Foreword

For any business organization, how effectively and efficiently the combined potential of people, process and technology can be harnessed, is pivotal to success. The focus on delivering transformational value at an optimized cost was also the reason why many back office functions moved their operations to low cost geographies.

A constant focus on driving efficiencies and advent of automation promises to fundamentally change and transform the value quotient that is now being demanded by businesses. The potential that technology offers is undoubtedly immense and some of the leading global business services (GBS) centers have already adopted these into their operations and are reaping the enhanced benefits that stem from it. From my interactions, I have seen this journey of intelligent automation as being exhilarating for our clients.

Beyond the obvious benefit of lower labour costs, in this report, we have tried to articulate how we see the transformation happening and how diverse businesses and especially the back-office centers can make best use of the opportunity offered by these new age automation technologies.

This knowledge document is focused on RPA as it the only the beginning on the Intelligent Automation journey. The document explains EY IA framework which will allow the enterprises to gradually move from RPA to machine based learning to cognitive capabilities culminating in Artificial Intelligence taking root. The report also reflects insights from other leading global business services centers who we spoke to, illustrating their experiences from their journey towards Intelligent Automation.

Read on to learn more about the journey that companies will need to make to capitalize on the benefits of Intelligent Automation. We will be releasing knowledge primer on each IA area covered in the journey as enterprises adopt them at scale.

Milan Sheth
Partner & National Leader
Robotics & Cognitive Practice
milan.sheth@in.ey.com

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The old ways of managing and supporting business processes are undergoing a paradigm shift. The old edifice of back-office support system is being dismantled to make way for the new conception, made possible by the advent of disruptive technologies and artificial intelligence, which together promise to bring in speed, ease and significant cost optimization. This transformative step-up promises to considerably ease the managing of businesses while introducing minimalism in place of myriad complex processes, which are the norm today. And as new technologies, especially RPA, demonstrate their transformative potential, becoming increasingly refined and smarter with time, they are making enterprises take note of the benefits that could result from elevating their business processing centers on the technology curve. Clearly, the journey to the future – from back-office rooms to business technology and engagement centers – is underway. Organizations are indeed gearing up to be future ready!
Aided by groundbreaking technologies and remarkable advancements in robotics, back-office operations are being transformed into future-ready business support centers with demonstrable gains in efficiency and productivity while cutting down on process complexities. And the change is not piecemeal. It is a complete metamorphosis!

It is catapulting all back-office support systems to an altogether new platform where technology and automation play a defining role in providing a demonstrably faster and more efficient support system. This system can handle routine and repetitive work, with human resources primarily engaged in delivering insights to provide a qualitatively higher value addition to decision makers. More and more companies have now begun their journey to usher in transformative change.
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Reset business expectations
The journey of Global business services (GBS) as a tool for efficiency has now reached an inflection point. More so than ever, there are existential questions for traditional transaction processing centers, bringing into spotlight the question: Are there other levers to demonstrate efficiency and effectiveness?

With advent of intelligent automation and robots as part of digital workforce, the expectations are now definitively reset.

**Expectation = Value @ Speed**

**The need for faster turnaround**

Time has always been at a premium and more so now. In a highly competitive and fast-paced business environment, enterprises want quick and real-time support. For that to happen, the back-office support system has to be transformed. But while transformation is desirable, it has to be swift. Organizations have little patience for any changes that take long to materialize, even if promising measurable productivity gains.

**Demonstrable productivity gains**

The new-age processing centers have demonstrated significant gains in productivity while cutting down on processes. This is encouraging more and more organizations to transform their operations architecture.

**The demise of “lift and shift”**

Enterprises want real change; simple cosmetic or physical changes are not acceptable and will not suffice. Enterprises have to be convinced of demonstrable gains in every sense if they are to swing over to a new platform. So, a simple change of geography for the back-office support center or mere adoption of more technologies is not going to be a sufficient motivation for change unless it provides disruptive demonstrable talent or value. As a next step, when the work indeed is shifted, it will necessarily need to be optimized right from the beginning.

**Back-office centers as real and additional value providers**

Expectations are elevated. Decision makers do not want to settle with a placid support system but expect a proactive value provider. They want that something extra which will provide them with additional insights, information and trends to take more informed and better decisions for the organization to stay ahead of the competition. Thus, apart from efficiency and effectiveness, decision makers want an a GBS to focus equally on the third “E,” i.e., engagement. So, while automation and robotics will focus on efficiency and effectiveness, the people in these future centers will focus on engagement with the stakeholders by providing insights and being the chief support system for brainstorming myriad issues.
Mainsprings of this new normal at the Global Business Service centers

The journey of intelligent automation (IA)
Automation with human intelligence or automation with a human touch is redefining the way tasks are being allocated and performed in an enterprise. To begin with, IA was primarily used in the manufacturing processes and later as bits and pieces in other functions. But now, it is increasingly becoming an integral part of various enterprise functions across the board. Organizations are putting in place a wholesome architecture of IA systems because of its crucial potential to be the critical vehicle for effecting enterprise-wide transformation. The time to embark on the “IA journey” has indeed arrived.

To automate or not to automate is no longer a question anymore. Enterprises will have to integrate IA for their own benefit and survival, with the numbers of such entities growing steadily. Over the last two years, there has been a notable increase in the number of enterprises adopting end-user process automation via the robotics process automation (RPA) route, which is the foundation block of the IA journey. The primary stimulus for this new enthusiasm stems from the appreciable double-digit improvement in productivity across organizations that have implemented RPA.

RPA technologies have evolved from being just piecemeal isolated automation installations to a comprehensive connected enterprise-class digital automation solution. The old doubts and concerns around RPA’s worthiness, manageability and security are also long gone as they have been ably addressed and significantly improvised. Today’s RPA architecture is much more robust, reliable and future ready.

IA tools are set to evolve further as they imbibe an augmented ability to mirror human intelligence. And as they become smarter, we will also see them undertake and perform more intelligent and complex tasks. This will further spur IA’s adoption at an even higher level across functions – even across areas such as planning, budgeting, analysis and decisions making that were perceived to always remain within the preserve of only humans.

Organizations will continue to adopt more advanced automation technologies as they become smarter by acquiring more and more human intelligence and the ability to mimic human actions. IA will be applied across functions and boards, deeply impacting and transforming the way organizations work. Nonetheless, IA adoption calls for a well-deliberated, well-calibrated approach along with receptivity to continuous learning and change.
1. Structured data interaction (SDI)
These are traditional systems where the integration is through exchange of information that is well structured. Examples include integration of systems through relational data base management systems (RDBMS), data transformation tools, and application programming interfaces (APIs) and web services.

2. Robotic Process Automation (RPA)
It involves automation of standardized and rules-driven system-based activities using scripts and other methods to support efficient business processes. It is suitable in scenarios where it is too expensive or inefficient for humans to execute a task or a process.

3. Machine Learning (ML)
It involves systems that learn through handling variations that are not anticipated upfront. These systems get trained on the go by assimilating learnings from the data and decisions, and may make simple predictions or classifications backed by algorithms. A simple case could be a scenario where a well-defined identifier needs to be mapped to more descriptive/free form text, e.g., mapping of a vendor name that appears on an invoice to the vendor ID in the system. The vendor name may appear in various forms.

4. Natural Language Processing (NLP)
NLP uses statistical methods and learning algorithms to analyze text and unstructured information to understand the meaning, sentiment and intent. A sample use case could be the customer service function, where a customer raises a support ticket in form of free text, which is analyzed to understand and determine the levels of urgency, sentiment or frustration and then determine the ticket severity/priority.
Natural Language Generation (NLG)

It is a technology that helps generate text as we speak or write from structured information such as fields and numerals. It is largely applied where sections of financial analysis reports and insights are generated, e.g., numbers reflecting a company’s performance.

Chatbots and virtual agents

These are systems that can interpret voice/text in free form (chat) to simply respond with standard pre-defined answers. A simple example is the customer service function where a chatbot could respond to queries. These chatbots can continuously learn and build vocabulary to interpret unstructured information being directed to them.

AI-Decision Systems

These are systems that employ an array of technologies, algorithms and models to solve complex and inter-related problems to make decisions. These may be driven by deep learning systems and cognitive capabilities to recognize patterns, and apply statistical models and algorithms to make choices and decisions. These could also potentially address multiple decision points, e.g., determining the demand for certain products for a geography/location based on weather forecasts, thereby helping decide the inventory to be housed in a store and determine the best possible fulfilment center location and route to be chosen for the fulfilment.
Mainsprings of this new normal at the Global Business Service centers

Conquering the first frontier in IA: RPA
Change is inevitable, and organizations definitely recognize this fact. That is why they constantly seek ways to be future ready by improvising processes to drive efficiencies, engaging better with stakeholders to benefit from multiple feedbacks and simply being open to the idea of embracing change. And today, digital technologies and artificial intelligence are the principal vehicles for effecting change, while deploying RPA and advanced automation (IA) at various functions is fast becoming the norm. IA is indeed helping organization to become agile entities by inducing capabilities and speed hitherto inconceivable.

**Intelligent Automation is very much at the heart of back-office operations**

Traditional automation technologies integrated the flow of information across applications at the back end at the database level based on broader rules that applied to the business. These were typically large technology transformation programs that entailed large investments and elongated timelines (sometime spanning multiple years). However, these did not usually cater to task specificity at the end user level, which called for human interventions to work across multiple applications and information from the desktop – the swivel chair activities.

Robotics Process Automation (RPA) takes this back-end automation to the end-user level with the ability to further automate repetitive manual tasks associated with the swivel-chair activities, integrating applications and information through the front-end while leveraging existing integrations between systems.

RPA has also laid the foundation of the beginning of the next wave of automation – the IA journey (Refer Intelligent automation journey page 24) RPA helps deliver business value in a timeframe of months, enabling the journey to potentially be “self-funded,” anchored on huge savings in terms of the time and resources.

### Key drivers of value include

<table>
<thead>
<tr>
<th>Speed of processing</th>
<th>Improved accuracy</th>
<th>High availability</th>
<th>Reduced cost</th>
<th>Robust traceability</th>
<th>High flexibility</th>
<th>Ease of deployment</th>
<th>Healthy ROI and Shorter Payback</th>
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<tr>
<td>In general, RPA can process transactions at a much faster pace than humans can</td>
<td>RPA can significantly reduce errors otherwise introduced by manual effort</td>
<td>Robots are available for work 24/7 and there is no absenteeism</td>
<td>Typically, robot license costs are much lower than the average cost of human workforce</td>
<td>A robust audit trail can be created for all the activities that robots perform</td>
<td>It is much easier to turn on and turn off capacity, unlike with a human workforce. RPA is very valuable in operations where there are significant peaks and valleys</td>
<td>RPA is a lightweight enterprise automation technology that can sit alongside the existing IT landscape. Besides, the IT skill requirements for deploying automations are fairly lower than for other enterprise technology implementations</td>
<td>Typically, RPA can drive about 20%-25% of FTE savings. RPA automations can be developed in matter of weeks and therefore business benefits start flowing within a short period of time. Payback on RPA programs is typically less than a year</td>
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Beyond establishing the quick wins and making this journey potentially self-funded, RPA-led transformation is set to pave the way for the adoption of more advanced automation solutions (Intelligent Automation).
We interacted with and studied some leading global organizations across diverse verticals that have implemented or are at various stages of implementing a complete architecture of RPAs for harnessing the major benefits while addressing the challenges occurring along their RPA journey.

RPA case studies

1. The RPA journey of a large TMT leader*

How has your RPA journey been so far?
As an SSC, we support core functions such as finance, HR, customer and network operations for our parent entity. We embarked on the RPA journey with a clear objective to increase the quality of business operation, optimize cost and improve key performance indicators across these functions. The learning curve was steep with the initial set of proof of concepts. We realized that it is important to identify compelling use case and ensure alignment with business. In conjunction with this, it is critical to have an RPA roadmap in place that can help a system scale up from a small initial POC to large-scale production, in order to derive significant business value.

How did you plan and implement the RPA program?
This was a strategic program for us because of the focus on delivering to 26 markets across the world. Our RPA rollout spanned multiple phases:

Stage 1: Identifying areas/functions within the business where RPA opportunities exist while ascertaining the convenience and various stages of migration; subsequently following up with a process development proposal to create a business case and receptivity for the RPA program

Stage 2: Delivering automation solutions by partnering with IT and other departments, so as to make RPA a truly collaborative group initiative

Stage 3: Business operations absorbing the changes and focusing on “keeping the lights on” after processes are automated; this is the stage where the success of the program can be truly determined

*Responses from the Head of Strategic Projects for the company
What were the key learnings from your journey that could be imbibed by enterprises while implementing RPA?
We had a strong demonstrable track record of POCs. However, we gained the most valuable experience when POCs moved to live production. The aspects that need to be considered while undertaking RPA are as follows:

The familiarization process
Familiarization lowers resistance to change. To smoothen the process of transition and enhance receptivity among employees, it is essential for project owners to encourage process teams to familiarize and experiment with RPA tools with an eye on comprehending and appreciating the opportunities and the tools’ limitations.

Training and capability building
RPA requires the right team, involving a combination of strong technical skills and deep operations expertise.

IT infrastructure management
Though there are RPA tools that operate on individual desktops, these tools have limited ability to take different data feeds. RPA tools work best on a virtualized desktop environment, with appropriate scaling and a business continuity setup.

Governance framework
Robust governance policies underpin a successful robotics implementation. Adequate controls must be present to ensure regulatory compliance, user access management and authorization and protection from cyber-threats.

Costing and funding myths
RPA can help deliver business value in a short span of time and make the journey potentially “self-funded.” We have been able to realize benefits even as we automate processes located in tier II locations, which are already cost competitive.

How do you see the road ahead?
We had undertaken a broad-based RPA initiative with a process-based mindset and are now 18 months into the journey. We have derived a great understanding of various architectural structures of automation tools, enabling us to evaluate and classify automation-ready processes under different classes of automation:

Class 1
Processes requiring basic automation involving macros, scripting and screen scraping that help with point desktop automation

Class 2
RPA of rule-based work across multiple applications, including Citrix, mainframes with wider reach, complex steps and very quick design and delivery

Class 3
Cognitive and AI automation that deal more with unstructured data, delivering significant value; we look at leveraging these as we move forward into the future
The RPA journey of a global transportation leader*

What were the trigger points for your RPA journey?
The biggest reason was to get rid of myriad complexities and introduce simplified minimal processes. Our GIC has achieved considerable maturity in scale and breadth of services over the long years of operations. It has always been at the forefront of embracing IT innovation, so much so that our organizational journeys on IT and automation at GIC are inseparable. We have gone through waves of automation dating back to the age of mainframes, where we built complex logistics systems for our global organization on mainframes and implemented ERP. In the early 1990s, during the PC era, there were plenty of desktop-based productivity tools that emerged and non-ERP systems proliferated, with virtually total absence of automation.

As we consolidated our business processes into a GBS in the early 2000s, equipped with tools such as Visual Basic and .NET, we started again on the automation journey and have never looked back since. However, too much of automation made our IT systems very complex – we had more than 3,000 applications. Since we had disjointed pieces of ERP, apps, Excels and people, this created a very challenging situation for our IT teams. We were introduced to RPA about 18 months back with an expectation around RPA delivering a sense of structure and sanity to our overall architecture.

What were your early sentiments about the prospects of migrating to a new domain?
To begin with, we were skeptical about how different RPA will be from other tools such as macros that execute recorded key strokes. But we were excited to see that it democratized automation. With legacy systems not keeping up with evolving business integration needs, the value that RPA has brought in has been very important. The speed with which we can now deliver this integration is impressive. Today, we can deliver innovation with industrial strength without losing control. More importantly, RPA now helps us create a flow across systems and business processes.

However, the journey has had its own set of challenges. Some of these can be attributed to process selection, while others are to do with the expectations around it. While RPA automation is speedy, the upfront due-diligence and the post-automation effort to adapt and sustain do create a need for rigorous regimen.

*As shared by its Head of Process Excellence
What would be your advice be to enterprises/CTOs contemplating to commence their journey toward RPA?

The key points to consider while undertaking a RPA journey include the following:

- **Assemble a squad of multi-skilled personnel with process understanding and technology expertise:** There are no pristine black belt roles anymore and so is the case with a pure-play technology person. An individual focused on processes needs to understand technology, while a technology person now needs to learn processes.

- **Comfort with technology is important:** As we automate extensively, our dependence on technology becomes almost absolute. So, we need to be aware of and plan for that. People have to be comfortable with technology and need to manage the overall flow and not just individual automation.

- **Be ready for digital workforce management:** The advent of virtual robotics workforce will drive transformation in workforce management policies. RPA helps bring about change in the leadership style requirement from purely people leadership to thinking about how to manage bots (bot leadership skills) as well.

- **Enable a robust governance framework:** A lack of strong governance framework can lead to ineffective and inefficient robotics implementation, adversely affecting business processes and the ability to achieve business objectives.

How do you see the road ahead?

Over the last many years, including the last couple of years of our RPA-led automation journey, we have automated all rule-based and mundane activities. We aspire to scale this up by 10 times. The RPA journey enables us to implement the flow across systems and business processes and at the same time helps develop a good understanding of the underlying processes. This lays a good foundation for us to build up further transformation.
3. Preparing people to embrace automation*

People are the biggest support for ushering in change but maximum resistance, covert or explicit, also flows from them. We just need to appreciate this fact and work out a plan that creates an environment of trust and receptivity. To prepare people to embrace change, the following points are useful.

Familiarization with the oncoming disruption
We always believed that we are a people company in the technology business. We acknowledge that our focus on automation will disrupt processes and people. So, while the strategy was pushed from the top, we knew the ideas had to come from the floor. We really engaged with the operations team and they were well aligned with what was coming, how they can participate and what to expect. This was a critical step to prepare people to embrace change while diminishing the fear factor.

Training and developing talent
We conducted a training program to help employees understand RPA and solicited ideas. The entire process was democratic, with people on the floor coming up with ideas for automation. Next, we started building an in-house talent pool and trained the subject-matter experts (SMEs) to undertake trainings in their respective process areas. We also defined a career path and created a differentiated pay structure to ensure we are able to retain people. All this helped break initial barriers and helped in a faster adoption of the RPA program.

Project mapping and preparing trainers
We mapped out RPA projects that are ongoing and in the pipeline, and developed quarter-by-quarter visibility on the capacity that was being created so that this could be approved by the governing board. So far, we have been able to train 70+ people from the business on RPA. These people now have opportunities to move across the organization, to address the specific points of demand.

How do you see the road ahead?
SSCs are gearing up for enhanced RPA to further scale up the technology curve by adopting more intelligent automation technologies in their business operations. This flows from a clear recognition of the vital role that automation technology can play in helping GICs augment their position as the center of innovation.

*As shared by a leading tech company
Making the right start with Intelligent Automation

Succeeding with RPA!

10 key essentials for successful RPA implementation

While RPA may sound simple and easy to implement, it does require thorough planning, coordinated action and lots of rigor for successful and speedy implementation. Thus, it is very important to identify the right RPA program and implement it properly. Organizations may do well to follow the key ground rules as below.

- **Start with a proof of concept**
  While RPA as a concept may be understood, showcasing RPA through a quick workable pilot project will trigger enthusiasm and help ward off cynicism.

- **Set the right expectations**
  Promise less, deliver more – this age-old wisdom holds true here too. It helps to set realistic expectations around the potential benefits. So, avoid creating a hype or euphoria around what RPA can achieve for the business or individuals. Let people be impressed with the end results.

- **Have a robust solution focus**
  Invest efforts in building the right solution to address majority of the variations, handoffs and process goals. Usually, 30% or less time is spent on actual BOT configuration.

- **Identify and bring evangelizers on-board**
  Change is often resisted even if it is for common and individual good. Thus RPA-led transformation requires strong sponsorship and support. It is also important to identify functional leaders and opinion makers right at the beginning of this journey to implement RPA adoption seamlessly.

- **Leverage complementing tools**
  Be on alert to identify and explore tools that can complement and strengthen (e.g., OCR) RPA implementation.

- **Follow the quick win delivery methodology**
  Chances of success increase with smaller manageable sets of automations than large and complex ones. Follow an iterative process of fine-tuning the solution through build-test-deploy procedure.

- **Choose processes wisely**
  The success of first steps will have a significant bearing on the outcome of this migratory journey. So, choosing the first set of processes is very critical for the entire program to succeed. Initial processes have to be the ones where success is almost inbuilt while inconvenience or the pain of transition is minimal. Once the initial phase meets success, there will certainly be greater organizational support and receptivity.

- **Make IT an integral part of the journey**
  Value from RPA has to be co-created by both the business and IT teams. Given the short bursts of implementation and launch of automations, it requires the business and IT to work in harmony, in the absence of which time lapse and resource wastage are bound to happen. For example, a large GIC organization of a global insurance company took just 7 days to automate a process but had to wait for 45 more days to address application access requirements for bots before rolling it out.

- **Track and reap benefits simultaneously**
  Actual benefits flow in only on productive redeployment of the saved hours. It is important to track actual savings on the baseline.

- **Plan for sustainability**
  Institutionalize structure and governance to productively manage automations that have been delivered, and prioritize and deliver on the pipeline of opportunities. Adopt a holistic strategy to build, re-build and sustain talent.
Mainsprings of this new normal at the Global Business Service centers

Back-office to business technology center
Let the journey begin!

Traversing the IA journey at the back-office operations center has to be purposeful and needs to be driven by a shared vision with the parent, helping determine the speed and choices that the GBS will have to make along this journey. This requires being in-sync with the GBS’s current position in the value chain and the target state it aspires to achieve.

The centers will need to synchronize all that automation has to offer into a coherent value proposition, the same way an orchestra conductor harmonizes disparate instrumental sounds into a beautiful musical composition.

The centers can simultaneously navigate up the value continuum as well as the automation maturity curve. With every automation technology experimentation, the journey along this path will open up new opportunities for scaling up the automation process, finally elevating and transforming the back-office support room to a new age digital business technology center.
Mainsprings of this new normal at the Global Business Service centers

Making it happen
The key to achieving this transformation is embedded in the following actions:

- **Start hiring for flexibility with a stress on technology literacy across all levels.**
  
  “After embarking on RPA journey in our finance shared services, our recruitment strategy has changed from hiring only finance/accounting background people to an equal mix of process analyst, automation engineers and accounting professionals,” noted the CFO of a global insurance company. We are also seeing shifts in talent strategy among several other organizations. Thus, no longer is domain-specific knowledge or singular technology skill alone sufficient. Building a robust operations center calls for personnel with a healthy familiarity with technology apart from core domain expertise.

- **Involve people to succeed.**

- **Pilot technologies extensively.**
  
  Do not hesitate to roll out technologies across board but do so in a calibrated manner. It is also a myth that these are cost prohibitive – they are usually self-funding.

- **Junk the current dashboard.**

- **Build appetite for technology and change.**

  Catalyze change by building an activation model to continuously inspire the right appetite, attitude and behavior for adoption of automation.

- **Demonstrate value rather than seek budgets.**

- **People’s identification with and ownership of the IA program is important.** The back-office of a professional services firm successfully implemented robotics across more than 30 processes, which positively impacted the business outcomes. A three-week campaign as a follow-up to identify additional automation opportunities within the same team created a groundswell, generating ideas of a significant quantitative value.

- **Initiate and inspire discussions on business outcomes and the ultimate beneficiaries – the customers.** The first step here is the articulation of the current value.

- **Do not seek exclusive budgets.** Demonstrate value with the help of frugal investments and an entrepreneurial culture.

“*The future belongs to those who see possibilities before they become obvious.*”

John Scully
Intelligent automation journey

1. RPA

- Automates rule-based transactional activities for processing, manipulating data, triggering responses etc.
- Process: Standard/Rule-based | Information: Structured/Predictable
- Back office processes such as F&A, IT maintenance, HR and procurement, and some service operations. For example, receipt of purchase orders over email and creation of PO in the system
- RPA and OCR technologies
- Choice of processes, business, IT and leadership support, and speed
- Automate the “do” part of work. Remove the “BOT” out of the humans
- Robust process selection framework; Process re-engineering/RPA solutioning and RPA technology capability; Strong program and change management capability
- Provides for making simple decisions based on data mining (past learnings)

2. Simple machine learning

- Back office and mid office processes with variations in information and rules. For example; Insurance claims award based on available documents and past data on similar claims; Mining database of previous orders placed by customers and predicting future requirements
- RPA and Machine Learning
- Choice of processes, strength of historical data, accuracy and speed
- Automate simple “think” part of work
- Process re-engineering and solutioning capability; ML algorithm/tools application understanding; Data-centric organization with continuous focus to learn and improve; Change management
Making sense of unstructured information input through data mining, pattern recognition and natural language processing

3. Cognitive

Process: Less standard | Information: Unstructured
Back office, mid office and front office, particularly useful in customer-facing functions to capture requirements and feedback. For example: Making sense of customer tweets, blogs, FB updates and face recognition to understand sentiments and provide suitable options; A virtual agent handles queries while continuously learning and improving on the responses
RPA, ML, NLP, NLG and Semantics
Strength of keywords; accuracy is very important
Automate simple “analyze” part of work
Process re-engineering and solutioning capability; Capability to work with NLP/ NLG and other applications tools; Ability to adapt and respond to new information and insights; Change management

4. Artificial Intelligence

Intelligent automation solutions that can make decisions and call up on intelligent automation services to execute

Across the enterprise: Integrated business processes that are less standard, complex, interdependent and involve structured and unstructured information; Taps into capabilities of Cognitive, NLP, NLG, Machine Learning, Expert Systems to execute complex processes. For example: In HR hiring processes, identifying skillsets required for a particular job posting based on historical information and ML capabilities and posting the jobs on multiple sites; screening CVs using NLP capabilities and profiling candidates based on information in the social media, to assess first-level fitment; conducting first-level assessment using chatbots; using free-text; and then scheduling the subsequent round of discussion through the AI system.
RPA, NLP, NLG, semantics, OCR, BPMs, Service Orchestration, Expert Systems and Analytics
Strength of the ecosystem – feeder systems, algorithm and orchestration; Accuracy and integrity of processes
Enable the “decide” part of work
Deep solutioning capability and expertise in data science; Robust information flow across systems and functions; Expertise in deploying AI-based expert systems; Change management to allow for systems/information driven decision-making
Reshaping the future of work with robots
Our offices

Ahmedabad
2nd floor, Shivalik Ishaan
Near C.N. Vidhyalaya Ambawadi
Ahmedabad - 380 015
Tel: + 91 79 6608 3800
Fax: + 91 79 6608 3900

Bengaluru
6th, 12th & 13th floor
“UB City”, Canberra Block
No.24 Vittal Mallya Road
Bengaluru - 560 001
Tel: + 91 80 4027 5000
+ 91 80 6727 5000
+ 91 80 2224 0696
Fax: + 91 80 2210 6000

Ground Floor, ‘A’ wing
Divyasree Chambers
# 11, O’Shaughnessy Road
Langford Gardens
Bengaluru - 560 025
Tel: +91 80 6727 5000
Fax: +91 80 2222 9914

Chandigarh
1st Floor, SCO: 166-167
Sector 9-C, Madhya Marg
Chandigarh - 160 009
Tel: +91 172 331 7800
Fax: +91 172 331 7888

Chennai
Tidel Park, 6th & 7th Floor
A Block (Module 601,701-702)
No.4, Rajiv Gandhi Salai
Taramani, Chennai - 600 113
Tel: + 91 44 6654 8100
Fax: + 91 44 2254 0120

Delhi NCR
Golf View Corporate Tower B
Sector 42, Sector Road
Gurgaon - 122 002
Tel: + 91 124 464 4000
Fax: + 91 124 464 4050
3rd & 6th Floor, Worldmark-1
IGI Airport Hospitality District
Aerocity, New Delhi - 110 037
Tel: + 91 11 6671 8000
Fax + 91 11 6671 9999

4th & 5th Floor, Plot No 2B
Tower 2, Sector 126
NOIDA - 201 304
Gautam Budh Nagar, U.P.
Tel: + 91 120 671 7000
Fax: + 91 120 671 7171

Hyderabad
Oval Office, 18, iLabs Centre
Hitech City, Madhapur
Hyderabad - 500 081
Tel: + 91 40 6736 2000
Fax: + 91 40 6736 2200

Jamshedpur
1st Floor, Shantiniketan
Building Holding No. 1,
SB Shop Area Bistupur,
Jamshedpur - 831 001
Tel: +91 657 663 1000
BSNL: +91 657 223 0441

Kochi
9th Floor, ABAD Nucleus
NH-49, Maradu PO
Kochi - 682 304
Tel: + 91 484 304 4000
Fax: + 91 484 270 5393

Kolkata
22 Camac Street
3rd Floor, Block ‘C’
Kolkata - 700 016
Tel: + 91 33 6615 3400
Fax: + 91 33 2281 7750

Mumbai
14th Floor, The Ruby
29 Senapati Bapat Marg
Dadar (W), Mumbai - 400 028
Tel: + 91 22 6192 0000
Fax: + 91 22 6192 1000

Pune
C-401, 4th floor
Panchshil Tech Park
Yerwada
(Near Don Bosco School)
Pune - 411 006
Tel: + 91 20 6603 6000
Fax: + 91 20 6601 5900
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