



**University of Northern Iowa
Annual Economic Development and Technology Transfer Report – FY2020**

Section 1. UNI’s Economic Development Activities to Enhance Economic Growth in Iowa – Highlights and Summary

The University of Northern Iowa (UNI) provided economic development assistance throughout all of Iowa’s 99 counties for the 21st consecutive year. UNI’s economic development outreach programs are housed in the Business and Community Services (BCS) division and work toward supporting the UNI strategic goal of contributing to the economic vitality of the state. Since 2000, BCS has engaged the entire university community in its outreach efforts, including faculty, staff, students, and alumni – all of whom play a critical role in enhancing economic development across Iowa. Even though COVID-19 eliminated the possibility of face-to-face interaction for nearly one-third of the year, BCS programs pivoted in their service delivery approach and programming and realized only a minor reduction in overall clients served.

Specific areas of service offered by UNI BCS include: entrepreneurship, community and economic development, market research, environmental research and sustainability, metal casting, and additive manufacturing.

Some exceptional recognition and milestones in the past year include:

- UNI’s Center for Business Growth and Innovation was awarded the AACSB Innovations that Inspire Award for their Succession Iowa program.
- UNI’s Iowa Waste Reduction Center received a regional food waste award from the USDA to expand food waste support to five Midwestern states
- The Succession Iowa program was recognized by the Ewing Marion Kauffman Foundation with a Heartland Challenge Award to expand rural business opportunities.
- James Hoelscher, Institute for Decision Making (IDM) senior program manager, will serve as the president of Professional Developers of Iowa, which is the professional association of more than 350 economic developers across Iowa. He is the fourth member of the IDM team to be elected PDI president.
- CEEE’s Environmental Health Program director, Audrey Tran Lam, received Iowa Public Health Association Going the Distance Award as an emerging public health leader.
- UNI’s commitment to entrepreneurship was demonstrated by the renaming of the Marketing Department to the Department of Marketing and Entrepreneurship in the College of Business Administration.



Summary of BCS' key economic development program outcomes for FY2020:

Overall

- Provided service in all 99 counties to 3,206 unique business, community, and local government clients and served an additional 75,494 unique visitors to MyEntre.Net/IASourceLink
- Reached more than 305,000 Iowans through BCS programs and projects
- Engaged 141 faculty members and 239 students in the direct delivery of BCS client services, and another 4,252 students were reached by BCS programs
- Leveraged each \$1 invested by the state with \$5 in private grants, fees, or federal funding

Summarized Impacts on the Iowa Economy

- Conducted a series of five Family Business Workshops across Iowa and successfully converted the program to virtual gatherings in March 2020
- More than \$1 million of 3D printed casting molds and cores have been provided to industry in 2020. This value represents only 5-10% of the value of the final parts for industry. More than 50 of these companies are based in Iowa.
- Nearly 19,000 Iowa businesses and non-profit organizations responded to an impact survey created by the Institute for Decision Making and Strategic Marketing Services to assess the statewide impact of COVID-19.
- Iowa Workforce Development and the Iowa Economic Development Authority successfully launched the first statewide workforce estimates based on the laborshed approach developed by the Institute for Decision Making
- Military bases and depots saved at least \$500,000 annually in painting and coating costs due to better transfer efficiency through painter training

Entrepreneurship, Business Development and Incubation

- Provided assistance to 171 second-stage Iowa companies in 74 counties through Advance Iowa, creating 345 jobs
- Conducted 28 COVID-19-related business webinars that received more than 10,000 views
- Increased participation of entrepreneurs in IASourceLink online resources, a joint program between UNI and the Iowa Economic Development Authority (IEDA), to 75,494 user sessions
- Supported 825 Iowa businesses with market information by the Business Concierge team
- Served 16 businesses through the new student consulting program called Panther Biz HQ
- Completed 15 business valuation projects for Iowa companies through the Succession Iowa program
- Conducted 34 peer group meetings with a focus on next generation ownership through Advance Iowa
- Attracted 14 new companies to the UNI incubators
- Partnered with the Millrace to provide assistance to 30 co-working companies
- Graduated 88 innovators from Center for Business Growth and Innovation (CBGI) incubators during the past decade
- Served 264 new clients through UNI's Small Business Development Center (SBDC)
- Incubated 17 student businesses in the John Pappajohn Entrepreneurial Center's (JPEC) R.J. McElroy Student Business Incubator, and 47 additional students were affiliate tenants
- Continued to jointly work with the Iowa State University Research Foundation (ISURF) to assess and commercialize intellectual property and submitted a joint patent



Local Economic Development

- Received expanded funding from the Economic Development Administration (EDA) University Center program to focus on additional business impact surveys and provide assistance with intrapreneurship and innovation for local developers
- Provided strategic planning and comprehensive technical assistance to 71 community partners and 5 additional regional groups across Iowa through IDM
- Assisted IEDA with the creation and analysis of 2 COVID-19-related business impact surveys and provided more than 70 local impact reports from the survey data
- Partnered with the IEDA and the Iowa Utility Association for an analysis of statewide existing industry survey data
- Continued to assist with local development organizations that annually average creating approximately 1,500 jobs

Waste Reduction, Environmental Assistance, and the Bioeconomy

- Provided 950 residential energy efficiency projects for Iowans and 400 environmental outreach programs that engaged 4,933 volunteers
- Facilitated 241 education programs for 10,000 participants related to weatherization and solar energy
- Distributed 990 acres of native seed for 32 county roadsides as part of the Tallgrass Prairie Center's (TPC) roadside vegetation project and published an interactive map to showcase native roadsides
- Provided environmental technical assistance and on-site reviews through IWRC to 65 Iowa small businesses, conducted 12 food waste projects, and conducted 7 Green Brewery audits
- Expanded CEEE's Local Foods Program impact to \$25 million worth of locally grown food products purchased by institutional buyers from hundreds of Iowa farmers
- Updated 10 Iowa watersheds' National Hydrography Dataset in collaboration with the Iowa Department of Natural Resources (DNR) and GeoTREE
- Developed a cartographic map series for the Iowa Governor's STEM Council through GeoTREE
- Provided recycling and reuse project funding and outreach services to 5 companies and 10 organizations through the Recycling Reuse Technology Transfer Center (RRTTC)

Advanced Manufacturing and Market Research

- Served 48 Iowa foundries and supply chain companies with custom 3D sand-cast core and mold printing services through the Additive Manufacturing Center
- Assisted all branches of the military with applied research for the manufacturing of cast parts
- Hosted 830 visitors to demonstrate additive manufacturing at MCC's Additive Manufacturing Center
- Delivered painter training to 54 painters within all military branches at the Iowa Waste Reduction Center's (IWRC's) painting facility and at 4 satellite facilities, and 19 painters at industrial facilities
- Technical assistance and materials training was provided to 50 companies across Iowa by the Material Innovation Service
- Piloted the first stages of automated investment casting operations and embedded sensors for casting cores and molds
- Provided market research and competitive intelligence to 18 Iowa companies and organizations by Strategic Marketing Services (SMS)
- Conducted an industry sector partnership inventory and an analysis of Iowa's existing industry through a partnership between SMS and IDM



Section 2. Technology Transfer and Intellectual Property

FY2020

	UNI
Number of disclosures of intellectual property	10
Number of patent applications filed	2
Number of patents awarded	2
Number of license and option agreements executed on institutional intellectual property	2
Number of license and option agreements yielding income	11
Revenue to Iowa companies as a result of licensed technologies	\$3,800,000
Number of start-up companies formed with UNI assistance	99
Number of companies in research parks and incubators	22
Number of <u>new</u> companies in research parks and incubators	14
Number of employees in companies in research parks and incubators	55
Royalties/license fee income	\$45,100
Total sponsored funding	\$46,875,000
Corporate-sponsored funding for research and economic development and revenue generation (excludes corporate philanthropy - all in Iowa)	\$1,014,000
i. Annual appropriations for economic development	\$1,466,419
ii. Regents Innovation Fund	\$900,000

Section 3. Overview of UNI’s Economic Development Programs

UNI outreach services for community and economic development activities are outlined in a table format on the following seven pages. The format provides a brief overview of each program, its purpose, those served, outcomes for the past year, and some aggregate outcomes as well. Together, the programs served nearly 3,206 unique businesses and organizations in the past year and another 76,319 individuals through the IASourceLink.com entrepreneurial development system and the Business Concierge.



Section 3. Overview of UNI’s Economic Development Programs

Programs	Services	Those Typically Served	FY 2020 Results (listed)	Cumulative Results
Advance Iowa (AI)	Rural/Urban Consulting program focused small- and medium-sized existing business providing succession planning, strategic planning, business consulting, training, peer round tables	Small, medium enterprises	<ul style="list-style-type: none"> ✓ 171 companies assisted ✓ 8 seminars on Succession Planning & Value Building ✓ 5 Part series for Family-owned companies ✓ 34 Peer Group Meetings ✓ 7 Seminars on Family Business ✓ Service to clients in 74 counties 	<ul style="list-style-type: none"> ✓ Project work with 945 small- and mid-sized companies across the state in all quadrants and industry sectors
Center for Business Growth & Innovation	Rural/Urban entrepreneurship development, online entrepreneurship resources, business consulting, business training, business incubation	Small and medium sized businesses, entrepreneurs, entrepreneurial service providers, community leaders	<ul style="list-style-type: none"> ✓ Succession Iowa – completed 15 projects for Iowa businesses ✓ 6 Webinars – 1,713 attendees ✓ Business Concierge served 825 small businesses ✓ Panther Biz HQ served 16 businesses with marketing and public relations support ✓ IASourcelink was accessed by 75,494 unique visitors ✓ Coping with COVID-19 – 28 webinars with 10,426 views 	<ul style="list-style-type: none"> ✓ IASourcelink has reached 275,000 unique users since its launch in 2012 ✓ Engaged more than 550 entrepreneurs in Dream Big Grow Here since 2010 ✓ Over 6,750 business intelligence requests have been completed since 2010 ✓ 88 companies have graduated from the CBGI and Innovation Incubators ✓ More than 45,000 live and archived webinar views since 2003



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Small Business Development Center (SBDC)	Rural/Urban entrepreneurship development, online entrepreneurship resources, business consulting, business training	Small- and medium-sized businesses, entrepreneurs, entrepreneurial service providers, community leaders	<ul style="list-style-type: none"> ✓ SBDC served 264 clients across Iowa with 644 counseling hours. The SBDC partnered with a number of local entities including Main Street Waterloo, Grundy Center Chamber and Main Street, Parkersburg Chamber, Grundy-Butler Development Alliance and others. 	<ul style="list-style-type: none"> ✓ SBDC has worked with 764 local small business clients since 2017 with over 3,100 hours of counseling time
Center for Energy and Environmental Education (CEEE)	Technical assistance, educational programs and leadership in residential energy efficiency and weatherization, environmental conservation and water quality testing and mitigation, food insecurity, and sustainability efforts for K-12 school districts	Iowa residents, nonprofit organizations, teachers, students, school districts, city governments, utility providers, counties	<ul style="list-style-type: none"> ✓ Green Iowa AmeriCorps program completed 950 residential energy efficiency projects for Iowans, completed nearly 400 environmental outreach projects that engaged 4,933 volunteers, and facilitated 241 educational programs for nearly 10,000 participants. ✓ Completed a Greenhouse Gas Emissions Inventory and Climate Action Plan for the Iowa City School District ✓ Hosted 15 solar group-buy program seminars 	<ul style="list-style-type: none"> ✓ Over the past 11 years Green Iowa AmeriCorps has provided energy efficiency services to over 5,500 homes and educated over 60,000 people. The program has completed more than 3,900 service projects alongside more than 300 community organizations and 14,000+ volunteers ✓ By July of 2020, more than 620 members will have given a little over 667,900 hours to our communities. At the national rate of in-kind value of a volunteer per hour, nearly \$16.9 million of support was leveraged for the state



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<p>Geoinformatics Training, Research, Education and Extension Center (GeoTREE)</p>	<p>Geospatial technologies, education, research, and outreach activities for federal, state, local and tribal agencies</p>	<p>Federal, state, local, and tribal (FSLT) governmental agencies</p>	<ul style="list-style-type: none"> ✓ Developed processes and began conflation of National Hydrography Dataset in collaboration with Iowa DNR ✓ Updated Linn County GIS databases and solar radiation modeling for web apps ✓ Captured and published >300 images for Iowa DNR State Parks, developed virtual tour apps ✓ Provided editing of 75 NHD HUC watersheds 	<ul style="list-style-type: none"> ✓ Conducted project work with hundreds of public agencies, academic groups/departments, and private companies. Development and delivery of many geospatial data and custom applications
<p>Institute for Decision Making (IDM)</p>	<p>Hands-on community and economic development guidance and research</p>	<p>Economic development organizations, chambers of commerce, city councils, communities, utilities and others</p>	<ul style="list-style-type: none"> ✓ Assistance and research provided to 71 community organizations, 13 regional development groups, and 21 services providers and utilities. ✓ Partnered with the Iowa Economic Development Authority and Iowa utilities for an analysis of statewide existing industry survey data ✓ Assisted with the completion of 2 statewide COVID-19 impact surveys and provided over 70 local, regional and statewide reports 	<ul style="list-style-type: none"> ✓ Served over 825 communities, counties and groups in all of Iowa’s counties to date ✓ Community clients report 1,500 – 2,000 new jobs annually as a result of IDM assistance ✓ Trained over 1,000 economic development professionals to date



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Iowa Waste Reduction Center (IWRC)	Free, confidential, non-regulatory environmental assistance for Iowa small businesses and public entities, as well as industry training and education	Small businesses throughout Iowa; food waste generators; military and industrial painters	<ul style="list-style-type: none"> ✓ Detailed one-on-one environmental assistance was provided to 65 Iowa small businesses, including 12 food waste reduction visits and 7 green brewery project visits ✓ Industrial painter training was provided to 3 businesses to train 19 workers ✓ Military painter training was conducted by IWRC staff and at 4 satellite sites training a total of 54 painters 	<ul style="list-style-type: none"> ✓ Provided 6,219 on-site reviews to Iowa small businesses ✓ Certified 28 Iowa craft breweries ✓ Provided 4,073 certifications to military painters and DoD contractors
John Pappajohn Entrepreneurial Center (JPEC)	Research, entrepreneurship education, technology transfer, and capital investment programs	Student entrepreneurs, UNI staff and faculty entrepreneurs, new ventures and rapidly growing small companies	<ul style="list-style-type: none"> ✓ 4,805 students, businesses, and individuals were assisted through all JPEC programs ✓ 17 student business owners running 15 businesses with 31 employees were provided dedicated office space and services in the student business incubator ✓ 47 student business owners running 40 businesses with 63 employees were provided services as part of the student business affiliate incubator program 	<ul style="list-style-type: none"> ✓ The JPEC Student Business Incubator has provided space to more than 195 business owners since FY05 ✓ The JPEC academic program doubled student enrollment in FY2020 with 190 students enrolling in Entrepreneurship courses. ✓ Since FY13, 2,608 College of Business Administration students have learned about and crafted an elevator pitch through presentations by JPEC instructors ✓ Since FY11, 51 businesses and non-profits have had projects completed by Entrepreneurial Strategy students



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Metal Castings Center (MCC) and Additive Manufacturing Center (AMC)	Metal casting technologies, applied research, testing and training	Iowa casting users, foundries and foundry suppliers	<ul style="list-style-type: none"> ✓ Iowa active contracts with 48 companies, provided outreach projects to 11 Iowa foundries and technical assistance to 50 additional foundries ✓ Conducted DOD-sponsored research into front line manufacturing of cast parts ✓ Conducted projects in Industry 4.0 technologies including real time process sensors and robotic manufacturing 	<ul style="list-style-type: none"> ✓ Over 2,150 industry-funded projects have been completed to date and more than 100 clients assisted with additive manufacturing and cast metals technology
Materials Innovation Service (MIS)	Mechanical, physical and chemical tests of metals, polymers and cementitious materials	Serving Iowa manufacturers and suppliers	<ul style="list-style-type: none"> ✓ Technical assistance and testing was provided to over 50 companies across Iowa 	<ul style="list-style-type: none"> ✓ Technical assistance or testing provided to approximately 160 companies. More than 2,100 hours of testing provided since the beginning of the program
Panther Initiative for Environmental Equity and Resilience (PIEER)	Environmental social justice awareness, education, outreach and research	Serving Iowans, especially those affected by environmental equity issues	<ul style="list-style-type: none"> ✓ Outreach awareness and education related to environmental social justice to 10 organizations 	<ul style="list-style-type: none"> ✓ Outreach and educational awareness provided to several organizations and more than 800 individuals this year, including community, UNI and governmental organizations



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<p>Recycling and Reuse Technology Transfer Center (RRTTC)</p>	<p>Recycling and by-products research, education and outreach</p>	<p>Serving Iowa businesses, the recycling industry and Iowa citizens.</p>	<ul style="list-style-type: none"> ✓ Research project funding and outreach services related to recycling and reuse was provided to 5 companies and organizations 	<ul style="list-style-type: none"> ✓ Over 42 RRTTC funded research projects Over 170 reports and publications available ✓ Outreach and services provided to more than 7,800 individuals, including business/industry, K-12 students, teachers, and Iowa citizens
<p>Strategic Marketing Services (SMS)</p>	<p>Market research and analysis</p>	<p>Businesses, entrepreneurs and non-profit organizations</p>	<ul style="list-style-type: none"> ✓ Market research and analysis services were provided to 18 Iowa organizations (some with multiple projects) ✓ Assisted Cedar Falls Utilities in assessing customer satisfaction with utility services (electric, gas, Internet and cable services) ✓ Assisted the Iowa Economic Development Authority in assessing the impact of COVID 19 on Iowa organizations in March and again in May. A total of 11,076 Iowa organizations participated in the research 	<ul style="list-style-type: none"> ✓ Since 1990, market research and analysis services have been provided to 319 Iowa companies



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Tallgrass Prairie Center (TPC)	Coordination and assistance for county roadside managers, farmers and agricultural conservation professionals; stewardship of source-identified foundation seed for native seed industry; educational materials on the tallgrass prairie ecosystem for educators; general restoration research to support recommendations	Iowa county governments, state DOT, USDA-NRCS, native seed producers and buyers, county conservation boards, K-12 educators and students, restoration ecology private business and academic researchers	<ul style="list-style-type: none"> ✓ Distributed 990 acres-worth of native seed for 32 county roadsides ✓ Developed an online “Botany Beginners” course attracting 570 learners ✓ Hosted Green Iowa AmeriCorps service members who made substantial improvements to website, social media and conference communications ✓ Produced 132 pounds of Iowa-source foundation seed from 32 ecotypes and made 38 releases to growers ✓ Published a list of prairie seed, plant, and service providers to assist watershed coordinators 	<ul style="list-style-type: none"> ✓ More than 50,000 acres of Iowa counties rights-of-way have been planted to native vegetation ✓ Forty-seven Iowa counties use ecologically integrated management on ~315,000 acres of public roadsides ✓ Public and private land managers have access to 85 species of genetically diverse, source-identified seed including grasses, sedges, and many species of wildflowers ✓ Over 90 UNI students and recent graduates have gained hands-on practical experience and scientific training on prairie restoration



Section 4: Regents Innovation Funding Report

UNI's FY2020 Regents Innovation Funding (RIF) Annual Report (also known as the Skilled Worker and Job Creation Fund) is on file at the University of Northern Iowa and was submitted separately. Projects and outcomes partially supported by the RIF are included in this annual report.

Section 5: Collaborative Projects

Each year, UNI works closely with the other Regent institutions and state and federal agencies on collaborative projects. The following projects represent a sampling of these collaborative projects.

Center for Business Growth and Innovation (CBGI) Partnerships Key to Success

- In FY2020, 75,494 Iowans sought information, and business assistance was provided to 825 Iowa business owners via the Iowa Business Concierge services. IASourceLink: The IASourceLink program continues as a strong partnership between UNI and the Iowa Economic Development Authority. This program serves to provide assistance to business-related issues and link Iowa's businesses with support resources from around the state. In addition to the partnership with IEDA, the program collaborated with the following regional, state, and local partners, such as the Iowa Department of Revenue, Iowa Commission on the Status of Women, Iowa Innovation Corporation, New Bohemian Innovation Collaborative, Technology Association of Iowa, Pappajohn Entrepreneurial Centers, Iowa Waste Reduction Center, SourceLink, U.S. Small Business Administration, Iowa Small Business Development Centers, Iowa Farm Bureau/Renew Rural Iowa, Iowa Area Development Group, Iowa Association of Business and Industry, BizStarts, Entrepreneurial Development Center (EDC), Main Street Iowa and more.
- Several local events were conducted wherein the UNI Center for Business Growth and Innovation worked collaboratively with local partners. These include monthly One Million Cups events, Cedar Valley Startup Week and other events in the community. Partners for the events included the Grow Cedar Valley, TechWorks, Inc., Mill Race Co-working and Collaboration, Hawkeye Community College, Cedar Falls Utilities, the UNI Pappajohn Entrepreneurial Center, and numerous local entrepreneurs. CBGI also partnered with Red Cedar and the Technology Association of Iowa to host TechBrews each month.
- During FY20, CBGI hosted a Venture School cohort with the University of Iowa John Pappajohn Entrepreneurial Center and the UNI John Pappajohn Entrepreneurial Center. The seven week course is focused on helping new companies find their value and scale. Community members and CBGI/UNI JPEC staff served as mentors for the teams.
- The Dream Big Grow Here platform assisted the Farm Bureau Young Farmers host their Grow Your Future award. Fourteen non-row crop ag operations submitted their ideas to continue to grow and help their communities through ag operations. Six finalists pitched to judges for \$15,000 in prizes.



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- The UNI Advance Iowa program has collaborated with the Iowa Rural Development Council to represent the voice of closely held small businesses across the state. This includes a focus on succession planning and the immediacy of this issue from an economic development standpoint.
- The UNI Small Business Development Center partnered with Red Cedar to deliver Co-starters to new startups in the region. Thirteen teams took part in the ten-week series focused on determining if entrepreneurship is right for them and then planning and engaging their startup.

Center for Energy and Environmental Education (CEEE) Collaborated on projects with ISU and UI.

- CEEE collaborated with the Iowa Commission on Volunteer Service to host a significant AmeriCorps Program with more than 120 service members serving many Iowa communities, school districts and municipalities.
- CEEE and ISU Extension are working closely together on local food initiatives in Region 9 Extension, which includes Black Hawk and surrounding counties. UNI and ISU Extension have jointly funded a local food coordinator to expand local markets for local agricultural products among institutional buyers, and make locally grown foods visible to the residents of the region.
- CEEE works collaboratively with various faculty in the UI College of Public Health and environmental engineering to improve environmental health in Iowa.
- The Black Hawk County Health Department contracted with the CEEE to complete the Black Hawk County Community Food Assessment (CFA) with the directive of ensuring that the assessment looks at the entire food system to see how the region's food system measures up to being fair, sustainable, and racially equitable while addressing the priority issues of obesity and poverty.

The Geoinformatics Training Research Education and Extension (GeoTREE) Center partnered with state agencies, education entities, and local governments across Iowa

- GeoTREE carried out urban watershed modeling for several communities in the Clear Creek Watershed and for all urban areas in the City of Coralville.
- GeoTREE updated the Iowa contribution for the National Hydrography Dataset in collaboration with the Iowa Department of Natural Resources.
- GeoTREE developed a web mapping application in collaboration with the UNI Institute for Decision Making and Iowa Economic Development Authority for a project related to COVID-19 impact on Iowa businesses.
- GeoTREE developed dynamic mapping and visualization resources for the UNI Tallgrass Prairie Center Prairie on Farms and Iowa Roadside Management Program as part of an IDALS funded project.



Institute for Decision Making (IDM) and Strategic Marketing Services (SMS) Collaborates with Iowa Economic Development Authority, Iowa Finance Authority, Iowa Workforce Development, Iowa Department of Education, Iowa utilities, local economic development organizations, statewide associations, and other economic development service providers

- *Statewide COVID-19 Business Impact Surveys and Technical Assistance.* IDM, in partnership with Strategic Marketing Services (SMS) assisted the Iowa Economic Development Authority (IEDA) and Iowa Finance Authority (IFA) with the development, implementation and analysis of two statewide COVID-19 business impact surveys. Survey 1 had nearly 14,000 respondents and Survey 2 had over 9,600 respondents. The high response numbers were achieved by IDM working with IEDA, IFA and a variety of local, regional and statewide economic development organizations and associations to promote the survey. These groups included the Professional Developers of Iowa, the Iowa Restaurant Association, Iowa Association of Business & Industry, Iowa Business Council, Iowa Council of Foundations, United Ways of Iowa, Iowa Small Business Development network, Iowa Department of Education, and Iowa Workforce Development. Sixty-five summary reports were prepared for economic development organizations using data from Survey 1.
- IDM, in partnership with Strategic Marketing Services (SMS), continued to assist the BEST of Iowa Management Team (Iowa Economic Development Authority, MidAmerican Energy, Black Hills Energy, Alliant Energy and the Iowa Area Development Group) analyze data from interviews completed with Iowa companies, which are in one of the 12 distinct industry clusters driving Iowa's economy or were identified as major employers by the BEST of Iowa Management Team. The interview data was collected by economic development organizations across Iowa from September 2018 and August 2019. The findings were used in evaluating and revising the economic development assistance provided to Iowa companies by the state of Iowa, the utility companies and economic development organizations around Iowa.
- IDM continues to assist Iowa Workforce Development (IWD) with the implementation of laborshed surveys across Iowa that are utilized by economic development organizations in their work with existing businesses and prospective businesses that are considering an Iowa location. In partnership with the UNI Mathematics Department, IDM assisted IWD with updating the statistical model used to produce workforce estimates for laborshed areas and tested the feasibility of enhancements to the model. IDM also provided IWD technical assistance as they implemented a statewide surveying process that was being funded by IWD and the Iowa Economic Development Authority.

Iowa Waste Reduction Center (IWRC) Collaborates with State and National Partners

- The IWRC has partnered with the Iowa Recycling Association, the United States Composting Council (USCC), public sector organizations, and private industry to begin the process of bringing a state chapter of the USCC to Iowa.
- The Iowa Waste Reduction Center has partnered with economists from UNI and Arizona State University, as well as the Iowa Brewer's Guild to continue a multi-year research project focusing on sustainability in craft brewing as part of the Green Brewery project.



- The IWRC has partnered with four DoD facilities to operate as satellite locations for the STAR4D painter certification course. Instructors from US Marine Corps sites in Albany, GA and Barstow, CA, as well as instructors from US Army sites in Fort Rucker, AL and Tobyhanna, PA certified 54 painters on location in FY20.
- The IWRC collaborated with the Iowa Department of Natural Resources and the United States Environmental Protection Agency through the Strategic Goals Program. This project involved all three organizations transitioning the program due to COVID-19. Instead of workshops, the organizations worked together to plan and produce three webinars providing pollution prevention and environmental assistance to Iowa businesses. Registration for all three webinars was 411 persons.

John Pappajohn Entrepreneurial Center (JPEC) Collaborations for Entrepreneurship Projects

- UNI's JPEC and CBGI partnered with the Cedar Falls High School CAPS program to create a two-day team building workshop to kick-off the four strands of the CAPS program for the fall semester. In the spring semester, Jesup and Columbus High School participated with the four strands from Cedar Falls High School. A total of 121 students participated in the program and the Business Solutions strand was housed in BCS.
- UNI's JPEC staff partnered with Junior Achievement of Eastern Iowa to teach a week-long program, Emerging Entrepreneurs, to 259 3rd, 4th, and 5th graders from Highland Elementary and 175 3rd, 4th, and 5th graders from Kingsley Elementary. Twelve UNI student entrepreneurs along with two UNI staff members were the instructors for this courses.
- UNI's JPEC partnered with UNI's International Recruitment and Admissions Department to present the Panther Cage Challenge in their EdCamp program this summer. The virtual experience was offered to 28 Pakistani High School students with four current student entrepreneurs and two JPEC alum serving as mentors to the teams. The challenge was voted the students favorite activity during the EdCamp program and over 60% of the students listed UNI as one of their top choices to consider to attend as an International student. A second cohort was then offered to 37 students from Pakistan and Qatar.
- UNI's JPEC partnered with the Waterloo Community Schools Career Center to provide business consulting services to high school students in the Entrepreneurship Course. Weekly sessions were scheduled to meet with students interested in either starting or growing their businesses. JPEC staff also served as judges for the Business Cart presentation that was a collaborative project involving a number of the classes at the Waterloo Career Center.

Recycling Reuse Technology Transfer Center (RTTC)/Panther Initiative for Environmental Equity and Resilience (PIEER) Collaborates with many Cedar Valley organizations

- The RRTTC continued for the second year to collaborate with UNI Study Abroad and with the Universidad Latina de Costa Rica. ULatina students traveled to Iowa to participate in an English Language and Sustainability Immersion Program while integrating existing courses from their home institution. While on campus, the CIEP worked collaboratively and resourcefully to develop the



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program with the RRTTC. U.S. students will travel to Costa Rica to complete a Capstone course that will help them develop an understanding of how individuals and groups impact the environment through tourism and campus life.

- The RRTTC worked with Cedar Falls High School and the schools Environmental Awareness Team to provide guidance and advice on a project this student-led group had chosen to pursue. The students decided on a project to improve the recycling options throughout the school. The RRTTC was able to assist with providing 30 recycling containers to the school and helped the students with proper signage and education on collecting data to for future use in other programs. There are over 30 members in the Environmental Awareness team who took part in this project and over 2,500 students at the high school who are able to participate in these expanded recycling efforts.
- RRTTC/PIEER partnered with Cedar Falls Library, Hearst Center for the Arts, Healthy Cedar Valley Coalition and North Iowa Farm Partnership to organize the Cedar Valley Food and Film Festival. Local food producers and supporters were available to showcase their products and services to kick off the farmer's market season. Gardening classes were taught from the Black Hawk County Master Gardeners program and the film Overload was shown with a discussion afterwards with the audience.

Strategic Marketing Services (SMS) Partners with Iowa Organizations

- Meals from the Heartland was considering expansion options but wanted to identify which of their preferred locations would offer the best chance for community acceptance and success. SMS assisted Meals from the Heartland with secondary research to evaluate demographic factors favorable to charitable sponsorship and volunteering among four geographic areas: Cedar Rapids/Iowa City, Sioux Falls, Omaha and Kansas City.
- UNI's Recycling & Reuse Technology Transfer Center (RRTTC) developed a Green Business Practices survey to determine knowledge of and interest in green business practices among Iowa businesses. SMS assisted in streamlining, simplifying, and adjusting the survey to improve user experience. Additionally, SMS helped identify and build a list of businesses/contacts in the industries and locations specified by the RRTTC and qualified and recruited businesses/contacts to take the online survey.
- The 14th customer satisfaction study was conducted by SMS to monitor customer feedback for Cedar Falls Utilities (CFU) relative to products and services, customer service, rates/product pricing, reputation and branding. Data from current customers was collected to measure CFU's current performance in key action areas against their past performance. These comparisons provided CFU with information designed to improve and foster their customer relationships.

Tallgrass Prairie Center (TPC) Partners with State Agencies and Statewide Organizations

- The TPC continued collaborating closely with the Iowa State University STRIPS team and the Iowa Nutrient Research Center. The TPC director is on the Leadership Team for STRIPS along with leaders from ISU-Agronomy, ISU-Entomology, ISU-Natural Resources Ecology and Management, and US Fish and Wildlife Service. The TPC shared results of its research and collaborate on field days, seminars and grant proposals.



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- The TPC collaborated with Practical Farmers of Iowa in hosting the first ever online course, “Botany Beginners” which eventually attracted over 570 participants from Iowa and 14 other states. The course involved six webinars by various TPC staff, as well as four virtual field tours (2 conducted by TPC and 2 by PFI). The associated Facebook page has 438 members.
- TPC’s Prairie on Farms Program partnered with the Iowa Economic Development Authority (IEDA) on a Resilience Competition block grant. Additional partners with this grant include the University of Iowa, Iowa State University Outreach and Extension, Iowa Department of Natural Resources and the Iowa Flood Center. As a partner, the TPC works to assist Watershed Coordinators in eight designated priority watersheds across the state of Iowa to reduce flood risk and improve water quality. The TPC assists county US Department of Agriculture Natural Resources Conservation Service offices and watershed coordinators in eight watersheds across Iowa to provide tailored technical guidance on prairie restoration.
- The Restoration and Research Program collaborates with Iowa State University’s Iowa Nutrient Research Center, which is funding seed mix design research for nutrient reduction. The USDA Farm Services Agency supports research into cost-effective seed mix design for the Conservation Reserve Program, as well as evaluation of CRP pollinator habitat and study of the native seed supply chain. Research-based recommendations on seed mix design and CRP implementation were provided to the state NRCS office and the USDA Farm Service Agency.
- The Plant Materials Program hosted the second Native Seed Stakeholders workshop, inviting panelists and workshop leaders from Natural Resource Conservation Service, Allendan Seed Company, Iowa Department of Transportation, Wisconsin Crop Improvement Association, and many other entities involved in testing, growing or buying native seed. The program also collaborated with the USDA-ARS Plant Introduction Station in Ames, Iowa, on collection and stewardship of genetic diversity.
- Iowa Roadside Management coordinated with members of the Iowa Monarch Conservation Consortium, a partnership of over 40 farmer and conservation organizations, state agencies, companies, and Iowa State University, to finalize the statewide monarch conservation plan, such as roadside best management practices for monarchs. Approximately 6,483 acres of new roadside habitat established from 2014-2019 were submitted to the national Monarch Conservation Database.
- Iowa Roadside Management coordinated with the Iowa DOT in the administration of a grant from the Federal Highways Administration that provided enough seed to plant over 1,000 acres of county roadsides in Iowa with native plants and coordinated with the Marion County roadside manager and Iowa DOT Living Roadway Trust Fund to plan and implement the 33rd annual roadside conference.
- Iowa Roadside Management collaborated with Trees Forever to train citizens to become local ambassadors for a county roadside program and for native plants through a workshop series, Stewards of the Beautiful Land. The workshops are being held in four counties.

Metal Casting Center (MCC) and Additive Manufacturing Center (AMC) Collaborates with UI, ISU, Iowa Community Colleges and other educational institutions

- The MCC collaborated with the University of Iowa Mechanical Engineering and Art departments on several projects, the largest of which involves the Defense Logistics Agency and Steel Founders Society of America integrating additive manufacturing into their operations and supply chain. The UNI MCC is providing melting and pouring of cast steel for projects involving counter gravity casting,



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low turbulence gating system development as well as thermos physical property measurement for casting process simulation. The UNI AMC is working with UI faculty to provide instructional materials and investigate alternative methods for creating sculptures.

- The AMC collaborated with Youngstown State University on an America Makes project to explore accelerating 3D printing speeds to enable serial production of cast components to benefit the Iowa supply chain.
- The AMC is collaborating with Industrial Engineering faculty at Iowa State University on federally funded projects to evaluate and digitally record surface finishes on cast metal components. The work involves both digital capture of surface finish with future planned collaboration in robotic finishing of castings utilizing UNI robotic resources.
- The MCC has collaborated with Northeast Iowa Community College on a federally funded project to develop training materials for additive manufacturing.
- The MCC has collaborated on several student projects in additive manufacturing with Youngstown State, Iowa State Cyclone Power Pullers, and University of Wisconsin, Platteville,