

Building the workforce of the future

By Susan Lund

The economic news around the world is good, with buoyant GDP growth and bulging order books. But across advanced economies employers say they can't find the workers with the skills needed to fill millions of job vacancies. In the coming years, as companies adopt automation, robotics, and artificial intelligence, our research finds that the skill gap will grow larger. Building the workforce of the future will require action by companies, educators, and public and social organizations.

Automation and AI technologies promise many benefits: raising productivity growth, replacing aging workforces, and solving some of societies' toughest challenges. But the looming workforce transition will be a severe test. [Research by the McKinsey Global Institute](#) suggests that roughly 50 percent of the tasks that workers are paid to do in the United States, Europe, and other advanced economies could potentially be done by machines. The problem will not be lack of jobs: the research also finds that new jobs created over the next decade will make up for those lost, assuming that economies sustain dynamic economic growth. The real challenge is that between 75 million to 375 million people globally may need to switch occupations by 2030, depending on how quickly automation is adopted, and will need to learn entirely new skills and ways of working.

Workers with a secondary degree or less are particularly susceptible to having their jobs automated—and we find that many of the new jobs created will require higher educational attainment. Jobs that rely mainly on physical and manual skills, basic literacy and numeracy skills, and basic data manipulation and data entry skills will decline. This could put pressure on incomes, especially on middle-wage jobs in advanced economies, exacerbating issues of job and income polarization.

All workers—and particularly those outside of the technology occupations—will need to [improve their digital skills](#) to work with machines. Some companies are actively working to raise the digital skills of large swaths of their workforce, such as AT&T and SAP. More workers of the future will need advanced cognitive abilities and critical thinking skills that will enable them to solve problems, manage projects, and carry out complex information processing. Advanced technological, scientific, and mathematical skills will also be at a premium.

Equally important will be social and emotional skills that few educational systems today focus on, such as communication and negotiation, teamwork, empathy, creativity, and teaching others. These skills are essential in the jobs that MGI's research find will grow, such as those in healthcare, teaching, managing others, and interacting with customers and stakeholders will grow in the years ahead.

These trends amount to critical challenges for policy makers, for the private sector, and for international institutions. Trying to halt or slow the adoption of automation may be tempting, but even if it were possible, it would mean giving up the productivity benefits

our societies so badly need. The answer, rather, is to work to smooth the workforce transitions that seem inevitable, even as we embrace the technology for its benefits.

A much sharper focus on skills and training is the essential starting point. Government spending on training in most OECD countries has [been declining](#) over the last 15 years, and corporate spending on training has also fallen in some countries. That will need to be reversed. In surveys we have conducted, top executives at most companies foresee only modest changes in the size of their workforce, but they expect major shifts in the skills required. Yet beyond acknowledging the workforce challenge, only 15 percent of executives feel confident that they know how to address it. Only a handful of companies have begun the sort of large-scale retraining that will be needed.

A second challenge will be to improve the dynamism and fluidity of labor markets, enabling individuals to switch employers more easily and for companies to find the talent they need. The dynamism of labor markets is on the wane in many countries, including the United States. Technology can help us here, with new digital platforms that can match workers with jobs more efficiently. These platforms also increase transparency on the skills in demand, the job openings available, and the credentials needed for jobs.

Thirdly, we will need to look at income and transition support to help displaced workers or those struggling in the transition period. The Nordic countries provide an example with their “flexicurity” model that protects workers but not jobs. Individuals receive comprehensive training and coaching when transitioning between employers, thus avoiding large numbers of long-term unemployed people.

The last 20 years of globalization and technology diffusion have shown that great economic wealth can be created, but that it is not evenly distributed. Rising income inequality and left-behind workers with a bleak economic future have led to unsustainable political and social tensions. Over the next 20 years, as new technologies are adopted, societies must ensure that they do not repeat that mistake.