

Funding the Future:

Technology Creation & Economic Sustenance through the ORTDA

By Bill Newman

Responding to declines in

productivity and job growth in the state's natural resource-based and traditional manufacturing sectors, Oregon's 1986 legislators saw the limitations and vulnerabilities of a state economy that then did not provide adequate opportunities to support a shift to knowledge-based regional markets. At the time, recessionary pressures in the state economy left a serious gap in private investment dollars that might otherwise have facilitated viable market opportunities for new technologies and businesses emerging from entrepreneurial energies within the state. Demonstrating leadership and innovation, the Oregon Legislature became a player in the effort to transition our state's economy to one based on the only truly renewable resources—human capital and the knowledge it embodies.

Supporting Oregon's Knowledge-Based Economy

The Oregon Resource and Technology Development Corporation (ORTDC) was created in 1986 to address the scarcity of early-seed capital for business formation, and was funded initially by \$12.3 million from revenue generated by the Oregon Lottery. ORTDC privatized the management of its investments and became the Oregon Resource and Technology Development Fund (ORTDF). In 1998, the ORTDF's equity investment activities ceased while the Attorney General's office reviewed constitutional and statutory issues related to the fund's creation and prohibition on holding certain forms of equity in the companies it financed. Facing a conflict resulting from the cross-purposes of the ORTDF's intended mission and its constitutional and statutory authority on such investment choices and the need for the State to spur local technology markets through equity investment, the executive and legislative branches of the Oregon government restructured the Fund to remove some of the restrictions preventing equity investment. In 1999, the Legislature

resolved constitutional issues by transferring ORTDF's assets to an account that exists within the Educational Endowment Fund under the Oregon Constitution, naming it the Oregon Resource and Technology Development Account (the ORTDA). The intent of this solution was to provide an objective vehicle by which the State's interests could be managed effectively, without risking constitutional violations or even misperceptions. Under this new structure, ORTDA prepared to resume operations in 2000.

Defining its overall charter to provide early-seed capital funding, management assistance, and business development support for new Oregon companies, ORTDA's current priority is to provide accessible early-stage capital for the commercialization of technology coming from Oregon's public and private universities and research institutions. Although Oregon now has 16 venture capital funds, and more than \$300 million in federal research funds going to its research universities, there currently exists no public or private entities focused on establishing a link between these ventures and research funds. This gap in financial support for making new technologies commercially viable isn't lost on Oregon's research or private sectors. The recent merger between Oregon Health Sciences University and the Oregon Graduate Institute makes evident the undercurrent of interest by the research institutions to pool their innovative cultures toward an end of stimulating downstream biotechnology industries in this state.

Organizations like the New Economy Coalition, created by a group of business, high tech, and higher education interests, are also evidence of broad-based support for the role of govern-

ment in Oregon to foster the creation of opportunity for its citizens. The New Economy Coalition is promoting a legislative agenda platform that includes support for a Tier-1 engineering program in Oregon; doubling the number of the state's engineering graduates; creation of a top-tier biosciences program at the combined Oregon Graduate Institute/Oregon Health Sciences University; and support for commercializing university inventions via the Oregon Resource and Technology Development Account (ORTDA) and the Oregon University System's Technology Transfer Initiative. ORTDA's role in this platform is a cornerstone linking excellence in higher education to creation of economic opportunity in the state: it is a catalyst for the creation of businesses based on technologies that otherwise would pass unnoticed or manifest their economic opportunities elsewhere. In the absence of such a link, there are few alternatives for effectively creating businesses and commercializing the knowledge created in Oregon's scientific and research institutions. The economic potential of the scientific discoveries simply cannot be captured now without the support of the ORTDA mechanism.

Today, the fund's liquid assets stand at between \$4 and \$7 million in both public and private equities (non-marketable investments in private companies). While the fund's total value rose to over \$20 million during the time the fund was inactive and unmanaged, the portfolio's private companies could not receive the active management from ORTDA that they required during this time and the fund could not liquidate its public investments during a period of extreme market volatility, resulting in the decreased value of the fund

today. In order to bring the fund back to a level which can support renewed professional management of the existing portfolio and investment in new commercialization opportunities, ORTDA is seeking a \$10 million appropriation of state funding from the 2001 Oregon Legislature.

In a budget year when the Legislature faces tough choices about educational funding and the threat or opportunity represented by Oregon's "kicker," one could quickly write off this investment effort whose returns are not widely understood by key decision makers. Yet, funding the ORTDA is a responsible and strategic decision that could pay rich dividends, both financially and in economic benefit to the state, that would potentially dwarf the size of a one-time investment today.

Resources for the Future

New England was farmed out, forested out, and mined out over 250 years ago. Yet few could dispute that the economy of the Northeastern United States is far from the conditions of unemployment and resource depletion that are a growing part of the Oregon economic landscape. New England's tremendous concentration of educational and research resources with some of the basic building blocks of new industry have made it, today, very different from our own regional economy. By ensuring the development of new, commercially viable technologies, the availability of adequate funding aimed at establishing new enterprises, and a continual flow of skilled and educated human capital capable of implementing new business models and employing new tools in existing industries, there can be no question that partnerships between the higher education and business sectors have forged new opportunities for future economic stability and growth.

Measurements of the economic impact of top-quality institutions of higher education show results that exceed one's most optimistic guesses. A study in the *Journal of Private Equity*, examining the economic impact of major research universities, found that companies tracing their origins to Stanford (i.e. founders, technologies and spin-

outs) account for 37% of high-tech employment in the Bay Area. In Massachusetts, the figures show that approximately 60% of high-tech employment can trace its roots to MIT. In a 1997 Bank of Boston study on the economic influence of MIT, over 4,000 MIT-related companies were identified that employed more than 1.1 million people and produced annual sales exceeding \$232 billion, which on a global scale places it in the top 30 of world economies. Closer to home, the University of Washington, ranked first in public university system federal funding (with over \$5 billion in research funding over the last decade), has provided the impetus for the creation of nearly 100 new companies over the last decade and countless jobs.

While these numbers are impressive in and of themselves, demonstrating the benefit that the state can derive from the untapped potential in its universities, there are other lessons to be learned. First, such statistics, repeated over and over again, should demonstrate conclusively that people and knowledge are the only real, renewable resources we possess. Secondly, these numbers reinforce an argument that ORTDA has been making all along—excellence in higher education creates economic opportunity in the state and in the region. Finally, and perhaps most significantly, our current market uncertainty urges a powerful case for self-determination and our need to build a stable, secure economic development engine in the Oregon—especially when we see, as with Boeing's reduced commitment to Seattle, the fragility of dependence on any "sure" or "certain" industrial anchor.

ORTDA's Promise

Through its efforts to date, the ORTDA has provided the initial funding to establish firms that generated over \$6 million to the state in corporate and payroll tax revenues in 2000 alone, demonstrating the Account's ability to more than return its cost to the State. These same firms employ over 3,000 Oregonians and produced approximately \$798 million in year 2000 revenues. The opportunities arise from

multiple sources and across multiple industry sectors: of the 50 companies to which the ORTDA has provided early seed capital funding, 21 of these ventures originated from Oregon research institutions, and 20 of Oregon's 90-odd biotechnology, medical device and life sciences firms owe their beginnings to ORTDA. These economic benefits also are available to all Oregonians—more than 42 percent of ORTDA's investments have been made outside of the Portland metropolitan area. As a catalyst to spur private-sector involvement, ORTDA has also been successful. Companies that received seed investments from ORTDA subsequently received over \$570 million in additional, follow-on private sector funding.

By creating, nurturing, and building companies in this state, Oregon takes opportunity and creates businesses and jobs in Oregon, by and for Oregonians. Likewise for these companies, decisions are made in Oregon, for Oregon, by Oregonians; and the companies and the people involved are members of the community possessing strong ties and commitments to local business partners, to their communities, and to their state. Contrast that with the current situation, where decisions with great impact on our state are made from places like Intel's Santa Clara corporate offices, IBM's headquarters in Armonk, NY, or even further afield, as in the cases of Fujitsu, Hitachi, Wacker-Siltronic, and Sharp. Looking at the economic vitality in places like Massachusetts, the San Francisco Bay Area and Washington State, our greatest decision will be to create sustainable opportunity in Oregon by learning from those centers of economic and educational excellence, and not simply allowing our economy to be shaped and controlled by the companies that reside there.

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