

According to the World Economic Forum, "the pace of change today is different than the past. It is unrelenting, the swift evolution means...many jobs will be lost, altered, or replaced in the next decade." A 2017 study by the McKinsey Global Institute reported that "73 million U.S. jobs could be lost to automation by 2030." In the past, a massive economic change like this took decades, not years, and provided institutions, individuals, and company's time to acquire the skills needed to succeed in a new economy. Unfortunately, that is not the case this time. While some educational institutions are attempting a hard-pivot to the Science, Technology, Engineering, Arts, and Math (STEAM) skills that are vital in the new economy, what happens to those of us already in the workforce, the incumbent workers?

The upskilling challenge and "who has the ball"? There are three entities primarily responsible for upskilling the incumbent workforce: the institutions (education, government, and unions), the companies or employers, and the employees or individuals. Unfortunately, all three of these entities have competing challenges that make it difficult to give sufficient attention to this looming crisis. Due to cumbersome processes and regulations, the government generally moves too slowly and is already financially stretched. Unions tend to resist evolution that they perceive could impact their membership negatively. Companies usually focus on their quarterly reports and the new technology they need to stay competitive. While incumbent workers are primarily focused on the day-to-day, showing up for work and meeting the needs of their employers and their families. Upskilling can require a great deal of time and money, yet all three of these entities seem unwilling or unable to take the "ball."

Institutions and their challenges: Education institutions must look to the future yet seem entrenched in the past. Most students in 5th grade are not being introduced to coding and other fundamental STEAM skills that, 10 to 15 years from now, their employers will require. These increasingly irrelevant institutions are being held back by outdated and mandatory curriculum and union-driven employee constraints that make education for the 4th Industrial revolution nearly impossible, particularly for traditionally underserved demographics. Additionally, government workforce development programs focus almost exclusively on training and retraining of the unemployed or unemployable, rather than the "soon-to-be" unemployed incumbent workers. We must foster, fund, and support continuous upskilling and lifelong learning to fuel this projected growth and the bureaucracy that resists this mandate must be overcome. The competitive advantage lies with the state and local governments that anticipate and prepare for the talent demands of the future.

Employers and their challenges: Employers have a great deal of responsibility to upskill their existing workforce. They cannot depend on new workers entering the workforce to have the complete skillsets necessary; neither can they rely on hiring employees from competitors, which can be costly and inefficient. While some companies are investing in automation (reducing the size of their workforce), they are failing to recognize the value of upskilling their incumbent workers to stay competitive. Data shows that this lack of foresight is especially prevalent in small and mid-sized companies. While companies may see the value of upskilling their incumbent workforce, the fear that they may lose a newly-trained employee can be paralyzing.

Individuals and their challenges: It's human nature to think this could only happen to someone else; not "me." Add to that the fact that we all feel time and financial pressure, so making the investment in our own upskilling, at night or on the weekends, can be difficult. Not long ago, you could have expected to prepare for a single profession and work for a single employer throughout your entire career. Whether or not there is a desire to do so now, the transition to the new economy makes this career track nearly

impossible. The new normal requires us to take responsibility for our development through upskilling and lifelong learning to safeguard us from technological displacement.

It's time to take action. Communities and states must urgently and aggressively invest in incumbent worker training, in addition to early and integrated STEAM education, while companies and individuals need to take responsibility for lifelong learning and continuous upskilling. At the very least, this will include a commitment by employers to offer upskilling as an employee benefit, on par with healthcare or vacation time. The 4th Industrial Revolution is already here – It will take all of us to work together to prepare for the tremendous opportunities it will bring.