

# Economic Development and Technology Transfer at Iowa's Public Universities

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IOWA STATE  
UNIVERSITY

# Entrepreneurship



**190**

startups launched by faculty & students in the last **5** years



**\$24 million+**

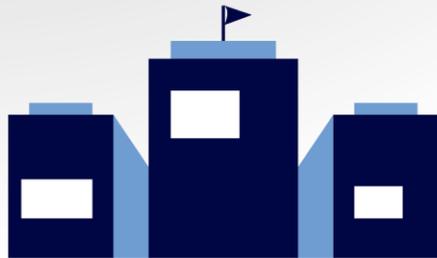
secured in outside funding for these startups

**144**

companies in research parks & incubators with

**3,255**

jobs



**13,167**

students participated in entrepreneurial programs on the three campuses



**6,334**

undergraduate students enrolled in entrepreneurial coursework

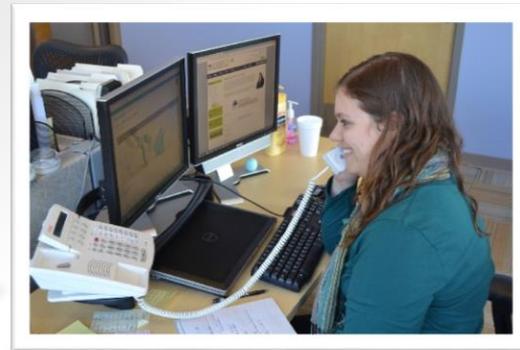
# Entrepreneurship

**Venture School** at UI trained more than 50 entrepreneurs in Iowa City, resulting in the launch of 12 new startups. Based on the program's success, we will be offering it across the state in FY2015.



## **BusinessConcierge**

UNI's **Business Concierge** provided business intelligence to 511 small businesses via contact made through Iowa SourceLink.



In the capstone course for the **Agricultural Entrepreneurship Initiative** at ISU, students learn by doing, not from textbooks. They develop the concept and business plan for their startup, presenting their ideas to investors, entrepreneurs, and bankers for \$5,000 in awards.



# Student Entrepreneurship



The **John Pappajohn Entrepreneurial Centers** at the three Regent universities provide thousands of students with coursework and guidance encouraging the entrepreneurial spirit



Toby Miller created **TelePharm** in 2012 to provide remote pharmacy services to patients in rural areas. TelePharm built a secure, proprietary platform to connect rural pharmacies to pharmacists in centralized locations. The company raised a \$2.5M funding round last summer.

Colin Hurd began development on **TrackTill** in 2011. Colin, through his work with a large scale farming operation in Iowa, saw the effect that compaction has on yields. TrackTill works with precision during planting to restore and replenish the root zone which is harmed by wheel track compaction.



**AGRICULTURE**  
CONCEPTS

Brain Hoyer operates **Rite Environmental** in the JPEC Student Business Incubator. His company provides recycling collection and processing, refuse collection and street sweeping in Northeast Iowa communities and he was recently recognized as the Iowa Recycler of the Year.



**RefuseRite**  
COLLECTION



**RecycleRite**  
RECYCLING



**SweepRite**  
STREETSWEEP



# Research to Commercialization



IOWA STATE UNIVERSITY

**472** licenses and options in the past 5 years



**1,059** invention disclosures

**767** patent applications



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\*Combined university numbers, FY2010-FY2014

# Industry Collaborations



## University of Iowa

- Long relationship with Rockwell Collins
  - Unmanned flight tests
  - RTA Weather Radar Flight Testing
  - Compositional Verification of Flight Critical Systems
- Medical trials and testing



## Iowa State University

- 6 active NSF sponsored Industry University Cooperative Research Centers
- More than 130 member companies participate
- Problems/issues presented by companies; solutions proposed by universities



## University of Northern Iowa

- Iowa Waste Reduction Center (16,000 ft<sup>2</sup> painting and coating facility)
- Provides applied research services for public and private sector
- Replicates real-world conditions without altering client schedules
- Clients are John Deere, Valspar and Omega Cabinets



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# Research to Commercialization



University developed technologies licensed to Iowa companies:



**Iowa Approach, Inc.** licensed IP from UI to commercialize a collection of catheter-based tools used to treat atrial fibrillation.



More than 500 Iowa companies and individuals have licensed **soybeans** from ISURF over the past 20 years, covering more than 500,000 acres.

**The Scout** is a new venture/mobile app that puts sophisticated baseball and softball analysis tools in the hand of coaches, scouts, and parents to provide a numerical profile of a player's abilities.



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# Working Together

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EntreFEST—Iowa’s three-day conference for entrepreneurs. It’s a summit, celebration and resource hub for the state’s entrepreneurs and those who support them.

ISU is providing their intellectual property expertise to UNI by performing due diligence for UNI-developed technologies.

UNI’s Metal Casting Center is partnering with UI engineers and students to investigate gating systems for ductile iron and the ISU manufacturing engineering department on the design of gearbox and axle housing. Both projects are using the sand mold 3D printer to print molds and cast sample parts.

Students and staff at the JPECs at all three universities participated in the 9<sup>th</sup> annual week-long Okoboji Entrepreneurial Institute.



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# Assisting Iowa

## Businesses & Local Development FY2014

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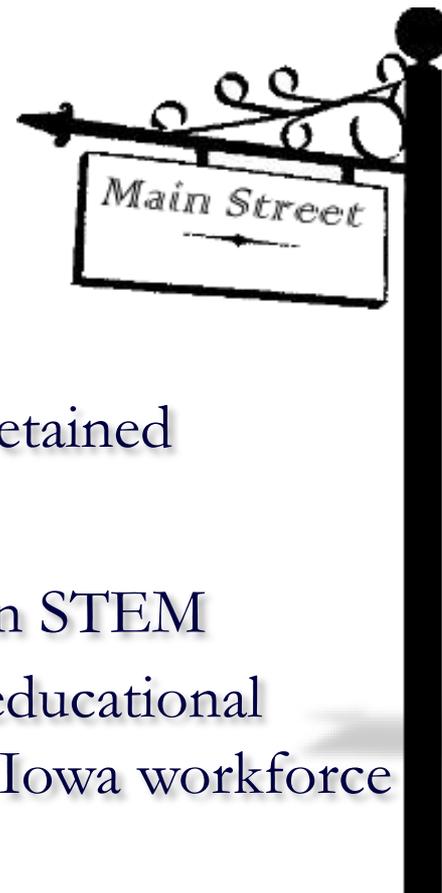
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UNIVERSITY

**9,854** clients in **99** counties assisted by university centers and programs

**439** new business start-ups assisted

**19,921** hours of one-on-one consulting

**9,100** estimated jobs created or retained



**128,861** K-12 participants in STEM education, outreach and other educational opportunities for growing new Iowa workforce



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# Assisting Iowa Businesses & Local Development



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UNIVERSITY

**\$24,724,000** in revenue for Iowa companies from technologies and inventions generated by the three Regents universities in FY2014

**34** new companies were formed in the universities' research parks and incubators in FY2014

Health care revenue cycle management company MediRevv opened a new 26,200 ft<sup>2</sup> facility in the UI Research Park in October and employs 250 people



The Iowa State University Research Park is undergoing an expansion that will double its size in both acreage and facilities over the next 10 years



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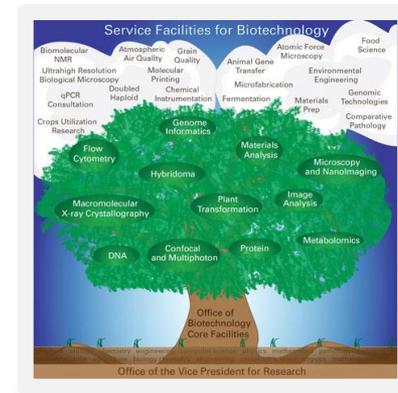
# Assisting Iowa Businesses & Local Development



**THE UNIVERSITY OF IOWA**  
 JOHN PAPPAJOHN ENTREPRENEURIAL CENTER  
*Innovate. Lead. Succeed.*

The UI Pappajohn Center directed over 55 student team field study projects which provide strategic business planning services to 42 start-up and early-stage companies across Iowa. They also placed 44 interns at 28 businesses.

Iowa State offers more than 30 research service facilities with state-of-the-art equipment and services accessible to industry. Annually, the 11 core facilities (in the tree) work with nearly 50 Iowa companies.



UNI's Advance Iowa program, Iowa's economic gardening program, expanded to serve 53 second-stage companies, reaching all regions of Iowa.



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# Overall Impact

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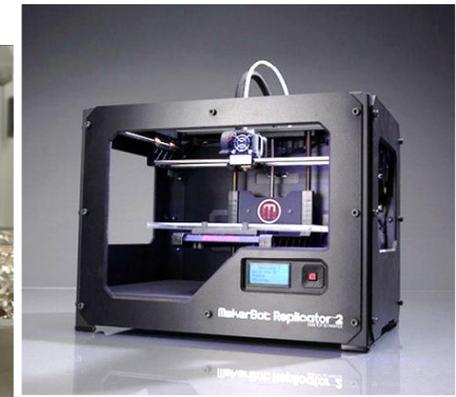


- More than \$100 million in corporate sponsored funding for research and economic development in FY2014
- Leveraging state funding
- Statewide coverage – impact in all 99 counties
- Faculty, staff, and student involvement
- Collaborations and synergies to promote state-wide economic development
- Partnerships with the Iowa Innovation Council, Iowa Innovation Corporation, Iowa Business Council, Regional Economic Development Organizations, and others

Training, Supporting, Growing Business

# UI Economic Development

WE MEAN **BUSINESS**



- Iowa City, Sioux City, Council Bluffs
- Collaboration with community colleges
- Business analytics, strategy, training
- IT needs assessment, boot camps

- Public-private partnership
- 3-D printing with diverse material capability
- Machining, fabrication of hardware



# Creating Startups and Jobs



- Accelerating faculty, postdocs, students
- Cultivating entrepreneurship
- Venture School (Lean LaunchPad)
- Gap funding, IEDA funds, SBIR/STTR
- Business mentoring
- Angel and venture capital



# New Initiatives

## Autonomous, Intelligent Machines and Systems (AIMS) Institute

- Seeking \$3 million over three years
- Business, technology, applications, utility and policy
- Self-driving vehicles, autonomous aircraft, machines
- Positioning Iowa at the forefront of driverless technology



## Kirkwood Regional Center at the University of Iowa

- Building, including STEM hub, opening fall 2015
- K-12, college, professional STEM collaboration
- Access to NADS, Hygienic Lab, other UI resources



 Iowa's  
creative  
corridor



# Economic Development Diversity

## Latino Business Assistance

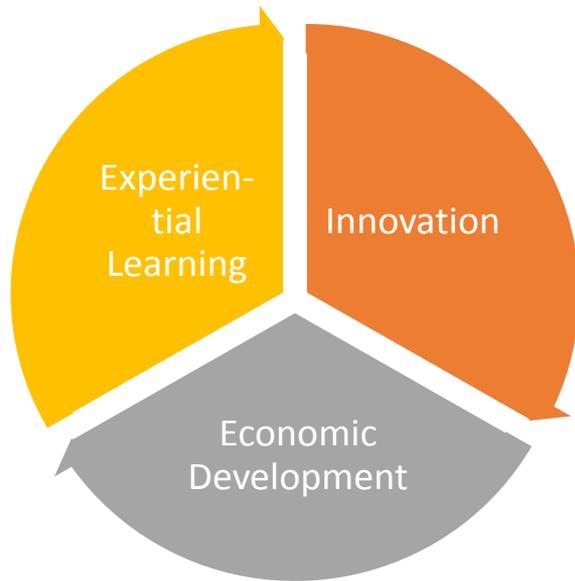
- 4 offices – Ottumwa, Sioux City, West Liberty & Perry
- 36 businesses started or improved
- 8 entrepreneurs assisted
- 15 jobs created and 54 retained
- Program with Alliant to promote energy efficiency in Latino businesses
- Outreach program initiated “Integrated Latino youth, family, community, and business development”



## Women in Business

- The SBDC assisted 684 women wanting to start businesses
- 296 jobs generated
- 112 jobs retained
- \$19,703,603 in sales
- ISED partnership

# CyBiz Lab



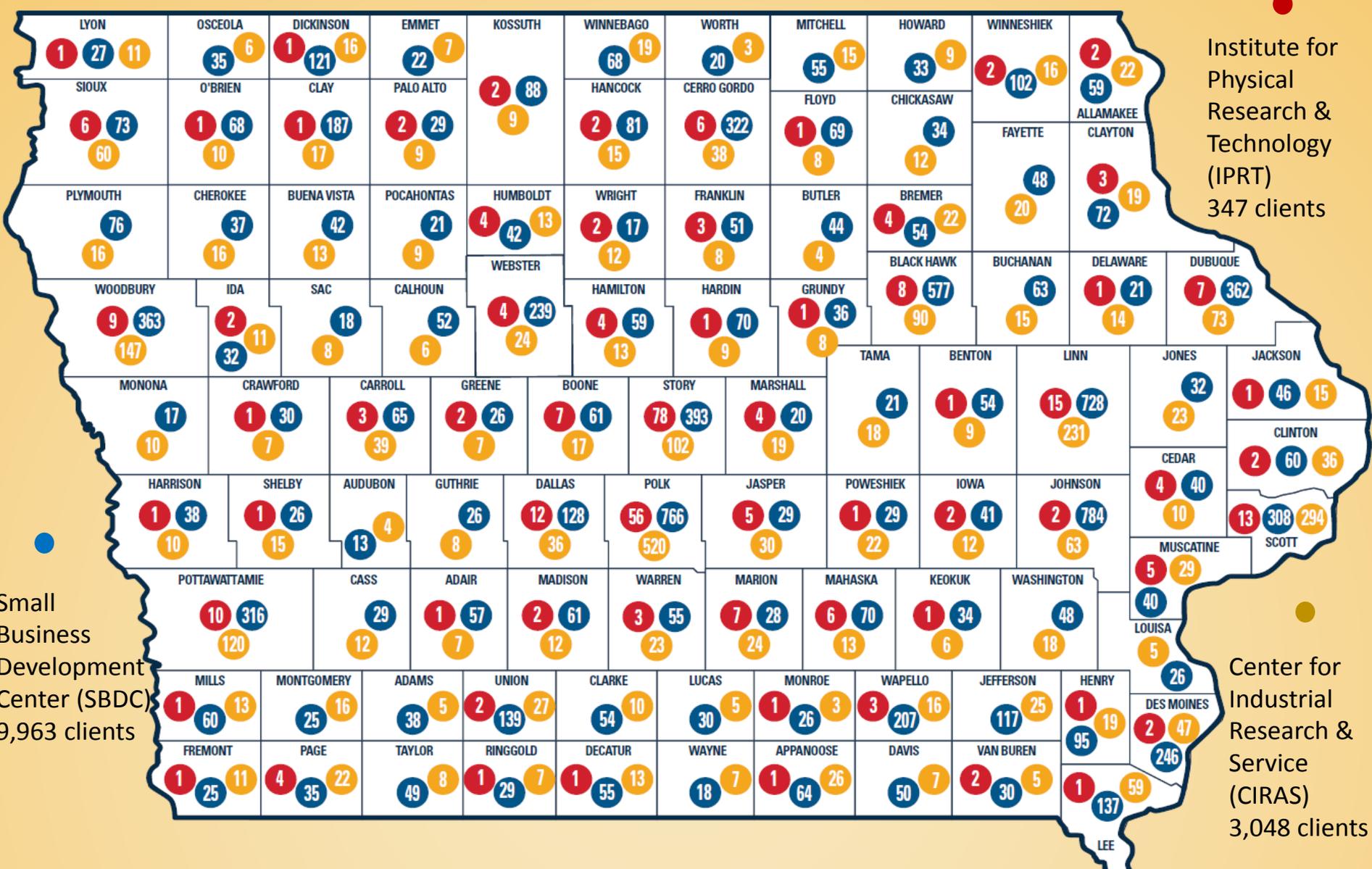
*The Iowa State University CyBIZ Lab provides the opportunity for cross functional teams of undergraduate and graduate students to work on business and organizational projects. These projects bring together three important components of the university mission, Experiential Learning, Innovation, & Economic Development.*

- All RIF projects have a CyBiz Lab component
- Specific student project examples include:
  1. Kingland Systems to research best practices and design a style guide and visual map for a technology product.
  2. Wady Industries to research and identify new market opportunities in the powdered epoxy coatings sector.
  3. Proximity to evaluate a software tool and develop a model for analyzing implementation options and efficiencies



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UNIVERSITY**

# Five-Year Statewide Impact



Institute for Physical Research & Technology (IPRT)  
347 clients

Small Business Development Center (SBDC)  
9,963 clients

Center for Industrial Research & Service (CIRAS)  
3,048 clients

## UNI Featured Initiatives

- Workforce Support
- Building Entrepreneurial Regions
- Small Business Survey

Building a  
Better Iowa

## Workforce Development

- Home Base Iowa
- Skilled Iowa
- Regional Workforce Plans
- Laborshed Updates



## Local & Regional Development

- Entrepreneurial Regions
  - EDA University Center
    - Hamilton & Wright Counties
    - Adair, Audubon, Greene & Guthrie Counties
  - New Region
    - Plymouth, Monona & Woodbury Counties
    - Includes all 3 universities
- Small Business Survey

