



Building a sustainable plant

By Stephan Waltman

Infinity Retail Services' new manufacturing facility in Turtle Lake, Wis., epitomizes the company's leadership in thoughtful resource management. Since its founding in 2007, Infinity has been dedicated to providing a sustainable platform for everything it does. The company produces custom fixtures in metal, plastic, wood, and varied materials, primarily for electronics and mobile devices.

Infinity's commitment to sustainable energy is visible from a distance, as I learned when I visited the plant in December. This was in part due to the flat and, at that time, frozen prairie of Wisconsin, but mostly due to the 150-ft.-tall wind turbine in front of the building. The turbine supplies up to 110 volts of electricity, providing a significant amount of power for the factory, explained Kevin Jansen, co-owner with his wife, Wendy. The wind power offsets approximately 40 metric tons of carbon dioxide equivalent (CO₂e) annually.

Planning for efficiency

Every effort was made to make sure that the new plant reflected the company's values in each step of the process, beginning with the selection of a site within a designated Green Park/Eco-industrial area in the owners' hometown of Turtle Lake. Before construction began in 2011, the Jansens worked closely with their architect and builder to design a building envelope with high-performance energy efficiency, including a heating/cooling system using high-efficiency heat pumps. The 60,000-sq.-ft. plant was designed to be flexible, able to be reconfigured to meet the needs of individual projects. Every component, material, and system was carefully evaluated for long-term outcomes. While the company's clients weren't requesting the level of sustainability that the company built into its operations, the owners firmly believe that these investments will offer a competitive edge in the future.

ONLINE BONUS

For a pictorial of the manufacturing facility, visit <http://bit.ly/UID7mA>



The factory is organized around a sophisticated storage and retrieval system designed to reduce material waste and loss. When materials arrive, the system stores them, keeping track of the storage location. The machine then retrieves the material needed for a job (even predicting the day's cut-list), delivering it to operators at one of three stations for processing: a saw station for simple cuts, a nested-based machine for complex processing, or a third station with a portable cart, for materials needed elsewhere in the plant (for modeling or cartooning, for example).

The automation eliminates the need for forklifts and manual heavy lifting, reducing waste due to damage and allowing staff to focus on skilled tasks. At all times, staff know exactly how many materials of any given type they have, how many they are using, and where they are located.

The ability to send materials either to a saw station or to a nested-based machine not only reduces material waste, but also minimizes operations that don't add value to the final material. Remaining scraps are made into briquettes, and the company is currently considering furnace systems that can use them. Cardboard, paper, plastic, aluminum, and glass are all collected and recycled.

The building is equipped with motion-sensing lighting that provides exceptional illumination, but only in occupied zones. Kevin Jansen noted that the company's permanent staff, plus a handful of part-timers, moves around frequently; lights come on as they are needed, both on the plant floor and in offices. Outside, the lights and signage are LED-illuminated,



Infinity Retail Services' new manufacturing facility in Turtle Lake, Wis., features a wind turbine that provides electricity, motion-sensing lighting inside, and a storage and retrieval system that reduces material waste and loss.



Working in conjunction with its machinery supplier, Infinity designed and constructed a facility to accommodate the new system and allow for future expansion. The custom configuration is designed to meet the company's strict requirements:

- Improve quality
- Meet/exceed production standards
- Minimize production labor
- Achieve a compact footprint with maximum board storage
- Eliminate forklift travel in production spaces
- Maximize flexibility (panel saw and nesting choices)
- Reduce energy consumption
- Embrace all sustainable practices

"The innovative technology aligns with our company vision to provide infinite solutions through leadership and performance excellence while maintaining a sustainable footprint," said Wendy Jansen, co-owner.

an upfront investment that the Jansens expect to contribute to long-term savings.

Developing a state-of-the-art facility with high-tech production equipment demanded a team approach. The Jansens tapped their circle of friends for the expertise they needed to plan and build the factory. Now they feel a strong connection to their community and hope their work with the local high school, community college, and university will help fill new positions as the company grows.

Near-future initiatives include photovoltaic panels to further offset the company's energy needs, as well as carbon sequestration in the native prairie to restore over 10 acres surrounding the plant (which will also minimize the need for lawn mowing, Kevin Jansen explained). The company is also pursuing lean manufacturing initiatives (upstream and downstream), as well as locally sourced bio-based materials, such as a soy-based board for possible use in

place of plywood and particleboard.

It's remarkable for me as a manufacturing veteran to observe first-hand an example of what makes this country great: A family business built in the heartland and staffed with local talent taking a leadership role in a highly competitive industry and global marketplace. Infinity Retail Services meets the challenges of international competition head on by leveraging global best practices. To quote urban planner and sociologist Patrick Geddes, the company's leaders "think globally, act locally." Infinity Retail Services shows us how it can be done. 🌍



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"I'm here to let you know that my A.R.E. membership continues to work for me. Last year a design firm submitted one of our projects to The Design Awards. We did not win, but were interviewed and an article appeared in your July/August edition of *Retail Environments* Magazine. Scheels, a sporting goods company, later contacted us (we were one of 5 A.R.E. members) and invited C-West to pitch to them. They were sourcing companies to work with them on a concept to completion design for their ladies footwear department and found us in the magazine. I am pleased to report that we were selected along with another A.R.E. member. Thank you A.R.E."

Anita Mackenzie
Owner and President of
C-West Custom Fixture Inc.



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