CONVEYOR TECHNOLOGY INCREASES FOOD SAFETY

BACKGROUND
Founded in 1969, UniTrak manufactures and supplies bulk material handling equipment to companies in the food and chemical industries. UniTrak’s main technology is a bucket elevator system called TipTrak. There are several models of the TipTrak system with 16 configurations.

While UniTrak has enjoyed some commercial success with its technology, the company needed to develop a pivoting bucket elevator to meet customer demand and improve its marketability. UniTrak wanted to have access to niche markets in the food industry that have high-preparation standards and production regulations, such as the dairy and meat industries.

It lacked the in-house engineering expertise and time to create the design so it teamed up with Dr. Scott Nokleby, an associate professor in UOIT’s Faculty of Engineering and Applied Science. Dr. Nokleby’s background in design and robotics was suited to this geometry-heavy project.

Michael Frejek, who had just completed his Master of Applied Science in Mechanical Engineering degree at UOIT, was selected to work on the project under Dr. Nokleby’s supervision. Frejek was responsible for designing a prototype with new buckets and a pulley system. He was also hired at UniTrak for a 12-month placement, an opportunity made available through funding from the ARC Initiative.

OUTCOMES
A prototype was developed that is easy to clean to meet higher standards in food safety guidelines.

UniTrak now has a workable design, which gains the company entry into a niche market as it prepares for commercialization in 2013.

ABOUT FEDDEV ONTARIO
The Federal Economic Development Agency for Southern Ontario (FedDev Ontario) was created as part of Canada’s Economic Action Plan to support businesses and communities in southern Ontario as part of the Applied Research and Commercialization (ARC) Initiative. ARC is a pilot program designed to address the gap between small- and medium-size enterprises and post-secondary institutions. Launched in 2010, ARC’s goal is to accelerate innovation, improve productivity, create jobs and contribute to the creation of globally competitive Ontario companies with fewer than 1,000 employees.

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