Connections Cultivate Value-based Actions

Cruise down 350th Street in Osage and eventually you will drive past an eye-catching swath of land vibrant with wildflowers and butterflies.

This 34-acre spread is the Jiri-Rita Prairie Park, which was developed by Valent BioSciences with support from CIRAS. The park symbolizes the value of connections: an Iowa company’s connection to its corporate values; CIRAS’s connections to Iowa manufacturing and to the resources of Iowa State University; and, ultimately, connections to the land and the environment.

Valent BioSciences specializes in biorational crop inputs, which are considered to be more environmentally friendly than many conventional products. The park is adjacent to the company’s Osage manufacturing facility and was once farmland. When Valent BioSciences established a solar farm nearby, company leaders learned of concerns about solar farms being near farmable ground because of dust and dirt. The idea of transforming the land into a natural prairie was launched.

Valent BioSciences turned to CIRAS for help.

“We’ve worked with CIRAS for a long time and have reached out for many types of questions related to safety, packaging, and environmental and biological issues,” said Brian Lynch, facility manager for Valent BioSciences. “People don’t always realize how CIRAS can help with a range of things.”

Rachel Hahn, CIRAS strategic advisor, notes the park is in line with Valent BioSciences’ sustainability-focused values and

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mission. Working with a company like Valent BioSciences is not unusual for CIRAS, but doing a park project was a bit out of the ordinary.

Valent BioSciences “is a diverse, forward-thinking company. Their values are centered around communities, the environment, and people,” she said. “This project pushed boundaries and shows how CIRAS can go broader than typical manufacturing objectives and support your company’s overall vision and mission.”

CIRAS first suggested Valent BioSciences reach out to local like-minded organizations such as Pheasants Forever and the Mitchell County Conservation Board. Both organizations supported the project. Valent BioSciences was also able to secure a $5,000 USDA grant. The park’s connection to the community is strong, with the Mitchell County 4-H donating handmade birdhouses and students with the Osage High School Industrial Technology program building a welcome kiosk.

The actual design of the park was a challenge, so Lynch once again turned to Hahn, who helped Valent BioSciences set up a capstone project involving students from Iowa State’s agricultural and biosystems engineering program.

“This is a generation of students who care significantly about sustainability and the environment, so it was fantastic to connect them with a real-life project and a company with similar interests,” Hahn said.

“We had three students who met with us regularly,” Lynch said. “They helped us with everything from how we should put in our trails to what additional plantings we should do to attract insects, birds, and wildlife. It was a big learning experience because we don’t have horticulturists. We have entomologists and engineering, but nobody with this kind of experience.”

The capstone team also recommended a burn plan, which is vital to maintaining the health of a native prairie.

The park, a popular destination for school fields trips, supports an ecosystem teeming with flora and fauna. The park also offers visitors a mile-long outer loop trail and four walking paths, named in honor of
people who have contributed to the strength of Valent BioSciences and the community of Osage.

CIRAS has also helped Valent BioSciences connect with Iowa State resources on two other sustainability-related projects. One involves testing a nutrient-rich byproduct of Valent BioSciences’ fermentation process. An Iowa State agronomist has been testing the liquid to help Valent BioSciences determine if it has commercial value.

“They wanted to understand conceptually if this was worth something. The results of the first year of testing were outstanding,” said Hahn.

CIRAS also connected Valent BioSciences with an Iowa State agronomist who is doing soil testing in the park. Valent BioSciences makes a product that enhances the symbiotic relationship of a certain fungi and microbes in soil. They are applying the product on the soil in the park and will do multiyear testing to see the effect on soil health.

Jiri-Rita Prairie Park was officially dedicated in June and has become a popular spot for area residents. Lynch himself visits it a few times a week.

“It makes me feel really good. The flowers are unreal and it’s unbelievable how many birds and butterflies and insects there are out there,” he said. “I never thought I’d be a prairie guy, but this has really converted me.”

For more information, contact Rachel Hahn at rhahn@iastate.edu or 515-620-8093.

The Jiri-Rita Prairie Park offers a mile-long outer loop trail and four walking paths.

Upcoming Events

■ Human Resource Strategies—Navigating HR Technology Trends
  January 10, 2024
  Join CIRAS at this virtual event as we unlock excellence with expert insights on timely topics to evaluate your HR capabilities.

■ Subcontracting Considerations for Government Contractors
  January 16, 2024
  Learn best practices of subcontracting. Enhance your company’s ability to team with other companies to augment skills and capabilities.

■ Introduction to Value Propositions
  January 24
  Join this virtual event to learn how you can improve the ability to clearly distinguish your company’s offerings from the rest of the market.

Visit www.ciras.iastate.edu/events-workshops for details on these and other events.
Technology Solves Workforce Challenges

In a business environment where adoption of technology is increasingly important—but also increasingly overwhelming—CIRAS is helping Iowa businesses identify the best systems and reduce the risk of adopting those systems.

A case in point is Osmundson Manufacturing in Perry. Osmundson makes agricultural tillage equipment. It is a constant challenge to prevent soft-tissue injuries and the adverse effects of environmental factors, like dust and heat.

“We saw an opportunity to help them understand the physicality that was being imposed on their operators,” says Chris Hill, CIRAS engineering services director.

CIRAS connected Osmundson with MakUSafe, which manufactures a sensor workers can wear on their arm that is designed to improve worker health, safety, and productivity while reducing incidents and mitigating workplace hazards and risk exposures.

At first, Osmundson was skeptical. They were concerned about the usefulness of the data, having the time to evaluate the data, and getting buy-in from the workers who would need to wear the sensor.

Osmundson bought one system with enough sensors for all employees on one shift. Within a few months, Osmundson ordered enough systems to cover the remaining shifts. Heather Bruce, President and CEO of Osmundson, was impressed with the astounding amount of data they were given, including trends over time, and how easy it was to interpret the data and make real-time changes.

One worker, for example, was experiencing shoulder pain from repeat motion with a hammer. He got feedback from the sensor on how he could use the hammer differently, and now he knows he doesn’t have to simply hit harder, but can do it in a way that puts less stress on his shoulder.

It’s a natural fit for a company like Osmundson, and Gabe Glynn, MakUSafe CEO, says they might not have connected with Osmundson if it hadn’t been for CIRAS. He said he appreciates how CIRAS connects technology companies like his with manufacturers.

In other cases, CIRAS can help companies make initial forays into using technologies that reduce injuries and increase efficiency.

In the case of Rosenboom Machine & Tool in Sheldon and Spirit Lake, CIRAS helped them experiment with exoskeletons, a type of hi-tech brace that provides body support to reduce fatigue and injuries. In the case of Rosenboom, they tried a particular exoskeleton with industrial painters who at times hold spray attachments above their heads, which can lead to fatigue and strain.

CIRAS can de-risk technology adoption for companies by helping them understand the capabilities and limitations of various technologies. CIRAS helps them conduct pilots before making a purchasing decision.

“Working with CIRAS gave us the opportunity to try the technology in our working environment,” said Kevin West, environmental health and safety coordinator at Rosenboom.

In today’s competitive workforce environment, it’s critical that manufacturers explore ways that technology can make jobs more attractive and reduce injuries. “Companies want to become employers of choice, and technology can help reduce costs and improve the work life of their employees,” said Hill.

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

Osmundson Manufacturing
FOUNDED: 1903
EMPLOYEES: 130
OVERVIEW: Manufacturer of top-tier tillage blades and cultivation tools.
IMPACT: Access to data that improves employee safety, health, and overall experience.

Rosenboom Machine & Tool
FOUNDED: 1973
EMPLOYEES: 730
OVERVIEW: Manufacturer of industrial hydraulic cylinders.
IMPACT: Cost savings through the ability to experiment with technology designed to improve employee health and safety.
Participants in the next ExporTech 2.0 series can expect the same mix of in-person presentations and online content that made last year’s program so successful.

“The hybrid format was well received by both the attendees and subject matter experts,” said Marc Schneider, a CIRAS project manager who leads ExporTech. “It provides a regular cadence for sessions with the flexibility to have different participants from each company attend the topics important to them. It also promotes teamwork and networking between participants, and it provides easily managed time slots to complete the program.”

ExporTech is a national export assistance program that helps companies develop plans for growing their export activity. It’s a joint effort of CIRAS, the Manufacturing Extension Partnership (MEP), the Iowa Economic Development Authority (IEDA), and the U.S. Department of Commerce. The next session begins January 10.

“This was well worth the time and effort we invested,” said Amanda Jepson, of Bovia, a participant in the most recent series. “The program really helped us clarify our export plans, so we knew where to push for growth.”

ExporTech welcomes participation from all companies. The program caters to both experienced exporters aiming to broaden their market reach and companies new to exporting seeking guidance in expanding into additional markets. However, its primary focus is on small- to medium-sized businesses, particularly those characterized by Schneider as “accidental exporters.”

“These are firms that are exporting today but not in a formal, structured way,” he explained. “They are reacting to orders and inquiries they’ve received via the Internet, trade shows, and customers who’ve found them. They now realize they should be targeting these markets and customers, and they want to ensure they have the right processes in place to do it.”

The series covers topics like sales and distribution strategies, pricing and payment practices, regulations and certifications, logistics, and market research. Participants are assigned a coach to guide them through the process, help them recognize export gaps specific to their company, and direct them to resources to help close those gaps.

“We had several obstacles that were keeping us from being successful exporters,” said Brian Houlihan, president of Lansing Housing Products. “Participating in ExporTech helped us identify those obstacles and provided resources for overcoming them.”

Participants leave the program with a customized strategic plan to grow their business through expanded exporting. A follow-up meeting takes place three months later to see how the company is progressing with their plan and what additional assistance may be needed.

IEDA offers grants to reimburse up to 71 percent of expenses for qualified companies.

For more information, contact Marc Schneider at maschn@iastate.edu or 563-221-1596.
Lakeside Products has seen a substantial drop in the cost of producing door flaps for its pet doors despite the ever-increasing cost of raw materials. The savings is the result of a team effort involving the company, their mold supplier, and CIRAS.

“Our injection molding partner has had some challenges with the quality of a part they make for us,” said Bruce Beguhn, who owns the Polk City-based company. “They suggested a design change to improve the quality and reduce scrap and secondary labor, but we needed to know if it was truly going to be better than what we already have.”

Beguhn shared the new design with Chris Hill, CIRAS engineering services director. Hill, who has extensive experience in injection molding, made some suggestions on changing the configuration of the design. He then brought in his colleague, John Roberts, CIRAS project manager, who did a Finite Element Analysis (FEA) of the new product to determine how it might behave.

“The primary concern was how the redesign might impact the strength of the part,” said Roberts. “In other words, would the new design solve the warping issue but create problems with cracks or breakage.”

Roberts first completed FEA simulations of the existing door to use as a design standard. He applied various loads and constraints to determine the door’s stress conditions. The same loads and constraints were applied to the new design and the stress results compared. CIRAS also provided a 3D printed prototype of the new component for marketing purposes.

“We did some adjustments based on stress analysis, but essentially we got it to the point where Bruce was comfortable that the new design would be structurally as strong as the original product but would be easier to mold with less defects,” Roberts said.

This project resulted in several additional benefits to Lakeside Products. There were decreases in manufacturing time to make the part and the amount of time needed to assemble the final product. The quantity of raw materials and scrap was reduced, and secondary work for out of spec parts was eliminated.

“When all those benefits are considered, we ended up reducing the cost of the product by 25% in spite of an increased cost in the raw material,” said Beguhn. “We couldn’t ask for better results than that.”

For more information, contact John Roberts at jarobert@iastate.edu or 515-294-0932.
Solar Cell Manufacturer Turns to Iowa State Students for Bright Ideas

In the world of technology research and development, it’s all about gathering the best and brightest ideas and then synthesizing them so a product can take the next step forward.

That’s why PowerFilm Solar turned to CIRAS. PowerFilm designs and manufactures custom solar modules and power solutions—including lightweight, flexible, waterproof solar-powered battery chargers. They’re used in transportation, the military, marine industries, and outdoor recreation. But the Ames-based company needed some help to improve its LightSaver Max V2 model, specifically simplifying its USB-C port, increasing its battery capacity, and speeding up charging time.

So they reached out to CIRAS to help connect them with the right engineering department’s capstone program.

PowerFilm had worked with CIRAS and capstone projects before with good results. Every Iowa State University engineering senior must complete a capstone project before graduation, demonstrating their ability to solve real-world problems and help develop potential new products.

It can be tricky to connect a business with the right capstone program, so CIRAS has taken the role of matching company needs to the appropriate Iowa State department.

CIRAS ensures that both the students and the companies benefit from the project,” said Mayra Ramirez, CIRAS project manager.

The students made good progress on the PowerFilm project, but as so often happens, real life intervened. A PowerFilm client needed upgrades on a similar product as soon as possible, so PowerFilm hired a professional consultant to develop the improvements.

But the capstone project turned out to be valuable in other ways, says Dan Stieler, president of PowerFilm. “They did a lot of work researching what is available in USB-C power delivery integrated circuits. That is going to help us in the future.”

The project also had a workforce benefit. Jon Fecht, who was both an employee and an Iowa State student at the time, was able to be part of the capstone project. “It really boosted his knowledge level and expedited his design work with us,” says Stieler.

Stieler estimates the capstone project benefits at around $200,000 over a two-year period in retained or additional sales through modernizations of the current product offering.

Capstone projects “are a good way for companies like ours to expedite product development,” says Stieler. Student work might not result in a completed product, “but it can give you a real jump start.”

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

Dan Stieler, president of PowerFilm, and Jon Fecht, Iowa State University student and PowerFilm employee, evaluating a rollable solar panel.
Out-of-the-box thinking prompted by CIRAS helped a northeast Iowa manufacturer significantly increase interest in its intern program.

JEDA Polymers, a Dyersville company that makes engineered resins, went from a few intern applicants to more than a dozen after the CIRAS workforce services team assisted the company with refining its recruiting process. CIRAS helped JEDA develop a more detailed job posting, interview questions, and a candidate evaluation matrix. CIRAS facilitated a shift in JEDA’s perspective, emphasizing the importance of expanding their recruitment efforts to encompass both engineering and business students.

“They were focused on hiring an industrial engineering student, which limited their pool of applicants,” said Mayra Ramirez, CIRAS project manager. “After they expanded their field of interest, they got more applicants and ultimately they hired a business major whose academic work in supply chain management was a perfect fit for them.”

Jeff Goodwin, president of JEDA, was initially skeptical about broadening the intern applicant pool.

“We were in the midst of a Lean manufacturing project, and the next step was about supply chain,” said Goodwin. “So choosing an intern with that background provided the best outcome for our organization.”

Ramirez also helped JEDA with a potential housing issue by connecting the company with their local community college, Northeast Iowa Community College (NICC), which provided summer housing for the company’s intern. Finally, she made sure they were aware of the Iowa Student Internship Program funded by Iowa Workforce Development (IWD). The program awards grants to small- to medium-sized companies to support internships. JEDA received a $3,100 grant.

The intern ultimately hired by JEDA was Anthony Aragon, an Iowa State business student majoring in supply chain management. He worked on a maintenance inventory project created by Emily Betz, CIRAS project manager. Betz was responsible for setting the scope of the project as well as its deliverables and milestones.

“Emily guided me through the process of planning, designing, and implementing a better inventory system,” said Aragon. “Ultimately, I created Kanban cards with parts descriptions, numbers, suppliers, reorder points, lead times, and so on. I implemented the system, analyzed the process, and fixed a couple of issues. I also created an instruction manual outlining the basics of the Kanban system and how it works so all employees can use it properly.”

Aragon will graduate in December, and he has already secured a position after graduation. He attributes his professional achievements to the successful internship experience. The experience was positive for JEDA as well.

“I know JEDA received a great product from Anthony, and I’m certain Anthony gained some good experience,” Goodwin said. “It was a total win-win.”

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

Anthony Aragon, previous intern with JEDA Polymers, has secured a position after graduation. He credits his work as an intern to his professional success.
CIRAS Secures Five-year EDA Grant to Benefit Iowa’s Construction Industry

The U.S. Department of Economic Administration has chosen CIRAS to continue its role in the national University Center program. This designation, along with a five-year grant, will provide CIRAS with the resources needed to enhance its support for the construction industry in Iowa.

As part of the new initiative, CIRAS will undertake four specific activities: (1) perform a needs assessment to pinpoint the main challenges facing construction companies; (2) identify key emerging technologies that could help address these issues; (3) organize events and demonstrations that bring together technology providers, construction engineers, and industry leaders; and (4) develop a Construction 4.0 technology assessment tool to help companies understand the long-term impact of different technologies and stay informed about changes in the market.

CIRAS will add a strategic advisor with expertise in the construction industry to lead this effort. Stay tuned, as we have exciting developments on the horizon and will share regular updates on the progress and opportunities arising from this initiative.

For more information, contact Leah Barton at bartonl@iastate.edu or 515-291-0733.

CIRAS Staff News

Ben Drescher joined CIRAS as a Food and Feed Quality and Safety project manager.

Ben Drescher recently joined CIRAS as a Food and Feed Quality and Safety project manager, contributing to implementing food quality and safety practices in Iowa’s agriculture and manufacturing sectors as part of the CIRAS partnership with ISU Extension’s Grain Quality Initiative.

With extensive experience managing all aspects of livestock farms for teaching and research, Ben works with companies to ensure compliance with regulatory requirements and external quality standards in the food industry. He holds a B.S. in agricultural education from Iowa State University and an M.S. in agricultural science from Murry State University. Before joining CIRAS, he served as the Animal Science Farms director at Iowa State University for nine years and worked in the swine industry prior to that.

For more information, contact Ben Drescher at bdresche@iastate.edu or 515-509-0940.

CIRAS has welcomed Jayna Grauerholz as the newest government contracting specialist.

Jayna Grauerholz serves as a government contracting specialist on the APEX Accelerators team at CIRAS. She assists Iowa businesses in navigating federal, state, and local government contracting. With a wealth of experience in government contracting, Jayna is skilled in RFP writing and evaluation, contract drafting, negotiation, and management.

Her background includes roles as a research and development contract negotiator at Ames National Lab and managing contracts at Iowa State University Procurement. With a legal background, she previously practiced law in areas such as disability, ADA, civil rights, compliance, and probate.

For more information, contact Jayna Grauerholz at jayna@iastate.edu or 515-509-4912.
A small central Iowa agency specializing in marketing, advertising, and website development has taken a big step toward bidding on government contracting work thanks to its relationship with CIRAS.

Andi Fagen, president and creative director of Creative DSM in Des Moines, met Kelly Freel at the Central Iowa Business Conference earlier this year. During a following introductory conversation, Freel, a government contracting specialist, explained the importance of the System for Award Management (SAM) registration and offered to guide Fagen through the process.

SAM registration is needed to bid on federal government contracts and to be eligible for the Woman-Owned Small Business preference program.

“I knew about SAM registration, and I’d started the process a couple of times. But I’d get overwhelmed and step back,” Fagen said. “Without Kelly, I might not have ever finished.”

In addition to helping Fagen complete and submit her registration documents, Freel kept an eye on the paperwork as it moved through the system and looked at possible next steps.

“We completed the SAM registration, and I was able to provide market research targeting government agencies that buy the digital and social marketing services Creative DSM provides,” Freel said. Fagen used the feedback from her work with Freel to create a website specifically for potential government clients.

Creative DSM is still working on getting their first government contract. But Fagen feels more confident about her chances since working with CIRAS.

“Working with CIRAS feels like you have an advocate, which is so important for a small business,” she said. “You can get so lost trying to do everything yourself. Having someone dedicated to helping you grow your business is priceless.”

For more information, contact Kelly Freel at kmfreel@iastate.edu or 515-620-6265.
ILC Conference: Growing and Giving Back

Interest in the Iowa Lean Consortium (ILC) annual conference is stronger than ever. Three hundred people from 97 organizations attended this year’s event held October 25 and 26 in Altoona. Organizers credit the event’s success to knowledgeable keynote and breakout speakers who delivered actionable insights.

“It was a privilege to bring people together who are leading improvement and change in their organizations and connect them with others who face similar challenges. We saw many hugs and high fives and heard a lot of laughter as people shared, learned, and connected while improving their knowledge and growing their network,” said Tracy Schuster, ILC director.

New this year was a “LEANing Together” preconference event. Divided into teams, attendees used continuous improvement strategies and hands-on learning to provide potential process solutions for the Food Bank of Iowa.

“For years, members have asked us, ‘How can we give back? How can we work with the nonprofit community to share our knowledge and help them improve processes in the work they do?’” said Schuster. “I learned about a similar activity at the University of California—San Diego. We adapted their model to help the Food Bank of Iowa improve their processes and help them provide food to Iowans in need with greater efficiency.

Kicking off the main conference was keynote speaker Katie Anderson, an internationally recognized leadership consultant, speaker, and author of the Shingo Award-winning and best-selling book “Learning to Lead, Leading to Learn.” Her presentation was based on her book, which tells the story of her mentor, Toyota leader Isao Yoshino, and what he taught her about learning, leading, and caring.

Will Bowen, known as the “no complaint guy,” closed the conference. He helped attendees understand why people complain and shared specific tools for turning complainers into collaborative problem solvers.

Conference breakout sessions focused on topics ranging from Lean tools to leading through change. Keynote and breakout sessions were recorded and are available to ILC members.

Now is a great time to join the ILC. There are a variety of connection and learning opportunities lined up for members. These include a trip to Kentucky and engaging local learning tours featuring Iowa businesses.

For more information, contact Tracy Schuster at tschust@iastate.edu or 515-715-0164.
Digital Authenticity: How True Workplace Excellence Meets Online Marketing

In today’s competitive business landscape, attracting top talent is as crucial as attracting customers. For small and medium businesses, this can be a real challenge. So how do you make your company the top pick for job seekers?

Before diving into digital strategies, it’s essential to understand one fundamental principle: authenticity is key. If your company is genuinely a great place to work, it’s easier to market it. Just as you’d develop a value proposition that tells the plain truth about what makes your product or services great, it’s crucial to craft a compelling narrative about why someone should choose to work for your company over another. This isn’t just about salary or benefits; it’s about culture, work-life balance, growth opportunities, and the overall environment.

The strategies employed by seasoned marketing professionals in promoting products aren’t vastly different from what’s needed to showcase your company’s work culture. Potential employees are the target, and digital platforms are the medium. Among the myriad of digital marketing tactics, social media stands out for human resources purposes. Platforms like LinkedIn, Facebook, and even Instagram can be powerful tools to showcase your company culture, share employee testimonials, and highlight unique benefits. However, remember to be real. Potential employees can discern the difference between genuine content and mere “spin.” A quick visit to your office will show if what you’re posting online is the truth, so make sure your digital image and real-life match up.

If the task of promoting your company’s value proposition sounds daunting, remember you’re not alone. Just as you’d consult a marketing expert for product promotion, consider reaching out to professionals who specialize in workforce development. CIRAS can guide you in crafting a workforce development strategy, including digital marketing, tailored to your unique value proposition.

Making your company a desirable place to work is half the battle. The other half is effectively communicating that to potential employees. In today’s world, having a strong online presence is a must. If you’re ready to step up your recruitment game, contact CIRAS’ Workforce Development team. We’re here to help.

For more information, contact Paul Gormley at gormley@iastate.edu or 319-721-5357.