

Prepared for:

The Venture Development and
Innovation Task Force of the
Nebraska Legislature

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Statewide Strategic Plan – Cultivating a Climate of Entrepreneurship and Innovation

Report Submitted to Comply with the
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Prepared by:



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EXECUTIVE SUMMARY

Nebraska has historically focused on business expansion or business attraction to grow its economy along with maintaining an agricultural sector by growing more crops and feeding more livestock. While agriculture will always be an important component, the future of Nebraska will depend on the innovation and knowledge economy, including agtech. Nebraska is no longer competing with its neighboring states. In order to succeed on a global scale, Nebraska must develop an innovation and entrepreneurial ecosystem that focuses on 21st century employment opportunities, takes advantage of its existing comparative advantages, and provides incentives for innovation.

Today, the state's economy benefits from traditional infrastructure: significant rail service, over 10,000 miles of state highways, a major interstate system crossing the state, broadband access, and an electrical power network that serves the public good. For tomorrow's economy, Nebraska needs a new type of infrastructure to build an innovation economy: increased R&D from industry and universities, serial entrepreneurs¹, additional risk capital, incubators and accelerators, and a STEM² educated workforce.

This strategic plan is the next incremental step to measure how Nebraska is doing in the innovation economy, evaluate whether the existing Nebraska Business Innovation Act programs through the Nebraska Department of Economic Development are achieving the intended objectives, and identify the next steps to keep the state moving forward. What this strategic plan does not do is create false expectations by proposing unachievable recommendations and neglecting Nebraska's core strengths. Only Nebraskans can forge the destiny we choose.

Inventory of Existing Entrepreneurship and Potential High-growth Programs in Nebraska

As entrepreneurship has evolved and gained recognition at the state and federal levels, economic development professionals and policymakers have identified two distinct classes of companies: small businesses best described as "lifestyle" or "Main Street" businesses and high growth capacity businesses. Traditional small businesses (as opposed to growth businesses) are not necessarily the targets of this strategic plan. Rather, the focus of this strategic plan is on innovation and the venture development of potential high-growth businesses.

Of course Main Street businesses are an essential part of the entrepreneurial ecosystem and have value, but their focus is typically on providing a livelihood for an individual, family, or small employment base. These businesses will generate revenue from the local or regional area compared to high growth businesses that generate significant revenues from outside their local or regional market.

To acknowledge the importance of both, the inventory of programs and resources were broken down into these two distinct classes. The Main Street entrepreneurs will typically leverage bank financing for inventory, equipment, and possibly working capital. The potential high-growth business will typically

¹ A serial entrepreneur is defined as a person who makes a living by starting up companies and operating them until they are competitive, then selling them.

² STEM – Science, technology, engineering, and mathematics.

seek equity or convertible debt financing, bringing on investors that understand the risk associated with the early stage business but also realize the potential upside of the investment.

Main Street Entrepreneurship entails three types of entrepreneur development programming (classroom training, technical assistance, and entrepreneurial events) and three types of financial assistance (grants, micro-loans, and traditional loans). In Nebraska at the local, regional, and state levels, ninety-one organizations were identified that provide some type of entrepreneur programming or financing. The report breaks down a high growth entrepreneurial ecosystem into three distinct venture programs (incubators, accelerators, and mentoring networks) and various stages of capital (pre-seed, seed, series A, and Mezzanine). Eighteen public and private organizations were identified that provide some type of venture programming and/or financing.

How Nebraska Stacks Up

Historically, Nebraska's approach to supporting the entrepreneurial and innovation ecosystem has been one of bits and pieces. Finally in 2010, two major studies were released to provide an initial roadmap for policymakers to follow in building an innovation and knowledge economy. The Nebraska Department of Economic Development and the Nebraska Department of Labor commissioned Battelle Technology Partnership to evaluate Nebraska's competitive advantages and address gaps holding Nebraska back and opportunities where Nebraska could succeed and grow. The Entrepreneurship and Innovation Task Force of the Nebraska Legislature also commissioned a study to evaluate Nebraska's entrepreneurial ecosystem in comparison to other states and review best practices from other states.

The result of these conjoined studies resulted in the introduction of the Nebraska Business Innovation Act (LB 387) during the 2011 legislative session. The bill subsequently received unanimous approval by the Legislature and was signed into law by the Governor. For the first time, Nebraska provided financial assistance to Nebraska's entrepreneurs and innovators through a host of programs aimed at building potential high-growth businesses that create innovative products and processes and hire our educated workforce.

Several organizations, such as the Milken Institute, Forbes Magazine, CNBC and CNN, monitor statistical information that can be used to compare states' business environments against one another. While these rankings are based on subjective sub-categories and should not be considered a conclusion of Nebraska's "standing" versus other states, they are very useful in trying to find areas in need of improvement and determining the state's progress over time.

The Milken Institute publishes the State Technology and Science Index every two years. Comprised of five different category indices, the index provides policymakers progressive results demonstrating the efficacy of the Nebraska Business Innovation Act.

Table 1. State Technology and Science Index

State - Nebraska	Year			
	2016	2014	2012	2010
Category				
Human Capital	19th	15th	15th	13th
R&D Inputs	35th	35th	32nd	35th
Workforce	11th	29th	29th	34th
Risk Capital & Entrepreneurial Infrastructure	19th	33rd	47th	44th
Tech Concentration	36th	38th	37th	33rd
Overall Rank	24th	30th	33rd	34th

Source: Milken Institute

National and Regional Best Practices

National best practices were reviewed in order to provide leading examples of innovative approaches. In attempt to make a more targeted comparison, programs were further researched in five nearby states: Colorado, Iowa, Kansas, Oklahoma, and Missouri. These states were chosen as they have similar economic and cultural characteristics to Nebraska and in theory provide alternative markets and platforms for potential entrepreneurs in the region.

In general, the analysis shows that there is not much differentiation among these states in their approach to entrepreneurship development, except in the case of Colorado which has been more innovative. More details on national and regional best practices are provided in the full report.

Economic Impact Analysis of the Nebraska Business Innovation Act Programs

Dr. Eric Thompson with the Bureau of Business Research at the University of Nebraska-Lincoln conducted an economic impact analysis of companies receiving assistance under the Nebraska Business Innovation Act programs for the period October 2011 – June 2016. His analysis found that participating Nebraska businesses continue to attract substantial follow-on investment, create high-paying jobs, generate revenue, and increase the state/local tax revenue relative to the support received from the Business Innovation Act programs.

- Participating businesses have raised \$6.72 of private investment for each \$1 of state funding.
 - This was higher than the \$5.12 of private investment for each \$1 of state funding estimated in the 2014 analysis of these programs.³
- Participating businesses earned revenue of \$7.21 for every \$1 of state support.

³ "Supporting and Increasing Venture Capital in Nebraska", <http://neded.org/business/talent-a-innovation-initiative>, (Accessed November 2016).

- This was far greater than the \$2.32 in revenue that was estimated in the 2014 analysis of these programs.⁴
- These businesses have added 468 direct new jobs in the state with annual wages of \$26.36 million since initially participating in the Business Innovation Act programs.
 - This is an average wage of \$56,325 versus the Nebraska annual average wage of \$42,630.⁵
 - This is higher than the 162 jobs paying an average wage of \$50,617 found in the 2014 report authored by Dr. Thompson.⁶
- The annual economic impact is estimated in terms of employee compensation is \$52.07 million spread over 967 jobs (direct and indirect jobs).
 - This is an average wage of \$53,836 versus the Nebraska annual average wage of \$42,630.⁷
 - This is higher than the 307 jobs paying an average wage of \$49,609 found in the 2014 economic analysis of these programs.⁸
- The total annual economic impact was \$188.46 million.
 - This is higher than the \$53.45 million economic impact estimated in the 2014 economic analysis of these programs.⁹
- The annual state and local tax impact is estimated to have reached \$4.54 million annually.

As these participating companies continue to grow, add employees, and earn additional revenue, these economic impact numbers can expect to increase. *For policy makers, the \$7 million annual expenditure for these Business Innovation Act programs is generating significant follow-on investment, business revenue, job opportunities, and state/local taxes.*

Since 2011, the Nebraska Department of Economic Development has received 331 applications for assistance under the various programs and awarded financial assistance to 221 companies. Companies have requested \$39.93 million under the programs but awarded \$18.223 of financial assistance.

Policy Recommendations

These actions include a mix of immediate and short-term endeavors to build upon the past and plan for the future. The immediate time period is defined as less than 1 year and the short-term time period is defined as 1 – 3 years. The policy recommendations are presented in no particular order.

⁴Supporting and Increasing Venture Capital in Nebraska”, <http://neded.org/business/talent-a-innovation-initiative>, (Accessed November 2016)..

⁵ Bureau of Labor Statistics, http://www.bls.gov/oes/current/oes_ne.htm#00-0000, (Accessed November 2016).

⁶ “Supporting and Increasing Venture Capital in Nebraska”, <http://neded.org/business/talent-a-innovation-initiative>, (Accessed November 2016).

⁷ Bureau of Labor Statistics, http://www.bls.gov/oes/current/oes_ne.htm#00-0000, (Accessed November 2016).

⁸ “Supporting and Increasing Venture Capital in Nebraska”, Invest Nebraska Corporation, <http://neded.org/business/talent-a-innovation-initiative>, (Accessed November 2016).

⁹ Ibid.

Recommendation #1: Increase funding for the Business Innovation Act Programs: Currently, the annual state appropriation for the Business Innovation Act is \$7 million. Since the program's inception in 2011 through 2015, the Nebraska Department of Economic Development has received 331 applications for assistance under the various programs and awarded financial assistance to 221 companies. Companies requested \$39.93 million under the Business Innovation Act programs but received less than half that amount (\$18.223 million) due to underfunding. Dr. Thompson's economic impact study of the Nebraska Business Innovation Act found that for each \$1 of funding under the Act's programs, participating companies received \$6.72 of follow-on investment and earned \$7.21 of revenue. Increasing the funding for the Nebraska Business Innovation Act was also recommended by Cromwell-Schmissuir in their 2014 report to the Nebraska Legislature and by SRI in their 2016 report for the Nebraska Department of Economic Development. For the 2017-2019 biennium, increase funding by re-directing the returned loan capital paid to the Nebraska Department of Economic Development from the State Small Business Credit Initiative. This funding from the U.S. Department of Treasury was intended for small business financing in the state. To maintain the integrity of that federal program, the returned capital should be redirected to the Nebraska Business Innovation Act. Other possible funding sources are identified in the report. Funding for the Business Innovation Act should be increased from the existing \$7 million to \$10 million. A reasonable portion of new funding should go to the micro-loan program for Main Street entrepreneurs in Nebraska to meet the microloan demand across the state.

Time Frame: Immediate

Recommendation #2: Establish a Bioscience priority with a portion of new funding to the Nebraska Business Innovation Act: The 2010 Battelle Institute study for the Nebraska Department of Economic Development and the Nebraska Department of Labor, the 2010 Battelle Institute study for the Nebraska Legislature, and the 2016 SRI report for the University of Nebraska-Omaha and the University of Nebraska Medical Center presented hard data and recommendations on why R&D and early-stage financing in the bioscience industry are important to Nebraska. The possible innovations in the bioscience industry around Nebraska's core strengths: agriculture, food, water, and medicine, require special consideration under the Business Innovation Act.

Time Frame: Immediate

Recommendation #3: Modify and update the existing Angel Investment Tax Credit Program: The current Nebraska Angel Investment Tax Credit Program is allocated \$4 million annually and the entire allotment of tax credits is allocated on January 1 of each year. Consideration should be given to reduce the refundable tax credit from 35 percent (40 percent in distressed areas) to 20 percent, require that the certified investor invest at least the amount indicated on the allocation form to receive the tax credit, reduce the maximum amount an individual (and married couples filing jointly) certified investor is eligible to receive from \$300,000 to \$100,000, narrow the industries that are eligible under the program, and require annual disclosure of certified companies receiving investment under the program.

Time Frame: Immediate

Recommendation #4: Update Nebraska's security law exclusions to mirror federal law: The differences between security regulations at the federal and state levels create confusion and uncertainty.

Synchronizing the code will expand the scope of who qualifies as an accredited investor in Nebraska while maintaining the protection of individuals that the law was designed to protect.

Time Frame: Immediate

Recommendation #5: Request the Nebraska Investment Council study investment opportunities in early stage and mid-market Nebraska-based businesses: The Nebraska Investment Council manages \$22 billion of state assets across 32 investment programs. As of 9/30/2015, the council had made 2 investments in venture capital partnerships (i.e. Seed, Early-stage, and Later-stage). One firm is located in the San Francisco Bay Area and the other firm has locations on both coasts, Chicago, India and China. As the state's entrepreneurial/innovation ecosystem continues to develop, there may be opportunities to consider keeping some of those investment dollars in Nebraska's backyard rather than funding business development in large metropolitan areas or foreign countries. This would be a step forward to address the lack of Series A capital that is needed in "flyover" regions like Nebraska.

Time Frame: Short-term

Recommendation #6: Establish an Economic Development Special Committee in the Nebraska Legislature:

The Special Committee would be comprised of legislative leaders and committed senators to review economic development trends, determine legislation likely to move out of committee due to priority bill designation or part of a Governor's package, and policy implications on other economic development areas.

Time Frame: Short-term

Recommendation #7: Establish an Incubator Network Program across Nebraska: Currently in Nebraska, existing incubators are focused on software (for-profit incubators) or the retail/service industries (local economic development incubators). However academic and scientific incubators are non-existent. If Nebraska is to transition the R&D expenditures at universities into innovation that creates startups and jobs, some network of incubators must be established outside of academia. Create a new Incubator Network Program within the Nebraska Department of Economic Development as part of the Business Innovation Division. The program would be funded at \$1 million and provide matching funds for the startup costs and program development for incubators and innovation centers.

Time Frame: Short-term

Recommendation #8: Strengthen the InternNE program for STEM-based occupations: A recent survey of participating students in the InternNE program found that 40 percent of the respondents rated their internships a 10 out of 10 and of the students who shared their future plans in the survey, around 50 percent stated that they had been hired on as full-time employees with the companies for which they had interned. Currently, funding of \$1.5 million for the InternNE program comes from the Customized Job Training program at the Nebraska Department of Economic Development. Serious consideration should be given to making the InternNE program a stand-alone budget item, provide a dedicated source

of re-programmed revenue, increase funding to \$2 million, and increase the amount provided to STEM internships from \$5,000 to \$10,000.

Time Frame: Short-term

Recommendation #9: Encourage the development of an industry-based cluster Fintech incubator in collaboration with the financial services sector: Taking innovative ideas and turning them into new jobs and businesses requires a public-private partnership to implement the economic development strategies to establish an innovation economy. These strategies may include building necessary infrastructure, such as incubators, or providing support for critical resources such as mentor networks. Nebraska is fortunate to have a robust banking sector, represented by the Nebraska Bankers Association which includes banks of all sizes. The Association and its members can be the first customers for a startup and provide the necessary mentoring needed from a customer perspective. Other examples of industry-based cluster incubators collaborating with the private sector include Agtech and the Nebraska Farm Bureau and/or the Nebraska Cattlemen Association, Bioscience and Bio Nebraska, and Talent Analytics and Predictive Risk Services with private talent assessment companies in Nebraska. Nebraska Innovation Campus could also be a key resource for incubators.

Time Frame: Short-term

INTRODUCTION

During the 2016 Legislative Session of the Nebraska Unicameral, Senator Matt Williams introduced the Next Generation Business Growth Act (LB 1083). The main purpose of the Act was to create the Venture Development and Innovation Task Force “to develop a statewide strategic plan to cultivate a climate of entrepreneurship and innovation.” LB 1083 was approved 46-0 by the Legislature on April 1, 2016 and signed into law by Governor Ricketts on April 7, 2016.

Subsequently, the Executive Board of the Legislature appointed six state senators to the Task Force, including a Chairperson and Vice-Chairperson. The Task Force members are:

- Senator Dan Watermeier, Chairperson
- Senator Matt Williams, Vice-Chairperson
- Senator Al Davis
- Senator Mark Kolterman
- Senator Paul Schumacher
- Senator John Stinner

The Act requires the Task Force to hire outside assistance to prepare and present the strategic plan to the Legislature by December 1, 2016. Invest Nebraska Corporation was contracted by the Task Force to develop the strategic plan in accordance with the requirements of the Act.

Under the Act, the strategic plan is required to include five main elements.

1. An inventory of existing state-sponsored and locally sponsored programs and resources that are targeted to small businesses, microenterprises, and entrepreneurial endeavors in the state.

An inventory of existing state sponsored and locally sponsored programs and resources targeted to Nebraska’s entrepreneurs and small business owners is an important first step to determine the current state of the innovation economy efforts in the state. Invest Nebraska conducted an exhaustive analysis of these programs and resources, both at the local, regional and state levels. Since the focus of this strategic plan is on innovation and venture development, the inventory was broken into two parts: 1) general support programs and traditional lending resources for “lifestyle” or “Main Street” entrepreneurship, and 2) intensive support programs and stages of capital for potential high growth ventures or startups.

2. A review of previously issued statewide strategic plans focused on high-growth businesses.

Another segment of the report is a review of several statewide strategic plans released since 2010 that examined entrepreneurship and innovation in Nebraska. Also included in this review were two regional strategic plans involving the Lincoln region and commercializing research at the University of Nebraska-Omaha and the University of Nebraska Medical Center.

3. An economic impact analysis of the existing programs under the Nebraska Business Innovation Act.

The Nebraska Department of Economic Development, in coordination with Invest Nebraska and Dr. Eric Thompson with the Bureau of Business Research at the University of Nebraska-Lincoln, conducted an

online survey of businesses participating in the programs under the Nebraska Business Innovation Act for the period October 1, 2011 through June 30, 2016. Of the 168 businesses utilizing the programs, 72 responded for a response rate of 42.8%.

4. Best practices from other states.

National best practices were reviewed in order to provide leading examples of state-led innovative approaches. In an attempt to make a more targeted comparison, programs were further researched in five states: Colorado, Kansas, Iowa, Missouri and Oklahoma. These states were chosen as they have similar economic and cultural characteristics to Nebraska and in theory are states Nebraska should emulate.

5. Various policy options.

Providing a roadmap for policy makers to pursue for innovation-based economic development is crucial for the advancement of any economy. The policy options presented are the systematic result of how this strategic plan was developed.

The Invest Nebraska team would like to emphasize that it is not the intent of this strategic plan to try to reinvent the state of Nebraska into something that it's not. Nor does this plan advocate that effective solutions necessarily require an overall increase in funding or expansion of government services. Rather, existing programs should be measured and evaluated to ensure the intended outcomes are achieved, the roadmap to increase innovation and high-growth startups updated, and the best practices from other states should be reviewed. This focused approach is a more effective and efficient manner to ensure public policy generates greater economic growth and high-wage employment in Nebraska.

About the Authors

Invest Nebraska is a non-profit, 501(c)(3), venture development organization that advises and invests in companies and early stage businesses in Nebraska. The organization collaborates with public and private partners to develop and advance entrepreneurial communities across the state. For more information on Invest Nebraska, please visit www.investnebraska.com.

The Invest Nebraska team would like to thank all of the Task Force members, the Nebraska Department of Economic Development, the survey respondents, and other cooperating stakeholders for their time and contributions to this report.

NEBRASKA'S OBJECTIVES: INNOVATION, WORKFORCE AND HIGH-PAYING JOBS

Nebraska has historically focused on business expansion or business attraction to grow its economy along with maintaining an agricultural sector by growing more crops and feeding more livestock. And while agriculture will always be an important component, the future of Nebraska will depend on the innovation and knowledge economy. Nebraska is no longer competing with its neighboring states. In order to succeed on a global scale, Nebraska must develop an innovation and entrepreneurial ecosystem that focuses on 21st century employment opportunities, takes advantage of its existing comparative advantages, and provides incentives for innovation. Today, the state's economy benefits from traditional infrastructure: significant rail service, over 10,000 miles of state highways, a major interstate system crossing the state, broadband access, and an electrical power network that serves the public good. For tomorrow's economy, Nebraska needs a new type of infrastructure to build an innovation economy: increased R&D from industry and universities, serial entrepreneurs, additional risk capital, incubators and accelerators, and a STEM educated workforce.

***"During every year since 1988, U.S. firms less than 5 years old created more net jobs than firms 6 years or older."*¹⁰**

While change can be uncomfortable and challenging, it can also lead to dynamic possibilities in this new high-tech / high-creativity global economy. Embracing the 21st century economy is not only about developing the requisite human and technological capital components, it also requires a long-term commitment to cultivating creative energy, promoting innovation, and fostering risk taking. A state that welcomes these challenges will ultimately distinguish themselves from competing regions throughout the world.

Attracting and Keeping Talented Individuals in an Innovation Economy

Nebraska's greatest resource is its people. In today's knowledge-based economy, the creative capital of individuals is vital to the prosperity of any state. Not surprising, as a relatively sparsely populated state, Nebraska's citizens are some of the best educated in the U.S. While most states confront the need to attract creative human capital to their respective state, Nebraska is fortunate to already enjoy a wealth of home-grown talent.

Since 2002, the Milken Institute has formulated a State Technology and Science Index, reviewing each state's technology and science capabilities and their impact on regional economic growth. How a state ranks in the index does not necessarily measure current economic performance and overall job creation. *Rather, the index does indicate whether a state is likely to create high-paying and adaptable positions for the future.*

¹⁰ Jason Wiens and Chris Jackson, "The Importance of Young Firms for Economic Growth," *Entrepreneurship Policy Digest*, Ewing Marion Kauffman Foundation, updated September 13, 2015, <http://www.kauffman.org/what-we-do/resources/entrepreneurship-policy-digest/the-importance-of-young-firms-for-economic-growth>.

The index is comprised of five main composites, providing a benchmark to assess the technology and science capabilities for each state. Again, the composites are measuring individual indicators today that provide policymakers a roadmap for the future.

R&D Inputs – this composite examines a state's R&D capacity to determine the infrastructure that can attract funding and create innovations that can be turned into job creation. Some of the indicators in this composite include industrial, academic, and federal R&D; Small Business Innovation Research awards; and the Small Business Technology Transfer program.

Risk Capital and Entrepreneurial Infrastructure – these are the ingredients that determine the success rate of converting research into commercially viable products and processes, thereby creating jobs. Indicators under this composite include venture capital activity, entrepreneurial pursuits, patent activity, business formation, and initial public offerings.

Human Capital Investment - this is considered the most intangible asset in a state's economy. The various indicators measured under this composite provide insight into the skill levels of the current and future workforce. Worker skill level indicators include: the number of bachelor's, master's, and doctorate degrees relative to a state's population; and specifically the share of science, engineering, and technology degrees.

Technology and Science Workforce – focused on the technology and science workforce, this composite indicates whether a state has sufficient strength of high-end technical talent. The intensity is calculated by deriving the share of employment in three main areas (computer and information sciences, life and physical sciences, and engineering) relative to total state employment.

Technology Concentration and Dynamism – this composite represents technology growth in a state and assesses how effective policymakers and other stakeholders are in transforming regional assets into regional prosperity. Some indicators include the percent of establishments, employment, and payrolls that are in the high-tech categories.

Nebraska's performance in this particular Index has improved dramatically since 2010, jumping from 34th to 24th highest in the country. If entrepreneurship and innovation begin with the creative capital of individuals, then Nebraska is fortunate that the human capital already exists in the state. However, when we overlap this *Human Capital Composite with the R&D Inputs Composite and the Technology Concentration and Dynamism, and Science Index*, the results tell the work that lies ahead for Nebraska. This comparatively low ranking indicates that while Nebraska has the human capital and educated workforce resources to outperform most other states, we are either not putting them to work effectively or losing them to greener pastures in other states.

Table 2. State Technology and Science Index

State - Nebraska	Year			
	2016	2014	2012	2010
Category				
Human Capital	19th	15th	15th	13th
R&D Inputs	35th	35th	32nd	35th
Workforce	11th	29th	29th	34th
Risk Capital & Entrepreneurial Infrastructure	19th	33rd	47th	44th
Tech Concentration	36th	38th	37th	33rd
Overall Rank	24th	30th	33rd	34th

Source: Milken Institute

Nebraska increased its ranking in the Risk Capital and Entrepreneurship Infrastructure composite most likely due to the Nebraska Business Innovation Act passed in 2011 and implemented in 2012. These innovation and entrepreneurial financing programs provide the basic early stage funds for potential high-growth companies to grow and receive follow-on venture capital.

Other research and data, including the 2010 Battelle Study, supports this reality that high-wage jobs being created in other states are attracting Nebraska's talented young people. *The Nebraska Department of Labor's Long Term Occupation Employment Projections for 2014-2024 indicates that an additional 28,520 new jobs will be created statewide during the next ten-year period that require a bachelor's degree or higher. But an estimated 74,286 new jobs will be created during that same time period that requires less than a bachelor's degree.* It is therefore obvious that if Nebraska is to keep its young people and creative talent in the State, it must develop an ecosystem that creates more high-wage job opportunities.

Increasing Innovation and Entrepreneurship in Nebraska

If a noble goal of Nebraska is to increase the number and diversity of high-wage jobs in the State, then a key area of focus should be on improving the entrepreneurial ecosystem. The reason for this is that top-performing young companies are the most fruitful source of new jobs and offer the Nebraska economy its best hope for growth. A new discussion—one that not only promotes entrepreneurship, but specifically *high-impact* entrepreneurship—is necessary.

Fostering entrepreneurship is not an easy task and Nebraska's entrepreneurial ecosystem needs to be shaped around its comparative advantages, available assets, and human resource attractions. For example, Silicon Valley is considered the "gold standard" for an entrepreneurship ecosystem with technology, talent, money, and a culture that accepts failure and promotes collaborative innovation. But the example of Silicon Valley deceives public leaders across the country into becoming something that they are not and can set them up for disappointment – *and Nebraska needs to correspondingly find its own path forward.*

Creating Metrics to Evaluate Effectiveness

A key to effectively and efficiently supporting Nebraska's innovation and entrepreneurial ecosystem is to understand better how to measure and monitor the impact of a particular program. If policy makers can

understand better what is working and what is not, then resources can be more effectively allocated towards the successes. Too often not enough attention is paid to setting up consistent systems from the beginning that monitors the results of a program or organization. In addition, when monitoring systems are set up they all too often fail to accurately reflect the various dynamics that strengthen an overall ecosystem, and subsequently too often funds continue to flow to undeserving programs.

There are a variety of standard methods to measure the impact of various programs. They usually focus on specific economic indicators that are either directly or indirectly affected by funding. Some of these include:

- State Funds Awarded and Expended
- Number of Companies Created
- Number of New Net Jobs Created
- Federal and State Grant Assistance Received by the Company
- Number of Grant or Funding Recipients

While these standard indicators should continue to be tracked and evaluated, it is also important to dig a level deeper and look at program recipients' operational effectiveness as well. For companies created, attracted, or capitalized by the state and local programs, the following metrics could also be used more effectively:

- Follow-on Investments from the Private Sector
- Product Sales, Operating Margins, and Profitability
- Licensing Revenue, Patents Received, and R&D Investment
- Advanced Degree and High Salary Positions Created

The ultimate goal is not about the quantity of firms or workers assisted per dollar spent, rather about the quality of firm or worker assisted per total resource spent. While this level of analysis takes some additional efforts, it is critical to understanding where efforts can be best targeted going forward.

The market for new ideas and products has become truly global and ultra-competitive. In order to be successful, Nebraska must decide and plan on how to take advantage of its location, intellectual capital, and regional assets in order to sustain entrepreneurial and innovation activity.

NEBRASKA'S ENTREPRENEURIAL AND INNOVATION PROGRAMS

Historical Perspective: 1980 to Present

Nebraska's approach to supporting the entrepreneurial and innovative ecosystem over the past three decades has been one of bits and pieces. In comparison to other states, much of the legislation and policies pre-2011 were short-term focused and targeted at specific entrepreneurial issues, such as micro-lending, venture capital, and assistance to the agriculture sector. As a result, Nebraska had been ranked toward the bottom in many nationally recognized entrepreneur and innovation rankings of the fifty states. The rankings have improved with the passage in 2011 of the Nebraska Business Innovation Act. But more work still remains. A historical perspective provides the context of where Nebraska has been and how the state should move forward.

In 1985, Governor Kerrey's Policy Research office released a study that showed Nebraska was overlooked by venture capitalists across the country. As a result of that study, the Nebraska State Legislature enacted two definitive pieces of legislation: the 1986 Venture Capital Network Act (LB 163) and the Nebraska Research and Development Authority Act (LB 850).

The purpose of the Venture Capital Network Act was to "improve the dissemination of information regarding informal investment opportunities to potential investors and entrepreneurs and thereby stimulate the growth of small businesses in Nebraska." The Department of Economic Development contracted with the Nebraska Business Development Center at the University of Nebraska at Omaha to assume administration of the Venture Capital Network. The program initially received funding of \$25,000 in FY1988 and \$25,000 in FY1989, but was not funded in subsequent years.

That same year, the Nebraska Research and Development Authority Act was passed. This additional piece of necessary legislation provided \$4 million in General Funds for "engaging in seed capital financing for the development and implementation of innovations or new technologies for existing and emerging industries." Results of the program were mixed with only five companies receiving seed capital and there is not much additional information regarding the program or its final results.

In 1997 the Microenterprise Development Act (LB 327) was passed by the Legislature and approved by Governor Nelson. This Act established the Nebraska Microenterprise Partnership Fund which subsequently became a certified Community Development Financial Institution (CDFI) in 1998. The Program provided state general funds to microloan delivery organizations that could be used to:

- Satisfy matching fund requirements for other federal or private grants;
- Establish a revolving loan fund from a microloan delivery organization that may make loans to microenterprises;
- Establish a guaranty fund from which a microloan delivery organization may guarantee loans made by commercial lending institutions to microenterprises; and
- Provide funding for the operating costs of a microloan delivery organization.

In 2008 the Partnership Fund name was changed to Nebraska Enterprise Fund, which still is structured as a non-profit today and awards loans and related products directly to microenterprises.

In 2002, at the request of Governor Johanns, the Legislature passed the Nebraska Venture Capital Forum Act. The purpose of the Act was to have the Department of Economic Development select an organization to facilitate the relationships between venture capitalists and Nebraska entrepreneurs. The Legislature appropriated \$500,000 during the three years of the Act's existence. The Act expired in 2005. Invest Nebraska Corporation, a non-profit organization, was formed to carry out the provisions of the act.

In 2005 the State enacted the Agricultural Opportunities and Value-Added Agriculture Partnership Grant Program (VAA). The VAA provided grants up to \$75,000 to cooperatives, start-ups, and associations to subsidize their costs of research, education, training, and market development. From 2006-2009, the State awarded \$3,158,064 in VAA grants for buildings and building rehabilitation, equipment, marketing and advertising, website development, education, studies and plans, salaries and stipends, organizing fees, and supplies. Return on the total \$3,158,064 state's investment during this three year time period

was an aggregated total of 8.75 full-time equivalent positions paying an average salary of \$14.90/hour or \$30,992/year. This Act was eliminated in 2011.

A related initiative, the Building Entrepreneurial Communities Act, was passed by the Legislature in 2006. The program “supported economically depressed rural areas of Nebraska with grants that create community capacity to build and sustain programs that generate and retain wealth in the communities and regions.” The program was funded at \$500,000 per fiscal year (increased from \$250,000 by the 2007 Nebraska Unicameral) and provided up to \$75,000 per project over 2 years with a 50% cash match requirement. This Act was eliminated in 2011.

In 2007 the Nebraska Advantage Microenterprise Tax Credit Act was passed to provide a \$10,000 lifetime tax credit to microbusiness (5 or fewer employees) owners located in distressed geographic areas that make a “new investment or employment in the microbusiness.” Total funding for the credit is capped at \$2 million annually. Applications in 2014 and 2015 indicate that the tax credit program is being underutilized by Nebraska businesses (tax credits authorized in 2014 - \$1,563,529; 2015 - \$1,289,038).¹¹

In 2010, the Nebraska Department of Economic Development (DED), in collaboration with the Nebraska Department of Labor, selected the Battelle Technology Partnership Practice (TPP) to assess Nebraska’s competitive advantages. The study focused on three highly inter-related building blocks¹²:

- The underlying performance of specific industry clusters in Nebraska, based on employment trends, economic output, and geographic patterns of development.
- The talent position of Nebraska overall and within its leading industry clusters, and how to establish more concrete strategies and linkages of talent within the state’s overall economic development efforts.
- The position of Nebraska in innovation and high growth potential entrepreneurial development in the state, and how Nebraska is positioned in core competencies for future growth.

Also in 2010, the Nebraska Innovation and High Wage Employment Act was passed unanimously by the Legislature and signed into law by the Governor. The main purpose of the Act was to create the Legislature’s Innovation and Entrepreneurship Task Force “to develop a statewide strategic plan to cultivate a climate of entrepreneurship that results in innovation and high-wage employment.”

The Battelle TPP Study and the Legislature’s Innovation and Entrepreneurship Task Force Study made specific recommendations to increase high-potential business creation, provide state funded financial assistance, and develop a long term plan for attracting more venture capital to the state.

In 2011, LB 387 - the Business Innovation Act was introduced which incorporated many of the recommendations from both studies. The Business Innovation Act provided financing options for early stage, high growth businesses located in Nebraska or willing to locate to Nebraska. The Act was unanimously approved by the 2011 Legislature and signed into law by the Governor. The Act was funded annually at \$7 million per year with the potential to increase funding up to \$9 million per year.

¹¹ Nebraska Tax Incentives – 2015 Annual Report to the Nebraska Legislature; Nebraska Department of Revenue, July 15, 2016.

¹² “Growing Jobs, Industries, and Talent: A Competitive Advantage Assessment and Strategy for Nebraska”; Battelle Technology Partnership Practices; October 2010.

The Business Innovation Act contains five main components:

1. *Federal Small Business Innovation Research (SBIR) Program*

- Phase 0 grant – This grant provides up to \$5,000 for small businesses that qualify under the SBIR program, to plan and submit an application under the Program.
- Phase I grant - Nebraska businesses receiving an SBIR Phase I Award can also receive an additional state grant up to 65% of the federal grant (maximum \$100,000).
- Phase II grant – Nebraska businesses receiving an SBIR Phase II Award can also receive an additional state grant up to 65% of the federal grant (maximum \$100,000).

2. *Nebraska Research and Development Program* - Businesses operating in Nebraska using faculty or facilities of a public or private college or university in Nebraska are eligible to apply for two grants under this program:

- R&D Phase I grant - provides up to \$100,000 matching grant.
- R&D Phase II grant - provides up to \$400,000 matching grant.

Both grants must be matched by the business on a 1:1 basis with non-state government resources.

3. *Nebraska Innovation Prototype Grant Program* - Small businesses located in Nebraska or willing to locate to Nebraska are eligible to apply for a grant of up to \$50,000 for the purposes of creating a prototype of a product or a process. The grant requires a 50% match or a 25% match for value-added agriculture projects from non-state government resources.

4. *Nebraska Innovation Seed/Commercialization Fund Program* - Small businesses located in Nebraska or willing to locate to Nebraska are eligible to apply for an investment of up to \$500,000 for the purpose of commercializing a prototype of a product or process. The investment can either be a convertible note or equity and is held by Invest Nebraska. There must be a 100% match or a 25% match for value-added agriculture projects from non-state government resources.

5. *Microenterprise Lending and Assistance Program* - Microbusinesses defined as fewer than 10 employees located in distressed areas are eligible for micro-loans up to \$50,000. The Microenterprise Assistance Program assists these microbusinesses with business plan development and technical assistance. Currently, this program is administered by the Nebraska Rural Enterprise Assistance Project (“REAP”) and their urban partners in Omaha and Lincoln.

In 2014, Senators Mello and Hadley co-introduced LB 1114, which extended the sunset date for the Business Innovation Act from 2016 to 2021. The bill was approved unanimously by the Legislature and signed into law by the Governor.

In 2015, Senator John Stinner introduced LB 156, which increased the Angel Investment Tax Credit Program appropriation from \$3 million to \$4 million. The bill was approved by the Legislature and signed into law by the Governor.

The following is a summary of the legislation:

Implementing Legislation	Year	Purpose
Venture Capital Network Act	1985	Disseminate information about start-up opportunities
Nebraska Research and Development Authority Act	1985	Seed funding for start-ups
Microenterprise Development Act	1997	Provide state general funds to microloan delivery organizations
Nebraska Venture Capital Forum Act	2002	Facilitate relationship between venture capitalists and entrepreneurs
Agricultural Opportunities and Value-Added Agriculture Partnership Grant Program (VAA)	2005	Grants to agriculture sector start-ups and groups
Building Entrepreneurial Communities Act	2006	Matching grants for programs in rural areas
Nebraska Advantage Microenterprise Tax Credit Act	2007	Tax credit to microenterprises
Nebraska Operational Assistance Act	2007	Start-up assistance for potential high-growth businesses
Nebraska Business Innovation Act	2011	Various funding programs for early-stage companies in Nebraska
Nebraska Angel Investment Tax Credit Act	2011	Provide a refundable tax credit to "angel" investors up to 40 percent of the investment depending on location of the certified business
Amend the Business Innovation Act	2014	Extend the sunset date of the Business Innovation Act from 2016 to 2021
Amend the Angel Investment Tax Credit Act	2015	Increase the annual general fund appropriation for the Act from \$3 million to \$4 million
Next Generation Business Growth Act	2016	Create the Innovation and Venture Development Task Force of the Legislature and develop a strategic plan

PUBLIC TOWN HALL MEETINGS

During the summer of 2016 the Task Force held five public hearing across the state to receive testimony regarding innovation and entrepreneurship in Nebraska. The five public hearings were held in Columbus, Kearney, Omaha, Lincoln, and Alliance.

❖ Columbus, Nebraska – Wednesday, July 27, 2016

Columbus City Council Chambers

Task Force Members Attending: Senators Watermeier, Williams, Kolterman, Schumacher

General public attendance: 8

Testifiers:

- Jeff Reynolds, Rural Enterprise Assistance Project (REAP)
- Todd Dickie, Power Sport Nation
- Nick Emanuel, CropMetrics
- Nicole Sedlacek, Nebraska Public Power District and the Nebraska Economic Developers Association
- Candace Bossard

❖ Kearney, Nebraska – Thursday, July 28, 2016

Ramada Inn

Task Force Members Attending: Senators Watermeier, Williams, Schumacher

General public attendance: 63

Testifiers:

- Deana Beck, Rural Enterprise Assistance Project (REAP)
- Paul Eurek, Xpanxion
- Chris Blakely, Ecomitize
- Travis Holman, Holman Media
- Odee Ingersoll, Nebraska Business Development Center
- Jonathan Nikkila, Kearney City Council Member
- Steve England, Investment Property Exchange Inc.
- Lisa Tschauner, Center for Rural Research & Development, University of Nebraska-Kearney

❖ Omaha, Nebraska – Thursday, August 4, 2016

Omaha Startup Collaborative

AIM Exchange Building

Task Force Members Attending: Senators Watermeier, Williams, Kolterman, Schumacher, Skinner

General public attendance: 48

Testifiers

- John Synowiecki, Catholic Social Services
 - Melina Arroyo, Nebraska Enterprise Fund
 - Dusty Davidson, Flywheel
 - Dan Houghton, Buildertrend
 - Beth Engel, Dundee Venture Capital
 - Steven Taylor, Anvilhead Studios
 - Dwight Hanson, D3 Technologies
 - Alex Adams, Rodeo Analytics
 - Dell Gines, Federal Reserve Bank of Kansas City
 - Ean Mikale, Infinite 8 Institute
 - Bill Moore, Quikbyke
 - Jean Waters, Nebraska Business Development Center
 - Luis Lopez, Crumb
 - Tom Kudirka, 2015 Games
 - Erica Wassinger, Omaha Startup Collaborative
 - Jon Steinbeck, Green Rivers Recycling
 - Michael Dixon, UNMC
 - Andrew Prystai, DriveSpotter
 - Preston Badeer, Avert
- ❖ Lincoln, Nebraska – Friday, August 5, 2016
Nebraska Innovation Campus
Task Force Members Attending: Senators Watermeier, Williams, Schumacher, Stinner
General public attendance: 45
- Dorris Miller, Community Development Resources
 - Valerie Lefler, Integrated Global Services
 - Craig Christenson, H4 Technology
 - Vishal Singh, Quantified Ag
 - Tim Schnell, Centrix Solutions – a Q2 Company
 - Suji Park, FDMR
 - Christina Oldfather, Lincoln Partnership for Economic Development
 - Mark Zmarzly, Hip Pocket
 - Bart Dillashaw, Dillashaw, P.C.
 - Shane Farritor, Virtual Incision
- ❖ Alliance, Nebraska – Tuesday, August 9, 2016
Knight Museum & Sandhills Center
Task Force Members Attending: Senators Williams, Davis, Schumacher

General public attendance: 10

- Jerry Terwilliger, Rural Enterprise Assistance Project
- Ingrid Battersell, Nebraska Business Development Center
- Russ Finch, Greenhouse in the Snow
- Brad Justice, Blue Prairie Brands
- Pasha Korber Gonzalez, Posh Shoppe

Those testifying included a mix of service providers, university representatives, entrepreneurs and the general public. All of the service providers presented substantial metrics on how they assist entrepreneurs; both Main Street businesses and high growth businesses. There was a general consensus of those entrepreneurs testifying that the Business Innovation Act programs were very successful. Many had utilized the prototype, commercialization, and Research & Development programs through the Nebraska Department of Economic Development. Some testifiers also advocated for additional funding for the Intern Nebraska program through the Nebraska Department of Economic Development. Interns are ideal for early stage businesses due to their low-cost and technology expertise.

Two consistent themes at the town hall meetings were: 1) a “one size fits all” approach to entrepreneurship does not work when viewing urban and rural areas; and 2) “entrepreneurial density” is an integral component to build an entrepreneurial ecosystem. Consideration should be given to the differences between rural and urban areas when developing public policy options. Both geographic areas have unique challenges and opportunities.

Entrepreneurial density is defined by the Kauffman Foundation as “the number of entrepreneurs + people working for startups or high growth companies / adult population.”¹³ The closer the fraction is to 1, the greater the density. Translation: when talented makers and innovators interact regularly, new successful ventures are likely to emerge.

INVENTORY OF CURRENT PROGRAMS, RESOURCES AND ORGANIZATIONS

To lay forth an effective strategic plan to significantly grow Nebraska’s economy, it is important to first understand the current inventory of entrepreneurial programs and resources across the state. Cross referencing the economic development resources at University of Nebraska system, the membership roster of the Nebraska Economic Developers Association, and data from previously issued entrepreneur/innovation state reports, Invest Nebraska conducted an exhaustive analysis of the programs and resources at the local, regional and at state levels.

¹³ “Gauging Impact: A closer look at Entrepreneurial Density”, The Kauffman Foundation, April 2015.

As entrepreneurship has evolved and gained recognition at the state and federal levels, economic development professionals and policymakers have identified two distinct classes of companies: small businesses best described as “lifestyle” or “Main Street” businesses and high growth capacity businesses. Traditional small businesses (as opposed to growth businesses) are not necessarily the targets of this strategic plan. Rather, the focus of this strategic plan is on innovation and venture development.

Of course these Main Street businesses are an essential part of the entrepreneurial ecosystem and have value, but their focus is typically on providing a livelihood for an individual, family, or small employment base. These businesses will generate revenue from the local or regional area compared to high growth businesses that generate significant revenues from outside their local or regional market. Some examples of these are local restaurants, coffee shops, daycare providers, retail stores, law firms, and dentist’s offices. There are also distinctions between the two classes of businesses when one considers scalability, intellectual property, and wage thresholds.

To acknowledge the importance of both, the inventory of programs and resources were broken down into these two distinct classes. The Main Street entrepreneurs will typically leverage bank financing for inventory, equipment, and possibly working capital. The potential high-growth business will typically seek equity or convertible debt financing, bringing on investors that understand the risk associated with the early stage business but also realize the potential upside of the investment. A software startup will build one product that can easily be scaled and sold nationally or internationally in a short period of time. Similarly, a bioscience medical device company will need to raise significant equity and convertible debt financing just to seek approval of the U.S. Federal Drug Administration (FDA) before commercializing the product. This type of technological innovation impacts the productivity of companies, impacts the pace of economic growth, and creates higher paying jobs.

Main Street Entrepreneurship entails three types of Entrepreneur Development:

1. Training – whether the training occurs in a classroom setting, online, or for a specific business purpose, the organization provides a curriculum to achieve the desired purpose.
2. Technical Assistance – this type of assistance is more specialized and focused on the individual need of the entrepreneur.
3. Entrepreneurial Events – These meet-up events, coffees, or hosted events are organized by organizations to bring together entrepreneurs, service providers, funders, and the general public with the purpose of developing a community in a dense area.

The inventory of local, regional, and state entrepreneurship programs and financing can be found in Table 3.

Table 3. Inventory of Local/Regional/State Entrepreneurship Programs & Financing

Organization	Entrepreneur Development			Business Financing		
	Training	Technical Assistance	Entrepreneurial Events	Grants	Micro-Loans < \$50,000	Traditional Loans
AIM Institute	X		X			
Antelope County Resource Center	X	X				
Arnold Economic Development Corporation		X				
Aurora Chamber & Development Corporation		X	X			
Bio Nebraska			X			
Boone County Development Agency		X				
Box Butte Development Corporation		X				
Buffalo County Economic Development		X				
Burwell Chamber of Commerce		X				
Cass County Economic Development Council		X				
Catholic Charities - Microbusiness Training and Development Program	X				X	X
Center for Rural Affairs - Rural Enterprise Assistance Project (REAP)	X	X			X	X
Center for Rural Affairs - Latino Business Center	X	X				
Center for Rural Affairs - Women's Business Center	X	X				
Center for Rural Entrepreneurship	X		X			
Center for Rural Research and Development (UNK)	X	X				
Central Community College - Entrepreneurship Center	X	X	X			
City of Atkinson		X				
City of Burwell		X			X	X
City of Henderson				X	X	X
City of Kimball		X				X
Community Development Resources	X				X	X
Cozad Development Corporation		X				
Engler Agribusiness Entrepreneurship Program UNL	X		X			
Entrepreneurship Legal Clinic at UNL		X				
Falls City Economic Development and Growth Enterprise, Inc. (EDGE)			X			
Food Processing Center at UNL	X	X				
Fuse Coworking - Lincoln	X		X			
Fremont Creative Collective			X			
Gage Area Growth Enterprise (NGage)		X			X	X
Grand Island Area Economic Development Corporation		X				
GROW Nebraska	X		X	X		X
Hastings Economic Development Corporation		X		X		X
Ho-Chunk Community Development Corporation	X	X		X		X
Invest Nebraska		X			X	X
Knox County Development Agency						X
Laurel Economic Development		X				
Lincoln Partnership for Economic Development	X	X	X			
Metro Omaha Women's Business Center	X	X	X			
Mid-Plains Center for Enterprise	X					
Valley County Economic Development	X					
Nance County Development Agency	X	X				
Nebraska Angels		X				
Nebraska Business Development Centers	X	X	X			
Chadron	X	X				
Grand Island	X	X				
Kearney	X	X				

Table 3 Continued

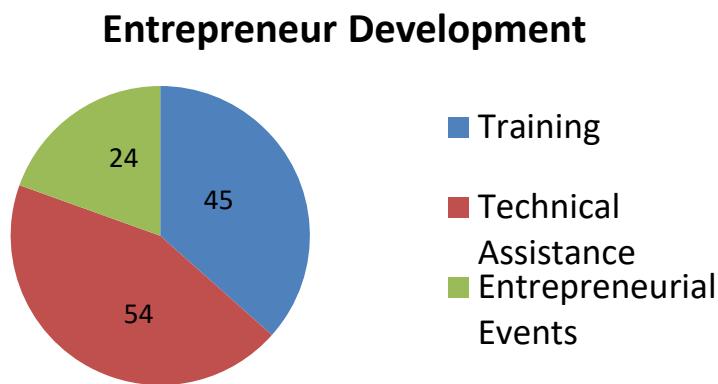
Lincoln	X	X				
North Platte	X	X				
Omaha	X	X				
Scottsbluff	X	X				
Wayne	X	X				
Nebraska Center for Entrepreneurship - UNL	X		X			
Nebraska City Area Economic Development Corporation	X	X	X			
Nebraska Cooperative Development Center - UNL	X	X	X			
Nebraska Department of Economic Development						
Prototype Grants				X		
Research and Development Grants				X		
Nebraska Development Districts						
Metropolitan Area Planning Agency					X	X
Northeast Nebraska Economic Development District					X	X
Panhandle Area Development District					X	X
South Central Economic Development District			X			
Southeast Nebraska Development District					X	X
West Central Nebraska Development District	X	X	X			
Nebraska Economic Development Corporation						X
Nebraska Enterprise Fund		X			X	X
Nebraska Rural Futures Institute - UNL	X		X	X		
Norfolk Economic Development Council		X				
Omaha Small Business Network, Inc.	X	X	X		X	
One Million Cups - Lincoln			X			
One Million Cups - Omaha			X			
Open Coffee Lincoln			X			
Phelps County Development Corporation	X	X			X	X
SCORE						
Columbus	X					
Kearney	X					
Lincoln	X					
Norfolk	X					
Omaha	X					
Scottsbluff	X					
Silicon Prairie News			X			
South Sioux City		X				X
Southeast Community College - Entrepreneurship Center	X	X	X			
Start Center - Omaha	X	X	X			
Thayer County Economic Development Alliance		X			X	
Twin Cities Development Association, Inc.		X				
Valentine/Cherry County Economic Development Board		X				
Valley County Economic Development		X		X		X
Wahoo Area Economic Development						X
Wakefield Micro-Business Loan Fund					X	X
Wayne Area Economic Development		X				

Notes: UNL: University of Nebraska-Lincoln

Once the organizations were identified as previously stated, each organization's website was analyzed to determine if the organization continues to offer services and financing and what type of services and levels of financing. In Nebraska, a total of 91 organizations (local, regional, or statewide) were identified that provide some type of entrepreneur development or business financing. Some of these organizations provided multiple types of entrepreneur development or business financing. The largest

number of programs offered for entrepreneurs could be categorized as “Technical Assistance”, followed by “Training” and “Entrepreneurial Events”.

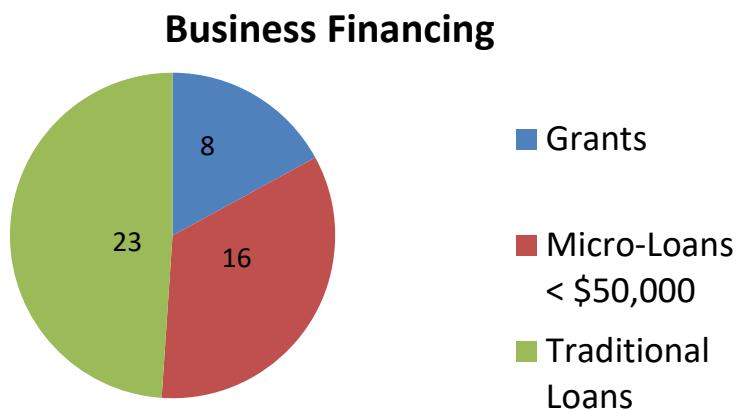
Figure 1. Inventory of Local/Regional/State Resources - Entrepreneur Development



Funding associated with Main Street entrepreneurship involves grants, micro-loans (less than \$50,000) and traditional loans through non-traditional lending organizations and/or banks. Again, this financing is used for working capital, equipment, or real estate and must be personally guaranteed by the entrepreneur and/or collateralized with company assets.

In Nebraska, a total of 29 organizations at the local, regional or state levels were identified that provide some type of business financing. It is acknowledged that financial institutions in Nebraska provide most of the business financing in the state. For purposes of this strategic plan, the organizations identified also provide some type of entrepreneur development assistance in coordination with financing. Some of these organizations provide multiple types of financing as well. Twenty-three of the identified organizations provide traditional loan capital while sixteen provide micro-loans and eight organizations provide grants.

Figure 2. Inventory of Local/Regional/State Resources - Business Financing



Potential high growth businesses require a distinct type of programming and financing. Potential high growth businesses do not require a traditional business plan. Today, these companies obtain financing with a pitch deck of 20-30 power point slides that touch on the main topics: product, intellectual property, market opportunity, team, financials, and investment requirements. That is why it is extremely important for these high-growth entrepreneurs to understand these components prior to building a prototype. But even after a prototype is built, the business may be forced to pivot to a new market or address issues that arise in commercialization. Hence, the type of programming needed for a successful high-growth entrepreneurial ecosystem was broken down into three distinct programs: Incubators, Accelerators, and Mentoring Networks.

The inventory of local, regional, and state high growth venture programs and financing can be found in Table 4.

Table 4. Local/Regional/State Resources - High-growth Venture Programs & Financing

Organization	Venture Development			Venture Financing			
	Incubators	Accelerators	Mentoring	Pre-Seed Stage < \$100K	Seed/ Angel Stage \$100K - \$500k	Series A Venture Capital	Debt Financing-Mezzanine
Aksarben Discovery Fund				X			
Central Community College - Small Business Institute	X						
Dundee Venture Capital			X		X	X	
Food Processing Center (UNL)			X				
Fuse Coworking	X		X				
Garage by Aviture	X			X			
Invest Nebraska Corporation (BIA Commercialization)			X	X	X	X	
KAAPA					X	X	

Table 4. Continued

Linseed Capital			X	X			
Nebraska Angels			X	X	X	X	
Nebraska Business Development Center			X				
Nebraska City Area Economic Development Corporation	X						
Nebraska Department of Economic Development				X	X		
Prototype Grant (BIA)							
SBIR Matching Grants							
R&D Grants							
West Central Nebraska Development District	X						
Nebraska Millions (Angel Fund)				X	X		
Nelnet				X	X	X	X
Nmotion Accelerator		X	X	X			
Northeast Venture Capital, LLC				X	X		
Pipeline			X				
Prairie Ventures			X	X	X	X	
Router Ventures			X		X	X	
Scott Technology Center	X		X				
Southeast Community College - Entrepreneurship Center	X		X				
Start Center - Omaha		X	X				
Startup Collaborative - Omaha	X		X				
Treetop Ventures			X				X
Turbine Flats	X		X				
Venture Tech	X		X	X			

Notes: UNL: University of Nebraska-Lincoln

BIA - Nebraska Business Innovation Act

SBIR - Federal Small Business Innovation Research

The National Business Incubation Association (NBIA) defines business incubation as a process that accelerates the successful development of startup and fledgling companies by providing an array of targeted resources and services such as office space and equipment, Internet service, conference rooms, and business support services. These incubators are usually funded by economic development organizations, government entities, academic institutions, and software focused private businesses.

In Nebraska ten incubators were identified across the state supported by all of these organizations. However, one of the key success metrics of incubators is that they actually “incubate” a business that grows to a point whereby they leave the nest and grow in a different location. Incubators should never become glorified office space allowing anyone to lease space.

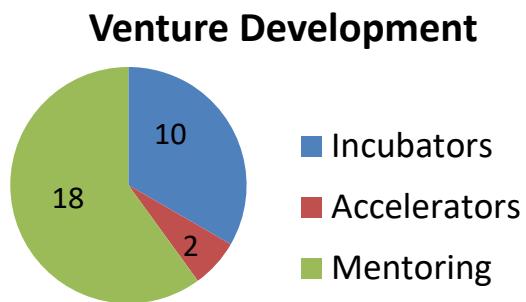
Accelerators are similar to incubators in that they are created to provide support for very young businesses, often times businesses that are still at the ideation stage. While incubators are often geared toward companies in their infancy, accelerators can be geared toward slightly more established businesses. It’s typical for early investors to provide capital to those businesses participating in the accelerator to accelerate the trajectory and path of the business, not start it from scratch.

Lastly, mentoring is the personal, professional relationship between an experienced, highly regarded, empathetic person (the mentor) and another individual (the mentee). The mentor often works in the same industry or field as the mentee and guides the individual by offering advice, support and

encouragement and acting as a role model. Mentoring can be individualized or structured depending on the program and expands the network for the mentee.

In Nebraska, 18 organizations offer some type of mentoring or mentoring network, 10 organizations stated they operate an incubator, and two organizations operated as accelerators.

Figure 3. Inventory of Local/Regional/State Resources - Venture Development



Typical early stage funding for potential high growth businesses includes grants from governments, non-profits, and universities. Grant-making groups are more recent to the capital market and often provide pre-seed or seed funding (research and development, and prototype building). This early stage, quasi-public sector capital can be provided not only in the form of grants, but also through convertible debt, direct equity, or other types of financial carry if the venture is successful.

Entrepreneurs can also receive their “seed capital” from people they know already and who are more receptive to their venture. They are often called the three “Fs”: friends, family and founders. This level of financing is of considered high risk, and tends to be smaller in scope. These funds are generally utilized to “test the market.”

Another source of capital can be angel investors or groups of loosely organized individuals who pool financial resources to provide startups or early-stage funds to firms. After entrepreneurs have either exhausted their own financial resources or those from friends and family, they often turn to angel investors. Angel investors generally focus on a specific region, so there is a complimentary knowledge regarding key contacts, networks, and markets among the investors.

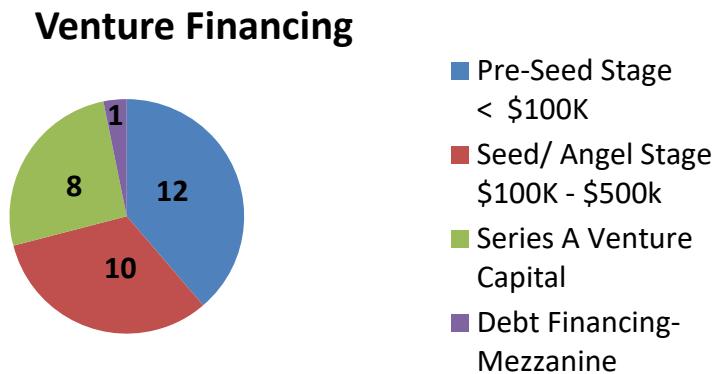
Finally, the traditional venture capitalists have moved “upstream” in recent years and generally only fund deals of \$5 million or more (although some “family funds” and micro-venture capitalists will look at deals of \$1 - \$5 million). Venture capital firms are generally looking for businesses that have rapid growth trajectory, a proven track record of execution, and focus on certain emerging innovation technologies, such as bio-tech, ag-tech, or IT.

Table 5. Stages of Development - Lifecycle of a Startup

	Stage of Development			
	Pre-seed	Seed	Series A	Mature
Sources of Capital	Government and Universities (\$10K -\$500K)			
	Friends, Family and Founders (\$2K -\$300K)			
		Angels and Angel Groups (\$10K -\$2 M)		
		Public-Private Funding (\$100K - \$500K)	Venture Capital (\$2 M -\$12 M)	
			M&A/IPO	
			Private Equity & Commercial Banks	

There are only thirteen organizations that offer some type of financing for potential high growth businesses. Of those, twelve offer some type of pre-seed stage financing of less than \$100,000. This includes one non-profit accelerator, two for profit accelerators focused only on IT businesses, the Nebraska Department of Economic Development through the Business Innovation Act programs, Invest Nebraska through the Business Innovation Act Commercialization Program, and seven for profit companies or funds. There are ten organizations that provide financing in the seed stage, \$100,000 - \$500,000, eight that will finance businesses raising a Series A round, and one organization that will provide mezzanine financing. It should be noted that of the eight organizations willing to participate in a Series A round, four are private funds (investor pooled capital), one is a publicly traded company, one is a venture development organization, and two are angel investor networks.

Figure 4. Inventory of Local/Regional/State Resources - Venture Financing



PREVIOUSLY ISSUED STATEWIDE STRATEGIC PLANS

Since 2010, five statewide strategic plans and two regional strategic plans were released focusing on the development and growth of high growth businesses in Nebraska. Intended for policymakers, economic developers, university officials, and the general public, these plans provide a roadmap to grow an often overlooked segment of the economy: startups or high growth businesses.

A startup or high growth business is a fast-growing, entrepreneurial venture that meets a market need by developing or offering an innovative product, process or service. These high growth businesses emerge from the ideation stage, commercialize products or processes and have the potential to create vast job creation with higher than average wages. A high-growth ecosystem requires entrepreneurial talent, ideas, private (i.e. venture) capital, and a supportive public sector with a long-term vision. As stated by Cromwell-Schmissuer in its 2014 study:

"Job creation sustains regional economies. Wealth creation transforms regional economies, creating greater demand for products and services and a new generation of investors and philanthropists."¹⁴

¹⁴ "Supporting and Increasing Venture Capital in Nebraska", <http://neded.org/business/talent-a-innovation-initiative>, (Accessed November 2016).

Table 6. Historical Innovation Studies and Reports

Year	
2010	Nebraska Bioscience Roadmap - Prepared by Bio Nebraska and the Nebraska Legislature Natural Resources Committee with consultation and assistance by Battelle Technology Partnership Practice
2010	Nebraska's Innovation & Entrepreneurship Ecosystem - The Innovation and Entrepreneurial Task Force of the Nebraska Legislature - Prepared by Invest Nebraska
2010	"Growing Jobs, Industries, and Talent: A Competitive Advantage Assessment and Strategy for Nebraska" - Prepared by Battelle Technology Partnership Practice for the Nebraska Department of Economic Development and the Nebraska Department of Labor
2014	"Supporting and Increasing Venture Capital in Nebraska" - Prepared by Cromwell-Schmissieux & Dr. Eric Thompson, UNL Bureau of Business Research for Invest Nebraska
2015	"Special Report Presented to the Lincoln Chamber for Economic Development Corporation on Behalf of the Lincoln Entrepreneurial Ecosystem Task Force"
2016	"Building Omaha's Bio-Commercialization Pipeline - UNMC Innovation Lab" - Prepared by SRI International
2016	"Supporting Innovation-Led Growth in Nebraska" - Prepared by SRI International for the Nebraska Department of Economic Development

2010 Nebraska Bioscience Roadmap – Battelle Report

Summary

In 2009, the Nebraska legislature passed Bill 246, which called for the Natural Resources Committee (“Committee”) to develop a statewide strategic plan for biotechnology in Nebraska. The Committee enlisted Bio Nebraska Life Sciences Association and Battelle Technology Partnership Practice (collectively “Developers”) to develop a strategic plan for the State of Nebraska. In developing the strategic plan, the Developers gained input from multiple representatives of organizations, statewide. Ultimately, the Developers’ efforts resulted in a report which: 1) examines the State’s bioscience industry base; 2) assesses Nebraska’s bioscience R&D base and identifies specific technology areas that appear to offer the greatest opportunity for growth in Nebraska; 3) reviews the State’s competitive position in the biosciences and determine gaps in policies; 4) provides strategies for addressing gaps; and 5) provides options to capitalize on opportunities.

Examining Nebraska’s bioscience industry base - When evaluating Nebraska’s bioscience industry, the Developers had multiple findings. The first finding showed Nebraska’s bioscience sector to be specialized, diverse and growing. Additionally, while Nebraska’s bioscience industry was not large or leading with respect to other states, it was diverse. Nebraska’s bioscience industry’s average wage paid to workers was **\$53,720**, well above the average wage of **\$35,790** in the overall Nebraska private sector.

This higher bioscience average wage of \$53,720 was comparable to the amount paid to bioscience workers in similar states. *The Developers also noted Nebraska's bioscience industry employment has relative equal distribution between Omaha (32%), Lincoln (24%), and the rest of the State (43%).*

Opportunities in the Nebraska bioscience industry - One such strength was Nebraska's sizable and diversified academic bioscience R&D base. However, it was noted the current growth was lacking behind national growth rates. Nebraska's medical sciences R&D base was growing at the national average for 2004 to 2008. *Another identified strength was the state's core competency in the research of animal, plant, and human sciences.*

Nebraska's competitive position in the biosciences - The workforce in Nebraska was viewed as both the state's greatest strength and greatest challenge, due to a shortage of educated, trained, and experienced workers. The second advantage Nebraska was found to have over other states is the quality of life in the state. While the large universities in Nebraska have high quality research, it was found there was a lack of partnership opportunities, between universities and companies. Nebraska was found to have a large amount of specialized facilities; although, it was found a continued investment in facilities was needed for continued high growth. The Developers noted Nebraska lacked a history of entrepreneurship and new company creation, even though Nebraska was business friendly and offered economic development incentives.

Options to address Nebraska bioscience industry opportunities - The report first indicated Nebraska needed to continue the growth of the State's bioscience R&D base. Second, Nebraska needed to address the lack of support, both technological and financial, for bioscience entrepreneurs and emerging companies. Third, the state needed to ensure that there was a business climate in which bioscience companies could flourish. Finally, the report indicated Nebraska needed to work with its bioscience sector to address the disparity between the existing workforce and the bioscience needs.

Strategies to address Nebraska bioscience industry gaps - First, the report proposed Nebraska make efforts to grow universities' bioscience R&D base and to better connect universities and bioscience companies. Second, the report suggested that Nebraska create the required infrastructure to encourage innovation, support commercialization, and assist bioscience entrepreneurs and start-ups. The third strategy advised growing the State's bioscience industry cluster by supporting the retention and expansion of existing and emerging bioscience firms. Finally, the last strategy focused on developing, retaining, and attracting new bioscience talent.

While the report gave the above four strategies to resolve gaps in Nebraska's bioscience industry, it also stressed the State needed to partner with multiple groups and organizations to implement the strategies. In addition to partnerships, it was indicated significant investments were required by all key stakeholders, both in the public and private sectors. Finally, it was determined the strategies needed a significant amount of time invested in them. While certain actions could help the bioscience industry in the short term, other strategies needed actions taken over multiple years.

Table 7. "Nebraska Bioscience Roadmap" - 2010

Recommendations	Resulting Action
I. Grow Nebraska's university bioscience R&D base around the state's bioscience research technology platforms and better connect Nebraska's universities and bioscience companies.	
<ul style="list-style-type: none"> • Create and fund a Nebraska Bioscience Eminent Scholars Program. 	
<ul style="list-style-type: none"> • Provide matching funds for industry/university collaborative applied research projects. 	Approved - LB 387, 2011
<ul style="list-style-type: none"> • Form technical networks around the bioscience technology platforms to foster information sharing across disciplines and institutions. 	
<ul style="list-style-type: none"> • Convene an industry/university panel to conduct a review of policies and procedures that affect university/private sector collaborations with a goal of streamlining technology transfer processes and accelerating the number of licenses and start-up companies. 	
II. Create an infrastructure to encourage innovation, support commercialization, and assist bioscience entrepreneurs and start-up companies.	
<ul style="list-style-type: none"> • Create a Bioscience Commercialization Fund to support proof-of-concept activities and advance the commercialization of bioscience technologies. 	Approved but not bioscience specific - LB 387, 2011
<ul style="list-style-type: none"> • Provide in-depth business development assistance to bioscience entrepreneurs and start-up companies. 	Approved but not bioscience specific - LB 387, 2011
<ul style="list-style-type: none"> • Enact legislation creating a bioscience angel investment tax credit. 	Approved but not bioscience specific - LB 389, 2011
<ul style="list-style-type: none"> • Employ business and entrepreneurial students and private sector mentors to assist faculty in developing plans to commercialize their discoveries. 	
III. Grow the state's bioscience industry cluster by supporting the retention and expansion of existing and emerging bioscience firms.	
<ul style="list-style-type: none"> • Maintain a well-funded bioscience industry organization that can bring firms together to identify areas of concern and advocate for policies and programs to address them. 	
<ul style="list-style-type: none"> • Address State environmental and regulatory policies affecting bioscience companies. 	
<ul style="list-style-type: none"> • Provide funding for bioscience industry-related facility infrastructure. 	
<ul style="list-style-type: none"> • Expand SBIR outreach, provide increased technical assistance to SBIR applicants, and provide matching funds for Phase I awards. 	Approved - LB 389, 2011
<ul style="list-style-type: none"> • Develop a strategy to build a comprehensive venture capital infrastructure in Nebraska. 	Approved - LB 1114, 2014
IV. Develop, retain, and attract bioscience talent.	
<ul style="list-style-type: none"> • Increase student awareness of local bioscience opportunities through internships and other activities that expose graduate and undergraduate students to Nebraska's bioscience industry. 	
<ul style="list-style-type: none"> • Undertake a campaign to identify experienced bioscience managers, researchers, and technicians with ties to Nebraska and recruit them to return to Nebraska. 	
<ul style="list-style-type: none"> • Survey bioscience industry workforce needs and work with community colleges, regional colleges, and universities to develop and implement curricula. 	

2010 "Nebraska's Innovation & Entrepreneurship Ecosystem – The Innovation and Entrepreneurship Task Force of the Nebraska Legislature"

Summary

In being part of a knowledge-based economy, Nebraska has flourished in large part due to its people. In 2010, the State of Nebraska recognized this fact, stating that people are its greatest resource. With this realization, the Nebraska Legislature undertook research to determine whether its talent was staying in-state or leaving. The results of the research suggested Nebraska could do more to encourage its homegrown talent to remain in Nebraska. While the traditional method for the state, to retain homegrown talent, was to persuade new businesses into the region, the Nebraska Legislature realized it

should promote existing local businesses and entrepreneurial ventures, as the catalyst for economic growth. This type of economic gardening strategy was found to be the best way the State could improve the entrepreneurial ecosystem. Ultimately this improvement in the ecosystem was found to lead to more local companies and startups creating higher wage jobs.

An evaluation of Nebraska's entrepreneurial ecosystem in comparison to other states and best practices were broken down to five key categories that directly impact small business development and growth:

1. General Entrepreneurship Statistics
 - *Conclusion – Nebraska generally ranks below average in composite business categories. On the positive side, Nebraska ranks well above average for economic climate (e.g. costs, taxes, etc.) some “Quality of life” factors (e.g. low crime, good education, etc.). However, a major area for concern is that Nebraska ranks very poorly for business capital and innovation.*
2. Business Cost, Tax, and Regulatory Environment
 - *Conclusion – Nebraska ranks fairly well in regards to ease of doing business, efficient regulatory requirements, and taxation. However, Nebraska ranks lower in areas of technology related to government (e.g. e-government).*
3. Access to Capital
 - *Conclusion – Nebraska ranks very low in access to capital. This is a major area in need of improvement.*
4. Innovation
 - *Conclusion – Nebraska ranks very low in technology and innovation. This is a major area in need of improvement.*
5. Workforce
 - *Conclusion – In general, Nebraska ranks high in broad human capital categories (e.g. workforce education). However, there is a concern of outmigration of young, high-skilled workers and the need to attract more technical professionals to the State.*

The report also looked at the existing programs and organizations in Nebraska. It was found that Nebraska had over 146 existing economic development programs, as of 2010. While the number was considered large for the population of the state, it was found that most of these existing programs were small and localized. Furthermore, it was relatively rare for a program to extend across multiple counties. These facts led to the conclusion there was a lack of coordination effort between local, regional, and statewide groups.

After compiling all of the above research, the report made multiple recommendations. The largest of these recommendations was implementing a statewide economic gardening program. It was also recommended that the state needed to work with local communities to ensure a deep understanding of

the economic gardening program. Other recommendations included having venture competitions, providing venture funding, encourage angel investments and improving its web presence.

Table 8. "Nebraska's Innovation & Entrepreneurship Ecosystem" - 2010

Recommendations	Resulting Action
I. Create a Statewide Economic Gardening Program	Approved - LB 345, 2011
II. Develop Awareness in the Local Development Community on the Importance of Economic Gardening and High-growth Businesses	
III. Establish industry-specific Venture Competitions	
IV. Establish Regional Venture Competitions	
V. Establish Quick Pitch Venture Competitions	
VI. An SBIR Expert Assist with "Phase Zero"	Approved - LB 387, 2011
VII. Creation of a Nebraska State SBIR Phase I and II Matching Grant Program	Approved - LB 387, 2011
VIII. Create a Nebraska TechStart Program	
IX. Encourage Additional Angel Investing	Approved - LB 389, 2011
X. Increase Seed and Venture Capital Investment	Approved - LB 387, 2011
XI. Improve Micro-lending Effectiveness and Targeting	Approved - LB 387, 2011
XII. State Add-on Credits and Focus in Coordination with Federal Programs	
XIII. Support the GEDAS Pilot Program	
XIV. Create a Rural Entrepreneurship Focus	
XV. Develop an Entrepreneur Consolidated Website	

2010 "Growing Jobs, Industries, and Talent: A Competitive Advantage Assessment and Strategy for Nebraska" - Prepared by Battelle Technology Partnership Practice

In 2010, Nebraska realized it had withstood the recession much better than other parts of the country. With that in mind, state leaders wanted to build upon their strong economic standing going forward. With this goal in mind, the state ordered an evaluation of Nebraska's competitive advantages and address gaps holding Nebraska back and opportunities where Nebraska could succeed and grow.

In the study's assessment of Nebraska's industry clusters it found that Nebraska has 12 primary industry clusters driving the state. It was noted many of these industry clusters were interrelated with one another. However, the study also found the industry clusters to be quite diverse for a state. The industry clusters identified were:

- agricultural machinery
- agriculture and food processing
- ***biosciences***
- business management and administrative services
- ***financial services***
- health services
- hospitality and tourism
- ***precision metals manufacturing***
- ***renewable energy***
- research, development, and engineering services

- software and computer services
- ***transportation, warehousing, and distribution logistics.***

The industry clusters in bold represent strengths in state employment, clusters that are growing and already specialized.

Three of the industry clusters were either emerging strengths or opportunities, based on their trend toward specializations and growth. These included health services, hospitality and tourism, and R&D and engineering services. Finally, four of the industry clusters were specialized, but not generating more jobs. These included business management and administrative services, agriculture and food processing, software and computer services, and agricultural machinery.

This study also looked at Nebraska's innovation and competitive advantages. The study benchmarked Nebraska against similar states, which included Iowa, Kansas, Oklahoma, Tennessee, Virginia, Utah, and Wisconsin. First, it was found Nebraska had mixed results in high-skilled talent needed for innovation in the current knowledge based economy; in total the state ranked slightly below the national average. While Nebraska was only slightly below the percentage of bachelor's degrees per person than the national average, it had a smaller percentage of graduate and doctoral degrees. Second, Nebraska was found to lag behind the nation and benchmark states regarding entrepreneurial activity. Third, venture financing and risk capital was significantly lagging; it was only above 1 benchmark state, Oklahoma. Nebraska lacked in patent generation, falling below all of the benchmark states. Furthermore, Nebraska's technology transfer was below the U.S. averages on startups and licensing income. On a high note, Nebraska had a strong showing in research and development. Academic R&D was well above the national average and its industrial R&D was growing, even though it was still below the national average.

The third major component of the study revolved around talent in the state of Nebraska. As previously discussed, it was found Nebraska had a workforce with a work ethic. Additionally, the majority of the workforce had basic skill levels. However, there was a need for more advanced talent in many areas. For instance, engineering, architectural, and science related employment fell in Nebraska, while employment in the areas rose nationally. Computer and math related employment had small growth in Nebraska, where it was fairly large nationally. Nebraska did have large growth in the area of business and financial jobs, requiring highly skilled workers. However, the growth was still slightly below the national average. Collectively, the study found the demand for high-skilled occupations in Nebraska had a relatively low demand resulting in the value added per employee being lower in Nebraska when compared to the national average. In relation to Nebraska's primary industry clusters, it was found there was a low concentration of high skilled workers in each of the spaces. In fact, only financial services, health services, and hospitality and tourism had at or above the national average of high-skilled workers for their cluster.

Regarding the level of high-skilled graduates coming out of Nebraska universities, there were a higher number of high-skilled graduates than high-skilled job openings in Nebraska. However, it is also noted that employers believe there is a lack of high-skilled workers available. A likely solution to this paradox is that students are leaving the state after they graduate.

In the strategic needs assessment, Battelle identified economic development program gaps in the state. The first gap was "addressing the challenges related to the demand and availability of a high-skilled

workforce is perhaps the most cross-cutting issue facing Nebraska's economic development efforts." This gap was largely due to the fact Nebraska was not oriented towards creating high-skilled jobs. The result from the finding was the state losing a large number of their home-grown high-skilled labor force. In order to raise its economic output, the state would need to come up with plans to create high-skilled jobs and retain or entice high-skilled talent back to Nebraska. Second, the study found "the lack of technology-based development programs oriented towards entrepreneurial development, risk capital, and the translation of promising research discoveries into new companies and products is a glaring gap in Nebraska." The study suggested this could easily be remedied through applying resources towards technology development and communication between educational institutions and companies. Third, "on the business attraction front, economic developers point to the need to be more competitive with other states by having a ready sites as well as being able to make financial assistance available upfront." This was primarily related to out-of-state recruitment of companies. Fourth, "there is a lack of an organized approach to tailoring economic development outreach and engagement through the industry clusters found in Nebraska." Nebraska needs to have industry-driven associations for a variety of their industries, not just a select few. Finally, the report identified the gap "Nebraska needs to ensure that it can stay abreast of ever-changing requirements for broadband internet services." In order for the State to work optimally, there needs to be high-speed internet services throughout the state.

When comparing the existing Nebraska economic development programs with the State's economic development gaps, there were some interesting takeaways. First, it was concluded some programs may be adjusted to cover certain gaps. However, there were three areas where new comprehensive strategies needed to be implemented. These three areas were technological advancement focusing on both development and deployment of technology for commercialization for new and existing businesses in Nebraska, talent connection initiative, and integrated industry cluster strategy that advances business attraction, retention, and expansion and new company formation on a tailored basis for each industry cluster or groupings of industry clusters.

The report developed a strategic vision for advancing the State's economic development efforts. The vision states, "By 2020, Nebraska is nationally recognized for its top-tier employment and wealth-generating economy, built on strong industry clusters, a growing skilled workforce, and engaged education and research institutions." In order to realize this vision, an action plan was developed for Nebraska's competitive growth initiatives; it contained 3 critical initiatives: a Nebraska Industry Cluster Initiative, a Nebraska Talent Advantage Initiative, and a Nebraska Innovation Initiative. For each initiative, the report presented recommendations, listed below, to place Nebraska on a path to meet its strategic vision.

Table 9. "Growing Jobs, Industries, and Talent: A Competitive Advantage Assessment and Strategy for Nebraska" - 2010

Recommendations	Resulting Action
I. Recommendations on How to Best Integrate State Economic Development Efforts Across Primary Industry Clusters	
II. Nebraska Industry Cluster Initiative	
<ul style="list-style-type: none"> • Enhance functionality of Nebraska Advantage Incentives for high-impact projects. • Establish state agency cluster resource teams, each with a lead DED staff person, with initial focus on "bio solutions." • Establish a Nebraska Strategic Opportunity Fund for site and facility development. • Provide competitive, matching funds for project-based "cluster activities," including formation of industry-led cluster organizations and industry-higher education collaboration centers. • Establish a major tourism destination (Mahoney-type) in the Sandhills that capitalizes on the region's unique scenic, ecological, and recreational advantages. 	DED accomplished internally Approved - LB 388, 2011
III. Nebraska Talent Advantage Initiative	
<ul style="list-style-type: none"> • Promote on-site and distance-related postsecondary student internships across the state with business in economic base industries. • Develop and market a Nebraska Jobs Search Site (NEworks) in collaboration with the Department of Labor, to serve as a portal and networking vehicle with specific emphasis on connecting students and graduates with employer needs in targeted, high-skill occupations. • Revamp Career & Technical Education in K-12 targeted to high-demand, high-shortage occupations, including though virtual high school enabled by expanded broadband. • Enhance entrepreneurial opportunities by providing mentoring, training, and increased capital access, particularly for high-growth businesses. • Create targeted skill centers at postsecondary institutions for documented skill shortage areas. • Provide for incentives in Science, Technology, Engineering, and Mathematics (STEM) occupations for graduates in high-wage, high-skilled fields to work in Nebraska in target industry clusters for which there is a critical skill shortage (similar to Rural Health Opportunities Program (RHOP)). 	Approved - LB 386, 2011 NDOL accomplished internally
IV. Nebraska Innovation Initiative	
<ul style="list-style-type: none"> • Expand Small Business Innovation Research (SBIR) outreach efforts. • Enact an angel investment tax credit. • Provide a financing mechanism for modernization and expansion to manufacturing companies tied to investments in improved productivity and higher wages (modernization fund). • Develop applied industry-university research matching grants for next-generation product and process innovations. • Revise Nebraska Advantage Tiers to provide incentives for manufacturing firms to modernize their business operations in a manner that generates increases in sale and raises wage levels. • Update efforts in modernization and technology advancement for manufacturing companies to also include a matching fund for product design, prototyping, and testing activities. • Adopt and support minimum standards for broadband internet service that continually exceeds any federal standards to help grow the mobile and entrepreneurial economy. • Establish a statewide commercialization service to mentor and advise technology-oriented entrepreneurs and early-stage companies. • Establish a private sector-driven Nebraska Innovation and Technology Development program. • Create a private sector-driven venture financing entity for equity, near-equity, modernization, and working capital. 	Approved - LB 387, 2011 Approved - LB 389, 2011 Nebraska Investment Finance Authority accomplished internally Approved - LB 387, 2011 Nebraska Investment Finance Authority accomplished internally Invest Nebraska accomplished internally Invest Nebraska accomplished internally Invest Nebraska accomplished internally

2014 "Supporting and Increasing Venture Capital in Nebraska" - Prepared by Cromwell-Schmisser & Dr. Eric Thompson, UNL Bureau of Business Research for Invest Nebraska

Summary

In 2014, Invest Nebraska was tasked with analyzing the venture capital landscape in Nebraska ("State"). In their efforts, Invest Nebraska performed three primary tasks. The first task was to present a historical perspective of the Nebraska entrepreneurial and innovation programs adopted by past legislatures. Second, Invest Nebraska provided research and economic analysis of the programs under the Nebraska Business Innovation Act, which was passed in 2011. Finally, Invest Nebraska worked with Cromwell-Schmisser LLC, to find the best practices of supporting venture capital in other states.

Invest Nebraska worked with Dr. Eric Thompson in gaining economic analysis and research on the programs initiated under the Nebraska Business Innovation Act. Dr. Thompson's research study focused on the four main innovation programs under the Business Innovation Act: the Pre-Seed Prototype grant program, the matching state support for Federal Small Business Innovative Research (SBIR) grants, the Academic Research and Development grant program, and the Seed/Commercialization program. Dr. Thompson's economic impact analysis found there was a significant amount of private sector investment for each dollar of state support; the businesses which participated in the programs raised \$5.12 in private investment funding for each dollar of state funding. Additionally, Dr. Thompson found participating businesses earned \$2.32 in revenue from sales for each dollar of state funding. It was projected that revenue from sales would grow as business further develop and commercialize. Furthermore, business participating in the Business Innovation Act programs added 162 jobs with annual wages totaling \$8.2 million. The total economic impact was \$53.45 million. Thus, the study concluded the Nebraska Business Innovation Act contributed to the development of high wage employment.

The last task of this report was finding other state's best practices, in relation to supporting venture capital. In addition to finding the best practices, it was suggested recommendations be made, to Nebraska, based on these best practices. Invest Nebraska worked with Cromwell-Schmisser on this issue. After much analysis, three main recommendations arose, based on other state's best practices. The first recommendation was to continue and consistently support the Nebraska Business Innovation Act programs with increased financial support. The second recommendation was to create a team to actively promote and recruit outside investments into Nebraska small businesses. The final recommendation was to begin planning for a state-sponsored "fund-of-funds" venture capital program.

Table 10. "Supporting and Increasing Venture Capital in Nebraska" - 2014

Recommendations	Resulting Action
I. Consistently support the state's "innovation farm system" through long-term (i.e., more than 10 years) and increasing financial support of programs launched by the Nebraska Business Innovation Act.	
II. Create a specialty function within, or sponsored by, the Nebraska Department of Economic Development to actively promote and recruit venture capital and private equity investment in Nebraska small businesses.	
III. Anticipating success with the Nebraska Business Innovation Act programs, begin planning for a state-sponsored "fund-of-funds" venture capital program that includes a focus on financing "emerging managers" of venture capital funds based in Nebraska.	

2015 "Special Report Presented to the Lincoln Chamber for Economic Development Corporation on Behalf of the Lincoln Entrepreneurial Ecosystem Task Force"

Summary

The Lincoln Chamber for Economic Development Corporation created the Entrepreneurial Ecosystem Task Force to review the recommendations and strategies contained in the June 2015 report from Angelou Economics. The task force was comprised of 30 community stakeholders. To begin, the task force wanted to define the term "entrepreneurial ecosystem". They concluded it is a term which describes the way individuals, companies, organizations, and governments interact to influence the development of entrepreneurs and their firms in a single metropolitan area or region. Additionally, the task force determined there are smaller entrepreneurial ecosystems within the larger regional entrepreneurial ecosystem. In order for a successful ecosystem, the task force found there is a usual four stage growth cycle that must exist.

- Stage 1 – New entrepreneurs seek to build scalable companies in Lincoln
- Stage 2 – Entrepreneurs are able to grow and reach scale
- Stage 3 – Successful entrepreneurs stay in Lincoln
- Stage 4 – Successful entrepreneurs reinvest in the next generation of entrepreneurs

With their study of Lincoln and its entrepreneurial ecosystem completed, the task force shifted its focus to the Angelou Economics report. The report contained four broad objectives and a few other strategies for nurturing the entrepreneurial ecosystem in Lincoln. These broad strategies were: to accelerate commercialization, grow clusters of mentors and angels, own an entrepreneurial event, and attract international entrepreneurs. Under each strategy were more specific examples of how Lincoln could achieve the overarching strategy. For each example, the task force gave their opinions on the example. These strategies, examples, and task force opinions can be seen below, in the recommendations.

Table 11. "Lincoln Entrepreneurial Ecosystem Task Force" - 2015

Recommendations	Resulting Action
I. Accelerate Commercialization	
<ul style="list-style-type: none"> • Develop a hub-and-spoke relationship between the tech sector and university. • Attract and nurture investors who are less averse to risk. • Appoint an advisory committee to each target industry. • Encourage local media to run weekly tech section. 	
II. Grow Cluster of Mentors and Angels	
<ul style="list-style-type: none"> • Promote and support efforts to connect angel investor networks to entrepreneurs in Lincoln. • Align leading startups with top entrepreneurs and investor from around the country to serve as mentors. • Establish a strategic partnership with an accelerator that is international in scope. 	
III. Own an Entrepreneurial Event	
<ul style="list-style-type: none"> • Host an annual international entrepreneurial event in a specialty area (ex Sports related startups) • Invest in big data/predictive analytics. 	
IV. Attract International Entrepreneurs	
<ul style="list-style-type: none"> • Use EB-5 Visa Regional Centers to market Lincoln. • Expand partnership with Greater Omaha Chamber and Nebraska Department of Economic Development on international outreach. • Partner with Omaha to develop investment attraction offices in Europe and Asia. 	
V. Public Policy Considerations	
<ul style="list-style-type: none"> • The task force felt the strategy similar to the Texas CAPCO program was the best route. 	

2016 "Building Omaha's BioCommercialization Pipeline - UNMC Innovation Lab" - Prepared by SRI International

In 2016, a study was presented by SRI in conjunction with UNMC and UNO. The objective was to seek to increase the number of biomedical and health IT technologies entering the commercialization pipeline with the goals of increasing the number and value of licenses in the short term and the number of Nebraska biomedical startups in the longer term. In order to find recommendations, SRI viewed the innovation ecosystem framework to assess strengths and weakness in Nebraska's biomedical ecosystem. Additionally, SRI conducted interviews with multiple stakeholders to gain a better understanding of the ecosystem.

In a gap analysis, SRI found multiple areas where Nebraska could improve in biomedical innovation. Idea generation was lacking in the state, as Nebraska has few biomedical companies and no biomedical clusters. Furthermore research institutions do exist in Nebraska, but they could do a better job at generating ideas. The second gap relates to talent in Nebraska. Very few experienced biomedical entrepreneurs exist in the state. Furthermore, there is a lack of clinical regulatory, device, and analytical talent in the State. Third, while Nebraska does an adequate job of deploying pre-seed and seed funding, there is a clear lack of funding on later stage investments. Furthermore, there is a lack of life sciences focused venture capital. The fourth gap is limited market access, which is due to a limited existing biomedical industry base. While Nebraska has strong innovation ecosystem actors, the state lacks external innovation actors. Finally, the Nebraska business environment has strong programs supporting

early-stage businesses. However, there is a lack of biomedical talent to foster biomedical company growth in the State.

In addition to the primary study, a secondary level of analysis identified which gaps in the State's biomedical innovation system UNMC and UNO can address. There were three primary areas where the parties could advance biomedical innovation in Nebraska. The universities could promote idea generation through more applied, interdisciplinary research and a stronger pipeline of technologies with potential to be translated into product. Second, the universities could help talent development in a setting that brought together more creative and innovative faculty and students around problem-driven projects. Third, the university could help with network development through increased connections to industry and faculty in other departments.

Table 12. "Building Omaha's BioCommercialization Pipeline - UNMC Innovation Lab" - 2016

Recommendations	Resulting Action
I. UNMC and UNO should use a faculty-driven Innovation Lab model to create a stronger bridge between faculty and the commercialization process.	

2016 "Supporting Innovation-Led Growth in Nebraska" - Prepared by SRI International

Summary

In 2016, the Nebraska Department of Economic Development contracted with SRI International to gauge how the state compared to other states relative to innovation and growth. In the study, SRI did a complete evaluation of Nebraska and ultimately gave four recommendations, to help Nebraska improve its position on innovation and growth in Nebraska.

The study began by valuing the importance of innovation to an economy and determining the government's role in promoting innovation. The study defined innovation as the process of getting new goods and services into the market. Additionally, technological innovation has been shown to impact companies, which adopt new technologies, by increasing revenues and lowering costs, through an introduction of better products and services. Overall, this new innovation leads to a growing economy, by creating higher wage jobs.

"Two-thirds of the United States' economic growth is attributable to technological change in workers, production processes, and new products and services – Solow Growth Model."¹⁵

With the direct correlation between innovation and economic growth determined, the study indicated it is important for governments to assist in promoting innovation. On the state level, governments can foster innovation through agencies like the Nebraska Department of Economic Development. These

¹⁵ Solow (1956). "A Contribution to the Theory of Economic Growth. Robert M. Solow" The Quarterly Journal of Economics, Vol. 70, No.1, pp. 65-94; Solow (1957) "Technical Change and the Aggregate Production Function," The Review of Economics and Statistics, Vol. 39, No. 3, pp. 312-320; and Dennison, Trends in American Growth, 1929-1982.

agencies can help connect different actors and incentivize a collaborative behavior around a shared goal of improving technology commercialization and startup growth.

The SRI study engaged in a high-level gap analysis to help identify gaps and opportunities where Nebraska can improve upon to increase innovation. The framework for the analysis focused on five functional elements:

- idea generation
- talent
- risk capital
- market access
- networks

SRI identified three major challenges in Nebraska: risk capital, market access, and talent.

Regarding risk capital, SRI found Nebraska, through the Business Innovation Act, adequately providing funding for pre-seed and seed stage companies; although in order to keep innovation growing, there will need to be an increase in allocation of funds to the startup community. In contrast to pre-seed/seed funding, Nebraska performed very poorly in providing Series A stage venture capital for companies. This lack of Series A funding translates to companies being able to start, but being unable to continue operations, due to lack of outside investment.

A second weakness was the state's lack of access to markets - Nebraska startups were having trouble reaching customers. A common way to remedy this problem is through meaningful connections with existing companies, in the same sector. While network connections were strong in Nebraska, they were often cross sector connections. This was found to be due to company sectors being misaligned. Additionally for the companies that do operate in similar sectors, it was found some large companies did not work with start-ups.

The third weakness was Nebraska's scarce talent pool. While there are talented workers in Nebraska, SRI found Nebraska lacked serial entrepreneurs who have already founded and scaled high-growth companies. If Nebraska could grow this population, it would help new entrepreneurs with finding someone who has "already done it", in relation to developing an innovative company. This would help to provide a larger workforce to new companies, as more people would have experience working for a start-up business.

Aside from these weaknesses, SRI found Nebraska's idea generation and existing networks to be the strengths. Nebraska's idea generation showed that existing companies were investing in corporate innovation and outside startups. However, as a whole, Nebraska lacked in the number of startups versus other areas of the country. Additionally, Nebraska's startups were primarily located in urban areas, rather than spread across the State. It should be noted, that SRI found the trend in startups, located in Nebraska, to be rising with the universities in Nebraska having multiple areas of innovation to be explored and developed.

Another strength Nebraska had, in relation to other states, was its network connections. The Nebraska innovation ecosystem was found to be very inviting. Entrepreneurs found it easy to connect with other individuals in the innovative community. Furthermore, the people in Nebraska wanted to help others. The study did find that these connections often were from different industries. But, if professionals

from similar industries, including out-of-state alumni, would connect then the possibility for quicker innovation would increase.

When taking the above information into account, SRI developed four recommendations for Nebraska. Two of the recommendations focused on providing entrepreneurs with access to risk capital and market access. The third recommendation related to providing Nebraska's talent with meaningful experiences in innovation. Finally, the fourth recommendation focused on strengthening university and government collaboration, in relation to economic development.

Table 13. "Supporting Innovation-Led Growth in Nebraska"

Recommendations	Resulting Action
I. Risk Capital: Increase appropriation for Nebraska Business Innovation Act ("BIA") programs in line with growing demand.	
<ul style="list-style-type: none"> • Increase funding to develop prototype and proof-of-concept testing • Increase funds to Invest Nebraska and related BIA programs 	
II. Market Access: Strengthen connections between existing companies and startups	
<ul style="list-style-type: none"> • Build program to bring together existing companies and startups companies. 	
III. Talent: Strengthen entrepreneurial opportunities for students at universities and community colleges to produce "T-shaped" individuals.	
<ul style="list-style-type: none"> • T-shaped individuals are those with deep experience, in at least 1 area (usually technological), complimented with a broad working knowledge of multiple areas. 	
<ul style="list-style-type: none"> • Recruit mid-career talent from outside the State. 	
<ul style="list-style-type: none"> • Give university students more opportunities to work on real-work problems and cases. 	
<ul style="list-style-type: none"> • Work with Community Colleges. 	
IV. Networks: Strengthen university-government collaboration around economic development objectives. Attract International Entrepreneurs	
<ul style="list-style-type: none"> • Improve information sharing between universities and government. 	
<ul style="list-style-type: none"> • Maintain government presence on Nebraska Innovation Campus. 	

COMPARATIVE ANALYSIS: NEBRASKA'S STANDING IN THE U.S.

Several organizations, such as the Kaufman Foundation, PricewaterhouseCoopers MoneyTree™ Report, Forbes Magazine, the Milken Institute, Small Business & Entrepreneurship Council, Corporation for Enterprise Development, among others, monitor statistical information that can be used to compare states' business environment against one another. While these rankings are based on subjective sub-categories and should not be considered a conclusion of Nebraska's "standing" versus other states, they are very useful in trying to find areas in need of improvement.

How Nebraska Stacks Up

An evaluation of Nebraska's entrepreneurial ecosystem in comparison to other states and best practices can be broken down to five key categories that directly impact small business development and growth:

1. General Entrepreneurship Statistics
2. Access to Capital
3. Innovation

4. Workforce

1. General Entrepreneurship Statistics

In the third quarter of 2015 Nebraska had 40,868 small businesses employing 1 – 499 employees and 127,427 non-employer firms (those firms with no employees); together which accounted for 96.5% of the State's employers and 47.5% of its private sector employment.¹⁶ While high, this is below the national average of 99.7%, demonstrating that Nebraska has a higher percentage of large businesses and larger small businesses than other states. In addition, 87.7% of Nebraska businesses have less than 20 employees.¹⁷

Nebraska had 1,665 establishment starting up and 1,703 establishments closing.¹⁸ Startups generated 5,048 new jobs while establishments exiting caused 4,634 job losses. The median income for individuals who were self-employed at their own incorporated businesses was \$42,751 in 2014.¹⁹ At first glance, these rankings indicate that Nebraska has a fairly robust and dynamic private small business sector.

In their report *The 2014 State New Economy Index*, the Information Technology & Innovation Foundation looked at the State's competitiveness in regards to what they term as "the new economy." The focus was on five key areas that best capture what is new about the New Economy: Knowledge Jobs; Globalization; Economic Dynamism; The Digital Economy; and Innovation Capacity. Overall, the report used twenty-five specific indicators divided into these five areas.

Overall, Nebraska ranked 35th in the study, and has ranked consistently between 28th and 36th since the Index was founded in 1999. In specific categories, Nebraska ranked:

1. **Knowledge Jobs (17th, up from 26th in 2007)** - Indicators measure employment of IT professionals outside the IT industry; jobs held by managers, professionals, and technicians; the educational attainment of the entire workforce; immigration of knowledge workers; migration of domestic knowledge workers; employment in high-value-added manufacturing sectors; and employment in high-wage traded services.
2. **Globalization (42nd, down from 27th in 2007)** - Indicators measure the export orientation of manufacturing and services, and foreign direct investment.
3. **Economic Dynamism (46th, down from 43rd in 2007)** - Indicators measure the degree of job churning (which is a product of new business startups and existing business failures); the number of Deloitte Technology Fast 500 and Inc. 500 firms; the number and value of initial public stock offerings by companies; the number of entrepreneurs starting new businesses; and the number of individual inventor patents issued.
4. **The Digital Economy (27th, down from 20th in 2007)** – Indicators measure the percentage of population online; the degree to which state and local governments use information technologies to deliver services; use of IT in the health care sector; Internet and computer use by farmers; residential and business access to broadband telecommunications; and use of information technology in the health care system.

¹⁶ SBA Small Business Profile: Nebraska, www.sba.gov/sites/default/files/advocacy/Nebraska.pdf (Accessed: November 2016).

¹⁷ ibid

¹⁸ ibid

¹⁹ ibid

5. **Innovation Capacity (37th, same as 37th in 2007)** – Indicators measure the number of jobs in technology-producing industries; the number of scientists and engineers in the workforce; the number of patents issued; industry investment in research and development; non-industry R&D; venture capital activity; and movement toward a green-energy economy.

With regards to the category of Information Technology Jobs, Nebraska was the 2nd highest mover from the 2010 ranking, improving from 22 to 13 in employment in IT occupations in non-IT industries as a share of total private-sector jobs. This is important since the number of IT workers in non-IT industries is a good proxy to measure the extent to which traditional industries are making use of IT. Low scoring states tend to have natural-resource-based or traditional manufacturing-based economies.

Entrepreneurial Activity specifically, where Nebraska ranked 42nd, the criteria for the rankings were the adjusted number of entrepreneurs starting new businesses. In general, Western states ranked higher than other areas of the country because fast-growing Western states provide a disproportionate number of entrepreneurial opportunities, but Nebraska did not seem to be part of this trend. Nebraska ranked 39th in the category of Venture Capital, an improvement since the 2010 (last place) report indicating that Nebraska is moving in the upward direction, creating potential high-growth businesses venture capitalists want to invest in.

However, the *Forbes Best States for Business and Careers 2010* ranks Nebraska 9th overall, using a composite of business costs, labor supply, regulations, economic climate, growth prospects, and quality of life, although Nebraska scored much higher in some of these measures than others. For example, Nebraska ranked 12th in economic climate, which measures job, income and state product growth, unemployment, and the presence of big companies, but 40th for growth prospects, which measures revenue and wage increases as well as business turnover and venture capital investments. This study implies that while unemployment may be lower than other states and Nebraska has more large businesses compared to similar-sized states, the small business growth prospects are dim. In the same study, Nebraska ranked 14th on quality of life measures, such as schools, health, crime, cost of living, and poverty rates.

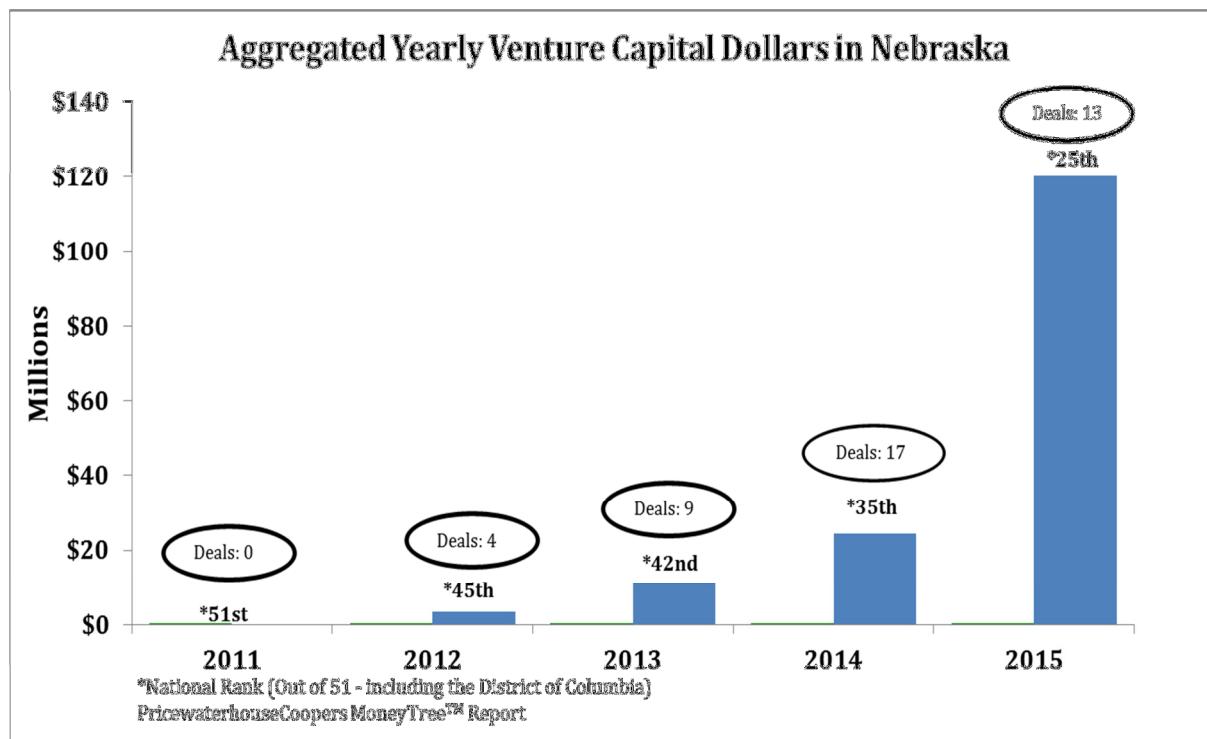
In the *State Technology and Science Index 2016* from the Milken Institute, another leading research institute, Nebraska ranked 24th overall, a significant improvement since the 2008 ranking of 34th. The state saw the largest increase in the *Risk Capital and Entrepreneurial Infrastructure Composite Index* from 44th place in 2008 to 19th place in 2016 which measures capable entrepreneurs for high growth firms and is a composite with a measure for risk capital. On a whole the Index looks at the success rate of converting research into commercially viable products and services. Twelve business indicators are included in this composite index including Venture Capital investment as a Percent of GSP, Number of Business Incubators per 10,000 Business Establishments, Patents issued per 100,000 People, and the Number of Business Starts per 100,000 people.

Conclusion: Nebraska generally ranks below average in composite business categories. On the positive side, Nebraska has significantly improved its rankings in the creation of IT jobs and Risk Capital and Entrepreneurial Infrastructure. However, major areas for concern are patents issued, the development of business incubators, and direct foreign investment.

Access to Capital

The level of venture capital activity has significantly increased in Nebraska since 2011. The PricewaterhouseCoopers MoneyTree™ Report, based on data from Thomson Reuters, is the premier source of information on emerging businesses that receive funding and the venture capital firms that provide that funding. The MoneyTree™ Report is the go-to source for most major economic development indices reporting on venture capital at the state level. The report shows that Nebraska has increased its ranking from last place in 2011 (with no venture capital in Nebraska) to 25th place with thirteen deals funded by \$119,981,100 of venture capital.

Table 14. Aggregated Yearly Venture Capital Dollars in Nebraska



The improvement in the risk capital metric for years 2008 - 2016 can also be found in the *In the State Technology and Science Index 2016* from the Milken Institute.

Table 15. Risk Capital and Entrepreneurial Infrastructure Composite Index - Nebraska

Year	2008	2010	2012	2014	2016
Ranking	44th	44th	47th	33rd	19th

Source: Milken Institute State Technology and Science Index

Appendix A of this report shows Nebraska in comparison to other states by the number of deals and the levels of venture capital from 2011 through 2015.

Angel Investing: Angel investment has improved dramatically since 2010. Under the Nebraska Angel Investment Tax Credit (AITC) from 2011 – 2014, 340 Qualified Investments were made into 104 Qualified Small Businesses for a total of \$30,295,608 invested and \$11,156,848 of tax credits issued.²⁰ The Nebraska Angels has increased its membership to over 60 members (from over 40 members in 2010). Two new angel funds are operating in Nebraska: Northeast Venture Capital, LLC located in Norfolk and the Nebraska Millions located in Lincoln.

Conclusion: Nebraska has significantly improved its rankings in access to capital since the implementation of the Nebraska Business Innovation Act in 2011. Angels are increasing their activity in Nebraska both through networks and funds. This is a major area to sustain and increase further development.

Innovation

Nebraska's improvement of risk capital can be traced to progress in many innovation categories over the past five years. Several publications have Nebraska performing better compared to the last time the Legislature considered this issue in 2010. However, the state still remains in the bottom half of all states. Broad-based innovation improves all industries. When economic growth is concentrated in one industry, such as agriculture or energy resources, a state is doomed to weak growth and a lack of economic vitality. Innovation leads to job creation and high-skilled job creation.

In January 2016, Bloomberg ranked the most innovative states based on a 0-100 scale across six equally weighted metrics. Overall, Nebraska ranked as the 39th most innovative state in America. Broken down by the six categories, Bloomberg ranked Nebraska 37th in R & D Intensity, 22nd in Productivity, 26th in High-tech Density, 34th in STEM Concentration, 49th in Science & Engineering Degree Holders, and 38th in Patent Activity.²¹

In CNBC's ranking of *Top States for Business 2016*, Nebraska ranked 31st in technology and innovation and improvement from 37th in the CNBC 2010 ranking for the same category. This metric focuses on state support for innovation, the number of patents issued, high-tech business formation, and federal health, science and agricultural research grants.²²

As previously mentioned, the Milken Institute's *State Technology and Science Index 2016*, reinforces Nebraska's sub-optimal performance in the innovation category. Nebraska ranks 35th in Research and Development Inputs (a measure of R&D and innovation capacities) and 36th in Technology Concentration and Dynamism (a measure of high-tech industries and high-tech startups).²³

²⁰ "Angel Investment Tax Credit Program Report, August 2011 – December 2014", Nebraska Department of Economic Development, November 4, 2015.

²¹ "Most Innovative States", Bloomberg, January 2016, <http://www.bloomberg.com/news/articles/2016-01-07/heres-the-most-innovative-states-in-america>, (Accessed: November 2016).

²² "Top States for Business 2016", CNBC, <http://www.cnbc.com/2016/07/12/americas-top-states-for-business-2016-the-list-and-ranking.html>, (Accessed: November 2016).

²³ "State Technology and Science Index", Milken Institute, <http://statetechandscience.org/statetech.taf?page=state&state=NE>, (Accessed: November 2016).

Conclusion: Nebraska ranks low in technology and innovation. This is a major area in need of continued improvement.

Workforce

A major concern continues to be the so-called “brain drain.” According to the US Census Bureau, Nebraska lost a net of nearly 8,000 college graduates to migration from 2012-2014, with significantly more four-year degree holders moving out of the state than moving in.²⁴

Forbes Best States for Business and Careers 2015 ranks Nebraska 19rd in labor supply, measuring educational attainment, net migration, and population growth. However, *Forbes Best States for Future Job Growth* ranks Nebraska

In the *State Technology and Science Index 2016* from the Milken Institute, Nebraska ranks 19th in the Human Capital composite; a measure of educated workforce, degree attainment, educational entrance scores, and state government spending on education. In a similar composite, Nebraska ranked 11th in Technology and Science Workforce composite; a measure of intensity of computer and information scientists.

CNBC ranked Nebraska 19th for Workforce in its *Top States for Business 2016* rankings. This category is comprised of education level of workforce, numbers of available employees, and the state's demonstrated abilities to retain college-educated workers.

But Nebraska faces major challenges in growing its private sector. The U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages recently ranked Nebraska toward the bottom for year-over-year percent change of private-sector employees. In 2012, Nebraska ranked 16th for private sector job growth but by 2015 the state had fallen to 34th.²⁵

Conclusion: In general, Nebraska ranks average in broad human capital categories (e.g. workforce and education). However, there is a concern of outmigration of young, high-skilled workers seeking opportunities in other states.

Best Practices throughout Country

Business Origination Infrastructure Incubation / Business Acceleration

The Enterprise Center (Philadelphia, PA) - Founded in 1989 by the Wharton Small Business Development Center, The Enterprise Center provides various business services to high-potential, minority and disadvantaged entrepreneurs. In 2004, The Enterprise Center bid for and won a US Department of Commerce contract to become the Pennsylvania Minority Business Development Center. In the process, it changed its delivery of services from incubator to accelerator and from working with 15-20 businesses on a daily basis to annually seeing 200 businesses three times a year and then referring them to an

²⁴ “College graduates again leaving Nebraska behind”, Omaha World-Herald, http://www.omaha.com/news/college-graduates-again-leaving-nebraska-behind/article_138dfcb6-ab17-567d-ae06-871b02022d05.html (Accessed: November 2016).

²⁵ Bureau of Labor Statistics, <http://www.bls.gov/regions/midwest/nebraska.htm#eag>, (Accessed: November 2016).

outside network of consulting partners. The Enterprise Center focuses on four main areas of services to entrepreneurs: Business Education, Economic Development, Access to Capital, and Capacity Building. The Center has an annual budget of about \$2 million, which it mainly receives from private donations (e.g. William Penn Foundation, Verizon Corp, etc.), from revenue raised through its commercial operations (e.g. housing program, micro-lending, etc.), and from government grant sources. The Center has about 20 staff members and can also be rented for private and event use.

<http://www.theenterprisecenter.com>

Environmental Business Clusters (San Jose, CA) - EBC is an award-winning cleantech incubator located in the heart of the Silicon Valley that provides commercialization support and facilities for emerging clean energy and environmental technology companies. Their suite of services include expert coaching and strategic counsel, focused educational and networking programs, targeted access to investors, strategic partners and industry networks, attractive furnished office space, equipment, conference rooms and training facilities. Founded in 1994 by the City of San Jose and the San Jose State University Research Foundation, the EBC has assisted over 150 companies. EBC is the largest environmental and cleantech incubator in the nation. <http://www.environmentalcluster.org/>

Rutgers Food Incubation Center (Bridgeton, NJ) - The Food Innovation Center is a unique business incubation and economic development accelerator program, which is part of the New Jersey Agricultural Experiment Station (NJAES) at Rutgers, the State University of New Jersey. The center provides business and technology expertise to startup and established food and value-added agriculture businesses in New Jersey and the surrounding region. The center also utilizes its outreach capacity to reach the food industry throughout the world. The center has been internationally recognized for its success.

<http://foodinnovation.rutgers.edu/>

Fulton-Carroll Center (Chicago, IL) - With over 26 years of experience and 410,000 square feet in seven buildings, the Industrial Council of Nearwest Chicago's Fulton-Carroll Center is one of the oldest and largest incubation programs in the United States. With a renewed focus on returning FCC to its incubator roots, ICNC expanded the center's business assistance programs and started much-needed facility renovations. And their efforts have paid off: In the last two years, FCC has welcomed more than 40 new client companies, most of which are owned by residents of Chicago's nearwest side, women, and/or minorities. <http://industrialcouncil.com>

High Tech Rochester (Rochester, NY) – HTR is a non-profit economic development organization that serves as a catalyst for entrepreneurship and innovation-based growth in the Greater Rochester, NY Region. HTR manages two startup business incubators – the Lennox Tech Enterprise Center and the Rochester BioVenture Center – and works with small manufacturing companies to help them become more competitive, through operational improvement and new growth strategies. HTR serves as the NYSTAR-designated Regional Technology Development Center for the Rochester / Finger Lakes region, through which it operates programs of the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP), the organization improves the competitive position of small manufacturing firms. High Tech Rochester serves as NYSTAR's designated Regional Technology Development Center for the Finger Lakes Region and one of nearly 350 MEP locations across the country. Their Entrepreneur-in-Residence (EIR) program was recognized as an industry best practice nationally. <http://htr.org>

Business Financing Infrastructure

Seed & Venture Capital

Connecticut Innovations (Rocky Hill, CT) – Launched in 1995, this program provides strategic capital and operational insight to push the frontiers of high-tech industries such as energy, biotechnology, information technology, and photonics. It has helped over 100 emerging companies' research, develop, and market new products and services. This activity has attracted over \$1 billion dollars in additional investments from private equity providers. The program has brought the State of Connecticut over \$510 million in Gross State Profit and over 5,000 additional jobs over the years. Connecticut Innovations manages several funds for companies at various stages of startup and across various sectors: Pre-Seed Fund (\$4m in size) for companies to develop proof of concept, support business model development and other early stage activity where capital requirements are typically less than \$150k; Seed Investment Fund and BioSeed Fund for companies who need capital of up to \$500k to execute on a proprietary technology-backed business plan; Eli Whitney Fund and Clean Tech Fund for "Series A" ready companies with at least a beta-stage product where up to \$1 million in capital is required to growth the company and where multiple investors may participate; and the BioScience Facilities Fund which helps qualified firms build out laboratory and research and development space.

<http://www.ctinnovations.com/index.php>

Ben Franklin Technology Partners (Harrisburg, PA) – Founded in 1983, this award-winning program is one of the nation's longest-running technology-based economic development programs. Ranked in the top 10 of venture capital firms in the U.S. by Entrepreneur magazine, BFTP has provided \$150 million in equity capital to 60 companies in the life sciences, communications and information tech industries, and has yielded 3.5x return on investment for every state dollar invested between 2002 and 2006. During that period, Pennsylvania received more than \$517 million in additional tax revenue as a direct result of BFTP by boosting the gross state product by \$9.3 billion, and generating 10,165 additional job-years. BFTP provides both early-stage and established companies with funding, business and technical expertise and access to a network of innovative, expert resources with an emphasis on: accelerating technology commercialization; supporting startups, entrepreneurs, and established manufacturers; and driving public and private investment. <http://benfranklin.org/>

Elevate Ventures (Indianapolis, IN) – Founded in 1999, Elevate Ventures is a nonprofit that receives a state appropriation and operates for the Indiana Economic Development Corporation. The organization provides advisory and technical assistance to entrepreneurs, assists and provides support to entrepreneurs seeking federal grant funding, oversees a large network of angel investors and oversees the states 21 Fund, which supplies venture capital to entrepreneurs on a competitive basis. Elevate Ventures has invested \$37 million in 183 startups in Indiana with a total portfolio employees of 926 and a total portfolio payroll of over \$63 million. <http://elevateventures.com/>

Launch Tennessee – Founded in 2012, Launch Tennessee is a public-private partnership focused on supporting the development of high-growth companies in Tennessee. Funded by the state of Tennessee, the LaunchTN team supports local entrepreneurs in five key areas: Entrepreneurship (regional business accelerators), Commercialization, Capital (co-investment with INCITE fund), Corporate Engagement, and Outreach. Since January 2012, LaunchTn has invested \$116 million in Tennessee early-stage high-growth businesses, created 1,300 jobs by accelerating companies, accelerated 500+ companies, and assisted accelerated companies raise \$138 million of capital. <http://lauchtn.org/>

Entrepreneur Development Infrastructure

Georgia Centers of Innovation – Georgia identified six strategic industries – aerospace, agribusiness, energy life sciences and information technology, logistics and manufacturing and created Centers of Innovation around them. State-funded incubators are located throughout the state to connect entrepreneurs to technical resources, emerging technologies, and university applied research.

<http://georgia.org/business-resources/georgia-centers-of-innovation/>

Empire State Development (EDS) (Albany, Buffalo, and New York City, NY) – Empire State Development is New York State's primary agent for economic development and is renowned for the depth and breadth of their assistance programs. <http://www.esd.ny.gov/index.html>

- *ESD – International Division* helps New York State companies increase exports and expand the visibility of their business in the global marketplace. They develop and maintain a valuable network of partners worldwide to attract foreign direct investment and create jobs for New Yorkers. And simplify the process of international trade from New York State.
- *The Export Marketing Assistance Service (EMAS)* is a New York State program designed to help businesses find sales agents or distributors abroad. EMAS provides customized research conducted by trade specialists at home and abroad. New York State's foreign-based offices provide local intelligence for the markets that are selected and work diligently to identify the best possible parties to represent your company's sales interests abroad. EMAS represents an important tool for New York State manufacturers of all sizes who aim to enter or expand their sales into foreign markets. By participating in EMAS, ESD will find the appropriate importers/distributors and sales agents to best represent businesses internationally.
- *The Global Export Market Services (GEMS)* is a matching grant that helps businesses expand through increased export activity. The grant is designed to help small and medium-sized businesses get the technical and marketing assistance they need to succeed in international markets. GEMS can provide up to \$25,000 which can be used in a variety of export related activities. Many firms choose to use the grant to hire an export marketing consultant who can provide services custom-tailored to a company's specific international business development needs. The grant can be used for a broad range of activities designed to assist the firm in being competitive in international markets Groups of companies or industry associations can request/apply for up to \$50,000 to fund export trade development services. GEMS will cover up to 50% of the total acceptable project costs within the maximum funding described. GEMS assists New York companies by providing matching grants for export marketing projects for new-to-export and new-to-market companies.

Targeted Programs

Ohio Third Frontier (Ohio) — Founded in 2002, this program focuses on health care, biomedical and technology startups, leveraging over \$1 billion in state funds awarded. It aims to increase the quality of high-quality research that has commercial relevance to Ohio companies. Through a wide variety of programs that range from direct investment and grant processing to connecting entrepreneurs to service providers and placing high quality talent, the Third Frontier has created over 60,000 jobs with an average annual salary of \$66,123. This program has recently expanded into high potential area such as fuel cells, energy, and advanced materials. <http://ohiothirdfrontier.com/>

Massachusetts Technology Collaborative (Westborough, MA) — Founded in 1982, the MTC is a public economic development agency focused on fostering a more favorable environment for growth and laid the foundation for an “innovation-based” economy. The MTC has always focused on technology, and now specifically develops new businesses in the following areas: health care technology, information technology, life sciences, marine sciences, nanotechnology, broadband deployment and clean energy. The MTC has distributed more than \$500 million in grants to support the tech industry in Massachusetts, which accounts for a quarter of the State's employment. One of the early leaders in supporting industry clusters, the agency also aggressively pursues federal funding to accomplish state growth targets. For more information, please see <http://www.masstech.org/>

San Jose BioCenter (San Jose, CA) - Accelerating the commercialization of science, the San Jose BioCenter provides a new generation of specialized facilities; capital equipment; laboratory services; and commercialization support for emerging science and technology companies. The BioCenter is a new, time and cost efficient model to commercialize innovation for emerging science and technology companies. Since inception, the life science and clean technology companies of the BioCenter have raised more than \$1B in capital and have created more than 800 direct jobs. The team at the BioCenter works closely with their portfolio companies as true partners in their growth, creating value over the long term. The mission of the BioCenter is to provide entrepreneurs with the resources, contacts and experience they need to commercialize their technology. <http://www.sjbiocenter.com/>

TechStars (Boston, Boulder, Seattle, NYC, Detroit) – Ten companies are selected to participate in a three month long intensive mentoring program in each city. The program provides \$18,000 in seed funding and the opportunity for companies to pitch to angel investors and venture capitalists at the end of the program. <http://www.techstars.org/>

Tax Incentive Programs

Connecticut Angel Investor Tax Credit Program – Administered by Connecticut Innovations, this tax incentive program allows Angel Investors to take a credit against Connecticut State income tax for certain investments made in qualifying businesses. The investments must be between \$100,000 and \$1 million to realize an income tax credit equal to 25% of the cash invested. Potential investments for CT Angels include: bioscience, advanced materials, photonics, information technology, clean technology, or an emerging technology as determined by the Department of Economic and Community Development commissioner. The program was founded in May of 2010. <http://www.ctangeltaxcredit.com/>

Pennsylvania Research and Development Tax Credit – Established in 2004, the program was established to assist the growth and development of technology-oriented businesses, particularly small start-up technology businesses. It is available to businesses and individuals performing qualified research in Pennsylvania, to incentivize businesses in PA, and to conduct research, especially research of a technological or scientific nature. The benefit of the tax credits are transferrable, allowing liquidity options for the participants who may not be profitable in the early stages of R&D, product development, and business planning. <http://www.newpa.com/>

Best Practices in the Region

In attempt to make a more targeted comparison, programs were researched in these five Great Plains states: Colorado, Iowa, Kansas, Oklahoma, and Missouri. These states were chosen as they have similar economic and cultural characteristics to Nebraska and in theory provide alternative markets and

platforms for development to potential entrepreneurs. In general, the analysis shows that there is not much differentiation among these states in approach to entrepreneurship development, except in the case of Colorado. The other 4 states rank very similarly to Nebraska in key categories, and therefore one could argue that these states are making some of the same mistakes and focuses on some of the same strategies as Nebraska.

Colorado

Colorado has an impressive small business and entrepreneurial sector, and can be a good model for Nebraska in many ways. The State ranks well in many key categories and certain cities, such as Boulder and Ft. Collins, provide impressive examples of what can be accomplished through local incentives and programs.

Colorado had approximately 124,998 small businesses employing between 1 and 500 employees in 2013.²⁶ According to the *Milken State Technology and Science Index*, Colorado ranked 2nd overall and 3rd in Risk Capital and Entrepreneurial Infrastructure Composite Index. Forbes Magazine recently named Colorado the 5th best state for business in the country when measured by costs, labor supply, regulatory environment, current economic climate, growth prospects, and quality of life. Moreover, four Colorado cities were ranked in the top 15 in the country for businesses and careers. Colorado also boasts an unemployment rate lower than the national average,²⁷ and population growth of 8.5% between 2010 and 2015 versus 4.1% for the country.²⁸

Overview of Colorado Programs

Colorado's main support system for entrepreneurs and small businesses is channeled through the Office of Economic Development and International Trade (OEDIT). This office serves as a central repository for the various programs and services available to entrepreneurs and offers information and links to program details. Below is a summary of categories of services:

- Business Resource Guide – A comprehensive publication detailing how to start a business in Colorado.
- Occupational/Industry Licensing Database – Contains information regarding the necessary state and federal permits required to operate a wide variety of businesses and services in Colorado.
- Small Business Development Centers (SBDCs) – A network of brick and mortar locations throughout Colorado that provide training and counseling, similar to the SBDC resources available in other states.
- Business Finance – Contains links to specific programs ranging from incentives, to tax credits, to state sponsored venture capital.
- The Economic Development Commission – Focused on incentivizing firms to move to Colorado and to expand in Colorado.

A key tool provided by the OEDIT is the Colorado Business Resource Guide. First published in 1998, over 200,000 copies of the Guide has been distributed to entrepreneurs across Colorado. The Guide is essentially a “do-it-yourself” manual for starting a business in Colorado including a general checklist for

²⁶ United States Small Business Administration, <https://www.sba.gov/sites/default/files/advocacy/Colorado.pdf> (Accessed: November 2016).

²⁷ Bureau of Labor Statistics, <http://www.bls.gov/eag/eag.co.htm>, (Accessed November 2016).

²⁸ Census Bureau, <http://quickfacts.census.gov/qfd/states/08000.html> (Accessed: November 2016).

business start-up, the options for entering a new market, legal structure and tax discussion, human resource management, business plan writing, intellectual property discussion, the basics of marketing and finance, and contact information and internet links to resources in Colorado. The entire guide is extremely comprehensive and is available to download for free.

Another key tool offered by the OEDIT is a very comprehensive database of the permits and licenses required to operate certain businesses and professional services. This continues the theme at the OEDIT of placing a premium on centralizing data—making it easier for entrepreneurs to start businesses working within the established regulatory frameworks. The license database can be browsed by keywords, by selecting an industry or topic from a list, or via an index organized by the governing state or federal agency.

In 2004, Colorado established the Venture Capital Authority to allocate state funding to be invested in venture capital stage companies. The State allocated \$50 million in premium tax credits to be sold to insurance companies to raise money for the program. Prior to 2004, the Colorado Legislature created the Certified Capital Companies (CAPCO) program to perform a similar function. The program was started to allocate \$200 million of state money to 6 CAPCO investment companies to fund startups, but was widely criticized for failing to keep management and administrative fees under control. Critics cited poor program design as the root cause. Thus the Venture Capital Authority was designed after learning from the CAPCO program. Features of the program include:

- The funds are managed by an independent investment company, selected through a public RFP process, who then reports to the Venture Capital Authority Board at least quarterly.
- The fund manager has discretion over investment selection & due diligence, but must adhere to allocation criteria set by the State: 1) 25% for startups in rural locations, 25% in distressed urban locations, 50% in any Colorado location; 2) No one investment can exceed 15% of the fund; 3) 30% of the fund must be invested by year 3, 50% by year 5, and 100% by year 10
- The fund is designed to be an evergreen fund: 80% of the distributions from portfolio companies are returned to the fund and can be redeployed by the fund manager. The fund manager retains the profits from successful investments.
- Management fees and fund administration expenses (e.g. audit, tax, and legal) are capped at 2.5% of the fund, and are also subject to a hard dollar cap over the life of the fund.

Key Initiatives

Small Business Development Center (SBDC) Network

This program offers services through 20 community-based service centers. A wide variety of programs are offered including:

- Local Entrepreneurial Training – This includes the Leading Edge (discussed below), business research and marketing, new business feasibility analysis, business plan preparation, finance packaging, and other small business topics delivered in one-on-one sessions.
- Workshops & Seminars – These cover a variety of topics and provide a forum for entrepreneurs to meet and network.
- Connection to the Association of Small Business Development Centers – Helps entrepreneurs by connecting them to resources and opportunities in other states.

The Leading Edge

This program offers entrepreneurs and business owners an intensive 10 to 14 week business education program. Over the course of the program, participants will create a comprehensive business plan for their business. The course involves approximately 35 hours of instruction facilitated by a State Certified Instructor chosen for their ability to counsel small businesses effectively, the ability to manage and operate their own business, and for their individual areas of expertise. The program is highly interactive, and encourages active participation and networking between participants.

Additional links include:

- Office of Economic Development and International Trade
- Colorado Business Resource Guide
(<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=OEDIT/OEDITLayout&cid=1154721645662&p=1154721645662&pagename=OEDITWrapper>)
- Occupational/Industry License Database (<http://www.colorado.gov/oed/industry-license/>)
- Small Business Development Center (SBDC) Network
(<http://www.colorado.gov/cs/Satellite/OEDIT/OEDIT/1162927366300>)
- Colorado Leading Edge Entrepreneur and Start Up Business Training Program
(<http://www.coloradosbdc.org/DocumentMaster.aspx?doc=38>)

Iowa

Like in Nebraska, there are several advantages to “doing business” in Iowa, such as low costs, low regulation, and high quality of life factors. However, Iowa suffers from some of the same challenges as Nebraska, such as high workforce yet low in numbers of professional jobs. Another example is the high ranking in entrepreneurial activity, yet relatively low rankings in patents, R&D, and venture capital.

Iowa had approximately 60,957 small businesses employing between 1 and 500 employees in 2013.²⁹ CNBC recently ranked Iowa 9th overall for Top States for Business, 2016 and 2nd in states with the lowest cost of doing business.³⁰

The impact of having good scores in low cost and most livable state is not evident in some cases. Iowa ranks in the bottom 10 of the Milken Institute - Risk Capital and Entrepreneur Infrastructure Composite Index and ranks 40th in the Technology Concentration and Dynamism Composite Index.³¹

Overview of Iowa Programs

Iowa has a number of programs to help start-up companies. Individual experience with service providers had been mixed but most gave the programs high marks in terms of the assistance they received. Programs considered successful are the John Pappajohn Entrepreneurship Centers (JPECs), Small Business Development Centers (SBDCs), local economic development agencies, the newly

²⁹ United States Small Business Administration, <https://www.sba.gov/sites/default/files/advocacy/Iowa.pdf> (Accessed: November 2016).

³⁰ “America’s Top States for Business 2016”, CNBC, <http://www.cnbc.com/2016/07/12/americas-top-states-for-business-2016-the-list-and-ranking.html> (Accessed: November 2016).

³¹ Milken Institute “State Technology and Science Index - 2016”, <http://statetechandscience.org/statetech.taf?page=state&state=IA>. (Accessed: November 2016).

established accelerators and programs directly administered by IDED (such as the Entrepreneurial Ventures Assistance [EVA] program).

Legislation has sought to develop its venture capital markets by providing tax credits for investments in both venture funds and technology companies, creating the Iowa Fund of Funds and facilitating the creation of community seed funds. A recognized success in helping startups is the Venture Network of Iowa (VNI). This forum provides a venue for venture presentations where entrepreneurs are exposed to potential investors. Volunteers provide one on one mentoring and help with resources, business plans and the presentation to investors.

The State has been focused on improving the entrepreneur environment by passing on tax incentives and sources of public funding. Some other examples are the Entrepreneurial Ventures Assistance (accelerator money) and Grow Iowa Values Fund (seed money). Most concur that many improvements have been made, however there are still many barriers and underfunding in many agencies is restricting growth and effectiveness. In addition, a lack of working together between various resources dilutes the impact of funding dollars.

According to a report commissioned by the Iowa Economic Development Authority, Iowa has made economic development progress but struggles in facilitating the transfer of university research and development to industry startups.³² Strengths that they can leverage on include low cost of doing business, high quality of life, high educational attainment, available wealth in the State, and high quality R&D.

Iowa has many pieces in place for a very effective support network. But the pieces need to be better connected to operate as a system and more could be accomplished in this area with more funding and better funding efficiencies.

Key Initiatives

Iowa Fund of Funds Law

The law provides loan guarantees and related credit enhancements on loans to rural and small business. Also, the law created the Iowa Capital Investment Board to mobilize venture equity capital and the Iowa Capital Investment Corporation, which solicits investment plan proposals nationally from fund managers for businesses that are or will be in Iowa. (House File 2708)

Venture Network of Iowa (VNI)

The network is sponsored and staffed by IDED, which seeks out entrepreneurs who receive mentoring from a volunteer committee to help them get their business ready for investment. Forums are held about five or six times a year at which entrepreneurs are given an opportunity to briefly present information about their companies and explain the business opportunities that they offer. The program gets high marks for not only a way to raise capital but also network with others in Iowa's entrepreneurial community.

The John Pappajohn Entrepreneurial Centers (JPEC)

Founded in 1996 through a generous gift from John and Mary Pappajohn of Des Moines, Iowa, it is a unique partnership with Iowa universities and colleges. There are 5 Entrepreneur Centers collocated on

³² *Iowa's Re-Envisioned Economic Development Roadmap*, Battelle Technology Partnership Practices, December 2014.

the respective campus' across Iowa. JPEC Entrepreneur Centers provide educations, support, and networking, and all undergraduate students can earn a Certificate in Entrepreneurial Management in addition to their undergraduate degree. Small Business Development Centers (SBDC) are collocated at each JPEC facility. The JPEC undergraduate program has been recognized as a National Model Program by the United States Association for Small Business and Entrepreneurship.

The Iowa Small Business Development Center (SBDC) conducts research, counsels, and trains business people in management, financing, and operating small businesses, and provides comprehensive information services and access to experts in a variety of fields. Specific to start-ups: a professional staff can offer counseling at no cost, training events, resources and answers to your questions.

Angel Investor Law

Up to 20% tax credit for investment made in qualifying businesses and community-based seed capital funds (House File 2271).

Other Legislation

Defer taxable income of qualified start-ups if funded by at least 25% venture capital. A three year deferral then five year payback schedule (House File 2592). Tax credits for equity investments in venture capital funds (up to 6% of equity investments). Tax credit certificates are issued by the Iowa Capital Investment Board (House File 2586).

Kansas

Overall, Kansas ranks very similar to Nebraska in many categories, and correspondingly shares some of the same assets and challenges. Areas where Kansas distinguishes itself include higher access to venture capital and higher immigration of knowledge workers, possible due to Kansas City being able to attract additional resources.

Kansas had approximately 56,088 small businesses employing between 1 and 500 employees in 2013. The Milken Institute's State Technology and Science Index ranked Iowa 31st overall and ranked the state 30th in the Risk Capital and Entrepreneurial Infrastructure Index.³³ CNBC recently ranked Kansas the 28th top state for business in 2016 but ranked the state 26th for cost of doing business and 28th for Technology and Innovation.³⁴

Overview of Kansas Programs

The Kansas Department of Commerce provides the DED equivalent for the State. They offer a nominal amount of services specifically for entrepreneurs. Services include:

- Business Development Offices – Retention and Expansion, Business Recruitment, Finance and Incentives
- Rural Development – Ag /food marketing, Communities, Office of Rural Opportunity
- Trade Development – Exporting consulting, data, foreign market research
- Workforce Centers- Business Development, Workforce Training, Small Business Entrepreneurship, Infrastructure & Site Development

³³ "State Technology and Science Index - 2016", Milken Institute, <http://statetechandscience.org/statetech.taf?page=state&state=KS>, (Accessed: November 2016).

³⁴ "America's Top States for Business 2016," CNBC, <http://www.cnbc.com/2016/07/12/americas-top-states-for-business-2016-the-list-and-ranking.html>, (Accessed: November 2016).

- International Trade Offices – Including resources on how to start a business and career services
- Community Assistance – Covers housing, redevelopment, infrastructure and community service.

Kansas has a number of initiatives in place to try and boost its attraction to start-ups. A few years ago the State Department of Commerce made a concerted effort to consolidate resources and information to simplify sourcing.

Key Initiatives

Kansas Economic Growth Act of 2004 (KEGA)

The Act established the Kansas Center for Entrepreneurship (Network Kansas).

Network Kansas

Devised to promote an entrepreneurial environment by providing a central portal that connects entrepreneurs and small business owners with the right resources they need. It offers expertise, education and economic resources at one place. This portal for business is devoted to the growth of entrepreneurship and small businesses throughout the State of Kansas. It is backed by more than 500 supporters' across the State.

Business Development Tax Credit Program

The Rural Business Development Tax Credit provides an innovative way to benefit start-up and existing business in Kansas, while simultaneously providing tax benefits to donors. The Kansas Economic Development Act of 2005 initiated the Rural Business Development Tax Credit Program (SB 453). Under this program \$2,000,000 in state tax credits are allocated each year toward rural economic development. These tax credits generate donations that in turn are used to fund economic development projects, provide support and offer financial assistance to rural businesses throughout the State.

The Resource Navigator

Provided by Network Kansas, The Resource Navigator connects individuals to more than 400 organizations that are ready to assist the entrepreneur in building their business.

Location One Information Systems (LOIS)

Available sites and buildings in a community controlled database.

Oklahoma

Oklahoma has received a lot of press lately for its entrepreneurial efforts. Much of this press may be well deserved, and due to recent economic factors such as the financial crisis (Oklahoma's unemployment rate is amongst the lowest in the country) and some unique programs that are being done on the city level in Oklahoma City and Tulsa. Overall, however, Oklahoma ranks the lowest (43rd) of all Nebraska's regional states reviewed. Statistically, there is not much venture capital and migration of high skilled workers coming to Oklahoma relative to other states.

Oklahoma had approximately 70,622 small businesses employing between 1 and 500 employees in 2006³⁵ and ranked 35th by the Milken Institute in the Risk Capital and Entrepreneurial Infrastructure Composite Index and 44th overall in the Institute's State Technology and Science Index.³⁶

CNN also ranked Oklahoma City as the #1 most business-friendly city in the U.S.³⁷ Their analysis stated "a steadily increasing proportion of college students is staying after graduation in the area, where the urban core is being revitalized. A decade ago, only 71% who earned bachelor's degrees stayed. Now it's 81%."³⁸ "The city also boasts a strong support system for entrepreneurs: A nonprofit, i2E, finds them funding. Existing businesses get help through the state's training system, CareerTech, which offers free education for employees."³⁹

Overview of Oklahoma Programs

A key policy of the State government has been to keep taxes low. Oklahoma has the fourth lowest total tax burden in the nation. When combining federal, state and local taxes, Oklahoma ranks #47, making it a very affordable state in which to live and do business. Oklahoma has a low corporate tax rate as well (6% for the top bracket).

Much of the Oklahoma's government's efforts are channeled through two organizations – OCAST and i2e. The Oklahoma Center for the Advancement of Science and Technology (OCAST) works to grow Oklahoma's knowledge-based economy by building the infrastructure of expertise and equipment needed to conduct nationally competitive research and development in Oklahoma and stimulate Oklahoma firms applying and producing technology. OCAST implements programs and initiatives to impact the entire technology development pipeline from basic research through commercialization and application.

OCAST offers services including:

- Seed funds for human health research
- Matching funds for research with commercial potential
- Assistance with the cost of preparing federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) proposals
- Modernization assistance for small and medium-sized Oklahoma manufacturers
- Information on federal research and technology transfer opportunities for businesses
- Assistance with accessing and using federal and state technology resources.
- Oklahoma's ranks a more respectable 30th in the Kaufman Index for venture capital funding, as there appears to be a lot of efforts made in this area.

i2E was created in 1997 in response to OCAST's initiative to establish a center to support technology commercialization. As a full-service venture development organization, i2E provides, through its various

³⁵ United States Small Business Administration, <https://www.sba.gov/sites/default/files/advocacy/Oklahoma.pdf>, (Accessed: November 2016).

³⁶ "State Technology and Science Index", Milken Institute, <http://statetechandscience.org/statetech.taf?page=state&state=OK>, (Accessed: November 2016).

³⁷ "Best Places to Launch," CNN, <http://money.cnn.com/galleries/2012/smallbusiness/1206/gallery.best-places-launch-cities/index.html>, (Accessed: November 2016).

³⁸ Ibid.

³⁹ Ibid.

programs, Oklahoma companies with essential strategic planning assistance, networking opportunities, and access to capital. i2E manages the following programs:

- **Oklahoma Technology Commercialization Center (OTCC)** assists researchers, inventors, entrepreneurs and companies to turn advanced technologies and high-tech start-up companies into exceptional business opportunities for Oklahoma.
- **OCAST Technology Business Finance Program (TBFP)** is designed to provide Oklahoma-based, advanced technology start-up companies with pre-seed financing and early stage risk capital to stimulate additional investments from private sources.
- **Oklahoma Seed Capital Revolving Fund**, a \$5 million fund designed to provide seed capital funding for Oklahoma entrepreneurs, start-up businesses, and expanding companies to develop, refine, and commercialize a product, process or innovation.

Key Initiatives

Oklahoma Creative Frontiers (<http://stateofcreativity.com>)

Formed in 2006, Creative Oklahoma (CO) is a statewide non-profit organization that promotes and catalyzes creative idea generation in individuals and institutions. The goal is to transform the State of Oklahoma through initiatives which lead to a more entrepreneurial and vibrant economy along with a better quality of life for its citizens. Through this organization, Oklahoma has become a “District of Creativity”, which is an international network of delegates. It consists of 12 regions of the world that have been working together in the field of creative innovation policies since 2004. The Annual Creativity World Forum (now in its 7th year) is run by Oklahoma Creative Frontiers and brings together entrepreneurs, knowledge workers and policymakers from around the globe to listen to inspiring speakers, exchange ideas and experiences, and network.

Small Business Advocacy (<http://www.okcommerce.gov/Businesses-And-Employers/Small-Business-Advocacy>)

In 2002, Oklahoma became one of the first states to pass a regulatory flexibility law called the Oklahoma Small Business Regulatory Flexibility Act. Through the Department of Commerce, the Act creates an opportunity for small businesses to be in the making, or changing, of rules that negatively impact small business. The Oklahoma Small Business Advocacy Committee, made up of 13 small business owners, meets quarterly for the sole purpose of hearing issues or concerns that small businesses have related to state agencies. Small business owners can contact committee members directly or voice concerns about state agency rules or other agency-related issues at one of the quarterly meetings.

Oklahoma Venture Forum (OVF)

The Oklahoma Venture Forum (OVF) is a non-profit group organized in Oklahoma City to encourage and promote economic and small business development through private enterprise. The Forum, formed in 1987, provides a means for investors, entrepreneurs and others to exchange experiences and ideas through discussions and studies of venture investing, and the development and growth of new and existing small businesses. Membership in the Oklahoma Venture Forum is open to anyone dedicated to fostering growth of new and existing business ventures in Oklahoma. Annual membership entitles the member to attend educational programs at the monthly luncheons, receive the monthly newsletter, membership directory, notices of upcoming events, and other member benefits.

Oklahoma Seed Capital Fund

Created in 2007, the Oklahoma Seed Capital Fund is a venture capital fund that provides seed and start-up stage equity financing to small, technology-based Oklahoma companies. The Seed Capital Fund looks and operates like a conventional venture fund with the specific goal of furthering economic activity and success in the State by bridging the early stage funding gap between personal sources and traditional sources of venture capital. An innovative public-private partnership, the Oklahoma Seed Capital Fund operates under the Economic Development Act of 1987 and is managed by a separate subsidiary of i2E. State funding is provided through OCAST. The Oklahoma Development Finance Authority and the Oklahoma Capital Investment Board are co-investors. The Seed Capital Fund seeks and accepts private investment which may offer state tax incentives and benefits.

Oklahoma Capital Investment Board (OCIB)

For many Oklahoma businesses, venture capital has been particularly difficult to locate. The Oklahoma Capital Investment Board (OCIB) supports investments in venture capital firms who will, in turn, make venture capital investments in Oklahoma businesses. The venture firms make their investments based on normal venture capital criteria and seek returns commensurate with the risk. OCIB supports investment in funds ranging from early stage venture capital to subordinated debt. The Oklahoma Capital Investment Board manages a \$100 million resource for the State.

MetaFund Corporation

MetaFund's broad mission as a non-profit, well-capitalized Community Development Financial Institution (CDFI) is the facilitation, development, and financing of Oklahoma businesses and community development projects. MetaFund has 22 investors, including 20 Oklahoma banks, and has more than 100 non-profit and government-related partners. Banks receive Community Reinvestment Act credit for investments and loans in, to, and through the corporation.

OSU Entrepreneurs Bootcamp

Oklahoma State University has just begun a new program that puts inspiring entrepreneurs (not regular students) through a mental workout. The OSU boot camp is designed for Oklahomans interested in launching their own ventures and those in the early stages of start-ups. The intense program concentrates on the key tools, perspectives and approaches that go into creating a viable business. Topics that are taught during the program range from creating a solid business concept to guerrilla marketing. A similar program at Syracuse University has been run for the past six years by Professor Michael Morris, the N. Malone Mitchell Chair in Entrepreneurship and founder of the new Entrepreneurship Department at OSU.

Missouri

Like many of the states in the region, Missouri's efforts towards entrepreneurship are a mixed picture. The State ranks in the middle in most categories, and appears to promote its low-cost environment as a major strength. This is even highlighted on state's economic development websites: "*Missouri is a low-cost state to do business in.*"

Missouri had approximately 113,565 small businesses employing between 1 and 500 employees in 2013⁴⁰. The Milken Institute ranks the state 28th overall in the State Technology and Science Index and

⁴⁰ U.S. Small Business Administration, <https://www.sba.gov/sites/default/files/advocacy/Missouri.pdf> , (Accessed: November 2016).

gives a rank of 7th for Risk Capital and Entrepreneurial Infrastructure Composite Index.⁴¹ Missouri's current unemployment rate of 4.4% is lower than the national rate.⁴²

Overview of Missouri Programs

The Missouri Department of Economic Development (DED) serves as the State's hub for entrepreneur and business services. These services are divided into several areas:

- Business Assistance – Includes information on financial incentives, outplacement assistance, job posting, Technology Incubators & Innovation Centers, and regional Project Managers to help existing businesses grow.
- Programs – A vast collection of state programs organized into categories: Business Development, Workforce Training, Small Business Entrepreneurship, Infrastructure & Site Development, Housing Development and Redevelopment.
- Individual Assistance – Including resources on how to start a business and career services.
- Community Assistance – Covers housing, redevelopment, infrastructure and community service.

Missouri has a myriad of programs focused on helping entrepreneurs, but specific information is difficult to find unless an entrepreneur knows what they are looking for. In order to sort through the hundreds of organizations designed to help businesses, MOSource Link created the Resource Navigator, an online, survey-based tool that a business owner can use to enter their business information and get a report on the services available to help them.

Many of the programs and assistance offered by Missouri services are related to tax credits and investment incentives. Missouri has very clearly positioned itself as a low-cost place to do business, hoping to attract and retain large corporate offices and industrial sites. This has proven to be a dangerous strategy—unless costs remain low when compared to other U.S. and international locations, firms looking for the lowest cost will be incentivized to look elsewhere.

There are notable exceptions to this theme in Missouri. Chief among them is the Missouri Small Business & Technology Development Center (SBTDC) network. This program offers business counseling, training Courses, technology development services for Missouri entrepreneurs, and in 2009, the program assisted more than 2,800 entrepreneurs and small business owners, resulting in 4,986 jobs created or retained and \$135 million in increased sales.⁴³

Key Initiatives

Missouri Small Business & Technology Development Center

Organized into 8 different regions, 33 service centers offer entrepreneurs access to a standardized set of services.

⁴¹ "State Technology and Science Index", Milken Institute, <http://statetechandscience.org/statetech.taf?page=state&state=MO>, (Accessed: November 2016).

⁴² U.S. Small Business Administration, <https://www.sba.gov/sites/default/files/advocacy/Missouri.pdf>, (Accessed: November 2016).

⁴³ Missouri Small Business & Technology Development Centers, www.missouribusiness.net/sbtac/success/index.asp (Accessed: November 2016).

- Business Counseling – Offers an excellent service covering business basics to more advanced concepts used by Fortune 500 companies like implementing a Balanced Scorecard management and strategic tool.
- Training Courses – A wide variety of training courses and seminars—available both online and in person at a local service center.
- Technology Development – This program educates entrepreneurs about SBIR/STTR opportunities, preparing successful proposals, implementing Phase II technical/business proposal assistance program, and assisting in Phase II management and commercialization

As mentioned above, the network provided services to 2,800 entrepreneurs resulting the creation or retention of nearly 5,000 jobs.

MOSource Link

Using a survey-based approach, this service allows entrepreneurs to sort through the hundreds of services available depending on their need. The drawback to this approach is the additional work of effectively tagging or categorizing all of the services offered. An even better approach would be to streamline the services offered—eliminating overlap and making the menu of choices simpler. If eliminating redundancies was not an option, then this type of tool is absolutely necessary to enable entrepreneurs to find the right resource to meet their needs.

Seed Capital Co-Investment Program

Designed to attract venture capital to Missouri by increasing the quality and quantity of high-tech startups to Missouri, this program leverages matching funds (up to \$150,000 per venture) from the Missouri Technology Corporation alongside private investment. Applicants for the program must be Missouri-based (either founded or relocating to Missouri), and must have direct start up experience or a committed mentor with startup experience. The program is especially designed for high-tech seed stage companies, with the goal of creating sustainable, high-paying, private-sector jobs.

Missouri TechLaunch

This program is targeted at pre-seed companies engaged in intellectual property development and evaluation, in-depth analysis of market potential, conducting competitive analysis, establishing proof of concept of a scientific discover, prototype design and development, and related activities. Direct investments from the Missouri Technology Corporation are made in the form of convertible debt up to \$75,000 each.

Missouri Building Entrepreneurial Capacity Program (MOBEC)

This program awards grants not to exceed \$500,000 to public or private non-profit institutions engaged in activities related to entrepreneurial support. The grant funding is meant to help enhance the capacity of these organizations to provide support, or to help attract federal and private research funding.

Additional links include:

- Missouri Department of Economic Development (<http://www.ded.mo.gov/>)
- Missouri Small Business & Technology Development Center (<http://www.missouribusiness.net/sbtac/index.asp>)
- MOSource Link (www.mosourcelink.com)
- Missouri Technology Corporation (<http://www.missouritechnology.com/home/>)

ECONOMIC IMPACT ANALYSIS OF THE NEBRASKA BUSINESS INNOVATION ACT

Invest Nebraska contracted with Dr. Eric Thompson and the Bureau of Business Research at the University of Nebraska-Lincoln to conduct a third-party, economic impact study of the programs under the Nebraska Business Innovation Act. This array of programs for early-stage businesses was approved unanimously by the Nebraska Legislature in 2011 and signed into law by the Governor. In 2014, the sunset date for Nebraska Business Innovation Act was extended from 2016 to 2021. The Business Innovation Act was the monumental legislation that emerged from 2010 Battelle Study commissioned by the Nebraska Department of Economic Development and the Nebraska Department of Labor as well as the report prepared for the 2010 Innovation and Entrepreneurship Task Force of the Nebraska Legislature.

Dr. Thompson's analysis found that participating Nebraska businesses continue to attract substantial follow-on investment, create high-paying jobs, generate revenue, and increase the state/local tax revenue relative to the support received from the Business Innovation Act programs.

- Participating businesses have raised \$6.72 of private investment for each \$1 of state funding.
 - This was higher than the \$5.12 of private investment for each \$1 of state funding estimated in the 2014 analysis of these programs.⁴⁴
- Participating businesses earned revenue of \$7.21 for every \$1 of state support.
 - This was far greater than the \$2.32 in revenue that was estimated in the 2014 analysis of these programs.⁴⁵
- These businesses have added 468 direct new jobs in the state with annual wages of \$26.36 million since initially participating in the Business Innovation Act programs.
 - This is an average wage of \$56,325 versus the Nebraska annual average wage of \$42,630.⁴⁶
 - This is higher than the 162 jobs paying an average wage of \$50,617 found in the 2014 report authored by Dr. Thompson.⁴⁷
- The annual economic impact is estimated in terms of employee compensation is \$52.07 million spread over 967 jobs (direct and indirect jobs).
 - This is an average wage of \$53,836 versus the Nebraska annual average wage of \$42,630.⁴⁸
 - This is higher than the 307 jobs paying an average wage of \$49,609 found in the 2014 economic analysis of these programs.⁴⁹

⁴⁴ "Supporting and Increasing Venture Capital in Nebraska", Invest Nebraska Corporation, <http://neded.org/business/talent-a-innovation-initiative>, (Accessed November 2016).

⁴⁵ Ibid.

⁴⁶ Bureau of Labor Statistics, http://www.bls.gov/oes/current/oes_ne.htm#00-0000, (Accessed November 2016).

⁴⁷ "Supporting and Increasing Venture Capital in Nebraska", Invest Nebraska Corporation, <http://neded.org/business/talent-a-innovation-initiative>, (Accessed November 2016).

⁴⁸ Bureau of Labor Statistics, http://www.bls.gov/oes/current/oes_ne.htm#00-0000, (Accessed November 2016).

- The total annual economic impact was \$188.46 million.
 - This is higher than the \$53.45 million economic impact estimated in the 2014 economic analysis of these programs.⁵⁰
- The annual state and local tax impact is estimated to have reached \$4.54 million annually.

While not present in the study, survey respondents reported spending a total of \$58.83 million on labor and other goods and services in 2014 and 2015. This means that participating businesses spent approximately \$36 million in goods and services, beyond labor, in the past two years.

The survey also found that 64 percent of the respondents rated their experience working with the Nebraska Department of Economic Development and/or Invest Nebraska as excellent and 21 percent ranked their experience as very good.

The Nebraska Business Innovation Act programs have proven to be very popular with new and early-stage companies as shown in Table 7. Since 2012, the Nebraska Department of Economic Development has received 331 applications for assistance under the various programs and awarded financial assistance to 221 companies. Companies have requested \$39.93 million under the programs but awarded \$18.223 of financial assistance.

The final component of the Nebraska Business Innovation Act is the Microenterprise Lending and Assistance Program. This program is administered by REAP and provides technical assistance and micro-loans up to \$50,000 to businesses across the state. In a recent survey conducted by REAP of 376 business owners, it found that 26 percent will need some type of financing in the next six months. Sixty-two percent of those indicated a need for a micro-loan of less than \$50,000. There continues to be a strong demand for micro-lending to Main Street businesses across the state.

⁴⁹ "Supporting and Increasing Venture Capital in Nebraska", Invest Nebraska Corporation, <http://neded.org/business/talent-a-innovation-initiative>, (Accessed November 2016).

⁵⁰ Ibid.

Table 7: Applications and Awards under the Nebraska Business Innovation Act; 2012-2015

Program	# of applications	# of awards/investments	Amount requested (\$M)	Amount awarded (\$M)
Commercialization (Invest Nebraska)	59	18	\$22.2	\$5.3
Prototype Grants	143	82	\$6.9	\$3.8
Academic R&D Grants	52	46	\$6.4	\$4.7
Value-Added Ag	34	34	\$3.1	\$3.1
SBIR/STTR	43	41	\$1.333	\$1.323

Source: Nebraska Department of Economic Development

POLICY RECOMMENDATIONS

For each of these policy recommendations, specific actions are identified to address the key objectives. As previously mentioned, this strategic plan is a roadmap for policy makers to value the progress achieved these past six years in Nebraska and envision the path for continued improvement and progress in the innovation economy. These actions include a mix of immediate and short-term endeavors to build upon the past and plan for the future. The immediate time period is defined as less than 1 year and the short-term time period is defined as 1 – 3 years. The policy recommendations are presented in no particular order.

1. *Increase funding for the Business Innovation Act programs.*

Rationale: Dr. Thompson's economic impact study of the Nebraska Business Innovation Act found that for each \$1 of funding under the Act's programs, participating companies received \$6.72 of follow-on investment and earned \$7.21 of revenue. Increasing the funding for the Nebraska Business Innovation Act was also recommended by Cromwell-Schmissser in their 2014 report to the Nebraska Legislature and by SRI in their 2016 report for the Nebraska Department of Economic Development. Since the program's inception in 2011 through 2015, the Nebraska Department of Economic Development has received 331 applications for assistance under the various programs and awarded financial assistance to 221 companies. Companies requested \$39.93 million under the Business Innovation Act programs but received less than half that amount (\$18.223 million). For the 2017-2019 biennium, increase funding by re-directing the returned loan capital paid to the Nebraska Department of Economic Development from

the State Small Business Credit Initiative. This funding from the U.S. Department of Treasury was intended for small business financing in the state. To maintain the integrity of that federal program, the returned capital should be redirected to the Nebraska Business Innovation Act. Other possible funding sources are identified in this report.

Proposed Policy Recommendation: Increase funding for the Business Innovation Act from the existing \$7 million to \$10 million. A reasonable portion of new funding should go to the micro-loan program for Main Street entrepreneurs in Nebraska to meet the microloan demand across the state.

Time Frame: Immediate

Metrics: Follow-on capital received, jobs created and retained, state and local taxes paid by companies, patents filed and received, revenue earned.

2. *Establish a Bioscience priority with a portion of new funding to the Nebraska Business Innovation Act*

Rationale: The 2010 Battelle Institute study for the Nebraska Department of Economic Development and the Nebraska Department of Labor, the 2010 Battelle Institute study for the Nebraska Legislature, and the 2016 SRI report for the University of Nebraska-Omaha and the University of Nebraska Medical Center presented hard data and recommendations on why R&D and early-stage financing in the bioscience industry are important to Nebraska. Unlike IT, bioscience (or biotech) requires a longer runway to develop a proof-of-concept, prototype, and commercially viable product/process. The possible innovations in the bioscience industry around Nebraska's core strengths: agriculture, food, water, and medicine, require special consideration under the Business Innovation Act.

Proposed Policy Recommendation: Set aside a portion of any new funding for bioscience related projects.

Time Frame: Short-term

Metrics: Companies receiving funding, follow-on investment, jobs created, average salary of jobs created, Nebraska educated employees, patents filed.

3. *Modify and update the existing Angel Investment Tax Credit Program.*

Rationale: The current Nebraska Angel Investment Tax Credit Program is allocated \$4 million annually. Due to the popularity of the program, the entire allotment of tax credits is allocated on January 1 of

each year. Rather than increasing the general fund appropriation under the program, consideration should be given to strengthen the program and encourage wider participation.

Proposed Policy Recommendation: Reduce the refundable tax credit from 35 percent (40 percent in distressed areas) to 20 percent, require that the certified investor invest at least the amount indicated on the allocation form to receive the tax credit, reduce the maximum amount an individual (and married couples filing jointly) certified investor is eligible to receive from \$300,000 to \$100,000, narrow the industries that are eligible under the program, and require annual disclosure of certified companies receiving investment under the program.

Time Frame: Immediate

Metrics: Annual venture capital received by Nebraska companies, the number of companies receiving Angel Investment Tax Credit investments, the number of certified angel investors, and the number of certified businesses.

4. *Update Nebraska's security law exclusions to mirror federal law.*

Rationale: Differences between security regulations at the federal and state level create confusion and uncertainty. Synchronizing the code will expand the scope of who qualifies as an accredited investor in Nebraska while maintaining the protection of individuals that the law was designed to protect.

Proposed Policy Recommendation: The Nebraska Revised Statute 8-1111 (8) definition of an "accredited investors" should be updated to match the federal definition in 17 CFR §230.501. The Nebraska definition does not include corporations, partnerships, or other entities organized for purposes other than to acquire the offered securities. The narrow definition excludes publicly traded companies and privately held companies that have both capacity and competency to make early stage investments. The federal definition includes all of these entities and Nebraska should as well.

Time Frame: Immediate

Metrics: Statute change

5. *Request the Nebraska Investment Council study investment opportunities in early stage and mid-market Nebraska companies.*

Rationale: The Nebraska Investment Council manages \$22 billion of state assets across 32 investment programs. Since 2005, the Nebraska Investment Council has been allocating part of its portfolio to

private equity through a fund of funds approach and commitments to direct funds. As of 9/30/2015, the council had made 38 investments in private equity funds totaling \$668,476,894 of paid-in capital with a total commitment of \$929,672,399. This represents approximately 5 percent of total assets. Included in this amount, the council made two investments in venture capital partnerships (Seed, Early-stage, and Later-stage). One firm is located in the San Francisco Bay Area and the other firm has locations on both coasts, Chicago, India and China.

Historically, elected leaders have avoided mandating any type of asset allocation. To honor that independence, this recommendation encourages the council to study potential alternative investment opportunities in Nebraska. As the state's entrepreneurial/innovation ecosystem continues to develop, there may be opportunities to consider keeping some of those investment dollars in Nebraska's backyard rather than funding business development growth in large metropolitan areas or foreign countries. It may behoove the council to look at what reasonable criteria should be established to consider Nebraska-based fund managers that target venture capital investments in Nebraska and the Midwest. This would be a step forward to address the lack of Series A capital that is needed in "flyover" regions of the country.

Proposed Policy Recommendation: While no legislation should be proposed, a request from the Task Force to the Nebraska Investment Council to study the policy recommendation is warranted.

Time Frame: Short-term

Metrics: Study request of the Nebraska Investment Council.

6. *Establish an Economic Development Special Committee in the Nebraska Legislature.*

Rationale: Every legislative session, a large number of legislative bills are introduced that impact economic development efforts in Nebraska. Unfortunately, these proposals are assigned to legislative committees based on the bill's subject matter without considering the trends in legislation and a comprehensive assessment of economic development legislation. Prior to the legislative session, the Special Committee can convene to define categories and legislative subject matter areas to be considered "economic development". These areas could include business taxation, business incentives, worker attraction & retention, agricultural incentives, workforce housing, business financing and entrepreneurial development. During the legislative session, the Special Committee can compile a list of introduced legislation in each of the categories to determine economic development trends, legislation likely to move out of committee due to priority bill designation or part of a Governor's package, and policy implications on other economic development areas. The Committee could also develop an annual report card on economic development metrics to measure the state's progress in specific areas.

Proposed Policy Recommendation: Create a Special Committee comprised of legislative leaders and committed senators that meet during the legislative session and periodically during the interim.

Time Frame: Short-term

Metrics: The number of bills introduced each legislative session in specific economic development categories.

7. Establish an Incubator Network Program across Nebraska

Rationale: A non-profit organization usually operates an incubator to accelerate the growth and success of entrepreneurial companies through an array of business support resources and services that could include physical space, capital, coaching, common services, and networking connections. Currently in Nebraska, existing incubators are focused on software (for-profit incubators) or the retail/service industries (local economic development incubators). However academic and scientific incubators are almost non-existent and much harder to develop. It is often mistakenly assumed that university R&D simply translates into commercialization (new business formation and job creation). The truth of the matter is that a wide chasm exists in Nebraska. There are currently no operating entities that focus on commercializing biosciences or “anything-but-software” in the state. *If Nebraska is to transition the R&D expenditures at universities into innovation that creates startups and jobs, some network of incubators must be established.* The needs of a medical bioscience incubator at the University of Nebraska Medical Center is different from an advanced manufacturing incubator at Central Community College, a food science incubator at the University of Nebraska-Lincoln, and an agriculture innovation incubator at West Central Community College. Incubators differ from research and technology parks in their dedication to startup and early-stage companies that take innovative products and process to market.

Proposed Policy Recommendation: Create a new Incubator Network Program within the Nebraska Department of Economic Development as part of the Business Innovation Division. The program would be funded at \$1 million and provide matching funds for the startup costs and program development for incubators and innovation centers. Criteria for the incubators may include:

- Collaborate with a post-secondary educational institution and tech transfer offices when appropriate. However, to force collaboration, post-secondary educational institutions or organizations directly affiliated with post-secondary educational institutions would not be eligible;
- An established mentor network in the incubator focused field; and
- A list of advisory services offered; and
- A time limit of no more than two years for companies to locate in the incubator or innovation center.

Time Frame: Short-term

Metrics: Number of companies receiving assistance through the Incubator Network Program, follow-on investment received by participating companies, jobs created, and participating companies survival after three years (five years).

8. *Strengthen the InternNE program for STEM-based occupations*

Rationale: Workforce infrastructure development should be an ongoing objective of a knowledge-based economy. Since the passage of the Technology and Innovation Initiative in 2011, the InternNE program has been at the forefront of connecting college students and employers across Nebraska. A recent survey of participating students in the InternNE program found that 40 percent of the respondents rated their internships a 10 out of 10 and of the students who shared their future plans in the survey, around 50 percent stated that they had been hired on as full-time employees with the companies for which they had interned.⁵¹ For calendar year 2015, 814 internship positions were filled disbursing \$2,158,674 of financial assistance to 476 companies.⁵²

Proposed Policy Recommendation: Currently, funding of \$1.5 million for the InternNE program comes from the Customized Job Training program at the Nebraska Department of Economic Development. Serious consideration should be given to making the InternNE program a stand-alone budget item, provide a dedicated source of re-programmed revenue, increase funding to \$2 million, and increase the amount provided to STEM internships from \$5,000 to \$10,000.

Time Frame: Short-term

Metrics: Internship positions funded in STEM fields, percentage of interns that are hired on by companies in Nebraska as full-time employees.

9. *Encourage the development of an industry-based cluster FinTech incubator in collaboration with the financial services sector.*

Rationale: Taking innovative ideas and turning them into new jobs and businesses requires a public-private partnership to implement the economic development strategies to establish an innovation economy. These strategies may include building necessary infrastructure, such as incubators, or

⁵¹ *Legislative Annual Report, 2015 – Nebraska Department of Economic Development,* http://neded.org/files/AnnualReport/DED_2015_CalendarLegAnnualReport.pdf, (Accessed November 2016).

⁵² Ibid.

providing support for critical resources, such as a mentor network. Nebraska is fortunate to have the Nebraska Bankers Association which includes banks of all sizes. These financial institutions can be the first customers for a startup and provide the necessary mentoring needed from a customer perspective. Other examples of industry-based cluster incubators collaborating with the private sector include Agtech and the Nebraska Farm Bureau and/or the Nebraska Cattlemen Association, Bioscience and Bio Nebraska, and Talent Analytics and Predictive Risk Services with private talent assessment companies in the state. Nebraska Innovation Campus can be a resource for incubators as well.

Proposed Policy Recommendation: Although no legislation is being proposed, the Task Force should request that a financial services organization like the Nebraska Bankers Association, in coordination with the Nebraska Department of Economic Development and other stakeholders, develop a FinTech incubator.

Time Frame: Short-term

Metrics: Companies receiving funding, follow-on investment, jobs created, average salary of jobs created.

SOURCES OF FUNDING

Given the tight fiscal situation in Nebraska, any new funding for the suggested policy options should come from existing sources. Reallocating funding from ongoing programs, especially those that claim to advance innovation and grow the state's economy with no measurable metrics should be reviewed by policy makers.

Consideration should be given to reallocate funding from the following economic development programs:

- Re-program funding from the Microenterprise Tax Credit Program and the Experimental Program to Stimulate Competitive Research (EPSCoR). Total funding for the Microenterprise Tax Credit Program is capped at \$2 million annually. Applications in 2014 and 2015 indicate that the tax credit program is being underutilized by Nebraska businesses (tax credits authorized in 2014 - \$1,563,529; 2015 - \$1,289,038).⁵³
- Reallocate returned loan capital paid to the Nebraska Department of Economic Development from the federal State Small Business Credit Initiative (SSBCI) Program that.
- Redeploy state general fund appropriations for university research initiatives towards applied university R&D with industry and talent connections.

Potential existing revenue sources to tap for innovation and talent objectives include:

⁵³ Nebraska Tax Incentives – 2015 Annual Report to the Nebraska Legislature; Nebraska Department of Revenue, July 15, 2016.

- Seek dedicated revenue streams from existing state taxes, fees, and settlements generated by industry activities, including from the cigarette tax, uranium severance tax, financial institutions tax, and the insurance premium tax.
- Consider use of Nebraska Investment Finance Authority (NIFA) to fund technical assistance initiatives.

Nebraska should aggressively pursue federal funding opportunities to accelerate these recommendations when such grant openings are made available. Existing federal grants that have been utilized by other states to advance their innovation economy include the i6 Challenge (U.S. Department of Ecommerce's Economic Development Administration), the Small Business Investment Company Program (U.S. Small Business Administration), the Rural Business Investment Company Program (United States Department of Agriculture), and the I-Corps Program (National Science Foundation).

APPENDIX A

Aggregated Venture Capital Investment Dollars by State											
2011			2012			2013					
Rank	State	Deals	Total	Rank	State	Deals	Total	Rank	State	Deals	Total
1	California	1,640	\$ 15,655,721,700	1	California	1,631	\$ 14,921,190,200	1	California	1,655	\$ 15,350,181,900
2	Massachusetts	401	\$ 3,200,260,200	2	Massachusetts	430	\$ 3,438,250,300	2	Massachusetts	381	\$ 3,203,991,900
3	New York	354	\$ 2,603,604,400	3	New York	349	\$ 1,939,231,400	3	New York	419	\$ 2,878,799,600
4	Texas	169	\$ 1,651,378,300	4	Texas	168	\$ 1,038,381,800	4	Texas	159	\$ 1,364,937,700
5	Illinois	103	\$ 809,084,500	5	Washington	110	\$ 858,121,700	5	Washington	130	\$ 942,640,600
6	Colorado	115	\$ 667,735,400	6	Illinois	84	\$ 644,663,700	6	Maryland	76	\$ 693,853,400
7	Washington	121	\$ 559,223,900	7	Colorado	107	\$ 636,904,500	7	Virginia	63	\$ 601,105,900
8	Pennsylvania	155	\$ 550,521,400	8	Pennsylvania	189	\$ 573,964,400	8	Illinois	92	\$ 491,945,700
9	Virginia	75	\$ 517,669,400	9	New Jersey	55	\$ 428,239,100	9	Colorado	83	\$ 472,659,500
10	New Jersey	63	\$ 456,291,900	10	Maryland	62	\$ 409,676,400	10	Pennsylvania	238	\$ 467,826,200
11	Maryland	74	\$ 445,253,400	11	Utah	44	\$ 336,897,200	11	Georgia	41	\$ 437,725,400
12	Georgia	62	\$ 433,227,200	12	Virginia	77	\$ 270,630,200	12	Florida	46	\$ 426,894,400
13	Florida	56	\$ 352,907,100	13	Ohio	56	\$ 270,619,300	13	New Jersey	43	\$ 326,578,700
14	Minnesota	48	\$ 332,447,500	14	Georgia	55	\$ 270,041,000	14	Utah	35	\$ 324,683,700
15	North Carolina	48	\$ 306,710,700	15	Arizona	20	\$ 267,223,800	15	District of Columbia	38	\$ 292,490,600
16	Utah	47	\$ 280,038,400	16	Minnesota	31	\$ 259,907,000	16	North Carolina	50	\$ 285,327,100
17	Arizona	26	\$ 240,538,200	17	Michigan	52	\$ 246,452,000	17	Minnesota	36	\$ 274,636,000
18	Indiana	14	\$ 177,927,100	18	Florida	35	\$ 207,425,200	18	Ohio	41	\$ 260,665,700
19	Ohio	70	\$ 173,146,400	19	North Carolina	35	\$ 184,429,300	19	Connecticut	52	\$ 238,038,500
20	Oregon	37	\$ 164,310,800	20	Connecticut	49	\$ 157,763,200	20	Oregon	37	\$ 139,306,800
21	Connecticut	50	\$ 163,122,700	21	Oregon	30	\$ 125,267,800	21	Michigan	74	\$ 128,755,100
22	Missouri	22	\$ 134,415,300	22	Wisconsin	14	\$ 93,295,900	22	Arizona	25	\$ 113,299,300
23	Tennessee	44	\$ 118,807,800	23	Tennessee	38	\$ 90,028,800	23	Tennessee	52	\$ 106,640,000
24	Michigan	34	\$ 83,461,900	24	Indiana	17	\$ 89,637,300	24	New Hampshire	19	\$ 103,838,900
25	New Mexico	10	\$ 66,714,400	25	Rhode Island	15	\$ 85,059,100	25	Delaware	5	\$ 100,793,000
26	New Hampshire	15	\$ 62,508,100	26	New Hampshire	8	\$ 81,126,000	26	South Carolina	14	\$ 86,381,200
27	Kansas	47	\$ 54,463,600	27	District of Columbia	26	\$ 64,990,200	27	Arkansas	4	\$ 85,507,000
28	District of Columbia	13	\$ 53,546,600	28	Kansas	12	\$ 47,985,000	28	Rhode Island	13	\$ 81,662,800
29	South Carolina	3	\$ 51,452,000	29	South Carolina	5	\$ 42,785,600	29	Missouri	38	\$ 79,984,100
30	Wisconsin	15	\$ 49,857,800	30	New Mexico	15	\$ 35,181,300	30	Wisconsin	18	\$ 33,876,400
31	Rhode Island	9	\$ 42,151,000	31	Oklahoma	6	\$ 33,036,000	31	Kansas	10	\$ 32,851,200
32	Maine	5	\$ 38,629,000	32	Kentucky	8	\$ 23,999,000	32	Maine	5	\$ 28,042,200
33	Iowa	3	\$ 28,402,000	33	Alabama	6	\$ 23,106,000	33	New Mexico	17	\$ 26,807,100
34	Nevada	4	\$ 26,950,000	34	Missouri	12	\$ 21,461,000	34	Iowa	2	\$ 25,499,900
35	Vermont	8	\$ 25,222,700	35	Idaho	4	\$ 15,150,000	35	Indiana	15	\$ 25,413,100
36	Oklahoma	3	\$ 23,115,000	36	West Virginia	3	\$ 14,568,000	36	North Dakota	3	\$ 24,052,000
37	Louisiana	8	\$ 21,538,900	37	Maine	6	\$ 14,037,200	37	Vermont	9	\$ 21,042,300
38	Delaware	10	\$ 20,548,500	38	Louisiana	4	\$ 12,007,200	38	Louisiana	7	\$ 15,731,200
39	Kentucky	9	\$ 13,195,900	39	Delaware	6	\$ 9,221,900	39	Kentucky	7	\$ 15,374,700
40	Idaho	3	\$ 5,145,000	40	Mississippi	2	\$ 6,248,000	40	South Dakota	1	\$ 11,900,000
41	South Dakota	2	\$ 4,146,000	41	Arkansas	1	\$ 5,091,000	41	Idaho	2	\$ 11,500,000
42	North Dakota	1	\$ 4,000,000	42	Iowa	1	\$ 5,000,000	42	Nebraska	9	\$ 11,294,900
43	Alabama	2	\$ 3,515,100	43	Vermont	5	\$ 4,415,000	43	Nevada	6	\$ 10,425,200
44	Montana	2	\$ 3,215,000	44	Montana	6	\$ 4,025,000	44	Oklahoma	8	\$ 8,213,900
45	West Virginia	2	\$ 2,100,000	45	Nebraska	4	\$ 3,365,000	45	Alabama	4	\$ 4,237,000
46	Hawaii	3	\$ 600,000	46	Nevada	4	\$ 3,273,200	46	Hawaii	3	\$ 2,469,000
47	Arkansas	-	\$ -	47	North Dakota	1	\$ 2,400,000	47	West Virginia	1	\$ 1,200,000
48	Mississippi	-	\$ -	48	Hawaii	3	\$ 645,000	48	Mississippi	2	\$ 700,000
49	Nebraska	-	\$ -	49	South Dakota	-	\$ -	49	Montana	1	\$ 25,000
50	Alaska	-	\$ -	50	Alaska	-	\$ -	50	Alaska	-	\$ -
51	Wyoming	-	\$ -	51	Wyoming	-	\$ -	51	Wyoming	-	\$ -

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Aggregated Venture Capital Investment Dollars by State							
2014				2015			
Rank	State	Deals	Total	Rank	State	Deals	Total
1	California	1,778	\$ 27,309,639,900	1	California	1,773	\$ 33,666,771,300
2	Massachusetts	392	\$ 4,630,336,800	2	New York	462	\$ 6,230,598,100
3	New York	421	\$ 4,323,166,900	3	Massachusetts	426	\$ 5,713,623,700
4	Texas	186	\$ 1,493,136,700	4	Washington	116	\$ 1,210,820,700
5	Washington	113	\$ 1,262,525,300	5	Texas	163	\$ 1,170,788,400
6	Illinois	99	\$ 1,082,351,700	6	Illinois	96	\$ 1,119,035,600
7	Florida	33	\$ 812,643,900	7	New Jersey	53	\$ 966,108,200
8	Utah	45	\$ 807,576,600	8	Georgia	71	\$ 836,077,800
9	Colorado	83	\$ 790,156,600	9	Maryland	71	\$ 820,012,600
10	Pennsylvania	185	\$ 761,230,400	10	Colorado	87	\$ 782,622,600
11	Connecticut	54	\$ 548,525,100	11	Utah	55	\$ 719,517,800
12	Virginia	77	\$ 521,227,300	12	North Carolina	63	\$ 675,500,300
13	Georgia	60	\$ 514,867,600	13	Pennsylvania	201	\$ 638,164,200
14	North Carolina	52	\$ 343,407,400	14	Florida	58	\$ 460,769,200
15	Minnesota	37	\$ 340,298,800	15	Connecticut	57	\$ 446,667,100
16	Maryland	82	\$ 339,682,400	16	Virginia	74	\$ 422,578,300
17	New Jersey	35	\$ 321,114,700	17	Minnesota	30	\$ 371,688,400
18	Ohio	64	\$ 268,211,900	18	Michigan	54	\$ 328,400,000
19	Arizona	30	\$ 259,105,500	19	Ohio	71	\$ 262,718,900
20	District of Columbia	32	\$ 242,547,100	20	Missouri	43	\$ 257,182,300
21	Michigan	48	\$ 221,406,600	21	Oregon	44	\$ 226,470,100
22	Oregon	32	\$ 190,762,100	22	Tennessee	75	\$ 193,817,900
23	Missouri	48	\$ 170,110,100	23	District of Columbia	23	\$ 171,977,200
24	Rhode Island	15	\$ 125,370,200	24	New Hampshire	13	\$ 125,708,600
25	Tennessee	58	\$ 116,124,800	25	Nebraska	13	\$ 119,981,100
26	New Hampshire	9	\$ 112,793,300	26	Arizona	28	\$ 113,512,000
27	Wisconsin	28	\$ 91,462,000	27	Delaware	9	\$ 98,155,000
28	Kansas	11	\$ 51,441,100	28	Maine	12	\$ 88,168,000
29	Nevada	8	\$ 50,266,000	29	Wisconsin	23	\$ 87,851,000
30	South Carolina	5	\$ 47,731,000	30	New Mexico	17	\$ 73,774,900
31	Kentucky	14	\$ 47,557,000	31	Idaho	3	\$ 63,000,100
32	Louisiana	4	\$ 47,471,000	32	Kansas	5	\$ 56,199,800
33	Indiana	19	\$ 44,106,800	33	Indiana	17	\$ 54,942,100
34	Nebraska	18	\$ 41,530,300	34	South Carolina	7	\$ 53,693,100
35	Vermont	13	\$ 39,513,500	35	Alabama	3	\$ 39,100,000
36	Iowa	8	\$ 21,980,000	36	Oklahoma	10	\$ 29,758,000
37	Arkansas	5	\$ 19,874,100	37	Vermont	9	\$ 22,994,000
38	Maine	7	\$ 17,169,000	38	Kentucky	4	\$ 22,582,000
39	Delaware	8	\$ 16,273,800	39	Rhode Island	11	\$ 16,262,900
40	Oklahoma	8	\$ 14,455,100	40	Iowa	4	\$ 12,276,000
41	New Mexico	13	\$ 12,790,000	41	Nevada	6	\$ 12,242,000
42	Alabama	3	\$ 10,894,000	42	Arkansas	11	\$ 10,375,000
43	North Dakota	2	\$ 7,500,100	43	Louisiana	3	\$ 10,100,000
44	South Dakota	1	\$ 3,001,000	44	South Dakota	2	\$ 7,052,000
45	Idaho	2	\$ 1,873,000	45	Montana	2	\$ 1,500,000
46	West Virginia	2	\$ 1,570,900	46	North Dakota	1	\$ 50,000
47	Hawaii	5	\$ 1,296,000	47	Hawaii	-	\$ -
48	Mississippi	1	\$ -	48	Mississippi	-	\$ -
49	Montana	-	\$ -	49	West Virginia	-	\$ -
50	Alaska	-	\$ -	50	Alaska	-	\$ -
51	Wyoming	-	\$ -	51	Wyoming	-	\$ -

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APPENDIX B



A Bureau of Business Research Report
From the University of Nebraska—Lincoln

Final Report

The Annual Economic Impact of Businesses Supported by Nebraska Business Innovation Act Programs 2016 Update

Prepared for the Invest Nebraska Corporation

November 18, 2016
Bureau of Business Research
Department of Economics
College of Business Administration
University of Nebraska—Lincoln
Dr. Eric Thompson, Director

Executive Summary

The Nebraska Business Innovation Act was part of the Talent and Innovation Initiative passed by the Nebraska Legislature and signed into law in 2011. Like similar policies in other states, the initiative is designed to promote successful entrepreneurial firms by providing access to capital in early stages of product development. The Business Innovation Act provides such support through five primary programs: 1) the Pre-Seed Prototype grant program; 2) matching state support for Small Business Innovation Research (SBIR) grants; 3) the Academic Research and Development program; 4) the Seed/Commercialization program; and the 5) Microenterprise Loan and Technical Assistance Program. There are additional incentives for businesses involved in value-added agriculture. This study by the University of Nebraska-Lincoln Bureau of Business Research provides an economic impact assessment of Nebraska businesses that have been supported by Business Innovation Act programs.

The analysis finds that Nebraska businesses have attracted considerable investment in relation to support received from Business Innovation Act programs. Businesses receiving support have raised \$6.72 in capital for every \$1 of state funding, all of which has been raised after the required initial match. These investments take the form of equity, loans, grants, and other sources of capital, and help businesses throughout the product development process. Successful businesses will ultimately be funded through revenue from sales, and some Nebraska businesses have already advanced to the revenue-earning stage. In fact, the study found that participating businesses have already earned \$7.21 in revenue for every \$1 of state support. This figure is far greater than the \$2.32 in revenue that was estimated in a 2014 analysis of these programs.

The businesses participating in Nebraska Business Innovation Act programs have several direct economic impacts on Nebraska. In particular, these businesses have added 468 new jobs in the state with annual wages of \$26.36 million since initial participation in Business Innovation Act programs. These businesses also had a significant total economic impact and tax revenue impact. The total annual economic impact was \$188.46 million. The economic impact in terms of value-added is \$97.18 million. The annual economic impact in terms of employee compensation is \$52.07 million spread over 967 jobs. The state and local tax impact is estimated to have reached \$4.54 million annually; this figure will grow as businesses advance further through the development and commercialization process.

The study provides evidence that Nebraska firms are successfully leveraging the support received from Nebraska Business Innovation Act programs by attracting various forms of investment and by generating substantial streams of revenue. These activities are, in turn, resulting in the creation of jobs and wages that are further promoting economic development in the State of Nebraska.

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1. Introduction

This report provides an estimate of the economic impact of businesses that have been supported by Nebraska Business Innovation Act programs. Under the Act, part of the Nebraska Talent and Innovation Act adopted in 2011, the State of Nebraska provides support to businesses through five broad programs: 1) the Pre-Seed Prototype Grant program; 2) matching state support for federal Small Business Innovation Research (SBIR) grants; 3) the Academic Research and Development program; 4) the Seed/Commercialization program; and the 5) Microenterprise Loan and Technical Assistance Program.

The programs are designed to assist businesses, many of which are in the early stages of developing new products and technologies, in a variety of ways. For example, the programs allow small businesses to better leverage federal dollars received through the SBIR and other programs that invest in small business research and development. The programs also encourage collaborations between small businesses and university personnel in the development of new technologies and services. In these ways, the programs offered through Act have the potential to spur job creation and economic growth throughout the state.

This study represents the second effort to examine the annual economic impact of the businesses that have been supported through such programs. The first study completed in 2014 demonstrated that the incentives offered through the Business Innovation Act yielded a number of direct and indirect benefits to the State of Nebraska. In particular, businesses receiving support through the Act to promote product development were successful at attracting investment from a variety of sources, and were able to generate considerable amounts of revenue in relation to the dollars received from the State of Nebraska. Further, companies receiving support were able to create a large number of jobs in the state, with a considerable amount of total compensation and benefits. Economic modeling was used to estimate the indirect impacts that job creation and salaries; estimates showed that jobs and salaries created as a result of state investment generated considerable indirect impacts through additional job creation and through federal, state, and local taxes.

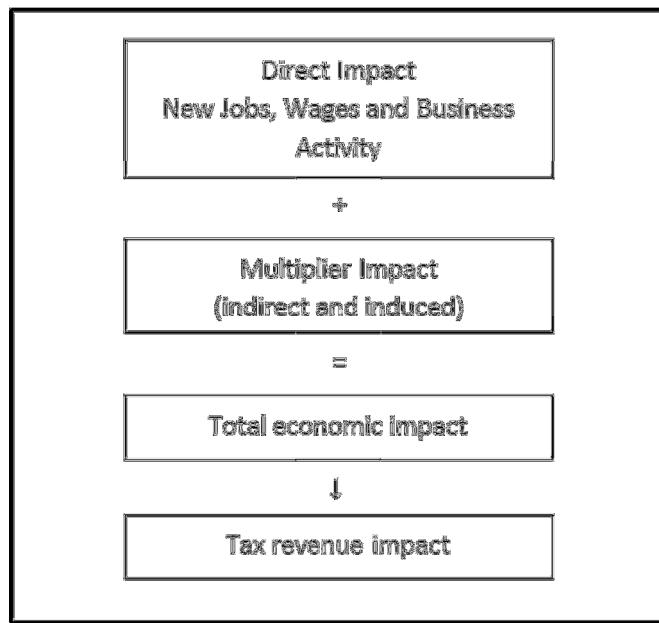
2. Methodology

Data for the present report were derived from three sources. First, a questionnaire was delivered to Nebraska firms that had taken advantage of one of the programs offered through the Business Innovation Act in the past. The survey was delivered to companies in early October, 2016. Personnel from the Nebraska Department of Economic Development were responsible for the delivery of the survey. Two attempts to follow up with firms receiving assistance were made in mid- and late-October,

2016. In total, 182 businesses were invited to participate in the questionnaire; 72 businesses provided responses. The questionnaire asked participants to state the total amount of spending in 2014 and 2015, list the number of employees added since receiving assistance, the average salary of new hires, the amount of capital raised, and how that capital had been spent. Second, administrative data were collected from the Invest Nebraska Corporation (INC). Data from INC pertained to Nebraska companies in the Commercialization program that had received startup support from INC through a loan, equity investment, or convertible debt. Data from INC also included information about the number of employees at each company, the total amount of salary paid by each company, the total amount and type of follow-on capital raised by each company, and the total amount of revenue generated. In total, data on 11 Nebraska businesses were derived from INC records. Third, researchers examined records from the 2014 economic impact analysis to determine whether any non-respondents to the 2016 survey had provided earlier responses to the 2014 survey. When possible, researchers pulled records from these companies to supplement data from the 2016 survey and the INC records. An additional 29 records were added to the dataset via this method. In total, data on 112 firms was used to conduct the economic impact analysis.

Using information from the surveys and administrative data allowed investigators to compute the direct effects of investment through the Nebraska Business Innovation Act programs. In particular, it was possible to compute direct economic impact through new jobs, wage, and business activity. This information was then used to estimate the “multiplier” effects which capture the additional economic activity that takes place as companies grow, and as employees support other local businesses. For example, growing firms make additional purchases of supplies and services from other businesses within the state, supporting sales, wages and employment at these businesses. This is known as the indirect impact. In addition, the new employees of firms spend their paychecks on ordinary household items such as housing (mortgage payment or rent), food, retail items, entertainment, insurance, health care, or transportation. This spending supports other businesses throughout the state and is known as the induced impact. The indirect and induced impacts together form the multiplier impact, which is the additional economic activity in the state which results from the initial direct impact when businesses expand. The total economic impact is the sum of the direct impact and the multiplier impact, as seen in Figure 1 below.

Figure 5. The Economic Impact Process



The multiplier impact is estimated using the IMPLAN model. IMPLAN is a widely used input-output analysis software package and database which provides a detailed picture of the economy for any state and sub-state region in the nation. Specifically, the IMPLAN model can be used to calculate the relationship between the direct economic and multiplier impact. For example, for each job created at a firm involved in a Nebraska Business Innovation Act program, the IMPLAN model will estimate the additional job or jobs in the Nebraska economy due to the multiplier impact. Direct, multiplier and total economic impacts will be prepared for each of four economic concepts: *output, value-added, proprietor and labor income and employment*.

- *Output* is equivalent to an increase in business activity.
- *Value-added* is analogous to gross domestic product and reflects the increase in labor income, proprietor profits, business taxes paid and capital consumption in the economy.
- *Employee compensation*, which includes proprietor and labor income, corresponds closely with personal income estimates maintained annually for state and local units of government by the U.S. Department of Commerce, Bureau of Economic Analysis.
- *Employment* is a critical measure to consider, and includes both full and part-time positions.

These economic impacts also imply tax impacts for the Nebraska economy. In particular, businesses receiving investments pay direct taxes to state and local government and to the Federal government. There are also additional tax revenue impacts beyond these direct payments. Employees receiving the newly created jobs pay income taxes on this income and sales taxes on their spending. Wages also support mortgage and rent payments, and therefore, local property taxes. At the same time business patronized by these employees pay property taxes. These additional state and local tax payments also must be included in any tax revenue estimates. For example, estimates of wages can be used to calculate estimates income taxes using the effective, or average, tax rate paid on income in the state. This effective income tax rate is 2.7 percent. Wages also lead to sales tax, depending on the percentage of income which is spent on taxable sales. In Nebraska, approximately 40 percent of income is spent on taxable sales. This formula can be applied to the total wage impact and multiplied by 7 percent to yield an estimate of state and local sales tax impact. Income also yields taxable property. There is approximately \$1.60 of taxable property in Nebraska for each \$1 of annual income. This rate can be applied to the total employee compensation impact and a weighted average state property tax rate of 2 percent to yield an estimate of the property tax impact.

A. Sources of Data

Data on business activity for firms participating in Nebraska Business Innovation Act programs were gathered from both administrative records and a business survey. Administrative records were available for 11 firms which participate in the Commercialization program, given that the Invest Nebraska Program invests in these firms. Surveys sent by Nebraska Department of Economic Development personnel yielded information on 72 of the approximately 182 other firms participating in the other Nebraska Business Innovation Act programs. Survey responses represent a response rate of just under 40 percent. For firms that did not respond to the survey invitation, records from 2014 were analyzed and incorporated where appropriate; 29 records were added via this approach.

While some firms received investments from multiple Nebraska Business Innovation Act programs, firms were sent only a single survey form. For example, firms might receive \$50,000 in funding for an initial Prototype program grant and as development proceeds also receive a Commercialization program investment. Similarly, firms may receive an initial \$5,000 grant for the SBIR 0 program, in order to develop a SBIR 1 grant application for a Federal agency, and may later receive a SBIR 1 or SBIR 2 grant

from the Federal government, and a matching grant from the State of Nebraska. This analysis focused on the most recent investment made in a company through the Nebraska Business Innovation program.

Participants in the Commercialization program or respondents to the survey provide data about their business including key measures of growth. In particular, businesses report growth in full- and part-time employment since their initial application to the Nebraska Business Innovation Act program and the average wages and benefits (i.e., employee compensation) of any new jobs. Application dates were a good measure because the start date of most projects is very close to the application date. Data on job growth and average wages and benefits were used to estimate the growth of businesses involved in the program. In particular, the research team measured cumulative job growth in each business. Reported wage and benefit data were used to estimate the cumulative growth in employee compensation. Estimates of value-added and output in each participating firm were estimated based on employee compensation, using industry averages.

Growth in employment, employee compensation, value-added and output is the measure of the direct economic impact of each participating business. Direct annual economic impacts were summed across businesses to yield the total economic impact from businesses participating in Nebraska Business Innovation Act programs. This focus on growth as a measure of economic impact was appropriate for multiple reasons. First of all, some businesses were established businesses with employees when applying to the program. The program helped these businesses to develop a new product or process and expand employment. The expansion of employment is the appropriate measure of impact for these firms. In many other cases, participating businesses were at a very early stage of development when applying for a grant with a Nebraska Business Innovation Act program. For these firms, growth in employment is essentially equivalent to current employment.

The point is that the focus on business growth better reflects the amount of business activity associated with Nebraska Business Innovation Act programs. The approach is superior to simply counting all employment, employee compensation and sales of firms which received funding, given that some firms already had significant levels of employment when first applying to a program.

Businesses responding to the survey also provided other key information. Most importantly survey respondents provided information about additional funds obtained in the period since applying to a

Nebraska Business Innovation Act Program. In particular, survey respondents indicated: 1) how much additional funding that has been received from equity investments, loans, grants and other sources and 2) how much revenue, if any, has been earned by selling products and services. All of this information allows for an analysis of the return in addition investment and revenue for each dollar invested by the State of Nebraska in a SBIR, Prototype, Academic Research and Development and Commercialization programs. Further, this information also was available in the administrative records of firms involved in the Commercialization program. Administrative records were used to account total amount of support provided through the state, as well as the total amount of the initial match.

3. Economic Impact Estimates

Early stage investments of the type supported by the Nebraska Business Innovation Act programs take time to develop. Projects often do not immediately yield wage and salary employment or revenue. Further, prototype projects may need sufficient development to establish a proof of concept before being able to attract further investment. This implies that at any point in time the portfolio of funded projects will include both new projects which have not yet yielded employment or revenue, as well as completed projects which are already at the employment and revenue stage.

This section of the report examines the portfolio of funded projects using both survey and administrative data on businesses in the commercialization program and survey data on other businesses. Analyses consider the most recent programs utilized by participating business and the number of projects at various stages of completion. This reflects the fact that the Nebraska Business Innovation Act provides a suite of programs for businesses in the early stages of development including pre-seed funding as well as seed funding. For example, pre-seed funding includes the Prototype program in which firms may be involved in the development of a prototype of a new product or service requiring a proof of concept. There is also a SBIR Phase 0 grant where businesses receive funding to develop an SBIR Phase 1 proposal for submission to a Federal agency. Businesses which participate in these programs move on to later stage of development, when appropriate, and the Nebraska Business Innovation Act is able to help with funding through the Academic Research and Development program, matching grants for businesses which earn a Federal SBIR Phase 1 and 2 grant, and through the Commercialization program. Thus, Table 1 lists participating businesses, again, according to their current or most recent program. For example, if a business participated in the Prototype program and through a successful effort was able to receive later stage funding through the Academic Research and

Development Program, that businesses would be listed in the Academic Research and Development category in Table 1.

Results in Table 1 indicate that 50 percent of the responding businesses were involved in the Prototype grant program where the businesses developed a prototype for an innovative product or service. Businesses which develop such products often moved into a later stage of development and commercialization, sometimes utilizing additional services from Nebraska Business Innovation Act programs. Among remaining businesses, 19 received either an SBIR 0, 1, or 2 grant. Recall that SBIR 0 grants provide initial support to firms applying for SBIR 1 or SBIR 2 federal grants, while state SBIR 1 or 2 grants are used to supplement successful federal SBIR proposals. While not shown in Table 1, 10 firms received funding from a Federal government agency under the SBIR Phase 1 or 2 programs and a matching grant under the Nebraska Business Innovation Act; nine Nebraska firms received the SBIR Phase 0 grant that did not require a match. There were also 22 businesses that received support from either the Academic Research and Development 1 or Academic Research and Development 2 program. There were 15 businesses in the Commercialization program, accounting for about 13% of the businesses analyzed.

Table 16. Program Utilized by Responding Business

	Number of Projects	Percent of Responding Projects	Amount Invested by Program
Prototype	56	50.0%	\$2,701,606
SBIR (0, 1 and 2)	19	17.0%	\$1,036,260
Academic R & D (1 and 2)	22	19.6%	\$2,591,228
Commercialization	15	13.4%	\$4,568,000
Total	112	100.0%	\$10,897,094

Businesses at the early stage of development are often pre-revenue and require investment spending to operate and hire any required workers. For this reason it is often critical for firms to obtain capital beyond the state funding which is provided, and the match which is required. Additional funding can be in the form of equity, loans, or grants. The survey which was sent to businesses inquired about additional funding from each source. Another issue is that businesses will eventually need to earn revenue from sales to support operations and to make new investments. The survey also asks about any revenue earned by each business since the time of the application to a Nebraska Business Innovation

Act program. The same information was available from administrative records for businesses in the Commercialization program.

As noted, all Business Innovation Act programs, with the exception of the SBIR Phase 0 program, require matching funds at the time of award. The analysis demonstrates that just over \$24.40 million in matching funds were generated by participating businesses. Table 2 summarizes the *additional* sources of follow-on investment obtained by businesses and the revenue earned from sales. Again, state support to businesses was just over \$10.89 million. Firms have raised over \$44.31 million in equity capital, which is 407 percent of state support. Support from loans totaled over \$17.74 million and is 163 percent greater than state support. Grant support was 76% of state support; and support from “Other” sources was only 26% of the amount of support provided via the state. In total, it appears that Nebraska businesses have successfully supplemented state sources of support, as the total capital raised is just under \$73.23 million, or 672% percent of the total amount of state support provided. In other words Nebraska businesses have raised about \$6.72 for every \$1 invested through the Nebraska Business Innovation Act programs. This ratio suggests that the programs are very efficient in helping firms obtain sufficient private capital to work through the development process. Note that the initial matching funds were not included as part of the total capital raised in Table 2, as the analysis was designed to assess the amount of follow-on capital raised after receiving award. However, when initial match funds are considered in conjunction with the total follow-on capital, it is clear that the Business Innovation Act programs are helping Nebraska businesses attract considerable amounts of capital.

Table 17. Follow-On Capital Raised by Nebraska Companies

	Total Funding	Relative to State Support
State Support	\$10,897,094	
Equity	\$44,311,210	407%
Loan	\$17,743,882	163%
Grants	\$8,300,343	76%
Other	\$2,874,579	26%
Total Capital Raised	\$73,230,014	672%
Revenue	\$78,562,116	721%

Businesses completing the development process ultimately will rely on revenue from sales to sustain and grow the business. While many participating businesses are in the pre-revenue phase, Table 2 shows that there was over \$78.56 million in revenue earned by firms since they began involvement with a Nebraska Business Innovation Act program. This is 721 percent of state support indicating \$7.21 in

revenue earned for each \$1 of state support. Earned revenue will likely grow as time passes and as more participating businesses proceed further into the development and commercialization process. Indeed, the \$7.21 return on the dollar represents a considerable increase over the \$2.32 return on the dollar in the previous analyses of Nebraska Business Act programs.

State support, additional investments, and revenue have supported new jobs and investment at businesses receiving support from Nebraska Business Innovation Act programs. These new jobs and associated employee compensation are summarized in Table 3. Table 3 shows the number of new jobs added by businesses since applying to a Nebraska Business Innovation Act program. These are the reported new jobs created as of mid-2016. Table 3 also shows the annual wages and benefits earned in these jobs (i.e., employee compensation), as reported by businesses either in administrative records or in response to the surveys. Table 3 shows that there were 468 jobs created with annual employee compensation of \$26.36 million. These figures reflect the direct annual economic impact in jobs and employee compensation for businesses participating in Nebraska Business Innovation Act programs. Notably, the 468 jobs created is more than 300 greater than was reported in the 2014 examination of the Business Innovation Act. This means that businesses receiving support from Business Innovation Act programs have generated an additional 300 jobs in the past two years.⁵⁴

Table 18. Employees Added and Compensation

	Total
New Employees	468
Compensation and Benefits Combined (Millions \$)	\$26.36

As noted in the methodology section, these direct economic impacts also will yield multiplier impacts in the Nebraska economy; for example, as businesses make purchases of equipment and supplies and as owners and workers at businesses spend their income on all the elements of household spending. The magnitude of these multiplier impacts are estimated utilizing the IMPLAN model. The IMPLAN model is the most widely used model for calculating economic multipliers and can be used to calculate economic multipliers for hundreds of industries in states, counties, or combinations of states and counties. The

⁵⁴ While not presented here, it is also worth noting that businesses receiving support from Business Innovation Act programs reported spending a total of \$58.83 million on labor and other goods and services in 2014 and 2015. This means that local businesses have spent approximately \$36 million in goods and services, beyond labor, in the past two years.

IMPLAN model was used to calculate economic multipliers for the Nebraska economy for the industry of each business participating in a Nebraska Business Innovation Act program.

Multiplier impacts show the additional economic activity for each unit of direct economic activity. For example, a job multiplier would show the additional jobs created in the economy for each 1 job created at a business participating in a Nebraska Business Innovation Act program. Multiplier impacts, once calculated, are added to direct economic impacts in order to estimate the total economic impact. Tax impacts in turn are estimated based on the economic impact. Purchases associated with business expansion lead to taxable sales while the income of employees leads to taxable income. An estimate of tax revenue impacts therefore can be completed once the economic impact has been calculated.

Table 4 shows the total annual economic impact of businesses participating in Nebraska Business Innovation Act programs in terms of output, value-added, employee compensation and employment. The table also shows the estimated tax revenue impact for federal taxes but also state and local income, sales and property taxes, in aggregate. The annual economic impact is \$188.46 million while the economic impact in terms of value-added is \$97.18 million. Note that the value-added impact is a component of the output impact, implying that the two numbers should not be added together. The annual economic impact in terms of employee compensation is \$52.07 million. Note that this figure is nearly twice as large as the figure reported in Table 3, showing that there is a significant multiplier impact in the State of Nebraska. This employee compensation is a component of the value-added impact. There is an employment impact of 967 jobs. This suggests wages per job of \$53,836 including both the direct and multiplier employment. The state and local tax impact is \$4.54 million annually.

Table 19. Annual Economic Impact Due to Growth

Impact Concept	Total Annual Economic Impact
Output (\$ millions)	\$188.46
Value-Added (\$ millions)	\$97.18
Employee Compensation (\$ millions)	\$52.07
Employment	967 jobs
Federal Taxes (\$ millions)	\$3.05
State and Local Taxes (\$ millions)	\$4.54

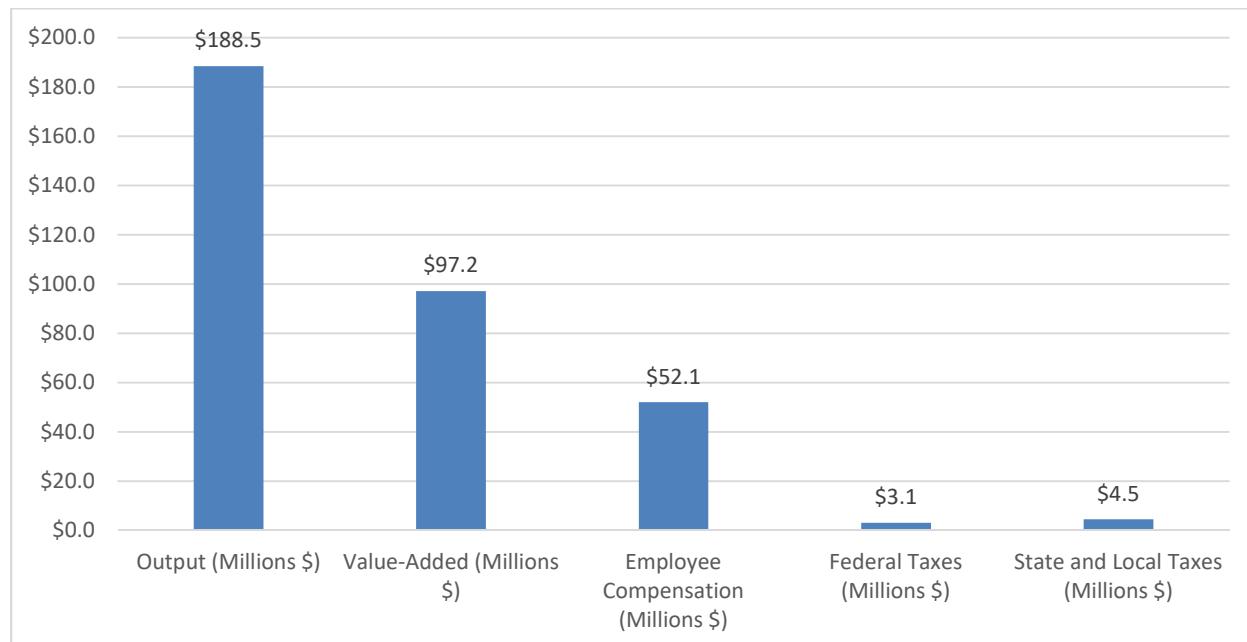
Source: BBR calculations

4. Conclusion

This study provides an economic impact assessment of Nebraska businesses which have participated in Nebraska Business Innovation Act programs. Specifically, the study summarizes the additional investments and revenues that businesses have attracted and earned after receiving funding from a Nebraska Business Innovation Act program. The study also examines employment growth at businesses which received funding from Nebraska Business Innovation Act programs, as well as the annual wages and benefits associated with these new jobs. The growth of these businesses and the resulting increase in direct annual economic activity is the basis for estimating economic impact. Multiplier impacts also are estimated and added to direct impacts to yield an estimate of the total annual economic impact.

One finding is that participating businesses received \$6.72 in additional investments through equity and other sources for each \$1 of initial support from a Nebraska Business Innovation Act program. Supported businesses also have earned \$7.21 in revenue from sales for each \$1 of such state support. Revenue from sales will continue to grow as more businesses complete the development and commercialization process. Businesses in the Commercialization program and businesses which responded to the survey have added 468 jobs since their initial involvement in a Nebraska Business Innovation Act program. These jobs had annual wages and benefits of \$26.36 million. These are direct economic impacts.

Figure 6. Annual Economic Impacts



Source: Bureau of Business Research Calculations

These businesses also had a significant total economic impact and tax revenue impact, which were presented in Figure 2. The total annual economic impact was \$188.46 million. The economic impact in terms of value-added is \$97.18 million. Note that the value-added impact is a component of the output impact, implying that the two numbers should not be added together. The annual economic impact in terms of employee compensation is \$52.07 million. The state and local tax impact is \$4.54 million annually.

While not shown in Figure 2, the employment impact is 967 jobs. These results suggest wages per job of \$53,836 including both the direct and multiplier employment. This finding implies that the innovative, growing businesses supported by Nebraska Business Innovation Act programs provide high wage employment.

Appendix 1: About the Bureau of Business and Principal Investigator

The Bureau of Business Research

The UNL Bureau of Business Research is a leading source for analysis and information on the Nebraska economy. The Bureau conducts both contract and sponsored research on the economy of Nebraska and its communities including: 1) economic and fiscal benefit analysis; 2) models of the structure and comparative advantage of the current economy; 3) economic, fiscal, and demographic outlooks, and 4) assessments of how economic policy affects industry, labor markets, infrastructure, and the standard of living. The Bureau also competes for research funding from federal government agencies and private foundations from around the nation and contributes to the academic mission of the University of Nebraska-Lincoln through scholarly publication and the education of students.

Dr. Eric Thompson – Principal Investigator

Dr. Eric Thompson is the principal investigator on this project. Dr. Thompson is the Director of the Bureau of Business Research and an Associate Professor of Economics at the University of Nebraska-Lincoln. Dr. Thompson has conducted a broad group of economic impact studies including impact studies of Nebraska agriculture, Sandhill Cranes migration, the Nebraska child care industry, the Omaha Zoo, the Nebraska horseracing industry, Husker Harvest Days, and the UNL Athletic Department. Dr. Thompson also works on demographic projections, and analyses of economic development programs for Nebraska and cities in Nebraska. He also has conducted numerous economic impact studies for the Lincoln Department of Economic Development, the Omaha Chamber of Commerce, the Nebraska Department of Economic Development, various Nebraska industries, and Nebraska tourism attractions. Dr. Thompson's research has received support from the United States Department of Labor, the Robert Wood Johnson Foundation, the Center for Economic Analysis, the Nebraska Health and Human Services System, as well as Lincoln, Omaha, and Nebraska organizations and agencies. In his previous employment, Dr. Thompson served as the Director of the Center for Business and Economic Research and a Research Associate Professor of Economics at the University of Kentucky. Dr. Thompson received his Ph.D. in agricultural economics from the University of Wisconsin-Madison in 1992. His research fields include regional economics, economic forecasting, and state and local economic development. His research has been published in *Regional Science and Urban Economics*, the *Journal of Regional Science*, the *American Journal of Agricultural Economics*, the *Journal of Cultural Economics*, and the *Economic Review of the Federal Reserve Bank of Cleveland*.

Dr. Mitchel Herian – Research Associate

Dr. Mitchel Herian serves as a Research Associate through the Bureau of Business Research. Dr. Herian also serves as a faculty fellow at the University of Nebraska Public Policy Center, and an adjunct professor in the Political Science department at UNL. Dr. Herian has conducted applied research for agencies such as the U.S. Army, the National Aeronautics and Space Administration (NASA), the Nebraska Supreme Court, the Nebraska Department of Education, and the Kansas Department of Corrections. His research has received support from agencies including the National Science Foundation and the National Institute of Justice. Dr. Herian's research has been published in a variety of peer reviewed journals including the *Journal of Public Administration Research and Theory*, *American Review of Public Administration*, *Policy Studies Journal*, *State and Local Government Review*, and *Ecology & Society*.

Appendix 2: Nebraska Business Innovation Act Programs

SBIR/STTR Program

The federal Small Business Innovation Research (SBIR) program and the federal Small Business Technology Transfer (STTR) program provides funding competitions in two phases that are relevant to the Nebraska SBIR/STTR Program. Phase 1- to conduct feasibility research; and Phase 2-to expand and develop Phase 1 results into commercially viable innovations. The federal SBIR program is administered by 11 federal agencies. Applicants for the federal funding programs compete by submitting proposals in response to solicitations issued by the participating federal agencies. The Nebraska SBIR/STTR Program establishes a financial assistance program to individuals and businesses with a principal place of business in Nebraska to support applications to the Federal SBIR Program solicitations.

Phase 0 Program – Provides funding up to \$5,000 to assist small businesses for the purposes of planning for an application under the federal programs.

Phase 1 Program – Nebraska small businesses that receive a federal notification of award for a Phase 1 federal SBIR/STTR grant will receive a state grant of 65% of the federal grant up to a maximum of \$100,000.

Phase 2 Program – Nebraska small businesses that receive a federal notification of award for a Phase 2 federal SBIR/STTR grant will receive a state grant of 65% of the federal grant up to a maximum of \$100,000.

Nebraska Prototype Program

Prototype Grant Program - provides financial assistance to individuals and businesses operating in Nebraska to support proof of concept activities. Helps businesses develop new technologies and leverage innovation to enhance quality job opportunities within the State. The grant is up to \$150,000 and must be matched 50% by the individual or business. If the project is a value-added agriculture project the match is 25%. Matching funds must come from non-state sources government.

Nebraska Innovation Commercialization/Seed Fund Program

Nebraska Commercialization/Seed Fund Program – provides financial capital to businesses in Nebraska for the purposes of commercializing a prototype of a product or process. The investment (equity or convertible debt held by Invest Nebraska) can be up to \$500,000 and must be matched 1:1 by non-state government sources. If the project is a value-added agriculture project the match is 25%.

Academic Research & Development Program

Academic R & D involves **applied** research, new product development, or new uses of intellectual property. The academic research and development being performed on behalf of the business must be directed toward: the commercialization of new products, the modification of existing products that lead to substantially improved marketability, or to the improvement of existing processes that will provide new sources of revenue to a Nebraska business. The business must use faculty or facilities of a public or private college or university in Nebraska.

First Phase – The grant amount is up to \$100,000 and must be matched 1:1 by the business with non-state government sources.

Second Phase – The grant amount is up to \$400,000 and must be matched 1:1 by the business with non-state government sources.

Microenterprise Loan and Technical Assistance Program

Microenterprise Loan and Technical Assistance Program – provides funding to microloan delivery organizations for technical assistance and loan assistance.