



Giving Power to the Machine: Offering Technology the First Right of Refusal

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Many companies are digitally transforming key operations, looking for ways that automation technologies such as artificial intelligence (AI), analytics, and machine learning can increase both productivity and customer engagement while reducing costs. Over the past two years, C-suite executives have banged the drum for change. Nearly half (47%) of CEOs surveyed in 2017 told Gartner they were under pressure from their boards to make digital change happen.²⁴ CIOs in 11 of 15 industries said digital transformation was among their top three priorities for 2018²⁵ and almost one in four CIOs said they have deployed AI technology or plan to in the near

²⁴ Gartner 2017 CEO Survey Infographic, April 27, 2017, accessed at <https://www.gartner.com/smarterwithgartner/2017-ceo-survey-infographic/>.

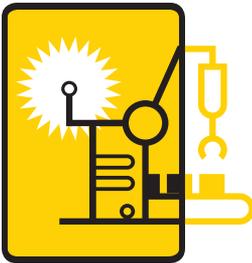
²⁵ "Here's Why CIOs Will Be the New Executive Leaders," Gartner 2018 CIO Agenda survey, October 7, 2017, accessed at <https://www.gartner.com/smarterwithgartner/heres-why-cios-will-be-the-new-executive-leaders/>.

future.²⁶ IDC predicts overall spending on digital initiatives will continue to rise, reaching close to \$2 trillion by 2022.²⁷

In spite of these broad trends, there are many firms that continue to have difficulty making their digital transformation efforts pay off. A 2018 Forrester survey found that one common problem plaguing companies pursuing digital transformation was the limited scope of their efforts. For example, less than half of the banks surveyed were attempting to transform customer care at a time when customers were demanding it.²⁸

In our dealings with enterprise leaders attempting to lead their organizations in the adoption of new digital systems, and coping with the organizational changes they require, we find that many see themselves on a hamster wheel, trying to keep up with rising customer expectations that outpace enterprise initiatives.

In this article, we will describe why companies typically have a difficult time incorporating automated business processes, and the strategies leaders can employ to keep up with customer expectations while engaging workers to meet transformational goals.



Automation Starts That Misfire

Conventional approaches to digital transformation initiatives typically misfire because they don't go far enough on two fronts. First, they fail to automate all the work in a company that can be automated. Second, they don't identify, create, and staff the new, more critical jobs the company will need to thrive in a world in which customers, suppliers, business partners, and employees are all looking to use digital tools to accomplish their to-do lists.

²⁶ "Gartner Survey of More Than 3,000 CIOs Reveals That Enterprises Are Entering the Third Era of IT," October 16, 2018, Gartner press release accessed at: <https://www.gartner.com/en/newsroom/press-releases/2018-10-16-gartner-survey-of-more-than-3000-cios-reveals-that-enterprises-are-entering-the-third-era-of-it>.

²⁷ "Worldwide Spending on Digital Transformation Will Be Nearly \$2 Trillion in 2022 as Organizations Commit to Digital Transformation," November 13, 2018, accessed at <https://www.idc.com/getdoc.jsp?containerId=prUS44440318>.

²⁸ Ted Schadler, "The Sorry State of Digital Transformation in 2018," Forrester, April 24, 2018, accessed at <https://go.forrester.com/blogs/the-sorry-state-of-digital-transformation-in-2018/>.

It's not that companies don't want to automate. Judging by their AI investments, they certainly do. In a 2018 survey, 47% of companies said they are adopting at least one AI capability in their standard business processes, up from 20% the previous year. But only 21% of these firms said they were using AI across multiple business functions, and most said their investments made up less than 10% of their digital business budgets.²⁹ Clearly, companies are not automating all of the work that they could. It's therefore no surprise they are not seeing all the benefits they expected, from new products launched to costs savings realized. They could (and should) be doing much more.

A narrow approach to automation is counterproductive; it harms employee morale and consequently slows the adoption of new systems.

What gets in their way? We have seen that many firms conceive of next-generation technologies like AI as a path to reducing costs and replacing people rather than as a way to offer cross-skills training to empower employees to improve performance and deliver value-added service. A narrow approach to automation is counterproductive; it harms employee morale and consequently slows the adoption of new systems.

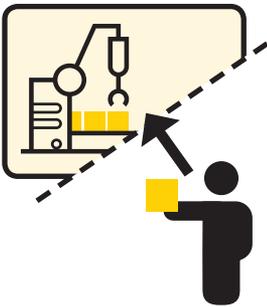
There are at least two additional issues at work. First, executives who think of automation and imagine robots on an assembly line, moving heavy chunks of metal and spraying paint on auto body parts overlook the potential of AI to perform other, value-added tasks—everything from analyzing market trends to writing news articles about corporate results. Secondly, concerns that aggressive, holistic automation efforts will produce widespread job loss (with accompanying morale problems) prevent some leaders from acting. But, like the story-writing application, this view fails to imagine the new types of jobs companies will need after they free employees from doing manual

²⁹ Irving Wladawsky-Berger, "The Current State of AI Adoption," Wall Street Journal, February 8, 2019, accessed at: <https://blogs.wsj.com/cio/2019/02/08/the-current-state-of-ai-adoption/>.

Failing to recognize how automation can create value across an organization, or to identify the new jobs that will be needed, and the people to staff them, will leave companies at a long-term disadvantage.

and knowledge work that can be done faster, better, and less expensively by AI. One only has to remember that jobs like social media manager, IoT application developer, and vision system engineer barely existed 15 years ago.

Failing to recognize how automation can create value across an organization, or to identify the new jobs that will be needed, and the people to staff them, will leave companies at a long-term disadvantage. Automating everything that can be automated is a key tenet of the Machine First approach to digital transformation. It means removing the unnecessary steps, costs, time, and errors that manual activities introduce in any process, and scoping out the new, higher-level work the company will need to operate in a world of accelerating digital change.



The Right of First Refusal

A Machine First approach to digital transformation looks at every business activity performed manually and asks: “Can a machine do it better?” This is what we mean by giving technology systems the ‘first right of refusal.’ Powered by analytics and AI, and by the digitization of all kinds of data (images, voice, printed words, video), automation drives efficiency by performing routine tasks faster and more accurately than ever before. Testing the machines on tasks and processes is best done with an agile development approach (rapid trials that apply lessons learned from trials that come before it) to develop new business processes and products.

See “The Crucial Role of People in a World of Extreme Automation” on page 47.

Importantly, the goal of this approach is not to deliver dramatic reductions in headcount. Rather, it is a way to free people from routine and repetitive work, and instead use their talents for more sophisticated jobs in which they do the new work their companies now need. In this way, a Machine First approach extends the boundaries of human potential. Managers will quickly see which tasks can't be automated and can then determine what new roles must be created to accomplish them. These new jobs may approximate or outnumber the jobs that have been given to the machines.

It's essential that employees be engaged and comfortable in the new ways of working, with technologies like AI creating systems that make it easy for them to do their jobs rather than forcing them to work with machines and systems in the name of progress or innovation. ***Ultimately, these technologies must become an integral part of employees' work lives, enriching and enhancing them.***

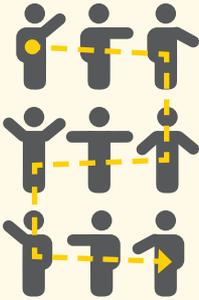
There are two stages in implementing the Machine First approach. The first is to identify those business areas that should be automated. While automation targets will vary by company, the overarching concept is that if a task will provide measurable benefits to the organization if it could be done faster, it should be automated. Closing the books at the end of each quarter is a good example and applies to most firms. Saving time on this repetitive process can add days to managers' schedules, days in which he or she can use to plan for future growth, or, to adjust spending based on recent performance.

The second stage involves redesigning manual business processes and using automation technology—software, hardware, and networks—to execute them.

A business process is a clearly defined set of tasks that when finished achieves a goal. Each process includes steps that people do and steps that machines can do. By analyzing current activities in a business process, and determining which tasks machines can do, a company can redesign the process so that machines perform more of those tasks, freeing up people to perform higher-order, value-added tasks that machines can't.

This stage begins with managers identifying both the physical and knowledge work in business processes that machines can and should do. The answers will generate a list of higher-value work the company should pursue; for example, what service improvements will customers value and pay for? The company can then develop a list of new jobs and skills the organization will need to provide those services, and help employees acquire them.

When machines are given the right of first refusal, companies will be liberated to begin thinking about what their customers and businesses really want and need.



An enhanced retail customer experience.

Analyzing patterns of customer activity, including correlating purchase histories to levels of technology sophistication, will shed light on unmet customer needs. One retailer we worked with found that less technically savvy consumers were open to purchasing technical services in addition to goods.

Key benefits: A new sales channel for services, a new revenue stream, improved customer loyalty and retention.



A better help-desk.

A German electronics manufacturer used a Machine First approach (including AI) to create intelligent agents that help employees with customer questions about the firm's products. The system automatically provides contact center representatives with answers, FAQs, and screenshots from the company's digitized knowledge base.

Key benefits: Productivity improvement, reducing time to solve customer problems (in some cases from days to minutes).

A revitalized call center.

One call center system we worked on uses a combination of technologies: AI to provide voice-activated or text responses in a chat box; analytics to determine a customer's profile to personalize answers. More complex calls are automatically routed to an employee who sees all this customer information so she (or he) can handle the call quickly.

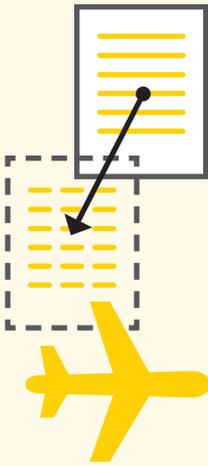
Key benefits: This Machine First system makes customer service more efficient while freeing up people to handle special requests.



A more human HR department.

By applying corporate rules to employee vacation schedules one employer was able to reduce employee disappointment. A combination of scheduling software and analytics tracks correlations among individual employee benefits and group schedules with AI-enabled interfaces to make the system user-friendly.

Key benefits: Improves employee morale by speeding approvals while saving HR time and labor.



A rationalized T&E process.

Everyone who has ever worked in a business knows what an irritant travel and expense payments can be, both for the employees filing them as well as for the finance people vetting them. At one company, an AI-enabled interface gathers expense data from an employee; a vision-enabled system converts images to data (photos of receipts, for example); analytics calculates expenses and compares employee reports data with company spending guidelines, automatically sending expense data to an accounting system that processes them for employee reimbursement.

Key benefits: Speeds approval for employees. For the company, it enforces spending policies with precision while saving time for accounting employees.

These examples, which are relevant to most industries, are just a start. With a Machine First approach, all companies have opportunities to drive gains for customers, business partners, and employees by automating business processes.

Strong Leadership, Data Management Required

It requires strong leadership, and a technology foundation built on robust data management, to adopt a Machine First approach to automating business processes.

Leaders need to communicate how automating systems fits into the company's strategic vision, clearly stating the purpose and benefits of

automation—from more efficient use of resources to innovative new services for customers. They also need to articulate the opportunities that changes will bring such as better service for customers and tighter connections in an ecosystem of suppliers, distributors, customers, startups, and academic researchers.

In addition, leaders must manage the cultural changes that are part of automating business processes. This means designing new jobs to perform tasks that machines cannot, and training people for these new roles. As noted earlier, many firms overlook this to their regret. The best way to gain support from employees is to start by automating basic tasks that people find boring. By identifying new tasks that are interactive and require people to solve problems, leaders can win buy-in while helping their people be (and feel) more productive and fulfilled.

Giving machines a 'first right of refusal' also means, of course, that the machines can do the work. Companies must have stellar data management, the right analytics in place to make good use of the data, and intuitive

tools so that people can work effectively with the system outputs. An infrastructure bolstered by cloud computing capabilities to provide flexibility and security is another must.

The technologies available today can enable companies to adopt a Machine First approach to automate every task that can be automated. Doing so will help them exceed customer expectations while generating productivity benefits, new business models, and new jobs for their employees.

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