



# Oklahoma Innovation Policy: Sustaining Leadership in a Competitive Nation

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Oklahoma Center for the Advancement of Science and Technology  
(OCAST)  
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## **Purpose of this Paper**

This report shares how OCAST delivers measurable economic impact through innovation. It provides Oklahoma's policymakers and partners with a clear picture of what works, where we are leading, and what additional investment is needed to sustain our advantage.



## Letter from the Executive Director

*Jennifer McGrail, Executive Director, OCAST*

Oklahoma's innovation story is one of determination, partnership, and impact. Nearly four decades ago, our state made a bold decision to invest in science, technology, and entrepreneurship as a path to economic growth. Since then, OCAST has proven that public investment in innovation is not just a policy choice; it is a competitive advantage.

Today, that advantage is being tested. Across the country, other states are rapidly adopting the very strategies Oklahoma pioneered, including competitive non-dilutive funding, commercialization networks, and coordinated access to capital. Indiana, Ohio, North Carolina, and now New Mexico have launched programs that mirror OCAST's long-standing model. What once made us exceptional is now the national standard.

This is not a story of decline—it is a call to advance. Oklahoma's foundation remains strong: a statewide innovation network, proven program outcomes, and an economy increasingly defined by research, entrepreneurship, and high-wage, high-quality job creation. The question before us is whether we will continue to lead or allow others to define the next phase of growth.

As this white paper outlines, sustaining and expanding OCAST's investments is critical to securing Oklahoma's role as a national and global benchmark for innovation-driven economic development. Our programs have leveraged more than \$139 million in follow-on private capital, supported the creation and retention of over 2,000 high-wage, high-quality jobs, and enabled companies to compete and scale in emerging industries from aerospace to biotechnology.

Innovation is no longer optional; it is economic infrastructure. When we fund startups, research, and commercialization, we are investing in the jobs, technologies, and industries that will define Oklahoma's future. The Oklahoma Standard has always meant meeting challenges with grit, collaboration, and vision. Innovation is our next expression of that standard.

Together with our legislative and executive partners, we will continue building a future where Oklahoma leads the nation in innovation-driven growth.

Jennifer McGrail  
Executive Director, OCAST

## Executive Summary: Oklahoma's Moment to Lead Again

Oklahoma's innovation economy is one of measurable results and proven return on investment. In FY2024, OCAST-supported companies created and retained 2,024 jobs with an average annual salary of \$83,196, 56 percent above the state average, and attracted \$139 million in follow-on capital. For every \$1 invested by the state, OCAST leveraged \$12 in private and federal funding. Yet, national trends show that states once behind Oklahoma are now accelerating investment to compete for federal funding, private capital, and talent.

The Global Entrepreneurship Congress (GEC) and Global Entrepreneurship Network (GEN) both emphasize that future growth will belong to regions that organize around three core elements: capital, coordination, and data. OCAST has been operating at this intersection for nearly forty years. However, maintaining this leadership requires continued and strategic investment.

According to the State Science and Technology Institute (SSTI), venture capital investment in Oklahoma reached \$195.2 million in 2024, outpacing peer states like Arkansas (\$25.3 million) and Louisiana (\$40.7 million). While these results reflect strong performance, states like Indiana and North Carolina are scaling even faster with new policy-backed innovation funds and expanded commercialization networks.

OCAST's model remains among the most cost-effective in the nation, leveraging more than \$12 in private and federal funds for every \$1 of state investment. Yet federal innovation dollars are increasingly competitive, requiring robust state matching programs and high-performing ecosystems to stay eligible for national grants.

## Key Takeaways

- Oklahoma's innovation infrastructure, built through OCAST, is a proven engine for economic growth.
- Peer states are catching up, replicating Oklahoma's long-standing approach to access to capital and commercialization.
- Sustained legislative investment is necessary to keep Oklahoma ahead in a national innovation race.

- Increased collaboration and accountability across state agencies, higher education, CareerTech, and industry will ensure every public dollar invested delivers measurable statewide outcomes.
- Creating a coordinated statewide entry point for innovators will simplify access to programs, reduce time to market, and strengthen Oklahoma's position as a national leader in solving one of the biggest challenges in innovation ecosystems.
- Strategic co-investment in research and innovation infrastructure will close gaps in academic and corporate R&D capacity, strengthening Oklahoma's ability to compete nationally and globally.

Metric	OCAST Impact	Source
<b>Jobs Created or Retained</b>	2,024	OCAST FY24 Impact Report
<b>Average Salary</b>	\$83,196	OCAST FY24 Impact Report
<b>Follow-on Capital</b>	\$139 million	OCAST FY24 Impact Report
<b>Venture Capital Investment (2024)</b>	\$195.2 million	SSTI 2024 Useful Stats
<b>Private Leverage Ratio</b>	12:1	OCAST FY24 Impact Report

Oklahoma has the programs and initiatives, talent, and partnerships needed to lead the next era of innovation. What's needed now is continued legislative commitment to sustain our advantage, to build the next generation of startups, and to ensure that the Oklahoma Standard continues to define national best practice in innovation policy.

## **OCAST's Proven Model of Innovation Investment**

### **Historical Context: A Vision Decades in the Making**

Oklahoma's commitment to innovation has deep roots. As early as 1971, the *Science and Technology and the State of Oklahoma* report called for the creation of an Office of Science and Technology directly under the Governor, recognizing that state government "must use science and technology effectively" to compete nationally.

By 1984, the *Oklahoma Council of Science and Technology* report, *The Future of High Technology in Oklahoma*, warned that the state was entering the technology economy late and urged urgent collaboration between business and education, along with venture capital formation as “an essential ingredient” for competitiveness.

The 1985 Final Report of the Oklahoma Council of Science and Technology further stressed that science-based industries would be “critical to the future of economic diversification” and that failure to act would leave Oklahoma behind its peers.

Sixteen years after the first recommendation, Oklahoma took bold action by creating OCAST in 1987 as a dedicated mechanism to fund research, accelerate innovation, and bridge the public-private gap.

That legacy should remind us: Oklahoma’s leaders have known for generations that investing in science and technology is essential. What took years of courage to start cannot be paused now.

### **OCAST’s Cornerstones of Innovation Investment**

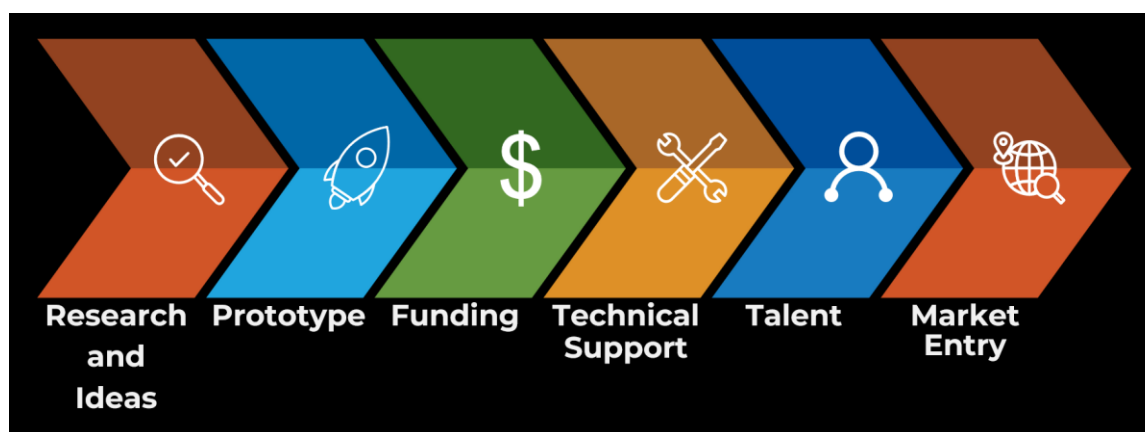
Since 1987, OCAST has served as Oklahoma’s dedicated agency for technology-based economic development. Its model was designed to catalyze research, accelerate commercialization, and strengthen the link between innovation and job creation. Nearly forty years later, this model has proven itself as one of the most efficient and impactful state-led innovation systems in the nation.

#### **Program Cornerstones**

1. **Applied Research and Development:** Through programs such as Industry Innovation and the Oklahoma R&D Attraction Act, OCAST funds industry-led research with measurable market potential. These grants require private sector matching, ensuring shared investment and accountability.
2. **Commercialization Support:** The Oklahoma Commercialization Network (OCN) connects entrepreneurs with accelerators, mentors, and investors. This network predates many national models and serves as a central hub for turning ideas into scalable companies.
3. **Access to Capital:** OCAST’s Seed Capital and SSBCI programs provide early-stage funding, leveraging private investment and ensuring that Oklahoma founders can access the capital needed to compete nationally.

4. **Talent Pipeline Development:** The STEM Internship Program connects students with industry, preparing the next generation of innovators while helping companies address talent shortages.
5. **Manufacturing and Technical Assistance:** OCAST supports Oklahoma's small and medium-sized manufacturers and technology-driven businesses. Through coordinated technical assistance, companies receive guidance on technology implementation, process innovation, and market expansion.

### OCAST's Integrated Innovation Model



This integrated system allows Oklahoma to move ideas from concept to market efficiently and inclusively. Unlike programs in many states that focus on isolated interventions, OCAST's approach connects research, funding, and workforce development under one coordinated strategy. OCAST's integrated model has become the foundation upon which Oklahoma's next phase of innovation will grow.

### Evolving to Build Oklahoma's Innovation Ecosystem

OCAST is entering a new phase of growth—one that expands the definition of technology-based economic development and brings innovation within reach of every Oklahoman. For nearly four decades, OCAST's work has proven that state-led investment can create jobs, attract capital, and build stronger communities. OCAST is among the first state innovation agencies to extend beyond traditional research partnerships, actively integrating entrepreneurs, startups, and small businesses into Oklahoma's innovation system. This evolution ensures that Oklahoma's innovation ecosystem is accessible, accountable, and focused on real-world outcomes.

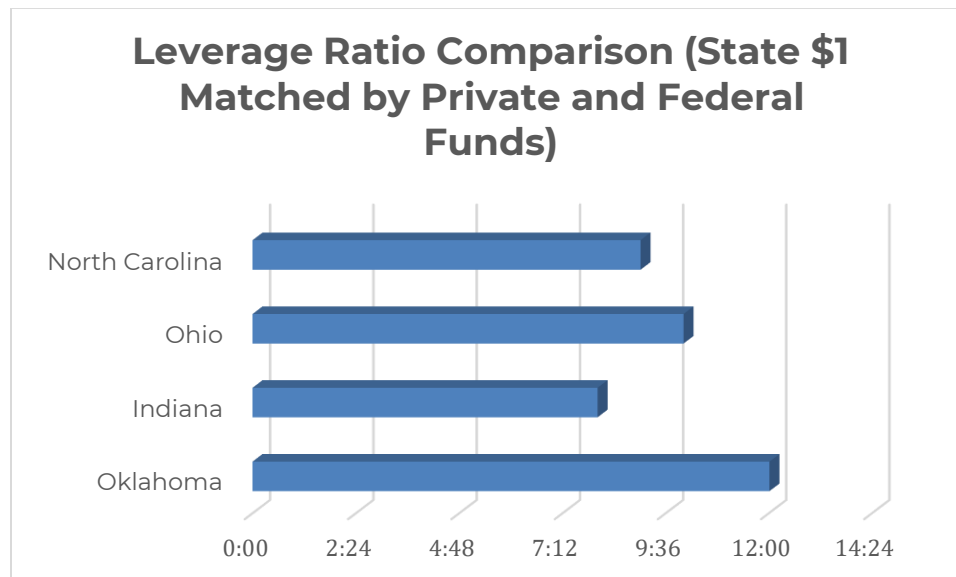
OCAST is broadening the state's innovation ecosystem by:

- Empowering entrepreneurs and private-sector leaders to guide innovation policy and align public investments with market demand. Through the modernized Oklahoma Science and Technology Research and Development (OSTRaD) Board, industry voices, founders, and investors now help shape the state's innovation strategy.
- Expanding access for non-traditional participants—startups, small manufacturers, and rural innovators—who have historically lacked entry points into research-driven programs. The Statewide Science and Innovation Plan ensures that these groups can connect with the networks, funding, and expertise they need to grow.
- Deploying targeted technical and capital assistance through programs such as the U.S. Treasury's State Small Business Credit Initiative (SSBCI) Technical Assistance Program and the Small Business Opportunity Program (SBOP), which strengthen financial readiness, commercialization capacity, and long-term sustainability for emerging businesses.
- Bridging academic and commercial innovation by unifying universities, CareerTech, accelerators, and investors through the Oklahoma Commercialization Network, reducing duplication and expanding impact across all 77 counties.
- Creating a more accessible innovation economy that extends opportunity beyond research institutions, ensuring that entrepreneurs, manufacturers, and students across rural and urban communities alike can participate in Oklahoma's innovation growth.

This evolution reflects Oklahoma's transformation from a research-centric model to one that integrates public and private leadership, connects local talent to global opportunities, and makes innovation a driver of prosperity for all Oklahomans.

### **Cost Efficiency and Return on Investment**

According to OCAST's FY24 data, every state dollar invested through OCAST programs leverages approximately \$12 in additional private and federal funding. SSTI data confirms that Oklahoma ranks among the top-performing Tier 5 states for venture capital leverage relative to population. This performance reflects prudent fiscal management and the strength of Oklahoma's innovation partnerships.



**Source:** State Science and Technology Institute (SSTI), *Useful Stats: State Venture Capital 2024*, OCAST FY2024 Annual Report

This strong leverage performance demonstrates the enduring value of legislative investment in innovation. Each state appropriation not only supports local startups and research but attracts national attention and federal dollars to Oklahoma's economy.

### Why It Matters

Innovation drives Oklahoma's competitiveness. Every OCAST-supported company strengthens local economies, creates high-paying jobs, and attracts national investment. The work of OCAST builds the foundation for sustained prosperity. By connecting research, capital, and talent, OCAST transforms ideas into growing companies and measurable economic outcomes.

### Startups Are Not Optional

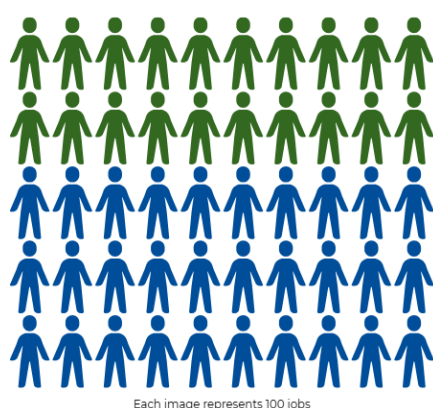
Economic diversification depends on high-growth startups that create new markets and industries. Small businesses sustain communities, but startups scale economies. High-tech jobs in innovation sectors produce a multiplier effect,



creating an average of 2.5 additional jobs in the non-trade sector for every one created.<sup>1</sup>

In FY24, OCAST-supported companies created and retained 2,024 jobs. Based on the employment multiplier effect, those jobs generated an estimated

5,000 additional positions statewide. These are not short-term construction or retail jobs; they are durable, high-wage, high-quality positions in sectors like aerospace, biotechnology, and advanced manufacturing.



**2,000**  
Startup Jobs  
Creates an  
additional  
**5,000**  
downstream jobs

Startups don't just create jobs—they define our state's identity. Oklahoma's growing innovation culture, from Tulsa Remote to Oklahoma City's bioscience corridor, demonstrates that collaboration and creativity are as central to our competitiveness as capital.

To retain our best graduates and attract national investors, we must continue funding the companies and technologies that define the next generation of opportunity.

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<sup>1</sup> Source: What Works Centre for Local Economic Growth (2019). "What does the evidence tell us about the employment multiplier effect?" Retrieved from <https://whatworksgrowth.org/insights/what-does-the-evidence-tell-us-about-the-employment-multiplier-effect/>

## How Oklahoma Compares

The Global Entrepreneurship Congress and SSTI's state analyses both confirm that Oklahoma's programs represent a mature and high-impact approach to innovation policy. However, peer states are moving quickly to replicate Oklahoma's success.

### Comparative State Policy Overview –

Policy Area	Oklahoma (OCAST)	Indiana	Ohio	New York
<b>Digital Resource Hubs</b>	Oklahoma Commercialization Network (est. 2012)	ConnectIND portal (2023)	TechOhio hub (2014)	Start-Up NY portal (2013)
<b>Targeted Non-Dilutive Funding</b>	Industry Innovation Program (1987); SBIR/STTR Matching	Early-Stage access to capital via SSBCI (2023)	Third Frontier (2002, expanded 2014)	Empire State Development grants (2011)
<b>Workforce Development</b>	STEM Internship Pipeline (2006)	Employer Training Grants (2017)	Ohio Means Jobs Internships (2015)	Excelsior Jobs Program (2010)
<b>Commercialization Support</b>	Inventor Assistance Program (2007); Oklahoma Seed Capital Fund	ConnectIND advisory network (2023)	Entrepreneurial Services Program (2014)	Start-Up NY tax incentives (2013)
<b>Ecosystem Convenings</b>	Innovation Day at the Capitol; OCAST partner summits (since 1990s)	Indiana Entrepreneurship Week (2018)	Ohio VC Fest (2023)	NY Venture Summit (2012)
<b>Emerging Tech Policy</b>	Exploring Responsible AI (next phase)	Responsible AI Framework (2025 pilot)	NE Ohio Smart Manufacturing Roadmap (2020)	Green Economy Innovation Zones (2021)

Oklahoma remains a national model, but other states are accelerating their pace of investment and coordination. Indiana's new Responsible AI framework, for instance, mirrors OCAST's next-phase planning to integrate ethical and inclusive technology development into its programs. North Carolina's targeted university-industry partnerships also highlight how sustained funding can position a state as a national leader in key industries.

New Mexico recently established its Technology and Innovation Office (TIO) within the Economic Development Department to accelerate startup growth and commercialize research from the state's national laboratories and universities. The office received \$90 million to launch a Research, Development, and Deployment Fund, support SBIR/STTR matching, and expand quantum technology and advanced energy initiatives. The TIO will coordinate across nine targeted industries including aerospace, biosciences, cybersecurity, and intelligent manufacturing. By absorbing its former Office of Strategy, Science and Technology, New Mexico is consolidating its innovation infrastructure to increase accountability and speed commercialization outcomes<sup>2</sup>.

Oklahoma pioneered this model nearly four decades ago with OCAST. The establishment of New Mexico's TIO is further evidence that states are increasingly replicating Oklahoma's long-standing framework—proof of concept that Oklahoma's early investments are the foundation others are now building upon.

### **How Oklahoma Competes in a Research-Rich Nation**

Unlike states anchored by billion-dollar research universities and corporate R&D hubs, Oklahoma's innovation system is built on distributed collaboration and state-driven support. OCAST's programs substitute for the scale of large academic and corporate research institutions by providing direct non-dilutive R&D grants, commercialization funding, and startup capital to companies that might otherwise relocate to more research-dense states. Federal data from the National Science Foundation's NCSES confirm that state-led R&D investment plays an increasingly important role in supporting innovation where private and university R&D are limited.

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<sup>2</sup> Source New Mexico, May 19, 2025; New Mexico Economic Development Department, Technology and Innovation Office Website

## Benchmarking Oklahoma Against National Leaders

According to the Milken Institute's 2022 State Technology and Science Index, Oklahoma ranks 46th overall but among the top performers in program efficiency and leverage. This reinforces that Oklahoma does more with less—and that scale, not performance, limits growth.

## Expanding Regional Innovation and Commercialization Capacity

Research from the Brookings Institution identifies three core assets that define successful innovation districts: economic assets, physical assets, and networking assets. OCAST's regional commercialization nodes mirror this model by connecting research capacity, workforce development, and entrepreneurial support across Oklahoma's regions. The Oklahoma Commercialization Network, combined with university and CareerTech partnerships, functions as a statewide innovation district network that extends opportunity beyond urban centers.

## Coordinating Access: Building Clear Pathways for Oklahoma Innovators

Oklahoma's innovation ecosystem is strong, but for innovators, researchers, and founders to realize its full potential, resources must be more visible, connected, and easy to navigate. The challenge is not a lack of opportunity; it is coordination and access.

OCAST is working with partners across state agencies, higher education, CareerTech, and local innovation organizations to create clear roadmaps and a single, coordinated entry point for Oklahoma innovators. By aligning existing assets and reducing duplication, we can ensure that companies and entrepreneurs spend less time searching for support and more time growing their ideas.

Creating these coordinated pathways will:

- **Accelerate commercialization** - Reducing the time it takes to find and access funding, technical assistance, and mentorship helps Oklahoma founders reach the market faster.
- **Increase visibility and accessibility** - A unified system allows innovators in rural, tribal, and underserved regions to connect with state and federal programs that may otherwise be difficult to reach.
- **Maximize public investment** - Coordination prevents overlap, aligns resources, and ensures that every public dollar invested delivers measurable results.

Oklahoma will also need to strategically market this single access point to ensure innovators across the state know where to begin and how to navigate available opportunities. By promoting the entry point through coordinated outreach, education, and regional partnerships, Oklahoma can make participation in the innovation economy simple and seamless. This effort will position the state as a national leader in solving a challenge that every innovation ecosystem faces; helping founders, researchers, and small businesses access resources faster and more efficiently.

This roadmap initiative, linking OCAST's programs, the Oklahoma Commercialization Network (OCN), and partner resources, will make Oklahoma's innovation system easier to navigate, faster to access, and more effective for those building the next generation of companies. By simplifying the journey, we help Oklahoma founders go further and faster with their resources.

### **Opportunities to Expand Leadership**

Oklahoma's innovation ecosystem is performing. The next challenge is to expand capacity, strengthen coordination, and invest at a level that matches our potential. To sustain and grow its leadership, Oklahoma can pursue five strategic opportunities identified through OCAST's FY26 initiatives, national benchmarking, and the Oklahoma Science and Innovation Strategic Plan.

- 1. Increase Collaboration and Accountability**

Strengthen partnerships among state agencies, higher education, CareerTech, industry, and local innovation organizations to improve coordination and transparency. Establish shared performance metrics, cross-agency dashboards, and collaborative reporting structures to ensure every public dollar invested in innovation delivers measurable statewide outcomes.

- 2. Responsible AI Policy Development**

Build on national best practices, such as Indiana's Responsible AI framework, to create an Oklahoma-centered approach emphasizing ethical, secure, and inclusive technology applications. Developing this policy foundation will help position Oklahoma as a thought leader in emerging technology governance.

- 3. Regional Commercialization Nodes**

Expand OCAST's reach through regional commercialization and innovation nodes that connect local universities, CareerTech institutions, and industry clusters. These partnerships will bring OCAST programs and resources closer

to communities, accelerate commercialization, and close geographic gaps in access to capital, mentorship, and workforce training.

**4. National and Global Visibility**

Elevate Oklahoma's reputation as a center for innovation by growing Innovation Day into a nationally recognized convening and strategically promoting success stories through data-driven storytelling, national policy forums, and global entrepreneurship networks. Increased visibility helps attract talent, investment, and new partnerships to the state.

**5. Data Capacity and Evidence-Based Decision Making**

Strengthen OCAST's data infrastructure to integrate innovation, workforce, and capital data across state systems. Enhanced analytics will provide policymakers with actionable insights, measure economic outcomes, and support real-time decision-making to guide future investments in science and technology.

## **Policy Recommendations**

Building on the strategic opportunities identified in the previous section, OCAST recommends the following policy actions to ensure Oklahoma continues to lead in science, technology, and innovation. These priorities translate opportunity into measurable outcomes, strengthen the state's competitive position, and ensure that innovation investments produce tangible returns for every community across Oklahoma.

**1. Stay Ahead of the Curve in Innovation Investment**

Move from preservation to acceleration. Expand core funding for OCAST programs including Industry Innovation, Seed Capital, the Oklahoma Commercialization Network, and regional commercialization nodes to ensure Oklahoma continues setting the national standard for state-led innovation. Sustained investment allows the state to anticipate emerging industries rather than react to them.

**2. Strengthen Access to Capital Across the Entire Startup Lifecycle**

Build a seamless continuum of funding that supports entrepreneurs from concept to scale. Expand early-stage pre-seed and seed funding programs, strengthen growth-stage capital through the Oklahoma Venture Capital Program and SSBCI, and support scalable ventures that attract follow-on private investment.

### 3. **Advance Data Capacity and Evidence-Based Decision Making**

Invest in modern data infrastructure to connect OCAST's innovation, workforce, and capital metrics with broader state systems. Enhanced analytics will empower legislators and partners with actionable insights, improve transparency, and inform real-time policy decisions grounded in measurable outcomes.

### 4. **Establish a Coordinated Statewide Entry Point for Innovation Resources**

Develop and promote a unified roadmap that connects state, federal, and regional programs through a single, easy-to-navigate platform. This will reduce duplication, improve visibility, and allow founders to move from concept to market faster.

### 5. **Increase Collaboration and Accountability Across the Ecosystem**

Align policies and incentives across higher education, CareerTech, local accelerators, and industry partners. Establish shared performance metrics and cross-agency reporting to ensure alignment of goals, reduce duplication, and maximize the statewide return on innovation investments.

### 6. **Expand Innovation Access and Inclusion Statewide**

Build on the SSBCI and Small Business Opportunity Program to expand access to capital, mentorship, and commercialization support for rural, minority-owned, and underserved innovators. Create pathways for participation in all 77 counties to ensure every region benefits from Oklahoma's innovation economy.

### 7. **Promote National and Global Leadership in Science and Technology**

Elevate Oklahoma's visibility in national innovation networks and international entrepreneurship forums. Scale Innovation Day and similar events into nationally recognized convenings that showcase Oklahoma's achievements, attract new investment, and build partnerships that position the state as a global leader in applied innovation.

## **Conclusion: Advancing the Oklahoma Standard**

OCAST is one of Oklahoma's greatest success stories. It is a proven model of how strategic investment in innovation drives jobs, growth, and opportunity. With continued legislative partnership and support, Oklahoma can continue to lead the nation in transforming ideas into industries and research into results. Together, we can build a future defined by innovation, resilience, and the Oklahoma Standard.