

**Death of the Assembly Line** The First Industrial Revolution was characterized by cotton mills, steam engines, and the development of iron-making techniques. The transition away from an agricultural-based economy and towards machine-based manufacturing had a profound global impact on society and urban growth. In the late 1800's, a Second Revolution took place – workers gathered along assembly lines to mass produce goods with uniformity and more importantly cost savings for the manufacturer. Over time these processes became standards as competitive edge became tied to the cost of labor. Industry moved overseas to take advantage of lower wages and ultimately our economy suffered in the midst of diminishing jobs. We are now standing on the threshold of a Third Industrial Revolution, characterized by agility. The focus is moving back to the consumer – and jobs are moving back to the US. No longer will manufacturers be forced to mass produce goods in order to recoup development costs. Additive manufacturing, better known as 3D printing, will enable the cost-effective manufacturing of products in small batches, tailored to the needs of the end user. The future of innovation is in the hands of small businesses intimately connected with their customers.

“Our decision to move the manufacturing process from China to the US is about more than just dedication to our economy. It’s about reducing our carbon footprint. It’s about reducing our response time. It’s about being close to the very people we serve,” explains Jeff Bollengier of CaliBowl®, a California-based manufacturer.

The Obama Administration recognizes the impact additive manufacturing will have on the factory of the future. Through the “We Can’t Wait” initiative, a public-private partnership has been formed to support this modern revolution. The National Additive Manufacturing Innovation Institute (NAMII) includes manufacturing firms, universities, community colleges, and nonprofit organizations that are all dedicated to investing in the technology and skills necessary to compete in a global economy. “I’m pleased that we are taking steps to strengthen American manufacturing by launching a new manufacturing institute in Ohio,” said President Obama. “This institute will help make sure that the manufacturing jobs of tomorrow take root not in places like China or India, but right here in the United States of America. That’s how we’ll put more people back to work and build an economy that lasts.”

Recovering from one of the worst economic declines in recent history will be continue to be a tedious process, however the investments into our own workforce and innovative technologies will put America back on top and pay dividends for decades to come.

- James Harper, Marketing Specialist for FATHOM