

The Crucial Role of People in a World of Extreme Automation

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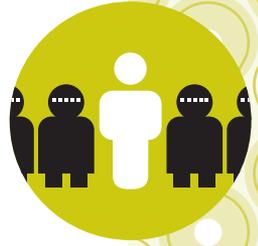
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The drive to automate is a critical part of a Machine First™ approach to digital transformation. Such automation enables organizations to respond faster to shifting market conditions and improve the customer experience. After they reduce cycle times and operational costs, they can more easily adopt new business models, generate new digital revenue streams, and put their people in new and important jobs that only humans can do.

However, leaders at many companies are holding back from going all-in on automation. Some may not realize how much work today's technologies can automate. With rapid advances in artificial intelligence, machine learning, and related technologies, plus the availability of immense but affordable computing power in the cloud, many paper- and people-intensive activities can now be done by machines.



Other leaders may be restrained from unleashing widespread automation because they fear the human cost—the specter of massive job elimination.

There is no doubt automation will bring dramatic changes to the workplace. For example, about 40% of U.S. retailers are implementing some form of intelligent automation, and more than 80% plan to do so by 2021.³⁰ Of course, online retailers have been doing this for years with automated product recommendations. Banks and other firms have been investing heavily in AI in their call centers. Businesses in a range of industries are replacing work done by people with software, automating such back-office chores as processing invoices, employee travel, and expense reports.

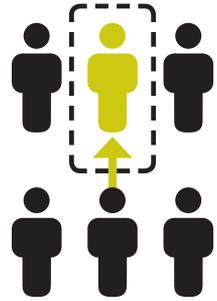
Thus, it's easy for CEOs and CHROs to believe a digital transformation that automates work to the max will be a big job killer. However, in our experience, companies that take a Machine First approach wind up creating many new jobs—sometimes more and better jobs than the ones they eliminate.

Many have retrained their existing staff for these new jobs. Helping functional leaders determine exactly what these new jobs are, and figuring out how to staff them, represent a great opportunity for HR leaders. In this article, we'll explore these issues for functional and HR leaders.

³⁰ “The coming AI revolution in retail and consumer products,” National Retail Federation in association with IBM, January 2019, accessed April 12, 2019 at: <https://cdn.nrf.com/sites/default/files/2019-01/The%20coming%20AI%20revolution.pdf>.

Identifying the New Jobs Automation Will Demand

Even as machines take over a number of organizational tasks, many new tasks will emerge that can only be conducted by people. One study notes that while greater automation will mean people spend less time on physical work, as well as data input and processing work, they will need to spend more time managing people and operating advanced technologies.³¹



Companies that take a Machine First approach to digital transformation will create many new and higher-order jobs. Over time, we believe many of these companies will see a net increase in employment. But that requires human resource and other enterprise leaders to determine the new jobs and skills they will need. The time to do that is during the planning of the automation work—not after it is done.

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Identifying the new roles and the people who can fill them in a digitally transformed company will be a key success factor for HR leaders. Done properly, it will mean that your people will stop doing work that machines can do better and start doing work of greater corporate value.

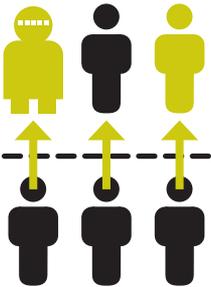
³¹ "Skill Shift: Automation and the Future of the Workforce," McKinsey Global Institute, May 2018, accessed at: <https://www.mckinsey.com/featured-insights/future-of-work/skill-shift-automation-and-the-future-of-the-workforce>.

Retaining Valuable People While Planning for the Future

Unfortunately, organizations that aren't thinking this far down the road run the risk of watching people with important domain expertise walk out the door. These employees are highly familiar with the company's workings. Many have intimate knowledge of the needs of customers they have spent years cultivating, and often have played key roles in fostering a productive workplace culture.

Rather than driving key people away, companies that embrace automation must use these initiatives to strongly connect their business and human capital strategies. Consider a firm that automates its call centers or its accounting department. Early on, leaders must clarify what new jobs they will need. Can they retrain employees for those new roles? If they can, it could be far more efficient and cost-effective than competing in the open market for new hires.

We have found three initiatives essential in this endeavor:



1 Analyzing changes in individual tasks, and identifying new tasks that people must perform.

Examine how automating a particular process will change the work that people perform. Identify tasks that machines will take over, existing tasks that people will still need to execute, and new tasks that people must handle. Doing this for every process and every task touched by automation will give leaders an overview of how the workforce must change.

The process will make both people and machines more productive, by themselves and with each other. Consider automobile factories, which have long served as laboratories for human-machine collaboration. In 2018, General Motors installed AI-enabled 'cobots,' or collaborative robots, to work alongside employees in the U.S. and China in factories that need constant adjustments to assemble more than one car model. The

cobots can perform ‘dirty, dully, difficult, and dangerous’ work like stacking tires on a conveyor belt and applying heated glue to the interior lining of a car. Factory workers, meanwhile, monitor progress, ensure the plant is performing well, and execute fine-tuning and finishing tasks on the line.³²



2 Training employees to perform new tasks.

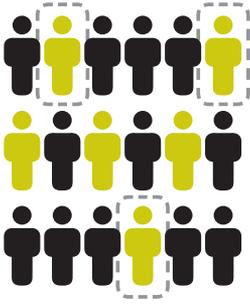
Companies need to continually identify new tasks, and they should help employees cultivate new skills. This could mean training people how to work with machines to perform new tasks. It could also mean freeing them up to do more sophisticated tasks.

Companies need to be explicit with employees about the new jobs they need and the skills they will require. They then need to be just as explicit about where those employees can gain those skills—both internally and externally.

As it has increased automation at its South Carolina manufacturing plant, German automaker BMW has invested in training programs with nearby community and technical colleges. The goal: train more people to keep the machines running properly at the 1.2 million-square-foot plant. The automaker hires students with the right technical skills from the colleges. They go to school part of the week and work part-time at the plant. BMW established the program in 2011 and expanded it in 2018, when it reported 130 graduates.³³

³² Norihiko Shirouzu et al, “The auto plants of the future may have a surprisingly human touch,” Reuters, April 26, 2018, accessed at: <https://www.reuters.com/article/us-autos-robotics/the-auto-plants-of-the-future-may-have-a-surprisingly-human-touch-idUSKBN1HY060>.

³³ Anna B. Mitchell, “BMW doubles down on tech apprentice program,” USA Today, January 31, 2018, accessed at: <https://www.usatoday.com/story/money/2018/01/31/bmw-doubles-down-tech-apprentice-program/1080832001/>.



3 Improving human capital management through automation.

It's common today for HR leaders to analyze patterns of workforce fluctuations, attrition, and employee engagement. Just over half (51%) of HR functions use predictive analytics on indicators like these.³⁴ For example, by automatically data gathering on employee satisfaction from surveys, hiring, and resignations, organizations can continuously improve their understanding of what roles are at risk of attrition. That enables HR to take proactive moves such as changing employees' responsibilities or providing training and growth opportunities. This is especially important in industries that rely on quality customer service.

Take the distribution centers for shipping companies like FedEx. With rising numbers of shipments and high customer expectations for fast deliveries, these companies have turned to robots to automate picking, packing, and shipping tasks in their giant warehouses. Machines are ideal for moving larger items like canoes and car tires. However, the shipping firms still need people to handle smaller and irregular-shaped items that robots can't manage. FedEx has been automating its warehouses for decades with sorters, scanners, and newer robots that move and lift boxes. "Everyone will have a job. It might just be in a different place," a FedEx manager notes.³⁵

Workforce planning is an integral part of a Machine First approach to digital transformation. Proactive talent management—putting people in positions to succeed, with training and data to support them—is crucial to improving organizational performance. It should also

³⁴ Thomas H. Davenport, "Is HR the Most Analytics-Driven Function?," Harvard Business Review, April 18, 2019, accessed at: <https://hbr.org/2019/04/is-hr-the-most-analytics-driven-function>.

³⁵ Cade Metz, "FedEx Follows Amazon Into the Robotic Future," New York Times, March 18, 2018, accessed at: <https://www.nytimes.com/2018/03/18/technology/fedex-robots.html>.

boost employee engagement. The reason is that it will demonstrate the organization cares enough about its people to give them new responsibilities and new, in-high-demand skills. Additionally, higher employee engagement inevitably leads to higher performance.

Empowering Employees, Increasing Enterprise Value

We have helped leaders automate their operations and empower employees in the ways we've mentioned. Here are three real but anonymized examples.



Retraining back-office staff at a B2B company.

When the company automated a back-office process—the administration of outgoing invoices and incoming payments—it deemed a number of accounts receivable (AR) positions to be unnecessary. At the same time, in improving its data analysis capabilities, it realized it needed additional people to analyze market trends in new ways to support the firm's strategy.

The company trained most of its AR staff on how to do the new data analysis. While the effort is in its early days, the benefits of back-office efficiencies and AR staff focused on higher-value work are already clear. Plus, the firm was able to retain motivated people with institutional knowledge. Their value to the firm has increased.



Providing crucial data to help a retailer's store employees.

Retail success often depends on quality customer service. Store employees, of course, are on the front lines of providing such service. However being helpful to customers requires being knowledgeable about what products are in the store, and what's on sale. One retailer found that its automation of price markdowns was overwhelming employees in the stores. Store employees needed more information

about what was on sale. The retailer created a two-minute daily podcast for employees to alert them to special promotions and what to expect from customers before the store opened for the day. Data alerts on handheld devices gave store workers timely progress reports on tasks such as changing prices on goods for sale. Apps with data about expected deliveries for in-demand goods helped employees respond instantly to customer queries, which previously had been a big source of employee stress. By providing the right information to the right person at the right time, the retailer was able to improve employee engagement and maintain top-notch customer service.



Improving a manufacturer's workplace safety.

A manufacturing firm boosted productivity by automating aspects of its production. Unfortunately it also saw an increase in workplace accidents and injuries as workers were getting accustomed to the new machines around them and new factory processes. To address this issue, the company developed training programs augmented by technology-enabled tools to help people and machines coexist safely. For example, vibration alerts delivered to workers' wearable devices, activated by signals from sensors on factory machines, informed employees when they were too close to robots.

The company also used HR analytics to track hours worked by machinists, welders, and other employees. With this data, the company adjusted work schedules to prevent fatigue and reduce the risk of injuries. The system sent alerts to managers when workers were close to their hour limits. Notably, the company worked in concert with its labor union to win support of this effort. While the effort is ongoing, the company has increased workers awareness of workplace hazards and demonstrated its commitment to employee safety.

The Value of People Power

As these examples illustrate, automating our enterprises is far more than a technology issue. It is about more than creating efficiency, cutting costs, and shedding newly obsolete positions.

To succeed, a Machine First approach to digital transformation also has to be about people.

- ✔ People have the institutional knowledge about the organization that allows it to run smoothly.
- ✔ People know the customers and the industry.
- ✔ People make our organizations places where the next generation of top talent wants to work.

As companies automate their operations, they must not miss this opportunity to invest in their people. This is the time for company leaders to make employees more engaged and more effective. Digital transformation through automation requires the right human capital to conceptualize, build, operate, and continually update the machines. By creating new roles and helping people excel in them, company leaders will take their digitally transformed organization to new heights.