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Statement of

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before the
HOUSE COMMITTEE ON HIGHER EDUCATION

January 31, 2008

3:00 p.m.

State Capitol, Conference Room 309

in consideration of

HB 3074

**RELATING TO A TECHNOLOGY TRANSFER PARTNERSHIP AT THE
UNIVERSITY OF HAWAII.**

Chair Chang, Vice Chair Bertram, and Members of the House Committee on Higher Education.

The Department of Business, Economic Development, and Tourism (DBEDT) strongly supports HB 3074, an Administration measure proposing a partnership between DBEDT, the Office of Technology Transfer and Economic Development (OTTED) at the University of Hawaii, and a private entity with expertise in technology commercialization.

This proposal was included as a component of the Innovation in the Economy bill submitted by the Administration in 2007. We believe that there is strong justification for providing the University with additional resources to enhance its ability to commercialize technologies and inventions developed by its faculty and ask you to consider it again.

Recognizing that universities that generate new knowledge and discoveries are important contributors toward developing a state's innovation economy, this measure proposes a technology commercialization public-private partnership for the University of Hawaii. A partnership with an experienced private entity would enhance the ability of OTTED to significantly increase its commercialization activities. OTTED, DBEDT, and the private partner

would work closely together to identify and implement the most appropriate range of activities that would best serve the state's interest of an innovation economy. The private partner and OTTED would share in any benefits that result from these activities.

This partnership between academia, industry and government, which combines resources and expertise from each, could significantly increase the number of licensing agreements and start-up companies based on discoveries at the University of Hawaii. This, in turn, would increase revenues and accelerate the movement of innovation into the marketplace. Beyond the dollar value associated with this activity, there is the public benefit that comes from introducing new products and solutions that meet societal needs, and according to a report by the President's Council of Advisors on Science and Technology, "... the transfer of publicly funded technology is a critical mechanism to optimizing the return for this substantial taxpayer investment..."

The U.S. Congress' passage of the Bayh-Dole Act in 1980 empowered universities to contribute to economic development. But for a university to do so there must be effective mechanisms to transfer innovation into the marketplace. That transfer is not an easy process for a number of reasons. These discoveries are often made during basic research projects and require additional work to determine their commercial potential. Agencies that fund basic research do not typically fund proof-of-concept studies and according to the State Science & Technology Institute's report, "A Resource Guide for Technology-based Economic Development," there is little other institutional funding support at this stage of innovation.

It also can be difficult to attract private investment at this early stage because of the very high risk. A 2001 National Institutes of Health report on ensuring that taxpayers' interests are protected, indicated that of all the inventions disclosed at the universities studied, less than half were licensed. Further, over 75 percent of licensed inventions were no more than proof of concept, indicating a high-risk venture for potential investors.

A third complicating factor is that the university researchers are not generally aware of market demand and may not recognize that the research they are conducting could have commercial applications. Technology transfer activities often include educating researchers about how to assist in commercialization of the results of their work and can include mentoring, assistance with business plans and a wide variety of other services.

Over 190 research universities in the U.S. have an office that oversees technology transfer and commercialization activities. Traditionally, they carry out their mandate through licensing of university discoveries. In recent years, more attention has been given to active commercialization through seeking entrepreneurs and partnerships with industry as partners and assisting university researchers to create new companies, or spin-offs.

Funding of university technology transfer offices comes from a variety of sources, including university funds, university-related foundations, state appropriations, and philanthropic organizations. OTTED is funded by a combination of UH resources and licensing revenues. However, “best practices” are emerging that include public-private partnerships to accelerate the transfer of university discoveries into the marketplace.

One example of a public-private partnership in technology transfer is the Maryland Industrial Partnerships (MIPS) program, which accelerates the commercialization of technology in Maryland by jointly funding collaborative research and development (R&D) projects between companies and University of Maryland faculty. Since 1987, MIPS has provided matching funds for more than 577 projects, worth a total value of \$152 million in R&D expenditures. Products that resulted from these awards have generated more than \$12.1 billion in sales, adding hundreds of high quality jobs to the region. In 2007, the MIPS program received a national Excellence in Technology-Based Economic Development Award from the State Science and Technology Institute

Another example of private funding for university technology transfer is the MIT Deshpande Center for Technological Innovation, which was founded in 2002 with a \$20 million gift from an alumnus and focuses on engaging university researchers with industry so that research that is conducted that meets industry needs. The center uses a variety of mechanisms to encourage interaction between companies and university researchers. Since 2002, The Deshpande Center has funded 64 projects with over \$7 million in grants. Eleven projects have spun out of the center into commercial ventures, collectively raising over \$88 million in outside financing. Twelve venture capital firms have invested in these ventures.

These are just two examples of how public-private partnerships accelerate university-based research and development, technology transfer and commercialization to benefit regional

economies. It is anticipated that the partnership proposed in this bill could develop a formula that works best for Hawaii.

The proposed budget for this initiative is \$100,000 for fiscal year 2009. Thank you for the opportunity to provide these comments.