

## CREATIVE CORNER

# Vermont manufacturing at a pivotal point

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FREE PRESS CONTRIBUTOR

As part of my role on the Vermont Manufacturing Extension Center advisory board, I recently had the privilege of attending an event releasing the latest New England Council Advanced Manufacturing Report.

Advanced manufacturers use innovative technologies and highly integrated, tightly controlled processes to produce exceptional products. They embrace cutting edge materials and tools coming from the emerging nanotechnology, chemistry and biology fields. The integration of high precision, advanced materials and information technologies along with an exceptional workforce allows an advanced manufacturer to excel in the marketplace.

The earlier report was prepared in 2009. The good news is that advanced manufacturing is thriving. This success is due to our great combination of regional education, research and established manufacturing firms. New England has a competitive advantage in advanced manufacturing over any other region in the

world. However, there are signs that our advantage is eroding.

This change is mostly due to an increasing worker skills gap. Most advanced manufacturing firms reported that they have a growing problem with unfilled positions because of a lack of qualified candidates. Advanced manufacturing firms in New England would grow quickly if these open positions could be filled.

Key Vermont statistics in the report show that the density of advanced manufacturing jobs compared to all manufacturing jobs in Vermont has increased by 8 percent since 2009. During this same time frame, traditional Vermont manufacturing jobs are down by 0.6 percent, whereas advanced manufacturing jobs in Vermont grew by 46 percent. This growth helped move Vermont up a notch so it now ranks fourth out of the six New England states in percentage of advanced manufacturing jobs.

Despite solid growth, a coordinated regional effort is needed to make progress on the increasing skills gap. We need to dispel old myths about manufacturing careers and educate teachers, guidance

staff and parents that advanced manufacturing provides a well-paid, challenging career path. Key to this effort are events like Vermont Manufacturing Day in October, which brings schools, kids and parents to see “behind the manufacturing walls” and educates them about the exciting careers available in advanced manufacturing.

There are highly localized “islands of excellence” such as the Burlington area that we need to better leverage to scale throughout the region. One way to close the gap is to provide better educational pathways for students through increased industry partnerships and apprenticeships.

The manufacturing industry needs to rebrand itself to spark the interest of bright students by catching their imagination through early involvement such as the “maker” movement. Recasting advanced manufacturing as the “science of business” may dispel the old myths of the dark, dirty and dead-end manufacturing jobs of the past.

Advanced manufacturers recovered from the economic downturn twice as fast as traditional manufacturing, which is

still down about 13 percent from before 2008. Old-style precision manufacturing is shrinking and the report predicts dramatic changes in the next five years. Advanced manufacturing is key to the survival of manufacturing as it can turn a 10 percent regional cost disadvantage into a 6 percent advantage due to our skilled workforce that provides the highest value-add per employee than anywhere on the planet.

Small Vermont manufacturers need to scale up to remain competitive and afford the large capital costs for advanced manufacturing tools and techniques such as fully digital design, additive manufacturing, advanced sensors and robotics. Improved alignment with industry and government policy can also help to reduce costs, streamline regulations and support growth. If we are to grow our way out of the Vermont state budget problems, we need to do everything possible to assist advanced manufacturing to grow high paying jobs in our region.

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