

Lighting the Future of U.S. Manufacturing

By Rep. Seth Moulton (D-MA)

Since the industrial revolution, manufacturing in the United States has long signified innovation, opportunity, and a strong middle class. Today, our nation's manufacturing sector provides an estimated 18 million jobs, accounts for roughly 12 percent of GDP and provides a mean annual income of roughly \$75,000 per worker, nearly \$15,000 higher than average wages in other industries.

Right here in the Commonwealth, manufacturing makes up roughly 10 percent of the economy and employs an estimated 250,000 people. That's seven percent of the state's workforce. Impressively, exports in manufactured goods from Massachusetts have grown more than 16 percent between 2009 and 2014. While that's a good start, we're way behind where we once were, and there's more we can do.

Recently I had the opportunity to visit Optikos Corporation in Wakefield as part of National Manufacturing Day – a celebration of modern manufacturing meant to inspire the next generation of manufacturers. Optikos is a small business yet its optically based product designs and instrumentation can be found in homes, laboratories, and manufacturing facilities around the world, and range from NASA tracking telescopes to cell phone cameras, military night vision systems to medical diagnostic tools.

It is businesses like Optikos and innovative fields like optics and photonics – the science and application of light – that will usher in the future of manufacturing in Massachusetts and across the United States. Optics and photonics support many of our most successful local employers including Raytheon, IPG Photonics, BAE Systems, L-3, FLIR, Bruker, Lincoln Laboratories, and a slew of medical diagnostic companies. Technologies from these companies underpin not only our most common devices like smartphones but also guide energy exploration, help medical professionals more clearly detect cancer, keep our servicemen and women safe on the battlefield, and much more.

Optikos is an impressive example of advanced manufacturing in Massachusetts, yet new opportunities arising from photonics offer the potential for even greater societal and economic impact in the next few decades if supported by public and private investment. However, as innovative fields like optics and photonics grow, so does the demand for skilled workers. One of our country's greatest challenges in advancing manufacturing is finding the workforce to fill the positions created by these innovative field, which is why I am committed to working to close this skills gap and ultimately fill these emerging jobs.

First, we must continue to invest in an educated workforce. That's why I offered an amendment during the Fiscal Year 2016 Budget markup that would have invested \$2 billion over ten years for career and technical education to address the persistent skills gap.

Second, we need to work closely with industry partners to ensure our job creators have the skilled technicians to expand here at home. This feedback loop can yield rapid dividends at our vocational institutions and universities. During my visits to Lynn Vocational Tech and Shawsheen Tech, I have seen first-hand that educational opportunities for technical, hands-on learning can create a more skilled workforce.

With arguably the best schools, universities, and vocational educational systems in the country, Massachusetts is well-positioned to lead in training the next wave of high-tech workers. Let's build on that momentum to help make Massachusetts attract more companies like Optikos by investing in education and continuing to partner with industry leaders who are our regional job creators.