



HAWAII
STRATEGIC
DEVELOPMENT
CORPORATION

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Statement of
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before the

**SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT & TOURISM and
SENATE COMMITTEE ON TECHNOLOGY**

Friday, February 1, 2019
2:45 PM

State Capitol, Conference Room 414

In consideration of
SB990

RELATING TO THE HAWAII TECHNOLOGY DEVELOPMENT CORPORATION

Chair Wakai, Chair Keohokalole, Vice Chair Taniguchi, Vice Chair English and members of the EET and TEC Committees. The Hawaii Strategic Development Corporation (HSDC) provides comments on SB 990 a bill that transfers all powers, duties, and obligations held by the Hawaii Strategic Development Corporation and the broadband division of the Department of Business, Economic Development, and Tourism to the Hawaii Technology Development Corporation.

It is the purview of the Legislature and the Administration to determine policy and the appropriate structure of government to implement that policy. HSDC's role is to execute on the mission established in its authorizing statute, §211F-2 HRS: to **provide incentives** and **reduce the risks** of private investment in order to encourage economic development and stimulate private capital investments. HSDC's mission is to co-invest with the private sector to **strategically** develop new growth sectors of the economy.

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.

HSDC ACCOMPLISHMENTS 2012-2018

Accelerators Establish Startup Ecosystem in Key Industry Sectors: Deploying the \$2 million Launch Akamai Venture Accelerator funding, HSDC helped establish accelerator programs in four key industry sectors: software, film and media, clean tech, and food innovation. UHERO's 2016 report, "Evolution of the HI Growth Initiative", concluded that HSDC leveraged state resources 11x and that HSDC's investment resulted in "the rapid growth in Hawaii based accelerators [that] may finally provide the necessary impetus to draw attention to entrepreneurship in the state, leading to further growth in venture capital, one of the necessary ingredients in a vibrant innovation ecosystem". HSDC supported accelerators achieved national recognition and are catalysts for their industry sectors through their mentor and investor networks, and the frequent community events they host to facilitate collaboration.

Continuum of Financing Creates Access to Startup Capital: HSDC's venture investment program helped to capitalize 6 funds spanning the pre-seed, seed and Series A stage of startup development. In their report, "Hawaii Venture Capital 2010 to 2018", Startup Capital Ventures documented the growth in venture capital in Hawaii. The report concluded that that HSDC's investment program significantly increased deal flow from 2012 onward through its establishment of various accelerator programs and investment funds. HSDC's \$13 million investment over this period attracted nearly \$235 million of investment. This activity generated \$24 million in state tax revenue and annual venture capital investment in the State is now averaging \$20 million a year. The US Treasury reported that Hawaii achieved 33x private capital leverage on its State Small Business Credit Initiative allocation, the highest in the nation.

Aquaculture Initiative to Jumpstart New Industry Sector: HSDC organized the first Statewide Aquaculture Summit, bringing together companies, researchers, investors, entrepreneurs and government agencies involved in Hawaii's aquaculture industry. The summit allowed the industry to articulate areas of strength, areas needing support, and recommendations on how to further develop the industry. This effort led to the successful funding for an aquaculture accelerator to be located at NELHA. HSDC was awarded a \$275,000 grant under the EDA's competitive Seed Fund Grant program. HSDC will partner with the University of Hawaii and NELHA and use this grant to build deal pipeline for the NELHA accelerator and support the capital raising activities of the investment fund affiliated with that accelerator.

Ecosystem Success Stories: Volta Charging, a Blue Startups graduate, has raised \$60 million to build its national network of EV charging stations. GVS released the film, "Running for Grace", in an 11-city national theatrical release and now available on the leading streaming services. The movie was completely filmed and produced on the Big Island utilizing GVS' Honua Studio. KinetiCor, commercialized UH and Queens technology to develop an image correction system for MRI machines. Siemens has incorporated the technology in its MRI machines. KinetiCor raised over \$12 million to grow and scale the business. IBIS Networks, a graduate of the Elemental Excelsior, has raised over \$4 million, and is now deploying its energy management system across California's community college system. OHi Superfood Bars, a graduate of the Maui Food Innovation Center, raised growth capital and is now selling its products in natural food retailers on the Mainland.