

The logo features a large, dark blue arrow pointing to the right, which serves as a background for the word 'Innosphere'. To the left of the arrow, there is a vertical bar composed of three colored segments: dark blue at the top, orange in the middle, and dark blue at the bottom.

Innosphere

TECH.SCIENCE.  
ACCELERATED.

# INNOSPHERE

## Life Sciences

Accelerate the commercialization of novel life science technologies

## NSF Engine

Accelerating advanced sensing and computation technologies for environmental decisions

## Venture Capital

Investing in science & tech startups during the Seed & Series A rounds

## Specialized Facilities

Offering startup office and wet lab space in Northern Colorado

# TECH. SCIENCE. ACCELERATED.

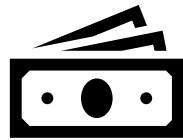
## A Decade of Impact

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**\$3.6B**

Capital  
Raised



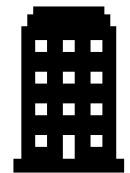
**\$300M**

Revenue  
Generated



**2,000+**

Jobs  
Created



**400+**

Graduated  
Companies

# Scaling Regional Impact

## EDA BBB, NSF Engine, EDA B2S

# NSF-ASCEND Engine in Colorado and Wyoming

The Engine is building a regional, place-based innovation ecosystem using the **Advanced Sensing and Computation for Environmental Decision-making (ASCEND)** framework to guide the development of cutting-edge tools to address pressing environmental and societal challenges in the region

## **This ecosystem will:**

- Strengthen national competitiveness
- Expand economic opportunities
- Lay the foundation for long-term resilience and sustainability



# Four Regional Challenges Motivate Our Regional Engine

## Wildfire Preparedness & Response

- 8 of Colorado's 10 largest wildfires have occurred since 2012, and Colorado and southern Wyoming's high-elevation forests are now burning at nearly twice the historical rate.

## Soil Health

- Drought in parts of the region has persisted nearly every year since 2000.

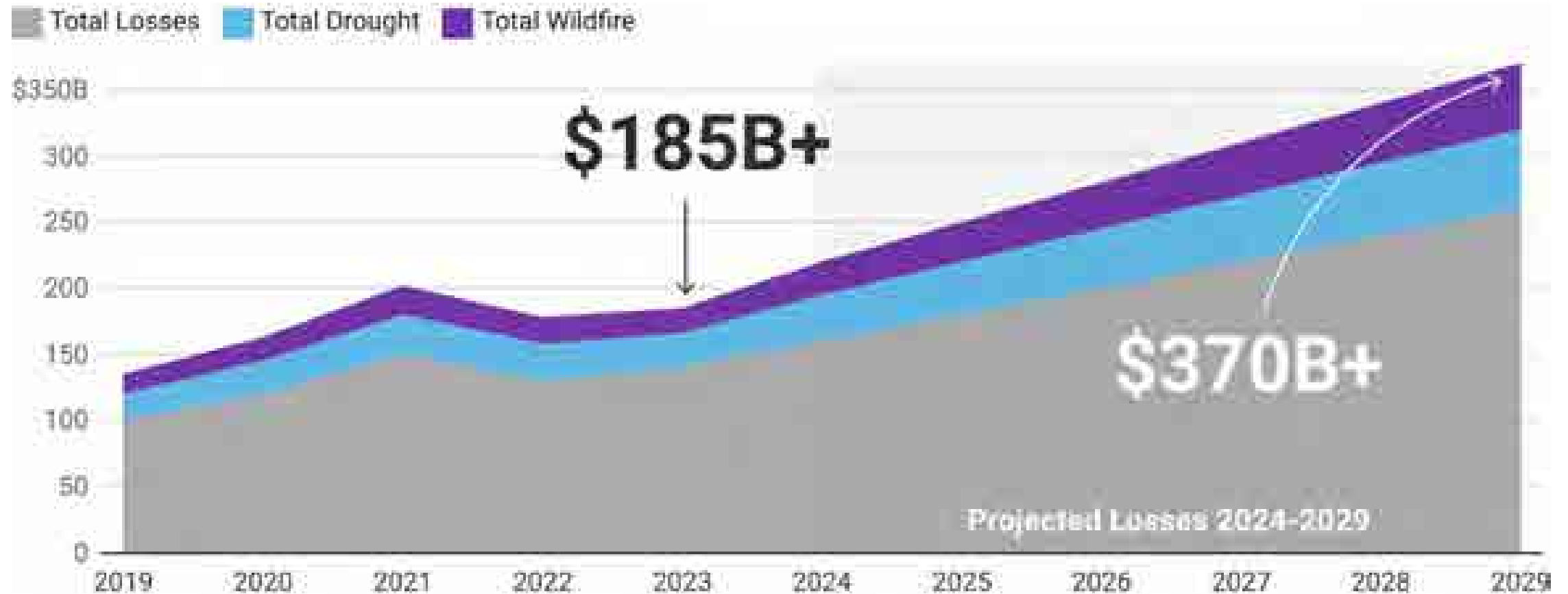
## Water Quality & Availability

- ~20% of agricultural water needs are unmet annually in the region.

## Air Quality

- Front Range now in "Severe" ozone nonattainment

# Increasing Natural Disaster Losses



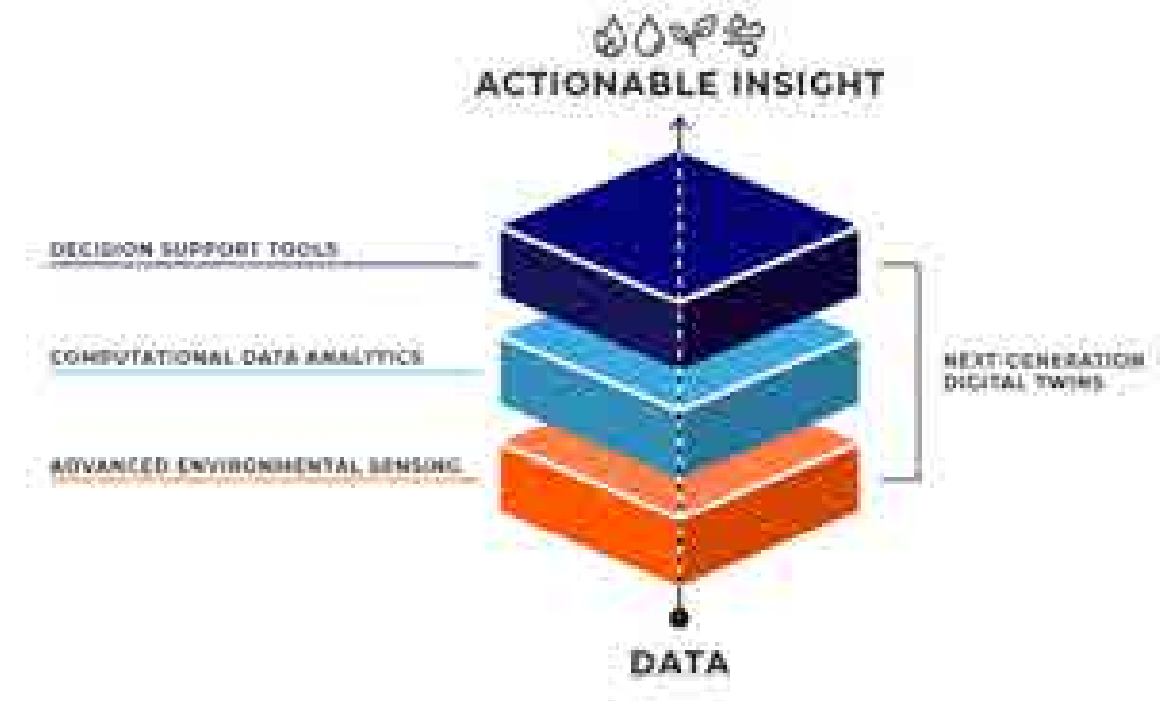
Source: FEMA Risk 2.0, NOAA, Department of Interior - Created with Datawrapper

# Unlocking a Unique Regional Advantage

Our region has nationally unique but **under-leveraged** bench strengths in advanced environmental sensing.

Advanced Sensing and Computation for Environmental Decision-Making (**ASCEND**) describes the value chain the Engine seeks to create to **unleash the innovation potential** of our ecosystem through:

- Creation of an integrative “tech stack”
- Focus on urgent resilience challenges
- Alignment with market opportunities





# Ambition is Backed by Realism – NSF Engine Region

## ★ 8 Super Star Regions

Seattle, San Francisco, Silicon Valley, Los Angeles, Austin, DC Metro, New York City and Boston.

## ★ 9 Rising Star Regions

Atlanta, Salt Lake, San Diego, Denver, Kansas City, Orlando, St. Louis, Dallas, and Miami.



\*Brookings Institute

# Powering ASCEND Through World-Class Partnerships



**COLORADO**  
COMMUNITY COLLEGE SYSTEM



**OroraTech**



**VAISALA**



**XPRIZE**



**COLORADO STATE UNIVERSITY**



**UNIVERSITY OF  
NORTHERN  
COLORADO**



**UNIVERSITY  
OF WYOMING**



**METROPOLITAN  
STATE UNIVERSITY  
OF DENVER**



**University of Colorado  
Boulder**



**MINES**  
@150 | 1874-2024



**University of Colorado Denver**



**Agricultural  
Research  
Service**



**WYOMING  
COMMUNITY COLLEGES**



**NCAR**  
RESEARCH BY DESIGN

**NIST**



**COLORADO**  
Office of Economic Development  
& International Trade



**DENVER WATER**



**NREL**  
NATIONAL RENEWABLE ENERGY LABORATORY

**LOCKHEED MARTIN**

**MARS**



**neon**



**MITRE**



**Microsoft**



**NVIDIA**



**Metro Denver EDC**



**WYOMING  
BUSINESS COUNCIL**



**Trimble**

**JuliaHub**

BUILD - RUN - ACCELERATE



**DENVER**  
THE MILE HIGH CITY



**INNOVATION  
CORRIDOR**



**I-CORPS  
HUB WEST**

**GLOBAL ENERGY  
PARK (GLO PARK)**



**FORT COLLINS AREA  
CHAMBER  
OF COMMERCE**

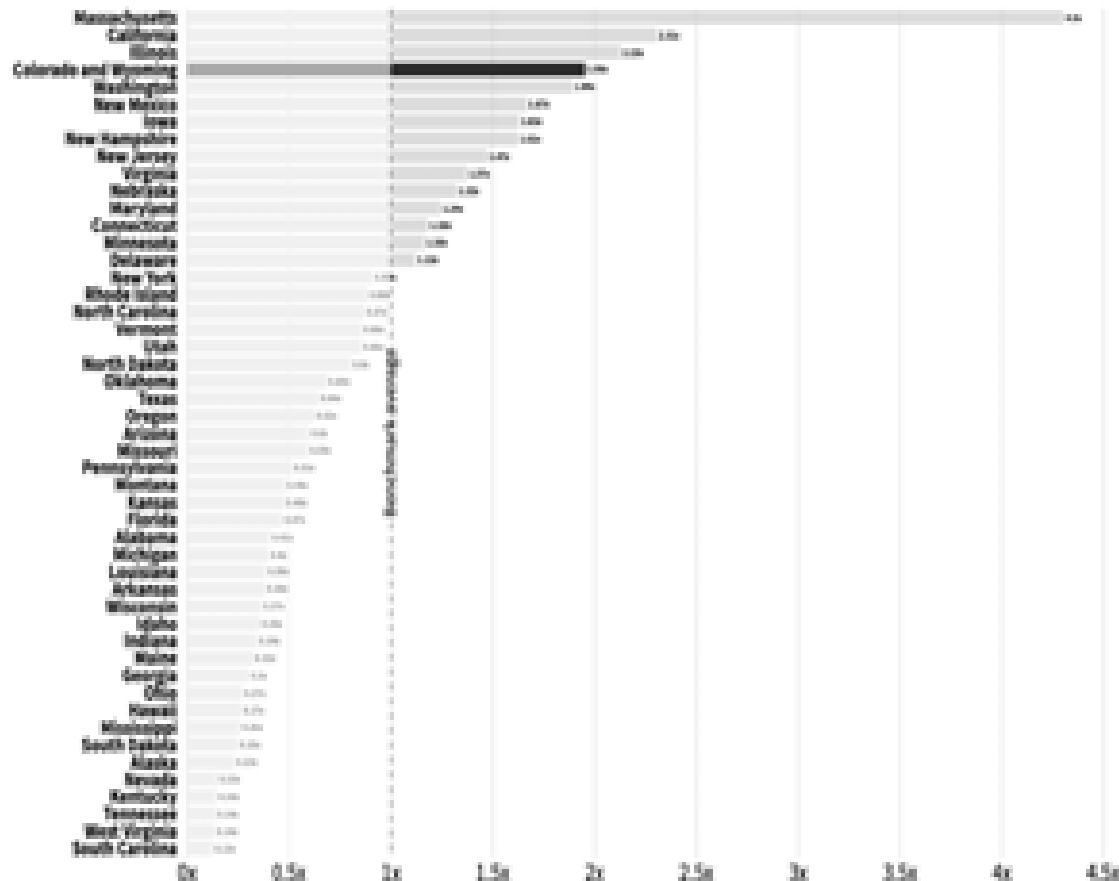


**CCIA**  
Colorado Cleantech Industries Association

# ASCEND Framework – Aligning Technology, IP, and Investment

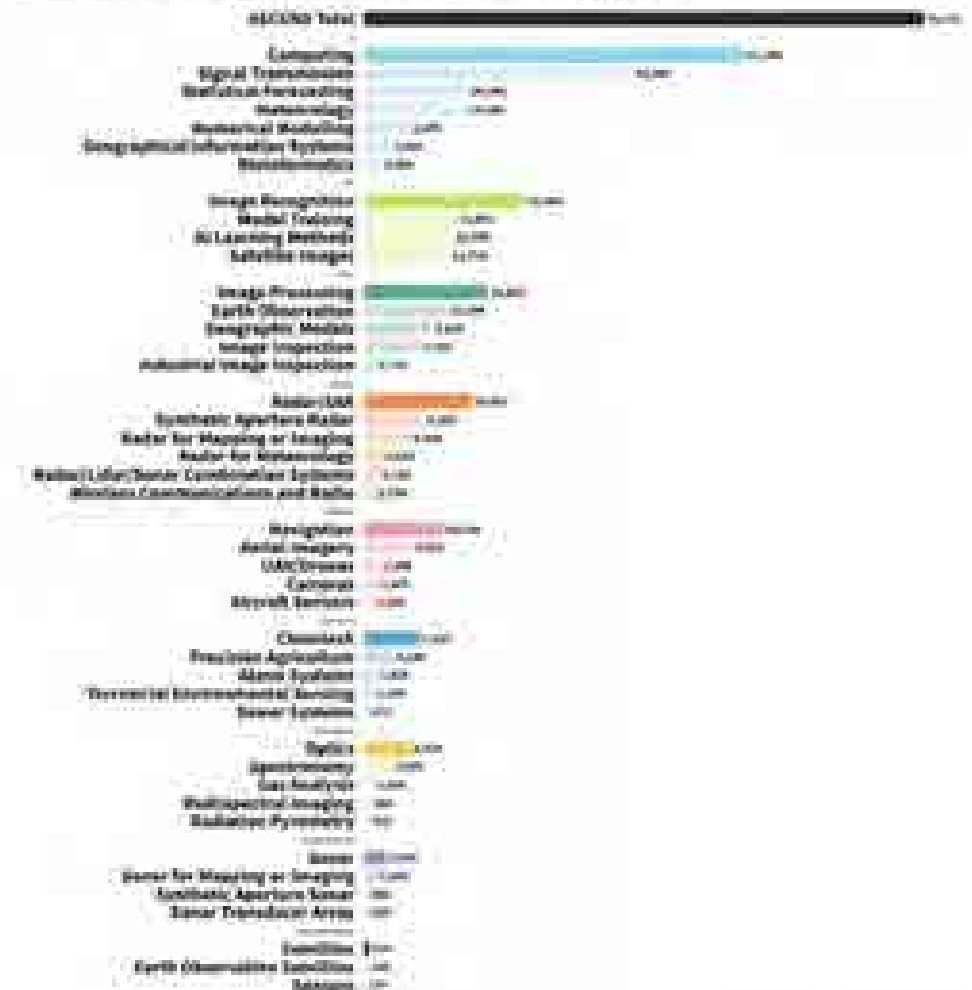
## ASCEND INVENTION IS CONCENTRATED IN CO-WY

ECONOMIC CONCENTRATION OF ASCEND INVENTIONS FILED SINCE 2010 BY STATE



## NINE CORE TECHNOLOGY CLUSTERS EMBODY ASCEND INVENTION

ASCEND INVENTIONS FILED SINCE 2010 BY NINE CORE TECHNOLOGY CLUSTERS



# Unlocking Siloed Potential Through Integrated Programs

ASCEND is shifting from ecosystem discovery and seedling-stage R&D project investments towards integrative, multi-team programs that will serve as foundational infrastructure for the continuous generation of translational activity. The Engine will launch two programs in Year 3, ARID and SHIELD and will launch a third program in Year 4.

## SHIELD Program

A distributed testbed for **soil health innovation** focused on the critical industry challenge of trustworthy, low-cost **measurement at scale**.

## ARID Program

Interoperable, multi-layer digital twins for **wildfire management** focused on **power and water systems**.

## “Program C”

Program to be launched in 2027 that will leverage promising Years 1-2 activities not yet integrated into ARID or SHIELD + additional Year 3 seedlings.

# Bridging Research to Market at Scale

## Accelerator program refinement

Focus on program builds — program produces significant results

- Applied AI –MIT Orbit
- Cohort model – Earth & Space Systems; ARID, SHIELD
- Programs ARID, SHIELD

## New programming to rapidly bridge R&D to T

Enhancing efforts to commercialization

- Commercialization Post-Docs
- Tech-CEOs for new startups/University, or lab-born
- Scaleup program for post-revenue/A+ VC stage

## Access to capital for pre-seed/seed VC

Sharp decline in early-stage VC funding in the region

- Investor introductions/pitches
- Innosphere Venture Capital Fund III



Sterling, CO National Ecological Observatory Network  
(NSF NEON)



# Developing the Workforce of the Future

## Closing critical talent gaps in ASCEND technologies

- Entry-level, non-degreed pathways
- Stackable credentials

## Expanding access to opportunity

- Increased opportunities for rural and tribal communities across the region

## Sustaining talent pipelines through co-design

- Embedding employer voice through partnerships
- Non-degreed Workforce Collaborative

## Delivering impact to scale

- Creating 25+ new career pathways
- Thousands of upskilled workers
- Increased economic mobility across both states



Rural Engagement Tour CO – Workforce Development

# ASCEND Engine 10 Year Impact

**18K\***

New Jobs

**\$2.7B\***

GDP Boost

**\$2B\***

Capital Raised

**145/73**

Startups Accelerated/  
Scaled

**1000**

Interns  
Placed

**2500**

Upskilled

**25+**

Career  
Pathways  
Opened

**2000**

Student Trained  
Systems Engineers

\*Metro Denver Economic Development Corporation; All others Engine generated

# Innosphere 2026 – 2028



# U.S. Innovation is Under Attack

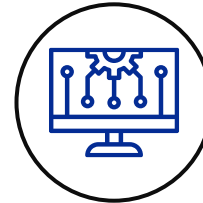
We are at critical cross-roads with funding support, global competition encroaching, and our countries regional leadership within advanced industries.

Whichever nation leads in these key technologies will shape global standards and reap outsized economic benefits for decades, making it imperative that the U.S. reinstitute its commitment to science and innovation.

America's leadership faces threats from **inadequate R&D funding** and **intensifying global technological competition**.



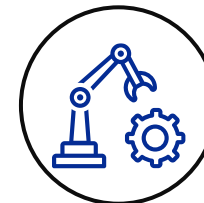
**Clean Energy & ClimateTech**



**Artificial Intelligence & Advanced Computing**



**Life Sciences & Biotechnology**



**Advanced Sensors & Manufacturing**

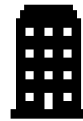
# U.S. Current Standing

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## Urgency

Geographically, innovation is uneven in the U.S., with heavy concentration on the coasts, and disproportionate private funding, which now accounts for ~75% of innovation funding. Areas where we once dominated as a country are now slipping and at risk of **irreversible lag**. While 2025 U.S. innovation outputs are **3rd** of 139 economies, inputs have slipped to **6th**.

## Industry Perspectives



**Business Leaders** cite talent shortages and immigration issues for recruiting highly-skilled workers and supply chain vulnerabilities.



**Nonprofits** face funding difficulties that hinder their efforts to broaden participation in innovation including improving STEM education and assistance to underserved entrepreneurs.



**Think Tanks** call for more incentive for U.S. tech companies and continues the push for more R&D tax credits, stronger intellectual property protection, and immigration reform to attract global talent.

# Global Competition

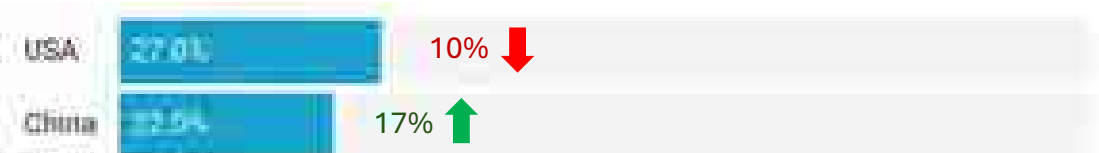
## China's Approach

China is pouring resources into key technologies such as AI, quantum, biotech, batteries, etc. and these substantial advancements threaten U.S. leadership and national security. China is projected to have nearly twice as many STEM PhDs graduate as the U.S. by 2025 and currently leads the U.S. in AI and machine learning patents filed since 2021.

### Global R&D Spending in 2000



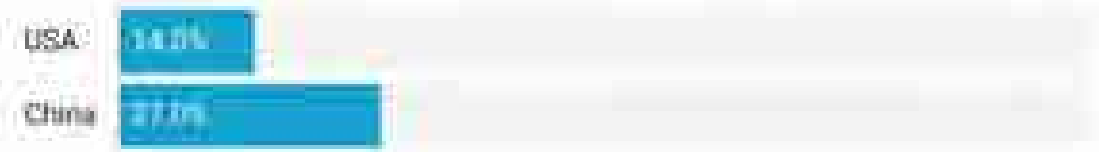
### Global R&D Spending in 2025



### Research Output Increase since 2010



### % of World's Science and Engineering Publications



**Innosphere** advances regional ecosystems by scaling science & technology commercialization through strategic partnerships



# Regional Ecosystem Building Strategy

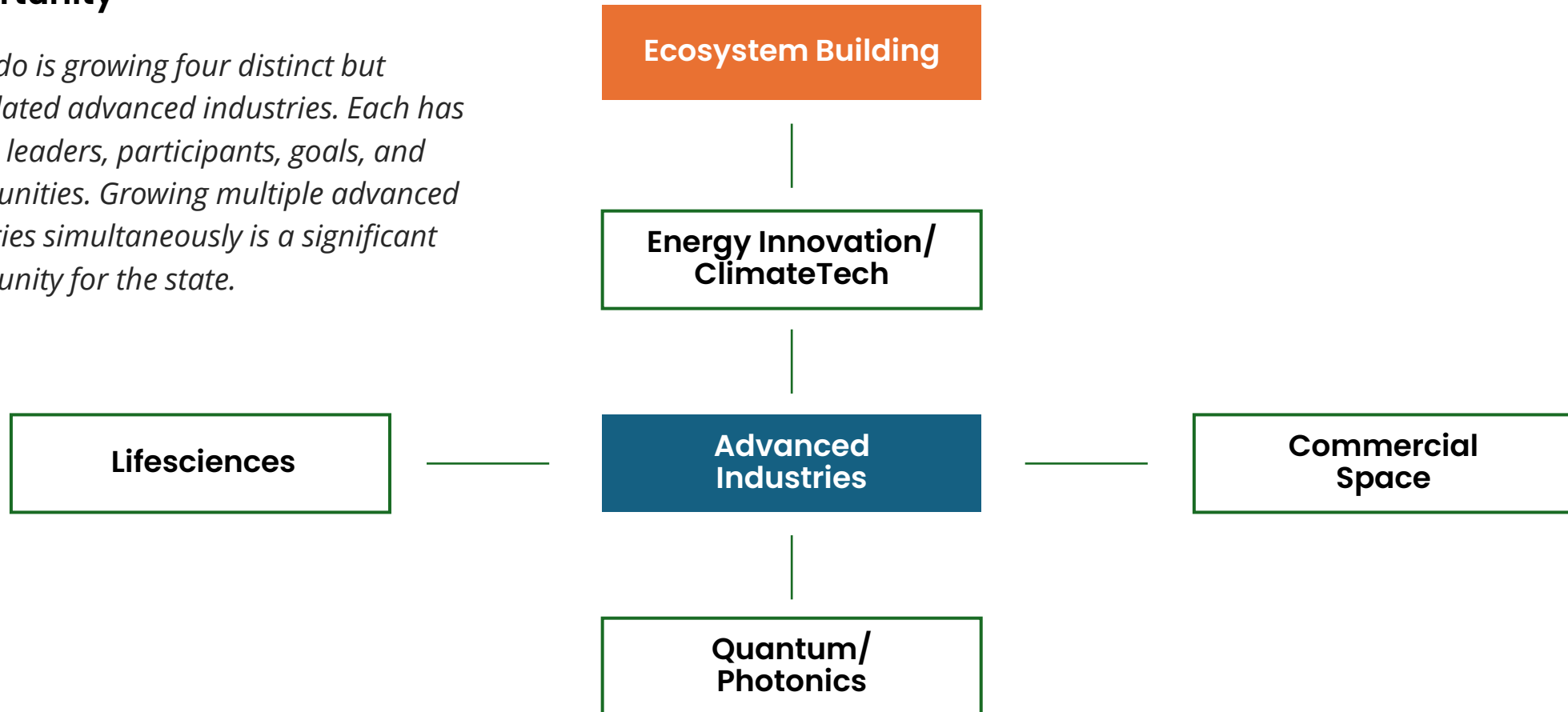
Innosphere advances regional ecosystems by scaling science and technology commercialization through strategic partnerships



# Regional Ecosystem Building Strategy

## Opportunity

*Colorado is growing four distinct but interrelated advanced industries. Each has unique leaders, participants, goals, and opportunities. Growing multiple advanced industries simultaneously is a significant opportunity for the state.*





# Regional Ecosystem Building Objectives



- Accelerate the development, deployment, and scaling of high-impact innovations across Colorado and the region's advanced industries.
- Reduce the time from research to commercialization through coordinated infrastructure, capital, and market access.
- Expand and diversify participation in the innovation economy by engaging students, entrepreneurs, and industry professionals through targeted pathways and partnerships.

# Ambition Backed by Realism

## ★ 8 Super Star Regions

Seattle, San Francisco, Silicon Valley, Los Angeles, Austin, DC Metro, New York City and Boston.

## ★ 9 Rising Star Regions

Atlanta, Salt Lake, San Diego, Denver, Kansas City, Orlando, St. Louis, Dallas, and Miami.



\*Brookings Metro

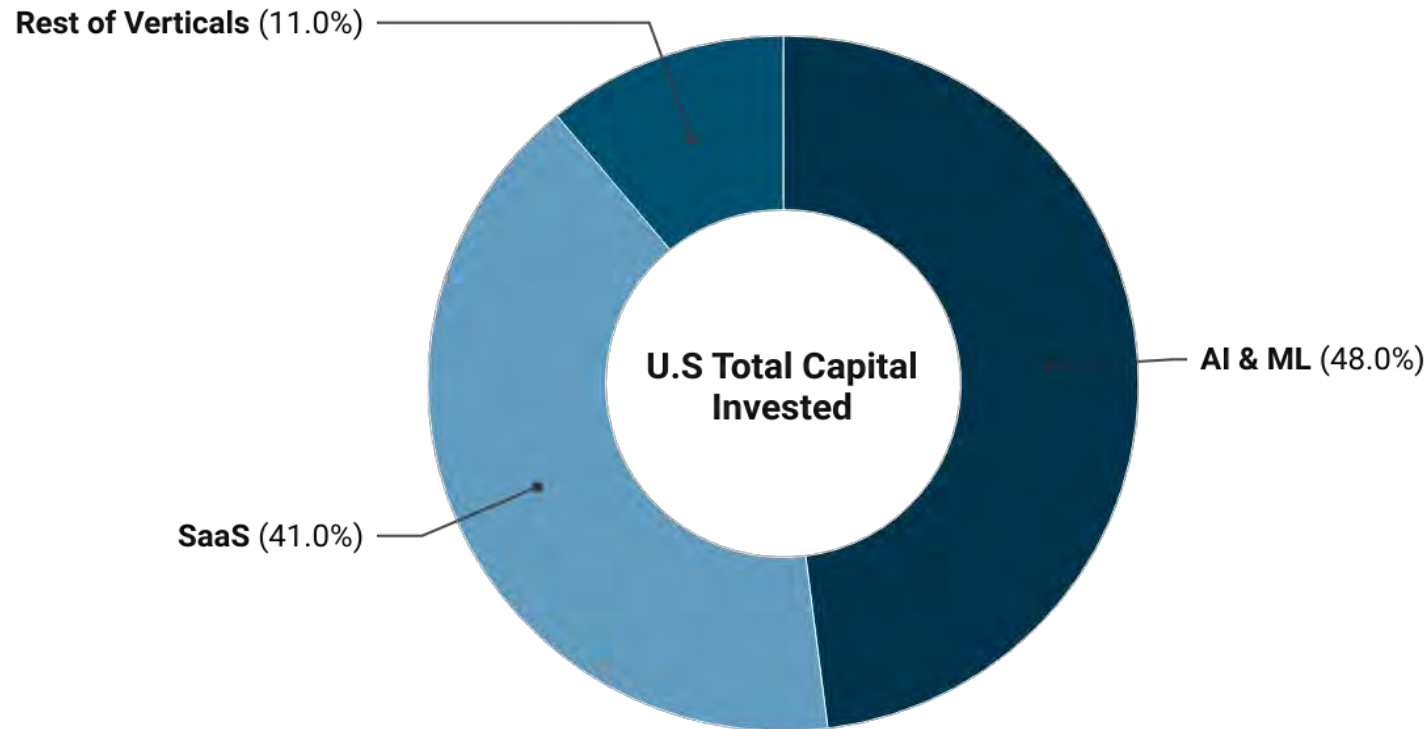


# Innosphere Capital Strategy

Presentation: Mike Freeman & Tim Jones

## ***The VC Market is Broken – Impacting Locations Like Colorado***

*In 2024, nearly 90% of VC dollars went to AI & SaaS. The rest of the innovation economy has been left in a capital drought.*

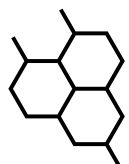


*Data Derived from All Venture Stages, Year 2024, United States, All Verticals*

Source: Pitchbook Inc. • Created with Datawrapper

## Investing in America's Next Tech Boom

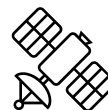
Our fund **targets innovation essential for global competitiveness** where durable innovation, **not fleeting trends**, can reshape industries, strengthen resilience, and **drive long-term value**.



### Medical Tech & Health

Biotech, digital health, medical devices, AI in healthcare.

\*\* Projected market size to be \$2.09 Trillion by 2030 – Statista



### Commercial Space

Satellites, launch tech, space infrastructure and data.

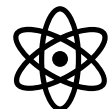
\*\*Projected to be \$1 Trillion by 2030 – McKinsey & Company



### Energy Innovation

Clean tech, climate solutions, energy storage.

\*\*Projected market size is \$2 trillion by 2030 – Department of Energy



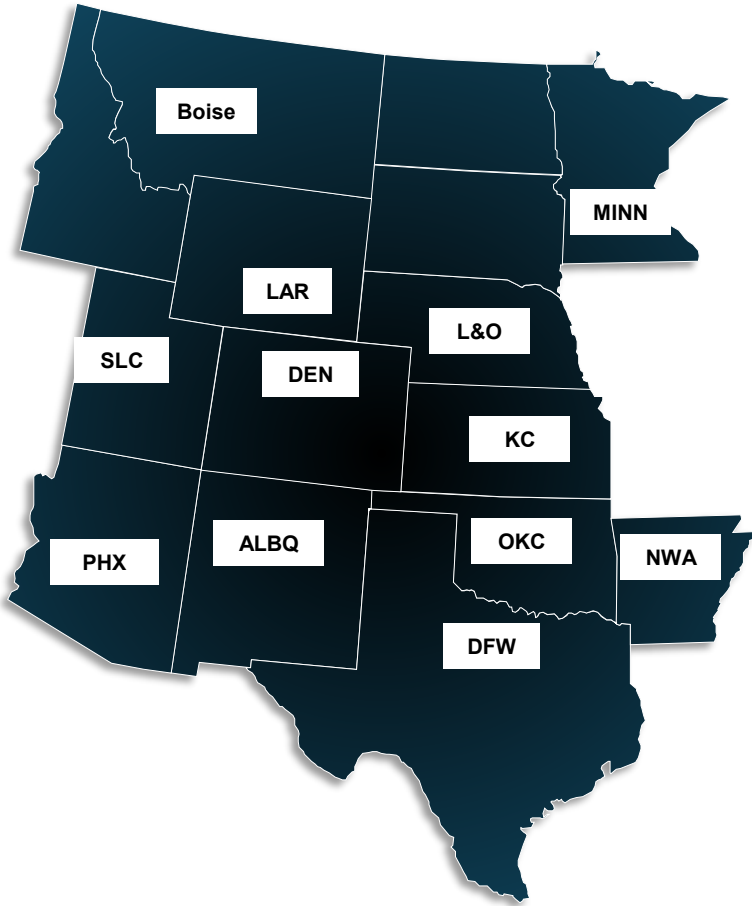
### Quantum/Photonics

Next-gen computing, earth sensing and imaging.

\*\* Projected market size to be \$1.3 Trillion by 2030– Grand View Search

Fund Attribute	Details
Fund Size	\$75M early-stage VC fund
Stage Focus	Pre-Seed to Series A
Initial Check Size	\$200K
Ownership Target	~20% (Prior to A)
Geography	Mountain Plains Region (Primary GP time spent)
Follow-on Capital	17.9% Pre-Seed, 44.7% Seed, 37.3% Series A
Target Sectors	Energy Innovation, Medical & Health Tech, Commercial Space, Quantum & Photonics

Primary Target Deployment  
Region: Mountain & Plains



# Ecosystem Building – New Mexico Venture Capital

## 2024 New-Mexico Key Venture Trends



Total Capital Invested across all stages: **\$280M**



Median Time between Rounds: **1.91 Years**



Pre & Post Money Valuation Difference: **\$ 2.00M**

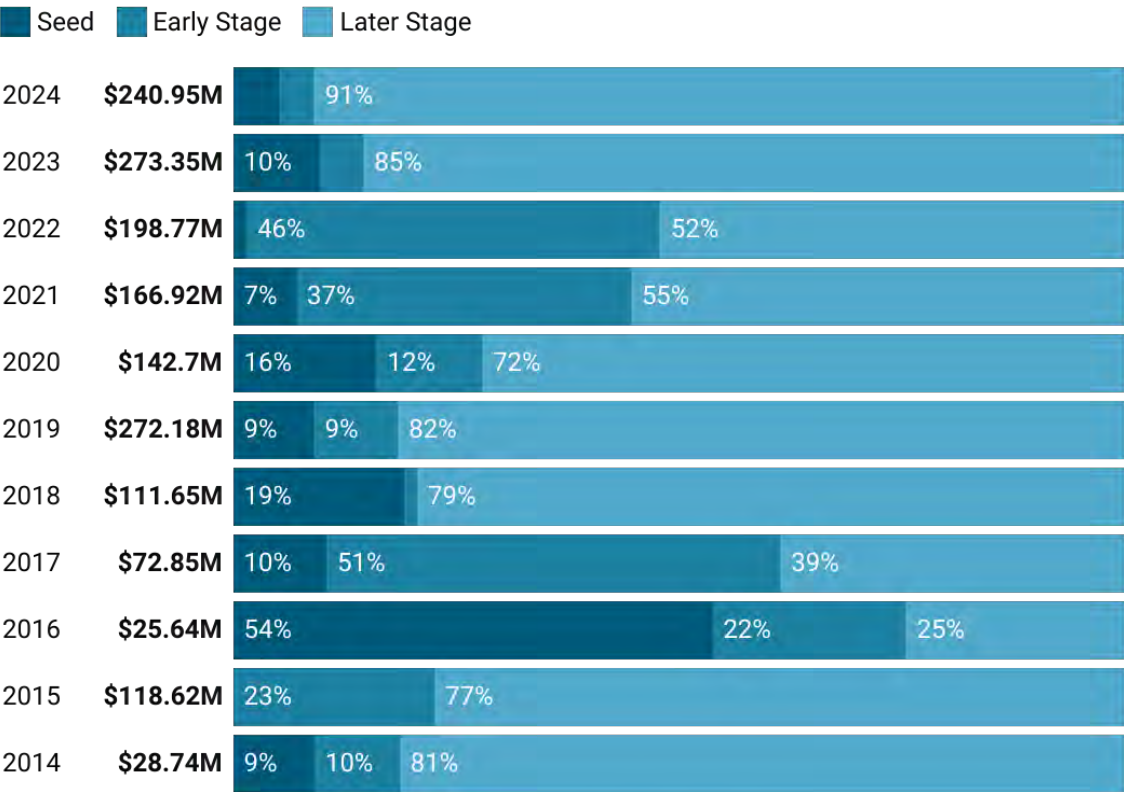


Top Vertical For Capital Invested: **Manufacturing**



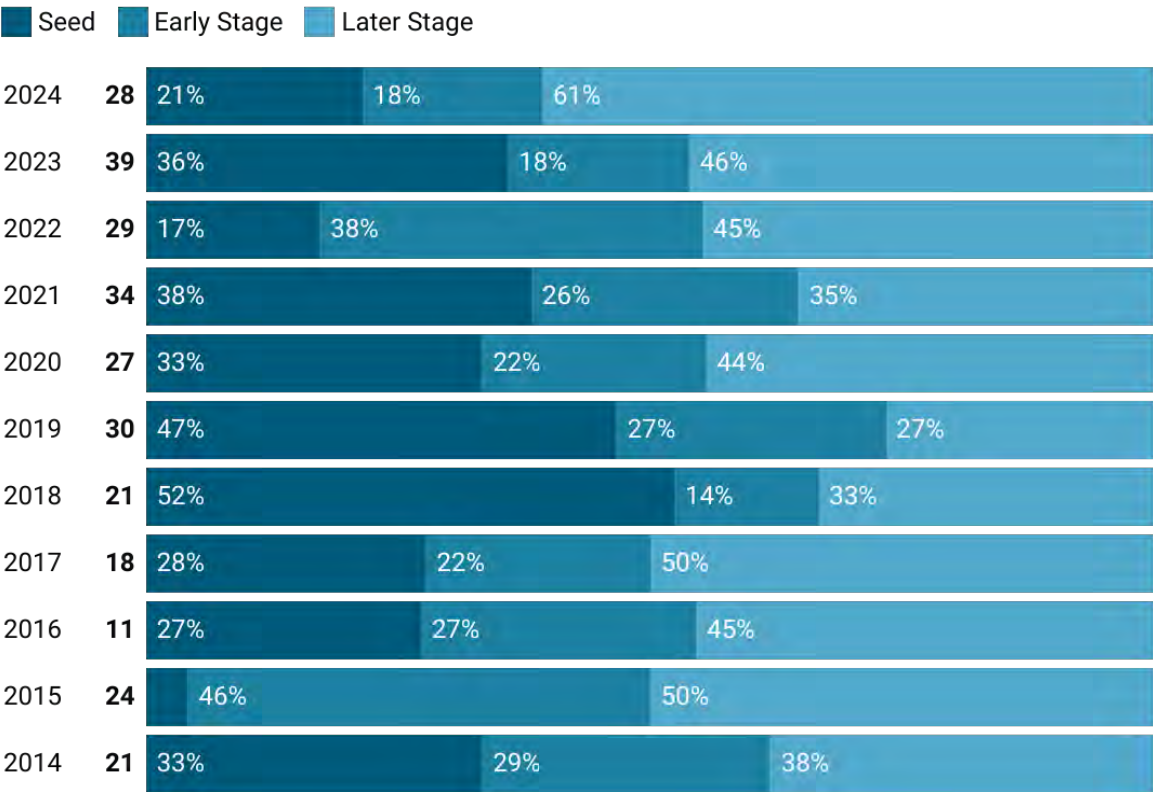
Total Deal Count across all stages: **28**

### Total Capital Invested | Stage Breakdown



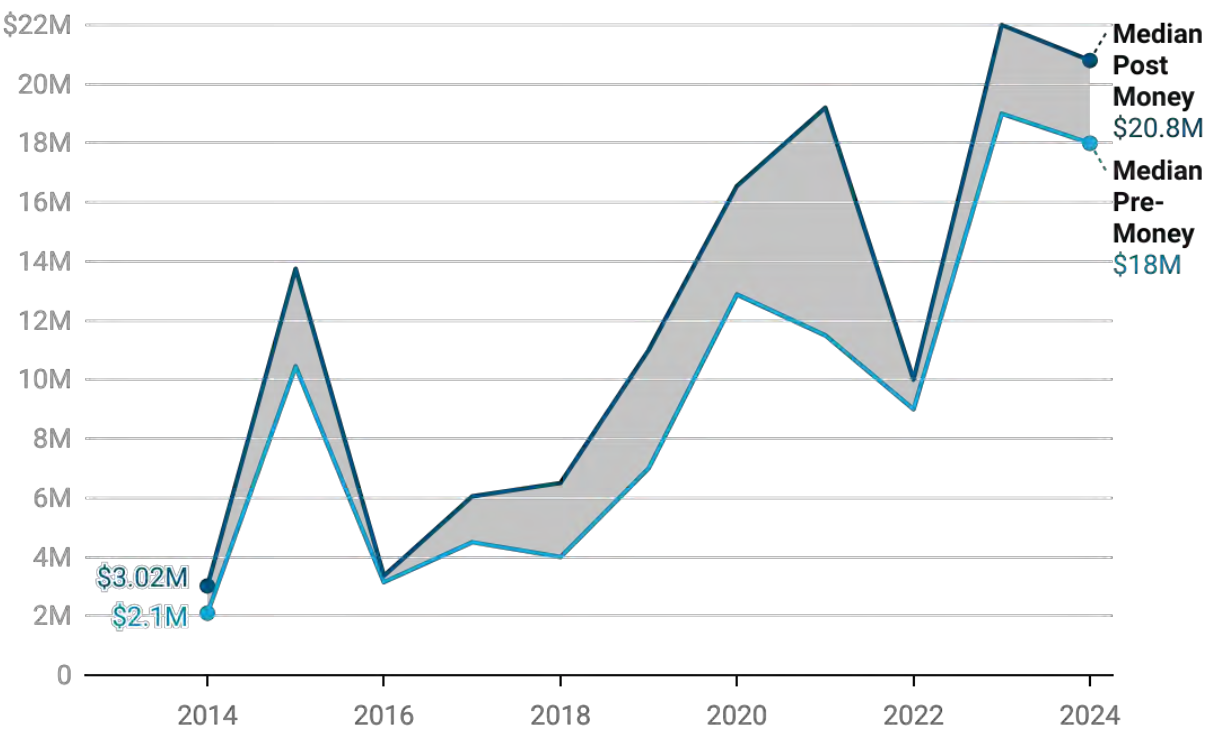
Data derived from Seed, Early Stage, and Late Stage deal data, Region New Mexico, Years 2014 - 2024  
Source: Pitchbook Inc. • Created with Datawrapper

### Deal Count | Stage Breakdown



Data derived from Seed, Early Stage, and Late Stage deal data, Region New Mexico, Years 2014 - 2024  
Source: Pitchbook Inc. • Created with Datawrapper

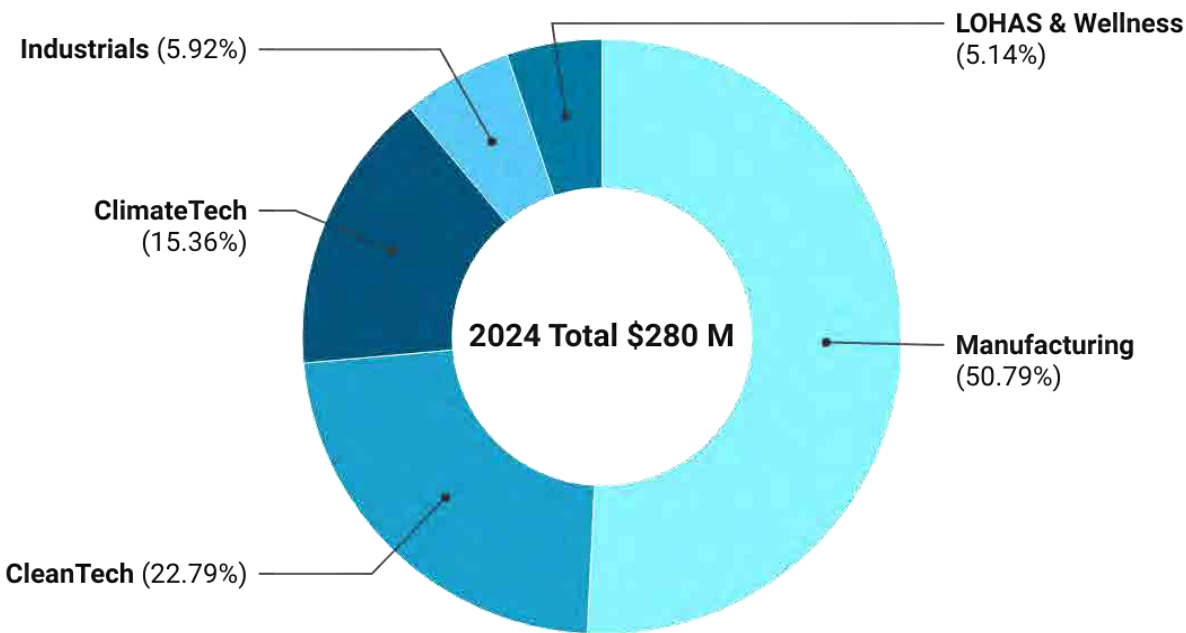
Valution Difference | Capital Invested



Data reflects national median pre-money & post money valuations. All Stages, New Meixco, Millions of Dollars showcasing actual value being created between rounds.

Source: Pitchbook Inc. • Created with Datawrapper

Funding Mix by Sector | New Mexico




Data Derived: All Venture Stages, Year 2024, New Mexico, All Verticals

Source: Pitchbook Inc. • Created with Datawrapper



# Last Decade of Venture Activity in New Mexico


## Capital Flow

- 
- Investment has surged over the decade, led by later-stage deals and large public grants. Early-stage and angel capital remain limited, showing a gap in private funding at the seed level.


## Deal Activity

- 
- Overall deal counts peaked 2018–2021, then cooled post-2022, mirroring national trends. Grant and accelerator funding continue to anchor startup activity.

## Valuations

- 
- Median pre-money valuations rose from \$2M → \$18M, reflecting stronger startup quality and investor confidence.

## Sector Focus

- 
- 2024 investment is dominated by Manufacturing (\$142.2M), CleanTech (\$63.82M), and ClimateTech (\$43.08M) signaling a statewide shift toward energy transition and advanced industries.

# Ecosystem Building – New Mexico Thoughts on Next Steps

# Suggestions for New Mexico Ecosystem Building

## **Stay Engaged in and Shape Regional Startup Programming**

- UNM is partner in regional Lifesciences startup accelerator
- Seek to shape topics of interest to NM entrepreneurs

## **Support a Three-State Exploratory Effort – Super Region Concept**

- Leverages the EDA Quantum Hub and NSF Engine.

## **Seek Clarity on Focused Technology-Based Economic Development Opportunities**

- Consider IP assessment similar to the Engine example

## **Build a Neutral Leader to Manage Complex Initiatives**

- Innosphere non-profit and neutrality key for Colorado wins

## Life Sciences **Incubator Partnerships**



# Ambition is Backed by Realism – NSF Engine & EDA Quant Hub

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\*Brookings Institute

# Regional Advantage

## Mountain West

Colorado, New Mexico, and Wyoming bring together national labs, leading universities, energy assets, and aerospace strength. By turning research into products, growing and retaining talent, and drawing investment, the Mountain West can become a key pillar of U.S. innovation.



### Colorado

**1st** in concentration of private aerospace employment per capita

**2nd** highest concentrations of national labs

**3rd** highest tech job concentration

**5th** in venture capital funding



### New Mexico

**2nd** in R&D intensity

Significant quantum funding and initiatives and tax credits

Strengths in Quantum, photonics, and advanced semiconductor manufacturing



### Wyoming

Home of a first-of-its-kind small modular nuclear reactor

Wyoming Innovation Partnership with \$69M in FY23-25

Strengths in energy, minerals, blockchain and financial tech

## The Power of Purpose

Older adults who were interviewed said if they could live their lives over again, they would:

- Be more reflective
- Be more courageous
- Be clear earlier about purpose

*Richard Leider*