

Niagara College research team creates future of efficiency for GGS Structures

BY CAROLYN MULLIN
NIAGARA RESEARCH

For the past 35 years, GGS Structures Inc. has been a world-class designer, manufacturer, and installer of commercial greenhouse structures. Specializing in commercial greenhouse design, industrial greenhouse manufacturing and commercial greenhouse construction, GGS greenhouses are built to last.

But while the company has the reputation and the reward of success for its many clients served, GGS wanted to look inwardly at ways to improve the efficiency of its own manufacturing process.

The Vineland-based company turned to the experts at the Industry Innovation Centre at Niagara (IIC@N), the advanced manufacturing centre operated by Niagara College's Niagara Research. Through IIC@N, Niagara Research works with small- and medium-sized businesses to meet their innovation goals, and to keep them competitive. With funding from various provincial and federal agencies, current students and recent graduates are hired to work alongside expert faculty to help industry partners leap forward in the marketplace.

During the project, the IIC@N team conducted research on GGS's current manufacturing process, and, using lean manufacturing principles, identified opportunities to streamline specific activities. For example, they designed and



Kerry Dryer, left, technology manager at GGS Structures Inc., and Mike Holderney, senior research associate with the Industry Innovation Centre at Niagara College, discuss lean manufacturing principles aimed at maximizing production efficiency at the GGS facility in Vineland. /PHOTO NIAGARA RESEARCH

implemented a clamping fixture to clamp and remove aluminium parts in process, which has reduced manufacturing time by 15 per cent on these parts. The team also created a set of standard operating

procedures to allow for consistency and efficiency in operations.

"We have fully implemented one solution, and have a request for quote out for the design of a new drill line," notes

Leigh Coulter, president, GGS Structures Inc. "Working together these five months has definitely opened our eyes to new possibilities, and everyone at GGS has benefitted." In fact, based on the

recommendations, GGS is undertaking an investment of up to \$150,000 in equipment with an expected rate of return of just six months.

"When we started the project with Niagara College we did not know what to expect. The more we learn about the facilities and skills that the mechanical engineering students are being taught, the more impressed we are," adds Kerry Dryer, technology manager at GGS. "I already have a list of future projects that I want to work on with the College."

This project was made possible with funding from the Federal Economic Development Agency of Southern Ontario's Prosperity Initiative.

Niagara College, through its Research and Innovation Division, will continue to support collaborative research projects in various disciplines that may involve product and process applied research, engineering design, technology development, product testing, proof of concept, and piloting and problem solving. Nearby small- and medium-sized businesses can benefit from gaining access to the College's adept faculty, students, and recent graduates to explore opportunities for innovation.

To learn more about partnership opportunities with Niagara Research, contact research@niagaracollege.ca or visit www.NiagaraCollege.ca/Research.



Niagara Research

- ♦ Advanced Manufacturing
- ♦ Agriculture & Environment
- ♦ Business & Commercialization Solutions
- ♦ Digital Media & Information Technologies
- ♦ Food & Beverage Innovation

IIC@N

INDUSTRY INNOVATION CENTRE AT NIAGARA

Innovation Happens Here

NIAGARA RESEARCH, the Research & Innovation Division of Niagara College, provides real-world solutions for business, industry and the community through applied research and knowledge transfer activities with college faculty and students. We are increasing the productivity of our region's small- and medium-sized enterprises and strengthening the economy of Niagara and beyond.

IN RECENT MONTHS, NIAGARA RESEARCH HAS BEEN ABLE TO:



Increase the output of **NORGEN BIOTEK'S** RNA and DNA test kits by a factor of **24**



Use lean manufacturing principles to recommend a 3.5 times reduction for first-phase production at **GGS STRUCTURES INC.**



Use **3D software** to reduce risk and curb costs of a planned factory addition for **KWIK MIX**



Create a prototype dispensing machine to allow mass production and distribution of **PAPERNUITS**



Design a new **e-commerce model** to decrease **CALHOUN SPORTSWEAR'S** production time by nearly **50%**



Reduce by **68%** the ambient noise being emitted by a hospital-grade air scrubber for **ABATEMENT TECHNOLOGIES**



Niagara College Canada

APPLIED DREAMS.



Do you have an innovative idea but lack the resources to bring it to life?
MEET WITH US. WORK WITH US.

Our industry partners have access to cutting-edge technology, laboratories and a research team determined to find innovative solutions for you.

- ♦ NiagaraCollege.ca/Research
- ♦ research@niagaracollege.ca



Federal Economic Development Agency for Southern Ontario
Agence fédérale de développement économique pour le Sud de l'Ontario



Ontario Centres of Excellence