Case Study:
Student Capstone Projects Benefit Their Companies with Tangible Results

Students in the industrial distribution master's program (MID) are required to complete a capstone project in their second (final) year of the program. Many students' projects are selections directed by their company for a company-wide project, while others opt to do projects that will benefit them in their own functional roles.

How It Works

The capstone project beings fall of the second year within the MID program. Students work closely with faculty, leaders within their companies, and use relevant research from the Global Supply Chain Systems Laboratory at Texas A&M as a guide.

These projects provide students the ability to exercise their strategic planning competencies since students develop a strategy and timetable for project completion and work alongside others to finalize the project with a quantifiable or measurable impact. The end product is a high-value solution that can be implemented immediately at their companies.

The Projects

Alan Andrae, an inside sales rep for TTI Inc., sought to create a process that would make the company run smoother. As an electronics component distributor, TTI uses forecasts from customers to build certain products. However, when forecasts are sent for connectors, the process frequently hits roadblocks that are not indicative of most processes at TTI. Because it is uniquely different, Alan wanted to figure out why this side of TTI wasn't running as smoothly. As part of his capstone, Alan not only came up with a few unique solutions to the problems, but he also discovered a disconnect between various divisions in the company, which was leading to confusion as to who was responsible for parts of the connector assembly process.

Camille Smith, a project manager at Lockheed Martin, analyzed process improvements within her company, after asking her boss for direction on her project. As a project manager, Camille works in the sustainment part of the F35 aircraft; she's in charge of making sure the latest parts are installed on planes already sold. She coordinates the process of doing so. For her capstone project, Camille took a closer look at the project management side of the modification process, which deals with the installation and adjustments to F35 aircrafts. She already knew there wasn't a clearly defined process in place. Her project looked at the bottlenecks that were happening in the process, defined the issues that were causing these hold ups, and offered solutions.
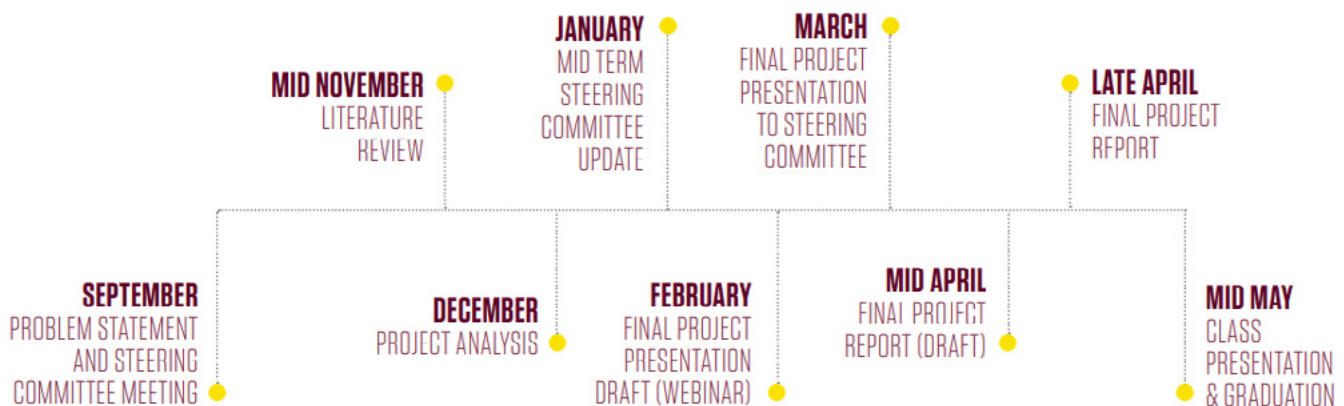
Jacob Herring works in outsides sales as the residential territory manager for the Birmingham branch for Wittichen Supply, an HVAC and refrigeration distributor. Wittichen has 25 branches, all of which operate individually. Although the company's computer system ties the branches together, there's no centralized purchasing. Jacob created a better inventory management process for the company. His system centralized the inventory process, labeling products according to their location in the warehouse by aisle and bin. He made the picking process logical. When someone searches for a particular part, Jacob's system tells them the product's exact location in the warehouse, regardless of how the warehouse is laid out.

ROI for Companies

Students' capstone projects offer significant ROI to their companies, whether those companies are sponsoring their education or not. Alan, Camille and Jacob's projects all address

MID NOVEMBER
LITERATURE REVIEW

JANUARY
MID TERM STEERING COMMITTEE UPDATE

MARCH
FINAL PROJECT PRESENTATION TO STEERING COMMITTEE

LATE APRIL
FINAL PROJECT REPORT

SEPTEMBER
PROBLEM STATEMENT AND STEERING COMMITTEE MEETING

DECEMBER
PROJECT ANALYSIS

FEBRUARY
FINAL PROJECT PRESENTATION DRAFT (WEBINAR)

MID APRIL
FINAL PROJECT REPORT (DRAFT)

MID MAY
CLASS PRESENTATION & GRADUATION

a particular challenge within their respective organizations. Through their research, collaboration with faculty and company leadership, along with their individual problem-solving skills, students offer real-world solutions that companies can implement immediately — and often do.

> "Now that we have a more defined process, we hired new project managers," said Camille. "It's a great way to train people."

Jacob reports that Wittichen plans to implement his organizational system immediately and expand the system into each of the company's 25 branches. Jacob's system not only organizes the warehouses, but it also saves Wittichen time and money. Tickets are organized according to location in the warehouse, so pickers can save time by picking products in an order rather than scrambling around. Training new employees will be easier, as they'll only have to understand the system rather than memorize where individual parts are.

Jacob says the biggest benefit to his company has been better visibility into the inventory in each warehouse. Previously, customers had received the wrong parts due to poor labeling and placement in the warehouse. For example, a customer received the wrong voltage for a part, and it wasn't discovered until they reached the job site and tried to install it. Now, inventory can be handled and tracked accurately, which saves Wittichen money. It also helps Wittichen bring more consistent customer service value to their customers.

ROI for Students

Alan: "The benefit to me was the opportunity to work with people outside of my sales branch and higher members of the organization. I learned how to coordinate with people from other departments to come up with solutions. It was a good experience of learning how to manage a project with different divisions and different levels of people."

Camille: "I learned so much. There were aspects of the process that I didn't even know about, so now I'm more familiar with the entire process. I also don't think I would have had the experience of working with leadership if not for the capstone project."

Jacob: "I enjoyed getting to see the inner workings of the company and be more involved from an inside standpoint — creating value for the company. I've been with the company for 17 years, my dad has been with Wittichen for 47, and my grandfather worked here for 44 years. It's not a family business, but I wanted to create value for myself to end up in upper management. I got a promotion as a result of the capstone."

Networking opportunity

Work closely with experts in their fields and faculty members

Opportunity to collaborate and learn from leadership in their companies

Professional experience of coordinating with coworkers from other departments or branches

Creating value for their companies and their roles

About Texas A&M's Master of Industrial Distribution

Texas A&M's Master of Industrial Distribution (MID) is a 4-semester, part-time, mobile learning graduation program designed for working professionals. By incorporating both academic professors and industry leaders who co-teach each course, students not only learn theories, but applicable supply chain management, logistics, and profitability of distributors and manufacturers in industrial channels.

Request more information about the program and learn more.

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