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Launching a New Meat Market That's a Cut Above

The northwest Iowa town of Sioux Center welcomed a flavorful addition in December with the opening of Member's Cut, a specialty retail meat market featuring premium cuts of pork and beef raised by local producers.


Farmers Cooperative Society (FCS) opened the new store after working closely with CIRAS to determine if this new distribution channel could be successful.

"FCS depended on CIRAS to understand the market opportunity and to frame a high-level business plan," said CJ Osborn, CIRAS director of business services.

The cooperative business model, which focuses on providing new markets for members, was the driving force behind the retail meat store concept.

"Member's Cut in many ways exemplifies the Farmers Coop Society mission," said John McDaniel, FCS CEO. "It opens up a new opportunity for our members, enhancing life in our community and, most importantly, putting a spotlight on the excellent work our livestock producer members are doing. The quality of the products from the store will be a big draw in this region of Iowa and neighboring states."

Continued on page 2



Aerial view of the new Members Cut facility in Sioux Center, Iowa.



1805 Collaboration Place, Suite 2300
Ames, Iowa 50010-9166
Phone: 515-294-3420 | ciras@iastate.edu
www.ciras.iastate.edu

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 - Department of Environmental Health and Safety
 - Engineering Career Services
 - Extension and Outreach
 - Ivy College of Business
 - Iowa Grain Quality Initiative
 - Meat Science Extension
 - Polymer and Food Protection Consortium
 - Structural Engineering Research Laboratory
- Alliant Energy
- Community Colleges for Iowa
- Iowa Area Development Group
- Iowa Association of Business and Industry
- Iowa Department of Transportation
- Iowa Economic Development Authority
- Iowa Farm Bureau
- Quad Cities Chamber

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"We didn't fully realize the knowledge base CIRAS had until we started digging into this project together."

An FCS worker reviews construction progress inside the new Members Cut facility.



The idea of selling member-produced premium meats at a new retail store connects to the farm-to-table concept, which has gained popularity, said Christian Fisher, manager of Member's Cut.

"This really brings things full circle," Fisher said. "Our members produce grain that becomes livestock feed, they raise these animals, and they have them processed. Now their products will be available at Member's Cut, where it's all about farm-to-table meats."

"The project also represents a significant collaboration between FCS, its members, Sioux Center leaders, and CIRAS," said Jared Terpstra, senior director of feed.

FCS brought CIRAS to the table to help determine if the project was feasible.

"It was an extremely good experience," Terpstra said. "We didn't fully realize the knowledge base CIRAS had until we started digging into this project together."

"One of the first things we did was help them formalize their business concept using our Business Model Generator program," said Osborn. "It's a comprehensive approach to identify a company's value propositions, potential

customers, sales channels, and needed support all in one concise page."

"CIRAS also had a wealth of resources FCS could rely on," Osborn said. CIRAS was able to offer food industry expertise and guidance on operations and meat processing equipment. Paul Gormley, a CIRAS project manager, advised on marketing and product development by working closely with Iowa State University Meat Science Extension.

Leveraging proven online survey tools and capabilities available from Iowa State, the team gathered insights from more than 300 rural consumers in northwest Iowa and southern Minnesota. The survey clarified consumer attitudes toward locally produced premium meat, including their willingness to travel and pay more for it.

Fisher, who has 26 years of experience in retail meat, wasn't surprised by the popularity of a specialty meat market.

"We have a generation coming up that is really interested in where their food comes from," he said. "They are food enthusiasts who embrace the farm-to-table concept and appreciate premium cuts and higher-quality products."



FARMERS COOPERATIVE SOCIETY

FOUNDED: 1907

EMPLOYEES/MEMBERS: More than 250 employees and 3,300 members.

OVERVIEW: Based in Sioux Center, FCS offers agronomy, feed, and grain services at 10 locations. The cooperative also operates a lumberyard.

IMPACT: The launch of a new company supporting local livestock producers and offering high-quality meat to consumers.



Member's Cut employees Brady Klarenbeek and Christian Fisher in the new facility.

Member's Cut will offer premium cuts of beef and pork from locally raised livestock. Customers will find dry-aged steaks, pure-bred Angus, Duroc pork, and smoked products. Fisher has met with local producers to ensure the supply will meet the expected demand.

"We have producers who are really focused on flavor in the livestock they raise, even more than the rate of gain. They are 100 percent behind this project. It's exciting," he said. "I talked to one who sends his high-premium beef to Japan, where they pay top dollar for it, and we'll be selling it here."

Terpstra credited CIRAS support for helping Member's Cut "act on this idea quicker than we would have been able to on our own."

"We have the experience and connections needed to help people make better decisions when they are contemplating new products or new markets," Osborn said. "We're going to save you time and work closely with you."

For more information, contact CJ Osborn at cjosborn@iastate.edu or 641-840-0505.

The CIRAS APEX team at Senator Ernst's Entrepreneur Expo, helping Iowa companies explore government contracting opportunities and drive growth.



Senator Ernst's Entrepreneur Expo: A Catalyst for Growth and Government Collaboration

The second annual Senator Ernst's Entrepreneur Expo, held in Ames on August 6, was a major success for Iowa's small business community. Supported by Senator Joni Ernst, CIRAS APEX Accelerator, and America's Small Business Development Center (SBDC), the event connected local entrepreneurs with government contracting opportunities and federal innovation programs.

Jodi Essex, CIRAS APEX Accelerator director, highlighted the following: "The federal government and Department of Defense are looking to increase our defense industrial base and utilize commercial technologies from Iowa companies to strengthen our military. This event helps companies explore both traditional and nontraditional government contracting opportunities. Our APEX team assists novice and experienced entrepreneurs in navigating the federal marketplace."

Plans for the 2025 expo aim to foster Iowa companies' collaboration with the federal government, creating more opportunities for entrepreneurs. The government is looking for technology (new or existing). If you have a technology and are looking to grow your business, come to next the event.

For more information, contact Jodi Essex at jodir@iastate.edu or 515-509-0769.

Iowa State University Students Drive \$3.1 Million in Improvements for Nestlé Purina

Nestlé Purina, a manufacturer of dog and cat food and treats located in Clinton, was ready to address some long-standing factory improvement needs. They chose a path that has proven beneficial for many CIRAS clients: a capstone project involving Iowa State University College of Engineering students.

“Having new perspectives to review our processes was beneficial, as it allowed

us to dedicate time to thoroughly examine our methods and identify gaps,” said Chris Sheridan, manager of specialty pet processing at the Nestlé Purina facility in Clinton. “This partnership proved advantageous for both the factory and the students,

providing an opportunity to explore potential solutions.”

This year, the company completed two College of Engineering capstone projects with student teams from the industrial manufacturing and systems engineering (IMSE) program. The teams visited the factory to experience the issues firsthand, studied historical data, and conducted various analytical studies.

One IMSE team worked on improving efficiency on a problematic small packaging line. Bags filled with dog and cat food were tipping over, resulting in production stoppages and wasted products. The students recommended changing the height of a platform and adding a support arm to prevent bags from tipping over and stopping the line. The team’s recommendations reinforced Nestlé Purina’s mission to care for its team by suggesting a guard around the filler to improve safety. Additional recommendations included collecting data on centerline runs to determine optimal operational settings,

adjusting some conveyor joints where the bags were getting stuck, and angling a conveyor flat plate to help avoid bag “beaching.”

The student team estimated a \$3.1 million impact through

enhanced production capacity and reduced product loss.

“We implemented the students’ ideas from the small bag line project, including guarding changes recommended for team safety,” said Justin Wilkinson, Nestlé Purina factory manager. “Their fresh perspective is making our operations run more efficiently.”

Another team focused on a production line for dog treats like Beggin’ Strips and Prime Meaty Bits. The line was experiencing frequent stoppages between the processing and packaging departments, resulting in extra costs, lost production time, and product waste. The goal was to reduce stoppages by 10 percent.

After analyzing several options for efficiency and return on investment, the IMSE students recommended removing a hopper and installing a monitoring system. The recommendation would achieve the 10-percent stoppage reduction goal, increase production, and decrease product loss.

“Our engineering department is currently working on designing the future conveyance system for the treats department, effectively integrating the information from the capstone team to enhance the efficiency of the future design,” said Sheridan.

Wilkinson noted that he and his colleagues were impressed by the students, highlighting their “professionalism and dedication to safety diving into the data before jumping to conclusions.” He added that “the excitement from our team to have new ideas, along with the energy these students brought, was contagious.”

NESTLÉ PURINA— CLINTON, IOWA

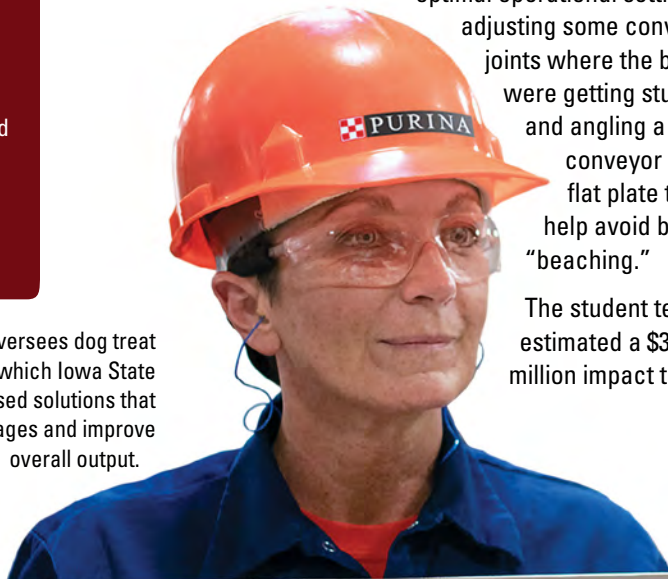
FOUNDED: The Clinton factory was established in 1969. Purina was founded in 1894.

EMPLOYEES: Approximately 300 employees.

OVERVIEW: Nestlé Purina is a leading manufacturer of pet food and treats, with a Clinton facility focused on producing high-quality dog and cat products.

IMPACT: Expecting \$3.1 million impact, improved safety measures, and a future 10 percent reduction in production stoppages.

Purina employee oversees dog treat production in which Iowa State students proposed solutions that helped reduce stoppages and improve overall output.





At the packaging line, a worker uses IMSE recommendations to address tipping bag issues, boosting both efficiency and safety.

For more information, contact Mayra Ramirez at ramirezm@iastate.edu or 515-520-3101.

CAPSTONE REQUEST FORM
Complete this form to match your project with the most suitable academic department by sharing its goals, focus, and needs.

go.iastate.edu/1SGFBX



FROM DREAM TO SUCCESS: *How APEX Helped a Family Business Thrive*

For Sam and Karissa Hunt, working with the CIRAS APEX Accelerator program has been a family affair. Sam is the owner of Hunter Quality Contracting, a mulching, land-clearing, and timber maintenance company. He connected with Julie Fagle, an APEX government contracting specialist, three years ago for assistance. She proved to be so helpful that he encouraged his wife, Karissa, to reach out to her when she launched West Main Co. 18 months ago. Located in Lisbon, the company specializes in custom apparel and engravable items. All embroidery work and laser engraving are done in house.



“The timing seemed right, so we dusted off the plans we’d started earlier and moved forward with the company. Sam had the best things to say about Julie and how much she helped him,” said Karissa. “Running a business was new to me, and I needed someone to bounce ideas off. She was that someone.”

WEST MAIN CO.
FOUNDED: 2023
EMPLOYEES: 1
OVERVIEW: Creates custom apparel and provides laser engraving on a selection of more than 500 products.
IMPACT: Received first state award, which led to three more contracts with the same buyer.

Julie helped Karissa develop her capabilities statement and complete her Targeted Small Business registration. Both are tools that will help West Main Co. grow. “I also showed her how to use our BidMatch program, which lists opportunities for government work,” Fagle said. “Through that, Karissa found an opportunity from a state agency. I guided her in preparing the proposal, and she was ultimately awarded a contract.”

That award led to three more contracts with the same agency, and another state buyer has recently contacted her as well.

“Our goal is to empower companies by providing guidance and resources to gain the confidence to pursue contracts they might not have considered before. Building strong relationships is key; we don’t just assist with a single contract but aim to foster ongoing support that enables companies to thrive in the government sector,” Fagle stated.

“Julie has been a tremendous resource,” Karissa said. “She’s introduced me to key contacts and simplified my journey as a new business owner. She’s been there to celebrate my success, and she’s made this journey much simpler.”

For more information, contact Julie Fagle at jafagle@iastate.edu or 319-390-8612.

Above: Karissa Hunt, owner of West Main Co., has been able to grow her company with help from the CIRAS APEX Accelerator.

Upcoming Events

■ Manufacturing Competimates Roundtable - Dubuque

January 14, 2025
8:30 a.m.—In Person

This event offers a unique chance to build connections, spark collaborations, and strengthen Iowa's manufacturing network in both government and commercial sectors.

■ Build America Buy America: Strategies for Success In Compliance

January 23, 2025
11:00 a.m.—Virtual

Learn valuable insights and expertise about BABA compliance certifications, pitfalls to avoid, and how BABA differs from existing requirements, as well as get your questions answered.

■ From Conflict to Civility: Creating a Positive Work Environment

February 12, 2025
11:00 a.m.—Virtual

Join this virtual event on creating a workplace in which everyone thrives. Learn to identify and prevent incivility and gain insights to address problematic situations.



Visit go.iastate.edu/BOEFSU for details on upcoming events.



Flow meters and measurement tools produced by J-TEC Associates, Inc.

ExporTech: Building a Strategic Path for Export Success

For Iowa companies ready to expand internationally, having a strategic export plan is essential for effectively reaching new markets. CIRAS offers ExporTech, a structured 12-week program equipping companies with insights and resources to grow exports in a targeted, intentional way. ExporTech provides companies with a blueprint to enter or expand their presence in international markets with confidence and clarity.

ExporTech assists companies in developing a tailored plan to significantly increase their level of exports. Supported by the U.S. Commercial Service, the NIST Manufacturing Extensions Partnership (MEP) National Network, and the Iowa Economic Development Authority (IEDA), ExporTech combines national and local expertise to offer a robust foundation for Iowa companies.

The program's approach helps companies understand how their strengths align with potential international markets. "Our goal is to help companies see where they can make the most impact and build a practical, growth-oriented export plan," explains Marc Schneider, CIRAS project manager. "ExporTech connects participants to an 'Export Village' of resources and networking opportunities to support their journey."

“ExporTech connects participants to an 'Export Village' of resources and networking opportunities to support their journey.”

After encouragement from their CIRAS strategic advisor, Brent Bormann, CFO of Rayser Holdings, participated in the program. Rayser owns J-TEC Associates, Inc., a Cedar Rapids company that produces flow meters for internal combustion engines and exhaust measurements. J-TEC had been exporting to several countries but wanted to expand further.

Bormann, along with employees from Rayser and J-TEC, participated in ExporTech, contributing their expertise throughout the program. He estimates they spent about

80 hours total. "We feel good about the program," said Bormann. "We now have an actionable export plan." CIRAS support, along with the structured approach of ExporTech, has been invaluable in helping Rayser set a clear path forward.

Plans are underway to host another session of ExporTech in 2025.

For more information, contact Marc Schneider at maschn@iastate.edu or 563-221-1596.

ExporTech Program Benefits:

- Develop a strategic export plan.
- Access U.S. Commercial Service expertise.
- Network with industry leaders and resources.

Paper Systems Automates In-house Process, Saves \$118,000 Annually with CIRAS Guidance

Sometimes, finding the best solution requires first identifying what isn't the solution.

That was the case at Paper Systems in Des Moines. Paper Systems manufactures liquid bulk packaging—cleverly designed bags enclosed in recyclable, disposable cardboard boxes, making the transport of nonhazardous liquids more convenient and economical.

The company aimed to streamline the box-laminating process by bringing it in house and enhancing efficiency through automation.

Paper Systems collaborated with two different companies to create two separate machines. However, the process was still less efficient than expected. Five people were required to operate the machines, and two more employees had to flip the cardboard panels between them.

To reduce labor costs, Paper Systems wanted to automate the cardboard flipping process. They worked with CIRAS to identify project objectives, technology options, and risks to pinpoint companies that could bid on the project.

"CIRAS came out, analyzed the situation, and helped us talk through our ideas and what was needed," said Melissa Mauro, vice president of Paper Systems. "The more we discussed potential designs with them, the more we realized we had the in-house resources to design and build the solution ourselves," Mauro said.

"They helped us affirm that our designs were the best solution with today's available technology," Mauro said. "Ty Hill and his team quickly understood what we needed to achieve, which made it easier for us to determine whether the proposed solutions were viable. The support we received from CIRAS reassured us that we were making the right decision to invest more in automation."

President and owner William Chase, who has designed many of the company's other machines, created the design for the cardboard flipper. A Paper Systems staff engineer drew up the plans, and the company's special projects maintenance person, along with the operations manager, built the flipper in the company shop.

"It was truly a team effort," Mauro said.

"Paper Systems was initially looking for a solution from an outside source," said Ty Hill, a CIRAS project manager. "But they discovered they actually had the internal resources to accomplish their goal. CIRAS helped them realize that."

For more information, contact Ty Hill at tyhill@iastate.edu or 515-357-4379.

PAPER SYSTEMS

FOUNDED: 1989

EMPLOYEES: 40

OVERVIEW: Leading manufacturer of nonhazardous liquid bulk packaging.

IMPACT: Reassigned two employees to new jobs, saving at least \$118,000 each year due to automation.

CIRAS Staff News

Dawn Ealy is the new workforces services director. She has 13 years of consulting experience in systems design, process improvement, and leadership. Dawn holds a computer science degree from Central College and is Lean/Six Sigma certified.



Contact:
dawnealy@iastate.edu | 515-567-0762

Jordan Joynt joined CIRAS in August as a marketing project manager. He brings expertise in digital marketing, content development, analytics/research, and project management. His experience includes Principal Financial Group and Insta-Pro International. Jordan holds degrees from Northern Iowa Community College and Iowa State University, along with a Google Analytics 4 Certification.



Contact:
jdjoynt@iastate.edu | 515-509-1200

Heath Reimers joined CIRAS as an engineering services project manager in August. With more than 20 years of engineering experience in sectors like steel and off-road equipment, he specializes in process improvements, CAD/CAM design, and prototyping. Heath earned a materials engineering degree from Iowa State University.



Contact:
har@iastate.edu | 515-357-8370



Paper Systems liquid bulk packaging container.

ILC Annual Conference Delivers Continued Success

The Iowa Lean Consortium (ILC) Annual Conference remains Iowa's premier event for continuous improvement professionals. 340 attendees from 96 organizations participated in this year's event on October 24 in

Altoona. Organizers attribute the event's continued success to three key factors: engaging keynote speakers, breakout sessions led by national experts and local members, and networking opportunities that foster valuable connections.

"This conference stands out for providing tools and fostering peer connections to tackle organizational challenges," said Tracy Schuster, ILC director. "Leading change is not easy. Whether you're part of a team or a solo leader, it's rewarding and energizing to come together with other like-minded individuals."

Kicking off the main conference, which followed a day of preconference workshops, was Billy Ray Taylor. Taylor, founder and CEO of LinkedXL, discussed the LinkedXL process from his best-selling book, *The Winning Link*. His process has enabled global brands to achieve record-breaking results by understanding and implementing the concept of a "winning link" within their organizations.

As he spoke, Taylor encouraged attendees to "set the standard," reminding them that

"what you accept, you cannot change." This takeaway was a powerful reminder for many attendees to uphold and reinforce high standards within their teams and organizations.

This was the second time Taylor served as an ILC keynote speaker, following his previous appearance at the 2013 event. Schuster received several requests from members to bring him back.

The conference closer was Anne Bonney, author of *Get Over It: 47 Tips for Embracing the Discomfort of Change*. Her presentation focused on change management and leadership, using the five-P approach outlined in her book: point, problem, path, punch it, and persevere. Bonney's appearance was suggested by an ILC member who heard her speak at another conference.

Conference breakout sessions covered various topics, ranging from continuous improvement implementation to building engaged teams and leading through change. The conference not only educated but also inspired participants to drive innovation and improvement as well as foster collaboration within their organizations.

Reflecting on the event, an attendee remarked, "I think this was the best conference yet."

For more information, contact Tracy Schuster at tschust@iastate.edu or 515-715-0164.



Top left: ILC conference attendees engaging in discussion during a breakout session. **Bottom:** Keynote Speaker Billy Ray Taylor pumping up the crowd during the opening session.

ILC Membership Renewal

It's time to renew your organization's commitment to excellence with the Iowa Lean Consortium! Here's why you should renew your membership:

- **Exclusive Access and Reduced Event Fees:** Gain entry to members-only events, workshops, and webinars.
- **Networking Opportunities:** Connect with industry leaders and peers to share insights, challenges, and best practices.
- **Resources and Tools:** Use our extensive library of Lean tools and resources to enhance your operations, including our improved on-demand library!
- **Discounts from Our Trusted Partners:** Take advantage of training programs to boost your skills and knowledge from partners such as Karen Martin, Jamie Flinchbaugh, and Jim Benson.

Join or renew your membership today at go.iastate.edu/XUNCJM to be a part of a community dedicated to continuous improvement and operational excellence.



go.iastate.edu/XUNCJM

For more information, contact Tracy Schuster at tschust@iastate.edu or 515-715-0164.

Iowa State Capstone Project Helps Manufacturer with Key Production Decision

Based in Peosta, Mi-T-M Corporation specializes in industrial equipment, including pressure washers, air compressors, and generators. Many parts go through a deburring process, which can cause production bottlenecks.

majoring in industrial and manufacturing systems engineering (IMSE). CIRAS often recommends this approach to clients seeking solutions for problems that need attention but aren't the limiting factor in day-to-day production.

They also met with vendors of automated deburring devices, including one that produced a model that Mi-T-M was already considering.

MI-T-M CORPORATION

FOUNDED: 1971

EMPLOYEES: 370

OVERVIEW: Manufactures industrial equipment such as pressure washers, air compressors, and generators.

IMPACT: A collaboration with Iowa State capstone students resulted in a 79-percent increase in production throughput, improving operational efficiency without additional staffing.

Mi-T-M was considering purchasing an automatic deburring machine but needed assurance that it was the right financial move. They also wanted to know if it would help the company achieve a goal of increasing throughput on the laser bed by 70 percent.

"These are not typically what we would call mission-critical projects. What's important is that the project addresses a company's need and provides benefits for the company. In addition, projects like this enable student groups to apply their skills and experience the satisfaction that comes from a successful project," said Mayra Ramirez, CIRAS project manager. "You're looking for a good fit, and in the case of Mi-T-M, it was perfect for a capstone project."

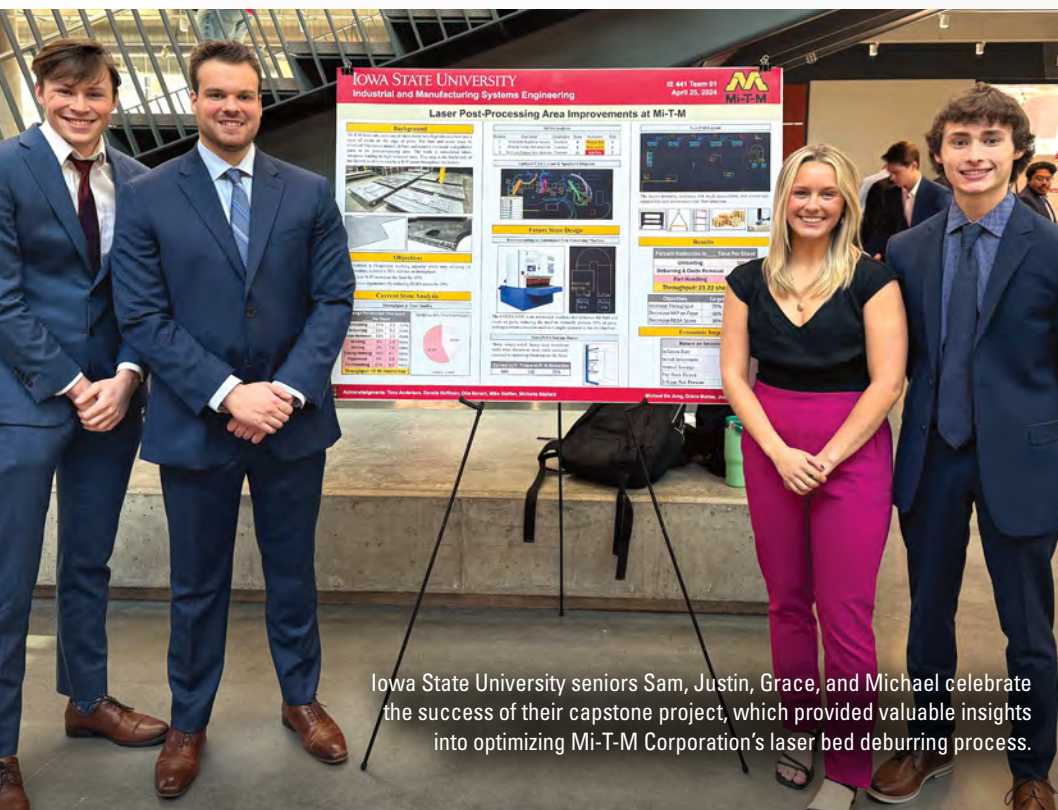
Based on their analysis, the students concluded that adding an automated deburring machine would boost throughput by 79 percent, exceeding the 70-percent target. The students also determined that a positive return on investment would result because the device would increase production without requiring additional staffing. Mi-T-M acted on the students' recommendation and is now awaiting delivery of a custom-made automated deburring machine.

"Our collaboration with Iowa State students provided valuable insights that confirmed the benefits of investing in an automatic deburring machine," said Dennis Hoffman, director of fabrication at Mi-T-M. "Their work will help improve efficiency in our laser-bed area, and we're excited to implement their recommendations."

A feasibility study like this takes time that busy manufacturing operations don't always have. Mi-T-M opted to conduct a capstone project with Iowa State University College of Engineering students

The students made site visits and used video recordings to observe laser-bed workflow. Mi-T-M also provided the students with performance metrics, including the time it takes to unload and cut parts. The student team analyzed several aspects of the laser-bed process and developed a process flow diagram to better visualize the movement and handling of materials within the facility.

For more information, contact Mayra Ramirez at ramirezm@iastate.edu or 515-520-3101.



Iowa State University seniors Sam, Justin, Grace, and Michael celebrate the success of their capstone project, which provided valuable insights into optimizing Mi-T-M Corporation's laser bed deburring process.

College of Engineering students are required to complete a capstone project during their senior year. The goal of these projects is for students to apply what they've learned in the classroom to a real-world project. The projects typically last one or two semesters and culminate in a full presentation to the client company by the capstone student group. The IMSE team completed the Mi-T-M project in early 2024.

CAPSTONE REQUEST FORM

go.iastate.edu/1SGFBX



Retaining Talent and Expanding Capabilities

Collaboration for Workforce Excellence and Facility Innovation

For more than a decade, Walsh Door & Security has relied on CIRAS as a trusted partner, leveraging its expertise to enhance operations, improve employee retention, and design innovative solutions tailored to the company's evolving needs. That has been Walsh Door & Security's experience with CIRAS. They've found CIRAS to be an ideal one-stop shop, providing fresh ideas, updates on best practices, new software strategies for recruiting talent, and even layouts for new facilities.

"CIRAS can be part of a company's flexible workforce, stepping in as needed for a wide variety of tasks and expertise," said Mary McGraw, a CIRAS project manager.

Walsh Door & Security's ongoing relationship with CIRAS spans more than a decade. "They know us, and we know them," said Brady Warrick, vice president for finance and operations. "They're here in Iowa, and we feel comfortable working with them."

Recently, Walsh Door & Security wanted to improve its employee retention, particularly for new hires. "We want to ensure they get started on the right foot and have the tools needed to succeed with us. If they have a strong first year, they tend to stay long term, saving considerable time and resources," said Warrick.

The company embarked on a comprehensive project to revamp its "new hire

experience." McGraw attended planning meetings, offering human resource expertise and an outsider's perspective.

"Mary did a great job challenging us to think about our culture and how we communicate it to new team members," said Warrick. "She also helped with specifics, like making our welcome email to new employees more human and warm."

When it came time to implement the new hire plan, McGraw recommended project management software to streamline implementation and track results.

When Walsh Door & Security purchased and renovated an additional 80,000-square-foot facility, CIRAS project manager Kirk Haaland created options to help the team plan an efficient layout for equipment and racks. "That helped us design a state-of-the-art facility," Warrick said.

CIRAS has also helped the company connect with high school students to promote its on-the-job welding training program.

"I can't think of any consultant or similar company that would do what CIRAS has done for us," Warrick said. "There may be large consulting firms out there, but they would likely provide subcontractors who don't know us like CIRAS does. CIRAS knows us, yet they also bring fresh perspectives, which is invaluable."

For more information, contact Mary McGraw at mcgraw@iastate.edu or 515-231-4734.

“
They're here in Iowa,
and we feel comfortable
working with them.
”



Above Left: Walsh Door & Security employee driving forklift in the expanded facility.
Below: An aerial view of Walsh Door & Security's state-of-the-art facility.



WALSH DOOR & SECURITY

FOUNDED: 1866

EMPLOYEES: 170

OVERVIEW: Des Moines-based provider of premium commercial door frames, hardware, and electronic security products and services.

IMPACT: Improved employee retention and an efficient, state-of-the-art new facility.

Mid-States Steel Overcomes Critical Equipment Failure with CIRAS Support

MID-STATES STEEL CORPORATION

FOUNDED: 1956

EMPLOYEES: 38

OVERVIEW: Mid-States

Steel Corp provides structural steel construction components for simple and complex architectural shapes.

IMPACT: CIRAS'

technology-driven

solution used 3D

printing and scanning

to replace a worn gear,

restoring operations and

providing tools for future

maintenance at Mid-

States Steel Corp.

Attending a lab tour of the CIRAS Digital Manufacturing Lab Powered by Alliant Energy proved invaluable for Mid-States Steel Corporation when they faced a critical equipment issue. "It was a great use of our time," said Duane Vander Weff, purchasing manager. "The tour exposed us to technologies we wouldn't usually encounter, which proved crucial when we needed them most."

The company's trouble began when the drive gear in their older paint mixing system wore out. This resulted in Mid-States Steel manually mixing paint with no replacement available, delaying other essential tasks. "Like many companies, staff availability and capacity are limited, and this setback slowed us down," said Vander Weff.

Having attended the tour, Vander Weff remembered a story about using 3D printing to recreate a gear. "When our gear failed, I immediately thought of CIRAS and reached out. I'm glad I attended the tour and recommend that other companies do the same."

After the company contacted CIRAS, Chris Hill, CIRAS engineering services director, promptly responded. He was on site within a few days to begin the review and present potential solutions. The biggest challenge was the lack of a 3D CAD model for the gear, which was severely worn. Hill proposed leveraging the CIRAS 3D printer to efficiently create a test gear.

Though the initial gear didn't fit perfectly due to irregular holes in the mounting plate, Hill used a laser scanner to map the hole pattern, adjusted the CAD model, and produced a better fit. Two days later, the company had a working test gear in place while the final version, made from durable nylon and carbon fiber, was printed.

"We appreciate the extra effort from CIRAS. We now have spare gears and a model for future production, and we're confident CIRAS can help with similar issues," said Vander Weff.

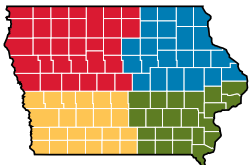
Reflecting on the project, Vander Weff stressed the value of CIRAS in helping Iowa companies access cutting-edge technology. "It's tough to stay current with trends outside our core business, but CIRAS provided new possibilities and insights. We'll definitely be working with them again."

For more information, contact Chris Hill at chhill@iastate.edu or 515-313-8251.



Legacy equipment reborn using technology.

CIRAS CONTACT INFORMATION



Locate your county to find your best introduction to CIRAS.

Your strategic advisor can help connect you with the expertise you need for your business.



All staff information can be found at www.ciras.iastate.edu/staff-directory.

Derek Thompson
thompson@iastate.edu
515-419-2163

Jason Armstrong
jasona1@iastate.edu
515-686-0441

Steve Wilson
wilsons@iastate.edu
515-620-6036

Derek Thompson
thompson@iastate.edu
515-419-2163

WORKFORCE SOLUTIONS

Mental Health in Construction: Building a Resilient Workforce

Mental health awareness is gaining momentum, especially in construction, where high stress, long hours, and physical demands create significant challenges. Workers in this industry face unique pressures, including physically intense tasks, tight deadlines, rising costs, and dangerous conditions. This mix often leads to heightened stress, anxiety, burnout, decreased productivity, and compromised safety if left unaddressed.

The construction industry has one of the highest suicide rates among professions. Data from the Centers for Disease Control and Prevention (CDC) show that male construction workers have a significantly higher suicide rate than the general male population. In 2022, around 6,000 construction workers died by suicide, compared to 1,000 who died from job-related injuries, according to 2024 data from the Occupational Safety and Health Administration (OSHA). This highlights the urgent need for mental health support in the industry.

The high suicide rate is attributed to factors affecting both men and women. Although much data focuses on men, awareness is increasing about the need to support all workers with their mental health.

Addressing mental health benefits individuals and strengthens teams. Healthier workers are more focused, leading to fewer accidents, better collaboration, and higher job satisfaction. Industry leaders recognize that promoting mental health creates a resilient workforce essential for long-term success. Encouraging a culture of care helps reduce the stigma of seeking help, promotes open dialogue, and provides vital support to those in need.

At CIRAS, we are committed to helping Iowa companies address these critical issues. By raising mental health awareness, we help create safer, more productive workplaces.

For more information, contact Mary Zimmerman at maryz@iastate.edu or 515-450-1278.



Join us for our virtual event series *Under Construction*, featuring expert-led presentations on key mental health topics in construction. > go.iastate.edu/NLB5RR