

Arizona lagging in tech presence, education

Report details disparity in jobs, funding, college degrees

by *Ken Alltucker* - Feb. 26, 2009 12:00 AM
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Arizona's technology industry began shedding jobs before the recession started and is not keeping pace with comparable states on measures such as venture capital growth and inventions.

Arizona also lags behind eight peer states on funding for [university](#) research and the share of students securing science, technology, math and engineering degrees, according to a new report.

Ohio-based Battelle completed the report on behalf of Science Foundation Arizona to assess Arizona's progress in growing technology jobs and education. The foundation plans to use the report to track its mission of spurring technology and innovation statewide, and measure the state's overall effort to diversify the economy with high-paying technology jobs.

"It's an honest report card," said William Harris, president and chief executive of Science Foundation Arizona. "It points to some challenges in the education system, capital and manpower."

The report comes as the foundation fights for funding after the Arizona Legislature slashed \$22.5 million from the private foundation's budget this fiscal year as part of \$1.6 billion in state budget cuts.

The foundation's operating costs are paid by the private sector. The state approved \$135 million for the foundation over several years, provided the foundation raised an equal amount from the private sector. The public funds and matching private funds are passed along as grants to scientists, educators and businesses that the foundation qualifies.

Science Foundation Arizona representatives on Wednesday downplayed the state's funding cuts, insisting they are working with the state to restore the money and meet contracts with grant recipients.

"The state has every intent to honor the contract," said foundation Chairman Don Budinger.

Harris said the Battelle report was commissioned last year during better economic times, before the foundation learned its public funding may be in jeopardy.

It commissioned the report based on the suggestion of one of its private donors, developer Jerry Bisgrove, who wanted to

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ensure the foundation had a way to measure its progress.

Overall, the report indicated Arizona has a significant technology base that supported 162,000 jobs and a university research budget of \$783 million in 2007. But the number of private-sector jobs declined from the previous year.

Some key findings:

- Arizona's technology employment dropped 2.1 percent in 2007 compared with a 1 percent decline nationwide. Arizona's patent growth checked in at less than 1 percent in 2008 compared with U.S. average growth of nearly 10 percent.
- University research budgets grew 2.1 percent in 2007 compared with a 3.5 percent spurt nationwide.
- Arizona ranked lower than eight comparable states based on the percentage of students obtaining college degrees in science, technology, engineering or math. Such degree fields are considered more desirable because they tend to spur innovation and economic growth.

Mitch Horowitz, vice president and

managing director of Battelle's Technology Partnership Practice, said the report demonstrates Arizona has a substantial technology base but is showing signs of losing ground. He said a particular area of concern is Arizona's lower share of degrees in science, technology, engineering or math fields.

"There are clear warning signs for Arizona," Horowitz said. "Those states that have the talent will have the jobs."

Still, the report also found that Arizona research projects funded by the foundation returned more bang for the buck. For every \$1 the foundation invested, a research project returned an additional \$1.18 in venture capital, federal grants or other funding. That may be in part because the foundation uses an outside panel of experts to assess a project's scientific merit and likelihood for success prior to committing funds.

The report indicated that Arizona had strong clusters of jobs in aerospace and defense as well as a small-but-growing bioscience sector.

Harris said that it is important to convince companies to complete research and development work in Arizona. Such work will make these businesses less likely to cut jobs or move operations to other states.

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Boeing, for example, had a lucrative offer from Texas to move its operations there, Harris said. The foundation sought to bolster ties with Boeing to prevent such a move.

Ventana Medical Systems, acquired last year by Swiss drug giant Roche, has plans to grow its workforce from 1,000 to 3,000. Ventana now is expanding its campus near [Tucson](#) to accommodate the medical diagnostic company's growth.

Some other foundation projects in the works include the creation of a new solar power initiative with [Arizona State University](#) and private industry as well as a public-private mining institute that could yield advanced robotics for underground mining.

"We have planted these seeds and these seeds are just starting to grow," Harris said.

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