

CIRAS 2002 ANNUAL REPORT

University Extension

IOWA STATE UNIVERSITY

College of Engineering

CIRAS Mission Statement: *The mission of CIRAS is to enhance the performance of Iowa industry, and associated entities, through education and technology-based services.*

From the Director

A sluggish economy and statewide budget cuts made this past year challenging for both Iowa manufacturers and CIRAS. CIRAS and Engineering Distance Education (EDE) staff worked hard to combat reductions by improving productivity and increasing income through grants and contracts. Some examples of our efforts follow.

- We added additional part-time student help where we have traditionally employed full-time staff. Combined, CIRAS and EDE employed the equivalent of 11 full-time students to support industry programming.
- Engineering Extension was brought under the CIRAS umbrella, after 90 years as a separate unit. The move will eliminate some administrative overlap, provide a more seamless link between manufacturers and Iowa State engineering faculty, and bring elevated resources within industry's reach.
- We relied more heavily on fees and grants. This past year, each dollar of support from ISU Extension helped to generate an additional \$1.23 in funds from grants and user fees, which were then used to assist Iowa industry.

Our staff also explored ways to amplify services through enhanced partnering opportunities. We continued to strengthen our partnerships with the Iowa Manufacturing Extension Partnership (IMEP), the U.S. Department of Energy, and the Economic Development Administration. We also initiated some new endeavors with USDA and the U.S. Department of Health and Human Services.

Collaborations with IMEP and the Iowa community colleges played a big part in many of the projects that we completed this past year. Examples of some of these projects are highlighted on the reverse side of this letter. The map conveys the extent to which we have been able to reach out to industry across the state.

We received two awards recognizing the quality of our programming. Mike Willett and Dawn Hines were honored by the Cedar Valley Manufacturers Association for their "Outstanding Contribution to the Organization." Tim Sullivan received an award from the National Association of Management and Technical Assistance Centers for his work with Iowa manufacturers on Theory of Constraints.

Though sales have been flat for many Iowa manufacturers, we have heard from many others that have experienced double-digit growth. We are optimistic about the health of Iowa industry, and we remain committed to assisting Iowa's manufacturers in becoming more profitable. We look forward to serving you.

Ronald A. Cox

CIRAS Staff

- Verl Anders
- Andrew Bice
- Jim Black
- Donald Brown
- Reg Clause
- Ronald Cox
- Clay Crandall
- Steve Devlin
- Paul Gormley
- Dawn Hines
- Jeffrey Mohr
- Sharmon Norris
- Merle Pochop
- Rudy Pruszko
- John Roberts
- Carol Smith
- Timothy Sullivan
- Chris Thach
- Steven Vanderlinden
- John Van Engelenhoven
- Michael Willett

Iowa Procurement Outreach Center

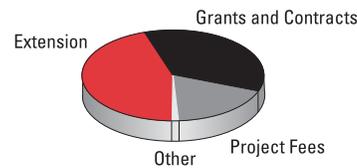
- Kathleen Bryan
- Bruce Coney

Engineering Distance Education

- Hiro Iino
- Paul Jewell
- Rebecca Sidler Kellogg
- Joe Monahan
- Pam Shill

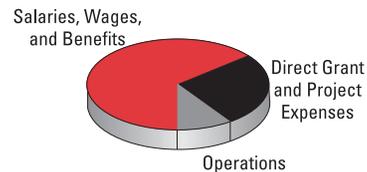
CIRAS Income

Total Income = \$2,750,283



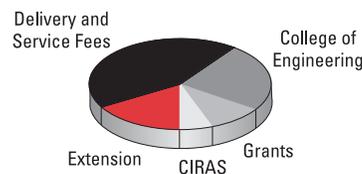
CIRAS Expenses

Total Expenses = \$2,539,653



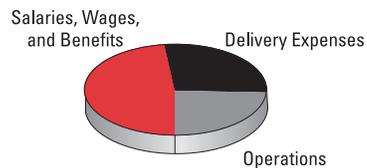
EDE Income

Total Income = \$628,740



EDE Expenses

Total Expenses = \$616,275



Iowa Manufacturing Profile

Iowa is home to 5,943 manufacturing establishments. The three areas below reflect how the manufacturing sector plays out as a portion of the state's total economic activity:

Labor Force	17%
Work Earnings	20%
Gross State Product	22%

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2001–2002 Highlights

Business Planning and Management

- Attendees at the second annual e-business conference explored the latest in Internet technology and security issues with hands-on training in e-business tools.
- CIRAS continued to be a prominent contributor to third-party feasibility studies for the USDA Rural Development Agency. ISU Value Added Agriculture Extension and CIRAS worked on feasibility studies for both Heartland Resources Technologies in Oelwein and for Arts-Way Manufacturing in Armstrong.

Energy

- CIRAS moved forward with the Iowa Industries of the Future (IIOF), a Department of Energy and Iowa Department of Natural Resources initiative that focuses on energy efficiency, waste reduction, and productivity improvements in Iowa industry. Representatives from metal casting companies completed a vision and a roadmap for their industry. Agriculture industry representatives developed a “bioeconomy” vision.

Engineering Distance Education

- EDE delivered distance education courses to over 130 Iowans at the B.S. level, including 60 secondary teachers. Over 350 Iowans are studying at the master’s level.
- Four B.S.E.E. degrees were awarded to students who earned 100% of their credits without traveling to Ames. Master’s degrees were awarded to 12 in FY 2002.
- The Information Assurance Center teamed with EDE to offer a new Graduate Certification in Information Assurance for the off-campus community.

Government Procurement

- The Procurement Technical Assistance Center (PTAC) reported that 420 jobs were created as a result of contracts awarded to companies that received assistance from IPOC and CIRAS staff. IPOC is funded through the Defense Logistics Agency and the Iowa Department of Economic Development.
- Decker Acquisition Corporation of Fayette reported receiving a \$180,000 subcontract from Cedarrapids, Inc., of Cedar Rapids in support of a \$5,100,000 U.S. Army contract for rock crushers.

Product Design and Testing

- CIRAS used the College of Engineering Acoustics Lab water tank to conduct weight-bearing tests on the Bass Baby®, a rotationally molded, two-person fishing boat manufactured by Schafer Systems in Adair.
- CIRAS conducted FEA studies on existing and modified weldment designs to analyze stress reduction effects for Wayne Engineering in Cedar Falls. “With CIRAS input, the reliability of this unit went to 100%,” said Jim Marks, product engineering manager.
- “CIRAS completed a task that I was unable to do at Brown Medical,” stated Shanna Marks, design engineer for Brown Medical Industries in Spirit Lake, which used CIRAS engineering services to reverse engineer and prototype a part before permanent tooling was produced.

- Casual Cuts, a start-up company in Ellsworth, worked with CIRAS and CATD on a design-for-manufacture of a new product. “We were very satisfied with the final prototype and the time in which the project was finished,” said Sandra Lunde, Owner.

Productivity

- CIRAS conducted several Constraint Management workshops in Decorah and at the Cedar Falls Industry Outreach Center. The forums brought together manufacturers who discussed methods to improve profitability through a constraint-based approach to production control, project management, and inventory replenishment.
- Company management at Trinity Fabricators in New Albin received assistance with plant layout techniques and using simulation tools to optimize material flow and reduce material handling costs. “The project really got my people thinking about the right things, gave them new ideas, and got them fired up about the potential we have as a company,” stated Mike Verdon, president.
- CIRAS staff conducted Kaizen and lean manufacturing workshops at Grimm Brothers Plastics in Wapello to help it reduce quality costs during its efforts to achieve ISO 9000 certification.

Quality

- CIRAS Quality Systems specialists assisted Iowa companies in transitioning from the ISO 9001:1994 to the ISO 9001:2000 standard. Staff also offered advanced assistance in the areas of customer satisfaction, failure mode and effects analysis, and root cause analysis.
- Omaha Standard, Inc., in Council Bluffs adopted the ISO 9001 quality standard to improve the company’s competitive position. CIRAS staff conducted an ISO 9001 gap audit, educated the company’s staff, assisted management in applying the concepts, and conducted a pre-assessment audit.
- Two CIRAS staff, trained in the National Malcolm Baldrige criteria and examination process, participated as examiners in the Iowa Recognition for Performance Excellence Quality Award program for the state.

Project Activity

