

The Ovation Story: How Innovation is Solving Lean Manufacturing Challenges

Art, engineering and science have converged to implement lean manufacturing concepts across dozens of industries. But the quest for improvement never stops.

“Many times, we find that manufacturers have not taken lean concepts all the way to the movement of materials on the manufacturing floor,” says engineer Josh Smith of Valley Craft in Lake City, Minn.

That’s where Ovation is stepping in to fill the gap. Ovation by Valley Craft is a concept that is bringing new levels of speed and efficiency to lean manufacturing materials movement. It’s done by designing customized solutions for moving materials – solutions that reflect the unique micro-environment of each manufacturing line.

Ovation is helping manufacturers get materials to the right place on the manufacturing floor in ways that are quicker and safer than using off-the-shelf materials handling equipment.

“Our people look at materials handling with an experienced eye,” said Smith.

“Our customers are the experts at what happens at each stage of the manufacturing process, but we offer expertise about how materials are moved from one manufacturing stage to the next – and all the way to getting the product packaged and shipped,” he said.

Smith said lean implementation, by its nature, calls for superior materials movement technique because proper, efficient materials handling can have a positive impact on several lean concepts, including transportation, inventory, motion and waiting.

Off-the-shelf materials handling equipment can violate lean manufacturing concepts because they are sometimes force-fit into manufacturing flow, instead of getting the right things to the right place at the right time in the right quantity for the job.

That’s why Valley Craft is transforming from a “line” manufacturer of materials handling equipment such as trailers and drum handlers, to a leader in custom solutions through its Ovation by Valley Craft service.

Customers are engaging with Ovation because they’re seeing results.

NBTY Inc., makers of Nature’s Bounty nutraceutical products such as vitamins and dietary supplements had a need for greater safety and speed on a manufacturing line. Rather than have employees dump 40-lb. boxes of material into hoppers that in turn fill bottles, they looked for a problem-solver that would save time, as well as employees’ backs.

“The people at Ovation gave us a solution that’s much safer and easier than our previous system,” said George Egan, NBTY’s Assistant Maintenance Manager for Packaging. Egan said that his Ovation representative was an effective conduit for getting the project done, serving as a facilitator and liaison between NBTY’s engineering staff and the Ovation custom design engineers.

Together, NBTY and Ovation engineers customized drum-handling equipment to lift drums of material easily (and painlessly) up to the top rim of the hopper and tip the drum for a smooth transfer. The pouring mechanism was fine-tuned to handle the product gently and precisely. Because the nutraceutical products are food grade, the team also developed a coating solution that could be easily cleaned and could withstand frequent cleaning.

Egan also said the Ovation-designed solution was more cost-effective than alternatives, saying that installing a pill elevator system would have cost significantly more while being less efficient to clean. He also said that the Ovation-supplied system offered other benefits.

“This is a ‘greener’ solution for the company because we have reduced the use and handling of cardboard containers in favor of product transported in large drums,” Egan said.

In subsequent orders for the Ovation-designed drum lifts, Egan said a goal will be to increase cycle time “because we’re always looking to speed up our processes.”

One of the reasons for Ovation’s success record with dozens of customers is that the customer is involved in the solution. “We invite the customer to be as involved in the design and solution development process as they want to be,” said Ovation’s Smith.

“Sometimes the customer wants us to go find the solution,” Smith said. “But frequently the customer has an idea about how to solve the problem, and needs an innovative manufacturer to make his vision come to life. That’s us,” he said.

Smith said the Ovation process typically includes:

- A detailed needs analysis involving the customer’s key staff;
- Concept sketches provided by Ovation designers and engineers;
- Bringing the concept to life in 3-D computer-generated drawings;
- Creating prototypes that are studied and fine-tuned; and
- Production using Ovation’s own lean manufacturing process of speed and efficiency.

The custom-designed carts, trucks, drum handlers, lifts, forklift attachments, cabinets, trailers and other materials handling solutions are crafted with a full complement of manufacturing capabilities from metal bending to electronics integration.

Smith says that his company’s own lean manufacturing culture and small-town environment create a sense of family and camaraderie that translates into pride of workmanship.

Todd Hearsey, Logistics Manager at Vigon International, said Ovation by Valley Craft helped his company overcome a production line challenge. Vigon is a Pennsylvania-based manufacturer and supplier of high-quality flavors, fragrances and ingredients.

“One of our manufacturing lines required dispensing of materials into scale carts. We wanted a mechanical answer that would smoothly handle the product and protect our people from undue lifting and strain,” said Hearsey.

Hearsey worked with Ovation specialists to modify an air-powered lift with a drum rotator to meet specific requirements for the Vigon production line.

Hearsey said, "Their product development people helped us get what we needed.

"It was a good experience because they had knowledgeable people who were easy to deal with. Everything was handled well," he said.

Other examples of Ovation solving real-world lean manufacturing problems includes creating a custom trailer for the manufacturing floor of a major air conditioner company that moves sheet metal quickly and efficiently to work stations; and a drum handling system to help prevent worker injuries at a water treatment company with an aging workforce. Manufacturing solutions range from heavy-duty carts to the load and unload dies at punch presses to "porcupine" carts to hold dozens of spools of materials.

Ovation is also helping non-manufacturing businesses solve materials handling challenges, including:

- A renowned hospital system based in Rochester, Minn., needed a container for handling bio-hazard waste. Ovation found a way to keep dangerous materials from being exposed to employees.
- A snack food products maker needed carts to efficiently handle light-but-bulky cases of chips. Ovation helped invent a telescoping cart.
- A mining company needed a reliable system to lift and dump ultra-heavy 55-gallon drums of steel shot. Ovation designed and built a bulked-up drum handler for the job.

Ovation by Valley Craft is also satisfying customer's need for speed.

"Valley Craft was able to supply us a superior product in only five weeks," said Doug McDonough, director of service at TOMRA North America, a major supplier of recycling systems.

Ovation's goals for its customer relationships are consistent: Reducing costs, safeguarding workers, increasing processing speed and maximizing profits. And customers are reporting that these results are real.

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Valley Craft, based in Lake City, Minn., is a manufacturer of innovative materials handling equipment through its Ovation by Valley Craft service. Valley Craft has 115 employees and is a member of the Liberty Diversified Industries family of companies. For more information, visit www.valleycraft.com or www.ovation-solutions.com.

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