



Iowa Innovation Council Report to the Legislature FY2011

HOUSE FILE 2076 established an Iowa Innovation Council (IIC) within the Department of Economic Development (DED) and amends the duties of the Economic Development Board with regard to its report on certain targeted industries, technology commercialization, and the Iowa Innovation Council.

The IIC is charged with the following:

1. Prepare a report of the expenditures of moneys appropriated and allocated to the department for certain programs authorized pursuant to 2009 Iowa Code Supplement sections 15.411 as amended by 2010 Iowa Acts, House File 2076, and 15.412 relating to the development and commercialization of businesses in the targeted industries.

The Innovation and Commercialization program results will be included as part of the Iowa Economic Development Authority Annual Report. Results will be included for the Demonstration Fund, Internship Program, IT Training, Networking Fund and Career Awareness Program.

2. Prepare a summary of the activities of the technology commercialization committee and the Iowa innovation council.

a) Technology Commercialization Committee (TCC): Purpose (15.116) To evaluate and make recommendations to the board on appropriate funding for the projects and programs applying for financial assistance from the innovation and commercialization development fund created in section 15.412.

The Iowa Integrated Innovation and Commercialization Network (IIICN) is a resource for the TCC. The IIICN is the product of over six years of addressing the gaps in the system of support for entrepreneurs. The concept of the Network was developed to provide:

- In-depth support and mentoring from people with experience in starting and growing companies
- Access to management talent
- Help in increasing sales and introducing products into new markets
- Efforts to strengthen the culture for entrepreneurship in Iowa

The IIICN is designed to be a source of best practices, standardized due diligence processes and a directory of resources available to entrepreneurs and small companies competing for state funding and private capital. Services for the IIICN are provided through a contract between the Iowa Economic Development Authority and VentureNet Iowa.

As part of the Demonstration Fund application process, VentureNet Iowa conducts an Expert Review Panel, a unique consolidated review process that provides preliminary feedback on the feasibility and advisability of the commercialization potential for a proposal. It serves as a review panel to score, rank and provide written feedback to the applicants and to the funding entity. The process is designed to insure continued consideration for future funding of viable projects that meet milestones and seek to advance both the concept and the resulting companies.

The IICN provides Network referrals to additional technical and financial resources for all Demonstration Fund applicants whether the applicant meets the eligibility criteria for the Demonstration Fund or not.

3. Create a comprehensive strategic plan for implementing specific strategies that foster innovation, increase new business formation, and promote economic growth.

- Iowa Innovation Council Strategic Plan: Attachment A

4. Review annually the existing IDED programs that relate to the targeted industries and suggest changes to improve efficiency and effectiveness.

a) Demonstration Fund Program: Purpose 261—105.2 (82GA, HF829) : The demonstration fund is established to provide financial and technical assistance to encourage high technology prototype and concept development activities that have a clear potential to lead to commercially viable products or services within a reasonable period of time. The primary purpose of the fund is to help businesses with a high-growth potential reach a position where they are able to attract later stage private sector funding.

Results for FY2008 – FY2011

- Applications evaluated by the TCC: 172 applications
Number of awards: 113
Amount awarded: \$11.6 million Amount leveraged: \$ 5.8 million
Awards by industry sector: Information Technology – 42% Advanced Manufacturing – 32%; Biosciences – 26%

In November 2011, a survey was conducted with successful applicants to determine if the Demonstration Fund achieved its goal of helping businesses reach a position where they are able to attract later stage private sector funding. The metric was that 10% of successful applicants would secure follow on private funding. Seventy-four (65%) companies responded to the survey.

Project Goal

| | |
|---|-------|
| Test a new product in the market | 48.6% |
| Ramp up to production | 16.2% |
| Expand to a new vertical market | 9.5% |
| Expand marketing and sales of a new product | 52.7% |
| Raise private capital | 8.1% |

What is/was the product stage before the Demonstration Fund award?

| | |
|--|-------|
| Investigation | 17.6% |
| Feasibility | 25.7% |
| Development | 52.7% |
| Market Introduction | 27.0% |
| Growth (cash flow generation) | 5.4% |
| Maturity (profitable revenue generation) | 0.0% |

What is/was the product stage after the Demonstration Fund award?

| | |
|---------------|-------|
| Investigation | 2.7% |
| Feasibility | 6.8% |
| Development | 36.5% |

| | |
|--|-------|
| Market Introduction | 52.7% |
| Growth (cash flow generation) | 31.1% |
| Maturity (Profitable Revenue Generation) | 1.4% |

Has the product led to outside funding for the company?

Yes: 45.9% No: 58.1%

Type of Funding (some companies access multiple sources)

Angel Investor: 72% Venture Capital: 32% Federal Funding: 28%

One recommendation is that a mentor should accompany financial assistance. In FY2012, we are conducting a pilot which will provide mentoring services to three demonstration fund awardees. VentureNet Iowa will manage the pilot program.

b) Student Internship Program: FY2008 to FY2011 Results

- Total applications: 298
- Amount awarded: \$1,966,400 Amount leveraged: \$998,000
- Total number of companies using the program: 154
 - Used program four times: 13
 - Used program three times: 30
 - Used program two times: 34
 - Used program once: 77
- Companies participating by industry sector:
 - Advanced Manufacturing: 50% IT: 38% Biosciences: 12%
- Total Intern positions: 496
 - Regent Universities: 345
 - Private colleges: 119
 - Community Colleges: 24
 - Out of State: 8 (Iowa high school graduates attending school out of state)
- Employment Results
 - Received employment offer: 18%
 - Intern will be considered for future position: 27.25%
 - Received no offer: 54%
 - Students willing to accept an offer: 78%
 - Unsure: 12.5%
 - Not willing to accept offer: 9.5%

Internships play a key role in keeping degreed students in the state. The Student Internship Program needs a more robust marketing plan selling the program.

5. Conduct industry research and prepare reports for the general assembly, the governor, the department, and other policy-making bodies within state government.

2011 Battelle Industry Report Updates Released: In 2005, Battelle completed an assessment of the advanced manufacturing and IT industries in Iowa and associated supporting strengths in

the R & D community. Because of the considerable changes that have occurred since 2005 – rise of international competition through globalization and the economic recession, the Iowa Economic Development Authority contracted with Battelle update the reports. The 2011 updates focused on reassessing and identifying the existing and emerging advanced manufacturing and IT niches. The Reports were released in October 2011.

Innovate Iowa commissioned Battelle to complete an update of the Biosciences report which was released in February 2011.

Copies of the reports are on the website at: www.iowaeconomicdevelopment.com/studies.aspx

6. Act as a forum where issues affecting the research community, the targeted industries, and policy makers can be discussed and addressed.

- The Iowa Innovation Council met on a quarterly basis: July 9, 2010, October 22, 2010, January 14, 2011 and April 29, 2011.

7. Coordinate state government applications for federal funds relating to research and economic development affecting the targeted industries.

The Iowa Innovation Council and Iowa State University applied for the U.S. Commerce Department's Economic Development Administration (EDA) I6 Green Challenge Grant. On October 31, 2011 the EDA awarded Iowa a \$1 million grant as one of six winners of the I6 Green Project. This is a federal, multi-agency competition to drive technology commercialization and entrepreneurship in support of a green innovation economy and increased U.S. competitiveness.

The objective of the i6 Green Award is to create a more robust pipeline of new ventures in Iowa that can potentially grow into significant future employers. The i6 Green Project will accomplish this objective by demonstrating and validating in a two-step process first the technical and then the commercial viability of early discoveries from the State's research institutions as well as other sources of technology. The project will employ rigorous commercialization methods, executed and overseen by industry experts and mentors to identify and support innovations with the most promising commercial potential.

The project involves expanding the Proof of Concept development model by adding a next stage Proof of Commercial Relevance Center. The project seeks to improve connections between Iowa businesses, entrepreneurs and universities to expand the pool of relevant green technologies, facilitate company creation and expansion, accelerate technology transfer and the commercialization of research and create sustainable, high paying, private-sector jobs.

ATTACHMENT A

IOWA INNOVATION COUNCIL STRATEGIC PLAN

Opportunity

Iowa historically has had a strong, independent pioneer spirit and this spirit has served the State well when the U.S. and Global economies have been strong. As the world has become more technologically sophisticated, the U.S. has been losing ground as we have transitioned through the Agricultural Economy, the Industrial Economy, and the Knowledge Economy and now into the Innovation Economy. Technology and communications are enabling developing countries and states to grow rapidly as they adopt new technologies and increase their economic investments in Science, Technology and Innovation.

The Iowa Business Council proposed legislation in 2000 to create a New Economy Council to help steer Iowa through the 21st Century Innovation Economy. This proposal failed to receive funding. The IEDA commissioned Battelle, beginning in 2003, to study the Iowa biosciences, advanced manufacturing and IT industries, as well as the entrepreneurial support systems in Iowa, to identify areas of economic growth with the highest potential. The industry groups created to review these studies subsequently helped to support passage of legislation that established the Innovation and Commercialization (IC) Division at the Iowa Economic Development Authority (IEDA).

However, progress has been limited, and Iowa has been slow to react to the rapidly changing Global Innovation Economy. We have lost ground as a state in economic development and are not creating the vibrant and supportive culture that is needed for entrepreneurs and innovative businesses to develop and grow. Iowa lacks a broad and integrated effort to create an innovation network with supporting policies, programs and services for both new and existing businesses.

A growing number of state governments in the U.S. have created public-private partnerships that are often referred to as innovation intermediaries. Iowa business and academic leaders determined in 2009 that such an entity, if properly organized and funded, could be significantly helpful in developing synergistic public-private partnership. The Iowa Innovation Council (IIC) was formed. While many other states began their technology or innovation based economic development strategies almost 30 years ago, Iowa now has the opportunity to develop and implement progressive strategies that have the potential to move Iowa into a leadership position in the Global Innovation Economy.

Scope and Purpose (Mission) of the Iowa Innovation Council (IIC)

Our greatest potential for high skilled/high paying jobs and wealth creation is found in accelerating the development, commercialization and deployment of relevant innovations in the targeted industries of advanced manufacturing, biosciences and information technology. In the current economic climate in the U.S. our universities, service providers, government leaders and the private sector all face the challenge of limited resources, and there are memories of past economic development program attempts and failures. However, if we develop and implement progressive economic development strategies, Iowa's future economic success will be enhanced because industry, academia and government are working together to find ways to more successfully commercialize relevant innovations from both the public and private sectors.

The IIC mission is to increase the chances for success for innovative entrepreneurs and companies by providing specific programs and services to entrepreneurs and existing

businesses and developing specific policy recommendations to enhance the innovation based economy of Iowa. The IIC will act as a public convener, identifying opportunities, proposing solutions and connecting and leveraging resources.

The IIC will collaborate with partners, including the Iowa Economic Development Authority, to develop and implement programs and policies that support and accelerate innovation and economic growth. It will also work with federal agencies, foundations and companies seeking state partners for specific innovation programs. The IIC will collaborate with Iowa businesses and the education community to develop progressive strategies to address the future workforce and education needs of targeted industries, to better connect university research with business needs and opportunities, and to facilitate the effective and efficient transfer of technology from the universities. The IIC will collaborate with both public and private service providers to organize resource lists and provide referrals and guidance to businesses and entrepreneurs in need of innovation assistance, including mentorship and best practice models and advice in areas such as venture funding, talent recruitment and governance processes.

Current Situation

The pressure on government leaders in all 50 states to create jobs has grown steadily for the past 30 years. Additionally, competitors are now international, from China to India, presenting the same challenges to Iowa as California, Minnesota or Illinois.

Research has identified a key determinate of the future wealth of the U.S. is our ability to innovate and produce economic output based upon innovation. Iowa research has indicated that maintaining and expanding the economic performance of targeted industries will depend on an individual's or a company's ability to innovate and rapidly commercialize new processes and products.

Iowa does not have a coordinated innovation, commercialization and investment network or system to accelerate the growth of the state's innovation-based economy. The state has some resources dedicated to the acceleration of innovation but they are fragmented or "siloed". Assessment of the current state of innovation and economic growth in the state has identified initial key gaps and opportunities that must be addressed, including:

1. Lack of institutional innovation by policy makers.
2. Lack of a vigorous review process to sort out and support those innovation projects with the greatest commercialization potential
3. Lack of early-stage seed capital under professional management
4. Poor optimization of university resources
5. Lack of vigorous technology transfer and commercialization of university research
6. Sub-optimization of state and federal program dollars including research funding
7. Poor national and global awareness of Iowa innovation capabilities
8. Insufficient culture of innovation in our state

Future Vision and Goals for Innovation in Iowa

The majority of the state's current economic development program dollars are designed to incentivize job creation, reflecting traditional economic development thinking. While these programs have fulfilled their promised outcomes, the Innovation Economy offers a different set of challenges and metrics to measure economic success; *the new metrics are wealth creation and higher paying jobs*. To accelerate innovation and increase the economic benefits across the entire state from the work of Iowa's universities and colleges, entrepreneurs and existing

companies, the IIC can play a critical role working with these partners to help develop a shared vision of the future business and innovation environment in Iowa. Included in this shared vision is the development of specific goals in the following areas related to re-invention and growth of existing companies and creation of new companies through innovation and rapid technology transfer:

- Innovation as a larger part of the state's economic development policy framework.
- Increased numbers and success rate for new companies formed in Iowa
- Increased new businesses and growth of existing companies in Iowa
- Increased Iowa employment in good paying jobs in targeted industries
- Increased private research investment in Iowa for targeted industries
- More effective translation of state and federally funded university research into new businesses in Iowa
- More effective competition for federal funding to develop and commercialize new technologies in Iowa

IIC Objectives

The IIC recognizes the direct relationship between outcomes and investible dollars and the need to make investments only in those opportunities with the greatest chance for eventual success in the marketplace. Therefore, the IIC will collaborate with its partners and stakeholders to assemble a critical mass of people, expertise, and funding to focus upon these objectives:

1. Establishment by the State of Iowa of a 501(c)(3) non-profit "innovation intermediary".
2. Expand by September 2011 the Iowa Integrated Innovation and Commercialization Network to be a source of best practices, standardized due diligence processes and directory of resources available to entrepreneurs and small companies competing for state funding and private capital.
3. Establish, staff, fund and launch a private seed capital investment company by December 2011 that will provide early stage, pre-venture capital to start-up companies.
4. Define and develop a plan by December 2011 for implementation in 2012 that will help connect Iowa businesses and universities more effectively to inform workforce education and development priorities related to innovation and new business development.
5. Define and develop a plan by December 2011 for implementation in 2012 that will help to better connect Iowa businesses, entrepreneurs and universities to define Iowa business opportunities for university research, increase the relevance of that research, accelerate technology transfer and the commercialization of university research.
6. Develop and implement a marketing communications plan to build greater understanding and support for innovation and entrepreneurship in the State of Iowa, to create greater awareness of the opportunities and understanding of the tools and resources available to Iowa businesses and entrepreneurs and to promote the State of Iowa nationally and globally as a supportive business environment for innovation and new business development.

Key Strategies

The key strategies to achieve the IIC objectives include:

- The IIC will partner with the IEDA to create the by-laws for the new 501-c-3 to ensure implementation of the IIC's strategic plan.
- Partner with IEDA, university, college, and business representatives to expand the Iowa Integrated Innovation and Commercialization Network beyond supporting potential applicants to the IEDA Demonstration Fund to include other programs including private early-stage investments for innovative start-ups.
- Form an advisory board of investors (individuals, foundations, companies) to help develop, establish and fund the proposed private seed capital investment limited partnership.
- Partner with the State Board Regents, Iowa Workforce Development, community college and university representatives, business representatives and IEDA to design a series of workshops to understand the current state of workforce development in Iowa and develop a plan and ongoing process to guide workforce education and development priorities related to innovation and business development in the targeted industries.
- Similarly, to increase the relevance, technology transfer and commercialization of university research in the targeted industries, partner with universities and business representatives to develop a plan to more effectively communicate and develop awareness of university research capabilities and existing programs, support existing Iowa companies with direct technical assistance, grow sponsored research activities and facilitate access to university IP and SBIR/STTR opportunities.
- Partner with the IEDA and legislative leadership to review existing state and federal policies and programs that have a demonstrated track record of increasing private sector investment in company R&D and develop recommendations for targeted industries.

Strategic Plan Implementation

Resource Requirements: The Iowa Innovation Corporation will manage implementation of the strategies as the State's innovation intermediary. The Corporation will develop an operating plan that includes identifying the state, federal and private sector funds required to support activities and programs. The operating plan and strategy for sustainable funding is based on the experiences and best practices of other states. To secure the funds necessary, the Council will immediately begin aggressive attempts to secure federal grant dollars through programs supportive of the strategic objectives.

Metrics: The Council will use the metrics identified in the Iowa Innovation Index to measure progress on the strategic plan. There are a series of key metrics identified in these five categories

- Economic Impact
- Innovation Research and Commercialization
- Innovation Capital
- Innovation Workforce
- Innovation Location and Environment