

# EASING THE TRANSITION TO AUTOMATION

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McKinsey Global Institute estimates up to 375 million workers around the world will be affected by automation and technology improvements through 2030.<sup>1</sup> A McKinsey report compares this technology shift to the dramatic impact of industrialization on the European and American labor forces in the early 1900s.

Fears of robots replacing human workers are being debated and challenged, and there's a new perspective on how work is organized that focuses on problem-solving rather than on task orientation. In this perspective, artificial intelligence and automation are seen as ways to perform complex human behaviors efficiently and effectively, enabling workers and companies to achieve higher productivity and create value.<sup>2</sup>

McKinsey estimates 23% of current work activity hours could be automated by 2030, displacing 39 million U.S. workers and forcing 13% of the workforce to switch occupational categories.<sup>3</sup> Although there may be enough work to maintain full employment through 2030, many jobs will be eliminated and new roles will be created.

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The churning of the job market is expected to affect up to one-third of workers in advanced economies such as the United States, Germany and Japan. By 2030, 8% to 9% of labor demand will likely be in new occupations.<sup>4</sup>

Change is never easy, but with automation, the stakes are very high. Job displacement and unemployment due to automation could lead to widespread social unrest and political turmoil.<sup>5</sup> Government policymakers, business leaders and educators are aware of these threats and are working together to minimize disruptions and help workers ease through these dramatic changes.

## STEPS FOR A SMOOTH TRANSITION

As automation advances through nearly all industrial sectors, displaced workers will need assistance in their transition to new jobs. They will need help with career coaching, retraining, education and support services for job placement. New workers entering tomorrow's job market will need to start out with more advanced technical skills to function effectively in a highly automated workplace.

Educational programs will need to focus more on developing math, reading, computer science and critical thinking skills.<sup>6</sup> Schools have been increasing their emphasis on science, technology, engineering and math in recent years and will continue to do so, provided adequate funding is ensured.



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Government programs supporting workforce opportunities in AI research, development and training can offer workers new skills and produce a pool of new talent for employers. Training programs forged as public-private partnerships can help workers acquire the skills they need and shift to emerging occupations in the post-industrial economy. Internships and apprenticeship programs can play important roles in helping workers apply new skills and adapt to changing job requirements.<sup>7</sup>

*The Wall Street Journal* noted global job displacement could be as low as 3% if governments and businesses act wisely.<sup>8</sup> Business leaders, educators and policymakers must proactively work together to develop a mix of training and support services to ease workers' transition to automation.

**To discuss these topics in more detail, please contact your PNC Relationship Manager.**

- <sup>1</sup> "What the future of work will mean for jobs, skills, and wages," by James Manyika, Susan Lund, Michael Chui, Jacques Bughin, Jonathan Woetzel, Parul Batra, Ryan Ko, and Saurabh Sanghvi, McKinsey Global Institute, November 2017. Available at: <https://www.mckinsey.com/global-themes/future-of-organizations-and-work/what-the-future-of-work-will-mean-for-jobs-skills-and-wages>
- <sup>2</sup> "Reconstructing Work: Automation, artificial intelligence, and the essential role of humans," by Peter Evans-Greenwood, Harvey Lewis and James Guszcza, Deloitte Review, July 31, 2017. Available at: <https://www2.deloitte.com/insights/us/en/deloitte-review/issue-21/artificial-intelligence-and-the-future-of-work.html>
- <sup>3</sup> "What the future of work will mean for jobs, skills, and wages," by James Manyika, Susan Lund, Michael Chui, Jacques Bughin, Jonathan Woetzel, Parul Batra, Ryan Ko, and Saurabh Sanghvi, McKinsey Global Institute, November 2017. Available at: <https://www.mckinsey.com/global-themes/future-of-organizations-and-work/what-the-future-of-work-will-mean-for-jobs-skills-and-wages>
- <sup>4</sup> "What the future of work will mean for jobs, skills, and wages," by James Manyika, Susan Lund, Michael Chui, Jacques Bughin, Jonathan Woetzel, Parul Batra, Ryan Ko, and Saurabh Sanghvi, McKinsey Global Institute, November 2017. Available at: <https://www.mckinsey.com/global-themes/future-of-organizations-and-work/what-the-future-of-work-will-mean-for-jobs-skills-and-wages>
- <sup>5</sup> "Forget Robots: Bad Public Policies Could Be Bigger Job Killers," by Lauren Weber, *The Wall Street Journal*, Nov. 28, 2017. Available at: <https://www.wsj.com/articles/forget-robots-bad-public-policies-could-be-bigger-job-killers-1511913600>
- <sup>6</sup> "Artificial Intelligence, Automation, and the Economy," a brief of the White House report presented in Duke University's Science & Society website, July 6, 2017. Available at: <http://scipol.duke.edu/content/artificial-intelligence-automation-and-economy>
- <sup>7</sup> "What the future of work will mean for jobs, skills, and wages," by James Manyika, Susan Lund, Michael Chui, Jacques Bughin, Jonathan Woetzel, Parul Batra, Ryan Ko, and Saurabh Sanghvi, McKinsey Global Institute, November 2017. Available at: <https://www.mckinsey.com/global-themes/future-of-organizations-and-work/what-the-future-of-work-will-mean-for-jobs-skills-and-wages>
- <sup>8</sup> "Forget Robots: Bad Public Policies Could Be Bigger Job Killers," by Lauren Weber, *The Wall Street Journal*, Nov. 28, 2017. Available at: <https://www.wsj.com/articles/forget-robots-bad-public-policies-could-be-bigger-job-killers-1511913600>

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