RBJ RBJ.NET ROCHESTER BUSINESS JOURNAL
VOLUME 36 NUMBER 45 Part of the BridgeTower Media network MARCH 29, 2021

Sustainable manufacturing gaining popularity in the industry

Nasr

When Seth Eshelman founded Staach in 2006, his focus on creating handcrafted furniture using sustainable methods and materials fell on somewhat deaf ears.

Since then, however, consumer interest in sustainable processes and products has increased substantially, he notes.

"There has been a change in awareness," says Eshelman who is also the company's principal designer of sustainable manufacturing. "For us, sustainability is not an option."

Sustainable manufacturing is the creation of manufactured products through economically-sound processes that minimize negative environmental impacts while conserving energy and natural resources.

The goal is to design products that can be reused, remanufactured or recycled; reduce raw materials consumption, and preserve and extend the life of products and materials.

At Staach, a simple design approach is used, focusing on creating pieces from only domestically sourced materials and decreasing the environmental impact wherever possible, Eshelman says.

Staach seeks to strike a balance between creating high-quality handcrafted products using sustainable methods while offering a competitive price to customers, most of whom are other businesses, such as restaurants and event venues, in locations including Rochester, New York City and California.

Staach has had a long-standing commitment to environmental stewardship, Eshelman notes. The firm became a Certified B Corporation in 2012.

Certified B Corps are businesses that meet the highest standards of verified social and environmental performance, public transparency and legal accountability to balance profit and purpose.

Eshelman says focusing on sustainability is a continual, evolving process that impacts not only its products and services, but employees, as well.

Enhancements made at Staach include energy efficiency improvements. The area is important particularly in manufacturing where energy is consumed to produce products, he explains.

Material efficiencies are another priority, Eshelman says, adding the firm buys only what it plans to use and opts for higher-grade materials that result in less waste.

The business also recycles its wood and donates wood chips to mushroom and horse farms.

When products are shipped to customers, Staach uses UPS's carbon neutral shipping.

A goal within the next year for Staach is to use only pulp-based products for its packaging, which would result in more recycling and less waste compared to other materials such as plastics and polymers, he says.

Eshelman has also worked with the New York State Pollution Prevention Institute at the Golisano Institute of Sustainability at Rochester Institute of Technology to help address environmental challenges including ways to decrease the firm's waste-water stream during its finishing processes.

While it can be daunting for a business to look at sustainability, Eshelman advises companies interested start small.

"Start somewhere and start simple," he says. "It's the little things one does that can help make an impact.

Nabil Nasr, CEO of the REMADE Institute, says the Rochester region has a number of companies in various sectors that are making a commitment to sustainable manufacturing.

They range from green cleaning manufacturer Midland Rochester Corp. to Wegmans Food Markets Inc.

Other local companies active in the sustainability arena include electronics recycling firms Sunnking and EWaste +, as well as Vnomics, a software company providing fleet management solutions for load and tractor companies.

Local firms are focused on areas including reducing energy consumption, whether at their facilities or in their product lifecycles, as well as developing clean technology products.

"They are being green in a more practical and efficient way," Nasr says.

Nasr says the local area has been active in sustainability for decades and has a number of local resources. They include RIT's Golisano Institute for Sustainability, which Nasr also leads, and RIT's Center of Excellence in Advanced and Sustainable Manufacturing, as well as the REMADE Institute.

REMADE focuses on research that accelerates the United States' transition to a circular economy, which is ultimately a world without waste that reuses, remanufactures and recycles products so they can be used over again several times, thereby decreasing what goes to landfills.

By the end of 2020 — REMADE's third year of operation — the organization was collaborating with more than 90 consortium partners, including manufacturers, universities and national labs, on 39 projects.

The projects, representing more than $20 million in investment, are reducing embodied energy, decreasing emissions, removing barriers and increasing the competitiveness in manufacturing in the U.S. for decades to come, according to the organization's 2020 economic impact report.

Nasr expects the field to continue to grow, given the new federal administration's commitment to sustainability initiatives.

He says while the region is progressive in its efforts, more needs to be done to promote the work being done here.

"We are very much in line with the goals of a circular economy," he says. "We are not as progressive with getting the word out and promoting all the great things going on here."

Ruebeck

Fritz Ruebeck, president and founder of Classic Automation LLC, says among the main tenants of sustainability are re-use and refurbishment, which have been at the core of Classic Automation's services since its inception in 2003.

Classic Automation extends the lifecycle of a company's installed control systems, drives and servo motors with new and refurbished parts and repair services. The company specializes in parts for older automation systems.

The firm's services are in-demand from industries across the board and around the globe, including manufacturers and wastewater treatment plants, as well as cruise ships and power plants.

Customers look to Classic Automation for parts because they do not want to change their systems every few years since they are often programmed for a specific process or machine, and doing so could be costly, Ruebeck says.

With more firms opting for automated processes, Classic Automation has also made some changes, enhancing its online efforts and expanding the range of refurbished parts it can supply to better serve its customers.

Ruebeck has also attended seminars at the Golisano Institute of Sustainability to learn more about sustainable initiatives happening in the industry.

While some customers have the mentality that they have to have something new, refurbished parts are becoming more accepted by the corporate world domestically and internationally, he says.

"I'm not sure if it's for altruistic reasons, but people are more accepting of refurbished items," Ruebeck says.

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