



Executive Summary

Today as never before, Utah stands at the brink. The very future of our state—its economic growth and the prosperity of its citizens—hangs in the balance. Competition for good jobs and scarce resources assails us from every region of the globe. Aggressive postures on research and development are the norm from North Carolina to Arizona. And the struggle for knowledge funding is already hinting at a world of haves and have-nots. These are factors that will only become more challenging in the months and years ahead.

A window of opportunity exists for us to meet this challenge, to tip the scale in favor of Utah and its citizens. To do so, we must commit to investments that prepare Utahns to participate in a knowledge-based economy.

A Reminder of What We've Accomplished

Utah has an enviable legacy of achievement in the face of daunting odds. To tame an arid desert we tapped the Colorado River (Central Utah Project, 1919). To connect a growing population we built a powerful network of state and national highways (1957, 1996). To welcome the world, we worked for thirty years to host the 2002 Olympic Winter Games. These investments required vision and sacrifice, but they set in motion patterns of action that benefit the lives of every Utahn even today.

Indeed, there are some who might well claim that Utahns can accomplish anything once they put their minds to it.

And such a time has come again. Utah is facing an increasingly competitive business environment, both regionally and globally. Gone are the days when competition was measured among communities in our state; now it is measured between states and nations. To create the advancements we need to grow and prosper, Utah must do as it has done in the past: invest in the infrastructure and education that will benefit both our present and our

***Utahns can
accomplish
anything once
they put their
minds to it.***

future. We must do everything possible to maintain the quality of our highly educated workforce, while reinforcing our innate spirit of entrepreneurship.

The Milken Institute, a non-partisan think tank, recently noted that 50 percent of long-term economic growth occurs because of scientific and technological change, and that technology has doubled its share of economic activity in the past 20 years.

The implication is clear: **embracing technological development could be as vital to our state's economy as developing our water resources was a century ago.**

Fortunately, Utah's state-assisted research universities have a strong tradition of supporting economic growth, both by providing human capital development and by maintaining a steady flow of innovative ideas feeding into Utah's "technology pipeline."

There are Challenges to Face

All is not well in Utah. To claim otherwise denies the honesty that made this state great. Our economy is only now recovering from its worst recession in nearly a half century. Continuing population growth and accompanying environmental issues raise questions that demand immediate and far-reaching answers; we must ensure a state where the quality of life is as good for our children as it is for us. And we struggle with the challenges of education—not only providing for a burgeoning primary and secondary population, but ensuring access to higher education for citizens from every economic stratum.

Even more critical is the lack of jobs awaiting Utah students. Each year, the University of Utah and Utah State University (along with our colleague, Brigham Young University) graduate thousands of men and women prepared to contribute to Utah's economy in clean, productive high-tech industries. Unfortunately, Utah's current job market cannot accommodate all its talented graduates; many of our best are lured away to jobs in more competitive markets around the world. If Utah is to retain its brightest children and serve as a beacon to the world, we must do a better job of preparing for tomorrow. We can do this by investing in the very research universities and citizens that have primed Utah's economic pump for decades.

What Future Awaits Us?

High-tech businesses have had a major impact on Utah's economic prosperity. At one time, high-tech companies in Utah numbered as many as 3,400, employing more than

60,000 people directly and some 133,000 in related services. Perhaps more telling, high-tech jobs in Utah paid about 77 percent higher than the state's average wage. Higher wages equaled higher taxes; more companies meant more money for the state's treasury. Indeed, high-tech employment currently constitutes 4.9 percent of the state total, but high-tech wages account for 8.4 percent of the state's economy.

The future is clear: technology will compose the majority of sustained economic growth in the nation. Those states that can grow and attract high-tech firms will be the ones to succeed and thrive.

It's worth noting that many Utah businesses pulsate with energy infused into them from university-based discoveries. Companies like Myriad Genetics, Theratech, Evans &

We must create an environment where emergent companies find the resources they need right here.

Sutherland, Hyclone, WordPerfect and Iomega are just a few examples of companies whose establishment as international powerhouses relied on innovations coming from Utah's research universities.

Unfortunately, some of these same Utah companies have now relocated outside of Utah, joining many other businesses whose innovative sparks were ignited here but who now heat the economies of other states and nations. We cannot blame organizations for taking advantage of global resources, but we must not allow this pattern to repeat itself. We must create an environment where emergent companies find the resources they need right here.

Utah's state government has partnered effectively with higher education to enable universities to play a supportive role. For example, Utah led the nation in its Centers of Excellence Program. Its current efforts to attract new capital in its "Fund of Funds" and its support of industry-specific "ecosystems" are additional ways the state sustains new enterprises heavily reliant on Utah's research universities. But more can and should be done.

The Synergy We Need

The government+higher education+industry partnerships suggested by prior programs are precursors of what policy experts describe as the "triple helix" of economic development. The components of this triple helix reinforce and strengthen one another, and stand united to benefit the state and its citizens. To enable technology-fed economic

development, the interplay between education, government, and industry must be robust; building this triple helix is the best way to create a prosperous future.

Utah's research universities, for example, contribute to that robust interplay by identifying and encouraging promising technologies. However, they often lack the capital to prepare those technologies for success in the marketplace. Achieving market viability for new technology-based businesses is precisely where Utah's government can cooperate with its universities to focus combined resources.

The government's role in the economic triple helix is equally vital. Only the state can establish favorable tax policies, make selective investments, and protect the state's resources. Companies being recruited to anchor new technology clusters expect to see state revenues invested in the state's infrastructure, education system, and environment. Research universities can help illustrate that governmental commitment.

Finally, the role of industry is to follow the prompting of the "invisible hand" that economist Adam Smith says guides the market place. If the universities and state government do their jobs well, the advantages that Utah provides will attract and retain the businesses, entrepreneurs, financiers, and service providers needed for Utah's economy to thrive.

Besting the Competition

Capturing additional Federal research grants is one example of what might be achieved by increasing Utah's competitive environment. Such grants are a major financial artery for research universities and help foster the innovations that ultimately benefit the state. Together, Utah State University and the University of Utah brought more than \$500 million in research funds to the state of Utah last year. Gaining access to Federal dollars is a highly competitive process, and—as a criterion for the awarding of grants—Federal agencies increasingly look at the full complement of economic infrastructure that supports petitioning institutions. It is therefore imperative for Utah to support university activities that develop synergistic clusters of high-tech companies.

Sadly, when it comes to state support for technology development Utah is being left behind. We once stood at the forefront of such support but sister states are now besting us. California, for example, is investing over a billion dollars in research university infrastructure. Arizona, facing more than a billion dollar deficit in 2003, committed over \$400 million in high-tech and educational initiatives during the next 20 years. Michigan initiated

spending \$1 billion on a “life science corridor” and created a statewide accelerator program that will take advantage of existing university-based incubators to advance technology-based start-ups. North Carolina dedicated \$4.5 billion just for construction and renovations at the University of North Carolina. And the list could go on.

In the face of this national rush toward technology development, Utah cannot afford to remain idle. Rather, our comparative strengths, built up over a rich history of education research and service, should be put to work to increase Utah’s competitiveness. We must increase our capacity for research and development or we will continue to fall behind.

Utah stands at the brink. Implementing just seven objectives can alter our future and ensure a brighter tomorrow for all our posterity.

- Establish and strengthen research institutes in targeted technology areas.
- Increase incentives to attract and maintain research and development talent.
- Build and expand research facilities.
- Enhance business incubation at Utah’s research universities.
- Expand the state Centers of Excellence Program.
- Increase incentives and support for new ventures.
- Increase access to venture capital.

We all share a common goal to improve the lives and well-being of every Utahn. Let us work with one another to arrive at solutions both innovative and practical—solutions that are uniquely ours, based on a heritage of commitment to education and economic development that benefits all of us. We are at the brink; now is the time to press forward together.