the edge
quarterly

Connected
Enterprise

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EdgeVerve Systems Limited, a wholly owned subsidiary of Infosys, is a global leader in AI and Automation, assisting clients thrive in their digital transformation journey. Our mission is to create a world where our technology augments human intelligence and creates possibilities for enterprises to thrive. Our comprehensive product portfolio across AI (XtractEdge), Automation (AssistEdge) and Supply Chain (TradeEdge) helps businesses develop deeper connections with stakeholders, power continuous innovation and accelerate growth in the digital world. Today EdgeVerve's products are used by global corporations across financial services, insurance, retail, consumer & packaged goods, life sciences, manufacturing telecom and utilities.

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Connected Enterprise

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Disruptive technologies are reshaping enterprises and emerging as a key competitive advantage. Whether delivering utility across the value chain, redefining business models, or influencing how enterprises operate, technology is at the forefront of everything businesses do today.
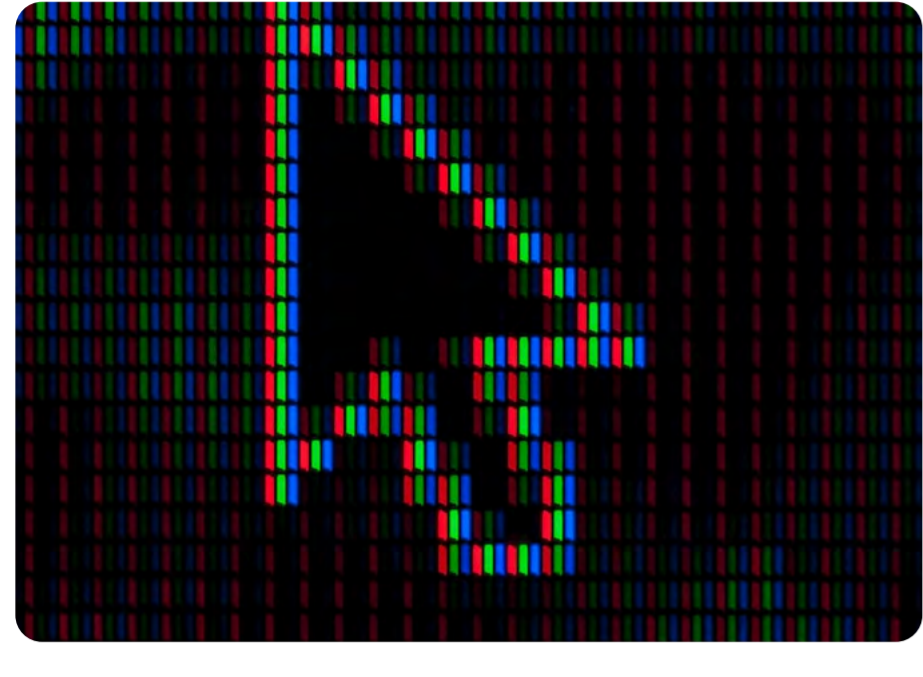
The need to build a **Connected Enterprise** is more critical than ever before as large enterprises try to navigate current global challenges. A Connected Enterprise enabled by **cognitive operations**, exploiting the power of **value networks** and ultimately **amplifying the human potential**. We also believe digital platforms will play a central role in unlocking the inherent value of connected enterprises. Through this edition of The Edge Quarterly, we see how these technologies create new use cases that unlock new business opportunities, increase productivity & process efficiency, improve enterprise resilience, and deliver an enhanced customer experience.

Contents

Enabling human-centric digital transformation through Connected Automation

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Summary

The current global health scenario has demonstrated the need for business continuity and resilience. A new paradigm of corporate transformation is being driven by diverse and demanding competitors, increased consumer pressures, dynamic marketplaces, and the need for ongoing innovation. Enterprises must provide excellent consumer and employee experiences to succeed. This change requires Connected Automation, a sophisticated approach to Intelligent Automation.

Our experience supporting 400+ large-scale enterprises across multiple industries in their digital transformation journeys has shown us that Intelligent Automation is a critical enabler of growth and innovation, from reimagining enterprise-wide process transformation to delivering measurable automation results. According to industry forecasts, automating knowledge jobs' economic impact may reach $600 billion by 2025. Despite these advantages, several challenges prohibit businesses from fully exploiting the potential of Intelligent Automation. Due to the lack of a multi-dimensional approach to value creation, tactical projects have been implemented in silos with little enterprise-wide impact. Every business is torn between centralized and decentralized techniques, resulting in disjointed strategies. Ultimately, while Intelligent Automation is still a top-down transformation in change management, adoption at all levels of the hierarchy is the only way to produce sustainable and long-standing concrete outcomes.

> Connected Automation, a human-centric holistic approach, may assist businesses in automating end-to-end operations with the help of data and cutting-edge intelligence. Organizations must be competent to create tailored client journeys founded upon hyper-efficient execution to gain long-term value. This would alter the business's functioning by employing bots for efficiency and quality while harnessing human skills for empathy and innovation. Connected Automation enables businesses to create stronger links between processes, data, and humans.

Processes
Improved process integration into the automation journey with end-to-end process orchestration via workflows and auto-automation.

Data
Through contextual data discovery, intelligent document processing, and sophisticated analytics, data is better connected to the automation journey.

Humans
Through low-code platforms for citizen developers and enterprise personal automation assistants, more people will be connected to the automation journey.

With this fundamental shift in RPA planning, businesses will be able to foster a culture of continuous improvement, intelligence, and efficiency, resulting in increased resilience and performance. Our experience has proven that Automation works best when used as part of a larger, organization-wide transformation initiative. Scaling Automation requires better control and convenience. Enterprises can convert each person into a transformation advocate by decentralizing technology control and making it available to non-technical employees, enhancing the scale of Intelligent Automation and the efficacy of change management. Enterprise technology is frequently discussed in tight circles, with only those "in the know" discussing its significance, development, and implementation. The emergence of low-code and no-code platforms can disrupt the status quo. Moreover, it also ensures that non-technical people are involved in the design and deployment of Automation.

Let's take the instance of citizen coders, for example. Employees are empowered to create and implement automations to increase and improve efficiency. In doing so, organizations give technology control back to the people it impacts the most, and the early results are astounding. Citizen developers can reduce manual work and, at the same time, increase automation footprint by more than 70%. Employees empowered to create automation programmes become the authors of an organization's transformation journey rather than just participants/onlookers in a larger plan. Employees can now assist enterprises in moving from process discovery through design and implementation, all while increasing the strategic value of their positions, as bots customized to their needs take over complicated asynchronous operations.
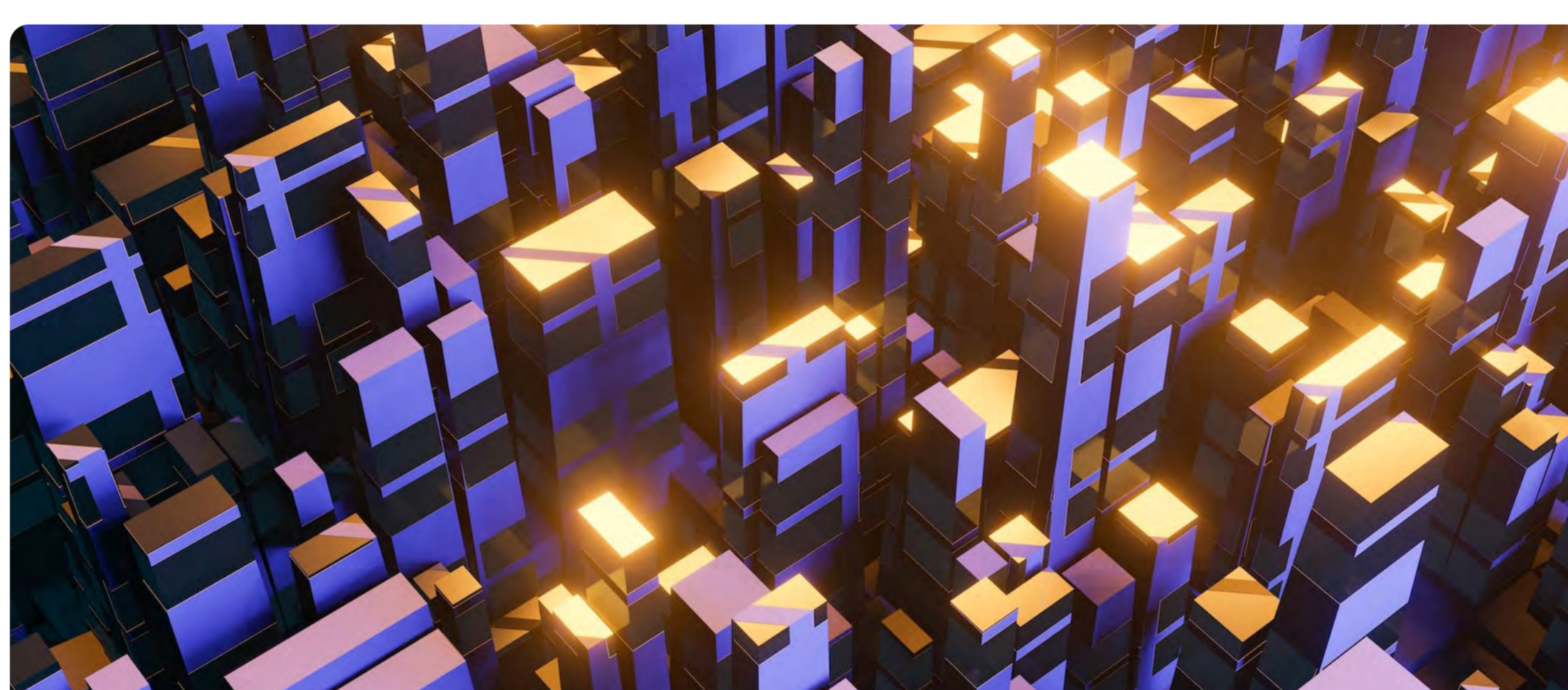
> Innovation, agility and efficiency are apparent advantages of Connected Automation, but its capacity to establish a culture of Intelligent Automation is the most significant benefit. Non-technical employees can help companies co-create their transformation story, allowing for faster scaling and better outcomes. Furthermore, Connected Automation offers a variety of valuable capabilities that touch every element of the organizational value chain-process orchestration, auto-automation, complicated document processing, and automation analytics-making it a strategic facilitator for business expansion.

The actual scope of Connected Automation lies in supporting people to promote critical organizational growth. The idea of human-centric Automation is becoming a reality due to Connected Automation. Here's how we helped a few of our clients, global leaders in their respective domains, harness the power of Connected Automation to achieve business and process outcomes with outstanding results.

1. Transforming operations of a leading telecom company across 150+ applications

Our client, a leading digital network in the UK connecting homes & businesses to the national broadband and telephone network, was stuck with an RPA partner forcing them to move their automations to the cloud. Considering the scale of their operation, the client was reluctant to make this shift and chose to seek an alternative, on-premise solution. Our client has used our RPA platform since 2011 for their contact center automation needs. They wanted to leverage the latest features offered by our platform, which was hosted within the client network, to optimize their operations. By seamlessly upgrading to the latest platform version, the client could leverage the latest features, including intelligent automation technologies, uplifting customer experience, improving overall agent experience and minimizing unnecessary manual interventions. We helped them save 9500 minutes daily by reducing manual effort and improving agent productivity. We enhanced user experience and improved usability, uplifting the overall customer experience. We also enabled end-to-end Automation using a single cohesive platform and streamlined enterprise strategy.

2. Implementing Automation across F&A processes for a global giant

Our client, a leading global healthcare manufacturer, came to us with such a requirement - to improve its F&A operation across the globe. The company's F&A processes required extensive manual intervention, which impacted its results' accuracy. These processes were fragmented across a complex IT landscape in multiple countries and regions. The client used our automation platform to automate their critical F&A processes, including payroll posting, cash collection & dunning, reconciliation, and accounting quality checks. Additionally, the creation of oversight bots eliminated the need for any human intervention for data sanity and cleansing. The results were tremendous, and the data speaks for itself. The average handling time of payroll posting was reduced by 72%, with a significant impact on the efficiency of their finance operations and substantial cost savings - $16.6 Million in incremental benefits—770,000+ person-hour savings, and 110% RoI with 220+ use cases automated.

3. Global scale meets universal optimization - Identification, standardization & streamlining

Our client wanted to assess the various versions of processes across countries, identify the optimal strategy, and standardize, centralize, and automate to lower costs and improve efficiencies. To begin with, the client wanted improvement and automation recommendations for two processes - cash collection and route settlement & billing. Using interactive process visualization through interactive process maps, the team came up with accurate visualization of as-is processes in terms of design, variations, and patterns. Automation blueprints were developed using business insights obtained from the task, and process-level data and automation prioritization was done using automation indicators, a priority matrix, and an intelligent funnel. The maps, created in just 2 weeks, were over 90% accurate and were further validated by 36 end-user interviews. Granular visibility into the as-is process helped identify 74 strategies for improvement in record time and 16 processes for Automation, resulting in potential savings of $1M annually. Additionally, reduced manual intervention and elimination of unnecessary steps accelerated revenue recognition, resulting in massive effort savings to the tune of 65k person-hours.

Reinventing Compliance Management

The go-to playbook for a CCO

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Summary

In the last 24 months, we have seen the growth of technology like never before. Global enterprises are reinventing themselves to adapt to the new normal, and the role of a Chief Compliance Officer (CCO) has become even more critical to help organisations adapt to these changes and manage risks better. Read on to know, how a Chief Compliance Officer can thrive in a dynamic environment.

With increased customer demands for speed and convenience and growth in new technologies, these changes will continue for a long time. Hence, organisations must give more cross-functional authority to the CCO for better crisis management and leveraging technology. CCOs around the world, whether in government or private enterprises, are responsible for managing grants, relief funds, assistance funds, etc., risk-free since these funds arrive from various sources and reach multiple recipients. Therefore, the CCO must ensure safety and compliance during a crisis and manage numerous unprecedented changes.

The new norm has exposed organisations to increased risks unimaginable a few years ago. Previous compliance-related standard operating procedures (SOPs) and manuals are now outdated as we continue to live in a post-pandemic world. Crises of such magnitude warrant a decisive seat for the CCO on the company's board. This will not only help reinvent the compliance framework but also allow the organisation to add an ethical dimension to its operating procedures.

The curious case of Financial Fraud

Wirecard – a German payments processor and financial services provider, became insolvent with its former CEO, COO, board members, and executives getting arrested for financial fraud in 2020, thus, forcing the company' to turn to its CCO to become the interim CEO. The report states, "Financial crime and other digital fraud are a pressing concern for banks, credit unions, and other FIs, with fraudsters stealing $2.8 billion from bank accounts in 2018." In the past, N26² also faced regulators for fraudulent transactions. Banks and financial institutions can benefit significantly from using Artificial Intelligence (AI) and Machine Learning (ML), which can further help them stay ahead of the game in the fight against fraudsters.

Cyber risk is another area the next generation of compliance officers will have to deal with. According to the Reducing Cyber Risks for the Financial Service Industry whitepaper³, there is a 189% increase in data loss incidents and 219 incidents of fraud. The pandemic has pushed many organisations to adapt to the digital way of contracting and transferring funds, and the CCOs will have to up the ante on their cyber risk awareness.

The pandemic has also pushed CCOs to reinvent themselves to manage the increasing number of financial frauds. According to a survey conducted by the Association of Certified Fraud Examiners (ACEF) in December 2020, 90% of the survey respondents anticipated an increase in the number of frauds over the next 12 months, while 77% indicated that fraud prevention and investigation have become more challenging than ever before. Coupled with these risks, the pandemic also restricted the ability to investigate fraud as and when it occurred. The CCOs and the investigating authorities are not in a position to interview suspects.

In the new normal, the CCO is expected to be more vigilant and curious about every penny spent. They need to examine the authenticity of regulatory filing and document every dollar received, spent, distributed, and donated – and this is where technology can be a saviour!

The Need for a Warp Speed team

The global pandemic has taught us to be agile and fast. Fast enterprises deal with crises better. Only two things can drive this within an enterprise – culture and people.

A culture of trust is when people believe in the purpose of an enterprise. Companies that continued to thrive during the pandemic had vigilant CCOs who reacted with warp speed. With the support of their teams, they have evolved to keep up with changing business processes that have helped change work dynamics and added more agility to enterprises. For instance, record keeping and record management in a remote work environment are new areas that CCOs will continue to look into, investing in various tools to create archives of documents which are tamper-proof and legally acceptable.

Anticipate changing scenarios

Given the Volatility, Uncertainty, Complexity and Ambiguity (VUCA) environment we are in now, CCOs must anticipate these changes and develop compliance policies, communications, and mechanisms to manage risks. If we look at the ING bank⁴ case reported a few years ago, it was stated that the diligence team was not trained and prepared enough for the crisis resulting from the software lapses. To avert a similar situation, AI and ML algorithms can be used to simulate various crisis scenarios that can help train compliance officers.
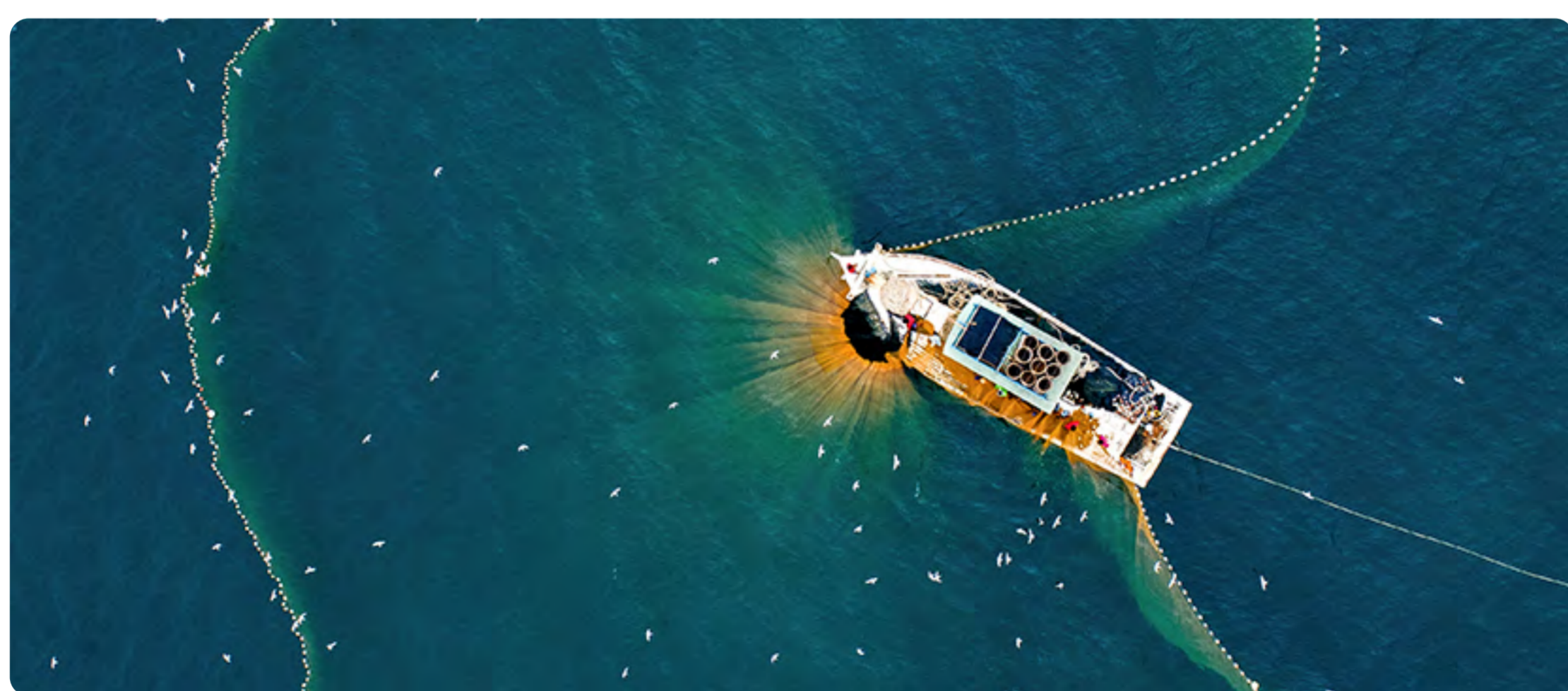
Traditional vs Transformative

This cannot be stressed enough. There is an absolute need for technology to be integrated into an enterprise to adapt to changes, manage crises, and meet increasing customer demands. Integration of new-age technologies like ML, AI, and APIs is inevitable, and organisations' executives need to be digitally savvy and learn these new technologies.

Take the example of surveillance requirements, such as voice surveillance. The compliance officers manually evaluate voice samples, call records, and other pieces of evidence. Considering the volume of data that needs to be analysed, this becomes a tedious process. Now imagine Natural Language Processing (NLP) algorithms taking over this end-to-end analysis and presenting a comprehensive summary. This automatically reduces the manual hours spent for reconciliation, increases the efficiency and productivity of the compliance officers, and as well improves data accuracy.

Contract management⁵ is another area where AI and ML technologies can positively impact. The algorithms are equipped with solid domain expertise that reduces the burden of analysing a large number of contracts, which would otherwise require many manual hours. The next-generation compliance officers could also use AI for Policy documents, Risk assessments, Risk Management, Legal agreements, and Relief Funds documentation.

AI and ML can also help significantly speed up the processes in compliance management. Accenture's 2019 Compliance Risk Study⁶ concluded that 71% of the compliance departments at financial institutions were facing cost reduction targets. Given this organisation, the CCO organisation could leverage AI/ML to eliminate the first line of manual review of a loan application and help reduce false positive approvals due to inaccurate manual analysis. The KYC process could also be made efficient and seamless with video and voice-based software embedded in a 'Do it yourself and at home' module for customers.

The innovations that AI-based interventions bring to the table will maintain a high level of operational efficiencies that compliance officers can tap on, although this requires learning and training. Upgrading to AI and ML-based technologies will significantly increase their integrity and credibility.

Empowerment and Authority

The role of a CCO has traditionally been seen as a "mandatory – check in the box" position rather than someone whose expertise can help create a risk-free and highly compliant enterprise.

The pandemic has prompted companies to reimagine how CCOs function and the authority they should provide to better deal with risks in an ever-changing environment.

Engaging with third-party suppliers

Contracting and engaging with new suppliers, customers, and other business partners have become even more critical now than ever.

Automated tools provide a 360-degree view of all the suppliers and vendors across the supply chain, ensuring compliance at all levels. These also help manage distributors, orders, and effective campaign promotion.

The new norm of remote working, paperless documentation, and digital contracts, coupled with the risk of fraud, has forced organisations to empower the CCO organisation. The business executives and CCOs are now working in tandem and adapting to these new changes while being compliant. The CCO is critical in communicating and delivering the right messages during a crisis. The effects of a problem in an enterprise can be detrimental to colleagues and customers. Hence, effective communication is very crucial.

A CCO should be a good communicator, a great social media enthusiast, and an evangelist of factual and transparent messaging by the company. The CCO will frequently communicate with the Board and C-Suite members of the company, backed and supported by automated risk assessments and efficient checks and balances.

With the change in business models and ways of working, the role of a CCO has become crucial, which must be constantly reinvented for global organisations to sustain and survive in the new normal while maintaining the highest ethical standards.

Disclaimer: Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the respective institutions or funding agencies

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The Digitalization of Waste Management

Is IT Essential to The Circular Economy?

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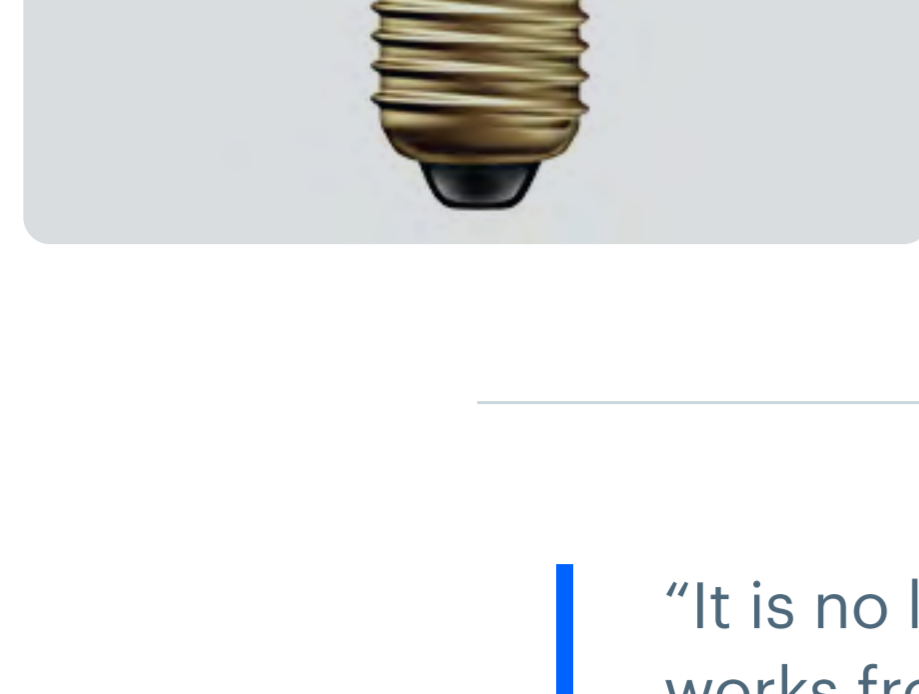
Summary

The global economic waste crisis is quickly approaching critical mass. Resource shortages, rising raw material prices, and steadily eroding biospheres have firmly debunked the wisdom of a linear economy. And waste management and manufacturing will likely play key roles in the drive toward circular economic policies. Many manufacturers have fully embraced Industry 4.0 in terms of digitalization, but waste collection, recycling, and disposal have noticeably lagged. What kind of impact can the digitalization of waste management have? And why is it fundamental to building a circular economy? Let's explore that in this article.

"It is no longer a question of having an economic strategy that works from a sustainability perspective, but rather a sustainability strategy that works from an economic perspective. The transformation to a lower-carbon business model must therefore become an important cornerstone in the strategy of every company." - Ernst & Young[1]

To policymakers, industrialists, and citizens worldwide, the writing on the wall has never been more obvious - the linear economy is no longer a viable model for economic progress. It creates an enormous amount of waste and drains significant resources via the handling and disposal of said waste. For instance, many major and minor municipal centres worldwide allocate 10% - 40% of their budget to solid waste management alone.[2]

The Need For A Circular Economy

Creating a closed-type system of economic inputs and outputs is not new. The concept of the 'circular' economy surfaced as far back as the 1960s, although it only gained real traction among world governments in the early 2000s.[3] With current economic systems using the 'take, make, waste' cycle, increasingly scarce economic resources are irrevocably lost to landfills. The inter-mixing and degradation of materials make resource recovery nearly impossible.

Why should waste management companies care about creating a circular economy? Well, for one, it offers them the chance to transform from collection and disposal agents to raw material producers, substantially increasing the value of their products and services. Secondly, the value created offsets the costs of processing highly volatile and hazardous waste, leading to greater profits and lowered costs at scale.

Every year, over 2 billion tons of solid waste are created.[4] Over a third of that ends up in landfills or leaches into the environment. In the US, for example, an estimated 75% of waste is recyclable, but less than 35% of that makes it to the recycling plant.[5]

Over the next two decades, the amount of waste generated annually is expected to nearly double. Still, there has been little scalable change in waste management processes and protocols. According to surveys, while 60% of waste management firms use an ERP platform, less than 10% have connected it to their CRM, service provider systems, or a more significant waste management ecosystem. The same research reveals that while 40% of firms have implemented digital vehicle tracking, only 7% use technology to track containers.[6]

Figure 1: Current impact of digitalization on waste management value chain
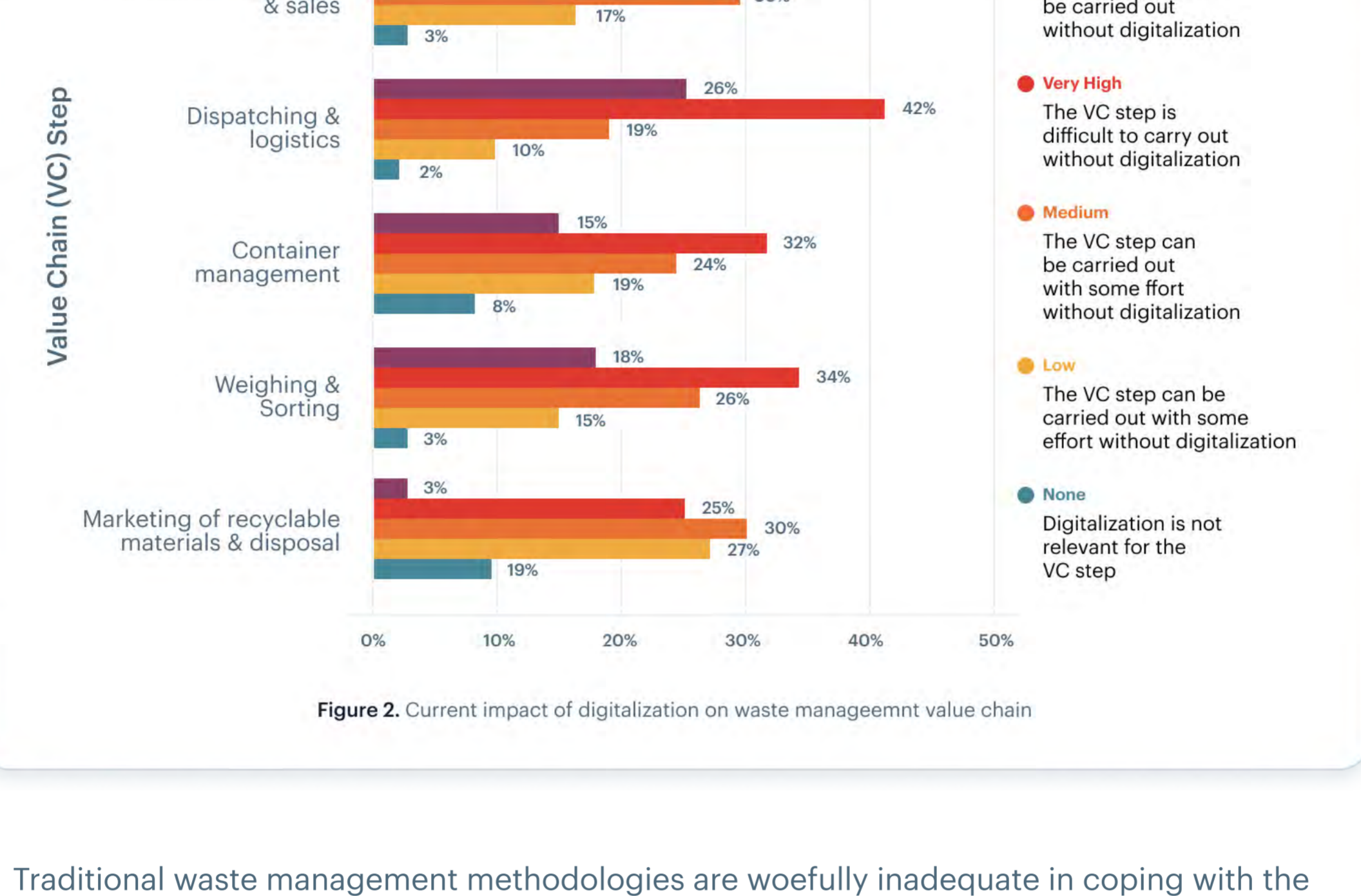
Traditional waste management methodologies are woefully inadequate in coping with the uptick in global garbage creation and actualising the vision of a circular economy.[6]

Is Digital Transformation Truly Necessary For Waste Companies?

The waste management industry is home to a highly competitive landscape beset by challenges on multiple fronts. An example is pricing is the critical differentiator in developing an advantage over industry peers and the primary raw materials market.

On the one hand, the total cost of reclamation and recycling fluctuates with changes in operational and input costs (fuel price surges, attrition-induced training costs, compliance costs, etc.). In contrast, on the other, market prices for secondary raw materials can also vary. When the cost of producing recycled materials surpasses the market value of those goods themselves, waste companies are forced into a position where they must raise prices to retain margins. As a result, buyer interest in the secondary raw materials market can often be significantly reduced.

Like many enterprises today, waste companies' processes can be grouped under two broad umbrellas - tactical and strategic. While the former is primarily operational and logistical, the latter involves profitability assessments, market positioning, growth planning, futureproofing, etc. Aligning these processes with the principles of a circular economy will involve significant organizational redesign and optimization. A key example lies in AI-powered value stream mapping - where the necessary information and resource flow to create a product in optimal takt time are mapped out to eliminate overproduction, waiting time, production complexity, logistical inefficiencies, and defects. Used in conjunction with algorithmic market analysis, this sort of digitization can rapidly turn waste companies into highly profitable materials producers.

On the same note, waste companies tend to be asset-heavy, often owning fleets and processing facilities. These assets lock up a tremendous amount of working capital by any measure.

A lighter, leaner waste management sector would involve a degree of fragmentation within the industry. A single organization focuses on a few competencies and is entrenched within an ecosystem of service providers across the value chain. To create the necessary value to support a circular economy, these ecosystems need to be supported by an efficient network of communication, commerce and collaboration platforms that ensure seamless, transparent data access to multiple stakeholders. This integrated ecosystem also makes mergers and acquisitions within the industry easier and faster to process, resulting in less overall industry downtime and more efficient waste reclamation.

Primary Challenges In Waste Management

- Poor talent management, high attrition rates, and high labour costs.
- Economic stagnation and inflation reduce disposable income and waste generation, which in turn affects waste company revenues
- Asset-heavy working model limits capital availability
- Inefficient mapping, routing, and collection models
- Lack of segregation induces higher TCO and lower margins on reclaimed/recycled material
- Frequent litigation costs alongside complex compliance requirements
- Environmental degradation due to poor waste management practices

Mapping Out The Impact Of Digitalization

The digitalization movement is quickly becoming ubiquitous across nearly every industry and has impacted and evolved much of our day-to-day existence in social, economic, political, and environmental spheres. Waste management is no exception.

By optimizing input and output factors across multiple fronts, including collection, sorting, processing, and strategic planning, digital tech can make the waste management industry much more efficient and eco-friendlier. At the same time, these technologies lower the cost and the needed to recycle while improving recycling volume, both of which contribute significantly to creating a circular economy.

Improved Transparency and Innovation

A combination of cloud, remote monitoring systems, analytics and IoT can give waste management companies a clear view of their processes and operations. Even a simple ERP system allows companies to lower their cost of operations via more efficient resource allocation, improved processes, and better collaboration across the value chain. Similarly, technology will enable workflows within an entire ecosystem to become more transparent in real-time - it's easy to imagine how a blockchain-based marketplace platform that connects different players in the waste management industry could ensure traceable waste chains, improved disposal, and more accountability, and fairer remuneration.

Highly communicative and transparent ecosystems are critical to creating a circular economy. They drive innovation in disposal, collection, and recycling techniques by connecting waste management specialists and stakeholders via collaboration platforms and democratizing access to waste management data.

Easier and More Accurate Sorting

When you think of automation, the manufacturing, BPO, and medical industries most often come to mind. But few uses rapidly grow within waste management. Apple's Daisy robot, for instance, disassembles over 1.2 million old iPhones a year, saving almost 48000 tons from ending up in a landfill.[7] Similarly, Finland-based Bin-e has developed an intelligent waste bin that automatically uses AI-image classification to sort recyclable waste into separate compartments. Not only does this eliminate human error and consumer carelessness in sorting, but the increased speed in materials processing can lower waste management costs by as much as 80%.[8] Better sorting practices directly impact recycling by improving recycling rates and reducing impurities in recyclable material, creating higher-value recycled goods at a lower cost.

Collection Vehicle Routing

Many waste collection firms operate a fleet of vehicles on preset weekly or daily routes. However, waste bins often take a variable time to fill, depending on the population density and neighbourhood demographics. Using a combination of bin sensors and GPS, digitally-enabled waste collection companies can track which bins are filled on a given day and optimize their collection routes accordingly.[9] This saves on fuel and time and lowers emissions significantly. Another potential AI-powered use case involves the deployment of autonomous (i.e., self-driving and collecting) dump trucks. However, the technology is likely at least a decade from being commercially viable at scale.

Improved Strategic Planning

By leveraging big data and analytics tools, waste management companies could chart out a more effective strategic vision, optimize their operational models, and inject more sustainable practices into the waste management process chain. This is essential to improve recycling rates, eliminate scale inefficiencies, and pave a path toward a sustainable circular economy.

In most cases, the cost of recycling a particular resource is fixed, however, prices for those recovered resources are at the mercy of market fluctuations. Better strategic and tactical insights can help waste companies prioritize materials for recycling operations based on the optimal market prices, ensuring a better bottom line.

Predictive Maintenance and Process Optimization

Industrial recycling equipment tends to be large, expensive and has many moving parts. Predictive maintenance via IoT sensors and connected machinery can help waste companies circumvent unnecessary repairs and increase equipment uptime.

Essential data that helps predict an upcoming breakdown is often a mix of structured and unstructured data (such as year of production, model, repair history, the operational environment, etc.) and can be hard to parse manually. AI-enabled predictive maintenance, however, takes all these factors into account when forecasting just how often an asset should be serviced or when a part will fail.

Reduction In Labor and Personnel Costs

One of the most pressing issues plaguing the global waste management sector is an ongoing shortage of low-cost labour.[10] Manual collection, sorting and administration are all labour-intensive tasks, but technology can change that. AI-powered sorting and processing can reduce the volume of workers needed to run waste management operations by optimizing waste collection patterns and sorting at source.

Using ERP systems to run operations at waste management firms can also slash the number of management personnel required while paving the way for LEAN management structures that offer faster decision-making.

The Future Of Waste Is Circular

From a circular economic perspective, digitalized waste management is a single step in a long chain of activities but is crucial to creating closed-loop production cycles. For governments, granular and well-documented waste management data is imperative to circular economic policy-making and urban planning, particularly given the accelerated pace of urbanization and population growth across the globe.

While this data collection may have been nearly impossible in the past, the continued development of big data, MCP, communication, cloud technology and IoT hardware has made accurate waste management information gathering a genuine possibility. As a result, much of the initial moves toward circular economies will likely begin not with restructuring how we produce but how we can reuse. And for that to happen, digitalization in the waste industry is a necessary first step.

Additionally, digitalization is a win-win for both waste companies and municipal administration. Complex disposal and recycling operations are often funded by local or state bodies and more compute and IT resources on education, telecom, utilities, and healthcare for budget-only allocations. By lowering the cost of waste management, digitalization helps waste management companies offer more competitive rates and win more lucrative contracts.

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Extreme Automation
How Enterprises Can Ensure Sustained Success

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Summary

The adoption of Robotic Process Automation (RPA) has accelerated globally, more so among enterprise finance teams. The need to automate has become more urgent since the pandemic, pushing the global economy under pressure with losses of trillions of dollars. Add to it the unavailability of employees, who are in lockdowns or quarantine, and businesses worldwide are actively looking at RPA to curtail losses. Read on to know more.

On the other hand, "30% to 50% of initial RPA projects fail", unleashing innumerable risks," resulting in organizations being stuck at the proof-of-concept stage, deploying fewer than ten bots", and unable to leverage the benefits of scale. Specific patterns emerge if we take a closer look at why this happens.

Siloed, narrowly focused implementations

Many enterprises mistake a proof-of-concept for being a micro-project. Therefore, they begin their RPA journey with a small, siloed implementation. Even when it succeeds, they continue the project-based approach, adding multiple RPA silos with quarter-wise budget allocation. The whole initiative never rises above the sum of these parts, if at all.

Scattered accountability

When projects are implemented in silos, the responsibility for their success is scattered among leaders of those functions at best. This limits the realization of value at an organizational level.

Limited targets

Implemented on a micro-scale within each function/department, the goals for RPA projects tend to be minuscule at best and non-existent at worst. This significantly limits the imagination of RPA's possibilities itself. To say nothing of the goals achieved.

Past-driven

Any automation is only as successful as the process it automates. When an organization automates 'as-is' processes —often designed for past needs, non-standardized, branched out, idiosyncratic and even broken — the outcomes are naturally sub-optimal.

Misaligned with IT/ERP initiatives

Most enterprises expect a new RPA solution to fit perfectly into their existing IT/ERP roadmap to avoid duplication. As a result, instead of looking at IT/ERP as complementary, leaders end up imagining RPA as conflicting with their existing initiatives, the friction that's never really resolved.

As we can see from the patterns above, many of these are 'implementation issues' more than 'RPA issues.' The good news is that they are just as quickly resolved with an outcomes-driven BPM service provider, critical design thinking and process standardization.

Ensuring Extreme Automation Success

Working with some of the world's foremost enterprises and their finance teams, we at AssistEdge, have learned that ensuring extreme automation success begins with a clear vision. Finance leaders are best served when they start by:

- Identifying the organizational purpose of adopting RPA, most often this is achieving measurable productivity and efficiency gains
- Enabling future-driven 'process vision' documents, based on which automation is designed
- Making an enterprise-wide, upfront, multi-year commitment
- Having a central business sponsor who holds accountability for RPA success
- Setting aspirational targets and imagining possibilities
- Building productivity improvement scorecards for continuous visibility and improvement
- Seamless alignment with IT/ERP initiatives through project milestones included in the RPA program

Most importantly, choosing a BPM service provider who can deliver tangible efficiency gains, thanks to "beyond contractual commitment" clauses. Here's why.

How BPM Service Providers Enable Extreme Automation Success

While extreme automation can be found in upstream automation done directly by clients, automation driven by BPM service providers brings components that can accelerate scale without compromising efficiency. Some features to look for are:

Human-ware operating model

The fundamental tenet of automation is that it augments the human workforce. So, bots alone cannot deliver effective business processes. Organizations need an exception handling setup in which process specialists are empowered (through reskilling) to make necessary interventions at the right time. This seamless collaboration between the human workforce and RPA bots — what's known as human-ware — improves process efficiency. A good BPM provider has a mindset geared towards the human-ware operating model and service delivery.

Flexible commercial framework

Traditional commercial models are built on time and effort, which doesn't incentivize the service provider to look beyond the barebones of 'contractual commitment.' Ensuring extreme automation success depends on changing this paradigm. An excellent extreme automation provider will be eager to take on the risks of organization-wide initiatives in return for a fair share of gains, making it a win-win engagement for both them and the client.

Multi-tier governance model

The larger the RPA implementation, the more critical the granular details. To make the change effective at scale, organizations need a precise governance model with frequent updates of what is working and correct the course as necessary. An experienced RPA provider brings a tried-and-tested multi-tier governance from use case-level to program-level, ensuring success at every step.

Factory-based implementation approach

Enterprise-wide, a multi-year implementation does not mean an up-in-the-air goal and project design—quite the contrary. A robust extreme automation initiative creates individual plans for each function/department that are easily achievable and contribute effectively to the overall vision. A good BPM partner will have frameworks to split the vision into use case factory (pipeline creation), development factory, testing factory, and support factory to ensure better throughput.

Flexible cloud-based infrastructure

To scale efficiently and cost-effectively, enterprises need a robust cloud infrastructure. For any modern RPA vendor, this is a given.

BOT operations command centre

Last is the monitoring and operations management piece of the puzzle. The RPA Operations Command Centre is like an Air Traffic Control Room. Like air traffic controllers directing aircraft through controlled airspace, the RPA support and monitoring team uses real-time robot traffic information to skillfully handle the bots on the operations floor through various applications and servers.

> To run large-scale bot operations efficiently, you need a command centre that seamlessly integrates each module and provides overall visibility. An excellent extreme automation partner will already have a blueprint for the command centre.

Building Sustained Success with Extreme Automation

Enterprise-wide initiatives are seldom for the short- or even medium-term. They are significant investments — of money, time and energy — which are expected to deliver results over the long term. To ensure this, enterprises need a futuristic approach to automation.

They must adopt human-ware thinking, building automation to work effortlessly with their human workforce, augmenting the overall process instead of merely automating the repetitive and mundane. They must rewire their approach to commercial exchanges, governance models and monitoring methodologies to elevate organizational outcomes.

Most importantly, they must choose a BPM service provider who aligns with this futuristic approach, has a proven record of delivering digital transformation and can be a true partner in this journey.

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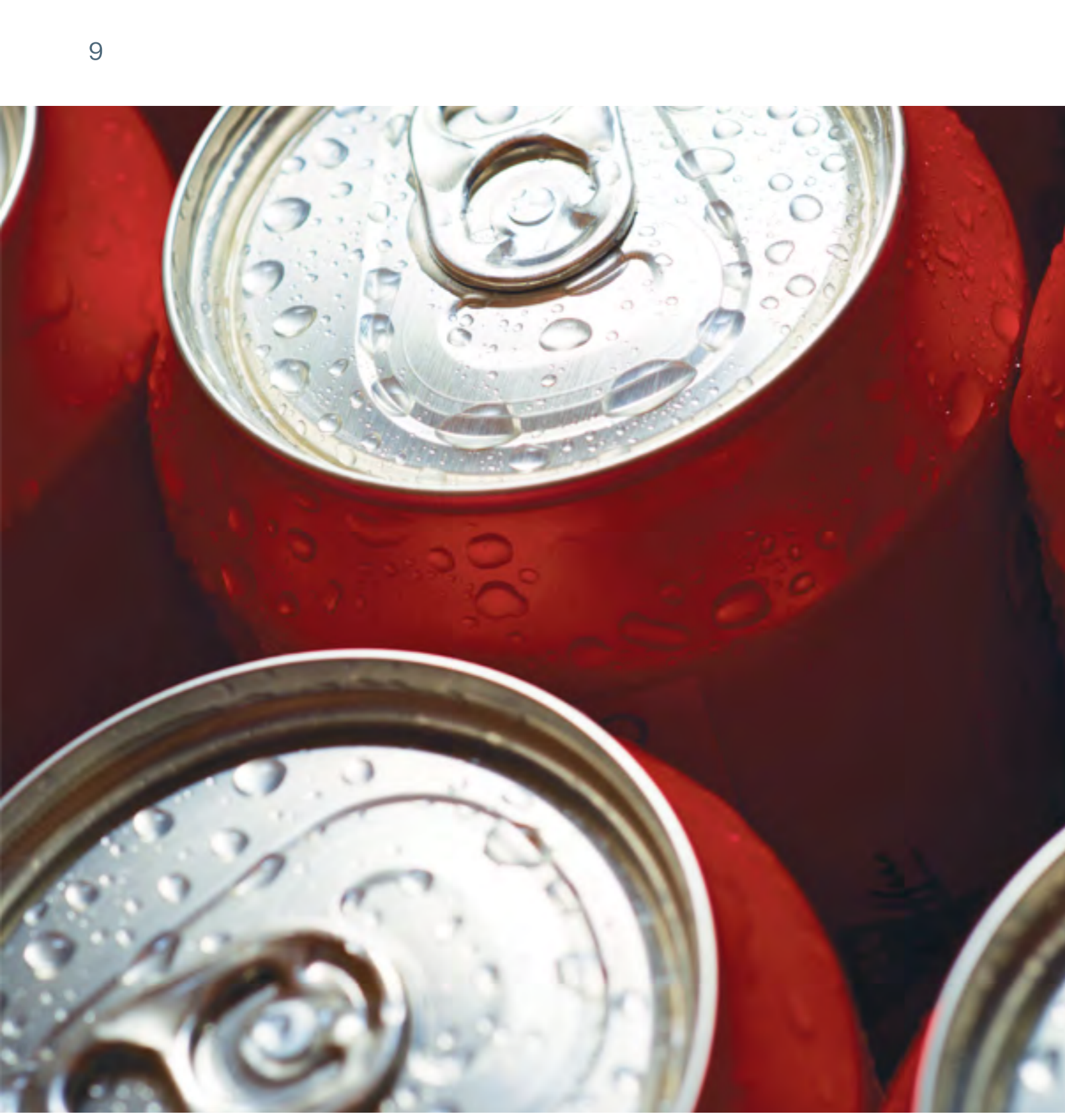
Discovery

The Achilles Heel of Process Automation

Case Study

Summary

For most business leaders, the why of automation is pretty straightforward — cost savings, operational efficiencies, error-free processing, etc., The biggest challenge, however, is in what and how. The answer to these questions begins with robust process discovery. Read on to learn how you can strengthen your robotic process automation initiatives.

At its foundation, robotic process automation (RPA) automates an existing process step by step. So, any RPA initiative is only as good as the process that it automates. No business process is perfect, so this opens up a can of worms. Even everyday tasks like invoice processing, billing, cash management, etc., can be inconsistent from one to the next and need considered interventions.

In the manual world, people use their domain expertise and business intelligence to make adjustments for anomalies in the process. Except, this creates myriad, minor yet significant variations to existing processes. Such processes can be difficult to automate for several reasons:

1. Variations often remain tacit knowledge, documented only in the minds of employees, and almost impossible to track

2. Most variations are only needed sporadically and used by a specific few, making them easy to miss during process discovery

3. Some variations might apply only to specific business units or geographies; therefore, they are unsuitable for global automation

While RPA has been successful with rule-based, high-volume, repetitive tasks, its impact has been limited when the processes are non-standardized and require frequent human intervention. The consequences of automating sub-optimal processes can be significant: Ranging from teams continuing to perform most of the tasks manually to abandoning the automation initiative altogether.

> Organizations need robust process discovery to prevent the pitfall of automating sub-optimal processes — and then fixing them again with manual efforts for eternity.

Manual process discovery is insufficient and ineffective

Process discovery forms the very foundation of effective robotic process automation. Good process discovery needs to collect process and task-level data from user devices, analyze it, provide insights and create a blueprint for automating the right processes.

Performing this manually is often an impossible task. Typically, analysts or consultants begin by interviewing teams and capturing the process flow. This is both time-consuming and expensive.

Often, there is resistance among team members to share information, which can be detrimental to holistic process discovery. Moreover, even when they are willing to share information, edge cases are often missed because users either don't remember or the sample group doesn't know.

On the other hand, manual process mapping misses data about crucial metrics such as process performance, stability, business exceptions, failure statistics, etc. Without these, there is no productive way to prioritize processes for automation.

Foundations of effective process discovery

Effective process discovery depends almost entirely on covering all the bases discussed above. It must be automated, cost-effective, comprehensive, and data-driven. Most importantly, it must also be accelerated to realize business outcomes.

> To achieve this, enterprises need AI-powered process discovery designed with a nuanced understanding of enterprise realities.
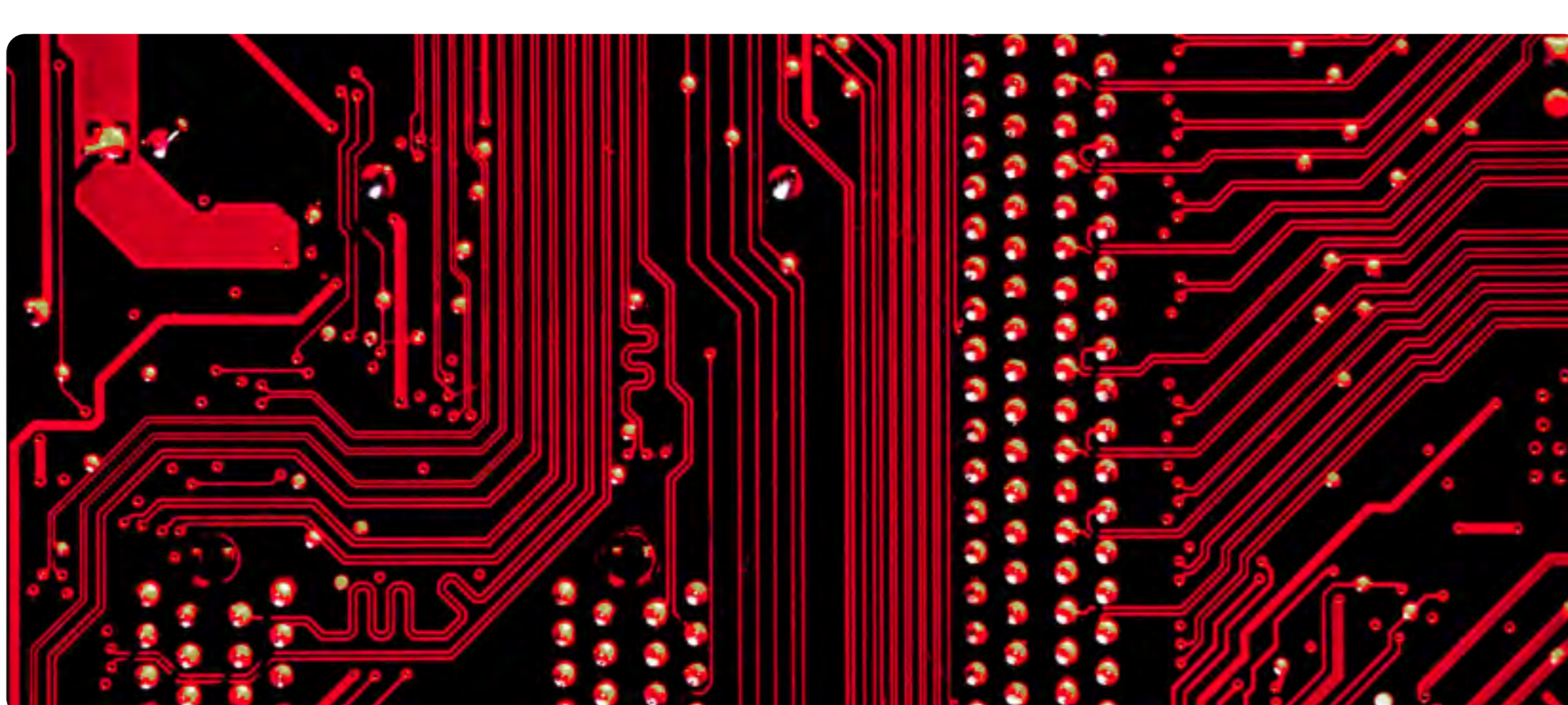
In our experience working with some of the largest enterprises across the globe, the necessary features of effective process discovery are:

1. **Intelligent data capture** of granular process nuances using computer vision and keystroke logs

2. **Adaptable data capture** with high configurability, ability to run offline, optimized data volume transmissions, and security features

3. **Process recording** so that users can record the application usage and business flow for any process with start and end markers

4. **Legacy system support** to ensure all processes and aspects are considered

5. **Interactive process visualization** with process maps to trace as-is processes in terms of design, variations, and patterns

6. **Automation blueprints** developed on the business insights obtained from the task and process-level data

7. **Automation prioritization** using indicators, priority matrix, and smart funnel

In reality, this is how it works. The discovery tool captures users' keystroke data by running on desktops and laptops in the background. Without disrupting work, these bots collect data on how the organization uses various applications and their interactions. Based on this data, the tool suggests the best processes for automation and creates corresponding workflows.

The business value of good process discovery

A leading global beverage company with operations across 20+ countries was looking to optimize and automate its cash collection and route settlement & billing processes. Due to their vast global operations, they faced several complexities with differences in local procedures, languages, and legal requirements. Process variations created non-standardization, limiting visibility and significantly increasing the cost of operations.

The client wanted to assess the various versions of processes, identify the optimal process, and standardize, centralize, and automate to lower costs and improve efficiencies.

> We deployed AssistEdge Discover on 50 user systems to enable this and created detailed process and task maps using over 3480 automated recordings. These maps were over 90% accurate and were further validated with 36 end-user interviews, built in just two weeks.

We used this data to identify over 300 process variations, evaluate the best approaches, and spot the right opportunities for automation. Based on this insight, we designed an optimal process flow that would significantly improve the current process and decrease the cost of operations.

OUTCOMES			
74	**16**	**$1M**	**65,000**
Processes identified for improvement	Processes identified for automation	Potential savings annually	Estimated reduction in person-hours annually

Take RPA success to scale with AI-powered process discovery

Deloitte found that RPA delivers a return on investment within 12 months. 92% of respondents reported improved compliance, 90% reported improved quality/accuracy, 86% reported improved productivity, and 59% said they realized cost reduction.

> Yet, only 3% of organizations have scaled their digital workforce.

The primary reason for failed RPA implementations tends to be picking the wrong processes, not understanding the entire scope of the process, or not automating them comprehensively. All these challenges can be overcome with robust process discovery.

Whether you're embracing RPA afresh or looking to optimize existing automation, begin your RPA journey with cost-effective, comprehensive, data-driven, accelerated, and AI-powered process discovery.

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edge**verve**

The Future is Automation
What's in store

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Summary

Scientists in Singapore recently invented tiny cyborg bugs[1] that can find injured people at a disaster site. This year a UK patient Steve Verze[3] made medical history when he was outfitted with a 3D-printed eyeball. Dr[3] Professor of Theoretical Physics at the City University of New York and author of "the Future of the Mind" predicts the rise of mental communication and a steady transition from the present-day internet to a brain net, where thoughts, emotions, feelings, and memories can be transmitted across the planet. From seawater fuel, personalized medicines, and artificially intelligent assistants to robotic bees for cross-pollination, a confluence of advancements in computing technologies and discoveries are making the future look extremely exciting. The world as we know it is only because of the power of imagination and the will of people to look beyond.

The Pandemic and Technology

The COVID-19 pandemic has changed the world in more ways than one. The most striking of them all has been man's massive adoption of technology in his day-to-day life. People living in remote places have become comfortable with cashless payments and ordering groceries to medicines from their smartphones. Technology has started to touch lives in the nook and corners of the world.

> While the pandemic could have triggered the increased use of technology, this revolution is here to stay. Students getting tutored by bot educators, drones delivering pizza or a driverless car that takes you and your family on a road trip, or even surgical robots do not sound far-fetched anymore.

Crystal Gazing into the Future

With the arrival of massive changes, one of the biggest fears of automation has been whether the robots will take away our jobs. Will greater automation replace humans? It's essentially a misplaced fear. Just like industrialization didn't demolish the agricultural economy, automation will only aid in transforming lives. According to the World Economic Forum, by 2025[4], technology will create 133 million new roles in place of the 75 million displaced. Yes, the nature of jobs could change, but man has always adapted to the advent of new technologies that make lives easier.

Automation is already being used to replace repetitive and non-creative tasks. However, as outdated studies are replaced, new ones will be created, birthing new industries. According to the futurist Thomas Frey's predictions for 2040, most of the typical jobs of the present times might get redefined but will still exist.

> So, while drones could deliver our pizzas, we would still have humans managing the drone crews, the drone command center, and aerial security teams working the aerial traffic flow. And this would give rise to the start of new industries and an entirely new ecosystem such as drone designers, drone programmers, and drone salespeople. The jobs will remain; only the nature of employment and the workplace will be transformed.

Dr James Canton[5], CEO of the San Francisco-based Institute for Global Futures and author of "Future Smart: Managing the Game-Changing Trends that will Transform Your World", foretells how predictive medicine will transform healthcare. Medical devices are being invented that can diagnose diseases with a sniff of our breath, and free DNA sequencing that will predict our health will become common. To complement predictive medicines, personalized genetic drugs will prevent diseases, saving lives and lost productivity.

Can technology go rogue?

As technology seeps deeper into human lives, can AI-powered technology behave in ways it was not programmed for? Experts warn that artificial intelligence has inherent risks, as with everything else. Stephen Hawking's sounded a note of caution when he told the BBC[6]: "The development of full artificial intelligence could spell the end of the human race."

He was not being entirely pessimistic when it was found that IBM's Watson[7], when used to assist doctors and physicians diagnose cancer patients, gave numerous "unsafe and incorrect treatment recommendations. Amazon[8] had to discard one of its AI-based recruitment programs after it was found that the AI was systematically discriminating against female applicants. These incidents have made a few experts in AI express their fears of creating artificial intelligence that can match or surpass humans.

AI-powered automation has the untapped potential to deliver incredible business productivity while elevating human standards of living. Harnessing this power could change how we work, travel, or live. According to leading visionaries and technologists, letting fear, rather than facts, control the narrative could eschew technological advances only due to fear and inertia.

An Optimistic Step into the Future

If the pandemic has taught us anything, it's how precious and yet how precarious life is. A microscopic virus in a short period has wiped out more than 5.3 million lives worldwide. Yet without the advancement and support of technology, this number could have been much higher.

> The world is experiencing an increasing need for digital transformation to help build better and safer futures. With reassessment of its immediate digital initiatives, organizations and countries are adopting emerging technologies to reduce waste, enhance their supply chain performance, and safeguard their employees. Automation, IoT, and other new-age technologies help challenge assumptions and create a new resilience and agility critical to outsmart the competition.

While we may not be able to see the paradigm shift in business models, the new emerging technologies are ushering in tomorrow's new industries. It becomes imperative for today's businesses to identify these key disruptors, gain insights, and respond to competition to have a sustainable future.

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Transforming Agricultural Supply Chains
for Improved Access to Farmers

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Summary

To feed a projected 9.7 billion people by 2050[1], our farmers need access to the latest innovations in agriculture –machinery, seeds, fertilizers, new technology, crop protection solutions, etc. Yet, the unorganized nature of farming makes it difficult for Agri-tech companies to reach farmers. According to estimates, over the 608 million farms worldwide, 70% of these are less than one hectare in size[2] and are usually located in remote corners. While Agri-tech companies have tremendous growth potential in emerging markets, millions of farmers stay underserved due to infrastructure challenges and the high cost of serving them.

Reaching the last mile with distribution networks

It's nearly impossible for agricultural organizations to directly reach this fragmented farmer demographic, especially in emerging markets, relying on a diverse network of small distributors and wholesalers spread across geographies. A distribution network provides access to last-mile retailers and helps companies maintain business relationships. An added benefit of local partners is the ease of compliance with local legislation. Nearly 90% of sales in emerging markets are driven by the complex distribution network of thousands of distributors/wholesalers and millions of retailers[3]. However, creating and maintaining a distribution network has its own set of challenges.

Distributors and wholesalers in emerging markets are often small and family-run businesses. While finding the right distributor is a challenge, it's further compounded by a lack of process and technology standardization. Typically, distributors are at different levels of digital technology maturity, often working on disparate systems and heavily dependent on paper-based and manual processing. Data silos, without an integrated and centralized system, obscure visibility into the distributors' secondary sales and inventory, leading to poor market penetration, out-of-stock situations, loss of revenue, and low effectiveness of pricing and promotion initiatives.

For instance, distributors still rely on phone calls to place orders, creating a need for additional resources to operate the call centres. Most distributors don't have a lot of technology infrastructure and depend on one or two systems to update sales and orders at the end of the day. They often don't want to use a different partner system to update inventory or place orders when working with multiple partners. These non-standardized processes are error-prone and lead to delays and omissions.

In addition, onboarding more distributors on a distributor management system (DMS) is effort and cost-intensive. The need to set up the system and provide ongoing technical support etc. makes it costly for agricultural companies to onboard hundreds of distributes. Clearly, a new approach is needed to activate and optimize distribution networks in emerging markets.

7 things agricultural companies need from a distribution management system

1. Streamline and simplify order management on the buy side and the sell side and get real time ordering information
2. Reduce cost of onboarding with self-service apps that require minimal support
3. Reduce cost to serve with self-service ordering to eliminate or reduce frequency of field rep visits
4. Improve delivery planning and increase shipment accuracy with advanced visibility to orders
5. Pay for what they use with flexible pricing models across affordable, byte-sized apps
6. Improve salesforce productivity
7. Reduce manual order touches

Accelerating profitable growth in emerging markets with technology

An agricultural enterprise needs a new approach to power an ambitious distribution strategy. AI & Automation technology can be used to drive efficiency in business operations.

Some of the unique benefits of utilizing technology in agriculture are;

1. Revamp vendor onboarding process
2. Automation of the ordering process leading to the digitization of orders and data capture
3. Place and manage orders on the go at the click of a button
4. Eliminating manual errors by centralizing data management
5. Near real-time visibility of the entire distribution network
6. Improve retail delivery, reach new markets and enhance the brand value

Changing with the times

Several factors, such as the cost to change, contribute to the inertia in the agricultural sector when it comes to revitalizing distribution networks. However, adopting new technology and reimagining the distribution process can unlock significant gains for these companies. There is a gold mine of unmet demand in emerging markets; you only need the right solution to tap into it.

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Strengthen the E-commerce Supply Chain

How CPG players can capitalize on their data gold mine for competitive advantage

Case Study

Summary

It is no longer news that E-commerce adoption has grown exponentially. This is true of CPG and most traditionally laggard categories within it. CPG companies need new tools in their armour to leverage this boom and power business growth. They need a comprehensive data and analytics foundation to serve as a feedback loop. How can CPG players build this foundation and capitalize on it? Read on to find out.

Mass retailers' online sales in 2020 were 93% higher than in 2019, McKinsey reported. BCG found that during the half-year ending January 31, 2021, online home goods sales surpassed physical sales for the first time. While growth in categories like home goods, apparel, and electronics was rapid even before the pandemic, the surprise came in laggard categories like pet care, household care, and groceries, which reached an online penetration of 10% or more.

The consumer packaged goods (CPG) industry was facing a watershed moment. E-commerce, a channel hitherto considered attractive but slow, had grown exponentially within a few weeks. While the pandemic triggered this acceleration of E-commerce adoption, it was not a temporary blip. 43% of consumers in the McKinsey study also said that they plan to buy at least some of their groceries online even after the pandemic-related lockdowns are removed.

Yet, it's also telling that only 6% of households shop exclusively online, as Neilsen finds. An overwhelming majority of customers still prefer in-store shopping for their needs. This means that CPG players need an integrated omnichannel strategy to serve customers when they are looking for something. E-commerce presents an enormous opportunity and a daunting challenge.

E-commerce hasn't been CPG's most profitable channel

In a recent Gartner poll, over 35% of CPG executives said their biggest concern regarding E-commerce was profitability. Naturally, CPG organizations aren't designed to cater to the instant-delivery models that customers have come to demand today. Their Supply Chain is not refined for E-commerce, making fulfilment significantly more expensive.

Customers demand a whole lot more

From expected delivery times being as much as 5-7 days only a few years ago, today's consumers expect same-day delivery as the bare minimum. Across markets, new-age and digital-first retailers are offering as little as five-minute deliveries placing immense pressure on CPG players to fulfil or be left behind.

Demand volatility is at an all-time high

Even before the pandemic, the weekly demand volatility rose by 70% between 2013 and 2019. In the following year, BCG's clients experienced another 50%. Even as CPG players hold less and less inventory for shorter periods, they also have to address growing demand volatility.

E-commerce is not a monolith

Within E-commerce, there are multiple channels such as in-store pickup, e-tailer, marketplace, and direct-to-consumer (D2C). Each of these channels grows at different rates presenting its unique challenges. For instance, in-store delivery demands full portfolio availability, but customers will likely substitute it with another similar product when there is a stockout. On the other hand, the D2C channel can restrict itself to very high-demand SKUs, but any trouble in availability will result in a lost sale.

Leveraging the data gold mine

As the industry evolves, sales volumes grow, and the ecosystem becomes more complex, CPG players will find it increasingly difficult to fulfil demand without accurate, real-time off-take data to manage inventory. The result is lost sales, missed shipments, and penalties. To ride the E-commerce growth wave without compromising efficiency and profitability, CPG players need better visibility into their Supply Chains. They need to be able to make agile, data-driven decisions. Failure to do so will lose 'seller authority' – and market share, passing swiftly over to competitors. CPG companies need a comprehensive data and analytics foundation to stay competitive and power growth to serve as a feedback loop.

Capitalizing on one's data strengths

The good news is that most CPG players are already sitting on mountains of valuable data across multiple sources such as:

- .com storefront data generated by the brand's E-commerce store
- Enterprise data generated by the brand's internal operations
- E-retailer point-of-sale (POS) data provided by e-retailers and third-party marketplaces
- Syndicated data obtained from social web or third-party data providers and research companies

The challenge, however, is that they do not have access to this data in usable form. In essence, CPG players have Pandora's box of data coming in different formats and from different directions, which is no basis for meaningful insights.

Building the analytics foundation

The real value of any CPG player's data gold mine is more in the mining than gold. All the data in the world can be harnessed only when it is consolidated and harmonized. To convert raw information into valuable insight that can be used to make better decisions and drive more effective E-commerce operations, CPG players need a robust data infrastructure comprising of:

Data harmonization

Ingest, harmonize, cleanse POS, search, click-stream, and digital shelf data.

Demand prediction

Using AI to accurately predict demand, enabling more accurate fulfilment and fewer penalties.

Insight generation

Drilling into the "Path To Purchase" uncovering customer trends and purchases.

Activation

Improve the "Digital Shelf" to drive increased sales and market share.

Realizing business outcomes with actionable insights

Once the foundation is set, CPG companies have immense opportunities to build the dashboards and insights they need to meet their goals, needs, and long-term vision. Each stakeholder can view the insights they need in real-time and make effective data-driven decisions in advertising, marketing, sales, operations, fulfilment, finance, or even HR.

Sales Trend/Share Analysis

Track your market share against competitors across key categories and brands

Profitability Analysis

Use e-retailer PoS data (Profit Per Unit and Cost of Goods Sold) to determine optimum product margin vs thresholds

Inventory Planning

Leverage AI/ML for the optimization of inventory control and supply planning

Media Performance Analysis

Consolidate media performance metrics such as ROAS, ACOS, CPM, CTR, Impressions, etc. to optimize media spend

Lost Buy Box Analysis

Uncover the factors driving Lost Buy Box by using data from the product detail page

Share of Search Analysis

Analyze paid/organic search performance and insights into campaign execution

Organic Search Performance

Identity leading organic search terms, find out where your search strategy is winning or losing

Ratings and Reviews Analysis

Gain visibility into ratings and reviews, identify under-performing SKUs compared to the competition

Product Page Content Compliance:

Validate product content and integrity analysis, compare the content with internal company content

Get started on your data and analytics journey

Every CPG player's data and analytics journey is unique. Your analytics adoption journey can differ entirely from your competitors depending on your categories, products, customers, channel strategy, location, Supply Chain design, goals, vision, and everyday challenges.

> For instance, a client of EdgeVerve, a CPG major in the US, was experiencing low case-fill rates for the E-commerce channel. This channel's sell-in requests were mainly erratic and intermittent, thus resulting in a low fill rate and 'out of stock' penalties. With TradeEdge, they saw significant improvement to the customer experience and the bottom line — 6% in case fill rates with 4.5% lower inventory, fewer out-of-stock penalties, and 1.4% of category revenue.

In our experience, a CPG player's analytics journey is most fruitful when they have a well-defined problem to solve. This can be specific to the example above or organization-wide opportunities such as plugging cost leakages, optimizing fulfilment efficiencies, identifying new growth opportunities, etc. To make the most of your data gold, clarify what you're mining for. In doing so, don't lose sight of the serendipitous findings that analytics can offer.

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Elevating Human Intelligence

AI is the key to enterprise resilience because it's just like us

Badri Devalla
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Summary

The recent past has been a time of both unprecedented change and remarkable adaptability. The pandemic, possibly the most significant global event of this generation, has also been a testament to the spirit of human resilience. To me, it is no surprise that the most compelling technologies we know today are built on an inherently human foundation. The dynamism, effectiveness, and scalability of AI make it a valuable asset for enterprise growth and resilience. The increased focus will make it a core, and perhaps the most important, element in infrastructure decision-making. An enormous part of AI's appeal lies in its ability to mimic human behavior, a crucial feature in developing future-ready strategies. The technology has already disrupted a broad range of areas, from healthcare and customer service to product innovation and crisis management. So, let's inspect how AI has drawn on human behavior to augment enterprise resilience and efficiency during the pandemic.
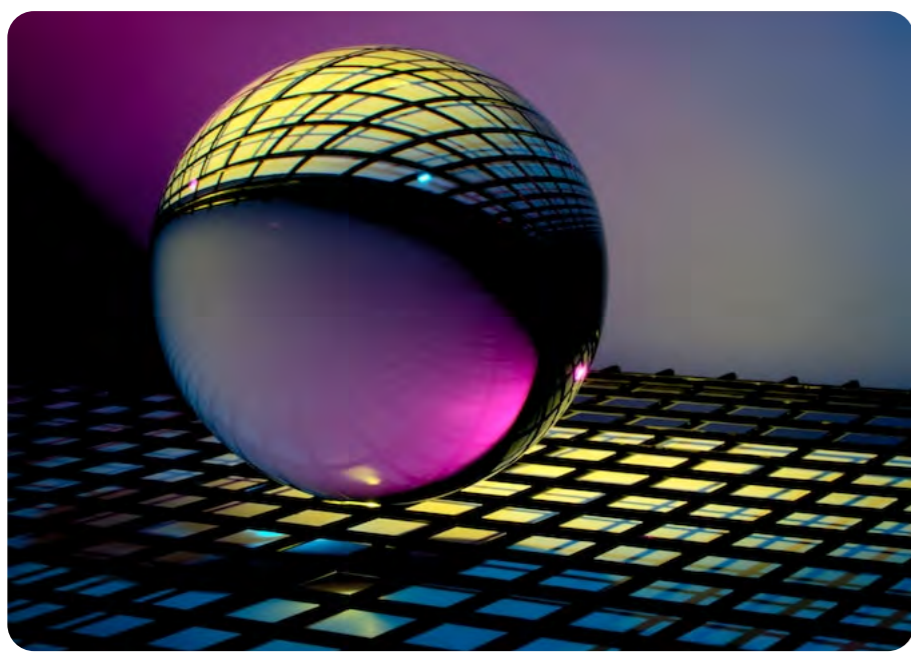
Imitating Efficiency

There are three core functions where AI has made a significant impact during the current crisis. While the overall contribution is broader, it is here that we believe AI's most human like tendencies came to the fore.

Risk Management

The pandemic has compelled enterprises to revisit their risk management policies, ensuring that a rarely invoked clause was front and center of contract discussions. Force majeure clauses are usually included as a formality under the assumption that they may never need to be enforced or evaluated. In these unprecedented times, however, the unexpected becomes normal. Negotiating contracts with a global supplier and partner base while ensuring diligence and accuracy is no mean feat, much less when required to be completed at speed. Enterprises need help with extracting clauses such as non-performance and termination from procurement contracts, extracting force majeure clauses from contracts both historical and current, and evaluating all contracts for risk and recourse.

> By using intelligent contracts analysis driven by AI and computer vision, enterprises have been able to inject efficiency into the process, allowing skilled legal teams to focus on adding value through targeted counsel instead of keeping them occupied with mundane and error-prone work. Intelligent contract analysis has also helped procurement teams find ways to unlock contract value by invoking discount clauses and renegotiating supplier contracts efficiently, allowing companies to optimize spending and capital allocation.

It will enable enterprises to understand the various covenants and SLAs in their agreements while aggregating intelligence to ensure business continuity.

Execution during a Disruption

The pandemic has placed a premium on business continuity and agile innovation. To thrive, enterprises must swiftly adapt, deliver new products and services on the go, and deliver exceptional customer experiences. Digital transformation is essential to this end. Consider the case of lending businesses. With capital at a premium, timely credit is the lifeblood of small and medium enterprises, offering them offering unwavering support to tide over this difficult period. Enterprises are now using AI to segment their lender base and de-risk their portfolio through a nuanced understanding of delinquency rates. Even beyond business, enterprises are turning to AI-based applications to adjust. Supply chain disruptions don't just affect consumer-facing businesses but also areas such as relief work, helping organizations deliver food and essentials to those most in need. Smart technologies are now assisting organizations in creating a digital twin of their physical supply chain before allowing human talent to make informed decisions based on near real-time intelligence. We expect AI-led initiatives will continue to lead business continuity plans as enterprises discover the critical role cognitive capabilities play.

Continuous Learning

Another key driver of AI consumption is continuous learning. Much like the human mind, AI-based technologies learn from various sources, including training data, application data, and their inferences. This ability to improve continuously makes AI- driven applications an attractive proposition for enterprise adoption. The rapid strides in NLP and computer vision create valuable synergies for AI to move beyond purely deterministic tasks and partner enterprise human capital. Besides, continuous learning has other benefits.

> Being short on data need not be an obstacle for enterprise AI/ ML adoption because these tools can utilize new data to make better predictions. Testing tools, fraud detection, recommendation engines, and procurement intelligence are just some areas in which AI platforms can get smarter over time.

As with any human career, direction, and purpose are integral to success. That's why enterprises would do well to build a robust and specific problem statement to maximize intelligent interventions.
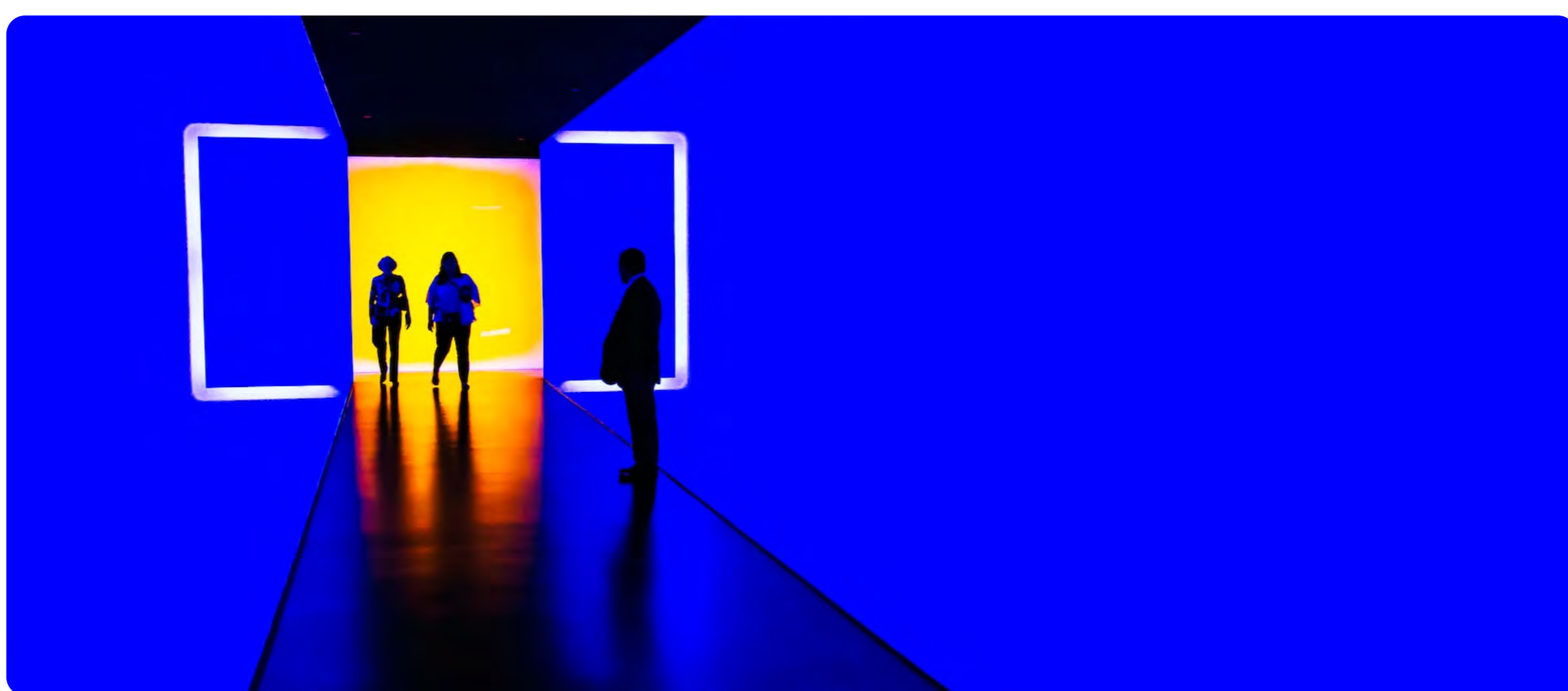
The Importance of Augmenting Human Capability

Humans, by nature, are resilient beings, both physically and emotionally. It is natural for AI to follow suit and draw on the best our species has to offer. The symbiotic relationship between these core value propositions – efficiency, accuracy, reasoning, creativity, and empathy – will pave the way for enterprises that will thrive in the long run. Either of these approaches in isolation could, however, offer a below-par result. Purely manual intervention is inefficient because deterministic tasks at scale can quickly erode accuracy while human decision-making inevitably carries some bias.

On the other hand, ERP and CRM systems, for instance, can be super-efficient but not adaptive. Furthermore, they cannot consider the nuances available to the human mind. It is here that human-digital work comes into its own, helping organizations move forward on the cognitive continuum from reactive to proactive and then predictive with immense accuracy and agility.

A Special Blend

Humans are the most resilient species, and AI the most intelligent technology. Human resilience and creativity combined with AI's hyper-productivity, intelligence at scale, and accuracy will make enterprises more resilient, and companies would do well to harness this value. Organizations must revisit their technology strategy in the crisis's aftermath, and AI-driven transformation must be central to their plan. However, people will remain an enterprise's most valuable asset, which is why organizations would do well to augment their human resources with on-demand intelligence and efficiency. People-first technology-led transformation will be the cornerstone of resilience as enterprises seek to reach unprecedented levels of excellence following a halt that has provided much introspection and courage.

edgeverve

Connected Automation
Powering the Connected Enterprise

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Summary

Automation is rewriting the story of human productivity. Enterprises prioritize Automation to maximize productivity but fall short of optimizing it by taking a tactical, siloed and disconnected execution approach. How can an enterprise plan and execute a seamless and scalable Automation approach? Read on to know more.

Automation has shape-shifted large global enterprises and is rewriting the story of human productivity. A study suggests that almost 95% of enterprises prioritize process automation to maximize productivity. However, a tactical, siloed, and disconnected approach focused on effort and cost savings is holding them back from scaling and unlocking the true potential of automation. The pursuit of quick, small wins to showcase value has led to fragmented automation initiatives across the enterprise. These empower just pockets of specialists and do not draw on enterprise-wide data sources, limiting their effectiveness.

But what do companies need to scale automation? What could be holding them back? How can they drive a holistic automation agenda? What are the right metrics to influence and drive? How can a broader ecosystem of employees be enabled to drive automation at scale? And how should this operating model be structured to democratize automation yet retain control on security aspects? These are questions that most businesses are grappling with today. Here are a few thoughts on moving forward and scaling their automation programs.
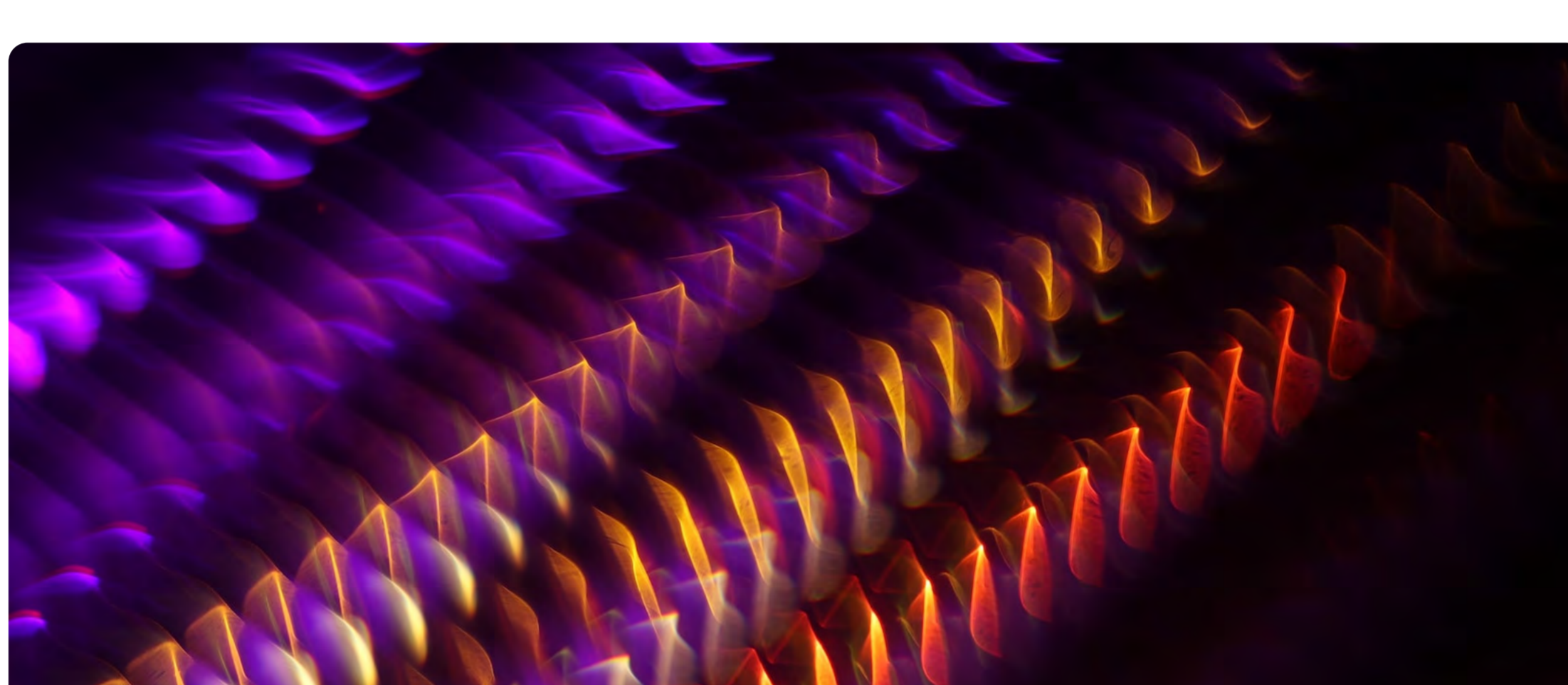
Four Levers to Drive Automation at Scale

01. Forge deeper connections between Processes, Data, and People.

As enterprises take a more strategic view of automation, data, human interactions, and complementary technologies, there is an opportunity to reimagine business models, customer interactions, and execution. Companies need to map out and radically rethink customer journeys before automating them. To align with the digital transformation of North Star, companies need to take a more strategic view of automation and see it as an enabler of customer impact. In a panel discussion at AdvantEdge 2021 [1], Bernard Shafrik of Forrester notes that "Conversations have shifted from cost-cutting to revenue growth and exploring new business models via automation technologies."

> It is here that Connected Automation, a human-centred holistic approach, can help ensure that enterprises automate end-to-end processes supported by data and cutting-edge intelligence. To derive sustainable value, organizations need to build capacity to deliver personalized customer journeys based on hyper-efficient execution. This would reshape the enterprise to tap human expertise for empathy and innovation while leveraging bots for productivity and quality.

Connected Automation assists enterprises forge deeper connections between Processes, Data, and People.

People:
Wider connection of people into automation journey through low code platforms for citizen developers and enterprise personal automation assistants.

Process:
Stronger connection of processes into automation journey with end-to-end process orchestration through workflows and auto-automation.

Data:
Deeper data connection into an automation journey through contextual data discovery, intelligent document processing, and advanced insights.
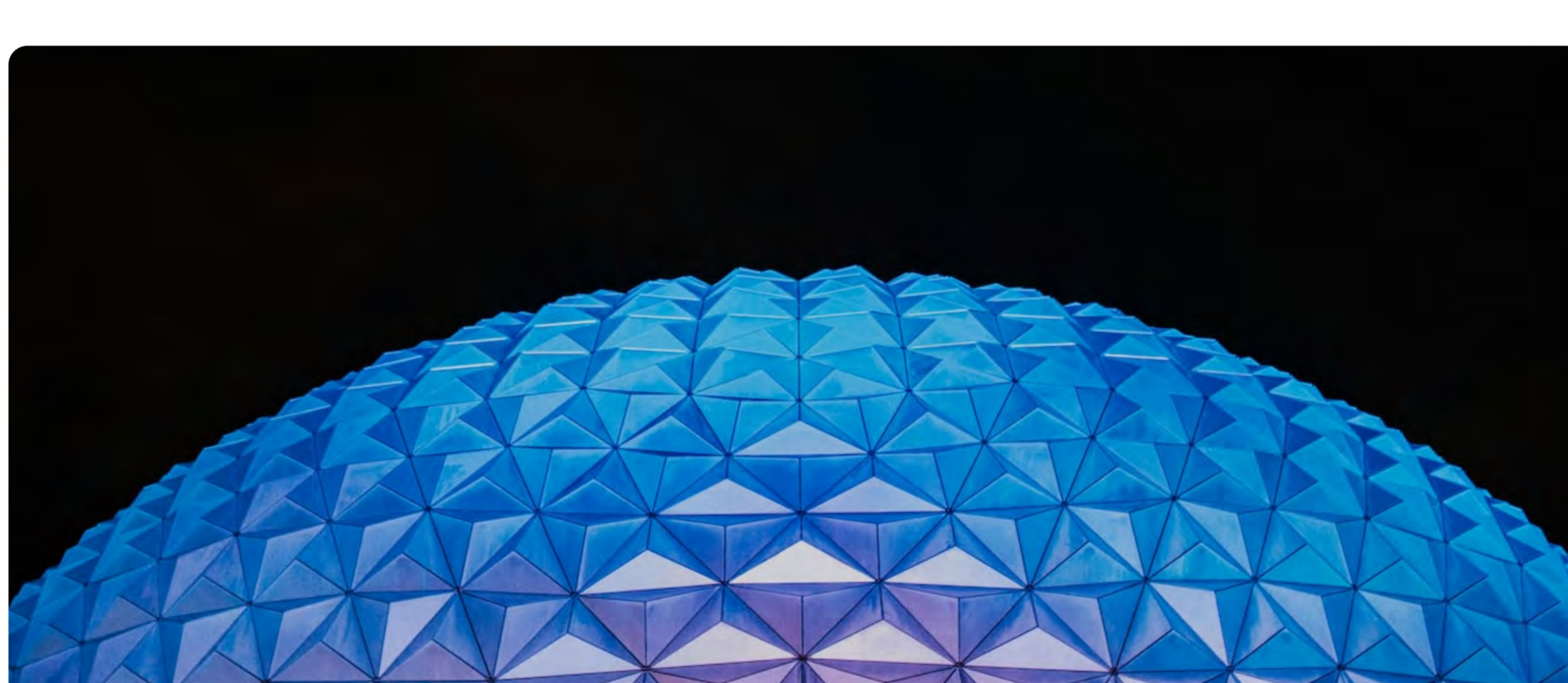
02. Think beyond the bot

There is a growing realization that automation isn't just about bots. Instead, it's a suite of products and adjacent technologies that help drive the enterprise digital agenda.

> Most companies struggle with scaling automation because they apply RPA on a task level instead of an end-to-end business process level. To achieve end-to-end automation, they need to deploy a set of automation technologies.

These could be low code tools that bridge the gaps left by RPA, decisions and rules engines, process and task mining, document processing, natural language processing, unstructured content processing, and even governance functions that allow the distribution of automation tool capabilities across the company.

Also, after the bots are deployed, they need to be monitored and measured for performance. Active bot management is required to preempt and prevent bot failure that could adversely impact business outcomes.

03. Democratize to scale

Running a tight ship through automation CoE may sound great in theory but often stifles automation scalability. In addition, today, most automation initiatives are triggered and owned by IT teams. Companies need a democratized environment where everybody has the ability and the tools to drive automation.

> The evolution of low-code and no-code platforms means that the status quo can change. In addition, it ensures that non-technical users play a significant role in automation design and deployment.

Consider the case of citizen developers. By enabling employees to design and develop automations that improve their efficiency and productivity, organizations hand technology to control back to the people it affects the most, and the early results are staggering. Citizen developers can scale the automation footprint by over 70% while reducing manual effort. Empowering employees to build automation programs allows them to become authors of an enterprise's transformation journey instead of mere actors in a broader strategy. With Connected Automation, employees can now help organizations move from process discovery to design and deployment, all while making their roles more strategic, as bots customized to their requirements take over complex asynchronous processes.

04. Create an operating model that supports scale

Automation, like innovation, works best when it occurs everywhere in the company and not just in silos. A distributed approach that fosters collaboration and doesn't need a CXO to sign off on every little thing would be the desired setup. However, there is a possibility that such a model would descend into chaos.

> Companies should aim for balance – a central story owned by businesses and supported by IT that is then translated to the application at the citizen developer level.

Each team should play to their strengths and own the aspects of the story they are good at. For instance, ensuring security and reusability, preventing redundancy, overlaps, manual workarounds, etc., are areas that corporate IT teams should own. Similarly, the business users should own what to automate and how the experience is delivered.

Create deeper connections with connected automation

It's clear from these four drivers that successful scaling depends on the strength of connections between automation and Process, Data, and People. And that is the premise of connected automation. By connecting these three core aspects, connected automation eliminates siloes and hidden areas. It brings forth all the available data in the organization – improving digital visibility to deliver employee and customer outcomes.

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