

Research conducted, market strategy created for tech startup

Telesensors Inc., an East Tennessee startup company, was recently the subject of study by students enrolled in the full-time MBA program at the University of Tennessee.

Every year, the program's Innovation and Entrepreneurship concentration pairs young companies receiving incubator support services from Tech 2020 with MBA students. The program allows students to walk in the footsteps of entrepreneurs and apply classroom learning to real-world challenges, while at the same time creating value for the startup.

The scope of work: The students accepted two opportunities that Telesensors was seeking in order to propel its growth. First, they were to provide the research required for the company to qualify for a second Small Business Innovation Research Grant, valued at \$1.2 million. The grant would be used to commercialize an alcohol sensor that's now in the nonhuman, medical laboratory research phase. Secondly, they were charged with researching and developing a go-to-market strategy for Telesensors' vineyard monitoring system that monitors temperature, soil moisture, sunlight, wind and humidity in the growing of grapes.

Students: Chris Doody (project manager), Amber Galbraith, Jennifer McClurg and Amit Sawhney, with UT full-time MBA faculty Pat Richardson and Glenn Swift serving as advisers.

The company: Telesensors specializes in custom electronic solutions — making things run faster with smaller technology. The company was founded in 2003 by Dan Blankenship, Peter Hansen, Steven Kurant and William Milam. Currently, the company has a staff of eight employees, and three revenue-pro-

TELESENSORS INC.

President: William Milam, President

Location: Fairview Technology Center, Knoxville

Phone: 865-927-4911

Web site: www.telesensors.com

Email: w.milam@telesensors.com

TECH 2020 CENTER FOR ENTREPRENEURIAL GROWTH

Director: Geoff Robson

Phone: 865-220-2020

Web site: www.tech2020.org

Email: robson@tech2020.org

ducing projects. Telesensors is self-funded and has had positive cash flow since its first year.

Because a colleague of the Telesensors' partnership owns a vineyard, the company was able to quickly recognize the potential of new products in this industry.

Approach: The students applied their problem-solving framework of engaging with the client, baselining the current situation, talking with current customers, researching options, benchmarking against similar situations and recommending solutions. Their methodology included understanding all conceivable alternatives and each one's predictable outcomes.

"This is a classic example of the effectiveness of cross-disciplinary teams," said Geoff Robson, director of the Center for Entrepreneurial Growth at Tech 2020. "The MBA team was able to gain a great understanding of the value provided by technology in solving real-world problems. The results of the team's efforts were the validation of a great opportunity for Telesensors to launch new

products into underserved markets and to better understand how to price and package these products.”

At the beginning of the projects, Telesensors was experiencing the normal growing pains and obstacles of taking its products and ideas from conception to production. Telesensors had the vision to customize solutions; with its fresh perspectives and insights, UT helped Telesensors move from the technical, research phase to the go-to-market phase.

Key findings: The team’s first challenge was in helping Telesensors secure critical funding for commercializing its alcohol sensor, currently in the animal-testing phase.

The UT team first determined the number of laboratories and universities doing nonhuman, alcohol research, where the common subject used was the laboratory rat. The students looked at how researchers perform alcohol research tests and the problems and challenges associated with the current process, which disturbs the animal’s natural state. The Telesensors product, which is implanted, improves data collection and doesn’t disturb the animal, thereby enhancing data reliability.

“We needed to know if the animal-research market was viable and whether this market could help fund further development toward a human diagnostic product,” said William Milam, Telesensors president. “The MBA team determined that we could be successful in introducing an animal-research product as part of our long-term product plans to develop a human sensor.”

The vineyard-monitoring group concentrated on the go-to-market strategy for the company’s wireless agricultural monitoring system.

The UT team set up a matrix showing the benefits of the Telesensors product against compet-

itive products and the benefits of the Telesensors product against the needs of the marketplace. Using this information, a survey was developed to test the Telesensors product concept with potential customers.

Through its extensive market research, the students discovered significant regional differences among vineyards regarding their growing processes, leading to potentially different regional products and go-to-market strategies for the Telesensors concept. For instance, in the Southeast, the vineyards are smaller and family-owned versus corporate vineyards out West, and the soil and climate conditions are significantly different.

“The research confirmed that the agricultural community has been slow to adopt this type of product. However, technology now is catching up with need, and, with the wine industry becoming more and more competitive, the market now is more willing to invest in this type of technology,” Milam said.

The students also confirmed that the Telesensors agricultural monitoring systems has applications far beyond the wine industry, including biofuels (corn and switchgrass) and fruit and nut crops, providing future growth opportunities for Telesensors.

Lessons learned: “One of the great lessons learned was the experience of collaborating with a diverse team that has a unified objective but comes at the problem from very different viewpoints and backgrounds,” Doody said. The UT team came at the problem from a business perspective, not initially understanding the technology, while Telesensors came at the problem from a strong technology standpoint, approaching UT for its business expertise.

■
This Case Study was provided by the University of Tennessee College of Business Administration.