# Innosphere

**Tech. Science. Accelerated.**

Leading an NSF Engine and EDA B2S ecosystem-building initiatives





E·D·A

U.S. ECONOMIC DEVELOPMENT ADMINISTRATION

Build to Scale

# Innosphere

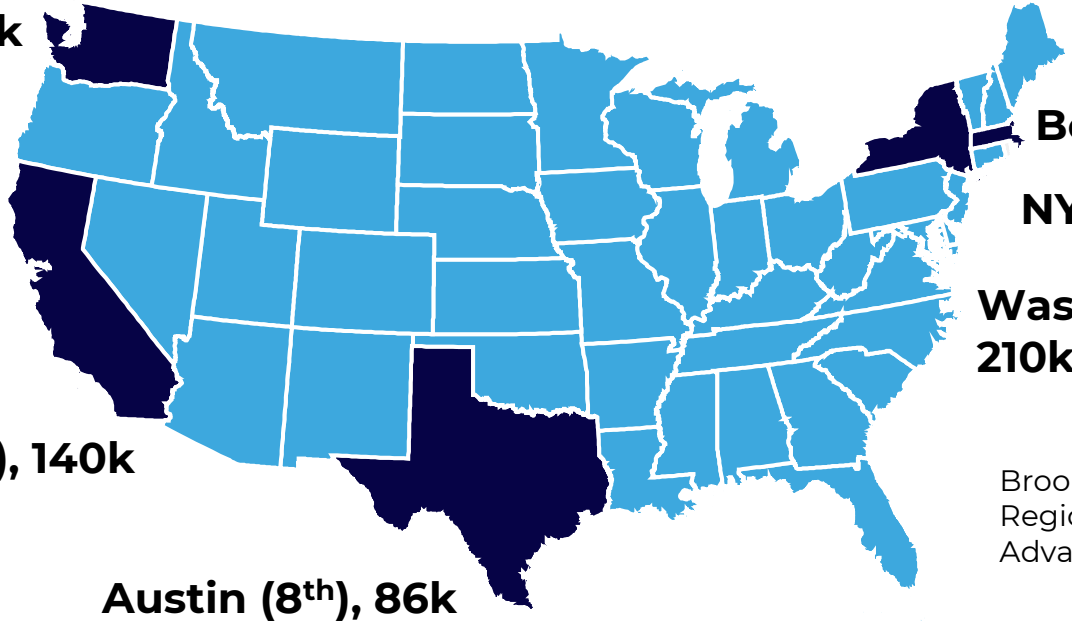
## Tech. Science. Accelerated.

**Commercialization**
**200+ Startups**
**Last 10Y**

**Venture Capital**
**$1.2B Capital**
**Raised**

**Specialized**
**Facilities**

# The Moment… 2019
# Eight Dominant Tech-based Metros



Seattle (5th),170k

Silicon Valley (1st, 3rd), 508k

Los Angeles (7th), 140k

Austin (8th), 86k

Boston (6th), 150k

NYC (2nd), 260k

Wash DC (4th), 210k

Brookings:
Regional Rating
Advanced Industries

# CO-WY Climate Resilience Engine

Building America's ***top*** regional technology-driven **innovation ecosystem**

Driving resiliency solutions with cutting-edge technologies, and processes that build **resilient, adaptable communities**



Innosphere

# CO-WY Engine: Ecosystem Building **How We Do It**

**Climate-Driven Threats and Hazards in the Region** 01
Developing technology-based solutions for climate resiliency.

**Research and Development** 02
Creating novel technologies/approaches for climate resiliency.

**Translation of Innovations to the Market** 03
Moving great ideas from the lab to the market.

**Workforce Development** 04
Building the Workforce of the future, inclusive engagement.

# CO-WY Engine **Partners**

| | |
|---|---|
| **Universities & Academic Institutions** | • Research Universities: Colorado School of Mines, Colorado State University, University of Colorado Boulder, University of Denver, EPSCor: University of Wyoming (UW), WU's High Plains American Indian Research Institute, University of Northern Colorado;<br>• Workforce Drivers and Minority Serving Institutions: Metropolitan State University of Denver, Colorado Community College System, Wyoming Community College Commission. |
| **Corporates** | Lockheed, NVIDIA, Deloitte, Palantir Technologies, Mars, Shell, Chevron, Trimble, Microsoft. |
| **Federal Labs/Federally Funded** | National Oceanic and Atmospheric Administration (NOAA), National Center for Atmospheric Research (NCAR), National Renewable Energy Laboratory (NREL), US Dept. of Agriculture's Agricultural Research Service (ARS), National Institute of Standards and Technology (NIST), NSF's National Ecological Observatory Network (NEON), CO-LABS, Inc. |
| **Translation** | Innosphere Ventures, CSU STRATA, CU Venture Partners; Mines Tech Transfer, UWY Tech Transfer |
| **Economic Development** | Metro Denver Economic Development Corporation, Colorado Office of Economic Development and International Trade, Wyoming Business Council. |
| **Local Government/Policy** | Local Governments for Sustainability (ICLEI), Colorado Cleantech Industries Association (CCIA), Denver Chamber of Commerce, Dever Water, City of Denver, City of Fort Collins, City of Boulder, City of Cheyenne, City of Larimie, Metro Mayors Caucus. |

# Community Resiliency

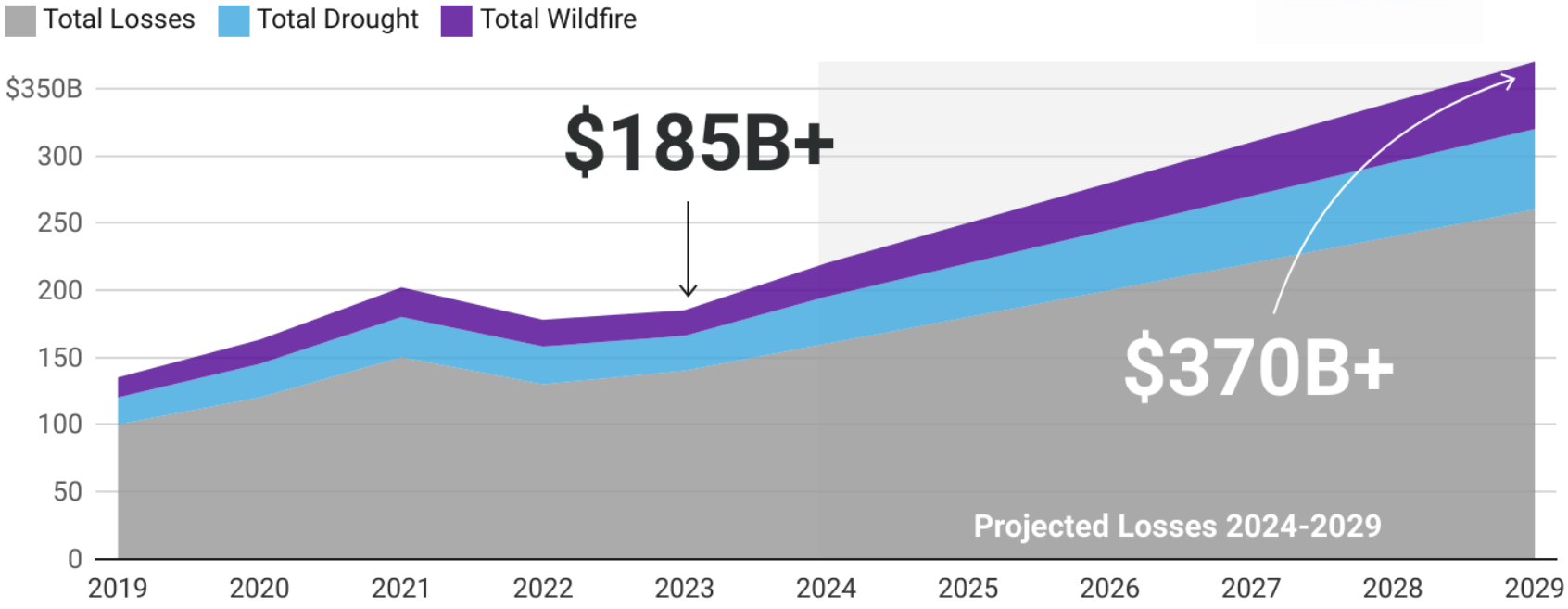
## Top community issues and Engine approach

**Increasing Losses**

**Economics of Resilience**

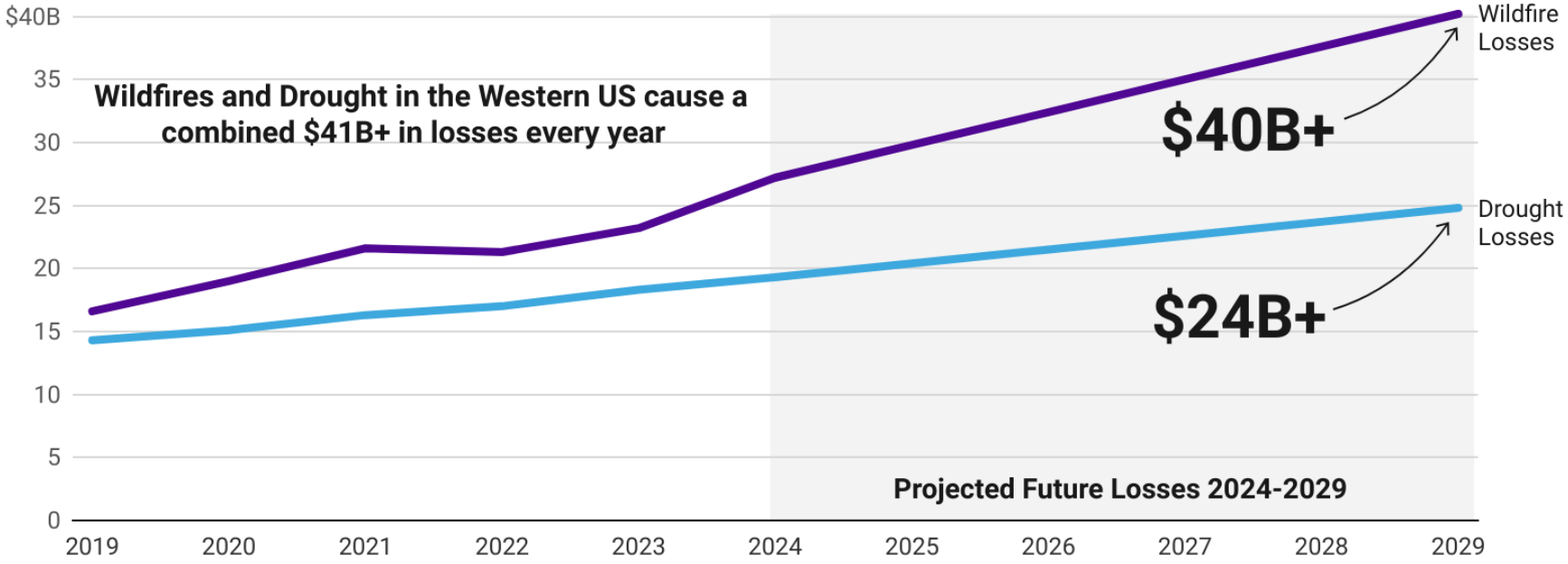
**CO-WY Engine Approach**

# Increasing Natural Disaster Losses




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

# Increasing Natural Disaster Losses




*States: California, Oregon, Washington, Arizona, New Mexico, Colorado, Wyoming*

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

# Community Impacts

## Multiple, massive impacts need attention

**Rising Insurance Rates**

**Higher Recovery Costs**

**Growing Food Insecurity**

**Increased Displacement Mortality**

# Economics of Resilience

**$1 invested** in preparedness = **$13 saved** in damages, and clean-up

***US Chamber of Commerce, 2024***

# CO-WY Engine Innovation Approach

## Advanced Sensing

Ex. Low-cost, distributed sensor networks

## Data Analysis

Data Analytics – ex. Digital twinning

## Decision Support

Ex. Prediction and preparedness

## Community Use Cases

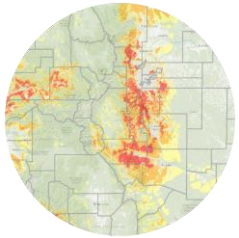
Prediction and Preparedness
Risk assessment and mitigation
Resource allocation/ optimization

# Engine Innovation Objectives

Increasing the number of innovations developed, deployed, and scaled - $3M in grants Y1

## Advanced sensing & data fusion:

High-resolution commercial satellite imagery, proprietary data



## Data analytics & Decision Support:

Knowledge-guided machine learning for near real-time loss collection capability

# National Security

## Improving community resiliency

**Disaster Recovery**


**Business Continuity**


**Prepared Communities**

**Technology Leadership**

# ENGINE IMPACT IN 10 YEARS

10 Year expected outcomes aim to generate significant economic impact:

| | | | |
|---|---|---|---|
| **22K** | **$5.3B** | **$1B** | **210** |
| New Jobs | GDP Boost | Capital Raised | R&D and Translational Grants |
| **1,300** | **3,100** | **136** | **400** |
| Internships/ Apprenticeships | Certificates Earned | Post-Docs Placed | Student Trained Systems Engineering |

# Thank You!

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CO-WY ENGINE