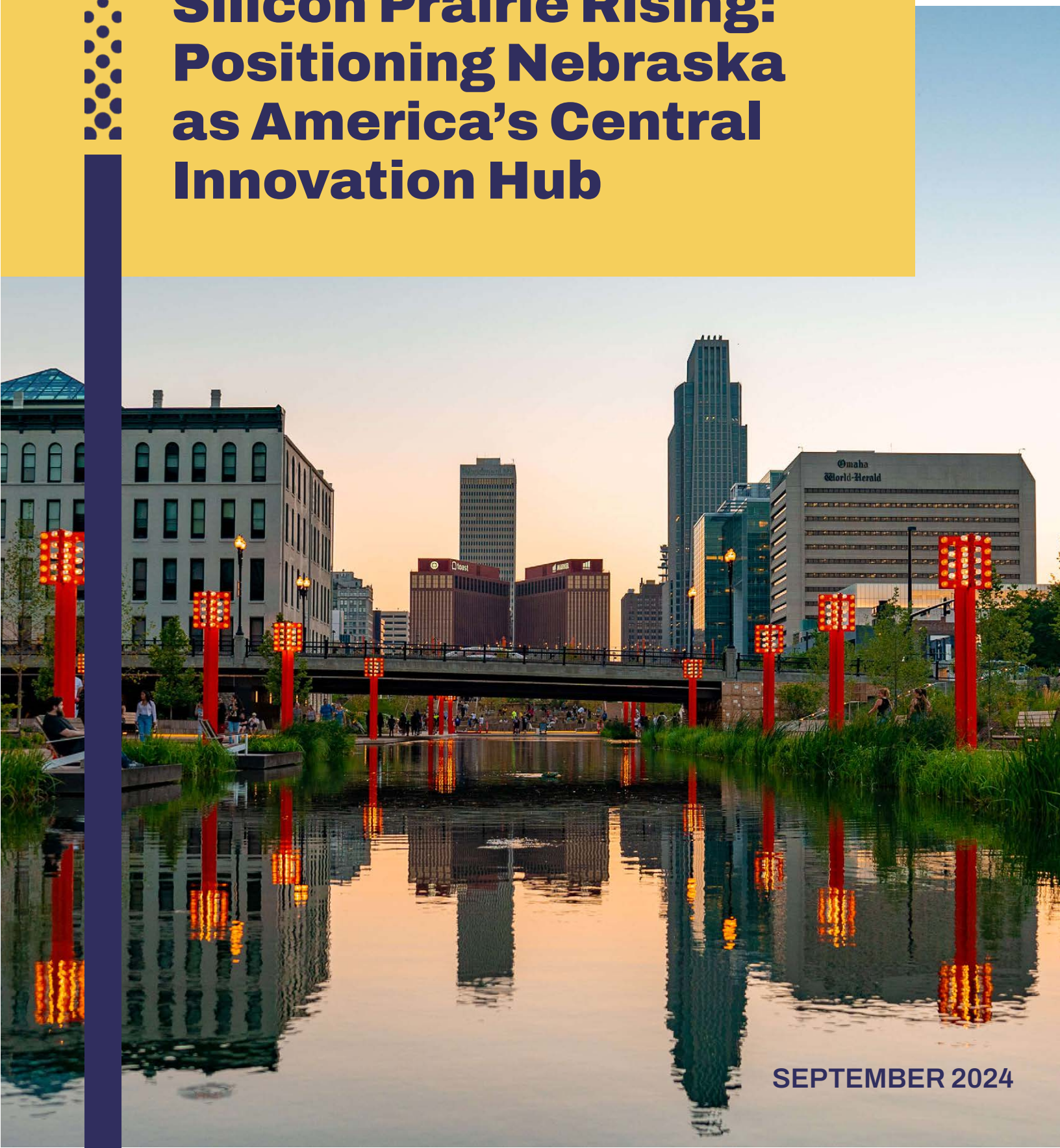
Silicon Prairie Rising: Positioning Nebraska as America's Central Innovation Hub



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Acknowledgements

We would like to thank the following for their contributions to this report:

Steering Committee

Paul Smith
Founder, Paul G Smith Associates
Steering Committee Chair

Shonna Dorsey
Executive Director, Nebraska Tech Collaborative, internNE

Dusty Davidson
Entrepreneur, Investor, and Startup Advisor

Mogens Bay
Chairman, Valmont Industries

Wendy Boyer
Executive Director, Peter Kiewit Foundation

Anne Folkers
Deputy Director, Suzanne & Walter Scott Foundation

Karen Linder
Co-Founder and Executive Chair, Tethon 3D

Joe Petsick
Co-Founder and CEO, Auctic

Calvin Sisson
President and CEO, Suzanne & Walter Scott Foundation

Annette Smith
Principal, Paul G Smith Associates

Carmen Tapio
Founder and CEO, North End Teleservices

Staff

Stephen Osberg
Vice President of Project Development, Paul G Smith Associates

Jeff Slobotski
Manager, Business & Ecosystem Development, Paul G Smith Associates

Corinne Wardian
Community Development Manager, Paul G Smith Associates

Interview Participants

Anne Barnes
Mike Cassling
Jennifer Creager
Charlie Cuddy
Dan Curran
Josh DeMers
Michael Dixon
Veronica Doga
Marco Floreani
Dr. Robin Gandhi
Dr. Martha Garcia-Murillo
Dr. Jeffrey P. Gold
David Graff
Billy Hagstrom
Dr. Matthew Hale
Dr. Phil He
Rev. Daniel S. Hendrickson, S.J.
Dan Hoffman
Joanne Li, Ph.D.
Dr. Rich Klein
Catherine Lang
Michael Lechtenberger
Dr. Jaci Lindburg
Itzel Lopez
Stephanie Luebbe
Josh Nichol-Caddy
Chuck Norris
Laurel Oetken
Lance C. Pérez, Ph.D.
Hobson Powell
Nathan Preheim
Silva Raker
Randy Schmailzl
Andy Stoll
Erica Wassinger
Nancy Williams
Ben Williamson
Dr. Mardell Wilson

Plus numerous interviews conducted on research trips to:

Atlanta, GA
Austin, TX
Boston/Cambridge, MA
Indianapolis, IN
Detroit, MI
St. Louis, MO
Winston-Salem, NC

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This report was prepared for the project Steering Committee by:

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Urban Impact Advisors

Urban Impact Advisors is a strategic consulting firm helping colleges and universities, innovation districts and urban developers work through complex analytical and implementation issues to achieve breakthrough goals. **urbanimpactadvisors.net**

mass economics

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EXECUTIVE SUMMARY

Unlocking the Potential of Omaha's Innovation Assets

Introduction

The greater Omaha region, which includes Douglas and Lancaster Counties and the cities of Omaha and Lincoln, has historically been successful at developing a thriving economy and providing high quality of life for its residents. The regional population has tripled since 1950, and an unusual number of large companies birthed in Omaha have become global powerhouses. Led by very strong private philanthropy, the Omaha region has developed world-class recreational and cultural intuitions. Omaha's Henry Doorly Zoo and Aquarium, Omaha Performing Arts, Joslyn Art Museum, and host facilities for the College World Series are shining examples of this success.

The challenge for greater Omaha, like all regions, is that current and past success is no guarantee of a bright future. The Detroit region had the highest per capita income in the United States in 1950. By 2020, its per capita income was ranked among the lowest of any large American metropolitan region.

In today's economy, regional economic success increasingly depends on bold leadership from a coordinated set of regional actors. Modern metropolitan regions need to be organized to build and attract new companies and businesses that will grow incomes and opportunity for residents.

Today, thriving regions are building what is commonly known as an innovation economy. Seattle, Pittsburgh, San Diego, Austin, Boston, and Indianapolis, among many other examples, have all embraced innovation economies and become leaders in producing great new companies and creating new industries. As these cities have shown, a successful innovation economy creates new jobs and wealth, attracts and retains young, highly-skilled workers, makes social mobility more likely, and fosters a vibrant problem-solving culture.

For Omaha's success to endure, regional leaders must act boldly to build an innovation economy that creates the next generation of wealth and expands prosperity to all parts of the community.

Report Overview

This report is an assessment of the Omaha region's current innovation ecosystem, as well as recommendations for what needs to be done to make Omaha a national leader in innovation and entrepreneurship.

Omaha has many strengths that lend themselves well to building a thriving innovation ecosystem. Omaha benefits from a central location, has a low cost of living, and a well-educated workforce. In addition, several large, successful, and relevant employment sectors exist, including AgTech, FinTech and insurance, data storage, warehousing and logistics. Emerging sectors are also promising, including renewable and bio-based manufacturing, healthcare, cybersecurity, and automation for construction and engineering. Importantly, a very high percentage of total employment in the Omaha region is within large firms. This reflects, at least in part, the historical successes of large firms in Omaha. It also represents a potentially strong base of support for growing an innovation-based economy, and built-in customers for small, more entrepreneurial firms.

Notable barriers also exist to building an innovation economy in Omaha. The extensive interviews conducted as a part of this study indicate that, while there are many organizations that support entrepreneurs and startups in Omaha, **the innovation ecosystem is poorly organized and disconnected.** This lack of coordination is underscored when examining regional results. The Omaha region significantly trails the U.S. in overall workforce growth and has very limited venture capital funding compared to other states. Nebraska ranks 34th among states in the rate of new company formation and a worrying 49th in startup success.[1] Omaha also has a lack of basic and applied research. Robust research, both commercial and university-based, is vital to building innovative companies in many sectors. Nebraska ranks 35th among U.S. states in business research and development funding and 33rd in academic research.[2]

Overall, Nebraska ranks 35th among U.S. states in business research and development funding and 33rd in academic research.

1. Fourth Economy analysis of Early-Stage Entrepreneurship Indicators, *Kauffman Indicators of Entrepreneurship*, 2021
2. dF-QCEW (private+public sector), Mass Economics, Omaha Innovation District Feasibility Analysis, August 24th, 2023.

Primary Recommendations

While this list is not inclusive of all of the recommendations outlined in this report, we offer three primary recommendations to support the growth of an innovation economy in Nebraska:

1. Create, fund, and support a strong regional organization to lead the development of Nebraska's innovation economy.

National experience suggests that effectively developing a regional innovation economy depends on leadership from either an internationally renowned research university, like MIT or UT Austin, or a very strong coordinating organization. Our model for regional leadership is the *Central Indiana Community Partnership* (CICP). The responsibilities of this entity will include entrepreneur support, advocating for the sector, workforce training, startup mentoring and recruitment, supporting innovation districts, venture capital support, and ensuring that historically marginalized communities benefit from a successful innovation economy.

2. Support and nurture the development of a small set of innovation districts.

Evidence from successful regions suggests that the creation of innovation districts is very important to the development of regional innovation ecosystems. Innovation districts are places where physical assets (including labs and co-working space), intellectual assets, and financial assets (including venture capital) come together to support innovative people and firms. Areas of greater density with well-designed shared spaces foster collaboration and cross-pollination of ideas. Kendall Square in Boston is a prime and well known example of an innovation district.

3. Seek a dramatic increase in support from the State of Nebraska for basic and applied research and support for venture capital.

States across the country, including those in the Midwest, are investing very significantly in university and independent research centers to grow local economies. Public support for venture capital is also common. Greater state support for University research and other forms of state support for venture capital is, in our view, necessary for a successful innovation economy.

Conclusion

The Omaha region has a history of success. However, modern regions must evolve if they wish to protect their gains and provide a platform for future generations to prosper.

Learning from the most successful regions today, Omaha's leaders must embrace an innovation economy as the key driver for long-term economic and social prosperity. This will require bold action, collaboration across sectors, and serious local and state investments to ensure Omaha's future as a leading innovation hub in America.

The call to action for Omaha leaders is clear: **act now to ensure the long-term sustainability of the region, bolster incomes and wealth for the next generation of Omaha residents, and ensure that growing prosperity expands to all parts of the community.**

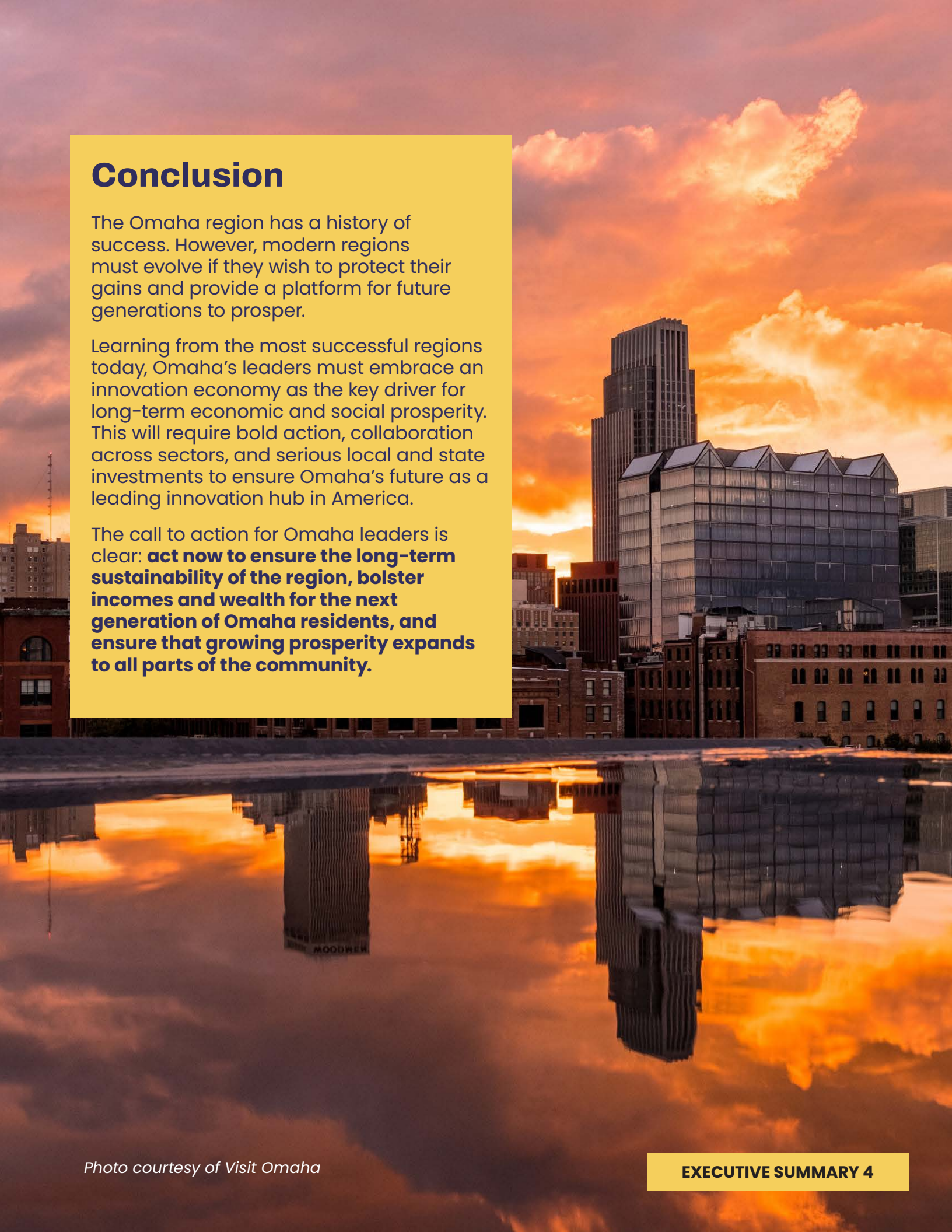


Photo courtesy of Visit Omaha

Unlocking the Potential of Omaha's Innovation Assets

Introduction: Defining a New Trajectory for Omaha

Nearly a quarter of the way through the 21st century, the Greater Omaha metropolitan area – which includes the cities of Omaha and Lincoln – finds itself at a pivotal crossroads, bolstered by its rich history and strong record of coming together to accomplish very big things exceptionally well, but falling behind peer cities in growing it's innovation and entrepreneurship economy, attracting and retaining talent, and growing its higher education research enterprise. To ensure sustainable growth well into the future, Omaha must take steps now to position itself for long-term success.

Strategically positioned in the heart of the Midwest, Omaha's central location lends itself to effortless accessibility and connectivity to major markets via truck and rail. The city boasts a diverse and vibrant economy with flourishing finance, healthcare, logistics, and agriculture sectors. The Omaha-Council Bluffs metro area had a GDP of $67.4 billion in 2021, accounting for nearly 60% of Nebraska's total GDP.[3] The region hosts seven major data centers, putting Omaha on the radar of large tech companies such as Google, and has robust infrastructure for high-speed data applications. Omaha's "big small town" feel and ethos of hard work, integrity, and collaboration create a unique culture that is supportive and champions collective success. And, perhaps most notably, Omaha has a high concentration of high net worth individuals and philanthropic organizations who have demonstrated a commitment to uplifting the community and coming together to champion major initiatives.

While Omaha boasts key strengths, the region has yet to reach a critical mass of investment and activity necessary to attract and retain talent, grow its economy, and compete with peer cities across the Midwest and beyond. The imperative for change is clear: Omaha, while rich in many assets contributing to its innovation ecosystem, faces challenges in effectively connecting and coordinating these resources.

While Omaha boasts key strengths, the region has yet to reach a critical mass of investment and activity necessary to attract and retain talent, grow its economy, and compete with peer cities across the Midwest and beyond.

3. Bureau of Economic Analysis.

There is a global shift towards knowledge-driven economies where innovation plays a central role in driving economic competitiveness. Strategic investments in Omaha's innovation and entrepreneurship ecosystem can help the region and the state grow its economy while creating opportunity and building wealth for all Nebraskans.[4]

Addressing Regional Challenges

While Omaha boasts many strengths, it faces challenges that threaten its future economic vitality if not addressed:

- **Omaha's job growth rate of 11% from 2010-2023 lagged behind the U.S. growth of 20%.[5]**
- **Nebraska ranks just 34th among states in its rate of new entrepreneurs and had a concerning ranking of 49th for startup survival in 2021.[6]**
- **The state ranks 35th in business R&D spending and 33rd in academic R&D spending.[7]**
- **Nebraska would need to attract over $600 million more in annual venture capital funding to reach the top 20 states.[8]**

On its journey toward becoming a vibrant hub of innovation and entrepreneurship, Omaha faces a nuanced set of challenges and opportunities.

The Promise of Innovation and Entrepreneurship for Overcoming Regional Challenges

The Economic Imperative for Innovation

Innovation is the key driver of long-term economic growth and competitiveness in today's global economy. Large and small companies need to create new products and services to grow. Evidence suggests that regions that embrace innovation are better positioned to foster resilience against economic downturns. According to a report by the Brookings Institution, "innovation is the primary driver of U.S. economic growth and prosperity" and "accounts for more than 50% of long-term economic growth."[9]

Omaha must prioritize innovation to enhance its competitive advantage and secure its economic future.

4. Literature on knowledge economies (OECD, World Bank).
5. Bureau of Labor Statistics data for the United States and the Omaha metropolitan area.
6. Kauffman Indicators of Entrepreneurship.
7. National Science Foundation.
8. PitchBook via State Science & Technology Institute.
9. Atkinson, R. D., & Ezell, S. J. (2019). The Manufacturing Evolution: How AI Will Transform Manufacturing & the Workforce of the Future. Brookings Institution.

The Entrepreneurial Ecosystem as a Catalyst

A thriving entrepreneurial ecosystem is crucial for innovation. It creates new jobs, economic diversification, attracts and retains talent, and stimulates local investment. Startups are particularly important as a source of job creation and a seedbed for innovation. Startups are responsible for much of the net new job creation in the U.S.[10] Startups (firms aged less than one year) have accounted for about 14 of every 100 new jobs created annually from 2002 to 2022, and only 8 of every 100 job losses; older firms (11 year or more) have created 62 out of every 100 new jobs, but also account for 67 of every 100 jobs lost. Overall, firms less than 5 years old have generated positive net gains, while firms 6 or more years old are shedding net jobs.[11] Regions without a strong startup ecosystem are likely to lose jobs in the long run. Omaha's commitment to building a strong entrepreneurial ecosystem can catalyze economic growth and position the region as an attractive destination for entrepreneurs and skilled workers.

Job Creation, Talent Attraction, and Retention

Innovation and entrepreneurship often lead to the creation of new businesses and industries. Startups and innovative ventures require a workforce to develop, produce, and market their products or services. As these ventures grow, they create job opportunities for individuals in various fields such as technology, marketing, sales, and operations. Additionally, a vibrant ecosystem of innovation and entrepreneurship is essential for providing employment for Nebraskans graduating from the state's colleges and universities as well as for attracting talented individuals from outside of the region. Entrepreneurs, researchers, engineers, and other professionals may be drawn to Omaha for its supportive environment, access to resources, and opportunities for collaboration. This influx of talent creates a virtuous cycle, fueling further innovation while contributing to community and economic growth.

Competitiveness and Resilience

Investing in innovation and entrepreneurship is crucial to spur industries in Omaha to be more competitive nationally and globally. Innovation helps businesses stay at the forefront of technological advancements, drives economic growth, attracts investment and talent, and positions the region as a dynamic and thriving hub for business and innovation. Innovation and entrepreneurship can also benefit existing industries in Omaha by fostering the development of new technologies, products, and processes that can help companies remain competitive as markets shift and change. This can help traditional industries stay competitive while creating a more diversified economy, ensuring Omaha isn't tying its economic future to a limited number of industries that may be vulnerable to economic, social, political, or environmental shifts.

10. Kauffman Foundation. (2020). Entrepreneurship Issue Brief.
11. Fourth Economy analysis of Quarterly Workforce Indicators data on job creation and destruction 2002 to 2022.

Economic Growth

Expanding innovation and entrepreneurship can contribute to overall economic growth in Omaha by creating new businesses, generating employment opportunities, and attracting investment. Innovation-driven growth can stimulate the local economy and improve the standard of living for residents. A thriving ecosystem of innovation and entrepreneurship can attract investment capital and talented individuals to Omaha, as well as businesses looking to invest in or relocate to the region. This influx of investment and talent can enhance the competitiveness of industries in Omaha and stimulate economic growth.

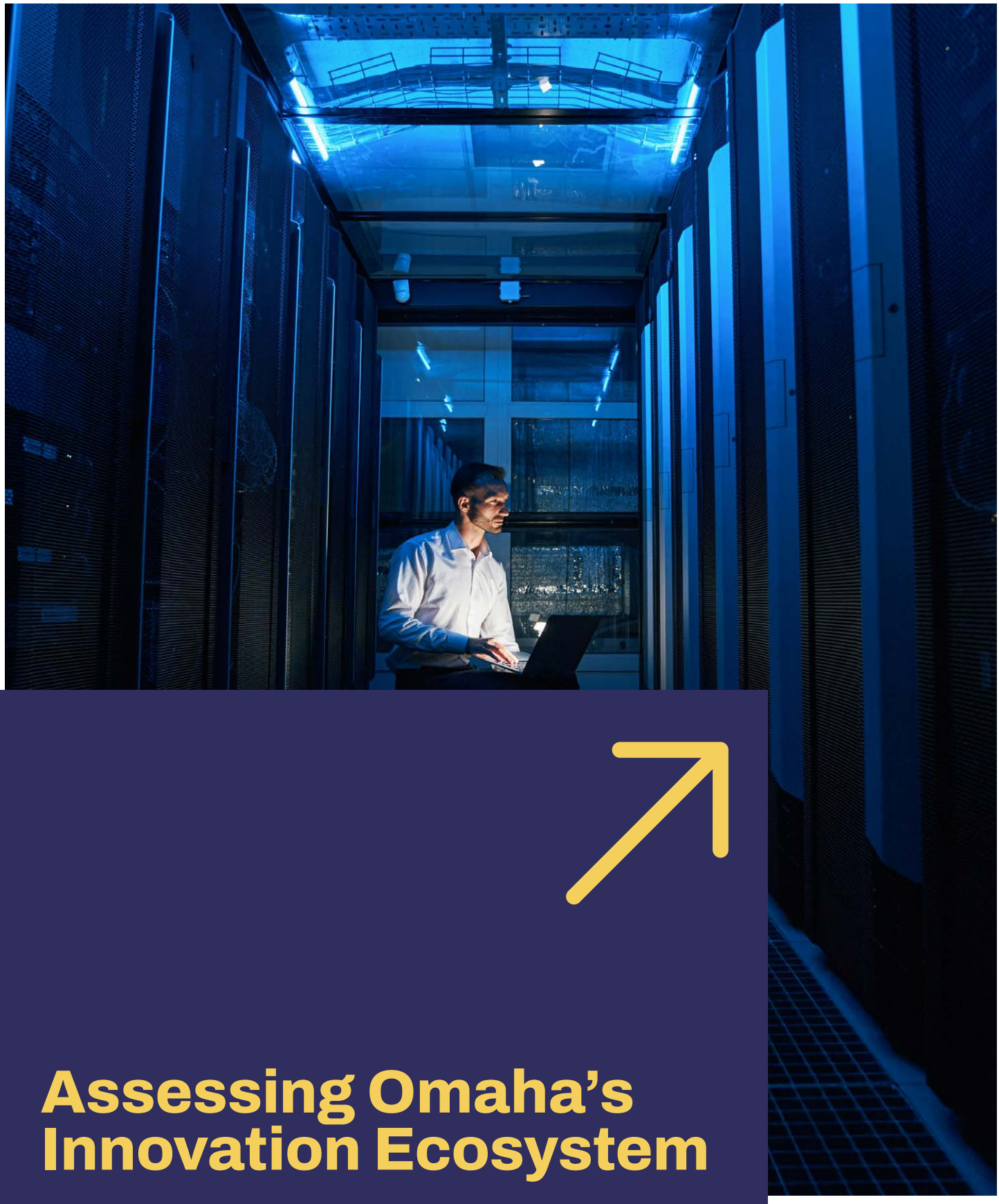
Financial Opportunity and Social Benefit

Beyond economic growth, entrepreneurship enables individuals from diverse backgrounds to start their own businesses and pursue innovative ideas. Entrepreneurship can provide a path to wealth creation and economic participation for underrepresented communities. The bipartisan research and advocacy group New American Economy notes that entrepreneurs are a diverse group and are more likely to be immigrants, minorities, and women than other members of the workforce.[12]

Additionally, innovation-centered economies often lead to the advancement of infrastructure, technology, and services that improve quality of life and address social inequities. For example, innovations in healthcare can lead to better access to medical services and improved health outcomes for underserved communities. Similarly, advancements in education technology can enhance access to quality education and lifelong learning opportunities, reducing disparities in educational attainment. By aligning financial interests with social objectives, innovation and entrepreneurship investments can contribute to wealth generation and the equitable distribution of resources while solving larger community challenges. Wealth creation fosters a virtuous cycle of innovation and investment, exemplified by the company Flywheel and the number of additional companies founded by its alumni.

Innovation and entrepreneurship are essential drivers of economic growth, social progress, and environmental sustainability. Omaha must invest in building a strong, inclusive, and sustainability-focused innovation ecosystem to secure its long-term prosperity and resilience. By embracing innovation and entrepreneurship, Omaha can create a brighter future for all its residents while positioning itself as a global leader in the knowledge-driven economy.

12. New American Economy, *Entrepreneurship. https://www.newamericaneconomy.org/issues/entrepreneurship/*



Assessing Omaha's Innovation Ecosystem

A Plan for Omaha's Innovation Economy

Acknowledging the need for a well-formed plan, a coalition of Omaha's civic leaders enlisted economic development consultants to conduct this comprehensive assessment of the regional innovation ecosystem. This collaborative effort underscores their shared vision of nurturing an inclusive and vibrant ecosystem to catalyze wealth creation and equitable economic development benefiting all residents.

Over the past several months, we interviewed over 50 leaders across industry, higher education, capital, workforce, community, and economic development sectors. We examined over 200 data points related to the region's innovation ecosystem and its competitiveness versus peer cities. What follows outlines the strengths, gaps, and needs for growing the region into a leading innovation hub, with recommended strategies for centering and connecting these assets.

Methodology and Assessment Framework

A comprehensive framework for evaluating innovation economies analyzes the interplay of various economic and physical assets and the people and policies which govern them. In order to thrive, an innovation ecosystem needs many things: visionary problem-solvers interested in creating solutions; capital to seed ideas, start, and scale enterprises; physical space to collaborate, tools, facilities, and infrastructure to materialize ideas into businesses and products; talent to execute and refine ideas; and supportive policies and initiatives to generate demand and improve competitiveness.

Moving from innovative idea to marketable product includes multiple stages, from ideation, research, and discovery to prototype development, commercialization and, finally, scaling. Once brought to scale, the product/service delivery requires routine operation and management. Each of these stages offer opportunities for employment and wealth creation and can be measured using various Bureau of Labor Statistics data, as well as metrics on the research and patent activity in a given geography. Together, these data allow us to compare the performance of Omaha's innovation ecosystem against peer regions.

Five Stages of Innovation

Ideation

Enterprises at the seed or pre-seed stage, generally non-employer firms

Research & Discovery

Enterprises engaging in R&D and market-testing

Prototype Development

Startups who are investigating the feasibility and requirements to bring their idea to market

Commercial-ization

Enterprises moving their product/idea/service into the marketplace, beginning to take on employees

Scaling

Enterprises moving into a growth phase to meet market demand

An Asset-based Approach

In approaching our assessment of Omaha's innovation ecosystem, we drew from prior experience working in innovation-based economies across the country, consulted experts working in the field, and conducted a literature review to arrive at a framework that would allow us to holistically assess the regional innovation ecosystem.

Our analysis takes an asset-based approach and is largely modeled on research from the Brookings Institution, which identifies three broad categories that define an innovation ecosystem. These include: Economic Assets, Network Assets, and Physical Assets. **Economic Assets** represent the people, capital, and industries which make up the foundation of the innovation ecosystem and fuel its growth. **Network Assets** are the support organizations, policies, programs, and culture that foster collaboration and form the connective tissue of the innovation ecosystem. **Physical Assets** are the places, spaces, and infrastructure that support innovation and entrepreneurship activity and define the centers of gravity for the ecosystem. The figure below summarizes the assets we evaluated in each domain.

Economic Assets

- Business Composition
- Industry Mix
- Capital and Investment
- Entrepreneurship activity
- Talent & Workforce

Network Assets

- Business Support Organizations, Events, and Programming
- Educational institutions and programs
- Policies and Initiatives
- Culture
- Equity and Diversity
- Marketing and Perception

Physical Assets

- Physical spaces
- Infrastructure
- Housing
- Arts/culture/placemaking assets
- Transportation and connectivity

In the following section, we summarize the region's performance across a range of metrics and answer key questions associated with each asset category.

Economic Assets

Douglas County, which includes the city of Omaha, is the economic hub of the region, With 345,000 jobs, it accounts for more than 70 percent of the total employment in the Omaha-Council Bluffs Metropolitan Statistical Area (MSA).[13] The job density in Douglas County is significantly higher than in the rest of the MSA, with 1,058 jobs per square mile compared to just 35 jobs per square mile in the surrounding areas. This concentration of employment highlights the importance of Douglas County as the central driver of the region's economy.

In terms of wages, Douglas County outperforms the rest of the region, including the nearby Lincoln MSA, and the state of Nebraska, with an average wage of $62,200 per year. However, this figure still falls short of the national average of $67,500, indicating that there is room for improvement in wage growth and competitiveness.[14]

Lancaster County, which includes the city of Lincoln and is home to the University of Nebraska-Lincoln (UNL), is the core county of the Lincoln MSA. While it plays a significant role in the state's economy, particularly in terms of education and research, its overall economic size is approximately half that of Douglas County. Omaha, not Lincoln, holds the greatest potential to drive the region's economic growth.

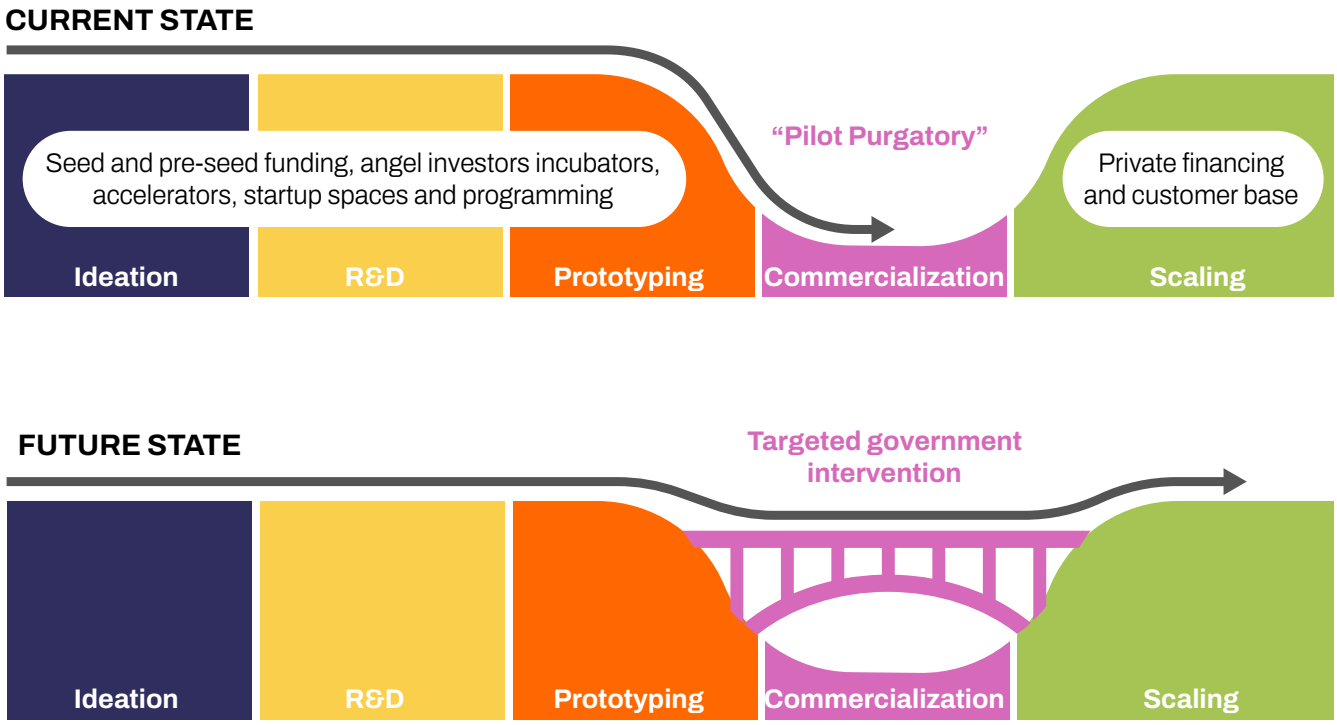
Business Composition and Entrepreneurship

The composition of businesses in Douglas County is distinctive. A significant majority of jobs in Douglas County (56.8 percent) are concentrated in large firms, defined as those with 500 or more employees. This proportion is notably higher than the regional, state, and national figures, making Douglas County a notable hub for larger enterprises. In contrast, small-scale enterprises, typically associated with entrepreneurship and innovation, account for only 14 percent of jobs in the county. This distribution is below state and national levels, which stand at 20 percent and 19 percent, respectively.

13-14. dF-QCEW (private+public sector), Mass Economics, Omaha Innovation District Feasibility Analysis, August 24th, 2023.

The entrepreneurial landscape in Nebraska presents a mixed picture. According to the Kauffman Indicators of Entrepreneurship, Nebraska ranks 34th in the nation in terms of the rate of new entrepreneurs, on par with states like Kansas and Ohio. However, a closer examination of the startup ecosystem reveals some significant challenges. Notably, the state ranks a concerning 49th in startup survival for the most recently recorded year (2021), with more than 23 percent of these nascent businesses failing to survive beyond their first year of operation – a trend has been relatively consistent over the past decade. The high failure rate of startups in Nebraska underscores the urgent need to strengthen entrepreneurial education, resources, and support throughout the state.

Many startups find themselves stuck in what is often referred to as "pilot purgatory," a phase where they struggle to transition from the startup stage to a scalable, sustainable business model. This is an area where targeted intervention and support could have a significant impact, providing these fledgling businesses with the necessary tools, guidance, and resources to overcome early-stage challenges and achieve long-term success. Additionally, fostering a robust local venture community would be instrumental in providing the financial backing and mentorship needed to help startups thrive.



Many startups find themselves stuck in what is often referred to as "pilot purgatory," a phase where they struggle to transition from the startup stage to a scalable, sustainable business model.

To foster a more vibrant and resilient entrepreneurial ecosystem, Nebraska must focus on several key areas:

1. First, it is essential to expand access to entrepreneurial education and training programs, particularly in underserved communities, to cultivate a pipeline of skilled and motivated entrepreneurs.
2. Second, the state should work to increase the availability of early-stage funding, such as seed capital and angel investment, to help startups navigate the critical initial stages of growth.
3. Third, strengthening mentorship and networking opportunities can provide entrepreneurs with valuable guidance and connections, increasing their chances of success.
4. Finally, streamlining regulatory processes and creating a more business-friendly environment can encourage more individuals to take the leap into entrepreneurship and help existing startups scale more effectively.

By addressing these challenges and implementing targeted initiatives to support entrepreneurs, Nebraska can create a more robust and thriving startup ecosystem. This, in turn, will contribute to greater economic diversification, job creation, and innovation, positioning the state for long-term growth and competitiveness in an increasingly knowledge-driven economy.

Existing Industry Sectors

According to the data provided by an innovation analytics company, Mass Economics, AgTech, FinTech, insurance, warehousing and logistics, and health sciences have firmly established themselves as the leading sectors within Nebraska's economy.

These industries stand out due to their current prominence but also because they have significant potential for further growth

AgTech: As the leading industry in the state and the largest industry globally, agriculture offers vast potential for innovation and market growth. Nebraska is a world leader in center pivot irrigation and is at the forefront of numerous agricultural advancements.

The sector's openness to innovation presents numerous opportunities, particularly in climate resilience technologies and drone technology. In early 2023, the USDA released a report on using drones in agriculture and natural resource management.[15] As researchers develop drone sensing and drone-based systems, there is a significant opportunity for Nebraska to serve as a driver of these technologies.

UNL has begun investing more heavily in this sector through programs at the Nebraska Innovation Campus, including The Combine and the Dougherty Water for Food Global Institute as well as a joint USDA UNL research facility which will greatly expand the region's research and commercialization activity. Additionally, the Heartland Robotics Cluster, led by the Invest Nebraska Corporation, aims to accelerate the state's leadership in ag-related automation and robotics, recognizing the region's strengths and encouraging collaboration between legacy industries and new, emerging technologies.

By investing in AgTech, Nebraska can lead the way in addressing global agricultural challenges, further enhancing its status as a hub for agricultural innovation. For instance, Omaha could focus on developing precision agriculture technologies, such as remote sensing, data analytics, automation, and advanced irrigation systems, to enhance productivity and sustainability in the agricultural industry. This would not only

15. *Using Drones in Agriculture and Natural Resources,* USDA, April 11, 2023.

benefit the local economy but also contribute to global efforts to address food security and environmental challenges.

FinTech and Insurance: Finance and Insurance are represented by many well-established enterprises in Omaha. As such, it is a sector that cannot be ignored when considering the region's mix of potential contributors to the innovation economy. It is also an area that potential investors should see as a safer bet, with less risk than other sectors. This sector also has the opportunity to grow small businesses as spin-offs or compliments of large institutional employers.

Areas of opportunity for Omaha include the development of innovative financial technologies, such as blockchain-based solutions, artificial intelligence-driven risk assessment tools, and digital payment platforms. These advancements could streamline operations, improve customer experiences, and create new opportunities for growth and collaboration within the industry.

Warehousing and Logistics: The logistics sector has experienced a dynamic shift in recent years, reflecting the growing demand for efficient supply chain management and the presence of a robust network of ancillary industries throughout the state. This sector's strength can be attributed to Nebraska's strategic location, well-developed transportation infrastructure, and the increasing importance of e-commerce and global trade. Across the state, an interwoven network of logistics-related enterprises makes for a dynamic sector that encompasses much more than trucks, trains, and warehousing.

Recognizing its potential for continued innovation, there's an expansive opportunity to ensure that logistics continues to play a pivotal role in driving the state's economic prosperity. Omaha could prioritize the development of advanced supply chain management technologies, such as real-time tracking systems, predictive analytics, and autonomous vehicles. Leveraging its existing expertise in natural gas, energy, and air force logistics, Omaha can stay at the forefront of AI-driven innovations in these areas. This approach will attract new businesses, create high-skilled jobs, and solidify Omaha's position as a hub for modern logistics operations.

> *Exploring the innovation potential within these established sectors presents a unique opportunity for Omaha to leverage existing resources and networks while fostering advancements that could position the region as a leader in these areas.*

By targeting investments and initiatives towards these sectors, Omaha can capitalize on their inherent strengths and drive transformative growth. **To fully realize the potential of these sectors, Omaha must create a supportive ecosystem that encourages collaboration between industry, academia, and government.** This can be achieved through targeted investments in R&D, the establishment of sector-specific innovation hubs or accelerators, and the development of talent pipelines that provide the skilled workforce needed to drive these advancements forward.

By strategically tapping into the innovation potential of its strongest existing industries, Omaha can amplify its innovation-driven economic growth and secure a competitive edge in an increasingly knowledge-based global economy. This approach allows the region to build upon its established strengths while fostering the development of cutting-edge technologies and solutions that can transform these industries and create new opportunities for growth and prosperity.

Emerging Industry Sectors

Although the logistics, finance and insurance, and agriculture sectors provide a strong foundation for expanding innovation in

Omaha, it is crucial for the region to diversify its sector growth to maintain its competitiveness and resilience in the face of economic challenges. Further, all industries must adapt, change, and innovate, and some industries will naturally be replaced by others. Identifying and nurturing emerging industries can help Omaha stay ahead of the curve, attract new talent and investments, and create a more dynamic and resilient economy.

Several promising opportunity areas have been identified where Omaha could establish itself as a dominant player. These emerging sectors align well with the region's existing strengths, resources, and pool of potential end-users, making them prime candidates for focused development efforts.

Renewable and Bio-Based Manufacturing: Innovation plays a vital role in addressing environmental challenges and promoting sustainable practices. Omaha can leverage innovation to encourage the adoption of sustainable technologies and industries.

Nebraska is currently demonstrating leadership in bio-based manufacturing, with great potential for additional growth in this sector. Currently, Nebraska has about 18,000 jobs related to bio-manufacturing, from scientists to soil testers, that pay an average wage of nearly $83,000 a year – well above the state average for all jobs of $54,000.[16]

Bio-based manufacturing is also an area with significant bipartisan political support, with state leaders expressing a desire to expand this sector and significant federal resources from aimed at developing sustainable products and decarbonizing industries.[17]

Life Science and Healthcare: Local Health Services is the county's largest cluster and is growing, but is not currently among the strongest industries in the state. Nebraska Medicine and the University of Nebraska Medical Center are among the largest employers in Omaha and are the largest recipients of federal research in the county. While not of the same scale as some other leading Midwestern academic research centers, UNMC has a number of nationally recognized programs. Moreover, UNMC has recently made a major commitment to supporting innovation through the Saddle Creek project. The bio-tech and medical equipment industry is enormous and Omaha can significantly benefit from growth in this area.

As there is competition and demand for health care related innovation in neighboring states and nationally, the region is better positioned to grow its existing industry rather than trying to attract outside enterprises to the state. Similar to logistics, there is an opportunity to link life sciences and health with AgTech to create new synergies and market opportunities.

Sports Tech: With a rich sports culture and a growing number of sports-related businesses, including Hudl, Omaha has the potential to become a hub for sports technology innovation. This sector encompasses a wide range of technologies, including wearables, performance analytics, fan engagement platforms, and virtual reality training systems.

16. *The U.S. Biosciences Industry: Fostering Innovation and Driving America's Economy Forward*, TEConomy/BIO Nebraska, 2022.
17. *Governor, business leaders tout potential to grow 'bio-manufacturing' industry in Nebraska*, Nebraska Examiner, August 9, 2023

Omaha is home to the UNMC Global Center for Health Security. The Center, established in 2017, has become an invaluable national and international resource for the management of high consequence infections, and houses the nation's only federally-funded quarantine unit and the nation's largest biocontainment unit. GCHS is leading the development of a new national planning approach to responding to large-scale health crises, such as the COVID-19 pandemic.

By leveraging its strong educational institutions, such as the University of Nebraska-Omaha, and fostering partnerships with local sports teams and organizations, Omaha can create a thriving ecosystem for sports tech startups and attract top talent in this field.

Family Tech: As a family-friendly city with a growing population of young professionals, Omaha is well-positioned to become a leader in the family tech sector. This industry focuses on developing products and services that cater to the needs of modern families, such as educational tools, parenting apps, child safety devices, and home automation solutions. By tapping into its strong community networks and partnering with local schools and child-focused organizations, Omaha can foster a supportive environment for family tech entrepreneurs and attract companies looking to expand in this market.

Cybersecurity: With the increasing reliance on digital technologies across all industries, cybersecurity has become a critical concern for businesses and individuals alike. According to the Bureau of Labor Statistics, the information security sector is projected to grow at a rate much faster than average over the next thirty years, with entry-level roles earning a median salary above $120k per year and requiring only a Bachelor's degree and less than five years' experience.[18] Omaha, with its proximity to major financial and defense institutions, including the nearby U.S. Strategic Command, has the potential to become a regional hub for cybersecurity innovation.

Additionally, the University of Nebraska-Omaha holds two rare National Centers of Academic Excellence in Cybersecurity designations in Cyber Defense (CAE-CD) and Cyber Operations (CAE-CO), further strengthening the city's capabilities in this field.[19] By investing in cybersecurity

18. U.S. Bureau of Labor Statistics, Occupational Outlook Handbook, *Information Security Analyst*
19. *UNO celebrates new home for NCITE counterterrorism research hub*. Nebraska Examiner. June 25, 2024

education and research, promoting public-private partnerships, and creating a supportive ecosystem for cybersecurity startups, Omaha can enhance it's position as a leader in this rapidly growing field.

Automation for Engineering and Construction: As the demand for efficient and sustainable infrastructure projects continues to grow, the engineering and construction sectors are increasingly turning to automation technologies to improve productivity, safety, and quality. Omaha, with its strong presence in the logistics and transportation industries, as well as its skilled workforce in engineering and construction, is well-suited to become a center for innovation in this area. Notable local companies such as Kiewit, HDR, and Buildertrend exemplify Omaha's strength in this field. By fostering collaboration between local engineering firms, construction companies, and technology startups, Omaha can drive the development and adoption of cutting-edge automation solutions for these sectors.

To successfully cultivate these emerging sectors, Omaha must take a proactive and strategic approach. This includes:

1. Investing in and better coordinating targeted education and training programs to develop the necessary talent pipeline.
2. Providing targeted support and resources for startups in these sectors, such as mentorship, access to funding, and networking opportunities.
3. Fostering collaboration and partnerships between industry, academia, and government to drive innovation and growth.
4. Creating a supportive policy environment that encourages investment and reduces barriers to entry for new businesses.
5. Promoting Omaha's strengths and successes in these sectors to attract talent, investors, and companies from outside the region.

By focusing on these emerging sectors and taking a comprehensive approach to nurturing their growth, Omaha can diversify its economy and create new opportunities for its residents. However, to truly establish itself as a leading center for innovation in the Midwest and beyond, Omaha must also address the critical issue of talent and workforce development.

Talent and Workforce

Among the 50 leaders interviewed to inform this report, the most cited concern was the lack of talent and difficulties in hiring locally due to a limited pool of qualified workers. The region's workforce is growing, with 13.2 percent employment growth between 2009 and 2019. However, this growth rate is lower than the broader U.S. economy's rate of 15 percent during the same period. Notably, organizations such as the AIM Institute and the Nebraska Tech Collaborative (NTC) have been working diligently to address workforce readiness issues and increase the pipeline of qualified workers. AIM has trained more than 67,000 tech workers through their programs to date,[20] while NTC is ahead of schedule in meeting their goal of adding 10,000 tech workers to the state by 2025.[21]

20. AIM Institute, *Our Impact*
21. Nebraska Tech Collaborative, *Data Dashboard*

Even with these commendable efforts, there is a need to further address workforce readiness, including better alignment of training with business needs, changes to recruiting practices to welcome workers from non-traditional backgrounds, and expanded internship and apprenticeship programs.

> *Omaha boasts a high labor force participation and low unemployment rate, creating good conditions for individuals looking for work but posing challenges for companies seeking to hire.*

Outflow migration data suggests Omaha struggles with talent retention, losing workers to Kansas City, Denver, and other markets. However, the city has great potential to attract "boomerangs"—individuals who left the area to pursue their careers but may be enticed to return to raise families in a community with many amenities and family-focused resources.

To capitalize on this potential, Omaha must develop targeted strategies to attract and retain top talent. These may include:

- Partnering with local universities and colleges to create industry-specific training programs and internships that align with the needs of emerging sectors.
- Promoting Omaha's quality of life, affordable cost of living, and family-friendly amenities to attract "boomerang" professionals back to the region.
- Advocating for local companies to implement comprehensive inclusive hiring practices, which encompass active recruitment from diverse backgrounds, tailored training programs to bridge skill gaps, and structured mentorship initiatives to engage underutilized talent, ensuring equitable opportunities for all workers.
- Investing in programs that support entrepreneurship and innovation, such as startup incubators, mentorship networks, and funding opportunities, to create a vibrant ecosystem that attracts and retains talented individuals.

Angel and VC Investment

Despite progress at both state and local levels to improve the funding landscape, Omaha and Nebraska still trail behind their peers in terms of venture capital (VC) and angel investment. Over the last decade, Nebraska's venture capital funding has seen an impressive tenfold increase, yet it pales in comparison to the levels observed in other states and one-third of the rate of deals per job as the U.S. average. This significant growth in venture capital, however, signals a substantial opportunity: there's a burgeoning pool of capital in search of viable investment opportunities within the region. Nebraska Angels have been actively working in this space, but more is needed to increase VC funding to the scale necessary to move the needle.

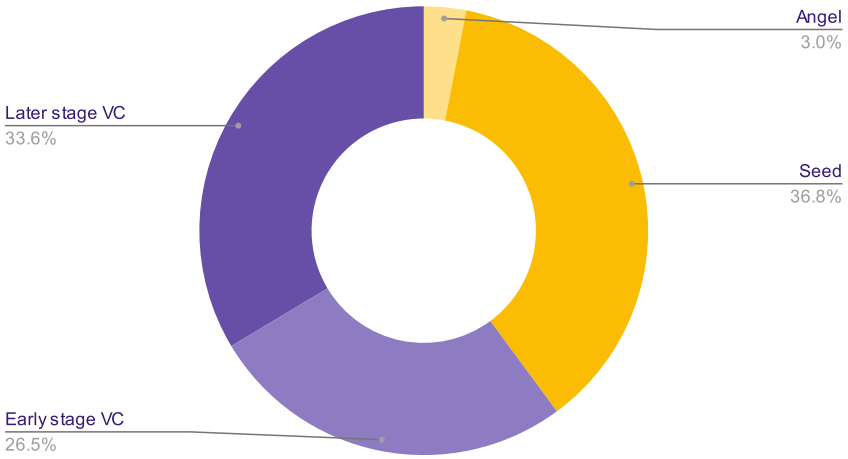
Feedback from the entrepreneurial community points to a funding imbalance, with a disproportionate focus on later-stage enterprises versus investment at the pre-seed and seed stages.

When looking at the number of companies recieving investment by stage, it is true that the number of angel and seed investments have historically lagged behind early and late stage VC investment. Overall, the total number of Nebraska companies recieving VC investment has been growing, and groups such as Nebraksa Angels have been working towards closing the gap in early stage investing.

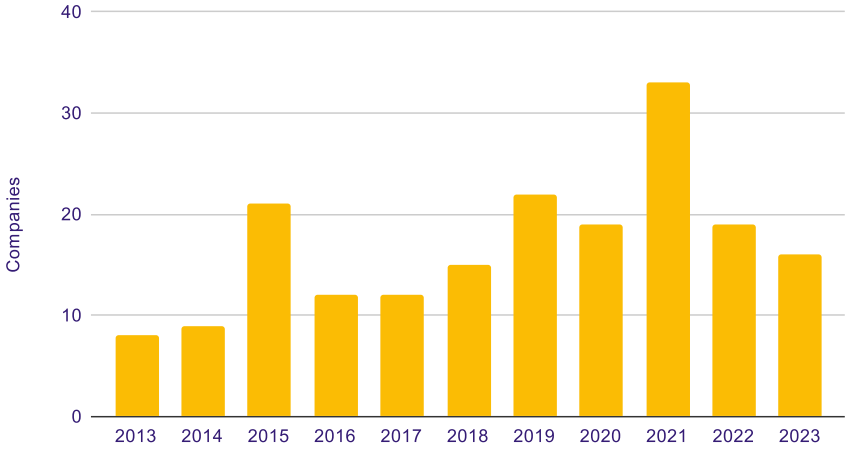
Omaha's ecosystem has great potential to capitalize on its strong philanthropic culture and a growing interest in angel investing. By channeling these resources towards higher-risk, early-stage investments, Omaha can mitigate local investment risks and become a magnet for external capital looking for promising startups.

Distribution of Capital by Investment Stage

VC Investment in Nebraska 2013 - 2023 (Q2)



Nebraska Funded Companies



Source: PitchBook data via SSTI 2013-2023 (Q2)

To address these challenges and capitalize on existing opportunities, several strategies could be implemented:

- **Enhancing Angel Investor Networks:** Cultivating a stronger, more active angel investor community can provide the early-stage funding necessary to nurture startups. This involves both leveraging the existing wealth within Omaha and attracting external angel investors by showcasing the region's potential.
- **Philanthropic Fund Allocation:** Encouraging philanthropic foundations and high-net-worth individuals to allocate a portion of their investments towards seed and pre-seed venture funds can inject much-needed capital into the ecosystem. Additionally, philanthropy can play a crucial role by supporting research and entrepreneurship programming through donations, which can further strengthen the foundation for speculative investments.
- **Education and Outreach:** Demystifying the investment process and outcomes for potential investors, particularly those new to angel investing or venture capital, can broaden the base of individuals willing to invest in early-stage companies. Educational programs and success stories can help shift the local culture towards a more balanced risk tolerance.
- **Creating a Fund of Funds:** Establishing a "fund of funds" that invests in a variety of venture capital funds can diversify risk and attract investment from both local and external investors. This could help amplify the impact of venture capital in the region, providing more substantial backing for startups across different stages of growth.

By addressing the funding gap with targeted initiatives that leverage Omaha's unique strengths and cultural predispositions, the region can foster a more dynamic and inclusive innovation ecosystem. This balanced approach to investment can position Omaha not only as a leader in the Midwest but also as a competitive player on the national stage, capable of attracting, nurturing, and retaining high-potential startups and talented entrepreneurs.

A key area where Omaha can make significant strides is through increased corporate investment and engagement. However, it's important to note that funds investing solely in a state or region often under perform, with the notable exception of Silicon Valley. Therefore, implementing tax incentives or other forms of public investment is crucial to bolstering the local innovation landscape and ensuring sustainable growth.

Corporate Investment

Large corporations are a pivotal force capable of advancing numerous initiatives within the entrepreneurship ecosystem. Encouraging corporations to play a more active role in supporting entrepreneurship, whether through sponsorships, internships, or hosting competitions, is a strategic imperative. Symbiotic collaborations between established corporations and emerging startups – such as Nelnet's active investment in startups – can propel the entire ecosystem forward.

Omaha is home to several large and well-established corporations, including Berkshire Hathaway, Kiewit, Union Pacific, and Mutual of Omaha. These companies have deep roots in the community and a vested interest in the region's economic growth and vitality. By leveraging their resources, expertise, and networks, these corporations can play a critical role in supporting the development of Omaha's innovation ecosystem.

Some specific ways in which corporations can contribute to the entrepreneurial landscape include:

- Providing seed funding or investing in local startups, either directly or through corporate venture capital arms, which can lead to potential acquisition opportunities and access to innovative technologies.
- Offering mentorship, guidance, and industry insights to help entrepreneurs navigate the challenges of starting and scaling a business, which in turn can cultivate a skilled and loyal talent pool.
- Hosting startup competitions, hackathons, or accelerator programs to identify and nurture promising ideas and talent, thereby driving innovation and potentially generating intellectual property that can benefit the corporation.
- Partnering with local universities and colleges to support research and development efforts, as well as create internship and employment opportunities for students and graduates, leading to a stronger and more capable future workforce.
- Collaborating with other corporations, government agencies, and community organizations to create a more cohesive and supportive ecosystem for entrepreneurs, enhancing the overall business environment and facilitating mutually beneficial partnerships.
- Serving as "first customers" for new and emerging companies, allowing corporations to gain early access to cutting-edge products and services while supporting local economic growth.

Lending and Capital Access

Examining capital access reveals nuances across different types of funding available to businesses in Omaha and the surrounding region. Small business loans in Douglas County display a tendency to skew larger, with about 54 percent falling in the $250,000 to $1 million range.[22] This suggests that businesses in the county are more likely to secure larger loans compared to other areas. However, when it comes to loans below $100,000, Douglas County, and Nebraska as a whole, lag behind national figures. This disparity in smaller loan amounts may indicate a funding gap for early-stage businesses and startups that often require smaller investments to get off the ground.

The Small Business Administration's (SBA) 7(a) loan program, which is the primary business loan program offered by the agency, also shows some differences in Omaha compared to national and state averages.[23] The average SBA 7(a) loan for Omaha businesses was $643 lower than the national average of $2,412 per business. However, Omaha's average SBA 7(a) loan was roughly $200 higher than the state average, indicating that businesses in Omaha are more successful in securing these loans compared to other parts of Nebraska.

On the other hand, SBA 504 lending, which provides funds for companies to offset the cost of capital expenses such as equipment or real estate, shows a different trend. In both the Omaha and Lincoln Metropolitan Statistical Areas (MSAs), SBA 504 lending outpaces state and national figures. This highlights a local strength in utilizing these programs for economic development purposes, suggesting that businesses in these areas are more adept at leveraging SBA 504 loans to finance their capital expenditures and expansion plans.

22. FIEC-CRA (2021); Mass Economics, Omaha Innovation District Feasibility Analysis, August 24th, 2023.
23. SBA; Mass Economics, Omaha Innovation District Feasibility Analysis, August 24th, 2023.

Community Development Financial Institutions (CDFIs), which focus on promoting economic development in underserved communities, exhibit higher lending rates in Douglas County compared to state and national averages. In terms of number and value of CDFI lending, CDFIs in Douglas County lend at much higher rates than the state and national averages, with Douglas County CDFIs making an average of 130 micro and business loans per business versus an average of 58 for the state and just 13 loans per business as the national average.[24]

These loans are also nearly twice the size of state and national averages, with CDFIs in the Omaha MSA lending an average of $1,237 per business versus $588 and $567 at the state and national levels, respectively. The robust engagement of CDFIs in Douglas County, offering micro and business loans at a significantly higher rate, underscores a proactive approach to addressing financial inclusion and supporting the diverse entrepreneurial landscape

By providing access to capital for entrepreneurs and small business owners who may not qualify for traditional bank loans, CDFIs play a critical role in bridging the funding gap and creating opportunities for economic mobility.

To further strengthen the lending and capital access landscape in Omaha and the surrounding region, there are several additional steps that could be taken:

- Expand partnerships between CDFIs and traditional financial institutions to increase the overall pool of capital available to underserved communities and entrepreneurs.
- Encourage the development of more diverse and flexible lending products, such as revenue-based financing or hybrid debt-equity instruments, to meet the unique needs of different types of businesses and industries.
- Invest in technical assistance and financial education programs to help entrepreneurs and small business owners navigate the lending process, improve their creditworthiness, and develop strong business plans and financial projections.
- Foster greater collaboration between CDFIs, local governments, philanthropic organizations, and the private sector to create a more coordinated and impactful approach to community economic development.
- Advocate for policies and regulations that support the growth and sustainability of CDFIs, such as increased funding for the CDFI Fund or tax incentives for investors who support CDFI lending activities.

Research Funding

Research funding is a critical component of the innovation ecosystem, as it provides the necessary resources for universities, research institutions, and businesses to conduct cutting-edge research and develop new technologies and products. The most successful innovation and entrepreneurship regions in the United States are, without exception, also the home of very successful research institutions. Examples include Boston, the Bay area in California, San Diego, and Austin.

24. CDFI; Mass Economics, Omaha Innovation District Feasibility Analysis, August 24th, 2023.

The level of research funding in Nebraska falls well below the levels in other Midwestern states. In 2022, research funding for the University of Nebraska Medical Center (UNMC) was $205M, placing it 131st among American universities. Funding at the Lincoln campus of the University of Nebraska was $340M, placing it 87th. Research volume at Creighton University was $28M and University of Nebraska-Omaha was $24M. These institutions' total research volume was $597M. If this amount could be attributed to one institution, that institution would rank 52nd in the U.S.

A total of $597M in research volume is respectable. It is above the level of such notable institutions as Princeton and California Institute of Technology. On the other hand, it is well below the level of research in other Midwestern states. Research volume in 2022 was $1.777B at the University of Michigan, $1.523B at the University of Wisconsin, and $1.202B at the University of Minnesota. The combined total of Purdue and the University of Indiana was $1.505B. The University of Iowa and Iowa State combined for $987M. The evidence is clear that the gaps between the leading research universities in other Midwestern states and Nebraska is large. This is an area that must be addressed.

The relative under performance of Nebraska's research volume extends to other areas as well. Both the Omaha and Lincoln MSAs receive comparatively lower levels of Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants than the national average.

SBIR and STTR grants are federal programs that provide funding to small businesses and startups to support the development of new technologies and products.

The lower levels of SBIR/STTR funding in the Omaha and Lincoln MSAs may indicate a need for greater support and resources for small businesses and startups in the region to help them compete for these grants and bring their innovations to market.

The distribution of SBIR/STTR grants between the two MSAs is noteworthy, with Omaha receiving a higher share of STTR grants compared to the Lincoln MSA.[25] STTR grants are specifically designed to facilitate collaborative research and development partnerships between small businesses and research institutions, such as universities. The higher share of STTR grants in the Omaha MSA highlights a unique regional emphasis on fostering these types of collaborations and leveraging the research capabilities of institutions like UNMC to support business innovation.

Additionally, the tech transfer policy of the University of Nebraska (NU) system warrants attention. Revising the policy to allow the university to retain a smaller percentage of intellectual property (IP) could incentivize more research and commercialization. This approach could create a win-win scenario, where researchers earn more directly from their innovations, and the university benefits from retaining a smaller percentage of a larger volume of successful projects. Such a policy shift could enhance the overall research and commercialization ecosystem, driving greater innovation and economic growth in the region. In addition, we would urge that all of our local higher education institutions benchmark their IP progress against national leaders in this area. Commonly identified leader include Carnegie Mellon University and the University of Utah.

25. NIH; NSF; USDA; DOE; SBIR/STTR; dF-QCEW (private sector); Mass Economics, Omaha Innovation District Feasibility Analysis, August 24th, 2023.

Economic Assets: SWOT Analysis

Strengths

- Regional Center: Omaha and Douglas County are the central economic hub for the region.
- Higher-than-average Wages: higher-than-average wages contribute to a relatively affluent economic landscape.
- Talent Attraction: Potential exists to attract "boomerang" talent who want to return to the area to raise a family or enjoy a higher quality of life.
- Strong Industry Clusters: Current strengths in AgTech, FinTech, insurance, warehousing, health sciences, and logistics can all be leveraged for growth.
- Strong Lending Institutions: CDFIs demonstrate a proactive approach to financial inclusion.
- Growing Excitement for VC Investing: Growing interest in venture capital investment opportunities.

Weaknesses

- Job Growth Rate: Slower job growth rate compared to the U.S. average.
- Talent Challenges: Difficulty with talent attraction and retention relative to peer cities.
- R&D: Weaker research base than other Midwestern states.
- Policy: Gaps exist in state policy support for I&E.
- Lack of Enterprise Diversity: Dominance of large firms and lower percentage of jobs in small-scale enterprises.
- Uneven Distribution of Capital: Capital is not optimally distributed across stages of entrepreneurship.
- SBIR/STTR Investment: Lower levels of SBIR/STTR grants compared to the national average.

Opportunities

- Emerging Sectors: Sports Tech, Family Tech, Cybersecurity, and Automation for Engineering and Construction are among areas Omaha is poised to demonstrate leadership in.
- Strengthening Startups: Improving entrepreneurial education, resources, and support can augment startup survival rates.
- Entrepreneurship Diversity: CDFIs can be leveraged to support a diverse entrepreneurial landscape.

Threats

- Indicators of Entrepreneurship: Nebraska's low ranking in Kauffman Indicators of Entrepreneurship and startup survival rates.
- VC Funding Levels: Despite improvements, persistent gaps remain in venture capital funding compared to peer cities and states.
- Large Firm Dominance: Potential impact of large firm dominance on the entrepreneurial ecosystem.
- VC Funding Distribution: Entrepreneurs face challenges in securing VC funding, particularly in seed and pre-seed stages.

Network Assets

While Omaha is rich in many of these assets, our assessment finds that these resources are often scattered and disconnected, causing entrepreneurs to fall through the cracks as they try to advance ideas and enterprises.

Omaha's innovation ecosystem, characterized by over 40 Business Support Organizations (BSOs), lacks a centralized convener that can effectively coordinate efforts, streamline resources, and guide entrepreneurs through the various stages of growth. This fragmentation can lead to inefficiencies, duplication of efforts, and missed opportunities for collaboration and synergy.

Similarly, while Lincoln showcases a dense network of BSOs, the absence of an overarching organization remains a consistent theme. This lack of a unified voice and strategic direction can hinder the ability of the ecosystem to effectively advocate for policies and resources that support innovation and entrepreneurship.

Our assessment also indicates that Omaha lags in various indicators of innovation and entrepreneurship vibrancy, raising concerns about the pace and trajectory of innovation growth. Despite commendable rankings in ideation and scaling, challenges persist among enterprises moving from prototype development to commercialization. This gap in the innovation pipeline suggests that there may be a lack of resources, expertise, or support for entrepreneurs and startups during this critical phase of growth. Addressing this gap is crucial for ensuring that promising ideas and technologies can successfully transition from concept to market.

One common solution to this challenge used across the country is the development of place-based interventions, such as innovation districts or other "centers of gravity," that can provide a focused and collaborative environment for entrepreneurs and startups. These concentrated hubs of activity can offer access to shared resources, mentorship, and networking opportunities, as well as foster the development of local clusters and supply chains that can support the growth and commercialization of new technologies and products.

In addition to these challenges, there is also a need to bridge gaps in tech transfer and research commercialization, and to foster coordinated efforts among higher education entities. While the region's higher education institutions contribute significantly to research and knowledge creation, they often face challenges such as budget cuts and talent shortages that can hinder effective collaboration with industry partners. Strengthening the connections between academia and business, and creating more opportunities for technology transfer and commercialization, can help to unlock the full potential of these valuable research assets.

Finally, there is a growing recognition of the importance of exposing the next generation to entrepreneurial thinking and skills from an early age. Investing in K-12 programs that provide hands-on experience with entrepreneurship, innovation, and problem-solving can help to cultivate a pipeline of future entrepreneurs and innovators, and create a culture that values and supports risk-taking and creativity.

> *A prevailing need has surfaced for a unifying force to consolidate resources and opportunities. While the ecosystem has an abundance of nodes and connectors, there is no overall convener.*

The desire for a dedicated organization to centralize resources and advocate for entrepreneurs in Omaha underscores the potential for enhanced collaboration and streamlined support mechanisms.

Business and Innovation Support Organizations, Events, and Programming

Omaha's entrepreneurial ecosystem boasts over 40 resource-rich entities, encompassing incubators, accelerators, capital providers, networking organizations, technical assistance providers, and those dedicated to supporting minority enterprises. A comparative glance at Lincoln reveals a dense network of BSOs that surpasses other metropolitan areas in Nebraska, Iowa, Missouri, and Kansas, indicating a robust support infrastructure.[26]

Innovation Support Organizations (ISOs) focus on assisting entrepreneurs in taking a new product or service from idea to market, moving from research and development to prototyping and, eventually, scaling. Exploring the region's ISOs reveals Lincoln to be a focal point, housing more than half of such entities in the combined metros). While Douglas County and Omaha exhibit relative strength in BSOs catering to Minority Business Enterprises (MBEs) and Women-owned Business Enterprises (WBEs), there is a notable absence of such organizations in Lincoln.

26. BSO database; dF-QCEW (private+public sector), Mass Economics, Omaha Innovation District Feasibility Analysis, August 24th, 2023.

Though the region has an impressive constellation of BSOs, many of these organizations are disconnected, not networked in a meaningful way, and could benefit from coordination, communication, and resource-sharing to avoid duplication of effort. A prevailing need has surfaced for a unifying force to consolidate resources and opportunities. While the ecosystem has an abundance of nodes and connectors, there is no overall convener. The desire for a dedicated organization to centralize resources and advocate for entrepreneurs in Omaha underscores the potential for enhanced collaboration and streamlined support mechanisms.

Attendance at events such as 1 Million Cups and Startup Omaha Week demonstrate the strength of Omaha's I&E community and eagerness to connect and collaborate.

The Role of Higher Education

As noted earlier, The combined efforts of the University of Nebraska-Lincoln (UNL), University of Nebraska-Omaha (UNO), University of Nebraska Medical Center (UNMC), and Creighton University have manifested in a cumulative research expenditure of $597 million. This places the collective on par with esteemed institutions such as the University of Iowa, Virginia Tech, and UC Irvine, underscoring their commitment to advancing knowledge and innovation, but it is still well below other Midwestern universities

Creighton University has notably contributed to this collaborative landscape by establishing an institute focused on population health. This initiative not only supports cross-sector collaboration but also delves into innovative approaches within clinical healthcare. UNL's 'The Combine' stands out as a model that effectively propels Nebraska's AgTech sector forward, offering a blueprint for growth and attracting rural entrepreneurs to contribute to the region's economic development. Metro Community College serves as an effective tech workforce training instiution.

In addition to increasing research volume, it is also necessary to strengthen partnerships between universities and the business community. These partnerships are crucial for fostering innovation and entrepreneurship. However, there is a recognized need to enhance technology transfer and research commercialization capabilities within the region to further drive innovation. The most successful regions have great research, technology, and commercialization capacity. In addition, there exists room for improvement in coordinating and collaborating among higher education organizations in Nebraska, recognizing their collective potential but also the limitations they face individually.

K-12 Entrepreneurship Education

Interviewees repeatedly named expanded K-12 entrepreneurship education as essential for exposing the next generation to alternative career paths and entrepreneurial thinking. An increased focus on STEAM programming (Science, Technology, Engineering, Art and Math) at the K-8 level can pay dividends later by generating interest in creative thinking at an early age. Further, the Omaha region would benefit from greater coordination and collaboration across programs at all levels of education to ensure a seamless education and talent pipeline for STEAM-based industries.

> *There is great opportunity to leverage Kiewit Luminarium and UNO's STEM TRAIL Center as partners in expanding programming and opportunities for engaging in STEAM-related learning.*

Community as an Asset

Among the members of the entrepreneurship community interviewed, the close-knit and supportive community was frequently cited as a benefit that makes Omaha stand out among other entrepreneurial ecosystems–particularly the ability to be two door-knocks or phone calls away from connecting to a support network.

Meanwhile, Omaha's family-friendly environment has the potential to attract "boomerangs" and family-minded entrepreneurs. Interviewees nearly unanimously cited the "big small town" nature as a chief advantage Omaha has over other places.

Policy and Legislative Support

National measures of state innovation success commonly cite seven success factors. These are workforce skills, business-friendly tax policy, venture capital availability, affordable living costs, strong research universities, high-tech firm presence, and established innovation districts. Of these measures, Nebraska ranks highly only in business-friendly tax policy and affordable living costs. State-level policy and investment is critical to building strong research universities and is often a major aid to venture capital availability and establishing innovation districts. States across the country of all political persuasions have made major progress in these areas.

In addition, state policy and legislative support plays an important role in education for entrepreneurs and attracting the interest of businesses who want to start and stay in the state. In our interviews we found there was notable interest in programs aimed at expanding early education for entrepreneurs and boosting innovation funding, and a willingness to incentivize companies to initiate and sustain operations within the state. Previous Nebraska initiatives in this area, such as the Business Innovation Act (BIA) and Invest Nebraska, while modest by national standards, are viewed as successful, though there is a perception that they may be operating at capacity. A 2020 Economic Impact Analysis of the BIA concluded that each $1 of BIA funding generated $5.75 of private investment funding, earned $9.77 of revenue for participating businesses, and produced an annual economic impact of $17.23. Such a return on investment underscores the effectiveness of these initiatives, making a strong case for further investment in legislative measures aimed at supporting and advancing innovation-driven endeavors within Nebraska.

Diversity and Inclusivity

Efforts are needed to address disparities in who can participate in the tech and innovation ecosystem, including non-traditional applicants and caregivers. Addressing resource gaps and providing basic resources can create a level playing field for individuals to innovate. Interviewees cited child care or other care giving responsibilities, a need for healthcare and steady income, and a lack of basic resources as barriers to entry for would-be entrepreneurs. This is an area where philanthropy is uniquely positioned to make an impact, addressing these challenges and reducing risk, and providing services to raise underserved populations to baseline to ensure they can participate in growing Omaha's innovation economy. Engaging corporations to expand internships, apprenticeships, and other placements can also be pathways for expanding opportunity and overcoming barriers to entry.

Perception and Promotion

There is a need for increased promotion and communication to raise the profile of Omaha's startup talent and innovators. Targeted communication efforts, events such as Big Omaha, and efforts to lead larger efforts to brand the Silicon Prairie are all pathways towards increasing Omaha's visibility on the world stage.

Efforts are needed to address disparities in who can participate in the tech and innovation ecosystem, including non-traditional applicants and caregivers. This is an area where philanthropy is uniquely positioned to make an impact, addressing these challenges and reducing risk, and providing services to raise underserved populations to baseline to ensure they can participate in growing Omaha's innovation economy.

Photo courtesy of Visit Omaha

Network Assets: SWOT Analysis

Strengths

- Resource Density: The ecosystem boasts over 40 Business Support Organizations, including incubators, accelerators, capital providers, and technical assistance providers, enriching the support network available to entrepreneurs.
- Community Ethos: Omaha's culture of hard work, integrity, and community collaboration, coupled with its "big small town" ambiance, are significant assets in attracting and retaining talent.
- Legacy of Success: The region benefits from a notable legacy of successful entrepreneurs who actively reinvest in the community, fostering a culture of philanthropy and mentorship.
- Innovation Rankings: Omaha shows strong performance in ideation and scaling, demonstrating its ability to generate and grow innovative ideas.
- Legislative Support: Initiatives like the Business Innovation Act and Invest Nebraska have shown success, encouraging private investment and supporting business growth through significant returns on investment.

Weaknesses

- Lack of Central Convener: The absence of a unifying "backbone" organization hampers the ecosystem's efficiency, making it challenging to centralize resources and advocate effectively for entrepreneurs.
- Competitive vs. Collaborative Culture: A tendency towards competition over collaboration among some ecosystem components limits the potential for synergistic growth.
- Innovation Growth Concerns: Omaha faces challenges in maintaining innovation momentum, particularly in moving from prototype development to commercialization.
- Education and Talent Shortages: Budget cuts and talent shortages within higher education and K-12 impact the region's ability to cultivate a competitive and collaborative innovation environment.

Opportunities

- Enhancing Collaboration: By fostering a more collaborative ethos and establishing a central convener, Omaha can amplify the impact of its innovation assets, creating a multiplier effect for regional growth.
- Marketing and Perception: A concerted marketing effort led by a governing organization could significantly enhance Omaha's image as an innovation hub, attracting further talent and investment.
- Education Expansion: Addressing gaps in K-12 entrepreneurship education and STEAM programming offers an opportunity to inspire future generations and build a pipeline of talent.

Threats

- Resource and Participation Disparities: Existing disparities in participation and access to resources for non-traditional applicants and caregivers present a barrier to creating a truly inclusive innovation ecosystem.
- Policy Incentives: While existing legislative initiatives are positive, there is a pressing need for additional policies that incentivize companies to start, grow, and remain in Nebraska, ensuring the region's competitiveness in the innovation landscape.

Physical Assets

Physical Assets include both the technical resources needed to support innovation, such as infrastructure, office, and co-working space, and the placemaking attributes that make a place desirable and vibrant. At the macro level, the region has much to brag about – low cost of living, strong infrastructure, and world class cultural amenities. However, as we examine the region through the lens of innovation and entrepreneurship we find a scattered landscape of resources that lacks a center of gravity.

Infrastructure

Nebraska's Midwestern location makes it ideal for logistics companies who, from Omaha, can reach most of the country in 1-2 days. The region's large data centers have put Omaha on the radar of large tech companies including Meta (Facebook), Google, and others. Omaha has 14 data facilities encompassing a total of nearly 40 acres, and ranks as the 17th largest data center market in the United States and 19th in the Americas according to technology consulting firm Baxtel.[27]

27. *https://baxtel.com/data-center/omaha*

Quality of Life and Arts, Culture, and Placemaking Assets

> *Much more than being a nicety, arts, culture, placemaking, and outdoor recreation assets are essential to creating a place that attracts creative thinkers, innovators, and entrepreneurs.*

Omaha has much to brag about in this arena. In addition to boasting many museums and cultural institutions, Omaha has invested heavily in developing a vibrant riverfront park. Nearby, Kiewit Luminarium, the Old Market district, and Millwork Commons all boast many public art installations, and anchor a vibrant downtown cultural corridor. Omaha is also known for its elevated cuisine (according to the *Washington Post*, one of the best sushi restaurants in America is in Omaha), and has a deep musical heritage which spans genres and eras.

For outdoor enthusiasts, the region offers access to lakes, trails, parks, world class golf courses, and many outdoor recreation opportunities. Combined, these assets enrich the region and provide plenty that Omaha can celebrate and leverage for talent attraction and retention.

Transportation and Connectivity

The ability to access physical locations, facilities, and other assets with ease is a critical component to ensuring assets are networked and don't become islands serving only a small, geographically proximal population. Several stakeholders we interviewed indicated that Omaha is very car-centric, but that it is easy to commute and move about the region. LinkedIn, which has a large office in Omaha, cited the ease of commute by car as a core component of their ability to effectively lure workers back to the office when shifting back to hybrid work.

While some indicated the geographic separation between Lincoln and Omaha created barriers to expanded collaboration, others stated they participate in events and activities in both communities and don't see the distance as a significant obstacle.

> *Creating an innovation district that is walkable and networked to public transportation and other clusters of activity is an important strategy for creating density and a nexus for activity.*

Siting such a district in an area that can take advantage of the Omaha Streetcar Project or other public transportation initiatives would be a sensible approach to enhance connectivity while reducing the need for parking and lowering the overall carbon footprint of the district. Wherever the district is located, ensuring there are strategies to create physical connections with Lincoln, Council Bluffs, and the larger region can help bring together all of the resources the region has to offer.

Housing

Omaha offers a lower cost of living compared to many of the leading innovation hubs, and the housing cost is a significant part of that. As housing costs have soared in other markets, Omaha has remained affordable, especially for tech workers. Omaha's median housing cost of $210,300 is below the U.S. median ($281,900), less than half of Austin ($461,500), and 40 percent of Denver ($540,400). Less than 7 percent of the city's housing is vacant, so new housing will be needed as the innovation economy grows, and special attention should be paid to minimizing displacement when siting an innovation district.[28] With the explosion of housing costs in many traditional innovation hubs (i.e Boston, San Diego, Seattle), Omaha's relative affordability is a major advantage.

28. U.S. Census Bureau, American Community Survey (ACS) 2018-2022, 5-Year Estimates.

Centers of Gravity

As with other resources, Omaha's physical assets are scattered across the region and lack a center of gravity for creating the density needed for a visible innovation ecosystem. Given the relatively small size of the Omaha region, our strong view is that Omaha should have only one or two innovation districts. Omaha is simply too small for its assets to be scattered – it needs to create places that will promote interaction, knowledge exchange, and vitality so the region can punch above its weight class. This does not mean that innovative companies will not be scattered throughout the region, but rather that programming to support entrepreneurs, co-working space, and small growing firms should be concentrated in a few areas

> *Innovation districts have the unique potential to spur productive, inclusive and sustainable economic development. At a time of sluggish growth, they provide a strong foundation for the creation and expansion of firms and jobs by helping companies, entrepreneurs, universities, researchers and investors—across sectors and disciplines—co-invent and co-produce new discoveries for the market. At a time of rising social inequality, they offer the prospect of expanding employment and educational opportunities for disadvantaged populations given that many districts are close to low- and moderate-income neighborhoods. And, at a time of inefficient land use, extensive sprawl and continued environmental degradation, they present the potential for denser residential and employment patterns, the leveraging of mass transit, and the repopulation of urban cores.*
>
> *- The Rise of Innovation Districts,*
> *Bruce Katz and Julie Wagner, Brookings Institution*

Critical characteristics of innovation districts include the following:

1. Critical Mass of Businesses, Researchers, and Workers – Innovation requires a significant number of people working in diverse fields located in a dense environment. The colocation that most effectively results in new knowledge creation is a place where companies are located within a 5-to-10-minute walk from each other.

2. Lively Urban Environment – Successful innovation districts are urban in character. They are located in or adjacent to areas of high economic activity, building off preexisting demand for development. They are designed to be walkable neighborhoods, filled with restaurants, entertainment, and other amenities that attract creative people throughout the day.

3. Plentiful Opportunities for Unplanned Interaction – Beyond mere proximity to other firms and creatives, the best innovation districts offer well designed public spaces to encourage the sorts of serendipitous collisions that lead to the cross-pollination of ideas. These shared spaces include parks, coffee shops, gyms, or anywhere else where people from different firms or industries might come together.

4. **Strategic Community Programming** – A robust network of relationships is incredibly important to the generation of innovative ideas. Through social events, lectures, and other engaging programming, innovation districts can proactively foster relationships between people working across industries and organizations.

5. Presence of Entrepreneurial Support Organizations – Entrepreneur support organizations provide resources and guidance to people trying to start and grow businesses. They educate, mentor, and sometimes help fund entrepreneurial endeavors, and their presence in innovation districts can dramatically accelerate the commercialization of new technologies.

Kendall Square, (Cambridge, MA) Anchored by the Massachusetts Institute of Technology is home to many biotech, IT, and clean energy companies, including Google, Microsoft, Amgen, Biogen, and Novartis.

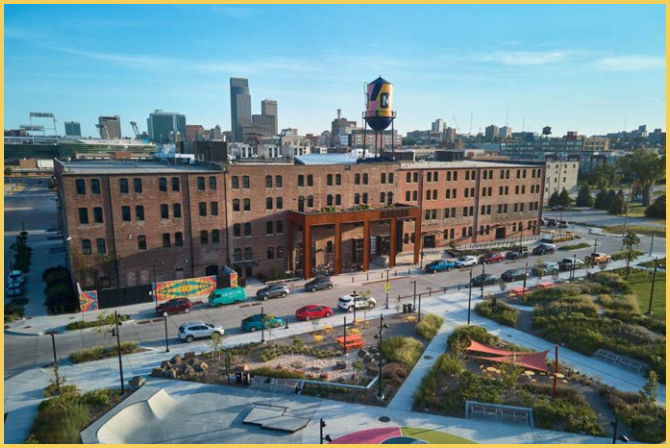
South Lake Union, (Seattle, WA), stands out as one of the most dramatic urban transformations in the U.S. - transforming a former warehouse district into a mixed-use engine for housing, startups, life sciences research, and a global hub for tech companies.

6. Ample Availability of Land – Innovation districts require a substantial amount of land, not just to provide sufficient space for the collocation of a large number of people, but also to provide a sustainable source of operational funding. Through sales and long-term ground leases, innovation districts can convert land holdings into revenue to support community programming and other critical operations. Most successful innovation districts are at least 50 acres, though many are 100 acres or larger.

7. Sound Governance Structure – Innovation districts are responsible for a unique mix of functions, including real estate development, community programming, property management, entrepreneurial support, and even public policy. To effectively manage and distribute resources across their many purposes, an innovation district requires a sophisticated governance structure with a skilled professional staff.

8. Intellectual Capital – Innovation entails research, and the commercialization of the intellectual capital resulting from research yields great potential for economic growth through new products and companies. To succeed, most innovation districts have research facilities on or near property they control. Research facilities (in the form of wet labs, dry labs, and more traditional office space) are often operated by universities, government agencies, or corporations.

9. Proximity to Underserved Populations – Given the unique capacity of entrepreneurship to generate wealth and the labor force needs of startups, innovation districts should be located near neighborhoods with higher levels of poverty and greater minority populations. Integration with underserved populations allows for the incorporation of diverse perspectives, which can enhance creativity and innovation. Additionally, proximity supports equitable economic growth by distributing the benefits of technological advancements and new business developments more broadly within a community.



Millwork Commons is not only a vibrant community in its own right, but is also in close proximity to parks, trails, entertainment venues and dining.

The University of Nebraska Medical Center brings together the areas highest concentration of medical centers, researchers, and related industry. Research facilities (in the form of wet labs, dry labs, and more traditional office space) are often operated by universities, government agencies, or corporations.

Physical Assets: SWOT Analysis

Strengths

- Strategic Location: Nebraska's central positioning offers logistical advantages for companies, ensuring rapid access nationwide.
- Data Center Attraction: Ranked 17th nationally, the region's data centers draw major tech companies, signaling expansion potential.
- Affordable Real Estate: Omaha's real estate market remains competitively priced, making it an appealing option for businesses and residents.
- Historic and Modern Fusion: Omaha and Lincoln's capacity to blend modern innovation within historical spaces enriches the area's charm and utility.
- Cultural Vibrancy: A lively cultural scene, including museums and entertainment districts, enhances Omaha's appeal as a place to live and work.
- Recreational Amenities: The abundance of outdoor activities contributes to the area's attractiveness for current and potential residents.
- Convenient Commuting: The region's car-centric nature and manageable commute times support flexible working arrangements.

Weaknesses

- Dispersed Innovation Resources: Key innovation assets like Millwork Commons and the University of Nebraska Medical Center are spread out, leaving the ecosystem without a cohesive hub.
- Lack of Central Innovation District: Without a dedicated district, Omaha misses out on fostering necessary interaction and collaboration within the innovation community.
- Geographical Division: The separation between Omaha and Lincoln poses challenges to seamless regional collaboration and development.

Opportunities

- Innovation District Development: Creating one or two central innovation districts that could catalyze collaboration, attract investment, and centralize resources, driving ecosystem growth.
- Bridging City Gaps: Enhancing connectivity between Omaha and Lincoln can unlock regional synergies and foster a more unified innovation landscape.
- Leveraging Cultural and Recreational Assets: Utilizing the area's cultural and outdoor assets in promotional strategies can enhance its attractiveness to businesses and talent.

Threats

- Competition with Cohesive Ecosystems: The absence of a unified innovation hub may place Nebraska at a disadvantage against regions with more integrated ecosystems.
- Diminished Collaboration Potential: The lack of a centralized district and geographical barriers could limit opportunities for spontaneous innovation and knowledge exchange.
- Resource Fragmentation: Dispersed physical assets may lead to inefficient use of resources and hinder the ecosystem's ability to support startups and attract investment.

Barriers to a Robust Regional Innovation Ecosystem

Relative to other metropolitan areas, the Omaha region exhibits a fairly slow growth trend.[29] Omaha, within the context of the top 100 U.S. metro areas, ranks consistently near the middle with its best rankings being 29th for scaling and 31st for prototyping, but it drops to 40th in overall commercialization and 42nd in ideation.[30]

> *Omaha cannot settle for "passing grades" if it wants to compete in the innovation economy.*

Examining the research landscape, Douglas County exhibits a shortage of researchers, with 2.7 graduate students, postdocs, and university researchers per 1,000 population, compared to 7.2 for Lancaster County (which includes Lincoln).[31] Patenting activity, a gauge of tech transfer and commercialization activity, trails far behind the national average, with 30 patents per 1,000 population in Douglas County versus 50 at the national level, and only 26 per capita in Lancaster County despite having a higher concentration of researchers.[32]

As it embarks on a journey to become a vibrant hub of innovation and entrepreneurship, Omaha faces a nuanced set of challenges and opportunities.

As the region looks to the future, it will need to grapple with several limiting factors, chief among them:

A limited pool of qualified workers.

There is a growing need to invest in educational initiatives and vocational training programs to ensure the workforce is well-equipped for the demands of the innovation-driven future. Hiring and recruiting practices need to evolve to embrace talent from non-traditional backgrounds and welcome qualified workers completing programs through the AIM Institute, Nebraska Tech Collaborative, and elsewhere.

A constrained funding landscape.

While Omaha's funding landscape has shown improvement, venture capital and other funding sources are taking their money elsewhere. Nebraska ranks 30th in annual VC funding, but it would need to attract more than $600M annually to pass Delaware and DC for 20th.[33] Omaha is simply not ranked. Among those investing in the region's enterprises, funding tends to concentrate in later-stage startups, leaving a void in support for seed and pre-seed ventures.

29-30. dF-QCEW (private+public sector), Mass Economics, Omaha Innovation District Feasibility Analysis, August 24th, 2023.

31. NSF-NCSES, 2021; U.S. Census Bureau, ACS 2021, Mass Economics, Omaha Innovation District Feasibility Analysis, August 24th, 2023, Slides 148-149.

32. National Center for Science and Engineering Statistics; Science-Metrix; PatentsView, USPTO, 1998-2020, Mass Economics, Omaha Innovation District Feasibility Analysis, August 24th, 2023.

33. PitchBook via the State Science & Technology Institute (SSTI), *Key Technology Area Investment Data Tool,*

Regarding R&D spending, Nebraska ranks 35th in business R&D and 33rd in Academic R&D.[34] Omaha and Lincoln perform better than the state as a whole in R&D, Talent, and Capital, but lag behind competing regions across many indicators. Omaha and Lincoln do not have the depth and scale to be competitive without increasing both research and investment activity from the public sector to leverage and de-risk private investment.

The combined level of R&D for Omaha and Lincoln, from both university and non-university sources was $623 million in 2022.[35] Across the country, U.S. universities generated 1 startup for every $100 million in R&D. That translates to 6 startups per year for Omaha and Lincoln, which is not a pace that will transform the region's economy.[36] Ramping up both research and investment is essential. Diversified funding sources and increased tolerance to absorb risk are necessary to expand entrepreneurship and foster sustainable growth.

Lack of a coordinated statewide investment strategy.

Legislative interest in programs to expand early education for entrepreneurs and increase innovation funding underscores Omaha's commitment to creating a conducive environment for I&E. Initiatives like the Business Innovation Act and Invest Nebraska are viewed as successful, though the city grapples with the need for further legislative backing. In recent decades, state governments have become active in promoting I&E development in their states. This support is consistent with other programs to support economic development more broadly, and has had long-term benefits.

Among factors that can be influenced, states vary in how much they focus specifically on programs to aid I&E and how much they invest generally in ways that improve aspects of the state that tangentially support I&E.

> *A large state investment in public research universities, for example, will produce many benefits, among them research that can be commercialized.*

State investments in supporting I&E tend to come in four broad areas: support for research at state universities, support for the growth and development of innovation districts, assisting in growing research centers of excellence, and state support – either directly or indirectly – for investment in new companies.

A competitive versus collaborative atmosphere.

The synergy between educational institutions and the business community is vital for fostering innovation. Collaborations between universities and businesses promise to bridge the gap between theoretical knowledge and practical application, nurturing a pipeline of talent and ideas that propels economic growth. Currently, geographic separation, resource scarcity caused by budget constraints, and a general lack of coordination characterize the relationship among the region's institutions of higher education, creating an environment that is competitive rather than collaborative. Marshaling the resources of academia and industry to enhance tech transfer and research commercialization capabilities is a critical need to drive innovation.

34. NSF-NCSES, *Science and Engineering State Profiles*, 2022.
35. National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.
36. Based on the region's R&D reported by NCES and national metrics from AUTM: *Surveys & Tools / Tech Transfer Infographic.*

A need for greater corporate engagement.

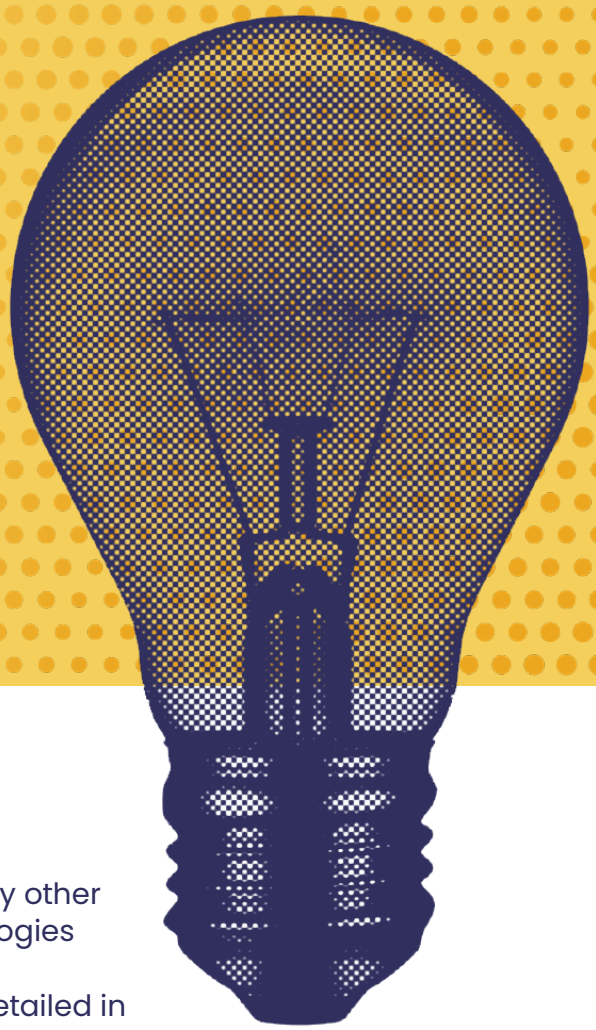
One of the region's greatest strengths is its strong core of large and stable organizations, some reaching back generations. Corporations are encouraged to play a more active role in supporting entrepreneurship. Through sponsorships, internships, and hosting competitions, established corporations can become integral to the success of emerging startups, fostering a symbiotic relationship that propels the entire ecosystem forward.

A scattered and disconnected ecosystem.

As with other resources, physical assets such as Millwork Commons, University of Nebraska Medical Center, Nebraska Innovation Campus, co-working spaces, and other key locations are scattered across the region and lack a center of gravity with sufficient density to create a visible innovation ecosystem that fosters collaboration.

> *To be competitive, the region needs more physical spaces such as co-working space, shared and private lab space, incubators, accelerators, and low-cost offices to provide startups with entry points and promote experimentation.*

Strategic Recommendations



Introduction

Omaha and the state of Nebraska have been on the sidelines of the innovation economy, getting passed by other states and regions in the race to develop new technologies and new companies. The gaps and needs have been addressed in previous sections and have also been detailed in "*Entrepreneurship in Nebraska*" by Josie Gatti Schafer, Morgan Vogel et al.

Currently several initiatives in the state and in the region are building momentum. These include but are not limited to:

- University of Nebraska Medical Center's (UNMC) innovation initiatives
- UNO's expanding Peter Kiewit Institute
- Nebraska Innovation Campus at UNL
- Nebraska Tech Collaborative powered by the Aksarben Foundation
- Tech Nebraska
- iHub at Omaha's Inland Port Authority
- An emerging cluster of firms and organizations in north downtown Omaha
- The proposed Bellevue Cybersecurity District
- Nebraska Statrup Academy at Millwork Commons
- Gener8tor at Millwork Commons

Regional and state leaders need to build around existing areas of strength, innovation, resources, and assets. Identifying or creating an organization that leads these efforts is the cornerstone and critical first step in the strategy. Physically centering these efforts around an Innovation District will serve as a "front door" to the I&E community while creating a centralized hub for connection, creation, and collaboration. Finally, a state-level higher education investment plan is necessary to increase the areas research capital and potential for commercialization.

1. Creation of a Coordinating Organization

Why It's Important

- Nebraska needs to "punch above its weight class" and it cannot do that without a collaborative and coordinated effort.
- Nebraska's I&E ecosystem is both too small and decentralized to be competitive against larger, more advanced I&E economies.
- Entrepreneurs can't afford to get bogged down navigating scattered resources while building their business.
- A coordinating organization can more effectively connect entrepreneurs to resources, as well as lead efforts to drive the innovation agenda. Key roles and functions of the coordinating organization include:
  - » Unifying expertise and resources in the state and channeling them where they will do the most good.
  - » Making decisions at the speed of the market to drive innovation forward.
  - » Serving as a strong convener and backbone organization to organize and make accessible the wealth of resources and activities available to the innovation and entrepreneurship community.
  - » Overseeing the entirety of the innovation ecosystem and ensuring coordination among the many players working on different parts of the puzzle.
- The development of a backbone organization was also recommended by the *MIT REAP Team Omaha*.

Actionable Strategies and Recommendations

- **Launch an Innovation Convening:** A public convening of the various champions, stakeholders, and leaders in Nebraska's innovation and broader creative economy is a critical first step to set up the new coordinating organization for success. The summit will bring together diverse stakeholders and engage them in the process of crafting a shared vision and action plans.
- **Establish the Coordinating Organization:** Create a new organization or align existing organizations to form the coordinating entity. This organization should be empowered to make decisions at the speed of the market and have the resources and expertise to drive the innovation agenda forward.
- **Secure Funding and Partnerships:** Identify and secure financial investments, partnerships, and human resources necessary to support the coordinating organization and its initiatives.
- **Develop a Clear Strategy and Priorities:** Work with stakeholders to develop a clear and prioritized strategy for advancing innovation in the region. This should include identifying areas of strength and depth, setting goals and metrics, and creating action plans for key initiatives.

- **Foster Collaboration and Coordination:** Establish mechanisms for collaboration and coordination among the various players in the innovation ecosystem. This may include regular convening, shared resources and data, and collaborative projects and initiatives.
- **Advocate for Supportive Policies:** Advocate for public policies at the state and local level that support research, innovation, and entrepreneurship. This may include funding for key initiatives, tax incentives, regulatory reforms, and other supportive measures.
- **Align Programs and Resources to Address Disparities:** Acknowledging that I&E investment alone is not enough to "lift all boats," the convening organization can elevate the needs of underrepresented groups and set priorities for expanding access and opportunity.
- **Promote the Innovation Story:** Actively promote the region's innovation economy within Nebraska and beyond. This may include marketing and communications efforts, events and conferences, and engagement with national and global innovation networks.
- **Measure and Track Progress:** Establish metrics and mechanisms for tracking and measuring the success of the coordinating organization and its initiatives. Use this data to continually refine and improve strategies and programs over time.

Potential Partners

- Corporate leaders
- Philanthropic Foundations
- Tech Nebraska
- Nebraska Startup Academy
- Nebraska Tech Collaborative powered by the Aksarben Foundation
- University of Nebraska - Omaha
- University of Nebraska - Lincoln
- University of Nebraska Medical Center in Omaha
- Creighton University
- State of Nebraska
- City of Omaha
- City of Lincoln
- The 75+ nonprofits supporting innovation and entrepreneurship

Starting Points

- Hire an interim CEO and assemble a board of directors to establish the organization.
- Secure funding for three years of activity.
- Build support among local stakeholders for the concept.
- Convene local innovation, entrepreneurship, and creative community to build momentum for initiative.

Promising Practices

Our primary recommendation is to have an organization, modeled after the Central Indiana Corporate Partnership (CICP), that can provide the resources, technical assistance, and decision-making to advance the technologies and initiatives needed to support and grow Omaha's innovation ecosystem. CICP served as an umbrella organization, or a greenhouse, that incubated and eventually spun off different sector organizations and related initiatives.

Given the lack of experience in Omaha and Nebraska at building a successful innovation ecosystem, we would expect the new organization to need some outside assistance, at least in the early years. A particularly valuable practice used elsewhere has been to establish a small visiting or review committee of national experts who would advise on the development of the ecosystem on a regular basis.

Spotlight: Central Indiana Corporate Partnership (CICP)

Founded in 1999, the Central Indiana Corporate Partnership (CICP), together with the supporting CICP Foundation, involves top executives from the region's major corporations, foundations, and universities, leveraging their leadership and resources for regional economic development in a strategic and collaborative effort to grow the region and expand opportunities for wealth creation.

To advance this mission, the partnership focuses on strategic projects that promise high impact, such as workforce development, tech sector growth, and research collaborations. CICP sponsors five key talent and industry sector initiatives, each addressing challenges and opportunities unique to its respective area: AgriNovus Indiana (agricultural biosciences), Ascend Indiana (talent and workforce development), BioCrossroads (life sciences), Conexus Indiana (advanced manufacturing and logistics), and TechPoint (IT and tech workforce development).

A major achievement for CICP is the creation of 16 Tech, a 50-acre innovation district in downtown Indianapolis. This district has become a hub for innovation and entrepreneurship, fostering collaborations between startups, established companies, and research institutions.

Budget: $12M, 98% contributed revenue. Lilly Endowment Inc. is a major philanthropic partner, providing substantial support for various initiatives and projects.

Staff: 29

Board: 73, with an Executive Board of 9 members including the CEOs of Lilly, Cummins, and other major employers

Outcomes:

- Development of a robust innovation ecosystem in Central Indiana
- Significant contributions to workforce development and talent retention in the region
- Enhanced collaboration between industry, academia, and government
- Successful launch and growth of 16 Tech, driving economic growth and innovation in downtown Indianapolis.

2. Grow Innovation Districts

Why It's Important

- As a focal point for innovators and entrepreneurs, innovation nodes provide a central hub where innovators and entrepreneurs can gather, collaborate, and access the resources they need to develop and grow their ventures.
- Innovation nodes serve as centers for applied university research and major sites for commercialization of academic research.
- Innovation nodes create an environment that encourages collaboration, facilitates knowledge sharing, and supports the growth of startups and innovative businesses.
- Establishing innovation nodes demonstrates Omaha's dedication to fostering innovation and entrepreneurship, making it a visible priority for the region and outside investors.

Actionable Strategies and Recommendations

- **Identify areas that are already centers of innovation activity:** Areas with some of the established assets commonly present in mature innovation districts include the University of Nebraska Medical Center, the Nebraska Innovation Campus, Millwork Commons, and the proposed Bellevue Cybersecurity District.
- **Decide, to the extent possible, to invest in a very small number of these districts:** Robust innovation districts must have significant capacity for growth as multi-decade projects. This includes the availability of land, often as many as 100 acres or more.
- **Invest in necessary infrastructure and facilities:** To support innovation and entrepreneurship at these nodes, create co-working spaces, labs, makerspaces, and incubators.
- **Establish programs and services:** Provide supportive offerings at innovation nodes for entrepreneurs and startups, such as mentorship, training, and access to funding and resources.
- **Foster collaboration and knowledge exchange:** Innovation nodes can host events, workshops, and networking opportunities.
- **Promote innovation nodes:** As key assets in Omaha's innovation ecosystem, innovation nodes can attract talent, investment, and businesses to the region.
- **Develop robust programs:** Additional valuable programming can be used to attract innovators from out of the region to these nodes.

Potential Partners

- Universities and colleges in Omaha and Lincoln
- Local and state government agencies
- Economic development organizations
- Private sector companies, corporate leaders, and investors
- Nonprofit organizations supporting entrepreneurship and innovation

Starting Points

- Engage stakeholders and partners to develop a shared vision and plan for establishing and growing innovation nodes.

- Secure funding and resources to support the development and operation of innovation nodes. **Land ownership can be a powerful tool for supporting long-term operations and programming through land sales and ground leases.**

Promising Practices

- The Cortex Innovation District in St. Louis (shown below) is a 203-acre campus with over 8,000 jobs in bio-tech, IT, cybersecurity and other industries. In addition to laboratories associated with Washington University, Cortex features extensive co-working space and shared lab facilities, venture capital firms, a robust set of programs targeted to growing small businesses, particularly small minority businesses, and numerous job training programs. Many major St. Louis companies have their innovation or research programs at Cortex.
- The 16 Tech Innovation District in Indianapolis is a 50-acre innovation hub that brings together researchers, entrepreneurs, and innovators to collaborate and commercialize new technologies.

3. Creation of a State and Education Investment Plan

Why It's important

- It is difficult to imagine that Omaha or Nebraska can become a national leader in innovation and entrepreneurship without a new level of commitment by the State of Nebraska.
- Nebraska lags behind other states in the volume of basic research, the number of centers of research excellence, sufficiently scaled innovation districts, and the availability of venture and seed capital – all areas where public investment is important or critical, and other states are making major investments while Nebraska is falling behind.

Actionable Strategies and Recommendations

- **Convene a task force:** Invite state leaders, educators, and industry representatives to develop the investment plan.
- **Analyze the status quo:** Assess current policies, programs, and resources related to innovation and entrepreneurship education in Nebraska.
- **Identify best practices:** Research models for integrating innovation and entrepreneurship into education that other states and regions have successfully implemented.
- **Develop specific goals, strategies, and metrics:** Set targets for the investment plan, particularly for research funding, commercialization, and workforce development.
- **Advocate for policy changes and funding:** State support is essential to the implementation of the investment plan.

Potential Partners

- Nebraska State College System
- University of Nebraska system
- Private colleges and universities in Nebraska
- Nebraska Department of Economic Development
- Nebraska Legislature
- Business and industry leaders
- Metro Community College
- K-12 Superintendents

Starting Points

- Identify the core champions who will recruit and lead the task force.
- Summarize the benchmarking and needs analysis in this report to develop key talking points.
- Identify industry partners in key legislative districts.
- Initiate one-on-one meetings with potential legislative champions.

Promising Practices

Successful examples of state investment abound in each of these areas:

- In **Georgia**, which has risen to 8th in the U.S. in R&D funding, the Georgia Research Alliance promotes economic development by recruiting star research talent to Georgia universities, investing in lab infrastructure, and helping launch and grow companies through seed funds, guidance and venture investments. Since 1991, GRA has invested $702M and generated $13.2B in research grants, venture capital, matching funds, and other sources.
- In **South Carolina**, the state supported the development of an International Center for Automotive Research at Clemson University. The center is an integral part of the state of South Carolina's successful effort to become the US leader in automotive manufacturing and research.
- In 2004, a State of **Florida** investment of $310M (matched by Palm Beach County) convinced the world-renowned Scripps Institute for Medical Innovation and Technology to open a second campus in Florida and affiliate with the University of Florida.[37] Today Scripps Research Florida has 50 principal investigators and a staff of 400, and focuses on neuroscience, virology, chemistry, and drug discovery. A 2021 study found that the Scripps Florida campus produced more than $3.2 billion in economic impact in its first 17 years of operation.
- To grow innovation ecosystems in **Ohio**, the State of Ohio invested $100M in innovation districts in the three major population centers of the state (Cleveland, Cincinnati, and Columbus) in 2021. Early returns are very positive.
- Through its Innovation Development Districts, **Indiana** has created a tool to attract large-scale tech and innovation projects to the state. These districts function similarly to a tax increment financing district but at a much larger scale. Successes of this program include the creation of the LEAP Innovation and Research District where Eli Lilly has announced plans to invest $9 billion to create a manufacturing campus, and have been instrumental in attracting more than $27 billion in pledged investment to the state in 2024.[38]
- Many states have a state program of support for venture capital and small business growth. There are three basic models.
  - » First, as in **California**, is to make venture capital investments in state companies from the state pension fund.
  - » Second is to establish state-funded venture funds that invest in local companies. **Connecticut** has created three such funds, with a total investment portfolio of $350M.
  - » Third is to provide tax credits for angel investors. **Iowa** Angels provides a state tax credit of 25% for angel investment in Iowa companies, with a $100k tax credit maximum per household.