



Strengthening Utah's Future: A Vision for Utah State's Research Enterprise



UtahStateUniversity

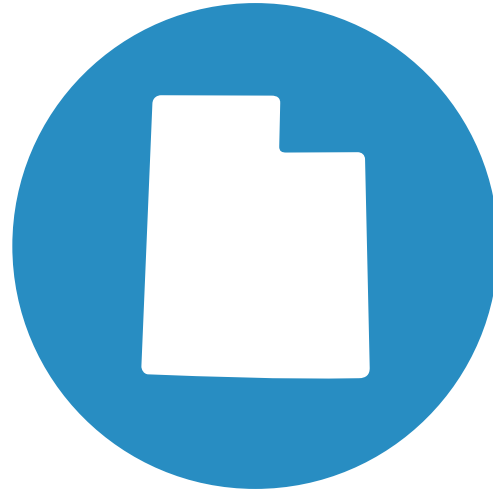
*Presented by Elizabeth R. Cantwell
President, Utah State University
November 21, 2024*

Value of Growing Utah State's Research

Utah State's R1 research investment fortifies USHE's mission: "To advance research that supports economic development and enhances the quality of life in the state."



Drive economic growth and development



Elevate Utah as a hub for innovation and discovery



Strengthen Research Collaboration

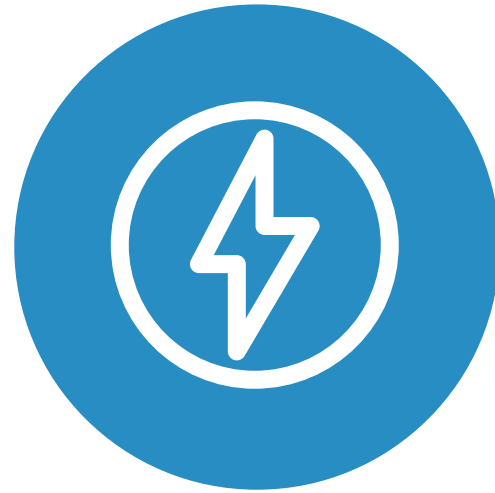


Improve Utahns Quality of Life

We Invest In Critical Research Areas



Healthcare in rural areas



Energy futures



National defense/security



Life Sciences futures:

- food and natural resources
- extractive resources
- industries impacting land, water and air

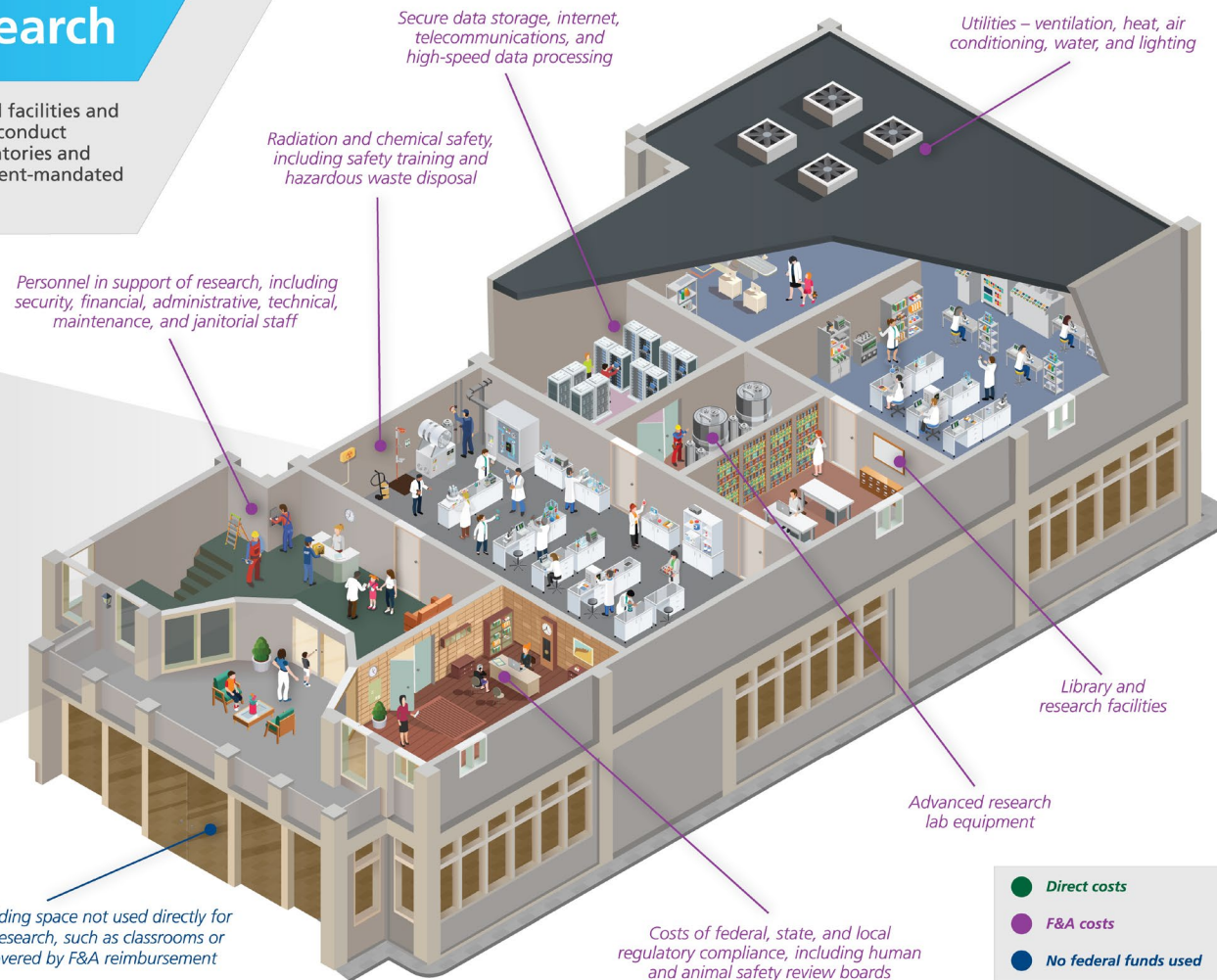
The Cost of Research

Costs of Federally Sponsored Research

The total cost of federally sponsored research includes a combination of both direct and facilities and administrative (F&A) costs. Both types of expenditures are key to an institution's ability to conduct cutting-edge research. F&A consists of the construction and maintenance costs of laboratories and high-tech facilities; energy and utility expenses; and safety, security, and other government-mandated expenses. These costs are real and research cannot be conducted without them.



Direct costs - These expenses solely cover research and include lab supplies and equipment; salaries and stipends for researchers and graduate students; and travel costs for conducting and sharing research



*Upkeep of any building space not used directly for federally-funded research, such as classrooms or lobbies, is **not** covered by F&A reimbursement*

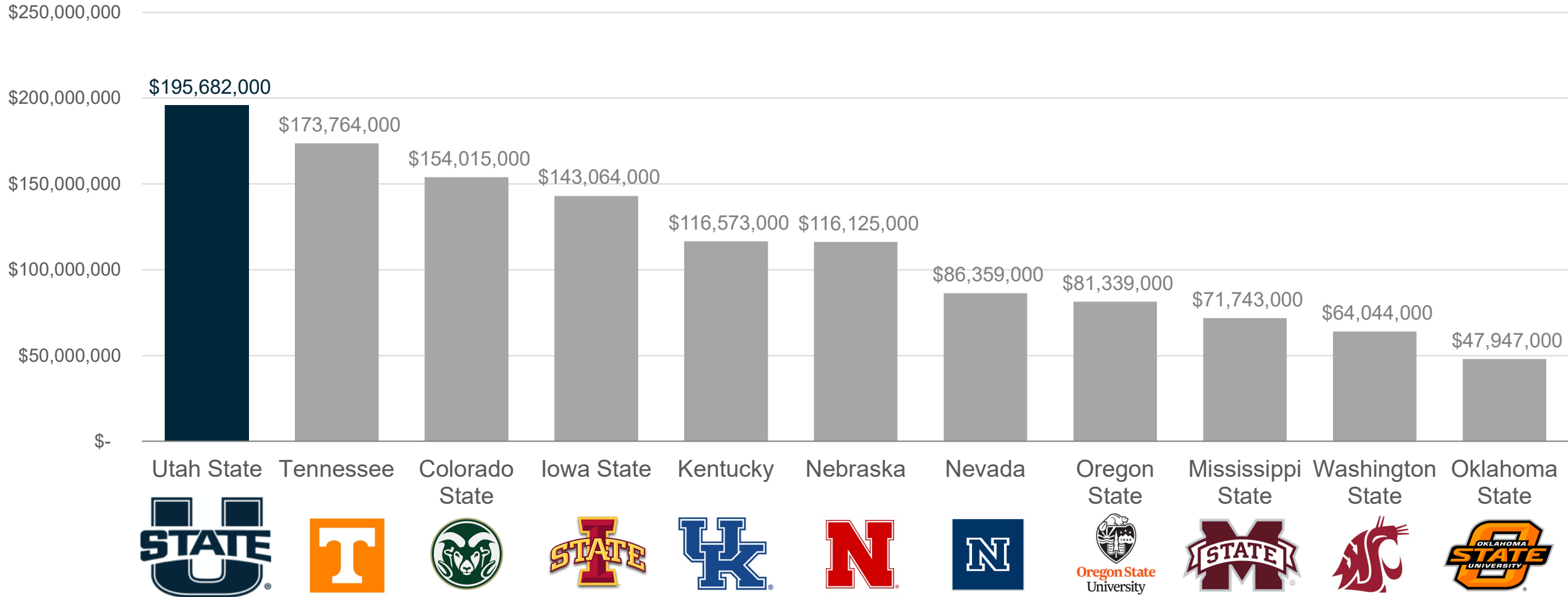
Costs of federal, state, and local regulatory compliance, including human and animal safety review boards

- Direct costs
- F&A costs
- No federal funds used



USU has the Fastest growing R&D Amongst Peers

Total change in higher education R&D expenditures: FYs 2010–22; rounded to the nearest thousand



Source: National Center for Science and Engineering Statistics, Higher Education Research and Development Survey

Utah's Winning Investment: ASPIRE

- Leaders in the west for electrified infrastructure & transportation
- With a modest **\$3M** state investment, ASPIRE has generated over **\$80M** in additional funding, demonstrating **a remarkable 2,683% return on investment for the state of Utah:**
 - **\$3M** initial, one-time funding support
 - **Raised \$58.9M** in federal and industry-sponsored research funding
 - Anticipating **\$24.6M** from NSF in 2025



Trusted Expert in National Defense at Space Dynamics Lab

2023-2024 achievements:

- Atmospheric Wave Experiment (**AWE**) and **OSIRIS-REx** - SDL successful launch
- Global **Small Sat Conference** moving to SLC in 2025 due to exponential growth
- **Center for Anticipatory Intelligence** for complex study of the world's security challenges



Shaping the Vision for Utah's Natural Resources

- **Report to the Governor and Legislature on Utah's Land, Water, and Air**
 - Expert insights into Utah's land, water and air to inform policy decisions
 - Research highlights, legislative summaries and news featuring: Colorado River and Energy, etc.
- **Selected impact projects**
 - Great Salt Lake Strike Team
 - Bear Lake Needs Assessment
 - Electrification analysis



usu.edu/ilwa/



The background features a blurred industrial setting with a large oil pumpjack on the left and a glowing digital data screen on the right. The screen displays various charts, graphs, and data points in a futuristic, blue-toned interface. The overall atmosphere is high-tech and industrial.

Defining the Future of Energy

Energy Engineering | Extraction Technology



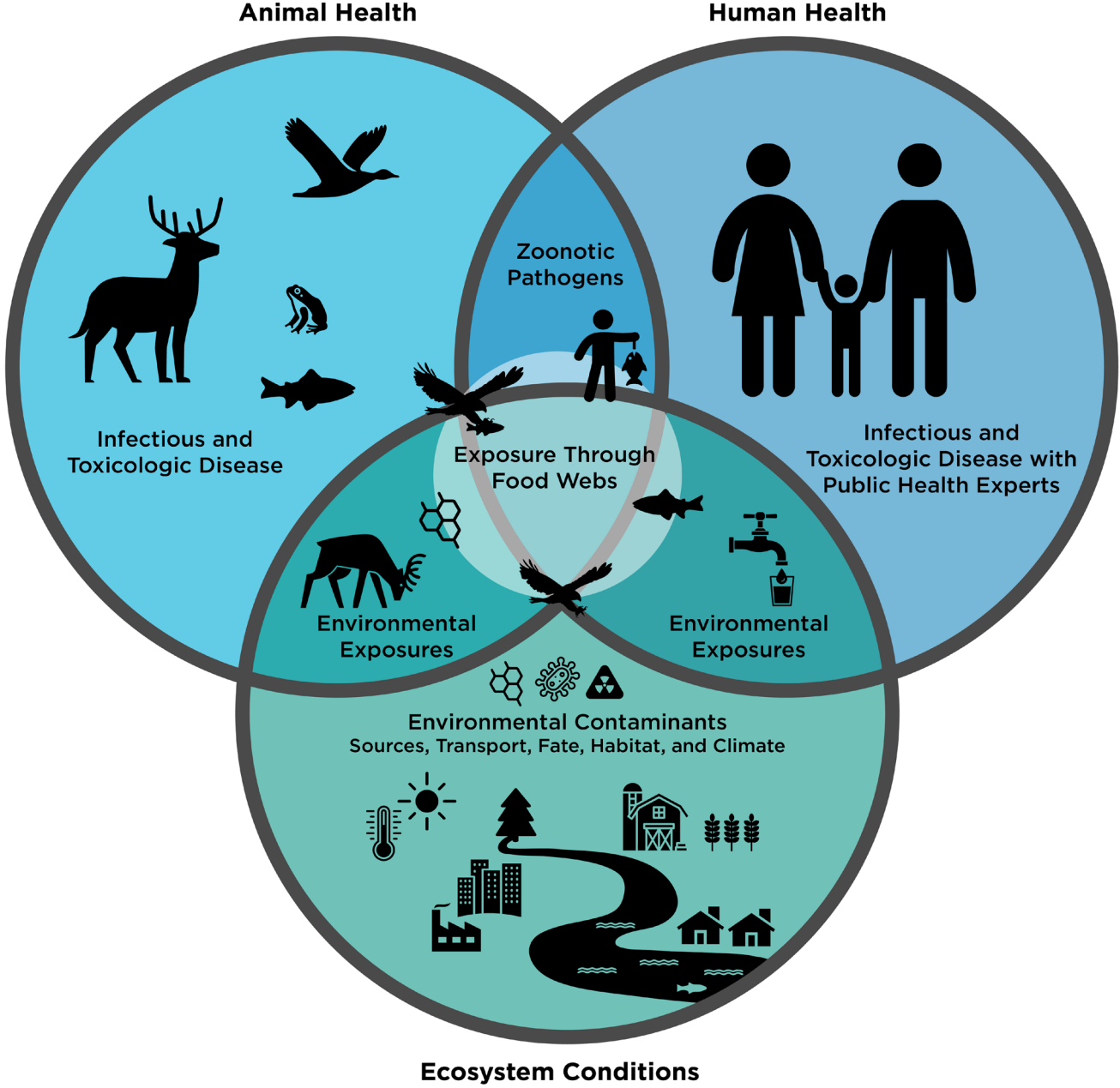
Designing the Next Era of AI

Integrated Data | Networking | Computing Research

MAIDAC Building
Multidisciplinary **M**ath, **A**I, **D**ata and **A**nalytics **C**enter



Charting a Sustainable Path for One Health



USU Research: Building a Roadmap to Utah's Prosperity



**Strong University-
Industry
Partnerships
through Applied
Research
Opportunities &
Discoveries**



**Incubator &
Accelerator
Programs**



**Talent
Development
Programs**



**Tax Incentives
& Grants**



**Regulatory
Reform**



**Infrastructure
Investment**

Investing in Utah State's Research Enterprise

- Drives innovation and economic growth
- Addresses critical societal challenges
- Creates a strategic partner for the state
- Builds a prosperous future for everyone



Research ROI

For every \$1 invested by the state, Utah State University returns on average ~\$8 in annual research funding. **In 2022, USU research achieved a 12:1 return on investment for the state of Utah.**

The national return in 2022 was 4:1.

According to the Kem C. Gardner Policy Institute, "Utah State University and the University of Utah collectively contributed **\$9.33B** to Utah's economic impact, with an economic multiplier of 2.1."

Source: NSF HERD 2022 Tables 1 and 23,
<https://gardner.utah.edu/news/economic-data-confirm-higher-education-confers-substantial-individual-and-societal-benefits/>





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