

Investing in Utah's Future

UtahState
UNIVERSITY

 THE
UNIVERSITY
OF UTAH

Research Universities are Critical

- *“The presence of a major research university is a basic infrastructure component of the creative economy. It is more important than the canals, railroads and freeway systems of past epochs and a huge potential source of competitive advantage.”*

Richard Florida: *The Rise of the Creative Class*, 2003



At the Heart of Every Successful Technology Cluster are Research Universities

- Silicon Valley - Stanford, UCSF, UC-Berkeley
- Research Triangle - Duke, UNC-Chapel Hill, NC State
- Boston's Route 128 corridor - MIT, Harvard, +7



Research Universities Produce a Strong ROI

- ❑ \$1 State funding = \$6 non-State funding
- ❑ Educate a well-trained work force
- ❑ Create new knowledge
 - Research → Discovery → Commercialization
- ❑ Jobs and tax revenues
- ❑ Stimulate economic growth

How Are Utah's Research Universities Doing?

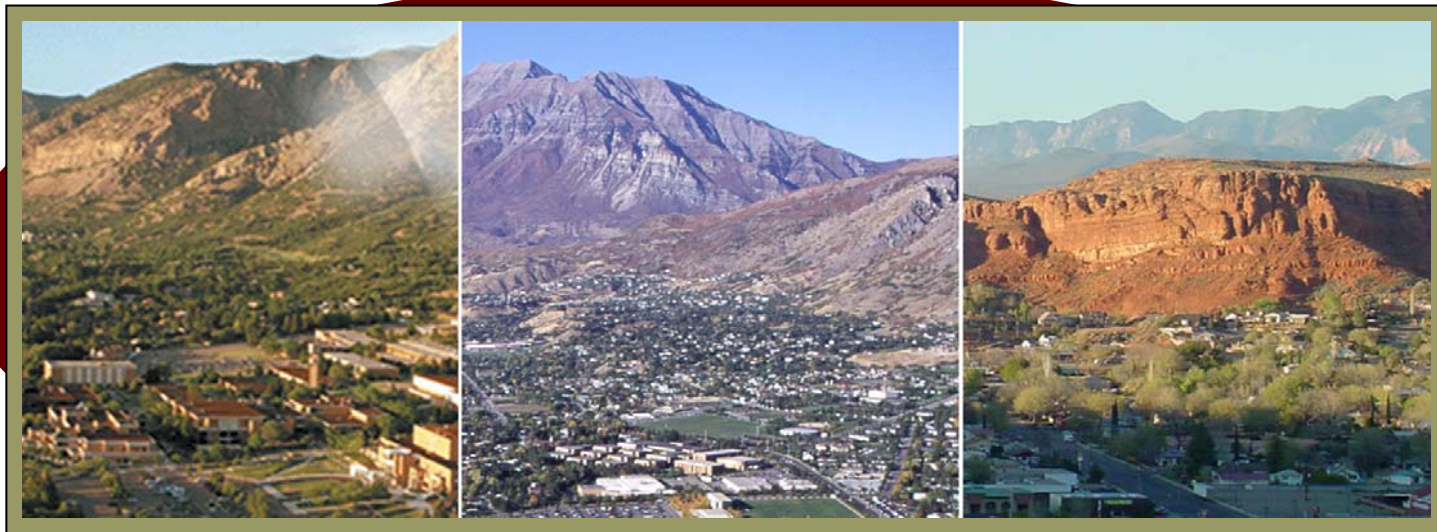
- In 2003, the combined impact of the University of Utah and Utah State University produced:*

 - \$414 million in university contracts and grants
 - \$1.2 billion in new money brought into the state
 - 37,198 jobs in the state
 - \$97 million in state tax revenues
 - \$17 million in local tax revenues
 - \$1 of state funding produced \$6 of non-state funding

*Bureau of Economic and Business Research: *The Economic Impact of Utah's Research Universities*, 2004

Economic Development Initiative

- Invest in programs and facilities at the universities to expand activities in IT, bio-tech, and high-tech
- *Technology Innovation Centers* to share best practices statewide





Programmatic Investment

- 25 Research Clusters
 - Capitalize on areas of strength
 - Interdisciplinary research focus
 - Senior faculty, post-doc researchers, junior faculty and graduate students
 - Cost of \$5 million each

Programmatic Investment:

Life Sciences & Biotechnology / USU & U of U

- 9 research clusters
- Research strength:
 - Collaborative work
 - Infectious disease / homeland defense
 - Cell signaling networks
 - Microbial processes with commercial application
 - Nano materials applicable to biological problems



Programmatic Investment:

Sensor & Prototype Development / USU

- ❑ **2 research clusters**
- ❑ **Research strength:**
Builds on unique strengths of Space Dynamics Lab
- ❑ **Investment:** Design & Development Center to support tech transfer into instrumentation, control systems, signal processing and electro-mechanical/ electro-optical devices



Programmatic Investment:

Water, Watershed, Climate & Weather / USU

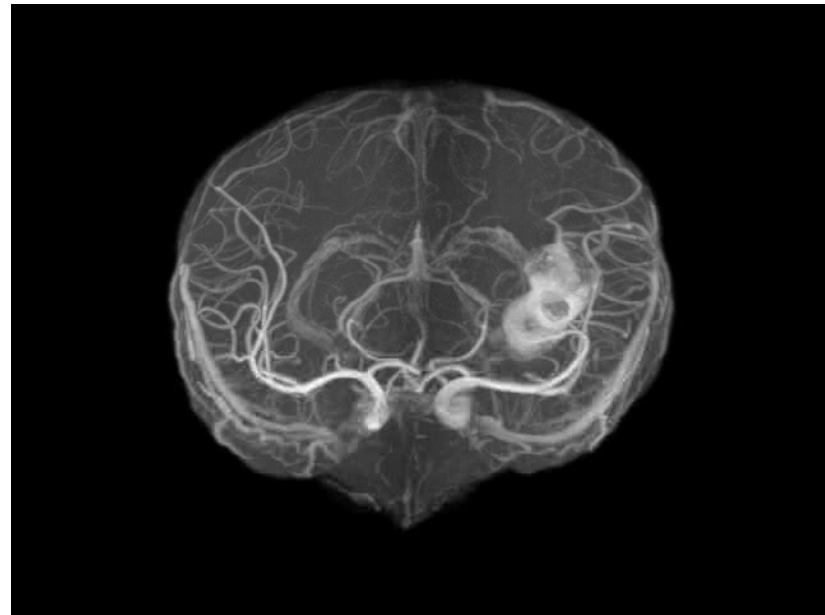
- 2 research clusters
- **Research strength:**
Interdisciplinary knowledge base and technical capabilities
- **Investment:** Plan and manage water resources
 - Protect and optimize water resources, a key limiting factor of economic growth
 - Hydrological Observatory



Programmatic Investment:

Interdisciplinary Neuroscience / U of U

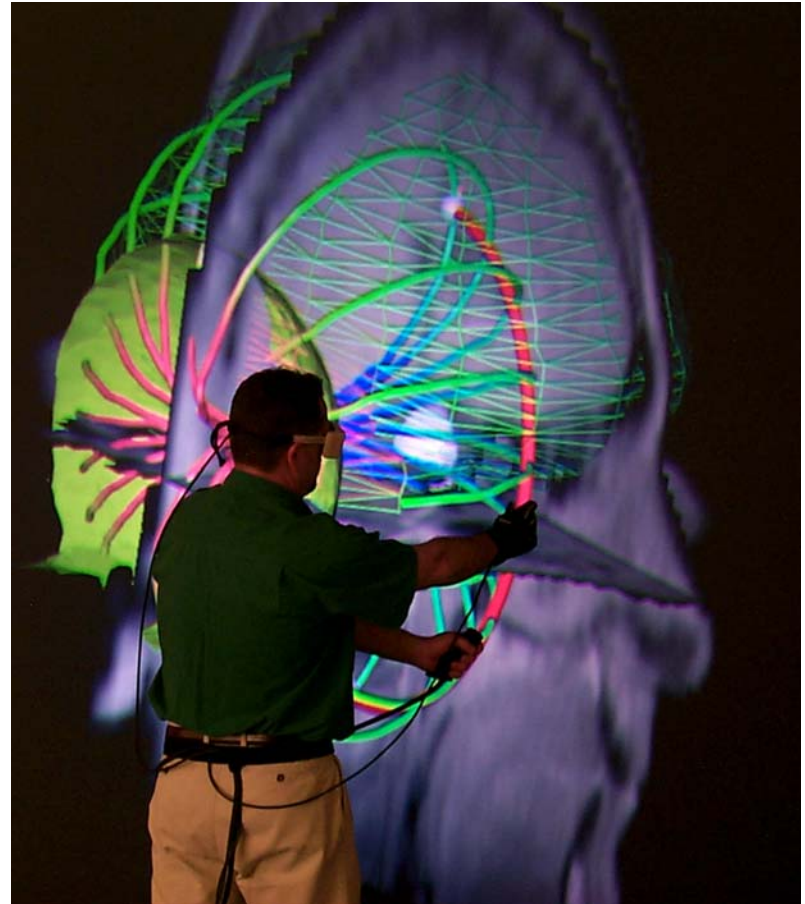
- ❑ **7 research clusters**
- ❑ **Research strength:**
Genetics, bioengineering,
computer science & imaging
- ❑ **Investment:**
The Brain Institute
 - Decipher biology of brain function
 - Build understanding of brain disorders



Programmatic Investment:

Information Technology & Informatics / U of U

- **5 research clusters**
- **Research strength:**
Interdisciplinary
research
 - Computer science
 - Imaging
 - Data base development
 - Informatics





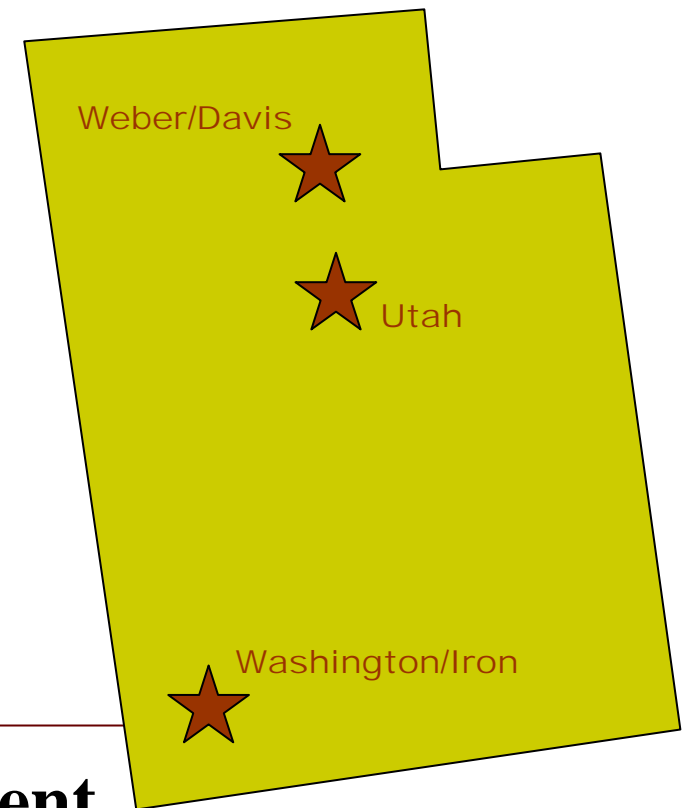
Campus Facilities Investment

Life Sciences Institute / USU	\$70 million
Infectious Diseases Center / USU	\$20 million
Informatics & Data / USU	\$10 million
The Brain Institute / U	\$100 million
IT & Informatics / U	\$50 million

Total of one-time appropriations \$250 million

Technology Innovation Centers

- Engage in statewide effort to commercialize research
- Help existing firms with best-practice ideas to expand business
- Assist other state universities and colleges with commercialization efforts



\$20 million construction investment

\$1 million per year on-going support

What is the Expected ROI?

Economic Returns to the State Before Tech Transfer

Year	Cumulative Business Activity	Cumulative State Tax Revenue	Jobs in Year Shown
5	\$ 110 million	\$ 5 million	1,463
10	\$ 620 million	\$ 24 million	3,315
15	\$ 1.4 billion	\$ 55 million	4,485
20	\$ 2.3 billion	\$ 92 million	4,875

Potential Benefits from Tech Transfer (spin offs, licenses)

Year	Cumulative Personal Income	Cumulative State Tax Revenue	Jobs in Year Shown
5	\$ 120 million	\$ 10 million	1,639
10	\$ 930 million	\$ 75 million	6,909
15	\$ 2.6 billion	\$ 210 million	11,411
20	\$ 4.8 billion	\$ 390 million	13,590



Investing in Utah's Future

- **“There is little doubt that the state’s future economic growth will be determined by our brains rather than our brawn and by the quality of our classrooms rather than the richness of our natural resources.”**

- Kelly Matthews, Economist for Wells Fargo Bank