judgement involved, the number of FTEs engaged, and the nature of the data that has been processed are just some of the major considerations while selecting accurate use cases.

From here on, the route to successful IA adoption is different for the enterprises that outsource processes and for those that do not; Figure 8 appropriately showcases the two distinct paths. Nevertheless, the BPO industry stands to play a critical role in the journey of both entities. BPOs can play a pivotal role in an advisory capacity by helping enterprise identify the most suitable processes for automation. With decades of experience in end-to-end management of innumerable processes, BPOs are well-positioned to create an accurate "as-is" image of how processes are carried out. Comprehensive process maps, based on this real-time assessment, aid enterprises in not only selecting the right processes for automation, but also in prioritizing them methodically. This helps enterprises reduce the risk of automating processes with low potential for productivity gains.

An enterprise with outsourced operations should reassess the standing service delivery model and urge its BPO partner to automate the managed processes promptly. As a next step, the BPO provider must leverage its associations with third-party IA specialists to recommend apt automation solutions that suit the process.

Given the crucial advisory and strategic roles played by BPO firms in enterprises' automation journey, it is clear that enterprises with outsourced operations enjoy a significant advantage over those without outsourcing partners. A more streamlined and structured approach, devised in close collaboration with BPO partners, dramatically improves speed-to-automation and boosts the prospects of achieving the aspired ROI.

4. The BPO imperative to remain relevant

With the BPO industry set to play a bigger role in leading enterprise customers towards end-to-end IA, there are certain essential transformative steps that need to be undertaken by visionary BPO firms. BPO firms must brace themselves for a disruptive yet rewarding journey that requires a fundamental overhaul of key elements such as business model, workforce planning, or solution offerings (Figure 9).

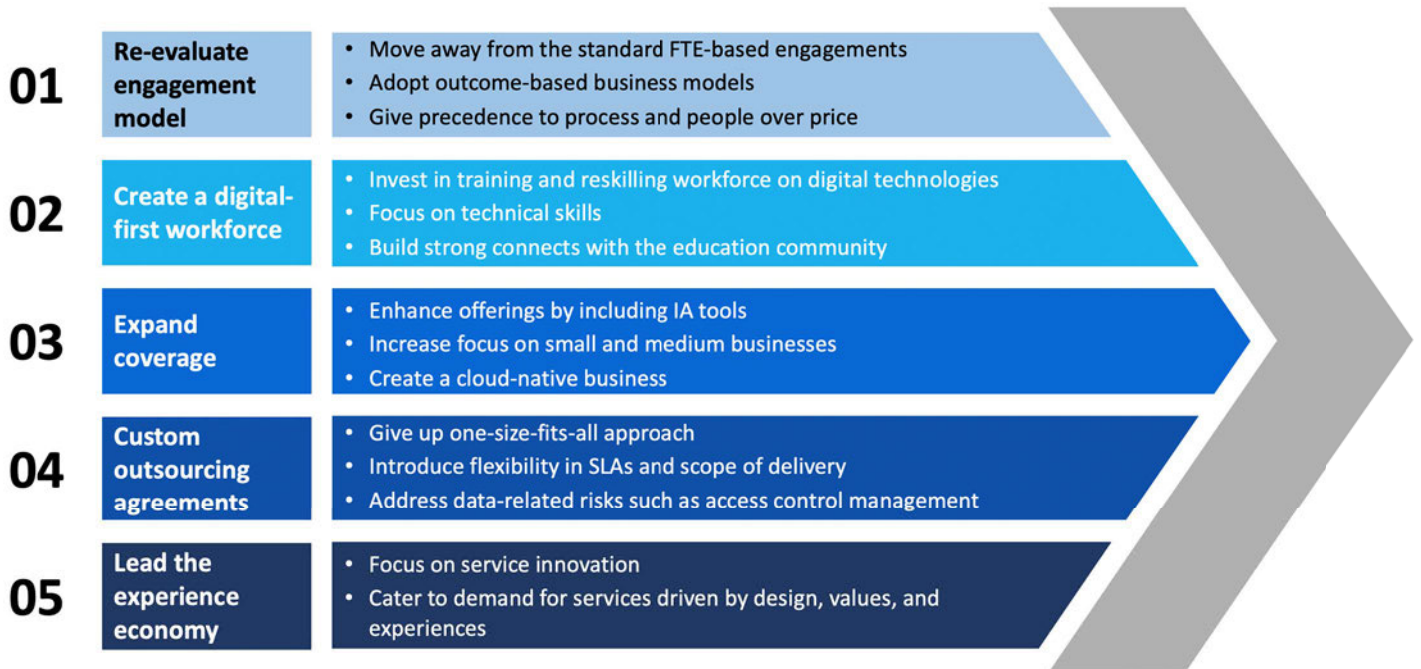


Figure 9: A peek into the future of outsourcing

The growing demand for personalized services, along with the rapid adoption of digital technologies by enterprises, is defining the next phase of growth for the BPO industry. The outsourcing firms that can successfully make progress on the 6 key levers are the ones that will seize the advantage and stay ahead of the curve (Figure 9). BPOs will be able to ride the tide of digital disruption if they can seamlessly harness new products, new technology tools, new business models, new ecosystems and much more. This demands the acquisition of new skillsets and a skilled workforce, which will prompt BPO firms to rethink their staffing and recruitment practices.

5. Conclusion :

The inevitable future of Outsourcing

IA tools are set to evolve further to perform even more complex and intelligent tasks that were once perceived to be beyond the scope of automation. This consistent improvement in IA capabilities will spur rapid and pervasive adoption among enterprises. To automate or not is no longer a question for enterprises – it's a must. Enterprises must integrate IA as early as they can for their own competitive advantage and sustenance. Successful IA adoption calls for a fine-tuned and well-deliberated approach.

As enterprises prepare to set sail on their IA adoption journeys, the BPO industry needs to carve out a niche for themselves in the eyes of their enterprise customers. Further, as IA finds more applicability across multiple functions, BPO firms must reimagine their roles and strive to become an integral part of their customers' journey. To continuously reinvent themselves, the BPO industry needs to prioritize relentless innovation across business models, talent strategies, and core capabilities.

The BPO industry is poised to undergo a massive reform, and the outlook towards outsourcing is set to change forever.

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Report Authors



Praveen Bhadada
Managing Partner &
Global Head - Digital
Zinnov



Nischay Mittal
Principal &
Global Head - RPA
Zinnov



Vansh Kukreja
Project Lead - Digital
Zinnov



Prashant Goyal
Project Lead - Digital
Zinnov

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