



The
Big Pivot

POINT OF VIEW | AUTOMATION

Automation: The Disruption Defense

How to achieve cost savings and business improvements during the pandemic and beyond

FEBRUARY 2021



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Achieve efficiency; unleash capabilities



From startups and non-profits to global industry leaders, nearly every organization has a fundamental goal to constantly grow and improve itself. Finding ways to do things better, faster and smarter has always been the name of the game. Today, however, the rules are changing. With advanced automation technologies readily available, companies can achieve rapid efficiency gains and unleash new capabilities in nearly every part of the business, driving competitors to follow suit or fall behind.

The race toward digital transformation has been in progress for a decade or more, but the events of 2020 served to quicken the pace. In fact, a recent study by NTT DATA and Oxford Economics points out that massive disruptions around the world have raised the stakes for digital while affirming that “at the heart of these big changes is the set of emerging technologies enabled by AI [artificial intelligence] and automation.”¹

The global COVID-19 pandemic and resulting economic downturn thrust unprecedented challenges on organizations of all sizes in all industries around the world. As quarantining and social distancing took hold, companies came under immense pressure to replace face-to-face interactions with digital business models, support a suddenly remote workforce and carry out decidedly manual processes with fewer hands on deck.

Automation, in its many forms, enables businesses to overcome these obstacles and get back to operating with some sense of normalcy. It also plays a critical role

in controlling costs for companies facing severe budget and operating constraints as a result of the pandemic. Indeed, a study from Everest Group conducted in the summer of 2020 found that more than 80% of enterprises see automation as a key lever to support cost optimization and resilience.²

Although it's clearly a practical tool to help companies survive the current crisis, automation isn't just about cost cutting. Beyond addressing the most urgent needs, companies use automation to stabilize operations and insulate core businesses from future disruptions. Automation is also an investment in long-term growth, and it sets the foundation for an intelligent enterprise.

As companies rebuild businesses, automation will be a driving force – enabling heightened business performance, rewarding work experiences and improved customer service. The NTT DATA and Oxford Economics study reports that 49% of employee respondents say there will be major changes to the tasks their organizations require in the next three years, and 41% say AI and automation will disrupt their industry.¹

But how do organizations implement automation at scale? This paper looks at various real-world applications of automation and offers advice on how enterprises can integrate automation within operations, for both near-term savings and long-term reinvention.

Understanding the range of automation

Automation, without further qualification, is a broad term that can be used to describe any number of technical projects that enable machines to perform independently of humans. It's a word thrown around so often that its meaning has been diluted. This lack of understanding can lead to wasted efforts and unmet expectations through a lack of focus and precision. For an organization to realize the benefits of automation, it must start with a clear idea of what it's trying to accomplish, as well as a firm grasp of the tools at its disposal.

For the purposes of this paper, we'll break down automation into two areas of discussion – robotic process automation and intelligent automation – though they aren't mutually exclusive. Automation solutions can start simply and evolve over time to offer more depth and sophistication as organizational objectives require.



Robotic process automation

Robotic process automation (RPA) performs simple sets of instructions written by a human coder. The technology is so named not because there are physical robots involved but because the program is robotic in its execution – with repetitive actions that yield predictable results.

RPA is at its best when deployed to take over high-volume, often tedious and time-consuming tasks that exist at the core of every organization. These are the menial, yet no less important chores that tend to be the bane of office workers everywhere. It could be processing payroll forms, sorting customer orders, conducting credit and background checks, simplifying patient scheduling or issuing shipping notifications. When performed by an automated system, tasks like these get done faster and more accurately, and workers can direct their time to tasks that require more of a human touch.

At organizations looking for cost savings, RPA bots can typically be developed and deployed in a few months or less. Given a little more time, RPA could be used to digitize entire processes once performed manually (such as managing paper contracts). This digitalization has allowed many businesses to keep the wheels turning even as the pandemic forced workers out of the office.

Intelligent automation

As RPA bots are used to complete more tasks and integrate with other technologies, a more complex and powerful proposition emerges: intelligent automation (IA). Beyond the ability to control routine tasks, this type of automation often incorporates AI, machine learning (ML) and natural language processing (NLP) to deliver wide-reaching, transformational improvements. While RPA is programmed to follow strict rules, IA can interpret those rules and even make new ones. It can pull and process data from many different sources, consider multiple variables and exceptions, and make informed decisions based on prior experiences.

Millions of consumers experience IA through their interactions with sophisticated customer service operations. At a telecom provider, for example, an automated agent might use voice recognition, NLP and AI to help guide customers through the process of ordering new products, paying bills or even troubleshooting service issues. But IA is also at work for companies in ways most people never see.

One company might take advantage of an AI-enabled optical character recognition (OCR) engine to read mountains of documents, extract pertinent information and apply the data to improve a different business process. Another firm may use conversational AI to manage inquiries from customers or employees 24 hours a day, inferring their intent and using it to take appropriate sales- or HR-related actions. Examples like these can not only reduce the human workload dramatically, but also drive enhanced, previously unattainable business results. While effectively implementing IA often requires an initial investment and more time to develop, the long-term savings and performance benefits to the organization can be profound.

The five steps to automation

Whether in business, government or the non-profit space, most professionals can probably think of at least one good use case for automation in their organization. But for companies still deeply invested in legacy systems and cumbersome processes, breaking free of those binds may be easier said than done. And although most CIOs have come to recognize the advantages of automation, leaders in other parts of the organization may be harder to convince.

Especially in difficult times like these, executives likely have many cost-cutting options to consider. Approving new investments in technology may feel like too big of a risk. With project leaders unsure of exactly where to begin or how to prove the value of automation, potentially great solutions can wither on the vine.

With those challenges in mind, here are five important steps progressive leaders can take to start down the path to automation and continue to guide their organizations toward meaningful, transformational improvements:

- 1. Pinpoint opportunities.** Project leaders want to know, “Where can we make the largest impact in the least amount of time?” The starting point for automation is different for every business, and data holds the key to finding it. Expert automation consultants can combine experience and exploratory tools to quickly identify which processes should be targeted for automation. In most cases, these will be high-volume, repetitive and time-consuming tasks that are often found to be bloated with redundancy or hindered by unnecessary bottlenecks. At the same time, data analysis may reveal larger trends at the organizational level that present opportunities to implement a broad scope of IA over time.
- 2. Demonstrate return on investment (ROI).** Calculating the ROI of automation investments might not be as straightforward as, say, moving a data center to the cloud. Data isn’t only important for finding processes to automate; it’s also essential to proving that automation saves the company money. Project leaders need to identify the quantifiable metrics that ultimately determine success versus failure, and then clearly present the improvements that automation brings.



- 3. Land and expand.** For teams with automation aspirations, starting small and demonstrating quick wins will gain the confidence of leadership and pave the way for larger projects. Begin with a proof of concept or smaller scale project that will produce tangible results in six months or less. Concurrently, keep in mind how multiple, incremental improvements can contribute to the larger picture of digital transformation.
- 4. Think beyond headcount.** It’s natural to correlate automating tasks with a reduction in workforce, and that may indeed be necessary for organizations struggling with deflated demand. On the other hand, automation success can be measured in many ways that don’t include eliminating jobs: higher employee productivity, reduced turnover, fewer errors and increased customer satisfaction, to name a few.
- 5. Foster an automation culture.** Every automation victory reiterates the message that spending money on technology today can pay off in the form of massive savings and performance enhancements over time. The more executives and employees understand the benefits, the more likely they are to adopt a pro-technology mindset of continuous improvement.

IT and industry use cases



A large and sprawling enterprise, replete with diverse business functions, is like an orchard of automation opportunities ripe for the picking. Countless business processes could be streamlined, sped up or otherwise improved. But, not surprisingly, it's quite common for organizations to get a first taste of automation in the IT department itself.

There are several good reasons for this. First, the CIO organization is most likely to be in tune with the technology marketplace – it has knowledge of current best practices and may already have relationships with potential automation partners. Second, as technology specialists, the IT staff understands the benefits of implementing automation and is the most likely group to welcome the resulting improvements without resistance. IT also provides an excellent testing ground for automation projects. It affects mostly internal services, and any mishaps won't directly impact customer-facing operations. Lastly, starting in IT helps the technology team get comfortable with the nuances of implementing automation before endeavoring to help other departments with similar projects.

With that built-in head start, the IT department can gather plenty of low-hanging fruit in its own backyard, with automation projects that quickly optimize operations and service delivery. Some of the most commonly automated tasks, such as resetting passwords and managing network access

privileges, used to require help desk staff but can now be completed through an employee self-service portal. Automation can also take over many system maintenance tasks, such as detecting a memory shortage and fixing it before it leads to system downtime. Each improvement frees up time for a skilled IT practitioner to put their talents to better use.

Longer term, automation plays a foundational role in IT's adoption of DevOps practices. With automated processes enabling rapid software development, testing and feedback, the technology team can speed the delivery of increasingly valuable services throughout the company.

Extending the reach

The cost-saving and performance-enhancing benefits of automation can be equally applied in other business support functions, such as accounting and finance, human resources, sales and marketing, and customer service. And that's to say nothing of the company's core operations.

The following examples show a variety of business sectors where automation has been proven to have enormous potential, to both minimize the damage of the pandemic and position companies for a flourishing future.

Manufacturing



Just as physical robots automate manual processes on the factory floor, much of the knowledge work involved in manufacturing can benefit from automation as well. This includes streamlining processes in demand planning, purchasing, quality control, logistics, customer relationship management and other areas. Adoption of such solutions has become especially critical in the wake of the pandemic.

The impact of COVID-19 on manufacturing companies has been as varied as the products these companies make. For example, demand for household goods, consumer electronics and workout equipment shot up as the virus spread and the lockdowns began. Meanwhile, sales of cars and clothing went downhill as workers reduced commuting and financial anxiety escalated. In almost every situation, manufacturers were caught off guard by the sudden shake-up of market dynamics and the disruption of workforce availability.

As unpredictably continues to confound the world's supply chains, a key priority for manufacturing companies is to be as flexible, nimble and resilient as possible. Automation will not be the only solution, but it will undoubtedly contribute to these goals. However, another recent NTT DATA study found that just 20% of manufacturers had achieved automation maturity prior to the pandemic.⁴

One NTT DATA client, Greene Tweed, achieved significant gains from its automation efforts.⁵ A manufacturer of industrial materials for various industries, Greene Tweed transformed its global operations with an SAP solution that provides real-time insight into 22 processes at five plants via automated workflows and custom dashboards. Not only did automation help the company increase production yields and revenue, but it was also able to reduce product waste and improve customer service.

By harnessing the power of technology to minimize wasted effort and gather valuable business insights quickly, manufacturers can achieve the elasticity they need to adjust to whatever surprises lie in wait.

Financial services



The pandemic set off a domino effect of turmoil in the financial sector as the world's complex latticework of financial systems experienced the fallout of quarantine, layoffs and economic decline. Consumer banking institutions had to shutter retail locations and pivot to meet unprecedented demand for digital banking services. Insurance companies faced similar challenges with claims processing as call centers went virtual while also encountering spikes in queries about travel and business interruption insurance. Investment houses scrambled to understand the impending impact of the virus on financial markets and offer informed advice.

Even before the pandemic, automation was quite prevalent in financial services as these companies regularly use RPA to speed up routine transactions, extract information, run reports, complete claims forms and accomplish other repetitive tasks. In the NTT DATA and Oxford Economics report, financial services organizations were most likely to say AI has been strategically implemented in key functions to optimize specific processes.¹ Adoption of these solutions will certainly continue to pick up as companies work to control costs amid challenging conditions. But as the effects of the pandemic linger, automation will also help financial companies adjust to the new realities, finding innovative and improved ways to empower employees and engage with customers.

For example, the shift to working from home is likely to endure, putting pressure on IT teams to equip remote employees through automated service delivery and efficient infrastructure. Externally, financial firms will continue to invest heavily in digital channels — including powerful online applications, chatbots and virtual agents — to serve consumers with less human contact required. Investment firms will build on prior use of automation to analyze mountains of market data and economic indicators, carry out rules-based securities trades and deliver incredibly accurate recommendations tailored to clients' needs.

Looking to the future, more sophisticated IA may hold the key to making financial services companies — indeed, the industry as a whole — more resilient in its ability to manage risk and cope with unexpected upheaval.

Healthcare



No other industry has felt the impact of the pandemic more than healthcare, with its employees working at the front lines of the crisis. On top of the complexity of treating and preventing the virus itself, providers have been forced to rapidly adapt to serve patients safely. In addition to managing an explosion of telehealth sessions through videoconferencing, providers are leveraging content-rich websites, digital apps, chatbots and other self-help tools to schedule appointments, deliver test results and follow up with patients. In this way, automation is keeping people safe at home and enabling healthcare workers to focus more time on critical patient care — all while keeping the costs of healthcare under control.

In one client example typical of 2020, NTT DATA worked with a major hospital to enhance the clinical service desk it used to support the patient-facing portal for its telehealth visits. With more automated features to help patients help themselves, the client was able to handle a 140x spike in call volume for telehealth support with 97% first-call resolution.

Healthcare payers are scaling up similar capabilities to manage increased volume and help consumers balance their health and financial needs through this time of uncertainty. And behind the scenes, healthcare scientists are working with IA to stop the spread of the virus. AI, data analytics and ML are already at work in contact tracing, building predictive models, optimizing the use of hospital beds and ventilators, and redirecting healthcare resources to vulnerable areas. In late 2020, NTT DATA announced a solution to help healthcare providers train AI to detect COVID-19 through chest imaging, even in asymptomatic patients.⁶

Though it's come under tragic circumstances, the COVID-19 crisis has driven a new wave of innovation throughout the healthcare sector that could not only help prevent the next pandemic but also forever change the way we deliver and consume healthcare services.

Public sector



The big benefits of automation aren't reserved for big business, and public organizations from local governments to federal agencies are proving this point. They're deploying automation in ways that bring greater convenience to citizens, promote public safety, conserve natural resources and provide other improvements — all without the need to add staff or call for tax hikes. In fact, NTT DATA research shows that 68% of public sector agencies accelerated their digital transformation plans during the pandemic and 31% are trying to identify opportunities for growth.⁴

Large government agencies, which have long been notorious for bureaucratic, forms-laden processes, have enormous opportunities to reduce not only the need for manual labor but the errors that result in costly rework. The most familiar example may be the Internal Revenue Service, which deployed RPA in various forms of processing, compliance and enforcement to keep service levels high despite budget cuts in recent years.

At the local level, the City of Houston, Texas, was losing 15 billion gallons of water annually to leaking pipes. Working with NTT DATA to install an internet of things (IoT) network of sensors, the city realized major savings through the ability to automatically regulate water pressure. Other cities, including Las Vegas, Nevada, have enhanced services like traffic management and police dispatch through automation, AI and ML.⁷

Today, with the pandemic continuing, governments are focused on applying technology to curb infections. The City of Austin, Texas, for example, launched a self-service tool on its public health crisis website, where a chatbot helps citizens determine if they should get tested for COVID-19.⁸ The tool, built by NTT DATA on the Salesforce platform, guides citizens through finding a testing location, scheduling an appointment and managing the follow-up, all while collecting crucial data to help the city track the spread of the virus.

Defend against disruption

No matter the industry or the geography, there's a place for automation technologies in every organization. Automation is an incredibly versatile tool that can be applied to any number of specialized tasks.

For companies and public institutions alike, the great challenge of 2020 was surviving the pandemic, and automation has served organizations well in controlling costs and maintaining business continuity. But the coming months and years ahead will bring new challenges as well. With a COVID-19 vaccine now in distribution, it's all but certain that many stagnant businesses will see a surge of pent-up demand when the world reopens for business. Automation will be needed there too. And as organizations continue to cope with the lasting effects of the pandemic and defend against new threats, automation and AI will live at the heart of accelerated digital transformation to achieve those goals.

Even more encouraging is the fact that automation solutions are continually becoming more accessible and affordable. As is the lifecycle of many technologies, solutions that were once highly bespoke creations requiring months to build and implement are becoming increasingly plug and play. In other words, it's getting faster, easier and cheaper to put automation to work.

With near limitless applications and low barriers to entry, automation should be inextricably woven into the fabric of every organization — bringing progress and prosperity with it.

About the author



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Let's get started

See what NTT DATA can do for you.

Read more about our automation offerings on our [website](#) and contact [Tim Musselman](#) to begin your journey toward cost savings and business efficiency.

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