

**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

DEPT. COMM. NO. 396

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DIRECTOR

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February 8, 2021

The Honorable Ronald D. Kouchi,
President and Members
of the Senate
Thirty-First State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki,
Speaker and Members of the
House of Representatives
Thirty-First State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Department of Business, Economic Development, and Tourism's Annual Report, as required by Section 201-10, Hawaii Revised Statutes, and Act 100, SLH 1999. In accordance with Section 93-16, Hawaii Revised Statutes, I am also informing you that the report may be viewed electronically at: <http://dbedt.hawaii.gov/overview/annual-reports-reports-to-the-legislature/>.

With aloha,

Mike McCartney

Enclosure

c: Legislative Reference Bureau

Dawn of a New Economy **HAWAII 2.0**

2020 Department of Business, Economic Development, & Tourism Annual Report



DBEDT

A report to the 31st Legislature of the State of Hawaii as required by Section 201-10 of the Hawaii Revised Statutes and Act 100, Session Laws of Hawaii 1999.

DIRECTOR'S MESSAGE



Mike McCartney
DBEDT Director

As we look back at DBEDT's 2020 accomplishments and forward to the economic recovery for the State of Hawaii, we keep in mind DBEDT's mission is to support the development of a Hawaii economy that embraces innovation, an economy that is globally competitive, dynamic and productive; and an economy that provides opportunities for all Hawaii's citizens.

The COVID-19 global pandemic is one of the most significant historically disruptive events impacting our civic, social, political and economic structures in our lifetime.

Before COVID-19 struck in early 2020, Hawaii's economy and business activity were the envy of the nation. The state's unemployment rate was 2.7 percent in December 2019, one of the lowest in the country. Visitor arrivals finished the year strong, with more than 940,000 visitors arriving in Hawaii in December. Then COVID-19 reached Hawaii's shores, sending our economy into a tailspin. By April, unemployment soared to more than 23 percent and visitor arrivals plunged to fewer than 5,000 for the month. From April to December, Hawaii lost 110,600 jobs, 58 percent of which were in the leisure and hospitality industries. The resulting loss of state revenue and decline in business forced a rapid adjustment to businesses in the public and private sectors.

"This new cycle represents the birth of a digital-data economy in which teleworking, artificial intelligence, data-based decision-making and clean energy will be integrated into the workflow by businesses and government."

Based on the data available at this time, the COVID-19 era is expected to stretch into the next few years, impacting our global economy. This era will mark the closing of an old cycle and a transition to a paradigm that will allow us to become more resilient. This new cycle represents the birth of a digital-data economy in which teleworking, artificial intelligence, data-based decision-making and clean energy will be integrated into the workflow by businesses and government.

As we move ahead, how we act and treat each other will determine how sustainable the outcome and results will be. Whether it is our natural environment, our communities, or each other, our collective ambition to find a balance for economic and civic prosperity will overcome the many challenges that are facing us during the COVID-19 pandemic. We are on a journey, not a sprint. The lessons we learned from the past about the courageous human spirit, innovation and resilience will lead us towards the future... and a new economy—Hawaii 2.0.

With my aloha on behalf of DBEDT and our employees, HRS 5-7.5 (a)/(b) & HRS 89-1.

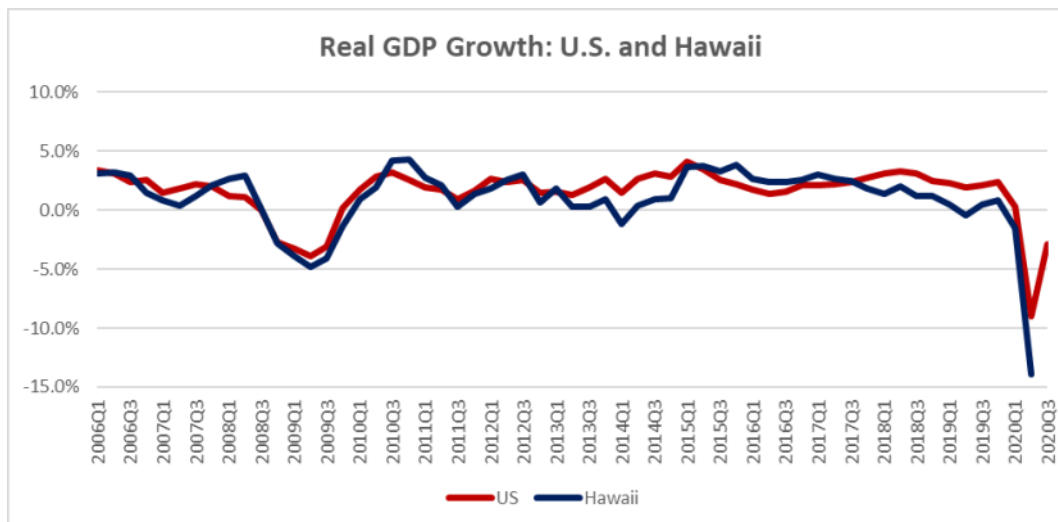
A handwritten signature in blue ink, appearing to read 'Mike'.

Mike McCartney
DBEDT Director

ECONOMIC IMPACTS OF COVID-19 ON HAWAII'S ECONOMY

In 2020, Hawaii's economy has been faced with one of the greatest economic challenges since statehood. The severity of the impact can be seen in Hawaii's second quarter decline in real GDP of 13.9 percent over the same quarter of the previous year. To put this in perspective, the worst quarter of the Great Recession was the second quarter of 2009, which had a real GDP decline of 4.9 percent over the same quarter of the previous year.

A good barometer of COVID-19's impact on individual industry sectors was the second quarter state GDP data released by the Bureau of Economic Analysis. As the pandemic took hold, tourism-related industries were hit the hardest in the second quarter with real GDP declines in Arts, Entertainment and Recreation (-61.8%), Accommodation and Food Service (-61.1%), Transportation and Warehouse (-30.6%), Educational Services (-18.4%), and Wholesale Trade (-17.9%). Buoyed by resident spending, the retail industry fared better than other tourism-related industries, declining 9.0 percent in the second quarter over the same quarter of the previous year.



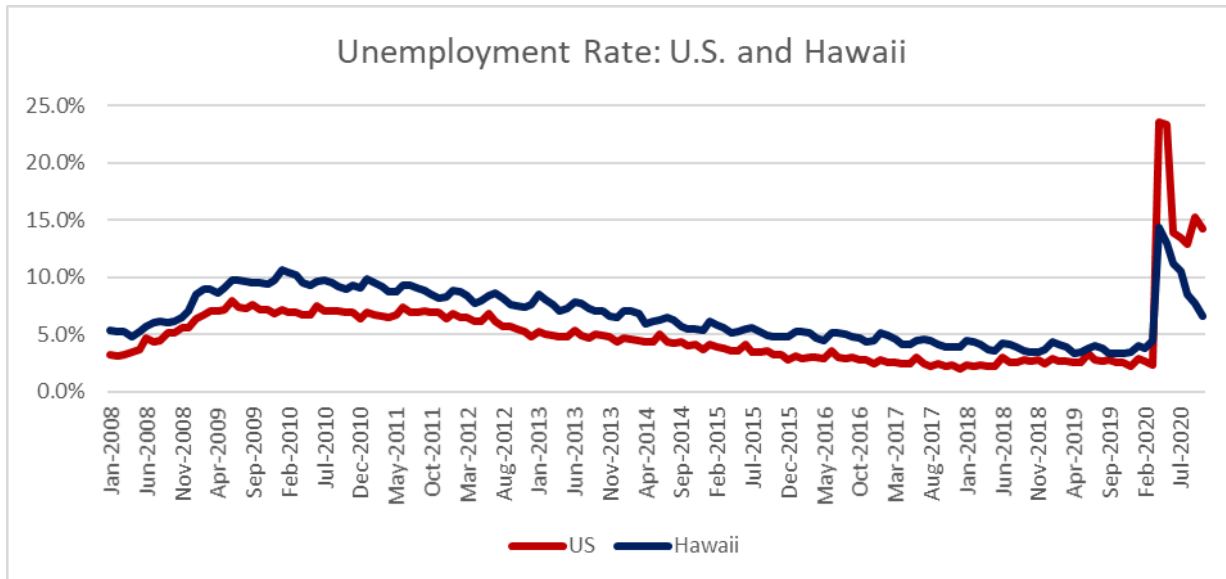
Real GDP for knowledge-based industries showed a measure of resilience, declining less than overall state GDP in the second quarter compared with the same quarter of the previous year. These industries included Finance and Insurance (-1.3%), Information (-2.8%), Management of Companies and Enterprises (-4.3%), and Professional, Scientific, and Technical Services (-8.7%).

The construction industry had a GDP decline of 3.5% in the second quarter over the same quarter of the previous year. In the third quarter, the value of building permits increased 5.6 percent over the same quarter of the previous year. The increase in the value of private building permits was fueled by the commercial and industrial category (44.4%) and residential (11.3%), while the additions and alterations category was down 5.8 percent. Government contracts awarded in the third quarter was strong, up 61 percent over the same quarter of the previous year. However, the October data shows a decline in private building permits, possibly signaling a softening as we head into 2021.

In spite of the pandemic, there were two non-agriculture industries that showed GDP growth during the second quarter; the Federal Civilian Government (1.7%) and Utilities (2.6%).

ECONOMIC IMPACTS OF COVID-19

The labor market declined sharply in the third quarter of 2020, with 110,000 fewer non-agriculture payroll jobs compared with the same quarter of 2019. The decrease in jobs was the highest for Accommodation (-33,300 or 77.8%), Food and Drinking Places (-30,000 or 42.7%), Transportation, Warehousing & Utilities (-9,800 or 28.7%), Professional & Business Services (-7,500 or 10.1%), and Arts, Entertainment, and Recreation (-5,900 or 43.1%). As of October 2020, Hawaii's unemployment rate remains high at 14.3 percent (seasonally adjusted), which is approximately double the national rate of 6.9 percent.



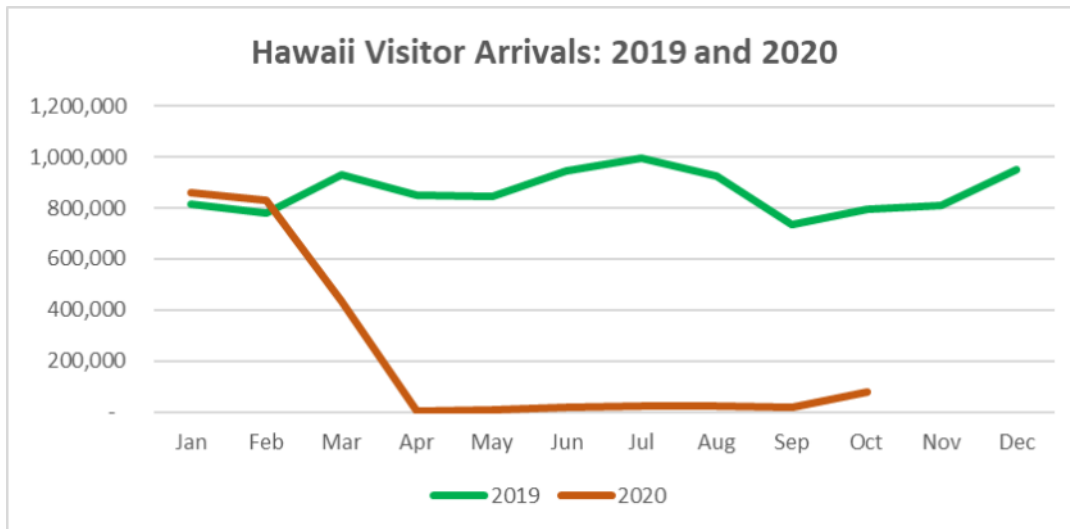
Despite the job losses, nominal personal income increased by 15.9 percent in the second quarter of 2020. Under normal economic conditions, personal income moves somewhat in tandem with GDP. However, the anomaly of personal income increasing and GDP decreasing in the same quarter was due to an increase in government transfers including unemployment insurance payments and CARES Act funds, offsetting decreases in wages and salaries. Another contributing factor appears to be that consumers chose to save their cash, rather than to spend it on goods and services. While data is not available for Hawaii, the personal savings rate for the nation more than doubled in the third quarter over the same quarter of the previous year, from 7.2 percent to 16.1 percent.

With the general decline in the economy, came a decline in tax revenues. In the third quarter, total tax collections applied to the state general fund were down 3.2 percent over the same quarter of the previous year and 12.1 percent for the first three quarters of 2020. A majority of the third quarter decline was in general excise tax revenues, which declined 24.6 percent over the previous year. Due to the increase in personal income, individual income tax revenues increased 38.9 percent, and this cushioned the drop in over general fund revenues. The tourism accommodation tax declined 92.1 percent due to the drop in tourism.

The tourism sector was by far the area most impacted by the pandemic; Hawaii's visitor numbers were a mere 2.4 percent of the previous year's level in the third quarter. However, tourism gained some traction as the state's pre-travel testing program began October 15 and Japanese tourists were included from November 6. The daily passenger count for the first seven days of December was 22.2 percent of the same period of the previous year.

ECONOMIC IMPACTS OF COVID-19

The annual impact of the pandemic on Hawaii's economy was reflected in DBEDT's fourth quarter forecast was released December 2. For 2020, the forecast predicts Hawaii's real GDP growth will decline by 11.2 percent, while real personal income will increase by 5.6 percent. For 2021, this is forecast to reverse with real GDP increasing by 2.1 percent, and real personal income decreasing by 8.9 percent as the flow of federal funds decreases.



Hawaii reopened to visitors on October 15, 2020. This picture of Waikiki Beach was taken in the first week of November 2020, devoid of the usual crowds.



CARES FUNDING

In December 2019, the Centers for Disease Control and Prevention became aware of a respiratory disease outbreak reported in Wuhan City, Hubei Province, China, known as SARS-COV-2 (novel coronavirus) and subsequently called COVID-19. [On March 11, 2020, WHO declared a pandemic of international concern.](#)

In order to prevent the disease from spreading further into Hawaii, State and County officials implemented several emergency measures including stay-at-home orders, mandated social distancing, a mandatory 14-day quarantine for travelers, and the closure of all nonessential businesses. As a result of the stay-at-home orders and shutting down of nonessential businesses in Hawaii, unemployment soared as hotels, retail stores, and restaurants closed their doors on March 25, 2020.

The Coronavirus Aid, Relief, and Economic Security Act (CARES Act), [Public Law 116-136](#), was enacted on March 27, 2020. Division A, Title V of the Federal CARES Act provided \$1,250,000,000 to Hawaii for expenditures that are necessary and incurred due to the public health emergency with respect to COVID-19. All expenditures eligible for funding would have to be incurred between March 1, 2020, and December 30, 2020.

In May 2020, the Legislature passed [SB75, SD2, HD1](#), which appropriated funds received by the State from the CARES Act. However, at that time \$635,986,000 was deposited into the emergency and budget reserve fund until the Legislature decided what the proper use of those funds should be.

Subsequently, the Legislature passed [SB126, SD1, HD1, CD1](#), on May 26, 2020, to appropriate the remaining balance of the funds. On July 30, 2020, the Governor issued Governor's Message 1112 which line item vetoes some of the appropriation amounts for the CARES funds reducing the appropriated amounts. The Governor signed SB126, SD1, HD1, CD1 into law on July 31, 2020, to become [Act 009, SLH 2020, Governor's Message 1113](#).

Programs under the Department of Business, Economic Development, and Tourism were appropriated funding to carry out programs to assist the community in economic recovery efforts.

Additionally, more funds were released as programs were developed to assist those businesses and industries that continued to struggle through the pandemic.

	Program	Expend- ed By	Original Appropriation	Amended Appropriation	Additional Appropriation
1	Retraining and Work- force Development Programs	BDSD	\$36,000,000	\$10,000,000	
2	Fishing Industry Support	BDSD	\$3,000,000	\$3,000,000	
3	Business Pivot	BDSD			\$25,000,000
4	Hawaii Restaurant Card	HGIA			\$75,000,000
5	Innovation Grants to Create a Supply Chain of Cleaning Supplies and PPE	HTDC	\$15,000,000	\$10,000,000	
6	Rent Relief	HHFDC	\$100,000,000	\$100,000,000	
7	Telehealth for Hope	HBI			\$131,150
		Total	\$154,000,000	\$123,000,000	\$100,131,150

CARES FUNDING

WORKFORCE DEVELOPMENT INITIATIVE

DBEDT contracted with two non-profits, Kupu and the Economic Development Alliance of Hawaii (EDAH), to train and pair individuals in Hawaii's workforce with companies to provide workers with an opportunity to transition their careers and provide companies with additional resources for business recovery.

Ten million dollars was allocated from the CARES funding for this project which employed workers through December 15, 2020. The target population served were displaced workers, and in some instances, college and high school graduates. Employing companies included those in clean energy, local food production, manufacturing, natural resource management, waste reduction services, smart sustainable communities, technology, STEM fields, healthcare and agriculture.

The objectives of the program were met as **346 individuals were placed in conservation, land management and agricultural jobs, assisting 151 organizations by Kupu.**

EDAH placed **433 individuals in emerging industries (non-tourism) related jobs, assisting 134 companies.**

HAWAII FISHING INDUSTRY SUPPORT



Fresh catch picture taken from Hawaiian Fresh Seafood YouTube video. <https://www.youtube.com/channel/UCe7Qcl6ZQJAeLArZRYZdKgQ>

DBEDT was appropriated \$3 million for this project. The COVID-19 pandemic had a substantial impact on the sale of fish caught by longline, non-longline and charter fishing vessels owned and employed by residents of Hawaii. The loss of tourism and decline in fresh fish sales to hotels and restaurants left the fishing industry economically challenged, thereby disincentivizing fishing vessels to make fishing trips.

In response, the State entered contracts with the Hawaii Longline Association (HLA) and the Pacific States Marine Fisheries Commission (PSMFC) to encourage a continued fish supply to fill food shortages and support local food security caused by the pandemic. The cost recovery for both programs will incentivize the fishing industry to maintain a fish supply and avert vessels from going out of business as a result of the pandemic.

The HLA contract is in the amount of \$2 million, to establish the Fishing Vessel Support Program (FVSP), for the purpose of providing economic support to Hawaii longline fishing vessels for their economic injury due to the pandemic. Qualified vessels may receive reimbursement up to \$7,500 in eligible expenditures. Up to 140 fishing vessels are eligible for this program.

The PSMFC contract addresses the substantial impact on the sale of fish caught by Commercial Non-longline Fishery of which there are 543 Commercial Marine License Holders in Hawaii and 189 fishing charter businesses in Hawaii. The State allocated \$780,000 to PSMFC for the purpose of providing economic support to Hawaii's Commercial Non-longline Fishery and Charter/For-Hire Fishing for their economic injury and for their trip expenses. Qualified applicants may receive reimbursement of up to \$7,500 in eligible expenditures.

CARES FUNDING



Locally made cloth masks by Kaikini.

INNOVATION GRANTS TO CREATE A SUPPLY CHAIN OF CLEANING SUPPLIES AND PPE

HTDC was appropriated \$10 million for this project. The program provided grants to small businesses in Hawaii to help establish a local supply chain of cleaning supplies and personal protective equipment (PPE) in response to the COVID-19 public health emergency.

From the onset of the pandemic, front line workers and essential workers throughout the world experienced a shortage of available cleaning supplies and PPE. In Hawaii, with very limited local capacity for manufacturing PPE, our community was left vulnerable to compete in a race to import supplies.

At the same time, the local community stepped in to help fill the demand by repurposing their manufacturing capacities. With cloth sewn masks, 3-D printed face shields, hand sanitizers made at distilleries, etc. local businesses showed how a local supply chain can rapidly adapt and prioritize the needs of the community in ways that imported products cannot. Furthermore, the [World Health Organization calls on industry and governments to increase manufacturing by 40 percent to meet rising global demand of PPE](#).

[World Health Organization calls on industry and governments to increase manufacturing by 40 percent to meet rising global demand of PPE](#).

The goals of the Program were to:

- Increase the local capacity for producing cleaning supplies and PPE for the safety of the public in case the import supply chain is disrupted due to global escalation of COVID-19 cases;
- Provide economic support and new opportunity to small businesses that demonstrate potential to provide employment opportunities for displaced workers on all islands caused by the COVID-19-related business closures;
- Advance innovative solutions related to creating a supply chain of PPE that could benefit the State of Hawaii; and
- Maximize the total benefit for Hawaii by coordinating with other programs/funds and prioritizing projects that commit matching funds and/or resources to help our community to endure and recover from the impacts of COVID-19.



Hand sanitizers produced by Hanalei.

There was a total of 79 completed applications received and 22 applications deemed to be incomplete or not submitted by the deadline. A total of 36 companies were awarded \$9.9 million. In addition, two companies declined the award because they could not meet the committed deadlines, as all expenses must be incurred by December 30, 2020. Awards ranged between \$15,000 - \$500,000 per company. The balance of the funds was used for administrative costs, PR/marketing and for auditor services.

RENT RELIEF HOUSING PROGRAM

The HHFDC was appropriated \$100 million in Act 9, SLH 2020, as modified by Governor's Executive Order No. 20-08 (August 28, 2020) for the project. The purpose of the State of Hawaii's Rent Relief and Housing Assistance Program was to assist eligible renters and homeowners who experienced or faced a reduction in income because of the disruption caused by the COVID-19 pandemic and were at risk of eviction or foreclosure.

CARES FUNDING

Administered by nonprofit intermediaries Catholic Charities Hawaii and Aloha United Way, the Program provided the following assistance for eligible households whose income did not exceed 100 percent of the HUD area median income adjusted by household size.

- Monthly rent or mortgage payments of up to \$2,000 per household residing in the City and County of Honolulu, or \$1,500 per household residing in the Counties of Hawaii, Maui or Kauai for payments due from March 1 to December 28, 2020.
- Monthly payments for homeowner association dues of up to \$500 per household for payments due from March 1 to December 28, 2020.
- Applicable financial counseling, assistance with loan modifications, or mediation.

A website was created to provide the public with information on the Program.



As of December 31, 2020, approximately \$58.04 million (of the \$59.8 million approved) was disbursed to assist 13,663 households statewide. For approved applicants, payments may continue to be made through March 31, 2021.

13,663	18,306 <i>(Total)</i>	4,807 <i>(Invalid)</i>	\$1.79M	\$58.04M	\$59.8M <small>As of 12/31/20</small>
HOUSEHOLDS ASSISTED	APPLICATIONS	PAYMENTS			
		Payments Pending	Payments Made	Approved for Payment	

As of December 30, 2020, rental payments comprised approximately 88% of the overall assistance. Mortgage payments comprised nearly 10% of the overall assistance, with payments for homeowner association dues comprising an additional 2%.

Approximately 72% of households assisted resided in the City and County of Honolulu, followed by 17% in Maui County, 7% in Kauai County, and 4% in Hawaii County. It is important to note that both the City and County of Hawaii administered similar housing assistance program utilizing federal CARES funds during the same time period as the State's program.

The balance of any funds will go to the State's Unemployment Insurance benefits program.

ADDITIONAL CARES FUNDING

“PIVOT PROGRAM” FOR COMPANIES TO IMPLEMENT CHANGES AS A RESULT OF COVID-19

Due to COVID-19, businesses in Hawaii needed to redesign and remodel the set-up of their physical operation, as well as adjust their operational practice, products and services. The “Pivot Program,” under contract with the Chamber of Commerce of Hawaii, serviced those organizations via a grant and assistance program to help companies “pivot” into the new way of providing products and services in the COVID economic environment. The amount allocated to this project was \$25 million.

The program provided technical assistance and a marketplace to find products or services to help businesses pivot. The core of the program is a grant program that provides Hawaii companies with financial assistance to retool their operations and products and address necessary changes. Eligible companies were Hawaii storefront companies with less than 100 employees, and funding was up to \$10,000.

HAWAII RESTAURANT CARD

HGIA served as project lead for the Hawaii Restaurant Card, a public-private economic stimulus program to inject millions of Federal CARES Act dollars into Hawaii’s economy to immediately drive business to the struggling restaurant industry and stimulate economic activity for the State’s entire food supply chain, while providing direct assistance to unemployed residents who have been negatively impacted by the COVID-19 pandemic.

In order to expeditiously galvanize a large number of residents statewide to frequent local restaurants and eateries, individuals who were receiving Unemployment Insurance (UI) and Pandemic Unemployment Assistance (PUA) benefits, who met CARES Act Funds eligibility requirements, were selected to receive a restaurant card preloaded with \$500 per recipient. These prepaid debit cards could be used to purchase meals (excluding non-alcoholic beverages) from restaurants, fast food establishments, bakeries and caterers throughout the Hawaiian Islands.

This initiative, with administrative overhead at less than 1%, enabled over 99% of CARES funds to reach the intended beneficiaries, as follows:

- 4,232 restaurants, bakeries and caterers;
- Food supply chain businesses (e.g., farmers, fishermen, ranchers, distributors); and
- 142,504 displaced workers statewide.



Monica Toguchi Ryan of Highway Inn

Preliminary Hawaii Restaurant Card Economic Impacts as of December 15, 2020

# Accounts Enrolled	146,576	Multiplier Output	\$ 151,233,083
Cards Activated	141,378 or 96.45%	State Tax Revenue Generated	\$ 8,858,929
Dollars Loaded	\$ 74,288,000	Jobs Created/Retained	1,162
Dollars Spent	\$69,372,974 or 93.38%		

ADDITIONAL CARES FUNDING

While every County benefitted, the spend was in line with the County's displaced workforce (both UI and PUA), as follows:

1. City and County of Honolulu – 59%
2. County of Maui - 20%
3. County of Hawaii – 13%
4. County of Kauai – 8%

Due to the success of the HRC Program, private industry banded together to purchase Hawaii Restaurant Card – Business Holiday Cards to continue to help and invest private capital into the struggling restaurant industry and food supply chain through the first quarter 2021, beyond the December 15, 2020, deadline for the original Restaurant Card program. This program was a public private partnership between DBEDT, Chamber of Commerce of Hawaii, the Hawaii Restaurant Association and the Hawaii Agricultural Foundation.



Alyssa Lee, Da Farm



Public Private Partnership in the Hawaii Business Holiday Restaurant Card Program.

TELEHEALTH AND BROADBAND ACCESS FOR HOMELESS COMMUNITY



Hope Services renders aid to clients using wireless devices.

HOPE Services Hawaii based in Hilo, Hawaii, was awarded \$131,150 in CARES funding for telehealth and broadband access to service the homeless community on Hawaii Island. The project involved purchasing of iPads and wireless connections for field workers for preventative efforts of the spread of COVID-19 among the homeless population. The project provided immediate access to primary and specialty care via telehealth and mobile wi-fi hotspots for the homeless population living on the streets and in shelters.

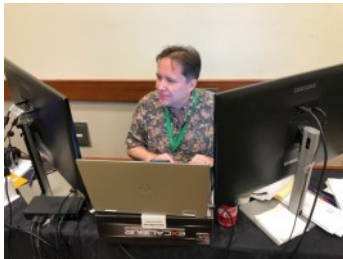


BUSINESS NOT AS USUAL

Due to the pandemic, DBEDT had to act quickly to assist businesses that were ordered to shut-down in late March 2020. During this time, the department's divisions collaborated with each other to aid the visitor industry, small businesses, other State departments and residents. The following programs and assistance were provided in addition to the CARES funding programs.

ASSISTANCE TO HI-EMA AND OTHER STATE DEPARTMENTS

1. **Prevention of the Spread of COVID-19.** HTA was asked to become involved in numerous COVID-19 missions through the direction of Incident Commander Kenneth Hara and the Hawaii Emergency Management Agency (HI-EMA). The primary goal of these missions was to assist in the prevention of COVID-19 spread throughout Hawaii. They included the Visitor Aloha Society of Hawaii Flight Assistance Program, support and funding for screening at Hawaii's airports, passenger form scanning, traveler data processing, dissemination of traveler data to HI-EMA, counties, Department of Health, and other state agencies, scanning, organizing, and storing Order for Self-Quarantine for the Attorney General, and provided quarantine enforcement support to state and county law enforcement and prosecutors. HTA continues communications outreach efforts, updating the visitor industry and HTA's marketing team around the world on COVID-related orders such as the travel quarantine and pre-travel testing program.
2. **Safe Travels App.** The Hawaii Broadband Initiative (HBI) created the team that developed the first generation of the Safe Travels app. HTA, OP's GIS program and the Office of Enterprise Technology Services (ETS) worked together on the development of a digital data collection tool for interisland travelers. The app provided an automated way for visitors to provide their personal information and daily quarantine check-in data to appropriate county and state enforcement agencies. Phase 1 of the application was successfully launched and used by both visitors and returning residents. Phase 2 of the project was taken over and developed by Google.



Call Center at the Convention Center.

3. **Call Centers at the Convention Center.** Due to the social distancing orders, people were not allowed to gather in groups of more than five. Thus, the Convention Center conferences were cancelled or postponed for the year, leaving the Center's rooms and space vacant. Since space was in need, the convention center was used to set up call centers for the Department of Labor and Industrial Relations (DLIR) – unemployment insurance benefit call center; the Department of Health's Contact Tracing Program; and Quarantined Travelers Tracing Program. HTA's marketing contractor for the U.S., the Hawaii Visitors and Convention Bureau, was also heavily involved in the COVID-19 call center efforts, both for checking on quarantined travelers as well as answering questions from future travelers.
4. **Energy Assurance: State Emergency Response Team (SERT).** The SERT for the State Emergency Support Function 12: Energy (SESF-12) is handled by the Hawaii State Energy Office. The SESF-12 coordinates and responds to "all hazards," including hurricanes and pandemics.

Stakeholder Collaboration. HSEO collaborated with partners to ensure effective and timely information exchange supporting energy companies and providing guidance on identification and prioritization of mission- and business-critical energy workers.

Energy Workers Best Practice. HSEO developed a national best practice for keeping energy workers safe during the early days of COVID. In its SESF-12 capacity, HSEO proactively worked

BUSINESS NOT AS USUAL



State and County officials being briefed at Civil Defense's Diamond Head Birkhimer station.

with stakeholders to address issues supporting critical infrastructure workers in the energy industry. The Energy Office worked with emergency management agencies and the energy industry to address priority testing of these critical energy infrastructure workers, which was highlighted as a best practice by the National Association of State Energy Officials (NASEO) to the US Department of Energy (USDOE) Office of Cybersecurity, Energy Security, and Emergency

Response (CESER) and in their nationwide coordination efforts for COVID-19 response.

Energy Ecosystem Analysis and Assessment. HSEO initiated analysis and assessment of Hawaii's energy system capacity to adjust to the near-total collapse of tourism travel and its effects on energy demand and supply such as jet fuel, diesel, and low-sulfur fuel oil (LSFO) throughout the State. COVID-19 created a scenario that was largely not considered in prior emergency planning: the demand destruction of jet fuel due to the absence of millions of tourists flying into and out of Hawaii. As a result, Hawaii's sole refinery operator renegotiated numerous contracts, including its LSFO contract with the State's largest electric utility, which resulted in an interim increase of about \$4.50 per month on Oahu electricity customers' bills. HSEO monitored the situation and provided input in the resulting Public Utilities Commission dockets.

5. **State Disaster Recovery Planning and Coordination.** Since April 2020, the State's Sustainability Coordinator was deployed to provide statewide disaster planning assistance to the HI-EMA to reopen the State's economy and to create and activate the State's Disaster Recovery Framework and the State's Recovery Support Functions. The State's Sustainability Coordinator and the Office of Planning Director provided emergency planning assistance and co-founded the creation of the State Unified Recovery and Resilience Facilitation Team (SURRF) in May 2020.

As the State moved closer to reopening, the State Sustainability Coordinator assisted in the planning, development, and launch of the State's Beyond Recovery: Reopening Hawaii and Safe Travels Hawaii strategies.

6. **State of Hawaii Vaccination Plan.** As part of the planning and implementation of the State of Hawaii Vaccination Plan, HSEO participates in the Communications, and the Allocation/Prioritization Working Groups to ensure effective and timely information exchange with energy companies, and providing guidance on identification and prioritization of mission- and business-critical energy workers for the COVID-19 vaccine.



PROVIDE BUSINESS ASSISTANCE TO CAPITAL

1. **Disaster Designation.** DBEDT's BDSD division conducted a Small Business Administration (SBA) survey in order to get a "disaster designation" for the State in March, to show Hawaii businesses were hurt because of COVID-19. Over 6,000 responses were received. These responses were necessary for the State to be included in the Federal disaster designation programs, which made the Paycheck Protection Program (PPP) and the Economic Injury Disaster Loans (EIDL) funds available to Hawaii companies.

BUSINESS NOT AS USUAL

2. **SBA Paycheck Protection Program Outreach and Technical Assistance.** CBED and HGIA supported small businesses by promoting and advising businesses on the Paycheck Protection Program (PPP) and the Economic Injury Disaster Loans (EIDL). CBED also re-directed a current contract with the Hawaii Community Reinvestment Corporation (HCRC) to provide technical assistance to nonprofits to access SBA EIDL and PPP loans. HCRC consulted with nonprofits to understand their immediate (3 to 6 months out) cash flow needs and the Federal resources available. In addition, HCRC held several periodic webinars to reach a broader audience.

Gwen Yamamoto Lau (HGIA Executive Director) participated in a number of community outreach efforts from April through June 2020, including a Windward Business and Non-Profits Town Hall sponsored by Senators Laura Thielen and Jarrett Keohokalole; Representatives Chris Lee, Cynthia Thielen, Lisa Kitagawa and Scot Matayoshi; and Councilmember Ikaika Anderson on April 6, 2020; with Dennis Ling on Governor Ige's Community Connection Broadcast; and at a Chinatown Small Business Technical Assistance Training sponsored by Congressman Ed Case and Councilmember Carol Fukunaga on April 16, 2020. Additionally, through the various ethnic Chambers, HGIA facilitated the translation of the SBA's PPP application into Chinese, Korean, Japanese, Tagalog, Thai and Vietnamese to assist our [English as a Second Language] small business owners.

3. **HGIA Loan Deferrals.** HGIA quickly shifted its focus during the year to help borrowers impacted by COVID-19 by offering loan deferrals for up to six months. Approximately 63% of the residential portfolio and 89% of the commercial portfolio opted in for the deferral.

ASSIST BUSINESSES TO REIMAGINE THEIR WAY OF DOING BUSINESS

1. **Buy Hawaii, Give Aloha.** BDSD created the online shopping site, ([Buy Hawaii, Give Aloha](#)) to help Hawaii manufacturers and brick-and-mortar retailers begin recovering from the economic shutdown caused by COVID-19 pandemic. The official public launch was held on Monday, August 10, 2020, and BDSD began marketing to Local Hawaii shoppers initially, then later targeted shoppers on the Mainland continent. In late December 2020, a Japanese language web page will be created to attract Japanese shoppers.



2. **E-Commerce and Digital Marketing Training.** INNOVATE Hawaii received \$132,000 in CARES federal funding directly from the National Institute of Standards and Technology Manufacturing Extension Partnership. A three-month e-commerce training pilot program was developed to target manufacturers who were new to e-commerce. The program provided a comprehensive introduction to e-commerce and digital marketing best practices. The program also introduced companies to local expert consultants who were available to help. Subsequently, assistance was offered to manufacturers who were ready to move past the basics



and into higher performance and analytics. This program continues and consists largely of assessing a company's needs and matching them with a local specialist.

In November, HTDC partnered with the Chamber of Commerce of Hawaii to upscale the e-commerce program and offer the program to a broader business audience as part of the Hawaii

BUSINESS NOT AS USUAL

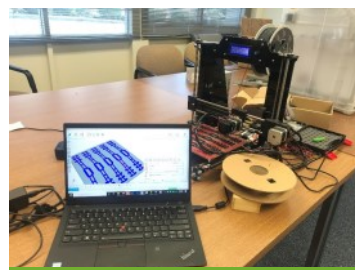
Business Pivot Grant program. It was a combination of webinars, workshops and 1-1 consulting sessions designed to raise e-commerce and digital marketing capabilities for Hawaii's businesses. The program provided in-depth assistance to 103 companies and hosted 11 webinar workshops.

ASSISTANCE TO THE UNEMPLOYED

Upskill for Displaced Workers. To assist displaced workers during COVID-19, this initiative, administered through HTDC in September offered educational resources to Hawaii's workforce. The program was targeted to assist unemployed workers, so they can equip themselves with technology skills and reposition for new career opportunities. Those currently employed or furloughed could also leverage Coursera's offerings to upskill themselves and take on more advanced technology projects. There were 1,028 enrolled in the program and they received 13,729 hours of free training. HTDC has also hosted virtual job fairs to compliment the program.

ASSISTANCE TO HEALTH CARE PROVIDERS AND FIRST RESPONDERS

Providing PPE and Equipment. Due to the pandemic, PISCES quickly collaborated with a local group (Hawaii STEM Community Care) to provide support and manufacture PPE components and equipment for health care providers, first responders and community service providers during the COVID-19 pandemic on the Island of Hawaii. Work resulted in production of mask stress release bands, face shields, UV mask irradiators, and community outreach educational and informational material. The coalition includes Hawaii Science & Technology Museum, NexTech, Canada-France-Hawaii Telescope, PISCES and volunteers from the Big Island Community Coronavirus Response Initiative. PISCES continues to collaborate with HI STEM Community Care in various COVID-19 related projects.



PISCES prints up mask straps for health care providers on the Big Island.

DATA ANALYSIS

1. **COVID-19 Dashboard.** READ created a new dashboard on the economic impact of COVID-19 and update the dashboard on weekly basis.
2. **COVID-19 Report.** READ produced a report on COVID-19 and the Economically Vulnerable Populations in Hawaii.
3. **Daily Tourism Brief.** HTA developed a daily tourism brief and other research reports to provide market intelligence to stakeholders.
4. **Commercial Rent Survey.** READ partnered with 16 private organizations and designed and implemented the Hawaii Commercial Rent Survey and tabulated the data. The survey was conducted in July, September, and December 2020. The objectives of the survey included finding out the business operation status, their revenue projections, tourism contribution to their businesses, and the status of rent payments. Results revealed that 16% of Hawaii businesses were closed in July, 24% were closed in September due the second stay-home order for Honolulu County, and 10% closed in December 2020. This survey has become a nation-wide survey since December 1, 2020, with the mainland states included.

BUSINESS NOT AS USUAL

5. **Economic Presentations.** READ Made 12 presentations on the economy at various business and community associations and groups.
6. **GIS Resources.** The Office of Planning's Geographic Information Systems (GIS) program provided staff support to Hawaii Emergency Management Agency (HI-EMA) to develop multiple data sets, maps, dashboards, and a consolidated hub website related to the State's response to COVID-19. The GIS Program also provided resources to the Hawaii Tourism Authority for its interisland travel initiative to track airline passengers between islands and monitor their compliance with quarantine restrictions. Currently, the GIS Program is providing staff support to the Hawaii Department of Health (DOH) as it works to integrate data from various data sources (VAMS, Tiberius, etc.) to develop vaccine distribution tracking data, maps, and dashboards.

ASSISTANCE TO CREATIVE INDUSTRIES

1. **Assistance to Film Industry.** Hawaii's film and television industries workforce also had a significant impact, down 95% from March through June of 2020. Until modified quarantine programs could be safely put in place, production was at a standstill in Hollywood and around the world.



Hawaii Film Office and its sister Film Offices of the Hawaiian Islands worked with film industry studios, labor unions and local officials to develop protocols so filming could begin in summer of 2020. Using a phased in approach the State opened for local regional productions in June 2020, followed by offshore productions late summer once the "Safe Way Forward" protocols were ratified by Studios and Unions.

Hawaii's film and television production industries remain an important aspect of recovery and resiliency to put residents back to work and support visitor attraction. While it is estimated that production spend will be down by 50 to 60% for calendar year, four television series, feature films and commercials have cumulatively employed an estimated 800 to 1,000 residents in high paying jobs.

2. **Assistance to Creative Sectors.** CID engaged in weekly dialogue with constituent clusters early in the pandemic, polling sectors particularly hard hit to effectuate solutions where CARES Act and other general fund support would help alleviate the adverse impacts.

Creative Sectors Served During the Pandemic include: Digital Transformation (DT), e-commerce and Work Force Development to the following:

- Performing Arts Venues and Non-Profits – Digital Transformation Initiative
- UHCC KapCC and IATSE – Safety Coordinators and staff training (up skilling)
- UHCC KapCC New Media Arts and IATSE – On-Set Conduct 101 (up skilling)
- Digital Ready Hawaii Theatres Initiative (ongoing)
- NEA Grant in partnership with Hawaii Theater and City and County of Honolulu
- ManaUP Live Telecast/Streaming Global Showcase Events
- Hawaii Theater Holiday Streaming Concerts



Keilana entertains the crowd on Aloha Friday.

BUSINESS NOT AS USUAL

- Drive-In Theatres, Hawaii Filmmakers Section, Hawaii International Film Festival
- Maui Film Festival Online Fest
- Hawaii Academy of Recording Arts (HARA) Virtual Na Hoku Hanohano Awards
- Hawaii Academy of Recording Arts (HARA) Annual Music Legacy Awards
- ID8 Studios & Coworking Space – Entrepreneurs Sandbox
- Creative Hawaii Hui – Ongoing dialogue with creative sector constituents
- Creative Lab Virtual Programs – music and media



Izik and Natalie Ai Kamaui perform at the Na Hoku Hanohano Award Show 2020. Photo taken from HARA Hawaii YouTube video. <https://youtu.be/SGzH1XkYYoA?t=133>

ASSISTANCE TO HOMEOWNERS

Refinancing of Reserved Housing Units. Due to the economic hardship caused by the COVID-19 pandemic and historically low interest rates, the Hawaii Community Development Authority (HCDA) received a drastic increase in requests to refinance HCDA reserved housing units by the homeowners. In response, HCDA amended its policies increasing its refinancing maximum limit to allow these owners to tap into their equity and assist them through these challenging times. The refinancing of over 140 HCDA reserved housing units was completed in 2020.



A NEW MODEL FOR ECONOMIC DEVELOPMENT

In 2019, the Department of Business, Economic Development & Tourism (DBEDT) launched an ambitious two-year goal to chart a new course to build a sustainable economic future for Hawaii—one that embraces innovation; is globally relevant, dynamic, and productive; and provides opportunities for all of Hawaii's citizens.

At the center of this change is DBEDT 2.0, a new approach to how DBEDT serves the community, based on collaboration, objectivity, respect, and the spirit of "CAN". This approach is framed by a new model for economic development that prioritizes the well-being of Hawaii's people, environment, and culture.

DBEDT's process of evolution focuses on expanding measures of economic prosperity beyond GDP, tax revenue, and job activity. The expanded measures will include measuring the well-being of Hawaii's residents, environment and culture.

DBEDT 2.0 refocuses economic planning with higher levels of community engagement organized around cluster-based activities that prioritizes Hawaii's economy based on our state's competitive advantage and priorities set by our community.

In June 2020, the Department formed the Economic Innovation Team (EIT) with the purpose of shepherding the Department on its journey to DBEDT 2.0. The EIT is developing a process for providing a structured and repeatable community-based economic planning.

The EIT's goal is to create a more resilient Hawaii economy by strengthening priority trade and local economic clusters. This is a hybridized process that starts with identifying priority economic trade or local clusters. The priority is established based on input from Hawaii's executive branch, that includes the Governor's priorities, and factors within the cluster including jobs multipliers, contribution to GDP, and Hawaii's natural competitive advantage of each cluster.

This objective, analytical approach is then strengthened by community input and engagement organized around each cluster of economic activity.

In November 2020, the EIT launched the Economic Reset Project (ERP) to pilot this new economic planning process by organizing the department around priority trade economic clusters, as well as to develop alternative measures of economic prosperity that capture the community's well-being. This cross-departmental effort is currently underway and the subject of the BED100 general fund appropriation for economic resiliency. Specific plans detailing the work of the EIT, ERP, and DBEDT 2.0 are forthcoming.



Governor Ige speaks to DBEDT managers at the Strategic Planning Session prior to COVID-19.

A NEW MODEL FOR ECONOMIC DEVELOPMENT

DBEDT's approach to economic development consists of a balance between economic growth and the well-being of Hawaii's people, culture, and environment.

In honoring each of these segments, we will be able to achieve a sustainable economic system that better serves Hawaii's people.



VALUES, STRATEGIES, AND TACTICS

VALUES

- ▶ Always be considerate and respectful of Hawaii's people, place, and culture
- ▶ Work together to prioritize balanced long-term growth and sustainable economic development
- ▶ Integrate all sectors and stakeholders to work for the common good and collective existence

STRATEGIES

- ▶ Capitalize on Hawaii's strengths and assets
- ▶ Strengthen and leverage collaboration between public and private organizations and Hawai'i citizens
- ▶ Empower the internal capacity of the department by giving programs and staff the tools they need to succeed
- ▶ Redesign the department to support flexibility and agility to better serve a dynamic economy
- ▶ Use continuous improvement processes for long-term growth

TACTICS

- ▶ Leverage internal expertise to sift through large volumes of information to make data-driven decisions
- ▶ Empower DBEDT's economic development experts with data to facilitate deep evaluation and analysis that can generate compelling and innovative ideas for a sustainable economic future
- ▶ Foster connections and collaboration amongst all stakeholders in order to build trust, consensus, and buy-in

The divisions and attached agencies of the department work together in a team approach in order to work towards these values, strategies and tactics that have been outlined. Thus, this annual report reflects on how the department works towards this Economic System as opposed to the usual reporting of each individual agency. As each agency or program submits its own annual report, please refer to their annual reports to find out in detail what each program has been working on.

WELL BEING OF ENVIRONMENT

Innovative green development is the key to economic growth that simultaneously provides living wage jobs of the future, protects our aina and contributes to climate change mitigation and resiliency. Innovative clean, affordable energy, local food production, and natural resource protection and enhancement are important economic drivers that are not only crucial to a vibrant tourism industry, but essential to a competitive knowledge based economy in Hawaii.

CLEAN ENERGY INITIATIVES

1. **Stakeholder and Community Education, Outreach and Engagement:** The Hawaii State Energy Office (HSEO) is prioritizing a more comprehensive public clean energy education, outreach and engagement program, which is critical to achieving HSEO's broader mission to promote energy efficiency, renewable energy, and clean transportation to help achieve a resilient, clean energy economy. In order to increase living wage jobs, capital investment in energy efficiency and renewable energy projects, and decarbonize the economy, access to clean, efficient energy must be available to everyone in Hawaii. The increasing public challenges and vocalized community concerns about energy projects' impacts on host communities has made it clear there needs to be a more focused effort to reach out to and include grassroots community in stakeholder engagements and collaborations to more effectively, efficiently, and equitably advance Hawaii's clean economy goals.



Actions undertaken by HSEO to support stakeholder and community education, outreach and engagement include:

- **Clean Energy Education Program:** Working in partnership with the Hawaii Department of Education to support the development and further expansion of clean energy education programs that will empower Hawaii's youth and citizens to meet our clean energy goals, while strengthening science, technology, engineering, and math (STEM) education and introducing students to potential energy job opportunities.
- **Stakeholder Outreach:** Participating in numerous educational and outreach events with staff serving as subject matter experts in a myriad of clean energy-focused topics. Event topics and themes include energy building codes, energy performance contracting, environmental/climate change, renewable energy, energy awareness fairs, EV/clean transportation, and energy-focused community meetings.
- **Dedicated Website:** Maintaining a dedicated website that educates viewers about Hawaii's growing clean energy economy and vision and the HSEO's initiatives, activities and programs. Viewers can find up-to-date information about energy planning, renewable energy and energy projects, energy efficiency, and clean transportation, including the annual [Hawaii Energy Facts and Figures](#), and numerous reports and studies. In FY20, there were 338,214 page views to www.energy.hawaii.gov, a 94 percent increase over FY19.
- **Publications:** Developing and distributing publications and collateral material to raise awareness and communicate progress of clean energy efforts of the HSEO. To educate and update stakeholders on Hawaii's constantly changing energy landscape, HSEO distributes an annual report, a quarterly e-newsletter, an annual compendium of Hawaii's key energy data, and various collateral pieces. In FY20 e-newsletters and e-blasts communications were sent to 19,403 subscribers, a 21 percent increase over FY19.

WELL BEING OF ENVIRONMENT

One-Year goal: Overhaul HSEO communications and website; and launch a long-term stakeholder and community engagement strategy to educate the broader community about Hawaii's energy needs and goals, what it will take to reach them, as well as to provide all Hawaii's stakeholders a voice in project and policy development to support the State's successful achievement of its decarbonization goals. Utilize web-based community engagement software to solicit feedback from communities on their views toward large-scale renewable energy projects.

Five-Year goal: Refine the website and continue strengthening community outreach and stakeholder engagement to solidify HSEO's emerging role as a trusted, unbiased navigator on Hawaii's voyage to a clean energy economy.

Action Plan: Procure the services of two contractors to 1) overhaul HSEO's communications and website; and 2) assist HSEO in planning and executing a more robust community outreach and stakeholder engagement strategy.

Measure of success: Number of viewers to HSEO information platforms. Compare community engagement feedback over time to measure effectiveness of each approach.

2. **Democratizing clean energy for underserved ratepayers:** The Green Energy Market Securitization ([GEMS](#)) financing program fills market gaps, stimulates private investments and leverages innovative tools to mitigate risks and reach new markets. The Hawaii Green Infrastructure Authority (HGIA) posted excess revenue over expenses at fiscal year ended June 30, 2020, of \$116,000, net of \$2.2 million in loan repayments transferred to the PUC. In addition, since inception to September 30, 2020, HGIA facilitated over \$105.0 million in clean energy investments, of which 92% were projects benefitting underserved ratepayers, generating over \$13.3 million in state tax revenues and creating/retaining almost 1,100 local jobs.

The HGIA continued to originate, underwrite, approve and fund loans to underserved ratepayers (defined as low and moderate-income homeowners, renters, nonprofits, small businesses and multi-family rental projects) during the year, leveraging its on-bill repayment mechanism and making clean energy more accessible to previously hard to reach ratepayers. HGIA's progressive financing programs were featured in several local and national publications, as well as during a number of national presentations throughout the year. Due to the pandemic, many unemployed LMI households have been unable to pay their energy bill. As a result, underwriting modifications will be required to assist these ratepayers in lowering their energy cost after the moratorium on utility disconnections is lifted.

One-Year Goal: Continue deploying funds to facilitate clean energy adoption for underserved ratepayers. Request approval to modify underwriting criteria to assist underserved ratepayers' negatively impacted by COVID, lower their energy costs.

Five-Year Goal: Develop new products to further help underserved ratepayers.

Action Plan:

- ⇒ Source and accept loan applications.
- ⇒ Work with the PUC on underwriting modification.
- ⇒ Underwrite loans depending on program criteria.
- ⇒ Approve, document and fund loans.
- ⇒ Service loans (including collection efforts) until all loans are paid in full.

Measure of Success: Based on the specific metrics of the individual loan product(s), such as jobs created, tax revenue generated kWh produced or reduced, etc.

WELL BEING OF ENVIRONMENT

3. **Expand Lending Activities:** In early 2020, the US Department of Agriculture made its Rural Energy Savings Program, which previously offered 0.0% interest loans only to rural utilities, available to Green Banks nationwide. In order to access this capital source, HGIA needs a revision in its statute to allow debt from the Federal government.

One-Year Goal: Pass legislation to get HGIA's statute changed. Apply for the US Dept. of Agriculture loan.

Five-Year Goal: Process loans through Rural Energy Savings Program while seeking additional sources of loan capital.

Action Plan:

- ⇒ Work with the Legislature to create a clean energy and energy efficiency revolving fund under HGIA.
- ⇒ Apply for Federal (and other) loan capital funds.
- ⇒ Identify access to capital gaps within the State.
- ⇒ Design loan products.
- ⇒ Outreach with partners and stakeholders.
- ⇒ Incorporate program into existing HGIA infrastructure for greater efficiencies.
- ⇒ Launch new loan product/program.



Measure of Success: Number of loans to facilitate clean energy projects, which results in additional economic and environmental impacts, all of which are reported quarterly.

4. **Increase leverage of private capital:** HGIA had hoped to explore the opportunity and viability of increasing leverage of private capital from banks and credit unions during 2020. Unfortunately, the pandemic, which decimated Hawaii's tourism industry and economy with temporary and permanent closure of businesses and the highest unemployment rate in the nation, has also resulted in a shift of priorities for banks and credit unions from expansion in lending, to risk mitigation, debt restructuring and other loss prevention activities.

One-Year Goal: On hold until the economy stabilizes.

Five-Year Goal: Expand programs to increase leverage of private capital.

Action Plan: Outreach to banks and credit unions to structure a loan loss reserves or other risk mitigation programs to leverage public funds, as may be required or necessary.

Measure of Success: Deployment of program (as required).

RENEWABLE ENERGY

1. **Renewable Energy Deployment:** HSEO is prioritizing support for renewable energy projects that will replace the existing coal plant and limit negative impacts on communities, while advancing the State's decarbonized economy goals. This includes the scheduled replacement of 180 megawatts of capacity from coal on Oahu's grid, which is a substantial undertaking and dependent on the successful deployment and operation of several solar and battery storage projects over the next two years. Toward this end, HSEO is supporting the deployment of 17 solar-plus-battery-storage projects and three standalone battery storage projects on Oahu, Maui and Hawaii Island.

WELL BEING OF ENVIRONMENT

Actions undertaken by HSEO to support renewable energy deployment include:

- **Workforce Development in Energy Industry Jobs:** HSEO met with all Hawaiian Electric Stage 1 and some Stage 2 renewable energy developers to discern their progress and needs, and to identify current and near-term jobs and skills to enhance opportunities for Hawaii residents to enter the clean energy industry. Meeting results indicated several technical skills and certifications are desired to enhance the competitiveness of Hawaii's local workforce. The HSEO is working with schools and universities, trades, and workforce development organizations such as the Chamber of Commerce and Workforce Development Council to ensure Hawaii residents have access and opportunity to obtain these skills and certifications and pathways into being a part of Hawaii's clean energy jobs.
- **Hawaii Renewable Energy Projects Directory:** HSEO has upgraded and will continue to upgrade its lauded Hawaii [Renewable Energy Projects Directory](#), which is the only state-controlled public resource that identifies all existing and proposed renewable energy projects in Hawaii. The Directory provides an important resource to inform the public and regulators of large projects proposed in their areas and to track the status of large renewable energy projects that contribute to Hawaii's renewable energy mandate. HSEO is transitioning the Directory to a data-based Geographic Information Systems (GIS) platform that will facilitate the sharing and analysis of more project-specific information and plans to launch the updated Directory in the beginning of 2021. The Directory, a popular component of HSEO's Developer & Investor Center suite, garnered 29,127 page views in FY20, a 60 percent increase over FY19. The Hawaii Clean Power Alliance tweeted that the Developer and Investor Center is "Hands down one of the best tool packages for all stakeholders engaged in the development of renewable energy projects in Hawaii."



One-Year goal: Conduct needs assessment with renewable energy developers, consultants, and permitting agencies to identify potential project siting and permitting needs.

Five-Year goal: Maintain and update the tools to address contemporary issues and subjects regarding the siting and permitting of large renewable energy projects in Hawaii.

Action Plan: Support implementation of the Stage 1 and 2 solar plus battery storage and standalone battery storage projects to ensure the timely decommissioning of Hawaii's only coal plant in support of Act 23, SLH 2020. Identify and facilitate local workforce employment opportunities. Support siting and permitting of large renewable energy and related projects to reduce risks and facilitate more appropriate siting of grid-scale projects.

Measure of success: Leverage state funds to obtain federal funds. Successful deployment of tools. Number of users. Successful renewable energy projects.

2. **Energy Projects:** The LUC is responsible for the approval of Solar Projects on class B&C rated lands. The LUC approved three major solar projects this year.

One-Year Goal: Expedite processing of Solar permits.

Five-Year Goal: Continued processing of permits in an expedited manner.

Action Plan: N/A

Measure of Success: Processing of permits in a timely manner.

WELL BEING OF ENVIRONMENT

3. **Expand the FTZ Energy Generation System:** In 2017, FTZ9 installed what was the largest photovoltaic array in the core downtown area. This system, coupled with other energy saving measures, produces enough energy to nearly fulfill all of FTZ's daily energy requirements.

One-Year Goal: Expand this system to reduce its dependence on the electric grid and shift toward renewable energy sources. In order to fully optimize the system, the photovoltaic should be augmented by a battery system to extend its usefulness, lower the FTZ's operating and energy costs, and provide a resource for energy resiliency in the event of a natural or other type of disaster.

Five-Year Goal: FTZ is identified in the State's COOP plan as a site for intake, storage, and mobilization of critical goods and materials to help the State in its recovery effort. The addition of a battery system will create a microgrid which could provide electricity for the area if electric feeder lines are inoperable or supply lines are cut. The battery system would allow FTZ and surrounding neighbors to operate 24/7 solely on renewable energy.

Action Plan: Seek financing to underwrite the cost of the project.

Measure of Success: Receive funding to start the project.

4. **Testbed to address electricity delivery and grid integration:** There is significant value in developing an advanced energy technology testbed to address electricity delivery and grid integration problems both within the site boundaries and to provide value to a stressed utility operating in an isolated island environment. NELHA contracted with the Hawaii Natural Energy Institute (HNEI) to provide a facility wide microgrid road map for the future.

One-year Goal: Continue discussions with national labs, University of Hawaii, local utilities, and the private sector to formulate partnerships for new joint projects in the areas of additional PV, grid scale energy storage demonstrations and microgrid development.

Five-year Goal: Develop five new renewable energy projects.

Action Plan:

- ⇒ NELHA's stretch goal is to become carbon neutral by 2030. Main initiatives include:
 - 1) Establish an energy storage testbed; 2) Develop an integrated energy district or microgrid; 3) Reduce our carbon footprint by adding renewable energy from solar photovoltaic (PV) panels; 4) Work with the University of Hawaii and US Department of Energy to develop a testbed for hydrogen technologies;
 - 5) Expand efforts to assist the private sector in commercialization of OTEC; and, 6) Expand our relationships with the national laboratories and other key players in Hawaii's energy field such as the Hawaii Natural Energy Institute and the utilities.
- ⇒ NELHA management will use HNEI's microgrid road map as a guide for potential future upgrades to the electrical systems at the facility. The inclusion and management of renewable resources and the strategies to implement will increase resiliency from grid related issues and emergency events.
- ⇒ Apply for grants to develop projects.



Measure of success: Reduce fossil fuel generated energy consumption by 25 percent.

WELL BEING OF ENVIRONMENT

5. **Regional Seawater Air-Conditioning Study:** NELHA has secured the consultant for the regional seawater air-conditioning study using CIP funds.

One-year Goal: Project is currently scheduled to be completed in the Spring 2021.

Five-year Goal: N/A

Action Plan: Continue to work with consultant to complete analysis.

Measure of Success: Implement recommendations of analysis and develop regional system if warranted.

6. **Solar desalination project:** NELHA has completed Phase One implementation of \$2M US DOE SunShot grant for a solar desalination demonstration project.

One-year Goal: Complete Phase 2 of project and begin Phase 3.

Five-year Goal: N/A - Project is scheduled for completion in 2022.

Action Plan: Continue to work closely with contractor and US DOE.

Measure of Success: Proof of concept of new technology to desalinate 133,000 gallons per day.

ENERGY EFFICIENCY

To support the State's economic recovery from the COVID-19 pandemic, HSEO is prioritizing initiatives that lower costs and support job creation and workforce development. Efforts to improve energy-efficient building codes and efficiency standards are recognized as cost-effective measures that set the bar for the minimum energy performance for commercial and residential buildings in Hawaii. Hawaii's energy policy is to maximize cost effective investments and foster high impact programs. Especially in these critical times, energy efficiency saves money for agencies, businesses, and residents.

Actions undertaken by HSEO to support energy efficiency include:

- **International Energy Code Adoption:** As an ex-officio voting member and Chair of the State Building Code Council, HSEO was instrumental in the Council's recent adoption of the 2018 International Energy Conservation Code with Hawaii-specific amendments. Efforts to improve energy-efficient building codes and efficiency standards are recognized as cost-effective measures that establish minimum energy performance standards for commercial, residential, and other buildings in Hawaii. Hawaii's energy policy is focused on maximizing cost-effective investments and fostering high-impact programs. The adoption of Hawaii's 2015 International Energy Conservation Code alone is projected to save Hawaii's ratepayers some \$1.4 billion by 2040. HSEO works closely with federal, state, county, energy stakeholders and others to promote and facilitate energy efficiency and conservation through technical assistance and training to state agencies, county and energy-related stakeholders, as well as businesses, non-profits and professionals.
- **Hawaii Green Business Program:** HSEO coordinates the Hawaii Green Business Program (HGBP), which provides technical assistance to businesses to implement energy and resource efficient practices and recognizes their success by communicating the environmental and financial value of their green practices during an annual award ceremony. Now in its seventeenth year, the Hawaii Green Business Program was established as a partnership between the HSEO, the Department of Health, the Board of Water Supply, and the



WELL BEING OF ENVIRONMENT

Chamber of Commerce of Hawaii. During COVID-19, HSEO co-sponsored educational webinars on how to address air quality, at places of lodging, and safely returning to work. Through an active outreach and engagement program HGBP recruits new businesses and organizations to participate in the program each year alongside returning Program participants. The 20 businesses, including major hotels, venues and events that participated in the 2019-2020 HGBP cohort achieved significant results, including the reduction of 19,000 pounds of solid waste, 15,000 therms of liquid propane gas, 1.1 million kilowatt-hours of electricity and 91.6 million gallons of water.

- **Energy Efficiency Technical Assistance and Collaboration:** HSEO collaborates with, and provides information and technical review to government agencies, professional associations, and educational institutions in Hawaii to reduce energy use and to participate in performance contracting. In addition to in-house expertise, HSEO contracts with technical and contracting experts to provide in-depth review and analysis services. In its role as advisor to government agencies, HSEO:
 - * Assisted the Department of Accounting and General Services in its successful application for ENERGY STAR® certification for the State Office Tower. HSEO performed site inspection, data entry into ENERGY STAR® Portfolio Manager, verification of results, and submission of the application to ENERGY STAR®.
 - * Gave presentations to the Department of Public Safety and the Department of Accounting and General Services about Energy Performance Contracts (EPCs) and the responsibilities of agencies and HSEO.
 - * Reviewed and provided input to the Department of Transportation (DOT)-Harbors and DOT-Highways on Measurement & Verification Reports given to them by their contractor and assisted the Department of Public Safety by reviewing their Photovoltaic (PV) Power Purchase Agreement presentation for Maui Community Correctional Center.
 - * Assisted the University of Hawaii at Manoa on potential approaches to their strategic plan for achieving their clean energy goals.

One-Year goal: Provide training on the 2018 IECC and Hawaii and county amendments. Conduct 2021 IECC Working Group meetings to discuss industry, code official and other stakeholder concerns. Obtain federal funding. Use results of previous State benchmarking of 416 public facilities to identify highest potential for immediate action to reduce energy use.

Five-Year goal: Adopt 2021 IECC at the SBCC with Hawaii amendments and at the county level with county amendments. Recruit and expand training programs to trade and professional associations via on-going partnership with the community colleges. Provide technical assistance to support State agencies in financing energy efficiency and cost reductions via operational changes, EPCs or other mechanisms.

Action Plan:

- ⇒ Provide leadership and support to reduce state energy use by 20% (from 2005 levels) by 2025.
- ⇒ Provide leadership in Energy Code and Community College Train the Trainer events and toolkits.
- ⇒ Increase the knowledge of advanced design and construction practices in community

WELL BEING OF ENVIRONMENT

college and continuing education programs.

- ⇒ Improve the awareness of and interest in employment opportunities in code official and code verification professions.
- ⇒ Establish a working group to develop Hawaii-specific provisions for the 2021 IECC for the State Building Code Council.

Measure of success: Utilization of train-the-trainer toolkit. Number of instructors and students participating. Number of other states that participate with Hawaii, Illinois, and Nevada. Meetings of the 2021 IECC working group and list of provisions for Hawaii amendments. For State facilities: number of State facilities benchmarked; rebate or energy cost savings identified for capital improvement projects; measured energy savings; and calculated bill savings.

CLEAN TRANSPORTATION

HSEO has taken a leadership role in advancing the adoption of clean transportation across Hawaii, including facilitating ZEV deployment and associated electric vehicle charging and hydrogen infrastructure, which directly contribute to reducing petroleum consumption and emissions in the transportation sector. To transition to a decarbonized transportation sector, HSEO works with the local community; federal, state, and county agencies; energy stakeholders; and clean transportation stakeholders to encourage and facilitate the adoption of clean transportation.



Actions undertaken by HSEO to support clean transportation include:

- **Volkswagen Settlement:** Investment of \$8.125 million allocated to Hawaii as part of a federal settlement with Volkswagen to mitigate vehicle emissions through the replacement of medium and heavy-duty vehicles, as well as the deployment of light duty vehicle supply equipment. HSEO has undertaken three major initiatives so far with the VW funds:
 - * VW Funding Request: Submitted a funding request to allocate \$1.2 million of Trust funds to contribute toward the purchase, installation and maintenance of light duty EV charging stations;
 - * HDOH Public Fleet Collaboration: Collaborated with the Hawaii Department of Health (HDOH) to offer rebates to private and public fleet owners looking to replace older, diesel buses with battery-electric vehicles; these collaborations will continue; and
 - * HDOH EV Bus Collaboration: Partnered with HDOH to leverage federal funds to help with the procurement of a battery electric bus and charging equipment for the City and County of Honolulu. This partnership will continue.
- **EV Charging Infrastructure:** HSEO assisted the Hawaii Department of Transportation in its effort to procure the services of a contractor to provide electric vehicles and charging Infrastructure statewide. The winning bidder will create a user fee-based program for battery electric vehicles and charging infrastructure under a 10-year service contract. The program could be used to help with the electrification of government fleet vehicles.



WELL BEING OF ENVIRONMENT

One-Year goal: Release the Vehicle Assistance Program (VAP) for eBuses rebates funded through the Volkswagen Settlement fund and the Environmental Protection Agency's Diesel Emission Reduction Act (DERA) funding. Refine deployment plan for the investment of the remaining EV charging infrastructure dollars and eBus program under the Volkswagen Settlement.

Five-Year goal: Deploy all Volkswagen Settlement funds except for the final two years of VAP rebates. Through collaboration with HDOT, counties, and relevant state agencies and stakeholders, develop a plan to systematically access and deploy federal funds through a variety of programs strategically filling market gaps.

Action Plan:

- ⇒ Advance investment in clean transportation infrastructure and vehicle adoption throughout Hawaii through the Volkswagen Settlement, DERA and other federal grants, and designation of clean transportation corridors coordinated as relevant with sister agencies at the State and county level and transportation stakeholders.
- ⇒ Explore and participate in innovative ways to adopt alternative fuel vehicles.
- ⇒ Support other State and county agencies as they transition to a decarbonized fleet.

Measure of success: Alternative fuel vehicles adopted, GHG and NOx emission reductions, federal and private funds leveraged.

2050 SUSTAINABILITY PLAN

Hawaii 2050 Sustainability Plan: Act 146, SLH 2019, added new language clarifying that the newly updated Hawaii 2050 Sustainability Plan “shall serve as the State’s climate and sustainability action plan.” The Hawaii 2050 Sustainability Plan will embrace the [United Nations’ 2030 Sustainability Development Goals](#) as the decennial framework while aligning the [Aloha+ Challenge](#) and the various sustainability and climate statutory targets, policies, plans, and initiatives.

One-Year Goal: The Office of Planning’s Statewide Sustainability Program plans to complete the decennial updates to the Hawaii 2050 Sustainability Plan as required by Act 146, SLH 2019.

Five-Year Goal: OP plans to work towards the statewide implementation of the Hawaii 2050 Sustainability Plan. OP plans to conduct a 5-year review of the Hawaii 2050 Sustainability Plan (2020 -2030) update, to ensure the plan’s progress toward achieving recommended actions. This review will provide an analysis of accomplishments through the UN’s “Decade of Action” to ensure the State of Hawaii continues in its progress in achieving Hawaii’s sustainability and climate-resilient statutory targets.

Action Plan: Implementation of the Hawaii 2050 Sustainability Plan.

Measure of Success: Progress toward achieving recommended actions. This review will provide an analysis of accomplishments through the UN’s “Decade of Action” to ensure the State of Hawaii continues in its progress in achieving Hawaii’s sustainability and climate-resilient statutory targets.



WELL BEING OF ENVIRONMENT

LOCAL FOOD PRODUCTION

- Land Use Commission (LUC) Important Agricultural Land designation:** Pursuant to recently enacted legislation, private parties and the counties may submit petitions for various lands to be designated as “[Important Agricultural Lands](#).” Counties may submit large scale proposals for designation.
One-Year Goal: Complete Petition by the City and County for Oahu designation.
Five-Year Goal: Complete Maui County and Hawaii County Petitions.
Action Plan: N/A
Measure of Success: Completion of designation process
- Act 278 Study of Subdivision and CPR on Agricultural Lands on Oahu:** The Office of Planning (OP) has completed and submitted its report prepared pursuant to Act 278, SLH 2019 which directs the OP, LUC, Real Estate Commission, and the City & County of Honolulu Department of Planning and Permitting to study land subdivision and condominium property regime (CPR) laws related to agricultural land on Oahu. A Stakeholders Group was convened in Fall 2019, and legislation addressing the identified problems and recommendations relative to defining “farm dwelling,” allowing expanded county review of CPRs, and bolstering county enforcement capabilities for leasehold agricultural subdivisions will be introduced in the 2021 Legislative session.
One-year Goal: Enactment of legislation amending HRS Chapter 205 and 514B as recommended by the Study; reconvening Stakeholders Group to address Neighbor Island county issues and other ownership vehicles currently avoiding State and county review.
Five-year Goal: Pursue additional legislation as deemed needed. Monitor implementation of any legislation and county amendments to their ordinances and rules.
Action Plan: Meet with legislators and testify as needed before legislative committee hearings. Reconvene Stakeholders Group to continue discussions and remedial measures as needed.
Measure of Success: Enactment of legislation as recommended by the Study.
- Heeiea Community Development Plan:** In 2020, the Hawaii Community Development Authority (HCDA) worked to establish a community development plan and rules for Heeiea. The 400-acre community development district, primarily owned by the State, is a tremendous asset to the State’s food security goals.



One-Year Goal: Complete the Plan and Administrative Rules.

Five-Year Goal: Increase acreage of land for taro cultivation and other agricultural activities. Restore natural resources in the district.

Action Plan: Work collaboratively with the lessee, Heeiea community and the surrounding neighborhoods, and other interest groups to finalize, adopt and then implement the Plan and Rules. Work with the lessee to increase acreage of land in agriculture and production of taro and other agricultural products.

Measure of success: Community Development Plan and Administrative Rules are adopted. Increase in acreage of land in agricultural use and increase in production of taro and other agricultural products.

REDUCE GREENHOUSE GAS EMISSIONS

One-Year Goal: Completed report and publicized in 2020.

Five-Year Goal: Progress towards Zero Emissions Clean Economy Target.

Action Plan: Collaborate with DOH and DOA on continuing to sequester carbon dioxide gas.

Measure of Success: Reduction of greenhouse gas emission and carbon dioxide sequestration.

One-Year Goal: OP plans to continue to host GHGSTF meetings and develop recommendations to align the State's clean energy and carbon sequestration efforts with climate initiative goals.

Five-Year Goal: OP plans to continue to advocate for the increased staffing and budgetary support to the Statewide Sustainability Program and to host GHGSTF meetings and assist in examining opportunities to exploit carbon sequestering trees and vegetation to reduce urban temperatures and thereby protect public health.

Action Plan: Continue collaboration with managers of working and natural lands.

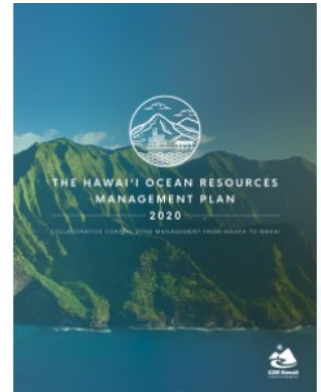
Measure of Success: Increase in sequestration of greenhouse gases.



WELL BEING OF ENVIRONMENT

MARINE MANAGEMENT

1. **Ocean Resources Management Plan (ORMP):** The Office of Planning's CZM Program has completed a new [ORMP](#) which sets forth the guiding principles and recommendations for the State to achieve comprehensive and integrated ocean and coastal resources management. HRS § 205A-62, charges the CZM Program with the review and periodic update of the ORMP, as well as coordination of the overall implementation of the plan. The ORMP is an integrated, place-based approach to management of ocean resources in the island, based on recognition of the ecological connection between the land and sea, the link between human activities and their impact on the environment, and the need for improved collaboration and stewardship in natural resources governance.



OP accomplished the 2020 goal to finalize and adopt the updated ORMP. The update involved public outreach through listening sessions conducted in eight (8) community meetings statewide. The final report incorporates Traditional Ecological Knowledge (TEK) and highlights three areas: Development and Coastal Hazards, Land-Based Pollution, and Marine Ecosystems.

One-Year Goal: The CZM Program seeks to establish multi-agency actions teams to implement ORMP focus area projects to inform decisions related to identified management gaps.

Five-Year Goal: The CZM Program will continue to collaborate with state, county and federal partners to implement projects to inform the management gaps to develop guidance for existing policies and/or to inform potential policy enhancements.

Action Plan: Collaboration with ORMP Working Group and Council on Ocean Resources to develop action teams. Specific projects and desired outcomes are identified specifically in the ORMP.

Measure of Success: The success of the various metrics will be measured and report on the ORMP dashboard and webpage.

2. **Federal Approval of the Section 309 Assessment and Strategy:** The Office of Planning's CZM Program accomplished the 2021 goal to complete and obtain NOAA approval of an Assessment and Strategy to be eligible to received federal funding through Section 309 of the CZMA funding. Every five years the Hawaii CZM Program conducts a self-assessment of its coastal management program within each of the nine enhancement areas. Hawaii CZM then develops strategies with a stepwise approach to reach a stated goal and lead to enhancement in the federally approved Hawaii CZM Program.

One-Year Goal: The CZM Program plans to work on the implementation of the NOAA approved Section 309 Strategy. The Strategy is specifically aligned with the implementation of the ORMP.

Five-Year Goal: Development of new or revised authorities including statutes, regulations, CZM enforceable policies, administrative decisions that will improve Hawaii's ability to address development and coastal hazards, reduction of land-based pollution, and/or marine ecosystems. Development of new or revised guidelines, procedures and policy documents that provide specific interpretations of CZM enforceable policy.

Action Plan: The Action Plan is outlined in the NOAA-approved 5-year Strategy.

Measure of Success: Development of administrative guidance 3-5 projects applied for and funded through NOAA eligible funding.

WELL BEING OF ENVIRONMENT

COASTAL HAZARDS

Probabilistic Tsunami Design Zone Maps: Managing development and impacts from coastal hazards remains a concern for the State of Hawaii. In particular, climate change adaptation has been identified as a high management priority in need of significant investment towards quantifying impacts and implementing reasonable planning and regulatory solutions. The Office of Planning's CZM Program developed a strategy to advance implementation of a priority of the 2013 State of Hawaii Multi-Hazard Mitigation Plan, in collaboration with the Hawaii Emergency Management Agency. The strategy addresses Hawaii's high exposure to tsunami risk by modeling and mapping comprehensive high-resolution probabilistic tsunami design zone maps for the State of Hawaii.



OP accomplished the 2020 goal to complete the integration of tsunami design zone maps into the ASCE Tsunami Hazard Tool and facilitated application into the City and County of Honolulu's building codes to strengthen resilience of essential facilities for the island of Oahu.

One-Year Goal: The CZM Program plans to complete the mapping and modeling of Maui's tsunami design zone maps for integration into the ASCE Tsunami Hazard Tool which will strengthen resilience of critical infrastructure.

Five-Year Goal: The CZM Program plans to complete the integration of tsunami design zone mapping and modeling for the counties of Maui and Kauai.

Action Plan: Utilizing the CZM Program federal funding and additional funding through the NOAA Project of Special Merit competition, the CZM Program will coordinate with counties to contract the modeling and mapping of probabilistic tsunami design zone maps.

Measure of Success: The adoption and use of the high-resolution maps in the International Building Code 2018/American Society of Civil Engineers (ASCE) 7-2016 Standard which include load and effects.

BROWNFIELDS

Hawaii Brownfields Cleanup Revolving Loan Fund Program: The Hawaii Brownfields Cleanup Revolving Loan Fund Program (HBCRLF) program was seeded by a \$2 million grant from the U.S. EPA in 2005. The HBCRLF funds are intended to encourage assessment, cleanup, and redevelopment of contaminated property. The HBCRLF program was established by Act 173, SLH 2002 and codified as HRS § 201-18(e).

The HBCRLF program provides low- and no-interest loans to eligible public and private entities to cleanup brownfield sites where economic or community development projects show the greatest need, exhibit long-term project viability, and demonstrate the capacity for repayment. The program is currently operating under a closeout agreement with the U.S. EPA, which governs the type of brownfields activities eligible for HBCRLF funding and eligibility requirements for borrowers.

One-Year Goal: OP has proposed legislation to amend HRS § 201-18(e) to enable greater use and flexibility of the HBCRLF funds. This change will allow funds to be granted in FY 2022 for several brownfields projects. OP will also continue to work with DOH HEER Office and U.S. EPA to respond to interest in HBCRLF loans.

Five-Year Goal: OP will continue to collaborate with the DOH HEER Office and U.S. EPA to distribute the balance of the HBCRLF to enable two or more brownfields cleanups to be

WELL BEING OF ENVIRONMENT

completed. Once all HBCRLF-funded cleanup activities have been completed and DOH has issued no further action letters, OP will seek legislation to repeal HRS § 201-18(e), close the special fund, and end the HBCRLF program.

Action Plan: OP will pursue legislation to amend HRS § 201-18(e) to enable greater use and flexibility of the HBCRLF funds. This will allow funds to be released in FY 2022 for several brownfields projects that have requested grant funding to proceed. Pending enactment of amendments to HRS § 201-18(e), OP will amend HBCRLF Administrative Rules to allow for sub-grants and expanded use of funds for brownfields site assessments. Once the rules have been amended, OP will issue a HBCRLF grant funding opportunity notice inviting grant applications. Grant funding will be disbursed in FY 2022 to eligible projects and recipients selected for funding, based on fund availability. OP will work with DOH in overseeing the conduct and completion of brownfields cleanup activities at recipient sites.

Measure of Success: Acres of land cleaned up or remediated and redeveloped or repurposed for community or productive use; projected number of direct beneficiaries from cleanup or redevelopment; estimated value/change in value of property due to cleanup/redevelopment.

MAINTAIN NATURAL RESOURCES

Heeia National Estuarine Research Reserve System Plan:



In 2020, HCDA commenced work pursuant to Act 166, SLH 2019, which establishes in part that the HCDA shall invite and consult with various entities for the development of a Heeia state park community-based long-range plan for the Heeia National Estuarine Research Reserve System (HNERRS).

One-Year Goal: Complete the Heeia state park community-based long-range plan.

Five-Year Goal: N/A. The final deliverables will be transmitted to the Department of Land and Natural Resources and the HCDA will not be involved in the implementation of the plan.

Action Plan:

- ⇒ Identify stakeholders and landowners who have an interest in the future of the Heeia State Park or who would be affected by activities at the park.
- ⇒ Identify and evaluate potential future uses and activities that support the Vision and Mission of the HNERRS.
- ⇒ Develop a community-based long-range plan for the Heeia State Park.

Measure of success: The Heeia State Park community-based long-range plan is completed.

WELL BEING OF ENVIRONMENT



RESPONSIBLE TOURISM

Understanding the significance of tourism's role to the state as the largest single source of private capital for Hawaii's economy, HTA's primary focus is to protect Hawaii's iconic brand. We also see the relaunch of tourism as an opportunity to reshape the model for tourism. Our natural environment, host culture and community are collectively Hawaii's brand – they play a major role in the appeal of the destination to our guests, to whom our marketing efforts are focused. For this reason, HTA serves as the connecting point between tourism, the community and other state departments. We are guided by our four pillars (natural resources, Hawaiian culture, community, and brand marketing) in everything that we do and are supported by research and data.

For HTA, 2021 will be focused on recovery and rebuilding tourism in Hawaii, thereby helping to get more of our residents back to work and bringing more money into our State through visitor spending. HTA will use the Destination Management Action Plans as roadmaps. Part of the rebuilding process includes the Malama Hawaii marketing campaign. It's an effort to inspire mindful travel by encouraging visitors to help make a positive impact and leave Hawaii better than when they arrived. Hotels, industry partners and organizations across the State are working together to encourage voluntourism projects, in the spirit of helping to care for or "malama" our precious resources.

In addition, HTA's Aloha Aina program funded 34 non-profit and government programs in 2020 across the State that helped to maintain, preserve and protect Hawaii's natural resources.

1. **Destination Management Action Plan:** HTA launched a [community-based tourism program](#) in 2020, getting members of the public, visitor industry, island visitor bureaus and the counties involved in creating DMAPs to recover and rebuild tourism. The HTA Board of Directors approved the DMAPs for the islands of Kauai, Maui, and Molokai in December 2020. Hawaii Island and Lanai's DMAPs are still being finalized as of December 2020, and Oahu's DMAP process will begin in January/February 2021.

One-Year Goal: HTA will work with the counties to implement actions outlined in the DMAPs, and the goal is to address as many of those issues as possible. It will involve working with other state departments, the counties, lawmakers, visitor industry, and the community. HTA

WELL BEING OF ENVIRONMENT

will work from the premise that what's good for residents is good for tourism. In addition, HTA plans to continue supporting education and prevention programs to improve safety among visitors and residents, in an effort to maintain Hawaii's reputation as a safe destination.

Five-Year Goal: Over the next five years, HTA plans to continue efforts to rebuild tourism in a sustainable and regenerative manner.

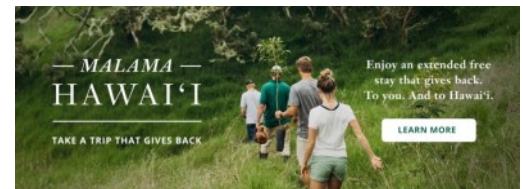
Action Plan:

- ⇒ HTA plans to work with the counties towards carrying out actions that are laid out in the DMAPs for each island.
- ⇒ HTA plans to increase its attention to improving and enhancing visitor-impacted infrastructure and natural resources, such as forests, parks, trails, cultural sites, beaches, and reefs.
- ⇒ HTA plans to encourage and support responsible tourism by increasing the number of training sessions provided for visitor industry partners and management.
- ⇒ HTA will continue to reach out to lawmakers and community groups to see how it can help with efforts to minimize the economic, environmental and social impacts of tourism.

Measure of Success: Milestones and measures will be based on the number of issues addressed.

2. **Branding and Marketing:** HTA contracts marketing organizations to promote Hawaii around the world. HTA's coverage in 2020 included the U.S. mainland, Canada, Japan, Oceania, Korea and Taiwan. During 2020, HTA discontinued its contracts to market in Europe, China and Southeast Asia, in large part due to the circumstances of COVID-19. HTA works to ensure that Hawaii delivers on its brand promise. HTA's marketing efforts are focused on working with contractors in markets who share our commitment to attracting high value visitors while staying true to Hawaii's brand.

One-Year Goal: HTA will continue to focus on marketing and brand management aimed at bringing more high-spending, low-impact visitors as part of its sustainable, responsible and regenerative tourism plan. The [Malama Hawaii](#) program encourages visitors to responsibly participate in unique experiences that give back to Hawaii.



Five-Year Goal: Over the next five years, HTA will continue to work towards bringing more high-spending, low impact visitors. HTA will also continue to educate visitors on cultural etiquette, including the do's and don'ts while in Hawaii.

Action Plan:

- ⇒ HTA plans to continue encouraging responsible and regenerative tourism through education.
- ⇒ HTA plans to continue marketing efforts that are aimed at attracting higher-spending visitors.
- ⇒ HTA will work to ensure the iconic brand of the Hawaiian Islands is protected and that Hawaii delivers on its brand promise.

Measure of Success: HTA's measures of success are visitor satisfaction, resident sentiment, per-person per-day spend, and total visitor expenditures.

WELL BEING OF CULTURE

HTA supports programs that perpetuate and recognize the uniqueness and integrity of the Hawaiian culture and community and their significance in differentiating the Hawaiian Islands through genuine visitor experiences.

PRESERVATION OF HAWAIIAN CULTURE

Kukulu Ola Program to perpetuate the Hawaiian Culture: In 2020, HTA had planned to support 43 community-created initiatives that perpetuate the Hawaiian culture through its [Kukulu Ola](#) program. However, because of the pandemic, restrictions on large gatherings and budget impacts, all the Native Hawaiian festivals and events that HTA had planned to support were either cancelled or moved online. HTA reduced the funding provided to the other programs and nonprofits in its Kukulu Ola program. HTA continued to support the Native Hawaiian Hospitality Association and efforts to preserve olelo Hawaii (Hawaiian language). It also provided support to Iolani Palace for the removal of bees and to make emergency repairs.



One-Year Goal: HTA aims to resume and continue funding programs and events that benefit the community, Hawaiian culture and natural resources because those are key components of Hawaii's brand. Regarding the host culture, HTA aims to give increased emphasis to the Hawaiian language by preserving language resources, and by encouraging appropriate use of the language.

Five-Year Goal: Over the next five years, HTA plans to continue to support Hawaiian programs and cultural practitioners, craftsmen, musicians, linguists, and other artists to help preserve and perpetuate the Hawaiian culture.

Action Plan:

- ⇒ HTA plans to establish a system for measuring and reporting the number of accommodations that have on-site cultural practice programs and practitioners, with the results tracked and reported annually.
- ⇒ HTA plans to develop a partnership with recognized Hawaiian cultural organizations to identify sites that are being used appropriately or inappropriately for tourism purposes.

Measure of Success: HTA will track results through its annual surveys.

FUNDING CULTURAL PROGRAMS

Community Festivals and Events: The Community Enrichment Program fosters community-based tourism projects to improve and enrich Hawaii's product offerings. It supports a diverse array of festivals, events and year-round programs in the niche areas of culture, education, health and wellness, nature, agriculture, sports, technology, and voluntourism. These community-based projects provide unique, authentic and highly-valued visitor experiences and represents activities that are developed by the community, for the community, and are things that the community wants to share with visitors and residents. This can also be considered as well being of people.



The Okinawan Festival's bon dance attracts many visitors as well as residents. Unfortunately, this year the festival was held virtually.

WELL BEING OF CULTURE



FESTIVAL OF THE PACIFIC

13th Festival of the Pacific Arts and Culture (FestPAC): The Festival, held every four years at a different location in the Pacific, was to be hosted by Hawaii in June 2020. However, due to the global pandemic, the Festival has been rescheduled for June 2024. The FestPAC Commission continues to hold virtual meetings on a monthly basis to carry on the planning for this event.

One-Year goal: Re-affirm commitment of all partner organizations and confirm venues for all activities.

Five-Year goal: Assess success of Hawaii event and share with other Pacific Island nations; create a new hybrid model for this event combining live and virtual activities and performances.

Action Plan: Leverage partnerships with cultural and community organizations.

Measure of success: Selection of Hawaii to host other similar events.

INTERNATIONAL AFFAIRS—SISTER STATE

International Affairs: Guangdong and Hawaii celebrated the 35th anniversary of their Sister-State Relationship. Due to the global pandemic, Hawaii and Guangdong were unable to plan a commemorative celebration; however, look forward to continuing their relationship of exchanges in the near future. The Division commemorated the 25th Anniversary of the Sister-State with Taiwan. The Division also organized one mission to promote trade and investment with Osaka.

One-Year goal: Produce the Philippines-Hawaii Sister States, Provinces and Cities Symposium and Expo and the Japan-Hawaii Sister-State Summit.

Five-Year goal: Leverage sister-state relations to increase trade and investment.

Action Plan: Leverage sister-state relations to increase trade and investment.

Measure of success: Increase in trade and investment.



ECONOMIC GROWTH

KNOWLEDGE BASED ECONOMY STRATEGY

Economic growth is essential to sustaining our livelihood in Hawaii and innovation is its key driver. Innovation leads to new and better paying jobs, resiliency to downturns in the global economy, and helps retain our best and brightest talent. Innovation is a mindset that demands continuous improvement in everything that we do and how we do it. It is inclusive, collaborative, and iterative.

DBEDT programs and projects look to build on our key assets of people, place, and culture with new capacity for our future. Hawaii has always produced world class technologies and products. Our programs connect the businesses to resources and new opportunities in and beyond our state. Supporting today's innovators creates new channels of revenue and jobs on all islands.

BUILDING A DIGITAL FOUNDATION FOR A RESILIENT HAWAII ECONOMY

Provide Infrastructure—Broadband

1. **Broadband.** The Hawaii Broadband Initiative's (HBI) mission is to provide a foundation for economic growth and global competitiveness for all of Hawaii's residents and businesses. Taking a holistic approach to the HBI, it is widely recognized that broadband touches the community by providing the foundation for innovation, economic development, healthcare, education, public safety, entertainment, etc. through the entire continuum of broadband connectivity including:

- Transpacific fiber optic cable and carrier neutral fiber landing station;
- Terrestrial backhaul to connect subsea cables to data centers and aggregation points on-island;
- Wireless broadband deployment including 5G small cells and 2.5GHz on Hawaiian Homelands;
- Inter-island fiber optic connectivity between the Hawaiian Islands;
- Rural broadband, last mile/first mile and community networks; and
- Broadband application drivers: telehealth, big data, smart city, smart grid, machine learning, artificial intelligence, autonomous vehicles, augmented reality, eSports, etc.

Broadband Hui. The [Broadband Hui](#) consists of more than 200 individuals representing wireline, wireless carriers, legislators, local national, and international non-profits, public and private schools, universities, commercial sector, local and state government leaders, and Congressional representatives. This collective forum meets on a weekly basis and has met over 40 weeks since the initial meeting. The Broadband Hui published the [Digital Equity Declaration](#). It is a call for collective action to address the three pillars of digital equity also known as Broadband for A.L.L.:

- Access: Broadband access and infrastructure for all of Hawaii's residents;
- Literacy: The tools and learning to bring everyone up to a level of digital literacy; and
- Livelihood: The ability to thrive in the digital economy also referred to our digital "pilina" or web of relationships.



Setting up network connection for Puuhonua O Waimanalo.

ECONOMIC GROWTH

Other projects include:

- Wi-fi on Wheels - Bringing connectivity to students in underserved communities.
- Kuauli Digital Opportunity - Providing refurbished hardware to needy families.
- Data Gathering and Mapping - Crowdsourcing of data to determine areas that are unserved or underserved with broadband.
- Community Networks - Connecting communities like Puuhonua o Waianae, Kipahulu and Molokai.

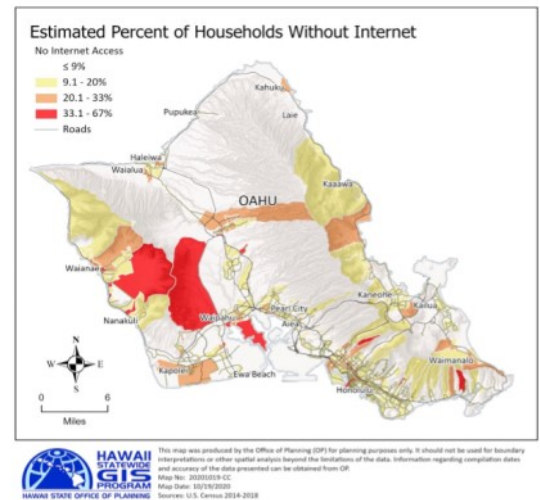
One-Year Goal: Continue convening Broadband Hui.

Five-Year Goal: Achieve goals stated in the Digital Equity Declaration.

Action Plan: See [Digital Equity Declaration](#).

Measure of Success: Eliminate digital inequity.

Broadband Strategic Plan: In addition to the work done on the Digital Equity Declaration, DBEDT, in partnership with the Office of Planning and with funding from DCCA, published the [2020 Hawaii Broadband Strategic Plan](#). The four overarching strategic goals include:



1. Ensure Robust Broadband Infrastructure to All Hawaii Residents;
2. Expand Digital Inclusion and Adoption to Achieve Digital Equity;
3. Enable Hawaii to Thrive in a Digital Economy; and
4. Strengthen Community Resiliency through Broadband.

One-Year Goal: Continue convening Broadband Hui.

Five-Year Goal: Achieve goals stated in the Digital Equity Declaration.

Action Plan: See [Digital Equity Declaration](#).

Measure of Success: Eliminate digital inequity.

Transpacific Cable Landing Station: Focus on building a carrier neutral [cable landing station](#) on Oahu and the neighbor islands to extend broadband width to the entire State and create an environment for Hawaii to thrive in the global digital economy.

One-Year Goal: In partnership with the Office of Planning and the Hawaii Community Development Authority, obtain permits to build a carrier neutral cable landing station on Oahu and Hawaii Island.

Five-Year Goal: Apply for construction grant for cable landing Infrastructure of Oahu and Hawaii Island.

Action Plan: Apply for an Engineering and Design Grant in 2021.

Measure of Success: Grant awarded.

ECONOMIC GROWTH

Provide Infrastructure—Utility

1. **District-Wide Improvement Program:** HCDA plans to develop and execute a district-wide infrastructure improvement program for Central Kakaako, which still is an under-utilized industrial and commercial area of Kakaako with substandard roads, insufficient drainage systems, and overhead utility lines.



Substandard roads in Kakaako.

One-Year Goal: Develop a comprehensive infrastructure improvement plan for Central Kakaako.

Five-Year Goal: Seek legislative funding to complete the plan for the district-wide improvement program for Central Kakaako.

Action Plan: Plan, design, and construct infrastructure improvements identified in the year one goal.

Measure of success: Completion of the district-wide improvement program for Central Kakaako.

2. **Kalaeloa Infrastructure Improvements:** HCDA completed the Kalaeloa Energy Corridor project in 2020. The \$13 million CIP funded project began at the intersection of Kapolei Parkway and Fort Barrette, continued along Enterprise Avenue and ended at Midway Road fronting the Kalaeloa Airport. The Department of Transportation Airports Division has contracted with Hawaiian Electric Company to energize the new Enterprise Energy Corridor project.

One-Year Goal: Continue to work on improving infrastructure in Kalaeloa to support development. Work with landowners and stakeholders in identifying critical infrastructure deficiencies and prepare a plan to address the deficiencies.

Five-Year Goal: Seek CIP and other funding for infrastructure improvements.

Action Plan: Plan, design, and construct infrastructure improvements.

Measure of success: Improved infrastructure leading to additional housing and mixed-use development.

Provide Facilities

1. **HTDC Entrepreneurs Sandbox:** The [Sandbox](#) had a tremendous start between July 1, 2019, up to the COVID-19 shutdown in March 2020. All of the offices were rented, the TRUE Initiative was launched, and there were activities going on every single day of the month, including weekends prior to COVID-19.

Due to COVID-19, the Entrepreneurs Sandbox moved online. The Sandbox currently hosts approximately three (3) webinars a month including relevant topics such as resume and linked-in tips, virtual job fairs, women in tech, transitioning to a tech job, and more. A HTDC Covid-19 resource page was set-up.

In April 2020, the Sandbox quickly re-tooled facility space into a call center for the Department of Labor to help manage a record number of jobless claims. Later that month, the facility was used as a socially distanced assembly line for a special Mother's Day



Prior to COVID-19, the Sandbox was bustling with activity on a daily basis.

ECONOMIC GROWTH

Gift Boxes in a partnership with INNOVATE Hawaii, the Chamber of Commerce of Hawaii and the Hawaii Food Manufacturing Association. The Sandbox was designed as an innovation hub for tech, entrepreneurs and creatives with the flexibility to accommodate various projects of different dimensions and now has demonstrated the ability to quickly adjust to support our urgent community needs.

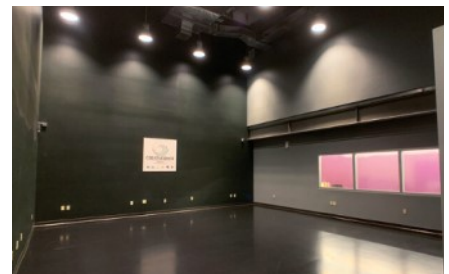
One-Year Goal: Revamp the Sandbox to positive operating cashflow.

Five-Year Goal: Begin the planning of an adjacent facility.

Action Plan: Building demand with Sandbox reaching full capacity and fully developed and engaged with the community.

Measure of Success: Full capacity and positive cashflow.

Co-Working Space & Studio at Entrepreneurs Sandbox: Creative Industries Division (CID) in partnership with Hawaii Technology Development Corporation (HTDC) will launch a studio space and creative co-working at the Entrepreneurs Sandbox in Kakaako. This purpose-built stage will provide the needed infrastructure for creatives who are developing content, creating online shows and rehearsal space. BizGym and former president of 1013 studios manage the space slated to open in Q1 2021. To expand postproduction training for the potential of local workforce being sought for productions, CID's Creative Spaces at the FTZ Homer Maxey Center focused on postproduction in sound and editorial, the other at the Entrepreneurs Sandbox. Each space will feature the tools necessary to create content in media, music and design/fashion.



One-Year Goal: Increase export of local music and media IP.

Five-Year Goal: Launch a content platform similar to the Korean Creative Content Agency model (KOCCA).

Action Plan: Partnership with KOCCA and regional accelerators, co-working hubs in Japan, Korea and Mainland U.S.

Measure of Success: Increased revenues to local creatives.

2. **Foreign-Trade Zone at Pier 2:** The [FTZ9](#) program is a self-sustaining program that services 369 companies statewide, providing revenues of over \$2.2 million annually, which wholly supports the program. During the last reporting year:

- **FTZ9 had over \$9.3 billion in cargo and merchandise that transited through Hawaii's FTZ sites which was up nearly 8 percent from the previous reporting year.**
- **One hundred and ten (110) different types of foreign merchandise were received into the FTZ9 from 34 countries.**
- **Hawaii's FTZ remains in the top 25 FTZs in the nation, with total exports of \$439 million annually, ranked as the 20th highest in the nation according to the Foreign-Trade Zones Board Annual Report to Congress.**
- **FTZ9 ranked 23rd highest in the nation for exports from warehouse/distribution activity, totaling \$2.3 billion, which was a 7.8 percent increase from the previous year.**
- **Zone activity supports 2,901 jobs for Hawaii.**
- **Total value-added and manufacturing activities over \$5.1 billion, an 18.6% increase.**

ECONOMIC GROWTH

One-Year Goal: Continue its excellent service and provide support to its clients. Update and modernize the FTZ Procedures Manual.

Five-Year Goal: Continue to serve FTZ clients to their highest expectation by adjusting program offerings to meet client demands. Continue to expand the FTZ Special Fund in order to fulfill its mission and expand services.

Action Plan: Through the use of on-line platforms with the eventual goal of in-person sessions, FTZ will develop a series of seminars designed to educate potential clients as to what is involved in international commerce and how to participate. FTZ will work with industry partners such as the U.S. Commercial Services, Small Business Administration, Chambers of Commerce, Mana Up, and DBEDT sister agencies to develop and present these seminars.

Measure of Success: The number of clients and jobs the program continues to support as well as program's continued Special Fund financial position throughout the year.

Renovations to the Pier 2 Facilities: The renovations to the Makai side of the Pier 2 facility were completed with an update and conversion to ADA compliant restrooms, an updated elevator, and a new chiller system. These renovations were greatly needed and helped to modernize the facility to bring it up to current standards and make it an attractive place to conduct business for many years into the future.

One-Year Goal: With the given financial constraints to the state's budget, FTZ will be deferring any additional CIP requests for facility's maintenance or improvement projects.

Five-Year Goal: Depending on the state's financial position as time progresses, FTZ has identified its parking lots and marshall yard for resurfacing, upgrading its antiquated, original DELTA electric distribution system, and complete the roof encapsulation over the warehouse.

Action Plan: In the interim, FTZ will utilize its Special Fund for facility maintenance and repair as needed but depending on the economy and the program's financial position, the FTZ may not have sufficient funds for major repairs or needed renovation projects.

Measure of Success: Continued maintenance and operation of the facility for the duration to ensure it is a safe and attractive place for international trade business to be conducted.

Alternative Site Framework Zone (ASFZ): FTZ9 also aggressively began to market to companies who may be able to benefit from activating as an [Alternative Site Framework Zone](#). The program reached out to multiple companies regarding the opportunity and now has three companies interested in activating and are currently in the application and activation phase. A fourth company has also expressed interest and FTZ9 will begin formal discussions with this company early in 2021.

One-Year Goal: 3 companies approved as ASF Zone location.

Five-Year Goal: 6 companies approved as ASF Zone location.

Action Plan: Work with identified companies to complete the Zone application to the FTZ Board, ensure the site meets Customs and Border Protection security and operations guidelines, and completes a Zone User Agreement. FTZ is working with Innovate Hawaii and other applicable agencies to identify and open discussions with companies who could benefit from using FTZ procedures in their operations. Improve application process and relative speed of activation.

Measures of Success: Success for this initiative will be measured in the number of potential clients engaged, and how many have begun the FTZ application process.

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3. **Maintain Operations at Hawaii Ocean Science and Technology Park:** The [NELHA](#) seawater system is the largest and most advanced in the world. Continued to maintain 99.99% uptime and review options to increase efficiency of the seawater system by 1% in terms of power consumption per gallon. Achieved goal of being below 0.40 kWhr/kgal in terms of pumping efficiency facility wide. In general, these changes saved NELHA 25 -35 kW per hour that would have increased the overall cost of the pumping operation from last year.

One-year Goal: Maintain uptime of 99.99% and increase efficiency by 1%.

Five-year Goal: Maintain uptime of 99.99% and increase efficiency by 2%.

Action Plan:

- ⇒ Continue efforts to improve efficiency, stabilize energy costs, maintain adequate reserve fund and achieve 99.99 percent uptime.
- ⇒ Continue to upgrade SCADA and WQL with new instruments and monitoring devices controlled by Water Quality Lab (WQL) including new nutrient analyzer, upgrading SCADA software and add additional monitoring devices, controls and pump station security to SCADA system.
- ⇒ Secure grant funding for microgrid development project from South Korean government for \$1.85M to service the 55" seawater pump station to lower or maintain energy costs. The testbed demonstration includes detailed design, deployment, testing and evaluation of a microgrid including 500 kilowatts of advanced PV panels and a 700-kilowatt-hour energy storage system (ESS) at the main seawater pump station at HOST Park in Kailua-Kona on the Island of Hawaii. The microgrid is expected to be operational by 2022.

Measure of Success: Continued stability of seawater system without disruption to HOST Park clients.

Removal of Abandoned Deep Seawater Pipelines: NELHA selected a consultant to formulate plans and design of removal of abandoned deep seawater pipelines. The \$500,000 in CIP funds appropriated for this project has been encumbered. Consultant was selected and the resulting contract has been awarded and executed for the underwater survey of pipeline locations. Remaining funds for the design of removal or anchor in place have been encumbered. Project is on hold due to COVID19 travel restrictions.

One-Year Goal: Complete survey and design for removal of pipelines.

Five-Year Goal: Remove pipelines or anchor in place.

Action Plan: Complete current contracts and request CIP funds to mitigate any health and safety issues identified.

Measure of Success: Mitigate any health and safety issues associated with unsecured pipelines that could cause danger to boaters.



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Exploratory Well for Potable Water Resources: NELHA continued its efforts for an exploratory well for new potable water resources for NELHA via a \$2.5M CIP appropriation. Obtained final permits required for construction and begin construction of well. Burial Council delegated decision to relocate the existing burial to the family of the deceased; family members agreed amongst themselves to the relocation and reinterment; reinterment plan carried out successfully. Final archaeological data recovery report submitted to DLNR State Historic Protection Division (SHPD) for review and acceptance; SHPD acceptance of the final data recovery report; SHPD acceptance of the archaeological monitoring plan.

One-Year Goal: Begin exploratory well drilling.

Five-Year Goal: N/A – project will be completed in 2023.

Action Plan: Work closely with HHFDC in partnership in drilling well and testing quality of freshwater.

Measure of Success: New high-quality source of freshwater verified.

Increase Revenue Stream: Continued to increase revenue streams within the NELHA Board approved business plan through continued efforts to maintain occupancy in Research Campus, vacant lands in HOST Park. Total revenue was \$4.6M for FY2020 and represents an increase of 4 percent over FY2019. For the first time, the offices in the NELHA's new incubator building were completely leased out. There is currently only one large room in Hale Iako available for lease. Occupancy in the research campus is also at some of the highest it has ever been despite the pandemic with small expansions from three companies. Increasing lease revenue in the park however has been challenging due to the COVID situation. Finally, despite the pandemic, no businesses as HOST Park and six new companies have established themselves at HOST Park, which demonstrates the resiliency of this economic sector.

One-Year Goal: Increase revenue by 5%.

Five-Year Goal: Increase revenue by 15% and complete Phase 1 of innovation village.

Action Plan:

- ⇒ NELHA will develop additional revenue streams to distribute operating costs over a broader base of clients.
- ⇒ NELHA will generate additional revenue to cover development costs and make necessary improvements to facilities and infrastructure.
- ⇒ NELHA will continue to review non-performing assets and realize the revenue potential afforded.

Measure of Success: Continued self-sufficiency of NELHA in maintaining operations from Special Fund sources and General Funds are not needed to subsidize operations.

4. **Innovation and Manufacturing Center (IMC) in Hilo:** PISCES is part of a working group to create an Innovation and Manufacturing Center (IMC) in East Hawaii to grow and support the local technology sector. HTDC is the lead agency in this project. Contractors for the Hilo and FRTC projects were secured and initiated work.

One-Year Goal: Assess the feasibility of the project. PISCES will work with HTDC to secure a site where the IMC can be developed and collaborate in the design process for the project.

Five-Year Goal: Complete construction and begin operation. PISCES to use site as base for its headquarters.

Action Plan:

- ⇒ Collaborate with HTDC in any way that PISCES can provide help, support and guidance.

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- ⇒ Create a Public-private partnership by working together with the community and state partners on a sustainable working model.
- ⇒ Secure public/private commitments for project.
- ⇒ Enhance opportunities for local businesses with workforce training and light manufacturing resources and help meet increasing demands as these industries grow in Hawaii.

Measure of Success: Construction of the facility and positive cashflow.

5. **Maui Research and Tech Park:** The MRTC provides office space, coworking space, and workshops for the Maui tech community. Last year HTDC hosted 8 events at the MRTC facility.

One-Year Goal: Cash Flow positive. Facility at 50% capacity.

Five-Year Goal: Facility at 90% capacity.

Action Plan: Revamp the facility to cater to remote workers.

Measure of Success: Number or new tenants and supporting workshop attendance.



6. **Kakaako Innovation Block Plan:** The Kakaako Innovation Block is an innovation cluster expanding on the success of the Entrepreneurs Sandbox.

One-Year Goal: Leveraging partnerships and community resources to create sustainable model to help move the industry forward. Secure additional commitments from non-state sources.

Five-Year Goal: Begin planning on other components of the block.

Action Plan: Continue activities at the Sandbox and further relationship with UH and the private sector.

Measure of Success: Non-state funds secured for the project.

7. **First Responders Tech Campus:** The FRTC is a technology campus for first responders located at the Mililani Tech Park.

One-Year Goal: Project planning and permitting

Five-Year Goal: Secure partnership with agencies and begin construction.

Action Plan: Contractor hired to plan.

Measure of Success: Federal dollars secured for project.

8. **Neighbor Island Creative Co-Working Sites:** A Memorandum of Agreement with the Public Access Stations will augment this infrastructure project, to deliver the same tools and programming to neighbor islands at PEG Access Centers. Integration of programming will include Creative Lab Hawaii High School to industry level opportunities.

One-Year Goal: Open Kakaako Studio Q3 FY21.

Five-Year Goal: Generate income from site rentals which are deposited into the Act 228 fund to sustain/maintain facilities, seed fund content for export, continue training programs.

Action Plan: Contractors to implement programs in concert with PEG stations.

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Measure of Success: Increased original content, programming from throughout Hawaii for licensing to global markets, complete MOA with all neighbor island PEGS, seek private sector donors to maintain the facilities.

9. **New Studio with Creative Media, Film Production Facilities:** CID has worked with UH leadership and DAGS and their consultants G70 to complete the initial plans required to obtain an Environmental Assessment for a site in the West Oahu region.

One-Year Goal: Attract private sector partners in the industry to design/build/operate a new multi-stage Creative Media/Film Studio Complex on Oahu.

Five-Year Goal: Structure completed and open for business.

Action Plan: Work with industry and UH.

Measure of Success: Multi-million-dollar industry cluster. Increased jobs, production, export of local content and taxes generated.

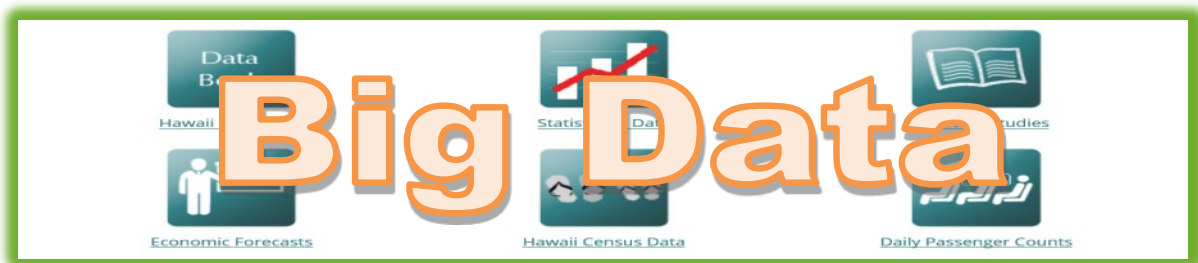
10. **Aloha Stadium Redevelopment:** HCDA, the Stadium Authority and the Department of Accounting and General Services (DAGS) executed a Memorandum of Agreement, as outlined in Act 268, that describes the cooperative relationship between the parties to work together to achieve a common goal, and develop a new Stadium and the area around it, which will result in a state-of-the-art facility, as well as social and economic opportunities for Hawaii. HCDA's main function will be disbursement of CIP funds that have been appropriated. Projected work on the new facility and ancillary development will be done in phases.

One-Year Goal: Assist DAGS in completing the planning phase for the new stadium.

Five-Year Goal: Assist DAGS in completing the construction of the new stadium.

Action Plan: Work collaboratively with the Stadium Authority and DAGS to efficiently and effectively build the new stadium and develop the area around it.

Measure of success: The new stadium is built.



BIG DATA RESEARCH AND DEVELOPMENT

1. **Gathering of Data:** READ houses the Hawaii State Data Center and the Federal-State Cooperative for Population Estimates (FSCPE) that partners with the U.S. Census Bureau and publishes Hawaii data, including the decennial census, the annual American Community Survey, Economic Census, and the annual population estimates.

- READ developed and hosts two data warehouses, one for the general [economic data](#), and the other is specific on [tourism data](#). The data can be accessed via [READ's website](#). READ's website receives an average of 54,000 page views a month in 2020, representing an 80% increase from that of 2019.

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- As of December 2020, the Economic Data Warehouse has 403,078 data points, and the tourism data warehouse consists of 438,223 data points. READ also developed a [Tourism dashboard](#). The data warehouses and the dashboard are updated on a monthly basis and provides users with tools for selecting the data series, the frequency, and the history, and ability to export data to excel spreadsheets and convert to PDF formats.
- READ collects data and maintains the database on Hawaii petroleum industry and the State government electricity usage by account. READ also created the [Energy Data Dashboard](#), which is updated on a monthly basis, and provides users with tools for selecting the data series, the frequency, and the history, and ability to export data to excel spreadsheets and convert to PDF formats.

One-Year Goal: Increase the data points by 20,000.

Five-Year Goal: READ will develop 5 more data dashboards on the economy and the population.

Action Plan: Assignments are given to specific employees with specific goals. Weekly meetings are held with employees to discuss work in progress. All projects are based on team work so that everyone on the team can substitute for each other if one is on leave. Periodic trainings are held in-house or by invited experts.

Measurement of success: The data products and studies will be measured by media coverage, citations, website visits, and comments from the legislature, administration, and the public.

2. **Tourism Data:** HTA serves as a source for vital information on [tourism market research](#). During the COVID-19 pandemic, HTA's research team also served as a resource for the Governor's office, the Department of Transportation, the Department of Health, the Attorney General's office and the local police departments.
 - HTA's Tourism Research Division continuously provides insightful information benefitting businesses and individuals who rely on having timely, accurate and comprehensive data about Hawaii tourism for their own usage.
 - * Regular Tourism Research reports include the Monthly Visitor Statistics and news releases, Market Area Highlights and Fact Sheets, monthly Air Seat Outlook reports, monthly Hotel Performance Report, the Vacation Rental Performance Report, the annual visitor research reports, Hawaii Timeshare Quarterly report quarterly and annual Visitor Satisfaction & Activity reports, Resident Sentiment Survey report, Visitor Plant Inventory, and Marketing Effectiveness Study.
 - * In response to the pandemic, the Tourism Research team produced additional market intelligence reports for stakeholders including a daily Tourism Brief, weekly Destination Brand Index Trend reports, and weekly Travel Agency Bookings reports. In addition, the research team monitored and updated air seat outlook reports more frequently due to rapid changes in air service.

One-Year Goal: Tourism Research will continue to provide regular, timely, and relevant market intelligence to stakeholders.

Five-Year Goal: Over the next five years, Tourism Research leverage technology to enhance research methods and improve the accessibility and user-friendliness of research reports.

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Action Plan:

- ⇒ Tourism Research will maintain programs which provide the Measures of Success.
- ⇒ Tourism Research will ensure that reports and market intelligence are timely, relevant, and regular.
- ⇒ Tourism Research will leverage technology to enhance research methods.
- ⇒ Tourism Research will leverage technology to improve data dissemination.
- ⇒ Tourism Research will maintain the integrity and continuity of key data series and programs.
- ⇒ Pending the availability of funding, Tourism Research will pursue additional relevant research opportunities.

Measure of Success: Research report and projects that are produced on time and on budget.

3. **Energy Data Analytics:** HSEO is prioritizing the establishment and implementation of an energy ecosystem data governance framework. Accessible, reliable, high quality data undergirds all efforts to achieve a resilient clean energy decarbonized economy. Collection, analysis, and open access to quality data is critical to Hawaii's successful transition to a decarbonized economy. Data supports the development of equitable and economically viable energy efficiency programs. Data is used to monitor and track progress towards state energy and climate goal, as well as objectives such as the conversion of medium- and heavy-duty vehicles.

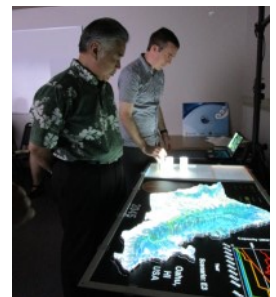
Actions undertaken by HSEO to support data analytics include:

- **Engage Modeling Tool:** HSEO has continued developing its "Engage" energy system modeling tool. Previously known as Hawaii Energy Visualization Initiative or HEVI, HSEO developed this in collaboration with the United States Department of Energy's (DOE) National Renewable Energy Laboratory (NREL). "Engage" can augment the energy system planning process by empowering more stakeholders to better understand and solve energy system planning problems.
- **HAVEN Tool:** The deployment of its [HAVEN](#) visualization platform as a community engagement tool. HAVEN supports the analysis and communication of information contained within complex energy data sets highlighting energy and related sector interdependencies and scenarios. HAVEN continued to be utilized in community engagements to advance the discussion on the tradeoffs of alternative renewable energy buildout pathways, in particular how they impact land utilization. USDOE requested HAVEN to be featured in the USDOE innovation exhibit at CERAWeek in Houston, Texas. CERAWeek provides an integrated framework for understanding what's ahead for global energy markets, geopolitics, and technology.

One-Year goal: Create and fill data scientist position with 3-year dedicated federal funding. Support the position with graduate data scientist students. Identify priority data governance activities. Create data sharing platform.

Five-Year goal: With a data governance framework largely in place, advanced data analytics are underway and available to the public. Explore monetization of data analytics per HRS §196-72(c)12. Dedicated funding source supports ongoing data science activities.

Action Plan: Develop a data governance framework for energy data to support measurement and evaluation of progress towards state energy goals, identify opportunities, and promote outreach and education. Design the framework to better disseminate data to the public.



Michael Schwing demonstrates the HAVEN tool to Governor Ige.

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Develop the energy data governance framework for Hawaii through a federally funded Data Scientist and Fellows in partnership with UH Data Science Institute.

Measure of success: Common data standards and practices across Hawaii's energy ecosystem. Accessibility of data sets.

4. **Census 2020:** READ hosted and operated the Hawaii Government Complete Count Committee for the 2020 Census with representatives from the Federal, State, and County government agencies as well as the non-profit organizations. They participated in 13 committee meetings, designed and produced brochures in 13 languages, distributed promotional materials to the public and participated in 20 community meetings and events. **As of October 15, 2020, 99.9% of Hawaii residents were counted.**



One-Year Goal: Develop one new dashboard on Hawaii population. Work with the U.S. Census Bureau and organize 3 training sessions on 2020 Census data.

Five-Year Goal: Work with the U.S. Census Bureau and organize at least 30 training sessions in Hawaii on Census data. Develop one new dashboard on Hawaii population. Conduct five comprehensive studies on Hawaii's population and demographic changes based on 2020 Census data.

Action Plan: Monthly meetings with the U.S. Census Bureau; Participate in the trainings at the U.S. Census Bureau. Monthly meetings with the State Data Center affiliates, periodic newsletters to the public.

Measurement of success: Number of Census data trainings organized, number of attendees, percentage of excellent evaluations, website visits, and media coverage of population studies.

2. **READ Economic Analysis Reports:** The Research and Economic Analysis Division (READ) produces an average of 50 economic and [statistical reports](#) a year, covering all aspects related to Hawaii's economy and the population including economic issues on energy, industry structure, workforce, household consumption, population, taxation, and businesses. The division assesses the economic conditions, identifies growth potentials, and projects future trends. READ also prepares economic documents for the Department of Accounting and General Services, Department of Transportation, and Department of Budget and Finance for the State's revenue bond and general obligation bond credit rating and sales.

One-Year Goal:

- * Assess economic conditions, identify growth potentials, and project future trends.
- * One report on economic impacts of aging in Hawaii.
- * Two comprehensive studies on Hawaii's labor force, including brain drain, occupational development, place of work status.
- * Develop methodology and models to measure economic impacts and industry performance. Update and maintain the State and county Input-Output Models using the 2017 Economic Census data.
- * Complete 45 other economic and statistical reports.

Five-Year Goal: Plans to complete five comprehensive population studies along with other economic studies.

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Action Plan: Assignments are given to specific employees with specific goals. Weekly meetings are held with employees to discuss work in progress. All projects are based on team work so that everyone on the team can substitute for each other if one is on leave. Periodic trainings are held in-house or by invited experts.

Measurement of success: Will be determined on whether the studies are produced and media coverage, citations, and comments from the Legislature, Administration and the public.

3. **Community Outreach and Education:** READ participates with the State agency bond rating and sales activities every year. Prepare documents for State financial reports and budget. READ also participate in business community events and provide training on data use and present the state economic conditions and projections.

One-Year Goal: 20 community event participations.

Five-Year Goal: 100 community event participation and training.

Action Plan: Join membership with business communities and organizations. Work with local communities in event planning. Taking the leadership positions in the communities.

Measurement of success: Good to excellent grade in event evaluations.



State Economist
Dr. Eugene Tian.

GEOGRAPHIC INFORMATION SYSTEMS

1. **Strategic Plan for Statewide GIS Program:** The Office of Planning's [GIS Program](#) leads a multi-agency effort to establish, promote, and coordinate the use of geographic information systems (GIS) technology among Hawaii State Government agencies. The GIS Program will review and update the Statewide GIS Program's Strategic Plan.



One-Year Goal: Develop an updated Strategic Plan for the Statewide GIS Program.

Five-Year Goal: Implement the Strategic Plan and review and adjust annually, as needed.

Action Plan: In consultation with stakeholders and key partners, e.g., state, county, and federal agencies and HIGICC, the Statewide GIS Program will review and update its Strategic Plan. The plan will set the priorities for the Program, build on its strengths and identify areas that can be improved to address the needs and concerns of the GIS community.

Measure of Success: Specific elements of the Strategic Plan will include measurable objectives that will be tracked.

2. **Implement Governance Framework for ArcGIS Online (AGOL) Platform:** The Office of Planning's GIS Program plans to work with other state agencies to implement a governance framework around the AGOL platform. This will include coordinating with ETS and agency leadership to establish AGOL liaisons in state agencies who will be responsible for facilitating and managing agency GIS users, and geospatial content and applications.

One-Year Goal: Get buy-in from agency directors and managers to recruit AGOL Liaisons within their agencies to implement governance changes in the AGOL platform. Work with agencies to identify AGOL liaisons and establish roles, responsibilities, and a communication plan.

Five-Year Goal: Establish a regular meeting schedule with AGOL Liaisons and work with them

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to implement changes in publishing and management of users and content. In collaboration with AGOL Liaisons develop additional guidance to address future changes in the platform as they arise.

Action Plan: Implement elements of consultant recommendations: revise user roles; revise publishing protocols; empower and train AGOL Liaisons.

Measure of Success: Regularly solicit feedback from GIS community regarding issues or concerns with changes in the platform. Overall success of governance should result in: a reduction in the number content items shared publicly (with an assurance that publicly shared items have been properly curated at the agency level for appropriateness, accuracy, and completeness); a reduction in the amount of storage required for content; and a reduction in the number of inactive users.

3. **Develop Communication and Outreach Strategy to Highlight Use of GIS in State Agencies:**

The Statewide GIS Program will work with state agencies to develop communication strategies to highlight the use and value of geospatial data, tools, and resources in achieving their respective agency goals. OP will expand on the use of the AGOL online mapping platform, the State's geoportal, and press releases to highlight achievements, and OP will also develop an annual Story Map website that includes narrative, images, and multimedia as an outreach and communication vehicle.

One-Year Goal: Develop an annual Story Map highlighting agency accomplishments and bringing attention to the State's geoplatform and the role of geospatial analysis in helping agencies accomplish their missions.

Five-Year Goal: Continue with an annual Story Map and establish other regular communication and outreach vehicles.

Action Plan: Survey agencies and meet with agency users to identify success stories utilizing GIS that can be highlighted and developed into content for the Story Map.

Measure of Success: No additional (non-personnel) funds are being sought.

4. **Develop Memoranda of Understanding/Agreement with Agencies Around Data Sharing and Governance:**

OP's Statewide GIS Program plans to develop memoranda of understanding/memoranda of agreement (MOUs/MOAs) with state and county agencies to provide a framework for consistent and reliable data sharing and data security, as well as MOUs/MOAs with state agencies to memorialize a comprehensive governance framework around the geospatial platform.

One-year goal: Execute an MOA with the Office of Enterprise Technology Services (ETS) to establish roles and responsibilities – ETS for funding the enterprise licensing agreement and cloud hosting environment, and OP for administering and managing the enterprise GIS platform.

Five-year goal: Execute MOUs with state and county agencies to establish regular updates of key data sets and document access and use constraints.

Action Plan: Work with the IT Governance office in ETS to develop an MOA; work with stakeholder agencies to identify data sets that can be shared in the State's geodatabase and develop MOUs to formalize data sharing agreements.

Measure of success: Regularly scheduled calls/meetings with ETS to discuss concerns and issues; an increasing number of MOUs with agencies.

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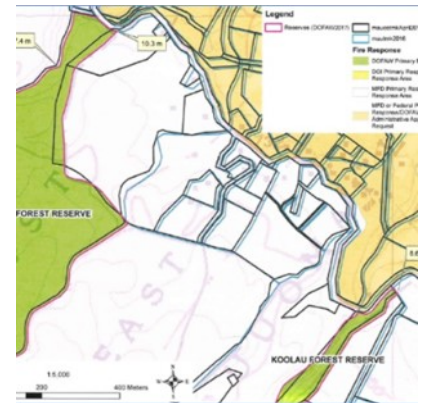
5. **TMK Parcel Boundary Alignment Issue:** During FY 2021, the Statewide GIS Program will conduct a study of options to address GIS layer alignment issues that arise as a result of TMK parcel boundary displacements/shifts counties make as they improve the positional accuracy of their TMK parcel data. The shifted parcel boundaries no longer overlay, or “line up” with derivative State agency layers such as State Land Use Districts, or Reserves, Federal agency layers such as Critical Habitat, or even other county layers such as Zoning, Roads or Sewer Lines. The misalignment affects analysis of GIS data throughout the State. Funds for this project are through the OP General Fund.

One-Year Goal: Identify possible solutions for various stakeholders to correct current data (short-term) and identify possible solutions going forward to create recurring work and communication flows among stakeholders to facilitate and enable regular updates of dependent data sets (long-term).

Five-Year Goal: Assist and support state agencies to implement solutions, where they are feasible, for dependent and affected data layers.

Action Plan: The GIS Program is convening a working group with participation from all sectors – federal, state, and county agencies, utilities, private sector contractors, and land surveyors – to identify alignment issues that arise when counties shift the GIS boundaries of their parcel layers in an effort to improve accuracy and alignment. Other GIS layers that have been developed that are to some degree dependent on those boundaries are adversely affected. Workflow and technical elements will be discussed to identify possible short- and long-term solutions.

Measure of Success: Track the number of identified state agencies with dependent or affected data layers, workflows or analyses that are able to implement short- and long-term solutions and maintain up-to-date data layers.



6. **Elevation Data Acquisition:** OP's Statewide GIS program will partner with federal, state, and county agencies and the private sector to acquire high-density light detection and ranging (LiDAR) data to: (1) replace old and lower quality data, and (2) provide new coverage areas. LiDAR data are the primary sources for deriving elevation models and other datasets. LiDAR is used to produce detailed maps showing sources of sediment pollution and smother nearshore coral ecosystems and inform mitigation and restoration efforts on Lanai. This LiDAR will provide the underlying data for the elevation map for Hawaii DOT's and NOAA's National Geodetic Survey "Hawaii Statewide Height Modernization Project," a major update to Hawaii's vertical control network. The LiDAR will also enable updates to Honolulu's flood maps through FEMA's RiskMAP program. LiDAR will provide detailed elevation and crop height information to enable updates to Hawaii DOA's "2015 Hawaii Statewide Agricultural Baseline Study." Data acquisition areas include Maui County and the City and County of Honolulu.

One-Year Goal: Acquire and process high-density LiDAR data for Maui County and Oahu.

Five-Year Goal: Acquire and process high-density LiDAR data statewide, including bathymetric data.

Action Plan: Pool funds with other stakeholders as matching funds for the federal 3DEP (3D Elevation Program) for LiDAR collection for Maui and Oahu. Include this data in the state's Elevation Service and make available for download and for digital elevation models (DEM),

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digital surface models (DSM), and digital terrain models DTM).

Measure of Success: Successful application for 3DEP funding, successful LIDAR collection, and utilization of data by GIS community.

7. **Geoplatform Management:** The State will negotiate its GIS licensing and cloud hosting agreements with Esri. During FY 2022, OP's GIS Program will work with agencies to mitigate the effects of the changes and will expand governance guidance and operational standards from the AGOL online platform to include desktop and server GIS platforms.

One-Year Goal: Communicate licensing and platform changes to user community and work collaboratively with agencies to develop governance standards across the full geoplatform, extending beyond the AGOL to the on-premise server and desktop environments. Draft State geoplatform governance standards document.

Five-Year Goal: Establish a representative GIS key stakeholder advisory group to provide two-way communication channels among agency users.

Action Plan: Work with ETS to negotiate GIS licensing and data hosting agreements. Work with agencies to make adjustments as needed to manage server and desktop licensing as well as their use of the online AGOL platform.

Measure of Success: Establishment of an advisory group; establishment of a regular meeting schedule; development of plans to address licensing and hosting requirements in advance of need.

8. **Establish a Distributed/Federated System of GIS Servers and Data:** OP's GIS Program plans to develop a distributed/federated geoplatform architecture (geodatabases and hubs/portals) and develop a governance plan to manage the proliferation of geospatial data and applications. The federated architecture is expected to be in the Statewide GIS strategic plan and will help to manage the growth and proliferation of geodata systems in a distributed fashion.

One-year goal: Develop a comprehensive plan to learn more about the requirements (hardware, software, skill sets) for establishing and maintaining a federated GIS server environment.

Five-year goal: Establish an architecture supporting multiple agencies' GIS servers federating their geodatabases in ETS' Government Private Cloud (GPC).

Action Plan: Work with Esri and ETS to design a sustainable, distributed GIS server architecture to accommodate agency on-premise server needs and establish a best practice governance framework for managing this environment.

Measure of success: Proliferation of federated agency level GIS geodatabase servers and reduction in standalone, unfederated servers and standalone file geodatabases.

9. **Develop a Quantitative Calculation of Return on Investment (ROI) for GIS:** During FY 2022, OP's GIS Program will work with state agencies to identify activities and measurable outcomes utilizing GIS resources to develop a quantifiable Return on Investment for the State's investment in GIS tools and resources.

One-Year Goal: Gather information from agencies about regular workflows incorporating GIS and noteworthy cases that have had a measurable impact on operations. Identify outcomes and outputs of those efforts that can be highlighted as part of the communication and outreach strategy above. Work with agencies to quantify short- and long-term impacts of those efforts.

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Five-Year Goal: Develop communication channels by which the GIS staff can continue to collect information from agencies about their use of GIS with quantifiable results.

Action Plan: Survey GIS user community and work with established GIS agency contact to identify suitable project and regular workflows

Measure of Success: Development of an annually repeatable ROI calculation in support of continued investment to support further development of geospatial tools, resources, and analysis.



PROVIDE SMALL BUSINESS THE INFORMATION AND KNOWLEDGE TO EXPAND THEIR BUSINESS TO THE GLOBAL MARKET

1. **Hawaii State Trade Expansion Program (HiSTEP):** [HiSTEP](#) is an export development program designed to: 1) Expand exports and revenues from exports of Hawaii produced goods and services; 2) Grow the number of Hawaii companies active in global markets; and 3) Penetrate new markets for Hawaii produced goods and services. In the eighth year of this program, BDSD has participated in over 40 international and domestic trade shows and retailer promotions. More than 900 Hawaii companies from industries ranging from fashion, food, gifts, education, to life sciences, were featured at various DBEDT-produced Hawaii Pavilions in Japan, Taiwan, China, and major U.S. Cities such as Orlando, Denver, San Francisco, San Diego, Chicago, Boston, Philadelphia and Las Vegas.

To continue this export program, the division won a competitive grant award of \$528,000 from the U.S. Small Business Administration (SBA). The division's proposal included a series of overseas and domestic trade shows, export training and one-on-one business advising, and direct financial assistance to support companies' export development plans. During the eight years that this program has been in operation, the division has been **awarded over \$4.5 million in grant monies which resulted in a total of \$105 million in export sales, supported 971 jobs, and generated \$7 million in tax revenues.**

The COVID-19 pandemic in 2020 altered many of the HiSTEP activities due to travel restrictions and cancellation of several trade shows.



ECONOMIC GROWTH

Companies are turning to virtual means of selling and promoting their products and services, and the division is committed to supporting businesses in their efforts and will continue to monitor and revise the HiSTEP activities into 2021 as needed.

One-Year Goal: Secure \$800,000 SBA award; assist 225 companies; and achieve \$5.5 million in export sales.

Five-Year Goal: \$500,000 + grants each of 5-year period; \$20 million in export sales.

Action Plan: Tradeshow, missions and company assistance.

Measure of success: Increase in export sales.

2. **2020 Tokyo International Gift Show:** In October 2020, despite the challenges of the global pandemic, DBEDT organized a Hawaii pavilion that represented 33 companies to promote a diverse selection of Hawaii-made products at the Tokyo International Gift Show (TIGS). TIGS is the largest international trade show in Japan, however, due the pandemic, the number of show attendees decreased. During the October 7-9, 2020 event, 180,214 buyers, wholesalers, distributors, brokers and retailers visited TIGS. Leveraging Hawaii's strong brand in Japan, 2020 marked the eighth year that DBEDT has participated in this export promotion project in Japan.

One-Year goal: 50 companies participating and reporting \$1.3 million in direct and mid-term export sales.

Five-Year goal: 75 companies reporting \$5 million in export sales.

Action Plan: Increase participation with partnership with Hawaii Tourism Japan and other partners.

Measure of success: Increase in export sales.

3. **2020 Hankyu Hawaii Fair Hawaii:** DBEDT continued our annual participation in the Hankyu Hawaii Fair in July 2020, although the Fair was held as a virtual, online event for the very first time due to the COVID-19 pandemic. Despite the scale being greatly limited, the Hankyu team was very pleased with the first virtual Fair. The e-commerce channel featured 30 Hawaii vendors of food, fashion/apparel, and art – a new category that showed great potential. Their Youtube channel of live-streaming and recorded talk shows, music and hula performances attracted over 23,000 Japanese viewers per week. Because of this year's success, the 2021 Hawaii Fair will be expanded to both in-store shopping and activities and e-commerce shopping with virtual events.



One-Year goal: 45 vendors topping \$700,000 in sales via e-commerce and in-store purchases.

Five-Year goal: 55 vendors topping \$1 million in sales.

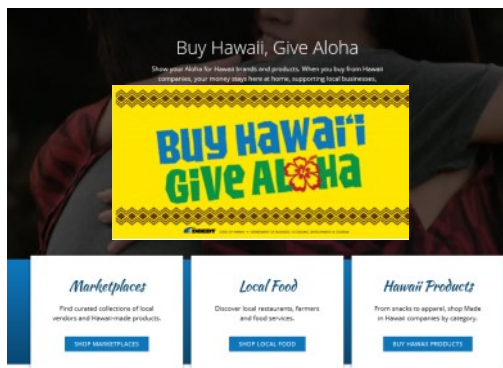
Action Plan: Increase participation with partnership with Hawaii Tourism Japan and other partners.

Measure of success: Increase export sales.

ECONOMIC GROWTH

4. **Buy Hawaii, Give Aloha:** BDSD created the online shopping site, ([Buy Hawaii, Give Aloha](#)) to help Hawaii manufacturers and brick-and-mortar retailers begin recovering from the economic shutdown caused by COVID-19 pandemic. The official public launch was held on Monday, August 10, 2020, and BDSD began marketing to Local Hawaii shoppers initially, then later targeted shoppers on the Mainland continent. In late December 2020, a Japanese language web page will be created to attract Japanese shoppers.

Currently, there are 240 businesses registered, including eight (8) large marketplaces that feature multiple vendors. BDSD has supported these businesses by working with partners HTDC's INNOVATE Hawaii (increasing e-commerce capability among small businesses), Shop Small Hawaii (marketing support for small businesses), and the Department of Agriculture (promoting Seal of Quality and Made in Hawaii With Aloha certifications). BDSD is also integrating the HiSTEP program, by offering export development to those registered companies who are ready to expand their sales abroad. BDSD will continue with this program.



One-year goal: 400 companies registered and listed at the end of FY 2021

Five-year goal: 1,000 company participants.

Action plan: Expansion into the Japan market.

Measure of success: Increase in export sales.

MANUFACTURING

INNOVATE Hawaii program: In 2017, HTDC's [INNOVATE Hawaii](#) program was awarded a 5-year \$2.5 million federal contract with the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership. In 2019, that contract was increased to \$3.05 million and another \$1 million Manufacturing workforce Development grant was also awarded in 2019. The INNOVATE Hawaii program has also been successful in establishing a Tech Bridge center in Hawaii with the Office of Naval Research. The Hawaii Tech Bridge is the latest effort by the Navy to enable greater collaboration with non-traditional partners and develop partnerships that will make the sea service stronger.

The following additional federal funds were awarded to the INNOVATE Hawaii program in FY20:

- \$132,000 (NIST) CARES Act funds to support manufacturers
- \$125,000 (SBA) 1-year SBIR outreach and assistance (secured for third straight year)
- \$69,000 (USDA) + \$20,000 (Hawaii County) to support the Neighbor Island Innovation
- \$75,000 (OMEP) to support advanced manufacturing

The INNOVATE Hawaii program started a suite of E-commerce and Digital Marketing training activities to help local businesses reach new markets. First, using federal CARES Act funding from NIST a 3-month e-commerce training pilot program was started to target manufacturers that were new to e-commerce. The program provided a comprehensive introduction to e-commerce and digital marketing best practices. The program also introduced companies to local expert consultants who were available to help. Subsequently, assistance was offered to manufacturers who were ready to move past the basics and into higher performance and analytics. This program continues and consists largely of assessing a company's needs and matching them with a local specialist.

ECONOMIC GROWTH

One-Year Goal: Continue program.

Five-Year Goal: Increase funding for the program.

Action Plan: Continue the efforts in workforce development, food safety, advanced manufacturing, and e-commerce. Adapt to the changing needs of the companies.

Measure of Success: Successful award from NIST. NIST survey and scorecard.

MAP Grants: HTDC's Manufacturing Assistance Program (MAP) offers Hawaii-based manufacturers up to a 20% reimbursement (up to \$100,000) on qualified expenses to help Hawaii manufacturers become globally competitive. The MAP grant program also provides wrap around services and is one of HTDC's core programs.

- **45 Applications Received**
- **18 Applications Funded**
- **10 First-time Applicants Funded**
- **\$9.0MM Total Company Investment**
- **\$1.5MM Total Match Requested**
- **\$486k Total Matching Grants Awarded**
- **281 New Full-time Employees Over 3 Years**
- **227 Jobs Saved Over 3 Years**

One-Year Goal: Continue funding and grant support for the manufacturing assistance program and the wrap around support services.

Five-Year Goal: Double the company investment and total match requested by the companies. Use this program to justify an increase in the amount of annual federal funds received from NIST.

Action Plan: Revamp of MAP grant program to include support for workforce development for manufacturers to address challenges with skills gap and employee retention.

Measure of Success: Number of jobs provided by companies in program.

OVERSEA OFFICES

Oversea Offices: Both overseas offices in Beijing and Taipei adjusted their plans in 2020, due to the COVID-19 pandemic. The Beijing office (SHOB) hosted an 11-sessions webinar series for Hawaii businesses to explore the opportunities and possibilities for exporting products to China; in an effort to diversify the economies of Hawaii, help Hawaii businesses to expand their markets, and to offset the effect of the abrupt halt to travel to Hawaii. Alibaba, a Chinese mega-company that is the world's largest online and mobile commerce company, was also included as one of the speakers to introduce their platform and help businesses to get their products online. There was an average of 30 businesses who attended the webinar in the past four (4) sessions since October 2020.

The Taipei office (SHOT) organized a virtual Hawaii coffee mart to promote Hawaii Coffee to the Taiwan Market. Seven (7) companies/farmers from Hawaii gave a presentation about their products, over 40 representatives/buyers from Taiwan coffee industry attended in Taipei, and coffee samples were distributed and tasted at the venue in Taipei. An interest form was filled for the post event follow up.

One-Year goal: Able to help Hawaii businesses to enter the China Market (Mainland China and Taipei)

ECONOMIC GROWTH

Five-Year goal: Maintain the overseas offices, increase exports to the Chinese market.

Action Plan: Leverage sister-state relations and the local relationship in China to increase opportunities for Hawaii businesses through different projects.

Measure of success: Increase export sales.

INVEST IN HAWAII

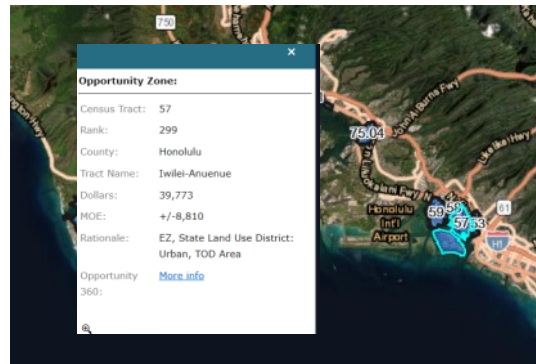
Opportunity Zones: The Opportunity Zones program provides a federal tax incentive for investors to reinvest their unrealized capital gains into Opportunity Funds that are dedicated to investing into Opportunity Zones, which are low-income urban and rural communities. There are 25 Opportunity Zones in Hawaii. The Division has held eleven promotional/informational sessions statewide to date.

One-Year goal: Five (5) community outreach sessions to assist community-based projects to become investment ready to be presented to Opportunity Funds.

Five-Year goal: Partnership with private companies.

Action Plan: Hold five (5) community-based projects.

Measure of success: Investment of \$1 million in Opportunity Zone projects.



Opportunity Zone Investment Funds: HGIA, BDSD, Office of Planning, and the Hawaii Community Reinvestment Corporation have submitted a joint application for \$35 million in Opportunity Zone Investment Funds.

One-Year Goal: Receive award.

Action Plan:

- ⇒ Application was submitted in November 2020. Due diligence continues with award announcements expected in early 2021. If successful in being awarded Opportunity Zone Investment Funds,
- ⇒ Work with the PUC to allow HGIA to finance utility scale projects (specifically community based solar).
- ⇒ Source opportunity zone energy projects (e.g., Molokai Community Based Solar Project, etc.)
- ⇒ Underwrite and approve project financing. Document and fund loans.
- ⇒ Service loans (including collection efforts) until all loans are paid in full.

Measure of Success: Based on the specific metrics of the projects financed, such as jobs created, tax revenue generated kWh produced or reduced, etc.

ECONOMIC GROWTH



EXPAND DEFENSE INDUSTRY IN HAWAII

Defense Industry: Throughout 2020, DBEDT has managed Phase II of the Industry Resiliency grant provided through the Office of Economic Adjustment. During that time greater transparency of the local defense industrial base has been obtained, threats to the Hawaii defense contractor supply chain have been identified, and future growth opportunities have been recognized.

In September 2020, in partnership with the contractor and by using data from the Office of Economic Adjustment and the Defense Manpower Data Center, a high-level macro view of a [defense industry dashboard](#) was created and placed on the front page of the Hawaii Defense Economy website. Local businesses can utilize the new data tools and information to improve their understanding of Hawaii's military spending and contract trends, as well as access resources to explore and better engage in local defense contracting opportunities. **In 2018, defense spending contributed \$7.2 billion to Hawaii's economy – \$4.9 billion in payroll and \$2.3 billion in contracts – accounting for 7.7 percent of Hawaii's GDP. During the current COVID-19 pandemic, defense spending in Hawaii remained stable, sustaining 49,000 local jobs including more than 30,000 through federal contracts awarded to local businesses, statewide.**

One-Year Goal: DBEDT will be applying for Phase III of the OEA grant with an anticipated program cost of between 1 and 1.2 million dollars, of which 90% will be funded through the federal match. The scope of work for the next grant period will focus on providing education and technical assistance to local defense contractors as it relates to new cyber security regulations, as well as fostering the development of a Defense Contractor Alliance which will identify and mitigate risks to the local defense industrial base. DBEDT will be requesting a February 1, 2021, effective start date for Phase III.

Five-Year Goal: \$1.2 million in additional grant from Office of Economic Adjustment.

Action Plan: Develop Hawaii Defense Alliance; increase cyber security capabilities.

Measure of success: \$50 million growth in defense sector.

HCATT Programs: Current 5-year cooperative agreement for the [HCATT program](#). HCATT continues working on its \$30 million contract with the U.S. Air Force Research Lab. HCATT continues to solicit Federal funding from a variety of sources to diversify its income stream. HCATT currently does not receive any State funding. The program includes 5 full time staff. HCATT operates the only operational renewable hydrogen production and dispensing station on Oahu and over the years has brought more than \$40 million in federal funds into the State, matched by another \$23 million from private partners.

One-Year Goal: Secure funding for program.

Five-Year Goal: Integrate program into common renewable energy goals of DOD and the State.

Action Plan: Collaborate with the State Energy Office, Air Force, and Navy.

Measure of Success: Federal funds brought into the state.

ECONOMIC GROWTH

PROVIDE ASSISTANCE TO SMALL BUSINESSES

1. **Community Based Economic Development (CBED):** Through loans, grants and technical assistance the Community Based Economic Development ([CBED](#)) program provides training and capacity building opportunities to promote, support, and invest in community-based development projects that result in measurable economic impact.

CBED offers micro-loans usually up to \$50,000, to eligible small businesses that support economic development in their communities. The CBED loan program supports a broad range of businesses, including agricultural producers and manufacturing businesses. Loans may be used for: Start-up costs and working capital; Construction or improvement of facilities; Purchase of equipment; Payment of production and Marketing expenses including materials, labor and services. CBED currently has co-lending agreements with the Hawaii Dept. of Agriculture (HDOA) to execute and service loans and also an agreement with Feed the Hunger to collaborate on participation loans.

In response to the COVID-19 pandemic, from April through June 2020, the CBED Program assisted the Small Business Administration (SBA) with promoting and advising business on the Paycheck Protection Program (PPP) and the Economic Injury Disaster Loans (EIDL).

BDSD expects to have an additional \$1 million available from the Economic Development Administration (EDA) grant for the CBED Revolving Loan Fund to use for CBED Small Business Loans.

One-Year Goal: Eight (8) CBED Loans to Small Businesses

Five-Year Goal: Obtain federal funds to increase amount available to lend.

Action Plan: Obtain federal funds to increase amount available to lend.

Measure of success: 50 loans to fund businesses.

2. **Hawaii Small Business Fair:** In FY2020, the CBED Program partnered with the Council for Native Hawaiian Advancement (CNHA) to sponsor a one-day event – the Small Business Resource Fair - at CNHA's 18th Annual CNHA Convention held at the Hawaii Convention Center on Oahu. More than 1,500 attendees for the CNHA Convention attended the resource fair and received valuable business resource information.

One-Year Goal: Total 300 attendance at the annual fair.

Five-Year goal: Total 500 attendance.

Action Plan: Virtual Business Fair.

Measure of success: Increase in business participation.

3. **Small Business Regulatory Review Board (SBRRB):** Review proposed new and amended Hawaii Administrative Rules (HAR): The [SBRRB](#) reviewed more than 220 existing HARs of State and County agencies and reviewed more than 30 pre- and post-public hearing HARs.

One-Year Goal: Continue to meet monthly and review State and County HARs.

Five-Year Goal: Strategic plans are established annually.

Action Plan: In order to achieve these goals, Board members must review, evaluate and update its action plan on a regular basis.



More than 200 attendees at the CNHA convention attended one of the many workshops held at the Convention Center.

ECONOMIC GROWTH

Measure of Success: Attendance at monthly board meetings, albeit remotely, will allow the SBRRB to continue to review pre- and post-public hearing HARs.

SBRRB Outreach: This year, conferences and events were scheduled to be attended for outreach purposes. However, due to the pandemic the events were held virtually. In order to provide information to the small business community, SBRRB brochures were mailed to hundreds of Hawaii businesses; a monthly e-newsletter was emailed; and continued outreach via social media platforms – Facebook, Twitter and Instagram.

One-Year Goal: Expand current and projected outreach activities and identify small business organizations to explore potential cooperative outreach.

Five-Year Goal: Strategic plans are established annually.

Action Plan: Review and improve upon collateral material, if necessary.

Measure of Success: Outreach activities will be measured by the number of activities attended, and small business organizations approached.

4. **Enterprise Zones (EZ):** The [EZ Partnership](#) Program is a joint state-county effort intended to stimulate—via tax and other incentives—certain types of business activity, job preservation, and job creation in areas where they are most appropriate or most needed. At the end of 2019, the companies eligible to receive EZ benefits reported 1,659 new or maintained jobs statewide. There were 193 companies enrolled in the EZ Program at the end of 2019.

One-Year goal: 225 companies enrolled at the end of FY 2021.

Five-Year goal: 300 companies enrolled.

Action Plan: Market to agriculture related companies.

Measure of success: Increase in jobs maintained.

CREATIVE INDUSTRIES



Hawaii's film and television industries workforce also had a significant impact, down 95% from March through June of 2020. Until modified quarantine programs could be safely put in place, production was at a standstill in Hollywood and around the world.

Hawaii Film Office and its sister Film Offices of the Hawaiian Islands worked with film industry studios, labor unions and local officials to develop protocols so filming could begin in summer of 2020. Using a phased in approach the State opened for local regional productions

in June 2020, followed by offshore productions late summer once the "Safe Way Forward" protocols were ratified by Studios and Unions. Hawaii's film and television production industries remain an important aspect of recovery and resiliency to put residents back to work and support visitor attraction. While it is estimated that production spend will be down by 50 to 60% for calendar year, four television series, feature films and commercials have cumulatively employed an estimated 800 to 1000 residents in high paying jobs.

ECONOMIC GROWTH

1. **Film Production:** While Hawaii's [film production](#) sector was one of the first of the bright spots in economic recovery and job generation, activity was down significantly in 2020 with an estimated \$198 million in production spend, compared to an estimated \$405 million spend in 2019. There are signs of a strong rebound in 2021 as there are three television series in production employing up to 375 local residents each.

One-Year Goal: Implement online e-systems, streamline reporting, data collection and ease of analysis. Mitigate any position abolishment impacts. Launch the industry workforce development programs in partnership with higher education and DBEDT workforce development initiatives.

Five-Year Goal: A more resilient film and television production sector. Increased studio/sound stages infrastructure, contributions to workforce development and Act 228 Hawaii Film and Creative Industries Development Fund.

Action Plan: Continue partnerships with private sector, foundations, federal support to mitigate fiscal impacts to program.

Measure of Success: Maintain steady offshore production and increase infrastructure capacity.

2. **Creative Lab Hawaii & Digital Transformation Initiatives:** Hawaii's creative economy showed continued growth until the pandemic hit. The first signs of recovery came in the form of film and television production; both offshore and increased volume in the locally written, produced content – from short films to online series and features. [Creative Lab Hawaii](#) programs demonstrated the power of business acumen in the entertainment industries with six figure placements for original Hawaii music during the pandemic. The increased digital export of original content and music has provided local artists with a new revenue stream in film and television, reaching a record number \$100,000+ in placements for 2020 despite the pandemic. This signals a significant opportunity to shift focus on digital transformation for Hawaii creatives.

One-Year Goal: Build digital online hub to showcase original content. Increase workforce development workshops in legal, business and IP creation/protection. Advance the digital continuum to build out the pipeline of education-to-workforce opportunities in media, indigenous storytelling, VR/AR storytelling music and design. Build partnerships and secure funding from foundations and federal dollars.

Five-Year Goal: Increase jobs in e-commerce, export of creative IP, postproduction, licensing of original songs in mainstream film, television, streaming and commercials.

Action Plan: MOA's and P3's developed to accelerate placement in new sectors of emerging industries.

Measure of Success: 30 to 50% of increase of jobs across creative and emerging sectors.

3. **Creative Industries Partnerships:** A partnership agreement between HTDC and the Creative Industries Division was established to run the soundstage at the Sandbox.

One-Year Goal: Open the ID8 studios.

Five-Year Goal: Fill the ID8 studios to capacity.

Action Plan: HTDC work with DBEDT CID and secure additional public/private stakeholder commitments for project.

Measure of Success: Positive cashflow.

ECONOMIC GROWTH



INNOVATIVE

1. **80/80 Initiative:** HTDC continues working toward the 80/80 Initiative: a goal for Hawaii to create 80,000 new tech and innovation jobs earning more than \$80,000/year by 2030. HTDC conducts an Economic Impact survey of all its clients. Due to COVID-19, the annual survey was not conducted this past year. **For 2018, 107 companies responded reporting \$560 million in revenues, \$277 million in income generating \$48 million in State taxes, over \$1 billion in economic impact and supporting 3,870 jobs.**

One-Year Goal: Collect data in a more consistent manner

Five-Year Goal: Publish a report on our progress toward 80/80

Action Plan:

- ⇒ HTDC is partnering with other agencies and the private sector to build the infrastructure, provide the capital and develop the talent needed for innovation to thrive.
- ⇒ Conduct the annual economic impact survey. Evaluate existing measuring system for better indicators to measure program performance. Additional measurables to consider: number of new companies engaged, and number of tech jobs within companies.

Measure of Success: 80,000 new tech and innovation jobs earning more than \$80,000/year created.

2. **TRUE Initiative:** In March, Hawaii executives and civic leaders gathered at the Entrepreneurs Sandbox to launch the **TRUE Initiative**, a technology solutions-focused collaboration between local private sector business leaders, HTDC, other State departments, and our local universities and colleges. Housed out of the Sandbox, TRUE stands for Technology Readiness User Evaluation. The initiative seeks to tech-enable organizations and local businesses through sharing of solutions to common business challenges. The goal is to help create quality jobs and new opportunities with higher wages throughout the State for sustainable living in Hawaii and attract kamaaina looking for opportunities to return home.

One-Year Goal: Companies readily collaborating and implementing new tech projects

Five-Year Goal: Wide adoption from many companies.

Action Plan: TRUE initiative will mostly operate independently with input and guidance from HTDC.

Measure of Success: TRUE initiative operates independently and is recognized by industry.

3. **SBIR Grants:** The Hawaii **SBIR** provides matching grants and wraparound services to assist companies further the development of new products to solve critical issues. Applicants must have received a federal SBIR grant in order to qualify for the State's matching grant. The HSBIR program provides up to 50% match for companies receiving SBIR awards. The SBIR grant program is one of HTDC's core programs.

ECONOMIC GROWTH

SBIR Phase 0/1

- **10 Applications Received**
- **10 Applications Funded**
- **4 First-time Applicants Funded**
- **\$1.7MM Federal Grants Awarded**
- **\$639k Total Match Requested**
- **\$520k Total Matching Grants Awarded**
- **49 New Full-time Employees Over 5 Years**
- **113 Jobs Saved Over 5 Years**

SBIR Phase 2/3

- **16 Applications Received**
- **14 Applications Funded**
- **3 First-time Applicants Funded**
- **\$53MM Federal Grants Awarded**
- **\$6.3MM Total Match Requested**
- **\$900k Total Matching Grants Awarded**
- **509 New Full-time Employees Over 5 Years**
- **168 Jobs Saved Over 5 Years**

One-Year Goal: Continue funding and grant support for Hawaii SBIR and the wrap around support services.

Five-Year Goal: Expand efforts with University of Hawaii to increase pipeline and with DOD through Hawaii Tech Bridge program.

Action Plan: Seek capital to continue growth of the program. The Hawaii Tech Bridge is envisioned to provide a competitive advantage for Hawaii in commercializing technologies for DoD priorities.

Measure of Success: Number of jobs provided by companies in program.

4. **Digital Currency Innovation:** Created through a partnership between HTDC and the Department of Commerce and Consumer Affairs, Division of Financial Institutions (DFI), the Innovation Lab explores digital currency innovation. During this period of participation, the 12 companies that were carefully screened and accepted into this pilot program are committed to providing key metrics specified by DFI. The data collected will be instrumental in developing local legislation around digital currency that will help advance the State, while laying the groundwork for the next phase of this pilot program.



One-Year Goal: Process in place for new virtual currency companies to do business in Hawaii.

Five-Year Goal: Integrate digital currency into economic development initiatives.

Action Plan: Continue building relationships with digital currency companies.

Measure of Success: Progress measured by engagement with new fintech businesses.

5. **Accelerator Programs:** The Accelerator programs provide funding, mentorship, and training for startup companies. HTDC funded four (4) accelerator programs – Blue Startups, Elemental Excelerator, ManaUp and XLR8HI -- a total of \$300,000 in FY20. Each program is required to have at least a 1:1 match in order to receive funding from the State.

ECONOMIC GROWTH

One-Year Goal: Develop next generation of accelerator programs and continue to provide financial support and mentorship for startups.

Five-Year Goal: Programs continue successfully.

Action Plan: Evaluate existing measuring system for better indicators to measure program performance. Additional measurables to consider include: total number of activities, total attendance, number of companies through the accelerator programs, private sector engagement/dollar leveraged.

Measure of Success: Number of companies running through program and still in operation.

6. **Unmanned Aerial Systems (UAS):** As the contracted agency with DBEDT to lead the State's Pan-Pacific Unmanned Aerial Systems (UAS) Test Range Complex, the Applied Research Laboratory at University of Hawaii (ARL at UH):

- Collaborated with the U.S. Pacific Fleet Submarine Force, to successfully deliver a five-pound payload to an underway submarine a mile off the coast of Oahu.
- Continues to engage the High-Altitude Platform Station (HAPS) Mobile project to test their next generation telecom system for global coverage—using unmanned drones from the stratosphere—from the island of Lanai.
- Heads the working group to monitor national UAS policies for consideration to promote responsible commercialization of drones in the state.



One-Year Goal: Continue to operate the State's UAS test range complex.

Five-Year Goal: Seek out economic opportunities, particularly in commercialization of UAS and autonomous vehicle operation in the State. Expand on proof-of-concept research, with emphasis on drone deliveries to rural areas of the State.

Action Plan: Develop plans to increase commercial opportunities in the state.

Measure of Success: Meet statutory requirements and increase commercial opportunities in UAS for the state.

7. **Aerospace Opportunities:** OAD has had tangible discussions with aerospace companies, both civil and defense, for potential new and expanded Hawaii-based operations in manufacturing, launches, artificial intelligence, autonomous vehicles, and space travel. With almost all opportunities coming to a halt in 2020, OAD continues its involvement through virtual participation and is currently maintaining its discussions through the office of the DBEDT Deputy Director.

One-Year Goal: Have a positive, measurable economic impact to the State.

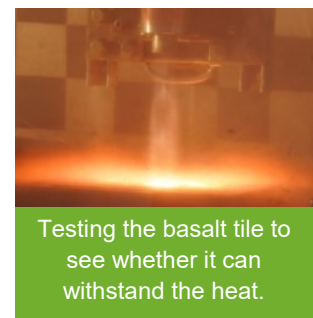
Five-Year Goal: Establish an aerospace hub in the State of Hawaii with research and manufacturing capabilities. Continue to promote Hawaii's aerospace capabilities through various global networking opportunities, support local conferences, and expand the UAS commercial opportunities.

Action Plan: Have a targeted approach to aerospace development in the State, establishing private partnerships and leveraging the DBEDT's Economic Innovation Team's capabilities as necessary.

Measure of Success: Have direct economic impact of at least \$5 million annually.

ECONOMIC GROWTH

8. **Opportunities for Economic Development in Aerospace Industry:** Collaborated with HSFL in preparing a white paper identifying various opportunities for economic development in the Aerospace Industry.
One-Year Goal: Identify the opportunities with higher probability of materializing and work with the involved parties in developing a plan to attract them to Hawaii.
Five-Year Goal: Establish an Aerospace Industry Park based on the projects identified in the white paper.
Action Plan: Work with County and State Legislators to find ways to advance opportunities in Aerospace Industry identified in the white paper.
Measure of Success: Companies that can be attracted to set operations in Hawaii.
9. **PISCES, Hawaii Space Flight Laboratory (HSFL) and HAPS Mobile:** PISCES collaborated with the Hawaii Space Flight Laboratory (HSFL) and HAPS Mobile in evaluating potential operations site for HAPS including Lanai airfield and Hilo International Airport for an operation that will provide on-ground telecommunication services through a network of UAS aircraft flying at high altitude. PISCES is leading the effort in identifying alternate operations sites for HAPS on the island of Hawaii.
One-Year Goal: Secure a site where airfield can be developed. Coordinate with local (county and state) authorities to obtain land use permits and zoning. Begin construction of airfield.
Five-Year Goal: Have completed construction of the airfield. Complete low and high-altitude test flights. Begin commercial flights operations and develop maintenance and refurbishing facility in Hawaii.
Action Plan:
 - ⇒ Continue to work with HSFL, HAPS Mobile and County and State legislators to advance the possibility of creating an operations airfield in Hawaii for HAPS Mobile.
 - ⇒ Determine land use and zoning permit and requirements.
 - ⇒ Generate outside income by entering into a contract with HAPS mobile to help them in the pursuit of completing the Lanai airfield and/or a site on Hawaii island.
 - ⇒ Secure funding for EA if necessary.
 - ⇒ Construction of airfield and set up of infrastructure for operations.**Measure of Success:** Establishing HAPS Mobile test flight operations program during next 2 years.
10. **Exploring Opportunities for Basalt Manufacturing:** Advance [basalt-binder](#) research for potential commercialization of tiles and for lunar/mars 3D printing and additive manufacturing. This technology could have direct applications for space construction as well as in-state construction. It also has the potential to bring in funds through NASA and NSF grants. Testing Sintered Basalt tile for landing pad material with Masten Space Systems was conducted in January and results were positive, creating interest in further testing. Production of a second round of test tiles was delayed due to COVID. Access to the sintering lab was denied from March through June 2020. Applied for 2 NASA federal grants but was not awarded. Interest in this technology has been expressed by NASA, private space companies and some Venture Capitalist portfolio managers.



ECONOMIC GROWTH

One-Year Goal: Finalize proper basalt to binder ratios, sintering temperatures and structural characteristics. Produce tiles and send to third party to perform structural testing and compare to reference of basalt only sintered tiles. Develop prototype 3D extruder for additive manufacturing using basalt-binder mix.

Five-Year Goal: Develop commercialization of basalt-binder tile products and 3D printing capabilities. Creation of Commercial Basalt Factory with 81 jobs with average annual salaries of \$75,000.



Basalt tiles.

Action Plan:

- ⇒ Apply for NASA research grants to advance development of vacuum CO₂ and curing process and to develop 3D printing extruder.
- ⇒ Produce test samples and submit to structural testing.
- ⇒ Work with potential investors to commercialize applications.
- ⇒ Collaborate in 2 different NASA STTR and NASA landing pad construction with 2 different companies with proposals based on PISCES work with basalt and binders.

Measurement of Success: Number of agreements secured, number of grants secured, successful production of test samples.

11. **Laser Communication Ground Station:** In collaboration with the State of Hawaii and private companies, PISCES is facilitating the development of a Laser Communication Ground Station in Hawaii to support the next generation of space communication technologies.

One-Year Goal: Resurrect talks with the private company interested in establishing a base of operations in Hawaii and with the National Oceanic & Atmospheric Administration (NOAA) both at State and Federal level to search for a solution for using the Mauna Loa Observatory (MLO) site as the base for the transmitter/receiver.

Five-Year Goal: If the challenges with NOAA and MLO are solved, establish a permanent laser communication ground base station at MLO.

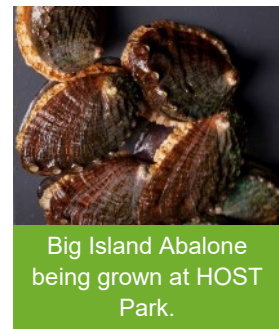
Action Plan: Work with a private party, NOAA at State and Federal Level, County Mayor and State Legislators to find a solution to the use of MLO as a site for the ground station.

Measure of Success: Approval from NOAA to use the site (short-term), construction of the ground station (long-term).

ECONOMIC GROWTH

AQUACULTURE

12. **Aquaculture accelerator project:** NELHA managed the contract for the operation of the accelerator with Hatch Accelerator Fund Management LLC. The pilot accelerator program had a successful start. Thirteen startups participating were selected for the first cohort. A similar accelerator program is planned for fall 2020 and HATCH has started its recruiting efforts for this new cohort. As part of the initiative NELHA worked with UH and managed EDA grant to assist in the operation of aquaculture accelerator. UH funds served as the majority of the cost share required by EDA for the \$275,000 capitalization grant for the aquaculture accelerator project. A follow-on fund was established starting with a \$1.85 million from the State of Hawaii. HATCH was able to grow the total amount of funds raised to \$8.395M. Organized by NELHA and NELHA client's participation in the World Aquaculture Conference in February 2020 at the Hawaii Convention Center and arranged for pre- and post-tours of NELHA and its operations. One session focused on NELHA success stories and what NELHA had to offer to potential aquaculture companies. Another session focused on the HATCH program. Eight NELHA and HATCH were highlighted in these sessions. NELHA also operated a trade booth during the meeting.



Big Island Abalone
being grown at HOST
Park.

One-Year Goal: Complete 3rd cohort and begin 4th cohort.

Five-Year Goal: Continue operations of accelerator and complete 4-9th cohorts.

Action Plan:

- ⇒ NELHA will continue to develop the strategy to establish an aquaculture proof of concept center and be identified as a place for innovation of global aquaculture technologies.
- ⇒ Offer additional services and facilities to support “incubation – accelerator – proof of concept” type facilities and programs and other laboratory services as well especially in the field of global aquaculture innovation.
- ⇒ Continue efforts to secure EDA grant to operate accelerator for an additional 4 years.
- ⇒ Implement grant in conjunction with HATCH.

Measure of Success: Increase in number of companies involved in growth global aquaculture; increase Hawaii's image and brand as an aquaculture leader; and, increase revenue to NELHA.



Cyanotech algae
ponds with Blue
Ocean Mariculture
fish cages on the
horizon, where they
are growing
kanpachi at HOST
Park.

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Smart Growth and Transit-Oriented Development (TOD) are closely aligned concepts. Smart Growth refers to land use policies that result in more compact, mixed-use, and accessible developments that also preserve and protect valued agricultural lands, open space, and natural resource areas. Transit-oriented development (TOD) is a type of community development that includes a mix of land uses such as housing, office, retail and/or other amenities integrated into a walkable, moderate-to-high density neighborhood and located within designated TOD zones or within a one-half mile radius of public transportation nodes.

CREATE LIVABLE COMMUNITIES

1. **State Transit-Oriented Development (TOD):** In August 2018, the Office of Planning published the State of [Hawaii Strategic Plan for TOD](#), which included over 65 proposed TOD projects on State and county lands Statewide in various stages of planning and development. The Strategic Plan has continued to evolve with the undertaking of master plans and the addition of new projects endorsed by the TOD Council.

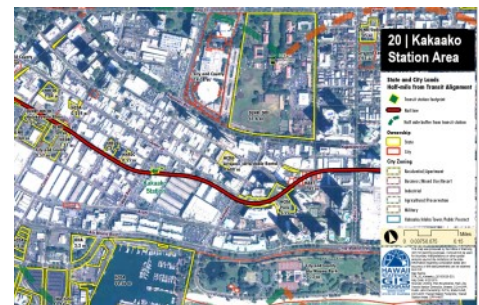
In 2020, the Office of Planning(OP) completed the State TOD Planning and Implementation Project for the Island of Oahu which sets forth the infrastructure and investment needs and financing strategy to enable development of planned State TOD projects in three priority regions along the Honolulu Rail Transit Project's rail line on Oahu – East Kapolei, Halawa-Stadium, and Iwilei-Kapalama.

One-Year Goal: Disseminate the report's data and findings to agencies pursuing TOD master planning and infrastructure need and cost assessments in priority areas along Honolulu rail line to assist in planning, design, and construction of backbone infrastructure projects.

Five-Year Goal: Monitor the implementation of the State TOD Master Plan's infrastructure assessments and costs.

Action Plan: Use the Implementation Project findings to assist and track actions needed to facilitate shared infrastructure investments and individual State agency project development.

Measure of Success: Use of the study cost information and financing strategies to guide development and infrastructure decisions.



2. **Transit Oriented Development (TOD).** HCDA will adopt a TOD Plan for Kakaako to support the State's Transit Oriented Development goals.

One-Year Goal: Complete and adopt the Mauka Area Plan and Rule amendments and TOD Overlay Plan and Rules.

Five-Year Goal: Implement the TOD Overlay Plan to encourage development in Kakaako.

Action Plan: Work with Kakaako landowners, developers, and stakeholders to plan and implement development projects.

Measure of Success: Success will be measured by the number of development projects and housing units in Kakaako.

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3. **OP TOD CIP-Funded Projects.** In 2020, the Legislature appropriated \$1.5 million in CIP funds to OP for statewide planning of TOD projects identified in the State TOD Strategic Plan. TOD CIP funds were directed to Neighbor Island TOD projects, since previous years' funding had been limited to Oahu. The primary purpose of the funds is to jumpstart master planning or infrastructure assessment work that is critical to advancing TOD projects in proximity to transit nodes—with particular emphasis on projects that require multi-agency cooperation and collaboration and meet State TOD objectives and principles in the State TOD Strategic Plan. Nine proposals were submitted requesting a total of \$3.43 million in funding. Four projects were selected by OP:

- Lanakila Homes/County of Hawaii Multi-Modal Transportation Project, Hilo, Hawaii (Hawaii Public Housing Authority and County of Hawaii) \$550,000.
- West Maui TOD Corridor Plan, Lahaina to Kaanapali, Maui (County of Maui), \$500,000.
- Lihue Civic Center Mobility Plan, Lihue, Kauai (County of Kauai) \$250,000.
- Integrated Kahului Library/Kahului Mixed-Use Civic Center Complex, Kahului, Maui (Hawaii State Public Library System and Department of Accounting and General Services) \$200,000.

One-Year Goal: Consultant/contractor selected, and project initiated.

Five-Year Goal: Completion of all planning work (within two years).

Action Plan: Finalize Memoranda of Agreement and contractual and funding disbursement arrangements with lead project agencies; participate in project planning and monitor project progress and deliverables for timely completion.

Measure of success: Completion of funded projects and initiation of development.

AFFORDABLE HOUSING

1. **LUC Affordable Housing.** LUC activities are focused on approval and enabling of large and medium scale construction and housing projects to stimulate the construction industry and further the state inventory of affordable and market rate housing. This past fiscal year, over 2,100 to 5,000 affordable and market rate homes were approved.

One-Year Goal: Complete filed petitions within required time frames.

Five-Year Goal: Complete filed petitions within required time frames.

Action Plan: Work directly with petitioners to ensure a fair but expedited process.

Measure of Success: Decrease in affordable housing shortage.

2. **HCDA Affordable Housing.** The HCDA under its Reserved Housing Program requires at least 20 percent of the residential units in new developments to be made available at an affordable price to qualifying households. Within the Kakaako Community Development District, 38 residential projects have been completed, three are under construction, and one has been permitted but has not started construction. Between these projects 12,484 residential units are completed, under construction, or going into construction, out of which 4,249 units are designated as affordable housing units, resulting in more than 1 in 3 homes in the district designated as affordable housing.

One-Year Goal: Amend the Kakaako Reserve Housing Rules to allow for the HCDA equity

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payment without sale or transfer of reserved housing unit.

Five-Year Goal: Utilize shared equity payments to leverage affordable housing development, preferably affordable rental housing development in Kakaako.

Action Plan: HCDA will continue to work with Kakaako community, private developers, and Hawaii Housing Finance & Development Corporation to develop affordable housing in Kakaako.

Measure of Success: Success will be measured by the number of new development projects in Kakaako and increase in affordable housing units in Kakaako.

3. **HHFDC Affordable Housing.** In FY 2020, and in collaboration with the private sector, [HHFDC](#):

- Assisted 328 first-time homebuyers under the Mortgage Credit Certificate program;
- Awarded multi-family financing to private developers to support the development or preservation of 978 rental housing units on Oahu, Maui, and Hawaii Island. Also, reallocated federal Housing Trust Funds to assist in the development of nine rental housing units on Kauai.
- Assisted in the completion and placement in service of 772 workforce/affordable housing units. The HHFDC has a production plan in place to assist in the finance and development of approximately 8,287 workforce/affordable units over the next five years.

One and five-year goals:

Fiscal Years	Rental	For Sale	Total
2021	1,586	708	1,665
2022	2,011	667	2,678
2023	646	708	1,354
2024	1,099	350	1,449
2025	950	200	1,150
Total	6,292	1,995	8,287



Hale Kalele, a joint project between HHFDC and the Judiciary, is a 200-unit mixed-use affordable rental and juvenile services and shelter facility.

Action Plan: HHFDC will continue to work with the Counties, the community, private developers, and Hawaii Community Development Authority and other state agencies to facilitate the development of housing statewide.

Measure of Success: Number of new development projects and affordable and workforce housing units which are produced or preserved statewide.

SMART GROWTH DEVELOPMENT

1. **LUC Petition Processing:** In the current fiscal year, the [LUC](#) has stimulated economic activity by meeting all of its projected goals and processing all petitions for district boundary amendments, special permits, Important Agricultural Land designations and Motions to Amend in a timely manner. Most Petitions and Motions were decided on and concluded within four (4) months of being deemed complete for hearing.

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Using virtual platforms, the LUC will be able to continue to meet all long- and short-term goals in the approval of these matters. The LUC has also been able to meet all of its projected goal with regard to Boundary Interpretations stimulating and allowing for the Counties to process and issue construction permits for over 1,200 small projects.

The estimated economic impact of the LUC this fiscal year was:

- **Minimum Direct Development Investment of over \$700 million;**
- **Post Development Economic Activity exceeding \$200 million;**
- **350 direct construction jobs exceeding \$250 million in wages;**
- **Offsite and Post development economic activity exceeding \$250 million;**
- **260 acres of Industrial lands approved for construction; and**
- **200 hotel rooms approved.**

One-Year Goal: Reduce the time for response to boundary determinations.

Five-Year Goal: Continue to streamline process.

Action Plan: Digitize archive materials. Update and modify the LUC website.

Measure of Success: Increase in number of Petitions handled annually.

2. **Periodic Review of State Land Use Districts:** The Office of Planning (OP) is conducting a boundary review required by HRS § 205-18 which calls for the periodic "review of the classification and districting of all lands in the state." OP will evaluate GIS maps and data files and examine the status of land use, particularly in the urban and agricultural districts, relative to urban growth areas identified by county general and community/development plans. The use and availability of agriculturally productive lands will also be assessed and unproductive lands will be assessed for possible transfer to the Urban, Rural or Conservation Districts.

One-Year Goal: Complete and disseminate the Periodic Review to the Governor, Legislature, State Land Use Commission, counties, and the general public. Proceed with recommended actions to the extent possible given limitation of staff and funding.

Five-Year Goal: Collaborate with state, county, and landowners to implement recommended actions including legislation as deemed necessary.

Action Plan:

- ⇒ Employ GIS overlays and analyses to compare the current status of the district boundaries relative to county land use plans, resources, and developments.
- ⇒ Consult with counties, the Land Use Commission and stakeholders in the State Land Use process in the implementation of report recommendations.
- ⇒ Recommendations for district boundary amendments may be pursued if funding becomes available.

Measure of Success: Adoption of recommendations by state and county.

2. **LUC Special Permit Applications:** Various infrastructure projects such as the expansion of the Honouliuli wastewater treatment plant and continued operation of various public and private landfills, and quarrying operations to supply materials for road building and construction.

One-Year Goal: Complete processing of filed petitions.

Five-Year Goal: Continued processing of filed petitions.

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Action Plan: N/A

Measure of Success: Completion of petitions.

4. **LUC Enforcement of District Boundary Amendment Compliance:**

One-Year Goal: Finalize three outstanding enforcement actions.

Five-Year Goal: Reinstate activity upon budget restoration.

Action Plan: N/A

Measure of Success: Restoration of enforcement activity.



CREATE COMMUNITIES TO LIVE, WORK AND PLAY

1. **Create Economic Development Through Revitalization:** The 1976 State Legislature created the [Hawaii Community Development Authority](#) (HCDA) as a way to plan for the future development of underutilized urban areas of Hawaii. Lawmakers determined these “community development districts” were underused and deteriorating but had the potential to provide great economic opportunities to the state once they were redeveloped.

One-Year Goal: HCDA staff will continue to review and approve development and renovation permits throughout the districts, manage its revenue earning assets and lands in the districts.

Five-Year Goal: Encourage more development in the Kakaako and Kalaeloa development districts including development of affordable housing.

Action Plan:

- ⇒ HCDA will work closely with the landowners and developers, development permit applicants, and HCDA lessees in each community development districts.
- ⇒ HCDA will work with the community and HCDA consultants in amending community development district plan and rules as necessary to facilitate development in each district.

Measure of Success: The measurement for achieving these goals are the number of development permits processed by the HCDA, the number of housing and mixed-use developments in each community development districts, the number of affordable housing developed, increase in HCDA revenue from its leases, and increase in GET and property tax revenue generated in the community development districts.

2. **Kalaeloa Community Development District Plan:** HCDA commenced the update of the Kalaeloa Community Development District (KCDD) Plan and Administrative Rules. The [Kalaeloa Master Plan](#) was adopted in 2006 and the Hawaii Administrative Rules Title 15 Chapter 215 and 216 were adopted in 2012. The Plan and Rules govern all development activities within the estimated approximate 3,700 acres in the KCDD except for federally controlled parcels. Since the Kalaeloa Plan and Rules were adopted, major developments have occurred within and adjacent to the KCDD. An assessment of the current state of the KCDD and surrounding area is needed.

One-Year Goal: Start the update of the Plan and Administrative Rules.

Five-Year Goal: Complete the update of Plan and Administrative Rules. Implement the

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amended Plan and Rules.

Action Plan: Identify favorable and detrimental conditions to redevelopment in the district and develop strategies for affordable housing development. Work collaboratively with community groups and stakeholders to obtain feedback relating to development in the district.

Measure of success: The updated Plan and Rules are adopted. Success will also be measured by the number of development projects in the district and number of affordable housing units in the district.

COMMUNITY AND CULTURAL EVENTS

Community Festivals and Events: HTA had also planned to support 92 community festivals and events in 2020, but 78 of those were either terminated or cancelled due to COVID-19 and lack of funding. HTA's community efforts, however, were shifted to creating collaborative tourism plans based on input from the community, visitor industry and counties. During 2020, since most of the festivals and events were cancelled, HTA reallocated much of the funding meant for the Community Enrichment Program to the DMAP process instead. Because of the COVID-19 pandemic and social distancing requirements, it's uncertain when festivals and events will be able to resume in Hawaii on a large scale.

PROVIDING BASIC NECESSITIES

Energy Assurance and Resiliency: While all HSEO's priorities are essential to meet the State's clean energy goals, HSEO's top priority is to ensure the continued availability and delivery of reliable fuel and electricity energy to support economic recovery and meet the demands of a growing green economy. In this role, HSEO is responsible for maintaining what is referred to as a "common operating picture" (COP) – a continuously updated overview of Hawaii's energy system both from a planning and incident response perspective. HSEO utilizes a COP in its role of the primary and coordinating agency for the State under the Hawaii Emergency Management Agency (Hi-EMA) for State Emergency Support Function 12: Energy (SESF-12) to coordinate and respond to "all hazards," including hurricanes and pandemics. In July, HSEO's State Emergency Response Team (SERT) found itself responding to both simultaneously.

HSEO's SERT for SESF-12 is led by one dedicated staff member and supported by HSEO staff serving as core team members and all other HSEO staff receiving cross-training on support functions for the core team members. Even with these measures in place, HSEO's ability to resource the SERT during COVID-19 and hurricane events became strained due to staff attrition and a hiring freeze. With category 4 Hurricane Douglas bearing down on the islands in July, members of the HSEO SERT staffed the HI-EMA Emergency Operations Center around the clock at Diamond Head while sequestering other team members in an offsite location to reduce exposure to COVID-19. While the SERT was successful in carrying out its duties, other HSEO programmatic activities were hampered during this time.

- **Energy Demand Destruction:** Analyzing and assessing the capacity of Hawaii's energy system to adjust to the near-total collapse of tourism travel and its effects on energy demand and supply such as jet fuel, diesel, and low-sulfur fuel oil (LSFO) throughout the state. COVID-19 created a scenario that was largely not considered in prior emergency planning: the demand destruction of jet fuel due to the absence of millions of tourists flying into and out of Hawaii. As a result, Hawaii's sole refinery operator renegotiated numerous contracts, including its LSFO contract with the State's largest electric utility, which resulted in an interim increase of

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about \$4.50 per month on Oahu electricity customers' bills. It is unclear whether and when the demand for jet fuel will return to pre-COVID levels--and if it does not--what the long-term solution is. The possibility that Hawaii could switch to 100 percent importation of refined products in response to future demand or supply disruption and the potential impact on fuel supplies and distribution in Hawaii is a priority investigation for the Energy Office.

One-Year goal: Contract for services to develop training exercise workshops for SESF-12/ SERT; identify and obtain funding for a second position to support energy assurance operations and training.

Five-Year goal: All HSEO staff cross trained in SERT responsibilities and business continuity of operations to ensure SERT capacity and effectiveness.

Action Plan:

- ⇒ Continue to build out HSEO's SERT and expand office-wide capability to support SESF-12 activities to prepare for effective discussion-based exercises, as well as development and implementation of the actual exercises that provide needed feedback and input needed for updating state level plans and developing institutionalized capacity within the HSEO and State.
- ⇒ Develop an Energy Common Operating Picture (COP) for both energy assurance and resiliency planning and emergency response.
- ⇒ Advance resiliency and investment in resilient energy supply infrastructure throughout Hawaii.
- ⇒ BRIC, Advance Assistance grants, and other energy resiliency grant opportunities coordinated as relevant with sister agencies at the State and county level.

Measure of success: Number of staff and stakeholders trained in the roles and responsibilities related to SESF-12.

EDUCATION

1. **Challenger Center Hawaii:** The Challenger Center Hawaii is a STEM learning center for middle school students to apply critical and creative thinking through collaborative space exploration scenario, received national recognition for most student missions flown for 2017-2018. Experiencing record participation, the Center had high hopes of upskilling the instructors, upgrading its systems and scenario missions, and expanding its outreach with neighbor island student's participation in its missions for the 2019-20 school year. With the COVID-19 pandemic virtually halting its activities, the Center is looking forward to welcoming back the students.



Photo from the Challenger Center website.

One-Year Goal: Continue its mission to provide space exploration missions to middle school students.

Five-Year Goal: Maintain its level of service and expand its outreach to neighbor islands.

Action Plan: Develop plans to expand its outreach.

Measure of Success: Completing missions for 5,000 students annually.

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2. **Aviation Education:** Wing Spirit, a Hawaii-based corporation, started in 2019 to focus on aviation education and chartered interisland flights.
 - The company has begun charter operation and committed to a fleet of 15 Honda Jets for VIP transportation, air ambulance, and aviation training.
 - The proposed Japan Aviation Academy campus on Oahu will train future pilots, mechanics, engineers, and flight attendants to fill the needs in the aviation career. They have already established a partnership with the University of Hawaii's aeronautics program for the pilot training portion of the 4-year degree program.
 - The project is currently on hold due to the COVID-19 pandemic and will reassess the need for a Hawaii campus.
3. **STARS Programs:** Raised funds to organize STEM Aerospace Research Scholars (STARS) Summer Camp Program for high school girls: \$22,000 were donated from sponsors Microsoft and Caterpillar but event was cancelled due to COVID-19. Funds are reserved for 2021 event. Launched a virtual event called WiSE (Women in Space Exploration) to reach STARS target audience during pandemic social isolation. Due to COVID-19, the mentorship program was put on hold. Since 2013, a total of 105 students have been mentored in robotics and material science projects.


One-Year Goal: Conduct the STARS Summer Camp Program with funds that are reserved from this past year's event which was cancelled due to COVID.

Five-Year Goal: Secure funding from multiple sponsors to make this program self-sustainable and increase the reach of the applicants.

Action Plan:

 - ⇒ Increase number of classroom visits and presentations to encourage youth interest in STEM.
 - ⇒ Plan and execute sixth-annual Women's STARS program with new improvements based on staff and student feedback from past event.
 - ⇒ Plan and coordinate with Microsoft & HSTM continuation of WiSE talks program as a biannual event to take place during Spring and Fall breaks.
 - ⇒ Participate in 2021 Virtual Journey Through the Universe Program.

Measure of Success: Number of sponsors, funds raised and number of events and participants.



The poster for 'WiSE Women in Space Exploration Talks 2020' is dated October 5-10. It features a blue background with a white rocket icon. Below the title, it says 'A virtual talk series exploring the world of human & robotic space exploration with leading female scientists & engineers.' There are eight small circular portraits of speakers: Jessica Dempsey (NASA JPL), Megan Lee (NASA JPL), Emily Calverton (NASA JPL), Sara Laing (NASA JPL), Phoebe C. Korman (NASA JPL), Rebecca Brinkman (NASA JPL), and two others. Logos for NASA, Microsoft, and other sponsors are at the bottom.
4. **Hawaii Space Exploration and Robotics Challenge (HI-SEARCH):** Advance robotics opportunities to include international robotic mining competition ([HI-SEARCH](#)) in collaboration with Caterpillar, and lunar rover remote operations with NASA & JPL engineers. The event was planned to take place at NELHA's HOST Park, which offers a high-fidelity lunar analog site for the competition. The event could bring an estimated \$500,000 to \$750,000 in revenue to the state. Unfortunately, planning and execution of the international robotic mining competition stopped due to COVID-19. Hi-SEARCH is intended to engage youth in STEM activities, while attracting new visitors

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to the state and highlighting Hawaii's value as a proving ground for aerospace and robotics.

One-Year Goal: Hold the competition at NELHA's HOST Park.

Five-Year Goal: Establish annual HI-SEARCH competition in Hawaii and expand sponsors.

Action Plan: Secure funding for Hi-SEARCH from Caterpillar and resume planning for event in 2021/2022.

Measure of Success: Number of teams attending, number of participants attending, number of sponsors and amount raised for event, revenue brought to the State, and overall satisfaction from participants and willingness to return.

5. **Hawaii Analog for Lunar Operations (HALO):** PISCES is collaborating with engineers from NASA and JPL in creating a program to offer customers a certification training course on lunar rover operations. PISCES contribution is to provide its planetary rover Helelani as the final activity of the program where customers will be remotely operating the rover.

One-Year Goal: Complete upgrades to Helelani's comm systems and the analog field site. Establish a working agreement with all parties involved to determine PISCES' responsibilities and compensation. Perform the first lunar rover training & certification course.

Five-Year Goal: Establish the program as an ongoing project and expand to attract customers from universities around the world as well as independent customers.

Action Plan: Begin upgrades to rover's comm systems and field site, perform full scale field test with involved parties and help develop curriculum for program.

Measure of Success: Number of teams attending, number of participants attending, and overall satisfaction from participants and willingness to return.

6. **CubeRover Collegiate Competition:** PISCES has begun conversation with Astrobotic and NASA to plan, organize and execute an international collegiate robotics competition in Hawaii based on Astrobotic's CubeRover platform.

One-Year Goal: Establish partners and sponsors to the event. Plan and develop competition goals and rules. Enter agreements with sponsors.

Five-Year Goal: Establish event as an annual competition starting on year 2. Increase number of teams, sponsors and complexity of operations each year.

Action Plan: Confirm collaboration with Astrobotic and other potential sponsors, develop competition plan, rules and regulations.

Measure of Success: Number of teams attending, number of participants attending, number of sponsors and amount raised for event, revenue brought to the State, and overall satisfaction from participants and willingness to return.



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INTERNATIONAL STUDENT ATTRACTION

International Student Attraction: Within Hawaii's overseas offices in Taipei and Beijing, the Division has established Hawaii Education Service Centers to attract and increase international students at Hawaii's schools, colleges and universities. The Hawaii Education Service Centers worked with DBEDT and organized the Study Hawaii Education Consortium of 21 schools. The overseas offices keep promoting Hawaii as an international student attraction by attending local education fairs, making presentations and speeches with different schools, answering enquires from parents and students, and visiting different principals and organizations for exchange programs in the future. The division organized an investment and trade symposium in Osaka in 2019 and the University of Hawaii-Manoa's provost was one of the featured speakers. The Student Ambassador Program, since its inception, deputized 1,273 international students as ambassadors to promote Hawaii as a learning destination.

For 2019, there were 13,371 international long-term and short-term students in Hawaii. They had a \$381.2 million economic impact, generated \$29.2 million in State taxes, and supported 3,756 jobs. For 2020, due to the global pandemic, Hawaii's colleges and universities were unable to proceed with plans to attract international students to their campuses. However, many international students continued their academic goals by enrolling in programs and completing classes remotely.

One-Year goal: Attract 14,000 students; and generate \$300 million in economic output (as to be reported for 2020).

Five-Year goal: 15,000 international students; generate \$400 million in economic output.

Action Plan: Rejuvenation of Study Hawaii organization.

Measure of success: Increase in international students.



ENTREPRENEURIAL ECOSYSTEM DEVELOPMENT

CID's Arts and Culture Development Branch (ACDB) handles business and workforce development for Hawaii's creative ecosystem development, focusing initiatives in the areas of: 1) talent/ workforce development; 2) infrastructure development; and 3) investment and policy development, to establish a continuum of job and business opportunities from education to workforce which are strategically designed to accelerate export of creative Intellectual Property (IP) products and services – all key aspects of a thriving innovation ecosystem.

One-Year Goal: Continue expansion of collaborative initiatives, fund Act 228 and launch initiative to provide seed capital for qualified Hawaii creative entrepreneurs with projects under \$200,000. Increase performing arts digital e-commerce support through CARES Act support.

Five-Year Goal: Hawaii has developed a self-sustaining ecosystem with vibrant economic impact, export of original works increased through global IP licensing.

Action Plan: Build out infrastructure, Secure partnerships with New Zealand, Japan and Korea for business to business remote work opportunities for Hawaii residents in media, VR/AR, content creation and performing arts digital platforms.

Measure of Success: Pipeline of business opportunities generated from industry relationships nets \$1 million annually. Number of films, series, performing arts content and music licensed, pipeline of jobs filled by local residents in emerging industries.

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DBEDT WORKFORCE DEVELOPMENT INITIATIVE

Aligning Hawaii's Economic and Workforce Development Efforts: The DBEDT Economic and Workforce Development Initiative is an alliance between the DBEDT Economic Innovation Team and the State of Hawaii Workforce Development Council. This alliance aligns DBEDT's programs and partnership activities in economic development with the workforce development efforts of the WDC to re-employ Hawaii's unemployed or upskill Hawaii's underemployed.

The results of the improved coordination ensures that Hawaii's residents who are either unemployed and underemployed are better prepared for the jobs of the future. This initiative provides the WDC with more timely and accurate intelligence on economic development initiatives that will allow the staff at the American Job Centers (AJCs) to better advise and invest in training for clients seeking better opportunities in gainful employment or to advance their skills and achieve a higher quality of life.

This alliance attempts to synchronize Hawaii's economic development initiatives (DBEDT) by increasing the time for advanced planning and implementation of workforce training solutions for the development of Hawaii's workforce and align Hawaii's Workforce Innovation and Opportunity Act State Plan and the WDC Workforce Resiliency Initiative with future economic opportunities as they materialize.

REMOTE WORKING

The Remote Work Initiative is an effort to expand remote working opportunities for the residents of Hawaii. Given the significant job loss from COVID-19 and the lack of employment opportunities in other economic sectors of the State, DBEDT undertook an effort to expand gainful employment opportunities for the residents of Hawaii through remote work.

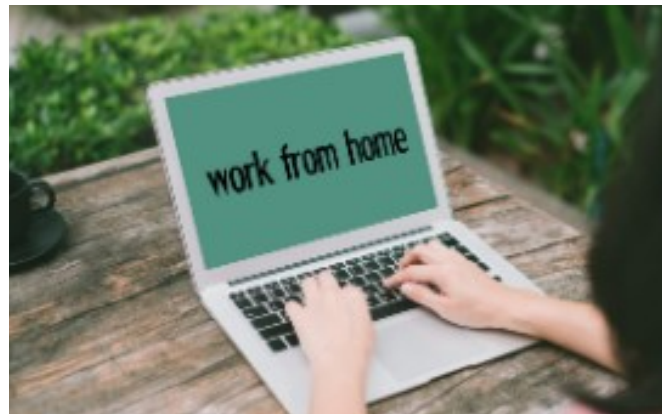
As part of the DBEDT Workforce Development Initiative, this program was developed in partnership with the State of Hawaii Workforce Development Council. DBEDT undertook three initiatives to create remote work opportunities to be filled by Hawaii's unemployed residents participating in our State's public workforce program through the American Job Centers.

One-Year Goal: Pilot test remote work program with target 2,000 residents employed in remote work through contracted services with remote work placement agencies and in partnership with the WDC. Development analytics on industry, occupation, employer, workers profiles to tactically expand remote work opportunities for Hawaii's residents in higher skill, higher wage jobs.

Five-Year goal: Remote work opportunities are integrated in Hawaii's public workforce system as an option for re-employment and up-skilling to higher skill, higher wage employment while living in Hawaii.

Action Plan:

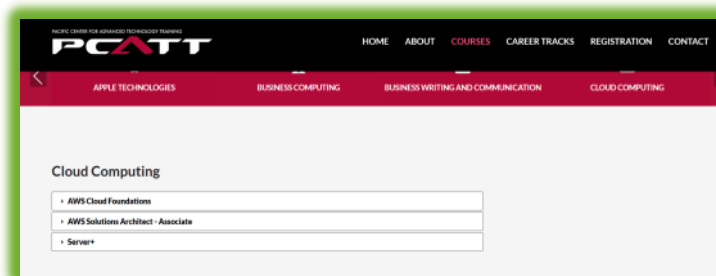
- ⇒ **Data Acquisition:** In an effort to gather data necessary to form better intelligence about the industries, businesses, and occupations, that support remote workers from Hawaii, DBEDT supported the Hawaii Executive Collaborative Movers and Shakas



WELL BEING OF PEOPLE

Program. This program provided incentives by local businesses in Hawaii's tourism industry to help Kaamaina working outside of the state to return to Hawaii to care for family members while maintaining their employment and remote working from Hawaii. The program also provided incentives offered to longer-stay visitors who would work from Hawaii for their out of state employer and provide much needed business activity to Hawaii's tourism industry.

- ⇒ **Pilot Test Remote Work Opportunities:** Simultaneously DBEDT contracted with two job placement organizations specializing in remote work. Created in 2007, Flex Jobs provide a trusted, more effective, friendly, and overall better way to find professional remote and flexible jobs. Flex Jobs has two goals. First, is to remove the key pain point of finding great remote and flexible job opportunities that are typically harder and more time consuming to find anywhere else. Second, is to provide top notch tools, resources, articles, and tips to support user in their job search to find a job that better fits their life.
- ⇒ **DBEDT has also contracted with Instant Teams:** Part of the Blue Startups portfolio of companies, Instant Teams creates remote working teams to deliver solutions directly to businesses allowing companies this unique solution to remote work allows Hawaii's residents to apply their skills in providing remote team solutions to businesses outside of our State.
- ⇒ **Building Capacity For Remote Work and the Digital Economy:** These projects incubated from the Broadband Hui discussions and as they matured in DBEDT, were aligned with the Workforce Development Council's Workforce Resiliency Initiative. The Flex Jobs and Instant Teams contracts have been done in coordination between DBEDT and the State of Hawaii Workforce Development Council.
- ⇒ **Training:** In 2020, the Broadband Hui conceptualized a pathway for Hawaii's workforce to work remotely for technology companies that provide online platform services. Initial discussions have resulted in efforts between DBEDT, the Pacific Center for Advanced Technology Training (PCATT) and Amazon Web Services. This program consists of two courses, AWS Cloud Certification and the AWS Solutions Architect Associate Course. PCATT has been working with AWS with a target date of offering these courses in Spring of 2021.



Measures of success: 2,000 new remote jobs are created through an alliance between DBEDT and the State of Hawaii Workforce Development Council (WDC). Ongoing collaboration between DBEDT and the WDC in reskilling initiatives that bridge the digital divide and provide greater digital equity throughout the state.

WELL BEING OF PEOPLE

DBEDT UNIVERSITY

Like any organization, DBEDT's impact is a direct result of the contributions of its employees. DBEDT therefore prioritizes the well-being of its employees, which in turn strengthens the department's capacity to serve as a facilitative catalyst for the well-being of Hawaii's economic system.

An area of high importance is therefore the training and development of DBEDT's employees. The department has initiated training and development opportunities to equip individuals with tools that can leverage and enhance their performance in the workplace. These training programs were initially rolled out to a subset of DBEDT employees, which included both managers and staff. Topics that were offered in 2020 include: navigating organizational change, technical vs. adaptive challenges, practicing a growth mindset, and finding and leveraging your strengths as an individual and in a team setting. It is envisioned that training can continue to be expanded and offered to the full department to support the continued growth and development of DBEDT's workforce.

One-Year goal: Roll-out department-wide training opportunities to facilitate individual and team development.

Five-Year goal: Continue to offer training opportunities and/or support program-specific training needs.

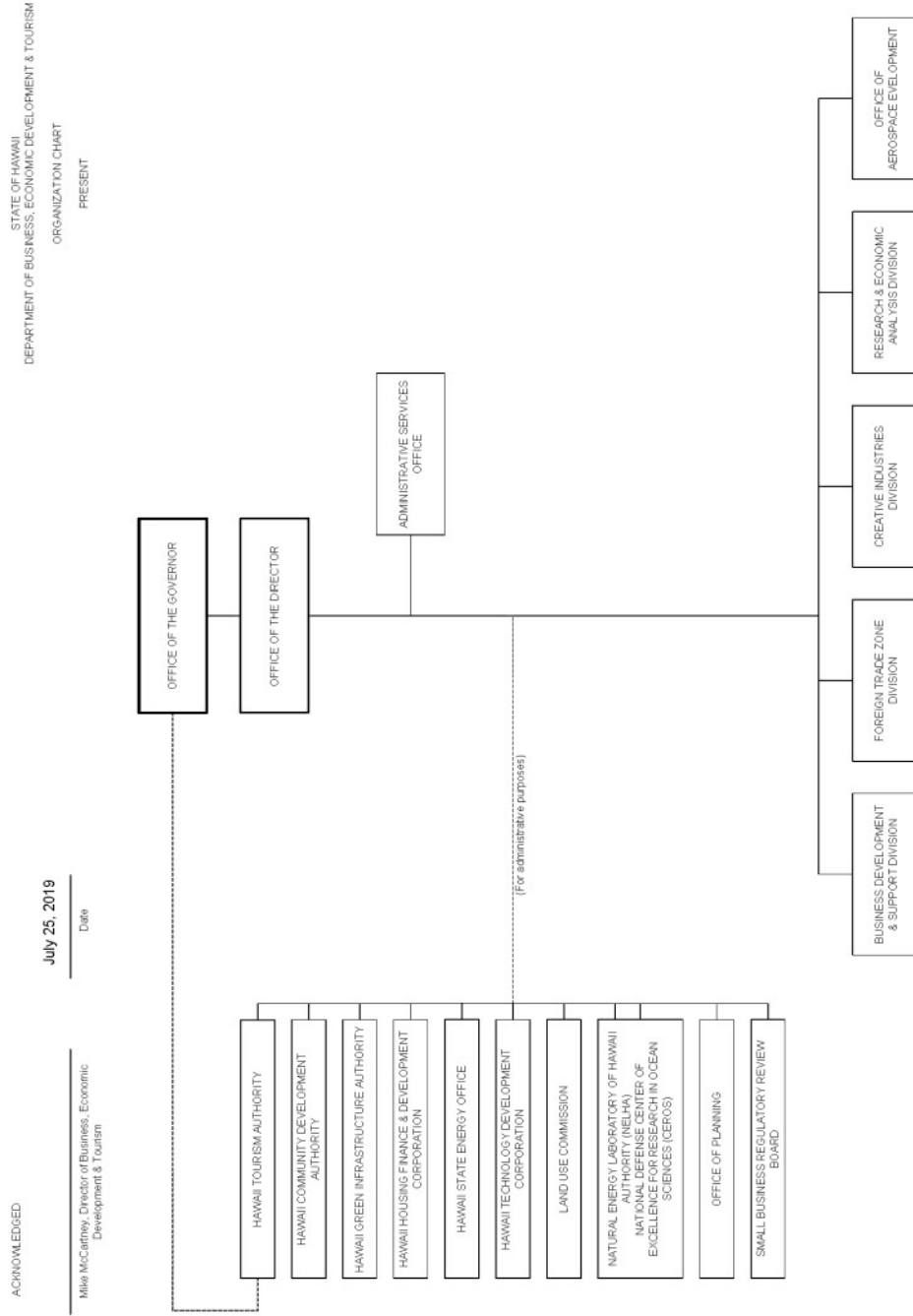
Action Plan:

- ⇒ Develop training menu and department-wide roll-out strategy. Collect input from managers and staff on topics of interest.
- ⇒ Work with managers to identify specific training objectives and measures of success.

Measure of success: Better communication and teamwork.



ORGANIZATION CHART



OVERVIEW OF DBEDT PROGRAMS

DIRECTOR'S OFFICE

Phone: (808) 586-2355

Website: <https://dbedt.hawaii.gov/>

The Office of the Director provides overall direction and coordination of statewide economic development and energy programs. It formulates and executes economic development policies of the Governor and the executive branch and economic development initiatives proposed and approved by the Legislature. The Administrative Services Office (ASO) provides internal management, fiscal, budgetary, contract, personnel, information technology and other administrative services in support of DBEDT's five core programs and nine attached agencies.

BUSINESS DEVELOPMENT & SUPPORT DIVISION (BDSD)

Phone: (808) 587-2755

Website: <https://invest.hawaii.gov/>

The division assists Hawaii companies and organizations to expand and grow their businesses through a diverse array of activities and promotional programs. BDSD accomplishes these goals by providing technical assistance; individual and group consultations; certifying eligibility for tax credits; approving loans, grants and other financial assistance offered to qualified businesses and organizations; serving as a bridge for international relations and cross-cultural education; and developing stakeholder events and outreach opportunities.

CREATIVE INDUSTRIES DIVISION (CID)

Phone: (808) 586-2590

Website: <https://cid.hawaii.gov/>

Creative Industries Division (CID) is charged with the effective development of Hawaii's creative industry clusters, developing initiatives, infrastructure and connectivity between sectors which strengthen business opportunities, support a sustainable ecosystem framework resulting in a robust Creative Economy for the State. Through targeted initiatives, CID builds business and digital export capacity across 13 sectors through three areas of focus: 1) talent and workforce development initiatives; 2) entertainment industries infrastructure development; and 3) access to capital and industry relationships designed to expand export of global creative content and intellectual property (IP). Comprised of the Hawaii Film Office (HFO) and the Arts and Culture Development Branch (ACDB), CID has increased the business capacity and growth of the state's media, music and design clusters creative products and IP through Creative Lab Hawaii and CreativeSpace808 initiatives.

FOREIGN-TRADE ZONE (FTZ)

Phone: (808) 586-2507

Website: <https://www.ftz9.org/>

The FTZ program is a federal program based on the simple idea of removing disincentives related to storing or manufacturing products in the U.S. This is accomplished by allowing U.S.-based companies to defer, reduce or eliminate customs duties on products admitted to the government-authorized zones as they could in a foreign location. This tariff and tax relief is designed to lower the costs of U.S.-based operations engaged in international trade, thereby creating and retaining employment and capital investment opportunities that result from those operations. Currently, Hawaii has 13 established Zone sites with six active Zones within its project area.

OVERVIEW OF DBEDT PROGRAMS

OFFICE OF AEROSPACE DEVELOPMENT (OAD)

Phone: (808) 586-2355

Website: <https://aerospace.hawaii.gov/>

The Hawaii Office of Aerospace Development (OAD) facilitates coordination among Hawaii's government, private and academic sectors to promote the growth and diversification of Hawaii's aerospace industry. OAD is committed to engaging the aerospace, aviation, and emerging industries to promote Hawaii as a place to do business, with focus on creating an ecosystem of STEM (science, technology, engineering, and math) education and workforce development leading to innovative careers.

RESEARCH & ECONOMIC ANALYSIS DIVISION (READ)

Phone: (808) 586-2466

Website: <https://dbedt.hawaii.gov/economic/>

The Research & Economic Analysis Division (READ) works to enhance and contribute to the economic development of the State by providing data and analyses and policy recommendations on economic issues. READ provides economic forecasts that contribute to government and business planning and infrastructure needs assessment. READ also conducts research to assess the status of Hawaii's industry sectors and the quality of life of Hawaii residents.

ADMINISTRATIVELY ATTACHED ENTITIES

HAWAII COMMUNITY DEVELOPMENT AUTHORITY (HCDA)

Phone: (808) 594-0300

Website: <https://dbedt.hawaii.gov/hcda/>

HCDA is a re-development agency established by the legislature in 1976 to improve blighted areas of the state with great potential. Its designated community development districts are Kakaako, Kalaeloa, Heeia, and the new stadium development district. In addition to processing permit applications, HCDA develops community development plans and rules, creates programs to implement the plans, and works with private enterprise and the various components of federal, state, and county governments to bring community development plans to fruition.

HAWAII GREEN INFRASTRUCTURE AUTHORITY (HGIA)

Phone: (808) 587-3868

Website: <https://gems.hawaii.gov/>

HGIA administers the Green Energy Market Securitization (GEMS) Financing Program, which includes the Green Energy Money Saver On-Bill Program, providing low-cost, long-term, flexible financing to Hawaii's most vulnerable ratepayers, specifically, low and moderate-income homeowners and renters, small businesses, nonprofits and multi-family rental projects. HGIA also administers the State Revolving Loan Fund, providing flexible financing to assist other state departments in lowering its energy costs. Lastly, working in concert with the Hawaii Public Utilities Commission ("PUC") and the Hawaiian Electric Company, Inc., HGIA is responsible for the administration and oversight of the \$150.0 million Green Energy Market Securitization Bond.

OVERVIEW OF DBEDT PROGRAMS

HAWAII HOUSING FINANCE & DEVELOPMENT CORPORATION (HHFDC)

Phone: (808) 587-0620

Website: <https://dbedt.hawaii.gov/hhfdc/>

The mission of HHFDC is to increase and preserve the supply of workforce and affordable housing statewide by providing leadership, tools and resources to facilitate housing development. Since 2006, HHFDC has facilitated the development or preservation of over 10,696 housing units. In Fiscal Year 2020, HHFDC assisted in the delivery of 772 workforce/affordable units while managing assets of approximately \$1.5 billion.

HAWAII STATE ENERGY OFFICE (HSEO)

Phone: (808) 587-3807

Website: <https://energy.hawaii.gov/>

The statutorily mandated mission of the Hawaii State Energy Office (HSEO) is to promote energy efficiency, renewable energy and clean transportation to help achieve a resilient, clean energy, decarbonized economy. Toward this end HSEO provides energy sector stakeholders and others with information, analysis, tools and technical assistance needed to carry out Hawaii's clean energy transformation. HSEO also engages with the broader community to educate and solicit feedback about Hawaii's clean energy and decarbonization goals. Hawaii's pursuit of energy independence is stimulating economic growth in an innovation economy, elevating job growth prospects and business opportunities.

HAWAII TOURISM AUTHORITY (HTA)

Phone: (808) 973-2253

Website: <https://www.hawaiitourismauthority.org/>

The Hawaii Tourism Authority (HTA) is the official agency for tourism in the State of Hawaii. HTA is guided by four pillars which are: natural resources, Hawaiian culture, community, and brand marketing. Its mission is to strategically manage Hawaii tourism in a sustainable manner consistent with economic goals, cultural values, preservation of natural resources, community desires and visitor industry needs.

HAWAII TECHNOLOGY DEVELOPMENT CORPORATION (HTDC)

Phone: (808) 539-3806

Website: www.htdc.org/

The Hawaii Technology Development Corporation (HTDC) is the State of Hawaii's lead agency to grow the technology industry sector through the development of infrastructure, capital and talent. Infrastructure includes facilities to nurture new companies and innovations. Capital provides the resources required to move the companies to self-sufficiency. HTDC works closely with all of the DBEDT divisions and administers two federally-funded programs assisting manufacturers and demonstrating new alternative energy solutions. Hawaii Strategic Development Corporation statute and mission were added to HTDC as the Hawaii Strategic Development Program. The program's mission is to stimulate private investment in Hawaii by establishing programs that co-invest public funds in private organizations to utilize the investment acumen of the private sector.

OVERVIEW OF DBEDT PROGRAMS

LAND USE COMMISSION (LUC)

Phone: (808) 587-3822

Website: <https://luc.hawaii.gov/>

The program objectives of the Land Use Commission (LUC) are to process, review, and act on petitions for housing and infrastructure projects and stimulate the construction industry and increase the state housing inventory. The primary way this is accomplished is through district boundary amendments involving lands over 15 acres in the State Agricultural, Rural, and Urban Districts and all petitions seeking reclassification of lands in the Conservation District; review and act on applications for special permits in the Agricultural and Rural Districts which are over 15 acres; process motions and boundary interpretation request ; and maintain, update, and disseminate official State Land Use district maps and land use information.

NATURAL ENERGY LABORATORY OF HAWAII AUTHORITY (NELHA)

Phone: (808) 327-9585

Website: <https://nelha.hawaii.gov/>

The Natural Energy Laboratory of Hawaii Authority's (NELHA) goal is to facilitate the private sector in creating sustainable business enterprises based on the resources of cold deep seawater, warm surface seawater, and high solar insolation available at NELHA; to attract federal and other non-state sources of investment for research and development projects in advanced energy, ocean science and other technological fields at the Hawaii Ocean Science and Technology Park (HOST Park).

OFFICE OF PLANNING (OP)

Phone: (808) 587-2846

Website: <https://planning.hawaii.gov/>

The Office of Planning's (OP) mission is to guide the overall growth and development of the State of Hawaii through a statewide comprehensive planning framework. OP prepares plans and studies, conducts policy analysis, and facilitates the formulation of state policies and strategies. OP consists of five integrated programs, Coastal Zone Management, Land Use, Statewide Sustainability Program, GIS, and Economic Development Planning, that collaborate with local, state and federal government agencies, academia, and community stakeholders to provide research, data and policy guidance to support an integrated statewide planning system. Collaboration allows for broad community input in meeting OP's mission and responsibilities.

SMALL BUSINESS REGULATORY REVIEW BOARD (SBRRB)

Phone: (808) 586-2418

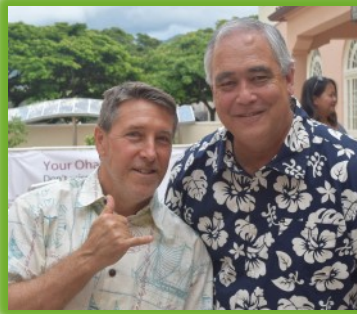
Website: <https://sbrrb.hawaii.gov/>

The SBRRB program is governed by the Hawaii Small Business Regulatory Flexibility Act (RFA), Chapter 201M, Hawaii Revised Statutes. The purpose of the RFA is to lessen the economic burden on small businesses and improve the State's entrepreneurial climate. Under the RFA, the SBRRB acts as a gatekeeper for laws affecting small businesses, and an avenue for regulatory change and complaints. The SBRRB reviews the state and county's proposed new and amended administrative rules impacting small business and makes recommendations for a rule change or for legislation based on any request from small business owners.

Agencies annual reports can be found here: <https://dbedt.hawaii.gov/overview/annual-reports-reports-to-the-legislature/>



Mahalo to DBEDT's
Aloha Friday
photographers:
David Hiromoto
Dean Masai
Mary Blewitt



Ohana

