

Friday, August 21, 2009

Busting the barriers between lab and marketplace

Washington state vows to mow down obstacles that prevent university breakthroughs from sparking startup companies

Puget Sound Business Journal (Seattle) - by [Deirdre Gregg and Clay Holtzman](#)

After years of ho-hum success at spinning out companies from its massive academic research complex, Washington state is starting to blast away the walls that block scientific innovations from becoming real-world businesses.

The [University of Washington](#) and [Washington State University](#), under pressure from politicians, business leaders and their own professors, are streamlining their technology licensing offices, bringing entrepreneurs to campus to coach researchers, and tearing up rules that hinder scientists from commercializing their discoveries.

“The key is matching that to where we want to go economically,” said John Lederer, associate director of academic affairs at the state Higher Education Coordinating Board, which has been ordered by the Legislature to implement a statewide plan that’s being devised to commercialize more campus research.

The push comes at a crucial time for the region, as economic mainstays like [Microsoft](#) and [Boeing](#) have shed thousands of jobs.

But it also stems from longstanding frustrations that the Puget Sound region hasn’t managed to pump out tech and medical startups as effectively as places like California’s Silicon Valley — despite the University of Washington’s status as the nation’s No. 1 public university in research dollars.

Yet to be seen is whether the state will back up this interest in commercialization with the amount of money invested by some competing states, and whether the universities will wholeheartedly embrace entrepreneurship over the long haul.

But leaders at both UW and Washington State University say they already have tossed aside some of the roadblocks that hindered professors from starting up their own companies or licensing their discoveries to outsiders.

“In the past, the universities have been very bureaucratic,” said Jim Torina, chairman and CEO of The University Funds LLC, a nascent Bellevue venture fund that is partnering with universities to foster startups based on academic discoveries.

Window of opportunity

Torina said the schools in the past tended to place an unrealistic value on the intellectual property and focused too much on licensing the technology instead of supporting startups that might result from it.

Even with some of those obstacles removed, another challenge is that credit and venture capital have dried up and initial public stock offerings are all but nonexistent.

Still, experts say recessions can be times when inventors and investors have little to lose trying out risky new technologies.

“People that are in technology transfer and early-stage investing know that this is a really good time to start and carefully grow wonderful companies,” said Susannah Malarkey, executive director of the [Washington Technology Alliance](#), an industry development advocate.

To be sure, many higher education leaders and technology industry officials say the greatest economic benefit the universities provide is an educated work force — not just pumping out technology licenses or startup companies led by faculty.

“If you don’t have the people to go out and do this kind of work, nothing is successful,” said Mary Lidstrom, vice provost for research at the UW.

But ramping up the transfer of research into viable local businesses has become a regional priority, and action is under way on several fronts.

In the past year, for example, the UW TechTransfer office has created an entrepreneur-in-residence program to advise researchers how to realize the commercial potential of their innovations (see story on page 22).

The school also has a [Technology Gap Innovation Fund](#) to provide \$50,000 grants to help bridge the gap between purely research money and the very early phase of starting a company.

Keith Jones, executive director of the Washington State University Research Foundation, said the Pullman-based school also is making headway on bringing forth companies based on the university’s research, with particular emphasis on agriculture, biofuels and animal health.

“(WSU tech transfer) was very much a passive organization,” Jones said. “We now have a well-functioning organization as far as finding intellectual property in the university and patenting and licensing it out to companies.”

In recent years, the state Legislature has also taken significant steps to speed technology transfer.

Easing restrictions

A 2005 bill that became law in 2007 gave universities the authority to craft their own conflict-of-interest policies for employees. Previously, regulations prevented faculty from using university resources — including the professors’ own offices or phones — in starting up a company. The old rule was considered a significant disincentive to faculty rolling their innovations into the businesses.

Both the UW and WSU moved to adopt procedures that would allow researchers more freedom to use a limited amount of university resources when working with private business. Researchers are still barred from some activities, including making long-distance calls on university phones, or using university office supplies or lab equipment to conduct outside work.

Howard Grimes, vice president for research and dean of the graduate school at Washington State University, said the new guidelines are one piece of a broader effort that both universities are making to change the culture and encourage the transfer of discoveries into the real world.

“We’re saying, there may still be a hoop or two to jump through, but we want you to do it,” he said.

Seeing ‘Stars’

The Legislature created so-called Innovation Research Teams of “Star Researchers,” a program known as “Stars,” in 2007, aimed at recruiting 10 top researchers with entrepreneurial track records over 10 years. The program is funded at about \$1.9 million a year, far less than states with similar programs, such as Utah, with \$15 million funding, and Georgia, with \$12.5 million, according to a draft report from the Washington Higher Education Coordinating Board.

To date, Washington has recruited two Stars researchers. The UW hired Michael Hochberg, a nanophotonics researcher from the [California Institute of Technology](#). Hochberg, who has started two companies, says he has received more than \$2.5 million in additional funding from private and government resources since coming to Seattle.

Few universities have both technology that is desired by industry and the desire to work closely with business, Hochberg said. The UW has both of those attributes.

“Part of my charter in coming here was to do this kind of work,” Hochberg said. “If this wasn’t the kind of place that I believed where it could be done, I wouldn’t be here.”

Meanwhile, Washington State hired Birgitte Ahring, a microbiologist focused on second-generation biofuels, as director of WSU’s Center for Bioproducts and Bioenergy based at its Tri-

Cities campus. Ahring is working at the new Bioproducts, Sciences and Engineering Laboratory, a \$25 million facility built by WSU and the [Pacific Northwest National Laboratory](#). Ahring, who earned her doctorate from the [University of Copenhagen](#), is also the founder and CEO of BioGasol, a Danish biofuels company that is working on demonstration plants in Denmark and Oregon.

Innovation zones

The Legislature also created [Innovation Partnership Zones](#) in 2007, which are designated areas with a concentration of businesses from the same industry that are potential hotbeds for entrepreneurial activity.

The state has designated 11 Innovation Partnership Zones, but only six have received capital grants, for things such as shared infrastructure, telecommunications or equipment.

At the Port of Bellingham, for example, the 200-acre Waterfront Innovation Zone is using its capital grant to build a 10,000-square-foot Technology Development Center, which will open in September. The center is a collaboration between the Port of Bellingham, [Western Washington University](#) and [Bellingham Technical College](#) and is aimed at working with marine and related industries.

Meanwhile, Bothell did not get capital funding but was designated as an Innovation Partnership Zone for biomedical device manufacturing.

“That has been good for us, to be officially designed by the state as the epicenter of the biomedical device industry,” said Terrie Battuello, assistant city manager and economic development manager.

The city has been holding educational and networking meetings, branded the area with signs on the boundaries and conducted surveys of the area’s biomedical companies and suppliers and supporting industries, such as metal fabricators.

Rep. Phyllis Gutierrez Kenney, a member of the state’s [Economic Development Commission](#), said that the Innovation Partnership Zones appear to be working.

“They have created much-needed partnerships to make companies in our state more globally competitive,” said Gutierrez Kenney, D-Seattle.

She is optimistic about the STARs program too, and wants to see both programs funded in future years.

“We need to continue to expand programs that are working,” she said.

The funding, of course, will likely be a perpetual challenge.

“There’s a big question about the amount of resources,” said Jack Breese, co-chairman of a private-sector advisory panel that is providing input on the Stars program and Innovation Partnership Zones.

The fact that the Stars program received any funding in a year when the state faced such a massive budget gap was “somewhat miraculous,” Breese said.

“But if you look at what Georgia, South Carolina or Utah have done,” he said, “it’s much more ambitious in terms of total dollars.”

The state Economic Development Commission recommended that the state increase funding for the Stars program in the next go-round, he said.

“I believe that if you talk about economic recovery,” Breese said, “it is programs like this that are going to allow the state to emerge strong from the downturn.”