

AT A GLANCE

The Dimensional Group

FOUNDED: 1987

EMPLOYEES: 75

OVERVIEW: The company creates custom packaging and commercial printing, ranging from binders and diploma covers to custom boxes and restaurant menu holders.

IMPACT: \$1.8 million over three years

LEARN MORE:

<https://dimensionalgroup.com>



The Dimensional Group Finds a New Approach

By the time CIRAS walked through his door, Adam Gold was ready to listen.

It was 2014, and it was clear that The Dimensional Group was a company with problems. The Mason City custom packaging and commercial printing firm had stretched beyond its capabilities. The shop floor was chaos, where work languished uncompleted and a backlog continued to grow.

“Our business had grown very, very rapidly, and that growth absorbed a significant amount of our cash,” said Gold, president of The Dimensional Group. “We had mounting late orders, and our plant couldn’t move fast enough to support the new revenue growth. Then we had a significant issue hiring new people.”

“By 2014, I wasn’t sure we were a viable entity,” Gold said. “I just had very little faith that this was what I was going to be doing in the future.”

Gold decided he needed a new approach. Then, as if on cue, CIRAS account manager Derek Thompson stopped by one day and asked if Gold needed any help.

What followed was three years of projects that have made a nearly \$1.8 million improvement to The Dimensional Group’s bottom line. CIRAS helped the company reevaluate its growth plans, revamp the way it handled inventory, reorder the way business was conducted on the shop floor, and refocus the way management decisions were made.

Once the entire production process began to run more effectively, CIRAS strategy expert Joy Donald stepped in to lead a strategic planning effort with Gold and the rest of The Dimensional Group’s management staff. Company leaders talked through the issues, devised a strategy, and agreed on how to make it happen. “Then the team basically felt like they created the plan and they had been empowered to go out and solve the problems,” Donald said.

Since the change, The Dimensional Group managers are playing a greater role in day-to-day decision making.

“I think the short version is we had to set some people in the organization on a

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path where they felt comfortable doing things themselves," Gold said. "We had to reduce my level of involvement to let them learn to grow."

Both Donald and Gold say a key change at The Dimensional Group has involved shifting the company's thinking about what it is and what it needs to be. Gold believes the company was trying to grow too rapidly for a small-town Iowa business and now has found the proper pace.

"What he really wanted was to have a successful company, but he didn't need it to grow exponentially," Donald said.

"He's very happy now, because with the new management structure his life isn't so chaotic," she said. "He's not having to delve so deeply into everything in the company. He's able to do what a president is supposed to do."

And it seems to be working.

"I think today we're very sound financially," Gold said. "We can grow at the rate I want us to grow at. And my employees are able to do and manage

and make decisions to the point where I can go and do other things, as well."

Since the end of 2017, Gold has used some of his new-found time to give back, serving as a part-time CIRAS resource to help small companies with specific problems. He hopes to provide the same kind of fresh outside view that he received when he needed it.

"It was one of those things where I needed some new thinking to figure out how I needed to do it next," Gold said. "That's the great part about CIRAS. You have a group of professionals

that are experts in what they do, and you have access to them.

"Whatever we want help with today, tomorrow, or the next day, it's there."



"It was one of those things where I needed some new thinking to figure out how I needed to do it next. That's the great part about CIRAS. You have a group of professionals that are experts in what they do, and you have access to them."

— Adam Gold

➤ For more information, contact Joy Donald at jdonald@iastate.edu or 319-359-0206.

Workers control the printing press through an electronic interface.



On the Cover: A Dimensional Group employee operates a screen press.

CIRAS Mission: Every day we will enhance the performance of industry through applied research, education, and technical assistance.

CIRAS is supported in part by the DoC/NIST Manufacturing Extension Partnership, the DoD/DLA Procurement Technical Assistance Program, the DoC/EDA University Center Program, and the State of Iowa Economic Growth Committee appropriation for the CIRAS Technology Assistance Program.

CIRAS News is published quarterly by the Center for Industrial Research and Service and edited by the CIRAS publications team. Design and production is by Hobbs Designs, LLC. Please send questions, comments, or address changes to ciras.news@iastate.edu.—April 2018 HD18006

Articles may be reprinted with the following credit line: "Reprinted from *CIRAS News*, Vol. 53, No. 3, a publication of Iowa State University Center for Industrial Research and Service." Please send a copy of the reprint to *CIRAS News*, 1805 Collaboration Place, Suite 2300, Ames, Iowa 50010-9166.

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With Service Bureaus Coming, Iowa at an Additive Manufacturing Inflection Point?

Dennis Fogle believes the dawn is coming for his industry in Iowa.

“We’re right on the edge,” said Fogle, general manager of Agile Additive Manufacturing Ltd. in Pella. “It’s just over the hill. . . . I think we just need a little bit more education here.”

Agile, a recently formed offshoot of Canada’s largest 3D printing service bureau, opened in Iowa last year in preparation for an expected wave in the use of 3D printing in Iowa manufacturing. Several other Iowa companies likewise have been formed over the last two years with a business plan that involves designing and/or 3D printing products for others. All report more fervent interest in the technology.

“We’re at an inflection point,” said Brandon Hart, who operates HartSmart Products LLC using six printers in his home. “Those in the design, engineering, and development space all look at 3D printing as a real tool in their toolbelt to develop a product.”

CIRAS has been working in 3D printing for nearly 20 years but decided in 2016 to purchase a metal printer and to help Iowa manufacturers explore the next leap in additive manufacturing technology. During the first year, CIRAS staff and students spent more than 3,000 hours producing parts and tooling as part of 12 test projects for eight Iowa companies.

“It’s still very, very early for service bureaus to make a living in the state of Iowa,” said Chris Hill, head of CIRAS’ Technology Assistance Program. “But they are slowly moving in. . . . You’re starting to get some more higher-end equipment moving into the state.”

Agile Manufacturing sits in the shadow of two major manufacturers—Vermeer Corporation and Pella Windows—but is pursuing business across the state.

“I think there are a lot of people who are still sitting back and seeing how it fits into their situation,” Fogle said. “I think technology has changed faster in the past year than it has in the previous 10 years. It’s hard for people to keep up.”

Gerald Beranek, owner of Beratek Industries in Cedar Rapids, launched his 3D printing business two years ago as a complement to making and selling his own products. His customers, mostly entrepreneurs with low-volume manufacturing needs, are looking for help with design,



Dennis Fogle of Agile Manufacturing holds a 3D-printed skull while wearing a 3D-printed custom glasses frame.

“I think there are a lot of people who are still sitting back and seeing how it fits into their situation.

I think technology has changed faster in the past year than it has in the previous 10 years. It’s hard for people to keep up.”

— Dennis Fogle

prototyping, and production (picking the correct manufacturing method, which may be 3D printing).

“They’re not coming to me just for 3D printing,” Beranek said.

At HartSmart, the proprietor says he has seen “a definite shift within the last year, in that I’ve seen a lot more companies asking for prototyping.”

Hart, who started his company partly as a hobby, now includes clients who are both inventors and more established companies. “It’s a lot better understood than it used to be,” he said.

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

Planning Continues to Bring About ‘Year of Manufacturing’ Industry Expansion

Industry experts from around the state are developing a detailed plan for growing Iowa manufacturing—with CIRAS slated to play a leading role both in the plan’s design and its implementation.

The ongoing effort stems from 2017’s governor’s Year of Manufacturing initiative, which charged the Iowa Economic Development Authority and the Iowa Innovation Council (IIC) with finding ways to increase a \$29 billion manufacturing gross domestic product to \$32 billion by 2022.

To get there, industry leaders will focus on the five main areas in which CIRAS already provides services—growth, technology, productivity, leadership, and workforce.

Among other things, the 12-page strategic recommendation issued by the IIC last November says Iowa should increase regional ties between manufacturers and work to attract more talent to manufacturing.

The IIC’s Advanced Manufacturing Workgroup has been laboring since February to develop a detailed plan for how that should happen. The initial focus will lie in three areas:

- Finding ways to network manufacturers together and link them to existing sources of assistance
- Developing a specific plan for helping manufacturers get digital ready
- Creating a plan for linking the additive manufacturing expertise available at Iowa universities so that it can be used to help small manufacturers grow

The 21-member workgroup includes CIRAS director Ron Cox.

“We’re looking forward to working with a lot of smart people to help Iowa manufacturers and their communities prosper and grow,” Cox said.

CIRAS already is working to aid the group’s efforts. Services have been expanded in 2018, including a new slate of networking events and increased efforts to educate Iowans about the use of digital manufacturing techniques. At the same time, CIRAS also is developing joint additive manufacturing projects with the University of Iowa.

Watch this space for more information. To see the full recommendations, visit <http://bit.ly/2FAfTaH>.

CIRAS Advisory Board Welcomes New Members



Patrick J. Adam

PATRICK J. ADAM is vice president of strategic accounts for Donatech, a niche staffing and engineering services company. Headquartered in Fairfield, employees work in 36 states for aerospace/defense and advance manufacturing companies. In Iowa, Rockwell Collins has been Donatech’s largest account for 30 years. Adam’s responsibilities include corporate sales and operations. He has a bachelor’s degree in business administration from the University of Iowa.



Bob Hickman

BOB HICKMAN is president and owner of Chenhall’s Staffing and HR Network in Davenport. A former National Human Resources Partner for RSM, he was responsible for guiding the firm from its roots as a regional firm to eventually becoming the nation’s fifth-largest accounting and consulting firm. Hickman has experience in recruitment and staff augmentation at all levels, as well as payrolling and temp-to-hire services. In addition to working with numerous local and community groups, he is active in Beta Alpha Psi (the national accounting fraternity) and the Diversity and Inclusion Committee of the American Institute of Certified Public Accountants.



Brad Jungling

BRAD JUNGILING is director of operations for Pella Corporation in Pella. His area of expertise includes Lean manufacturing, manufacturing plant management, and servant leadership. Jungling has a bachelor’s degree in industrial technology from the University of Northern Iowa. He previously has served as a school board member and a football coach at Pella Christian High School.



Mary Landhuis

MARY LANDHUIS is president of Lisle Corporation and EZWay, a maker of patient-handling medical devices in Clarinda. Her previous experience includes work in corporate communications, marketing, public relations, sales management, and manufacturing management. Landhuis has a bachelor’s degree in organizational studies from Northwestern University. She currently sits on the boards of Cardinal Fund and the Iowa Association of Business and Industry.

CIRAS Helps Oh Ball Get Rolling with New Production Methods, Design

By the time you read this, Kipp Hagaman hopes the “SnOh Ball” will be on a roll.

Hagaman, a former insurance salesman with a history of plantar fasciitis, formed his own company in 2013 to market the treatment he created for that painful foot condition, which affects roughly two million people each year.

The Oh Ball—essentially a fist-sized ball with a rope handle through the middle—has been sold for several years on Hagaman’s website. But the company is poised for significant expansion thanks to a coordinated package of assistance that included a loan from the Iowa Economic Development Authority (IEDA) and technical design help from CIRAS’ Technology Assistance Program (TAP).

Chris Hill, director of CIRAS TAP, said program experts helped Hagaman redesign the latest version of his product—the “SnOh Ball,” which is hollow and filled with a freezable gel. CIRAS helped the company discover a new way of manufacturing using plastic-injection molding.

The first fully functional versions of the new design were produced in November using a mold that had been created in CIRAS’ metal 3D printer.

“We helped him find a new process and a new technology that will work better for him for the long term,” Hill said.

The result for Hagaman was a drastically reduced cost structure and the chance to widen his project’s reach. The entrepreneur estimates that post-CIRAS, his products will cost roughly 50 percent of what they did before the CIRAS-driven redesign.

“Before this, I was making them with rotational molding at a company in Minnesota that had been helping me since 2014,” Hagaman said. “But rotational molding is a laborious, time-consuming, and therefore expensive process, and I was severely limited by how many I could afford to make.”

Hagaman currently sells the Oh Ball mostly online and through Des Moines-area chiropractor offices. They also can be found at Brown’s Shoe Fit and a handful of central Iowa clothing retailers.

The coming Oh Ball expansion will be aided by a \$100,000 incentive loan from the IEDA, and the company is pursuing new investors to fund both planned increases in production and staffing, as well as an overall upgrade of the products. Hagaman said he has plans to improve the Oh Ball handles and make them “more robust.”

“CIRAS has been absolutely great to me. They went above and beyond the call to help get this thing figured out. I can’t say enough good things about them.”

— Kipp Hagaman

“CIRAS has been absolutely great to me,” Hagaman said. “They went above and beyond the call to help get this thing figured out. I can’t say enough good things about them.”

Top: Oh Ball user Georges Niang demonstrates the product for a video shot last year. **Middle:** Kipp Hagaman confers during the video shoot.



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



AT A GLANCE

Kay Park Recreation

FOUNDED: 1954

EMPLOYEES: 55

OVERVIEW: The company makes metal bleachers and park furniture, plus some metal agricultural tanks.

IMPACT: \$175,000 from efficiency improvements in 2017; also expect increased sales from still-in-progress work on the company's website.

LEARN MORE: www.kaypark.com

Chris Borglum, left, and his brother, Larry Borglum.

Kay Park Recreation—A New Generation Rebuilds the Family Business for the Future

Kay Park Recreation was born in 1954 because its founder, Keith Borglum, was in the right place at the right time.

“His older brother happened to know some guys on a county conservation board,” said Keith’s son, Larry Borglum. “In the 1950s, when they started making parks everywhere, his older brother said, ‘I know some guys who could do that..’ ”

Years passed, word spread, and Kay Park Recreation’s business as a supplier of quality outdoor recreation equipment grew steadily. Until things just stopped. Keith Borglum, a smart man who survived the Great Depression and never really trusted anything he didn’t understand, had reached his limits.

In 2016, when the then-90-year-old Borglum retired, his sons called CIRAS looking for help modernizing their plant. It was time, they decided, to change.

“Our operations were getting pretty antiquated,” said current company president Chris Borglum. “My dad was the founder, and as quite often happens with an entrepreneur like that, he let it grow to the point where it was as big as he felt he could handle, and then he started choking it.... It basically stagnated things, because everything had to funnel through my dad.”

Chris and Larry Borglum have now been working with CIRAS for more than a year on efforts to update how Kay Park both makes and sells its equipment. CIRAS experts have helped the

company declutter its factory space and improve efficiency by empowering managers to make more decisions. CIRAS also is helping the company expand its internet marketing apparatus and shift away from the nearly 200,000 paper catalogs that Kay Park used to print and distribute roughly every 12 months.

“I would say the biggest thing we got out of the first CIRAS project was just a new way of looking at things.”

— Chris Borglum

“I would say the biggest thing we got out of the first CIRAS project was just a new way of looking at things,” Chris Borglum said. “We still had some silos in terms of managers and departments and stuff. What the project did was bring all management levels to an understanding of the whole picture. So, when we started talking about where we need to start spending our time and our money on improvements, it was clear to the entire group why we were choosing what we were choosing.”

CIRAS account manager Sean Galleger believes the Borglums are a typical family business in that “there’s going to be a lot of companies that recognize themselves in this picture.”

“Certainly, a lot of old-line family companies like this would be inclined to say, ‘Well, let’s just stick with what got us here,’ ” Galleger said. “These guys could do that, but I think they see that things really need to be shaken up for the long-term benefit of the company.”



In addition to picnic tables and other outdoor furniture, Kay Park Recreation makes towable bleachers.

The Borglums say their goal is to improve efficiency and grow the company by roughly 10 percent a year while maintaining approximately the same number of employees. That will require a new approach to many aspects of the business. But the Borglums believe it's time.

"There are still some people around here who probably question the value of all of it," Larry Borglum said. "It was so long developing the situation and the culture that we had, it probably will take more than two or three years to change it."

Like many privately held Iowa manufacturers, the company is averse to debt. So upcoming production changes will be financed by new customers recruited from a newly modernized website launching this spring. If all goes as planned, the company thinks it's reasonable to believe they could see revenues double within seven or eight years.

"They're trying to take their business model, their operations, and everything else into the 21st century," Galleger said. "They're attacking it from multiple points. Typically, we see companies start on their production floor and then expand from there. These guys are doing all that, but they're taking on completely different facets of the business at the same time."

So far, so good.

➤ **For more information, contact Sean Galleger at galleger@iastate.edu or 515-290-0181.**

Maximilian Droste (Group Schumacher North America)

Every so often, CIRAS likes to take a moment and tell you a little bit about the people who make Iowa businesses better.

Max Droste is responsible for operations at Schumacher, a maker of farm equipment, and he'd like to see industry and education work together.



NAME: Maximilian Droste

EMPLOYER: Group Schumacher North America

JOB TITLE: Chief Operating Officer

■ Explain your job.

Group Schumacher is a family-owned business with factories in Germany, Russia, Brazil, and the United States. I am in charge of manufacturing, including production, purchasing, and logistics.

■ How did you get started in Iowa industry?

Schumacher was founded in Germany during the 1960s. We worked with John Deere and other farming machine companies, and by the 1990s, we saw potential for international expansion. We saw Iowa as the perfect location for everything. Here, we have access to critical infrastructure and proximity to big OEM accounts. We are right in America's breadbasket.

■ How has the business/industry changed since then?

Schumacher North America started mainly as warehousing and a small amount of assembly from Germany. When manufacturing in Iowa became more of a necessity for reacting to demand, the owners decided to grow production in the United States.

Automation has become a much bigger part of the industry today. We still do manual labor, but automation has a continually increasing share of our company's production.

■ What's the key to success for somebody in your job?

Don't take things personally, and lead by example.

■ You've been appointed Supreme Leader. If you could change one thing about business in Iowa, what would it be?

I would lobby for a closer relationship between industry and education. I strongly believe in the correlation of education and people's abilities to better themselves. As a millennial, I feel like it needs to become a lot more affordable, especially in the United States. As an employer, we also have a hard time verifying the professional requirements needed in our industry based on people's resumes and interviews. I come from a background where precise skills and theory taught are strictly regulated and defined by national standards.

■ **Artificial Intelligence and Machine Learning**

May 23, 2018
10:00 a.m. to 3:00 p.m.
Ames

■ **Midwest Government Contracting Symposium**

May 23–24, 2018
8:00 a.m. to 5:00 p.m.
Moline, Illinois

■ **Doing Business with the State of Iowa**

June 5, 2018
11:00 a.m. to 1:00 p.m.
Sioux City

■ **Boot Camp for GSA Schedules**

June 5–6, 2018
1:30 p.m. to 4:00 p.m.
Sioux City

■ **Web Development Boot Camp**

June 27–28, 2018
8:00 a.m. to 5:00 p.m.
Iowa City

CIRAS arranges regular tours of Iowa State University laboratories so that Iowa companies can build an understanding of the capabilities that are available to help them solve problems. Upcoming events in Ames include the following:

■ **3D Printing and Polymer Lab Tour**

June 14, 2018
9:45 a.m. to 2:15 p.m.

August 2, 2018
9:45 a.m. to 2:15 p.m.

■ **Materials, Structures, and Nondestructive Lab Tour**

August 9, 2018
9:45 a.m. to 2:15 p.m.

For more information, see the CIRAS event calendar at <http://www.ciras.iastate.edu/events.asp>.



Advanced Media Production Firm Seeks Certifications, Growth as a Government Contractor

Terrence Thames wants to play a larger role in his profession and his community.

That's one of the reasons Thames (at right in photo above) is pressing to grow his small Des Moines advertising agency into a major creative provider for private brands and public organizations around the country.

Advanced Media Production Firm, which does business as Cocoa Creative, began in 2011. The firm provides creative and production strategy for brands, businesses, and government agencies, and its work already has played roles in campaigns involving large brands such as Papa John's, McDonald's, and Allstate Insurance.

"Capacity-wise, our agency is about 10 people strong," Thames said. "But what we want to do is create jobs. We really want to create some economic impact and make a difference in that way."

Thames hopes that difference will begin to develop with his company's stepped-up pursuit of government contracts. Advanced Media has been working since last fall with CIRAS and an unaffiliated minority business marketing consultant to obtain several certifications that the company hopes will spark more government work.

"Government agencies need advertising and creative services, as well," Thames said. "I think we just see this as something that we can do to help them."

The company previously has worked as a subcontractor for the Kid's Ride Safe Campaign, a safe driving education campaign funded by Drive Safe Cedar Valley.

"A key part of our strategy is to position ourselves as a very good company to work with as a government contractor," he said. "We're still getting better at telling our story to potential partners."

Among other things, CIRAS has been working to get Advanced Media Production Firm registered as a HUBZone (see article page 9) and 8(a) disadvantaged business. The 8(a) designation refers to federal rules that specifically set aside parts of government contracts for small businesses that are owned predominately by women and/or ethnic minorities.

Advanced Media plans to submit the final paperwork for both designations this spring.

Jodi Essex, a government contracting specialist with the CIRAS Procurement Technical Assistance Program, said federal rules allow large companies to partner with small ones and access the set-aside work. In exchange, large firms must provide mentoring to their smaller partners.

"The idea is that both companies benefit," Essex said. "The small companies get advice as they grow, while the large firms get access to a bigger pool of work."

Thames said Advanced Media already is being pursued by companies interested in mentor-mentee relationships. He's optimistic that companies will be willing to "test the waters first" by working with Cocoa Creative right now.

"We don't need to rush," he said. "Let's date before we're married."

➤ **For more information, contact CIRAS government contracting specialist Jodi Essex at jodir@iastate.edu or 515-509-0769.**

HUBZone Businesses Seek a Step Up in Seizing Attention of Agencies, Prime Contractors

Steve Belland and Moe Abu-Nameh have gone the extra mile to give federal government agencies and their prime contractors a reason to work with the duo's Hiawatha trucking company.

Now, the lowans just need to find the right match.

"We're reaching out to all the big companies," Abu-Nameh said. "We're just waiting until the right instances where we fit within their programs."

Integrated Connections LLC, a trucking, warehouse, and logistics company founded by Belland and Abu-Nameh in 2004, is one of fewer than two dozen companies in Iowa that have been formally certified as existing in a federal HUBZone. As such, the company is chasing something that often is an underutilized factor in federal spending.

Created by Congress in 1987, the HUBZone designation was intended to encourage government authorities to send more business into neighborhoods filled with Historically Underutilized Businesses.

"Any time a large company is awarded a contract that's more than \$750,000, they have to include these subcontracting goals in it," said Melissa Burant, a government contracting specialist with CIRAS' Procurement Technical Assistance Program.

HUBZone status is one of many such set-aside programs, Burant said—one that CIRAS encourages businesses to explore when they decide to get started in government contracting. "All those things are just little extra added bonuses that companies can then market to the government."

"They have quotas they need to meet, and we're hopeful that these certifications will help us get some of that business," said Belland.

Iowa had 20 recognized HUBZone businesses in 2017, up from 15 the previous year. Federal authorities also expanded the map last year, making portions of 32 counties available for HUBZone designation.

For more information, contact Melissa Burant at mmburant@iastate.edu or 563-726-9958.

CIRAS PTAP—Iowa's Local Link to a National Network of Contracting Expertise

by Leah Barton, PTAP program manager

Government contracting is a byzantine business—a long and plodding trek through a jungle filled with complicated regulation, documentation requirements, and new marketing challenges.

Sound impossible? Not if you have help.



Leah Barton

Since 2000, CIRAS has served as Iowa's Procurement Technical Assistance Center (PTAC)—the Iowa affiliate of a nationwide network funded by the U.S. Defense Logistics Agency. (CIRAS refers to the Iowa entity as our Procurement Technical Assistance Program, or PTAP.) The national PTAC network includes more than 600 government contracting specialists spread across 95 programs around the United States and its territories—all of them continually sharing best practices and ready to help each other at a moment's notice.

In 2016, PTACs around the country served more than 41,350 clients, according to a December newsletter article written by Jane Dowgwillo, president of the national Association of Procurement Technical Assistance Centers. Those centers helped clients win more than 87,000 contracts and subcontracts worth roughly \$16.5 billion.

"What makes this community special—and effective—is how we support each other in so many ways," Dowgwillo wrote. "Knowing that we can reach out to our colleagues and someone will be there to answer a technical question or provide some advice is invaluable."

CIRAS PTAP specialists exist to be your companion as you explore the world of government contracting. But know that when you call us, you're getting more than one guide—you're getting the experience and expertise of more than 600 government contracting experts.

For more information, contact Leah Barton at bartonl@iastate.edu or 515-291-0733. Or, request more information by visiting <https://newswire.ciras.iastate.edu/ptap-request-for-counseling/>.



CIRAS Assessment: Iowa Manufacturers Still Need Help with Technology, Business Strategy

Iowa manufacturers have been slow to take proven steps toward improving their businesses—and now face a widening technology gap and workforce challenges that are placing increasing pressure on smaller companies, according to a new CIRAS review of the state of Iowa manufacturing.

CIRAS' 2017–2018 Iowa Manufacturing Needs Assessment Report, a document based on comments derived from six public forums and a survey of leaders at 228 manufacturers across Iowa, shows Iowa companies continuing to sort themselves onto one side or another of a widening profitability gap.

A majority of manufacturers responding to the survey (54 percent) reported a return on sales of less than 10 percent—including many small companies that slipped to a loss since the last such survey was taken. However, 13 percent of the survey

respondents reported a return on sales of 20 percent or higher. According to the report, “this demonstrates that there is a significant group of manufacturers that create and sell high-value products.”

“One of the things we brought out through those forums is that there are companies out there that are figuring this stuff out,” said Mike O'Donnell, director of CIRAS' Manufacturing Extension Partnership. “It's not easy, but they're making good progress.”

Arrows indicate rising, decreasing, or stable need.



Enterprise Leadership

- ↔ NEED 1: Improved strategy and planning capabilities
- ↓ NEED 2: Support for small manufacturers in understanding and complying with local, state, and federal regulations
- ↑ NEED 3: Assistance in creating and sustaining a competitive advantage through health care costs



Growth

- ↑ NEED 1: Exposure and coaching to pursue opportunities in new markets
- ↔ NEED 2: Support product development
- ↔ NEED 3: Support growth efforts through next-generation technology and productivity



Productivity

- ↔ NEED 1: Improve implementation rates of proven initiatives to ease workforce constraints
- ↑ NEED 2: Provide hands-on implementation assistance for small manufacturers



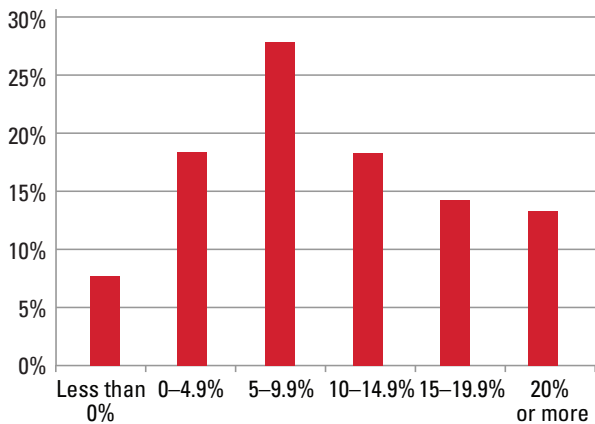
Technology

- ↑ NEED 1: Exposure to applications of next-generation technologies that can create sustained competitive advantage
- ↑ NEED 2: Deep technical support in advanced manufacturing engineering and automation
- ↑ NEED 3: Take a significant leap forward in digital manufacturing technologies



Workforce

- NEW** NEED 1: Support and grow manufacturing employee attraction programs
- NEW** NEED 2: Improve and coordinate regional efforts to attract and retain workforce



Return on sales for survey respondents.

According to the Needs Assessment, most Iowa manufacturers are not implementing next-generation technologies. Iowa companies face a growing need for technical support when it comes to advanced manufacturing engineering and automation, and many firms are significantly behind in handling basic digital manufacturing technologies.

Other findings in the survey include significant concerns by Iowa manufacturers about looming threats tied to workforce needs and the growing cost of health insurance. However, despite the perceived severity of those problems, many forum participants expressed that they were simply too busy to try new approaches to solving them. Concerned companies reported surprisingly low rates of adopting tools for dealing with those problems—tools such as wellness programs, productivity practices, and automation.

According to the report, Iowans may be stuck in old and no-longer-productive habits when it comes to tackling complicated issues: “The ‘heads down,’ hard work approach that kept manufacturers in business over the previous 15 years is [now] an impediment to their ability to solve these problems.”

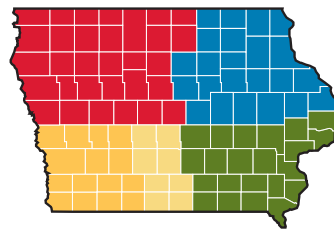
CIRAS is using results from this assessment to map our own strategy for the services we’ll be providing in 2018 and beyond. This year includes, among other things, a focus on educating Iowans about digital manufacturing, cyber security, and how to find global markets for their products. Other CIRAS events will share information about artificial intelligence, water technologies, and attracting global talent to Iowa manufacturing.

➤ **For more information, read the full version of the Needs Assessment at www.ciras.iastate.edu or contact CIRAS program manager Mike O’Donnell at modonnll@iastate.edu or 515-509-4379.**

CIRAS Engage. Educate. Embed.

Since 1963, we have delivered proven services to enhance the performance of industry. Our approach—Engage. Educate. Embed.—creates specific solutions that allow each business and its community to prosper and grow. Coupled with a satisfaction guarantee, our typical client has achieved a 200% ROI. Clients have reported an economic impact of more than \$2 billion over the past five years.

Find your county to find your best introduction to CIRAS. In addition to four regional account managers, CIRAS has five regional government contracting specialists,* a statewide account manager for the food industry, and one for economic development. More staff information can be found at www.ciras.iastate.edu/staff.asp.



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 - Engineering Career Services
 - Engineering K-12 Outreach
 - Extension and Outreach
 - Iowa Grain Quality Initiative
 - Meat Science Extension
 - Structural Engineering Research Laboratory
- Iowa Area Development Group
- Iowa Association of Business and Industry
- Iowa Economic Development Authority
- Iowa Farm Bureau
- Iowa Lean Consortium
- Iowa Sustainable Business Forum
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GROWING YOUR BUSINESS

I make widgets. Why should I care about cybersecurity? *by Doug Jacobson*

It happens every day. The news fills with words like botnets, malware, ransomware, heartbleed, phishing, and sniffing. We are told we must make passwords "long and strong," avoid "unsafe" websites, and keep computers "up to date." We wonder what hackers could ever want with us.

Mostly, we just wonder what is safe and what we should do to protect ourselves.

Here are a few ways businesses can start to address cybersecurity:

- First, remember that cyber threats can affect any person or entity. Don't assume that, since you are small, you cannot be a target. Attackers often don't care who the victim is. They just want someone to attack.
- Look at what you have and what you think is valuable. Examine your digital footprint and ask, "What would happen if I lost this or someone stole it?" This will help you set priorities.
- Don't forget the physical. Look at your physical controls and who can access your equipment, computers, and property.
- Guard the floor. As a factory floor becomes more automated, it can become more of a target. Look at how

you can separate the factory controls from the rest of your organization.

- It is not just about the money. Don't forget about your intellectual property, like design specs, manufacturing processes, and costing structures.
- Many attacks come through humans interacting with email or websites. Computer security issues cannot be solved by technology alone; users must play a role in keeping themselves secure. Attackers are targeting people as well as technology.
- Get help. There are private companies that can help assess and secure organizations. A lot of information is available through trade associations. The federal government has guidelines for cybersecurity through both DHS and NIST.

The bottom line is you want to be proactive and start thinking about cybersecurity before something happens. Have a plan in place before you are attacked. Be ready for the next round of news.

➤ **Professor Doug Jacobson is a cybersecurity expert in the College of Engineering at Iowa State University. He can be reached at dougj@iastate.edu or through his computer safety blog at www.security-literacy.org/blog.**