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## Driving high-tech firms: research, education, entrepreneurship

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Experts predict that technology-based businesses soon will dominate the nation's economy. To thrive in the new economy, we must pay attention today to three fundamental drivers: research, education and entrepreneurship.

That is the message business and community leaders statewide are hearing from Ed Lazowska, vice president of the Technology Alliance of Washington and Bill and Melinda Gates Chair in Computer Science and Engineering at the University of Washington.

Looking at the Mid-Columbia recently, Lazowska said that the Pacific Northwest National Laboratory gives the Tri-Cities a "tremendous advantage because it is one of the state's leading research institutions and is at the core of new technology development."

In education, Lazowska said it is critical to grow our own technology workforce through such actions as supporting efforts by Washington State University Tri-Cities and Columbia Basin College to strengthen the number and range of baccalaureate and advanced degree offerings.

The third driver – entrepreneurship – brings it all together. To Lazowska, an entrepreneurial culture has several defining qualities. Here are a few, plus observations from members of the Community Roundtable, an association of area government, business, research, education and economic development leaders. Also included are items from the 2001 "Innovation and Technology Index," an in-depth report on local technology business and a baseline for marking progress toward creating an innovation economy.

Successful business, academic and government partnerships – "The Tri-Cities has more than 40 organizations and government partnerships that assist in economic development," said Frank Armijo, Lockheed Martin Information Technology Hanford Program director and chairman of the board of the Tri-Cities Industrial Development Council.

The best example has been the Department of Energy's 3161 program for economic diversification, said Richard Reisinger, community relations manager at CH2MHILL. Technology startup firms have been among the key beneficiaries of \$22.3 million in partnership funds distributed since 1996 through TRIDEC. College students also are getting into the act, partnering with local entrepreneurs to produce business plans, data bases, engineering designs and more.

**Local venture capital availability** – Lack of local private sources of capital is a fundamental problem in the Tri-Cities. According to the Index, "Entrepreneurs have to show considerable ingenuity and persistence to attract capital investment." "We're one of the brainiest places around," said Rich Cummins, CBC vice president of instruction and champion of the Roundtable's information technology task force.

More financial support for early-stage technology development would encourage innovative people to grow businesses here and stay here, he said. To help fill the gap, local economic developers have established relationships with Northwest venture organizations and have brought numerous speakers and workshops here.

**Strong telecommunications infrastructure** – Increased bandwidth at competitive prices is critical for business expansion and competitiveness and to attract new high tech firms. Armijo is encouraged that investments by telecommunications carriers and expansion of the public utility districts’ fiber optic networks “are generating more options for local businesses to have affordable, high-speed access to the rest of the world.”

**Quality of life** - Lazowska said quality of life means being a place where smart people want to live. LoAnn Ayers, WSU community outreach and development director agreed, adding that the Tri-Cities increasingly appeals to individuals seeking more than money or technical challenge. They want a “life placement” with family-friendly qualities, such as recreation opportunities, short commutes, safety and good schools, she said. “Happy families help make happy entrepreneurs, and happy entrepreneurs are more likely to be successful.”

**Business climate** –Tax and regulatory structures are a problem statewide, Ayers said. “Locally, we are fortunate that our elected officials, chambers of commerce and others are working to influence decisions in that arena.”

On the other had, businesses have access to “phenomenal support services that are free or nearly free,” Ayers said. Examples include the PNNL Technology Assistance Program, the Small Business Administration’s Business Information Center at WSU, and incubator space that amazes visitors with its size and scope. “We can even handle some early-stage development with modest funds available through the Tri-Cities Enterprise Center and the Benton-Franklin Council of Governments,” she said.

**Next steps** - What can local business people do to improve our entrepreneurial culture? Reisinger would like to see more successful entrepreneurs participate in mentoring and other activities that support new businesses. Cummins urged small or emerging technology entrepreneurs to “take advantage of every opportunity you can to become a better business person, even offering equity shares in your company to attract the best management team.”

On a broader scale, establishing local chapters of business and professional associations is a tactic proven to build expertise and influence. For example, the Roundtable’s research and development arm, the Three Rivers Technology Alliance, recently became affiliated with the Technology Alliance of Washington – immediately connecting the Mid-Columbia with a leading voice on issues and policies surrounding the state’s technology sector.