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Is Your Community Preparing for the Future of Work?

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The United States has been through three industrial revolutions and is currently in its fourth. Industry 4.0 is defined by artificial intelligence, big data, and high-speed computing, wrapped in a cloud interfacing with a geophysical world.

In the first two industrial revolutions, the education system responded with an increase in high school graduation and college degree attainment, eventually matching the needs of industry. The response time needed for adaptation was long, and the educational system was able to adjust to meet the needs of employers.

But somewhere in the third industrial revolution – where we moved from analog to digital technology – the education response time did not keep pace with the needs of industry, and the skills gap was born. Now we have morphed from the third industrial revolution to the fourth in just five years. Compare that to the 50-year time frame to move from the second to the third.

The acceleration of knowledge, skills, and ability required in the workforce today is confronted with an education system that still has not adapted to the demands of the last change. New thinking is necessary to develop workforce skills at warp speed. Below are trends that are shaping the future of work and what economic development organizations can do to help their communities be prepared.

New-collar jobs

White-collar and blue-collar jobs have defined the American workforce for about 90 years. Now we are seeing “new-collar” jobs emerge – those that may not require a bachelor’s degree, but do require a highly specialized skill set – challenge the status quo of what a person needs to land a job, excel at a job, and define their career. [Recent employer survey data](#) from The Learning House confirms that 9 in 10 employers are open to hiring candidates *without* a four-year degree. The shift in employers’ emphasis – from degrees to skills – is happening now, and is most prevalent in information technology jobs.

Most IT jobs are not with an IT company but in other industry sectors, which need workers who understand the industry 4.0 technology integration required for companies to move to systems thinking. Employers are now looking to industry-recognized credentials (IRC) and digital badges backed by third-party validation. Individuals who can validate that they are systems thinkers and possess these specialized technical skills are in high demand. An example is someone with a CEH (certified ethical hacker) credential who understands and knows how to look for weaknesses and vulnerabilities in target systems.

The role of higher education

However, many employers who are seeking strong problem-solving, communication, and technical skills still want that four-year college degree. They are now looking at individuals with hybrid skills – a combination of liberal arts and technical or digital skills. Why? Because many high-quality liberal arts degrees develop the in-demand skills cited above.

Universities are revamping liberal arts programs and integrating digital skills to graduate students who can fill these jobs. Graduates who blend what Emsi and Strada call [“human skills”](#) – communication *and* technical skills, such as data analysis – are hot commodities. However, integrating technical skills into these programs will now require more students to be STEM-ready for college.

The shift to talent

While the skills employers need to keep their companies successful are always evolving, talented people are choosing where they want to live and either bringing their job with them or creating their own career path through entrepreneurial ventures or “gig economy” work. Once upon a time, the migration of talent was driven almost exclusively by company location decisions. A plant opened, and workers followed to fill the jobs. Then there was a shift.

Companies started making location decisions based on where they could access available (or trainable) workers. We first saw this with automotive manufacturing (Toyota in Kentucky and Mississippi) and aerospace manufacturing (Boeing in Charleston) growth in the South. More recently, we’ve seen it with tech firms (Amazon in Northern Virginia and Apple in Austin) and even in the financial sector (AllianceBernstein in Nashville).

Remote workers

We’re starting to see another shift: the emergence of a distributed workforce of remote workers. The share of remote workers in the U.S. labor market has grown from about 3 percent in 2000 to more than 5 percent as of 2017. In some metros – Austin, Denver, Raleigh – remote workers make up nearly 10 percent of the labor pool.

What is a remote worker? We define a remote worker as someone who primarily does not commute to a single job location. In other words, someone who has the flexibility of doing their work (and living) any place where they can access the technology and resources needed to successfully collaborate with their company, their coworkers, and their clients.

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Many smaller tech firms, like [Basecamp](#), have operated this way from the outset. Larger firms and companies in diverse industries have recently opened up to the idea of remote work as a core part of their workforce.

How can communities and economic development professionals respond to the rise of the remote workers? One strategy is to attract them. [Vermont](#) and [Tulsa](#) have developed incentive programs specifically targeting remote workers. Another strategy is to create a local environment that is appealing to them, offering the right mix of amenities, real estate options, and supportive networks to help this rapidly growing group of workers stay and thrive in your community.

What can EDOs do to prepare?

Talent is the new currency for industry attraction, retention, and expansion. So what steps can economic development organizations can take to ensure they are developing, retaining, and attracting top talent?

The first step is to understand the data and evaluate how competitive your community is on talent. Labor market data has evolved – and needs to further evolve – to keep up with the changing nature of work. Using the U.S. Census Bureau’s [American Community Survey](#), economic development practitioners can track the share of remote and self-employed workers in their regions as well as migration trends. They can also now more easily measure how many local college graduates are staying in the region via online professional profile data. In addition, advanced analytics allow communities to capture how many workers, and with what skills, are commuting in and out of their regions.

Finally, economic development organizations can analyze their current workforce development systems in terms of responsiveness to the skill demands that are quickly changing as jobs continue to incorporate new technology.

Are your community and EDO getting ready for the future of work?

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Also at the Economic Future Forum, IEDC will release new research on the challenges, opportunities, and impact of Industry 4.0 on businesses, workers, communities, and EDOs.

Learn more about the future of work by downloading IEDC’s [Future Ready](#) report and [Future of Work](#) webinar.