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Statement of
MIKE MCCARTNEY
Director

Department of Business, Economic Development, and Tourism
before the
SENATE COMMITTEE ON WAYS AND MEANS

Thursday, February 21, 2019
10:00 AM
State Capitol, Conference Room 211

In consideration of
SB 990, SD1
RELATING TO THE HAWAII TECHNOLOGY DEVELOPMENT CORPORATION.

Chair Dela Cruz, Vice Chair Keith-Agaran and Members of the Committee.

The Department of Business, Economic Development and Tourism (DBEDT) supports SB 990, SD1, provided that it does not adversely impact priorities indicated in our Executive Budget.

DBEDT thanks the Senate Committees on Energy, Economic Development, and Tourism and Technology for proposing that a study be conducted to assess and identify the policy and procedural changes to successfully execute a technology-based economic development strategy.

Thank you for the opportunity to testify.

SB-990-SD-1

Submitted on: 2/20/2019 12:34:05 AM

Testimony for WAM on 2/21/2019 10:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	Testifying for O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i	Support	No

Comments:



**HAWAII
STRATEGIC
DEVELOPMENT
CORPORATION**

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Statement of
Karl Fooks
President

Hawaii Strategic Development Corporation
before the
SENATE COMMITTEE ON WAYS AND MEANS

Thursday, February 21, 2019
10:00 AM
State Capitol, Conference Room 211

In consideration of
SB990 SD1
RELATING TO THE HAWAII TECHNOLOGY DEVELOPMENT CORPORATION

Chair Dela Cruz, Vice Chair Keith-Agaran and members of the WAM Committee. The Hawaii Strategic Development Corporation (HSDC) supports SB 990 SD1 a bill that requires the Department of Business, Economic Development, and Tourism (DBEDT) to engage a consulting firm to conduct a study to evaluate policies and organizational changes needed within DBEDT that will enable the State to successfully execute a technology-based economic development strategy and appropriates funds for DBEDT to engage the consulting firm to conduct the study.

It is imperative that the State commit to a long-term, comprehensive, technology-based economic development (TBED) strategy to support sustainable economic growth. TBED is the only development effort that can create high wage opportunities for our citizens. Most of the jobs in our economy are relatively lower paying service sector jobs. With the emphasis on STEM education in our educational system, if we do not undertake a sustained effort to create jobs that use these skills, the trend of rising domestic outmigration will continue. A recommended TBED strategy is presented below.

Thank you for the opportunity to testify.

What is Technology-based Economic Development? *

Over the last several years, the U.S. economy has been undergoing a dramatic transformation as the nation moves to an economy driven by technology and innovation—through the creation of new industries and the application of technology in traditional industries. Competing in a global economy, regions must have an economic base composed of firms that constantly innovate and maximize the use of technology in the workplace. Technology-based economic development, or TBED, is the approach used to help create a climate where this economic base can thrive.

What is Required for a Technology-based Economy?

Based on the experience of tech-based economies like Silicon Valley, Research Triangle, and Route 128, the following elements are required for a tech-based economy:

- A research base that generates new knowledge;
- Mechanisms for transferring knowledge to the marketplace;
- An entrepreneurial culture;
- Sources of risk capital; and,
- A technically skilled workforce.

What Approaches Can Be Employed to Develop These Elements?

Research Capacity. Initiatives that strengthen the capacity to conduct research in universities, federal labs, or the private sector include: centers of excellence, university-industry partnerships, and initiatives to expand research facilities, recruit eminent scholars, or increase research funding through R&D tax credits.

Commercializing Research. Initiatives that promote the conversion of research into technologies and products with high commercial potential include proof-of-concept funds and centers, entrepreneurs-in-residence to assess commercial potential and develop commercialization strategies, and pilot-scale production and scalability testing.

Promoting Entrepreneurship. Enriching the skills and ability of entrepreneurs, increasing capacity of entrepreneurs to successfully grow and start companies, and improving the environment for entrepreneurial development can be delivered through many forms, including: venture development organizations, mentorship programs, and accelerators and incubators.

Increasing Access to Capital. The availability of capital to support startup and emerging companies is critical. Regions can address needs for capital through angel investor tax credits, investing in technology companies, using public funds to leverage private investment funds, and help companies access capital sources.

Technically Skilled Workforce. Approaches that regions can take to ensure the availability of a technically skilled workforce include encouraging more students to enter STEM fields, STEM internship programs and providing technical training for workers in existing companies.

* From the State Science & Technology Institute

State of Hawaii Efforts to Promote TBED

Area of TBED Focus	Responsible State Entity
Research Capacity	University of Hawaii
Commercializing Research	<ul style="list-style-type: none"> • University of Hawaii for university research (grants) • Hawaii Technology Development Corporation for private research (grants) • Hawaii Strategic Development Corporation (investments)
Promoting Entrepreneurship	Hawaii Technology Development Corporation
Increasing Access to Capital	Hawaii Strategic Development Corporation
Technically Skilled Workforce	University of Hawaii

The state's economic development strategy has emphasized organizational self-sufficiency. As a result, entities have pursued programs that focus on generating revenue to support their operations, like incubator rent revenue and licensing income from research, and not collaborative ecosystem and capacity building efforts.

In addition, too much policy emphasis has been placed on supporting research related activities while ignoring the need to promote entrepreneurship, access to capital and a tech workforce, the drivers of real economic activity and job creation. A successful TBED policy must be comprehensive and support all the elements required for a thriving tech-based economy.

Rather than simply create a new state entity that does not have a well-defined policy mandate it may be prudent to step back and assess:

1. Where does Hawaii stand in comparison to other states that are leading in this field?
2. What opportunities and challenges exist in Hawaii for growth in technology-based industries?
3. How does Hawaii become a leading center of technology-based industries?
4. What policy and organizational recommendations can we provide the Administration and Legislature to improve the capacity of the state to successfully execute a TBED Strategy?

The best way to develop a consensus on the appropriate path forward is to engage a consulting firm with domain expertise in TBED policy and programs. The consulting firm will work with the stakeholders in the state representing the areas of research capacity, research commercialization, entrepreneurship, access to capital and tech workforce development to produce a report that:

1. Sets out the objectives and benchmarks for the next 3-5-10 years that would put Hawaii on a trajectory to become a leading center of technology-based industries;
2. Identify specific programs and policies to implement that will drive economic growth in technology-based industries to achieve those objectives and benchmarks; and
3. Recommend organizational changes in the state to facilitate the successful implementation of those programs and policies.



NATURAL ENERGY LABORATORY OF HAWAII AUTHORITY

An Authority of the State of Hawaii attached to the Department of Business, Economic Development & Tourism

Written Only

Statement of
Gregory P. Barbour
Executive Director
Natural Energy Laboratory of Hawaii Authority
before the

SENATE COMMITTEE ON WAYS AND MEANS

Thursday, February 21, 2019
10:00 am
State Capitol, Conference Room 211

in consideration of
S.B. 990 S.D.1
RELATING TO THE HAWAII TECHNOLOGY DEVELOPMENT CORPORATION.

The Natural Energy Laboratory of Hawaii Authority (NELHA) supports S.B. 990 S.D. 1 which appropriates funds to the Department of Business, Economic Development, and Tourism (DBEDT) to conduct a study to evaluate policies and organizational changes that will facilitate a technology-based economic development strategy as long as it does not replace or impact the Administration's priorities.

This issue has been the topic of significant dialogue over the years during discussions to combine DBEDT's three attached agencies related to technology development: Hawaii Technology Development Corporation, Hawaii Strategic Development Corporation and the Hawaii Natural Energy Laboratory of Hawaii Authority. The results of those discussions led to the current situation in which each agency is provides a representative to the Board of

Directors of the other agencies. This has worked well and has led to increased coordination and less duplication of services.

For example, HTDC has assisted NELHA with providing services for the operation of its new incubator; HTDC's HCATT is working with NELHA on the establishment of a microgrid at NELHA; NELHA, HSDC, and UH recently signed a memorandum of understanding to establish an aquaculture accelerator at NELHA; and, NELHA and PISCES recently signed a memorandum of understanding to establish an international robotics competition for missions to the moon and Mars to be held at NELHA early next year.

It is always important to re-evaluate our missions and how we can better work together towards a common goal of technology-based economic development. This may be an appropriate juncture for this review especially in light of the recent establishment of PISCES and renewed efforts to grow our aerospace sector.

Thank you for the opportunity to offer these comments.