

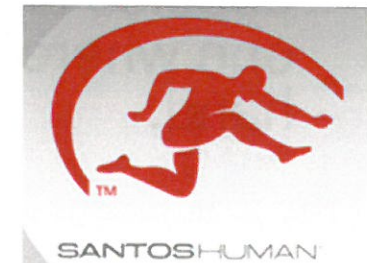
Economic Development Update: A New Strategy

Jon Darsee
Chief Innovation Officer

February 21, 2019



Metabolic Health



Economic Development Manifesto:

Our economic development goal is to assemble the fundamental building blocks of commercialization into the university culture piece by piece.

Like the Oakland Athletics concept of Money Ball—we are pursuing higher on base percentages—i.e. hitting singles and doubles until, over time, we have transformed the culture into one where economic development and innovation go hand in hand.

Successfully and consistently transforming our ideas into impact—including collaborating with our sister universities will positively change the UI, the community and our state.

TEconomy Partners Recommendation to Iowa Economic Development Authority

- ✓ Medical device one of 4 platforms recommended to promote economic development in the State of Iowa
- ✓ Challenges include:
 - Lack sources of seed and venture capital funding
 - Lack local industry and operational support
 - Lack unified university culture for economic development
- ✓ Opportunities include:
 - World class faculty at University of Iowa
 - World class research facility and reputation
 - Precedent for innovation and entrepreneurship
 - Supportive and successful Alumni within med device industry

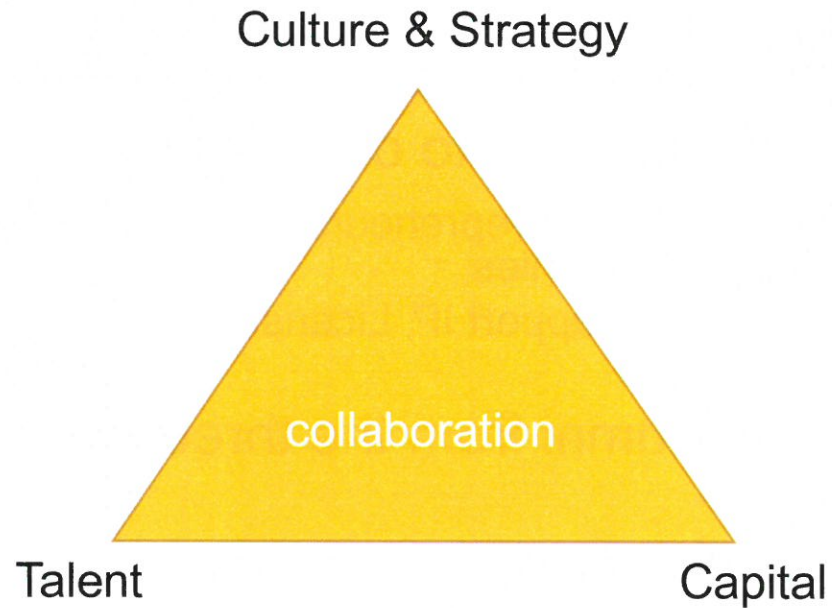
A bit about me...

- 35 years in medical device and digital health fields
- Founding executive at Rhythm Technologies, a Stanford Biodesign licensed med device start up
- Grew 3 to 600 employees
- 0 to 100M in revenue 2007-17
- Raised 120M mostly venture capital funding
- Successful 2016 IPO
- Valuation > 2 billion dollars
- 6th generation Iowan
- UI Basketball 1980 Final Four team member



Keys to University Medical Device Innovation

Successful university innovation commercialization examples contain these core elements



Talent: Tapping medical industry expertise –our largest unmet need

← Creating a nationwide stable of experts

- Build a connected network across a variety of disciplines
- Offer a value add for experts interested in an Iowa affiliation
- Combine face to face with virtual connections to sustain network

← Matching industry expertise to our world class faculty

- These experts must include entrepreneurs –with proven track records in starting and existing companies
- The experts we attract will support IP, Licensing, financial and start up support

← Leverage talented alumni from the three state universities

- We are creating a systematic method to find and qualify talent
- Engage experts with Iowa roots eager to be a part of creating a new healthcare innovation culture in the state of Iowa

Capital to advance Iowa's medical device opportunities

→ Access to Capital: Local funding is essential

- Replace extinguished UIRF GAP funding
- Built on relationship to Ames Seed Capital
- Exploring local philanthropic community foundation fund
- Leverage Connections with mid west, regional healthcare VC's
- Promote POCR for medical device start ups

→ Luring coastal VC's to Iowa

- Leveraging entrepreneurs w/successful track records
- Bringing Silicon Valley VC's to Iowa City
- Roadshow worthy start ups to Silicon Valley and elsewhere
- New Unity Point Innovation fund is a crucial development

Tools to advance Iowa's medical device opportunities

← **protostudios**—bringing ideas to life

- Rapid prototyping medical device design
- Supports teaching complex surgeries using 3D printed organs

- Expanding to other healthcare innovators throughout the state
- Supporting design and prototyping for Iowa medical device companies
- Seek Partnerships with additional Iowa companies to manufacture

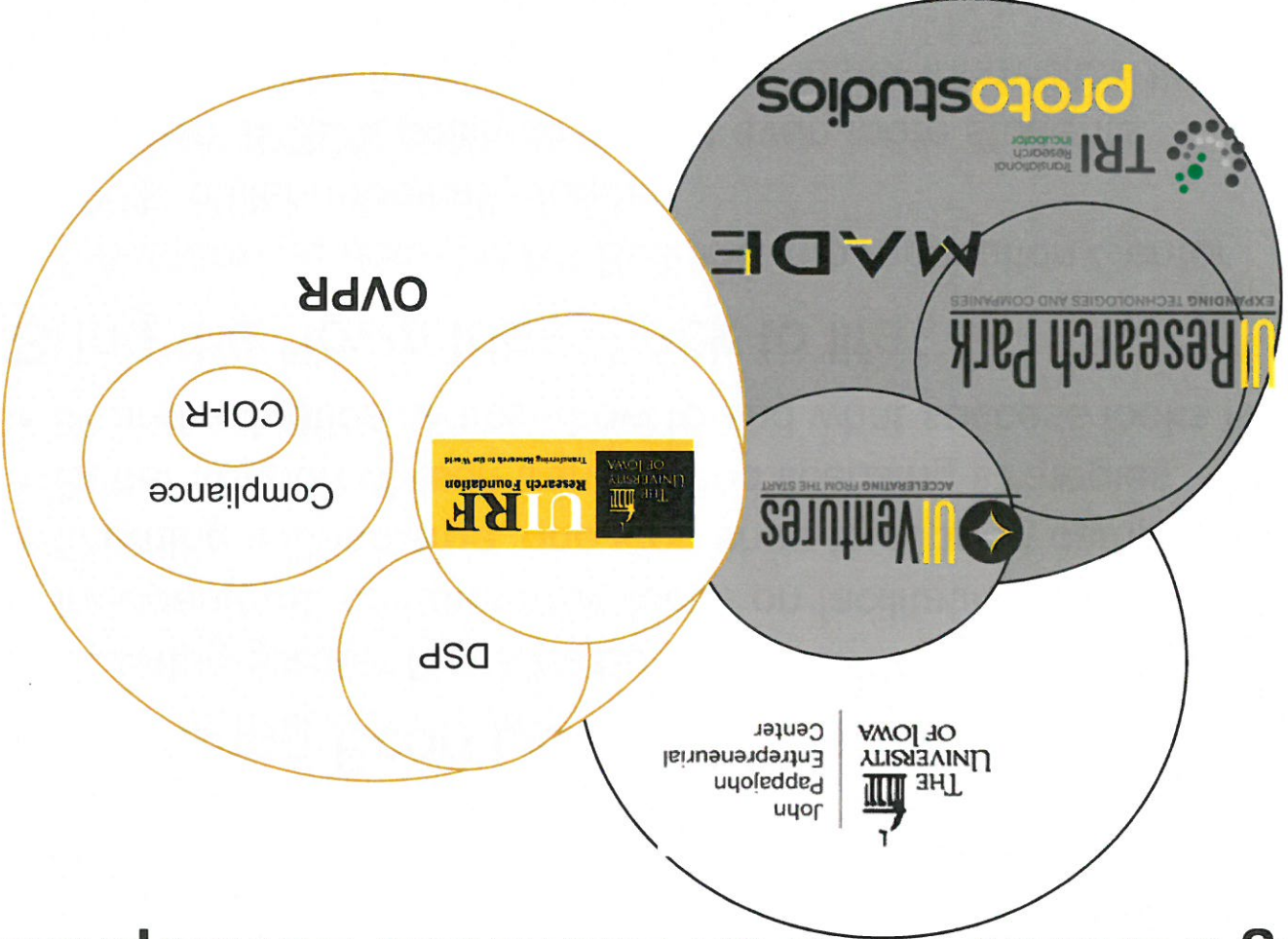
← **MADIE**

- First University in US to create and market simple faculty designed tools to address challenges in healthcare procedures
- Designed by protostudios, manufactured in Hiawatha

Strategy & Culture: Transforming Ideas to Impact

- Separating Econ Dev and Research
 - Creating greater focus for both
 - Independent, campus wide focus on facilitating econ dev
 - Creating a Concierge, one stop shop to support campus innovators
 - Better support of tech transfer and licensing strategies
 - IP and valuation clinics –how to and what success looks like
- Bring the “Iowa Idea” back to life
 - Transforming dormant Art Building into Innovation Center
 - 100% philanthropically funded
 - Support JPEC’s ability to impact even more students
 - Creates space for all 11 colleges to foster innovation thought and action
- Protostudios –Transforming innovative faculty ideas

Creating a unified focus on Economic Development



2018 Success Stories: Case studies of a promising future

✓ First ever FDA cleared AI Diagnostic

- Faculty founded, licensed IP from UI
- 32 Iowa Hires since FDA clearance in August
- 80% staff have an Iowa degree
- Most development created w/publicly funded research dollars
- Raised 33M Venture Capital in 2018
- AI platform will pivot to other disease states



✓ Changing how we study and learn

- Student founded to address dental school exam study challenges –pivoted to other applications
- 50 thousand daily users, 10 million downloads
- 50% revenue growth in 2018,
- 30M in revenue since founding
- Average employee age 35
- Only Iowa company named by Entrepreneur Magazine list of Best Places to Work (twice)



Thank you!

BIOSCIENCES CRUCIAL TO IOWA'S ECONOMIC GROWTH

LEGISLATIVE FUNDING REQUEST: Establish a nationally renowned innovation ecosystem in Iowa-advantaged bioscience platforms to grow and diversify Iowa's economy.

ANTICIPATED OUTCOMES:

- Accelerated translation of scientific breakthroughs, leading to commercialization, for growing and diversifying Iowa's economy
- Close collaborations between industry and universities to solve problems
- Development of a skilled workforce in biosciences

IOWA IS WELL POSITIONED FOR BIOSCIENCES ECONOMIC GROWTH:

- Iowa is currently outperforming the nation in bioscience employment growth
- The bioscience sector has been outperforming Iowa's overall private sector growth
- Iowa has 36% more bioscience employment than national levels
- There is enormous potential for further growth in Iowa, while providing high paying jobs (average salaries of \$68,000 versus \$42K for all private sector jobs)



THE BIOSCIENCE PLATFORMS:

The Iowa Governor's office, the Iowa Economic Development Authority (IEDA) and the Iowa Innovation Council identified four platforms as the focus for future bioscience development efforts based on the market potential for growth and R&D competencies and competitive advantages.

PLATFORM	MARKET POTENTIAL
Biobased chemicals	US Chemical market \$250 billion, growing at the rate of GDP
Precision and digital agriculture	\$3.3 billion in 2016 to \$5.9 billion by 2021
Vaccines and immunotherapeutics	\$33 billion in 2016 to \$45 billion by 2021
Medical devices	\$483 billion in 2016 to \$634 billion by 2021

SUCCESSFUL BIOSCIENCE DEVELOPMENT REQUIRES ENHANCED PARTNERSHIPS OF UNIVERSITIES, IBDC, AND INDUSTRY:

The FY2020 Board of Regents appropriation request for the bioscience platforms will accelerate the pace at which discoveries are translated into commercial opportunities by:

- Hiring one Chief Technical Officer for each platform, who will, in partnership with IBDC staff, provide technical expertise as well as business knowledge.
- Dedicating resources to obtain funding for large-scale federal programs focused on university-industry partnerships and for intellectual property and business plan development in the platform areas.
- Creating a seed funding program focused on early-stage technologies, encouraging University-industry collaborative partnerships.
- Creating an "Iowa Innovates" program to attract young innovators to Iowa.

Contact information for the Universities and IBDC:

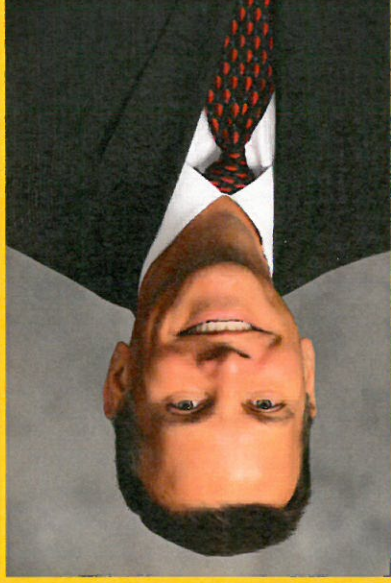
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THE UNIVERSITY OF IOWA
**JOHN PAPPAJOHN
ENTREPRENEURIAL
CENTER**



John
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Center





David K. Hensley

Iowa JPEC Executive Director

Clinical Professor, Management & Organizations

david-hensley@uiowa.edu

319-335-1022

www.iowajpec.org



Patricia Miller ('04)
CEO MATRIX 4, Inc.

"The coursework I did at UI was the catalyst for me to create change, both from the standpoint of being an 'intrapreneur' in corporate America and now as a startup business in manufacturing. The Pappajohn Center offers a very hands-on program that sets you up for success, whether you are going to start a business or work within a business."

ACADEMIC PROGRAMS

SUMMARY OF PROGRAMS

Tippie College of Business

- BBA in Entrepreneurial Management
- Undergraduate Certificate in Entrepreneurial Management
- Courses in various MBA programs

College of Liberal Arts and Sciences

- BA in Enterprise Leadership
- Undergraduate Certificate in Entrepreneurial Management
- Undergraduate Certificate in Arts Entrepreneurship
- Undergraduate Certificate in Media Entrepreneurialism

College of Engineering

- Undergraduate Technological Entrepreneurship Certificate

Other UI Colleges

- Undergraduate Certificate in Entrepreneurial Management

ACADEMIC PROGRAMS

2018 PROGRAM IMPACT

- Nationally ranked undergraduate program
- 4,880 student enrollments in entrepreneurship courses
- #1 Fastest Growing Major at UI over the past 5 years (Enterprise Leadership)
- Students from 101 undergraduate majors across UI's campus took entrepreneurship courses
- 133 Entrepreneurship class sections offered



John Mickelson | Cy Phillips | and families
All UI alumni!

- Both Iowa JPEC alum who got the Certificate in Entrepreneurship
- After both families had a child that received treatment at the UI Stead Family Children's Hospital (UISFCH), four Iowa alumni came together to create the Iowa Wave shirt.
- After the first football season of selling apparel, the organization donated more than \$440,000 to UISFCH
- The 501c3 nonprofit organization sells their shirts in stores throughout the state of Iowa.



Sigma Nu Tau
Entrepreneurial Honor Society

"Sigma Nu Tau has provided me with priceless opportunities for growth in both my academic and professional career. From the professional trips to major cities to networking with successful entrepreneurs across the U.S. to bonding with other entrepreneurial-minded students, this organization has given me the tools and resources to be a successful student, professional, and future entrepreneur."

CO-CURRICULAR PROGRAMS

Interdisciplinary Applied Learning

- Iowa Medical Innovation Group
- Iowa Innovation Associates (internship program)
- Okoboji Entrepreneurial Institute
- Iowa Business Consulting
- Iowa RAGBRAI Consulting
- International Study Abroad Programs
- Sigma Nu Tau Honor Society
- Founders Club – Student Entrepreneurs
- ENACTUS Student Organization

COMMUNITY ENGAGEMENT

2018 PROGRAM IMPACT

- FY18 **Venture School cohorts** included Cedar Rapids, Des Moines, Iowa City, Quad Cities, and Sioux City. Worked with **240 Iowa startups** to date
- Partnerships with Chambers, SBD's Community Colleges, Iowa Farm Bureau
- **75 consulting projects** were completed in **21 counties** for a variety of small and early stage businesses
- Four-year, \$300,000 National Science Foundation I-CORPS grant awarded spring 2015 to train and support faculty entrepreneurs
- Over 65 faculty teams with commercialization projects have been trained to date – 10 of these teams continued NSF training at the national level



Insights & Treepans
Bill Brown | Akron, IA

www.insights.com | www.treepans.com

"At the end of the day, choosing to participate in Venture School is one of the best decisions we have made. I really think that we have saved so much time and money through the customer discovery process. We changed our total direction that our expensive consultant was taking us. I believe in Venture School so much that I drove eight hours every week so I could go through the program again for a second business."

YOUTH PROGRAMS

2018 PROGRAM IMPACT

JACOBSON INSTITUTE FOR YOUTH ENTREPRENEURSHIP

- **Impact within the state of Iowa:**
 - 190 active teachers (BizInnovator and STEM Innovator®)
 - 95 schools in 45 counties
- **Nationwide impact:**
 - 32 states + DC with active BizInnovator and STEM Innovator® teachers
 - 25 states with teachers certified to offer UI college credit to high school students



Britany Flockhart
Student | Keokuk, IA

- *Entrepreneurial journey began in the classroom when she took Engineering the Future with Courtney Giesel, a STEM Innovator® Certified Instructor at Keokuk High School.*
- *In the class, Flockhart (a hunter herself) invented a device to help hunters field-dress a deer.*
- *Won first place in the Jacobson Institute's spring 2018 Innovator Competition and was awarded \$1,500 in seed money.*



Speeko

Nico Aguilar ('19) & Anthony Pham ('14), Co-Founders

www.speeko.co

- Speeko is a mobile application that enhances users speaking skills through supportive feedback and deliberate practice.
- Participated in TechStars Chicago 12-week Accelerator
- Took first place and \$11,000 at the Iowa JPEC Spring 2018 Business Model Competition

STUDENT VENTURES

2018 PROGRAM IMPACT

- 575+ student businesses supported since 2004 Founder's Club program inception
- 204 UI student entrepreneurs participated in the Founder's Club
- 127 Mentors supported Iowa students and their business
- 12 teams made up of 38 students participated in Student Accelerator
- 300+ UI students pitched their idea/business at an Iowa JPEC event or competition
- 2 UI Student Businesses won national competitions (combined \$75k in seed funding)

UI STUDENT ENTREPRENEUR

ERICA COLE

- Founder of No Limbits
- Chemistry Major
- Graduating May 2019
- Cedar Rapids, IA



