

Are We Prepared for the 4th Industrial Revolution?

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As we work on the update of the EDOWN Strategic Plan for the next 3 to 5 years, it has been a bit unnerving to realize that the world economy is changing at breakneck speed. We are in the early stages of the 4th Industrial Revolution and the future is now when it comes to planning for the next evolution of our regional economy. There is no doubt that the quality jobs we need to drive our economy will be much different in the coming years than they are now. So, we must consider the seismic shifts associated with the 4th Industrial Revolution as we determine what we need to do at EDOWN and how we allocate our limited resources.

What is an Industrial Revolution? The First Industrial Revolution used steam power to mechanize production in 1790. Around 1870, the Second revolution used electric power to create mass production. The Third revolution began in the 1970's with electronics, evolving to include the wide spread adoption of internet technologies which used electronics and information technology to automate production. Now a Fourth Industrial Revolution, building on the Third, is a digital revolution that is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological domains.

This Revolution will change everything. The fusion of state-of-the-art computational capabilities, extensive automation and extreme connectivity is impacting nearly every aspect of our daily life. We are evolving into *an economy powered by the mobile internet, automation and artificial intelligence (AI)*. According to the World Economic Forum, "The speed of current breakthroughs has no historical precedent. Moreover, it is disrupting almost every industry and the breadth and depth of these changes is transforming entire systems of production, management, and governance." In short this is big, it's happening now, and we will all be affected!

The 4th Revolution and Economic Development Planning. The speed and scope of these changes are unbelievable to most of us and do not fit into the timelines we are accustomed to. This revolution will displace many, if not most of the jobs that currently exist! Estimates range from 5M jobs by 2020 to 50% of our jobs being done by robots and AI in 15 years. A 2017 study by the McKinsey Global Institute reported that "73 million U.S. jobs could be lost to automation by 2030—with admin and office jobs, as well as those who do "predictable physical work" taking the brunt of the blow." However, there will also be many new jobs created - so the big question isn't, 'Will there be jobs?' According to the McKinsey study, "the big question is, 'Will people who lost jobs be able to do the new ones?'"

The jobs of the future are not the jobs we see now. As we consider the 4th Industrial Revolution changes, attracting the next generation of jobs means targeting emerging technology and breakthroughs in fields such as: artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, biotechnology, data science, blockchain technology and others. We must also engage with our education institutions regarding education and training, as **the skills of our workforce will matter** when working to attract these leading-edge companies.

Our Region is Poised for Success. Despite the magnitude and speed of the change expected in the economy over the next decade, we are excited about our potential as a region. EDOWN's shift to aggressive attraction of technology, high paying jobs and entrepreneurs has already positioned us ahead of most communities. Additionally, initiatives at the state and local level to support workforce development programs will enable the **retraining** of our existing workforce, while we work to incorporate 4th Revolution skills (STEAM, Robotics, Coding etc.) in our education system. These efforts are setting the foundation for an innovative and adaptable economy that will offer our kids and grand-kids quality jobs for decades to come.