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2023

Hawai'i State Comprehensive Economic Development Strategy

Prepared for
the Office of Planning and Sustainable Development

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**This publication was prepared by the Economic Development Alliance of Hawai'i.
The statements, conclusions, and recommendations are those of the author(s) and do not
reflect the views of the Economic Development Administration.**



About the Office of Planning and Sustainable Development

The Office of Planning and Sustainable Development (OPSD) is responsible for maintaining an overall framework to guide the development of the State through a continuous process of comprehensive, long-range, and strategic planning to meet the physical, economic, and social needs of Hawai'i's people. OPSD is involved in gathering, analyzing, and providing information to assist in the overall analysis and formulation of State policies and strategies to provide central direction and cohesion in the allocation of resources in order to help facilitate intra-District cooperation, self-help, and public investment. OPSD conducts State comprehensive planning and program coordination, strategic planning, planning coordination and cooperation, land use planning and regulation, coastal and ocean policy management, regional planning, and planning for sustainability.

Special Plans Branch

The Special Plans Branch is tasked with carrying out the functions of OPSD related to statewide planning under the Hawaii State Planning Act.



About the Economic Development Alliance of Hawai'i

The Economic Development Alliance of Hawai'i (EDAH) is a 501(c)(3) nonprofit corporation, working with the public and private sectors and community-based organizations and individuals to spur economic growth and sustainability throughout the State of Hawai'i. It is led by a Board of Directors comprised of representatives from the four county Economic Development Boards (EDBs), the Hawai'i Business Roundtable, and others from the business, academic, and non-government sectors. EDAH identifies opportunities and challenges in Hawai'i's statewide economy, developing strategies and implementing solutions through its members in conjunction with a wide network of community partners that spans across government, business, academia, and community organizations.

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EXECUTIVE SUMMARY

Every five years in accordance with the U.S. Department of Commerce Economic Development Administration (EDA), Hawai‘i updates the Comprehensive Economic Development Strategy (CEDS). This economic planning process and resultant document are meant to stimulate job creation and retention through the collection of data and analysis of Hawai‘i’s economic conditions and trends. The collaborative process includes broad representation from across the state with participants helping to identify strengths, weaknesses, opportunities, and threats; establish goals, objectives, and strategies; and cultivate a more stable, diverse, and sustainable economy aligned with the state’s current and future needs and growth. Concurrently the private sector Economic Development Boards based in the state’s four counties (Hawai‘i, Honolulu, Kaua‘i, and Maui) developed their respective CEDS identifying their unique conditions, needs, challenges, and opportunities.¹ The CEDS is intended to provide the tools necessary to position Hawai‘i for sustainable growth and development allowing stakeholders to enhance and maintain the quality of life for the people of Hawai‘i.

This updated Hawai‘i CEDS plan reflects the different but still challenging economic circumstances since the publication of the last Hawai‘i State CEDS in 2016. At that time, Hawai‘i’s economy was comparatively strong with record low unemployment of 1.9% in October through December 2017.² Today, the state faces dramatically different circumstances due to the aftermath of the Coronavirus (COVID-19) pandemic and rising inflation. At the height of the pandemic, unemployment in Hawai‘i spiked to a high of 22.4% per the United States Federal Reserve in April 2020. As the state and the world adjusted to the pandemic, the unemployment rate has declined through 2021 and 2022 falling to 3.5% in September 2022.

The pandemic dramatically exposed Hawai‘i’s economic vulnerability and underlying weaknesses. Hawai‘i’s unemployment was among the highest in the nation due in part to its longtime reliance on the visitor and tourism industry which was severely impacted by the stringent travel and social restrictions designed to curb the virus.

Hawai‘i’s economy continues its recovery from the impacts of the pandemic - in part due to the return of visitors - through relaxed travel restrictions, robust construction activity buoyed by federal infrastructure spending, and continued job growth. Additionally, there are growing trends toward rebuilding and reskilling the workforce toward higher-paying jobs in a broader range of innovation

¹ Links for each of the four Counties’ CEDS reports are provided in [Section 8: Additional Reports and Resources](#) or at <https://planning.hawaii.gov/spb/ceds/>

² U.S. Bureau of Labor Statistics (2018, January 26). Databases, Tables & Calculators. *California, Hawaii, and Mississippi at record low unemployment rates in December 2017*. <https://www.bls.gov/opub/ted/2018/california-hawaii-and-mississippi-at-record-low-unemployment-rates-in-december-2017.htm>

and diverse sectors aligned with the Hawai‘i 2050 Sustainability Plan,³ Aloha+ Challenge,⁴ United Nations Sustainable Development Goals,⁵ and other compatible plans and strategies.

However, Hawai‘i’s recovery has been hampered by macroeconomic headwinds in the form of inflation, high energy costs, supply chain disruptions, labor scarcity, and surging home prices and rental rates. When combining these factors with high taxes, challenging land-use and zoning regulations, and premium shipping costs for a state that imports more than 80% of its food and energy, updating and implementing the CEDS plan is even more crucial. The CEDS will help increase capacity-building and resilience for our local economy to reduce Hawai‘i’s prohibitive cost of living and promote well-being for its residents.

The Economic Development Alliance of Hawai‘i (EDAH) oversaw the development of the Hawai‘i State CEDS Update, in partnership with the private-sector Economic Development Boards in their respective counties and was funded by the US Economic Development Administration through a grant (Award No. 07-69-07760) administered by the State of Hawai‘i Department of Business, Economic Development and Tourism (DBEDT) – Office of Planning and Sustainable Development (OPSD), Special Plans Branch (SBP).

Present in this Hawai‘i State CEDS document are the highlights of the CEDS plans from each of the State’s four counties: Hawai‘i County, the City and County of Honolulu (O‘ahu), Kaua‘i County, and Maui County with the complete CEDS documents for each of the counties incorporated by reference and accessible by links provided in Section 8: Additional Reports and Resources.



Courtesy of Mauna Kahalawai

³ State of Hawai‘i Office of Planning and Sustainable Development (June 2021). *Hawai‘i 2050 Sustainability Plan: Charting a Course for the Decade of Action (2020-2030)*. <https://hawaii2050.hawaii.gov/wp-content/uploads/2021/07/FINAL-Hawaii-2050-Sustainability-Plan-web-1.pdf>

⁴ Hawai‘i Green Growth (2018). *Aloha + Challenge*. <https://aloha-challenge.hawaii greengrowth.org/>

⁵ United Nations. (2015). *Sustainable Development Goals*. <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>




CEDS Vision

Our unique island state innovates and diversifies to ensure shared economic prosperity and navigates toward an equitable, resilient, and sustainable future.



CEDS Values

- Economic opportunity and shared prosperity for all
 - Sustainability and resilience
 - Diversity
 - Lifelong learning and innovation
 - Multicultural traditions and indigenous systems
 - Stewardship of the environment
 - Trust, respect, and collaboration
 - Community engagement and participatory decision-making
 - Global relationships
 - Shared culture of ALOHA
- 

State Statutory and Planning Framework

Hawai‘i’s statutes and plans provide an additional framework for the CEDS. The Hawai‘i State Plan, Chapter 226 of the Hawai‘i Revised Statute (HRS), sets forth the following broad State goal:

HRS §226-4: In order to ensure, for present and future generations, those elements of choice and mobility that ensure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:

A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai‘i’s present and future generations.

- (1) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, which enhances the mental and physical well-being of the people.*
- (2) Physical, social, and economic well-being, for individuals and families in Hawai‘i, that nourishes a sense of community responsibility, of caring, and of participation in community life. [L 1978, c 100, pt of §2; am L 1986, c 276, §3; am L 2017, c 82, §1]*

In 2011, the Hawai‘i State Legislature amended the Hawai‘i State Plan to establish priority guidelines and principles to promote sustainability, setting forth:

HRS §226-108: Sustainability. Priority guidelines and principles to promote sustainability shall include:

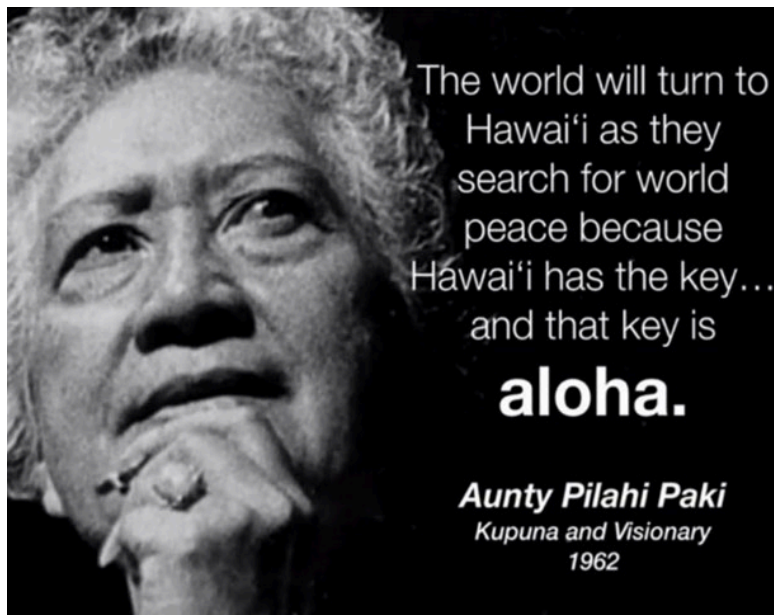
- (1) Encouraging balanced economic, social, community, and environmental priorities.*
- (2) Encouraging planning that respects and promotes living within the natural resources and limits of the State.*
- (3) Promoting a diversified and dynamic economy.*
- (4) Encouraging respect for the host culture.*
- (5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations.*
- (6) Considering the principles of the ahupua‘a system; and*
- (7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawai‘i. [L 2011, c 181, §2]*

Law of Aloha Spirit

The principles, priorities, strategies, and action plans of the Hawai‘i State CEDS process were also predicated on a fundamental law in Hawai‘i, the *Law of Aloha Spirit*.

Codified in 1986 by Hawai‘i lawmakers in HRS Section 5-7.5, this statute recognized the Aloha Spirit as “the working philosophy of Native Hawaiians and was presented as a gift to the people of Hawai‘i.” The language of the statute followed the *unuhi laulā loa*, a popular definition of aloha created by Aunty Pilahi Pahi, a renowned educator and philosopher. It defines the Aloha Spirit and the process in which stakeholders plan Hawai‘i’s economic future through “coordination of mind and heart within each person,” that “[e]ach person must think and emote good feelings to others,” and that “Aloha is the essence of relationships in which each person is important to every other person for collective existence.”

This statute governs the civility in business, social, and personal interactions that, when practiced, distinguishes the State of Hawai‘i as a leader in cultural, economic, and social harmony.



THE STATE OF HAWAI‘I CEDS PROCESS

2023 State CEDS Process Overview

The Hawai‘i State CEDS underwent a collaborative process engaging numerous stakeholders to responsibly steward our islands’ resources and manage economic growth to ensure stable long-term economic vitality for all residents of Hawai‘i. This stakeholder participation includes seating a Hawai‘i State CEDS Strategic Advisory Committee (SAC) to help guide the CEDS process and a 30 day public review and comment period. The CEDS deploys Cluster Based Strategies as prescribed by the U.S. Economic Development Administration,⁶ designed to identify actionable initiatives at the local (county) level that drive the economic resilience and managed economic growth beginning in 2022. This will help to drive towards the goal of diversification and long-term economic stability for all Hawai‘i’s residents.

The 2023 Hawai‘i State CEDS plan kicks off with an overview of the State of Hawai‘i’s core demographics and data which sets the stage for the State’s economic outlook and overarching themes, strategies, and priority actions. The State CEDS plan also includes and is informed by the regional county CEDS developed in all four counties of Hawai‘i. The state and county plans will serve as the basis for ongoing discussions and economic planning by Hawai‘i’s business, government, non-profit, academic, and community leaders as a systematic methodology for ensuring greater economic viability and sustainability.

Overarching Themes

The following themes emerged from the process of analyzing Hawai‘i’s current economic situation and systematically gathering feedback and input from stakeholders at the statewide level as well as at the county level:

1. **Strengthen economic industry clusters.** Industry clusters is the term used throughout this CEDS to describe Hawai‘i’s major sectors, which serve as the anchors for the state’s economy.
2. **Cultivate and grow emerging sectors.** Emerging sectors are those small or nascent industries with high growth potential based on Hawai‘i’s competitive advantages. Aerospace, specialty healthcare, specialty agriculture, and alternative power generation, among others, have the potential to diversify the state economy and become strong economic engines.
3. **Develop workforce and human capital.** Economies exist for the good of the people and depend upon a workforce that is prepared and well trained. Hawai‘i should strive to improve the

⁶ U.S. Economic Development Administration defines regional clusters as “geographic concentrations of firms, workers and industries that do business with each other and have common needs for talent, technology, and infrastructure.”

Economic Development Administration (2021). *Key Definitions*.

<https://www.eda.gov/archives/2021/performance/key-definitions/>

readiness of the workforce to permit the greatest possible opportunity to make a good living, meet the needs of an expanding economy, and support the well-being of residents.

4. **Support a strong business climate and entrepreneurial ecosystem.** Industries large and small depend on a climate which makes a state a good place to start and run a business, including access to capital and training for entrepreneurs.
5. **Build and update economic foundations.** Economic foundations are assets and elements like infrastructure, housing, environmental health, quality of life, and cost of living that must be in place for any commercial activity to take place. These factors are not specific to one industry, but broadly support all economic activity.
6. **Build a resilient economy.** Resilience relates to the ability of an economy to avoid or withstand negative events like natural disasters, pandemics, or recessions. It includes initiative-taking and responsive measures to reduce harm to workers, employers, and communities.

State Strategic Advisory Committee (SAC) Meetings

A total of six State CEDS Strategic Advisory Committee meetings were convened virtually via an on-line platform both for safety during the pandemic and to better enable statewide participation.

- **June 29, 2022**
Kickoff meeting with introductions of the EDAH team, DBEDT OPSD team, and SAC members; overview of CEDS purpose, process, and required components; regional county CEDS overview presentations; and initial statewide SWOT exercise
- **July 21, 2022**
Reviewed SWOT analysis results from June meeting; deeper dive into CEDS structure - priority focus areas, strategic priorities, process for calls-to-action and implementation, equity, and inclusion; detailed review of state industry clusters, priority infrastructure sectors, and capital; and detailed SWOT exercise industry clusters via MeetingSift online tool
- **August 4, 2022**
Facilitated discussion of each state industry cluster; reviewed in-depth SWOT exercise results; CEDS vision statement discussion; discussion on goals and objectives for Statewide priority focus areas of the CEDS
- **August 18, 2022**
Facilitated discussion of each state industry cluster; developed draft *Goals, Objectives, and Priority Action* items for clusters; and discussed initial implementation methods for the CEDS
- **November 10, 2022**
Facilitated discussion of substantive edits made to draft subsequent to the EDA required 30 day public review and comment period (September 1-30, 2022)
- **November 22, 2022**
SAC approval of Statewide document via email correspondence
- **April 4, 2022**
Final review and approval of the statewide document

Hawai‘i State CEDS Strategic Advisory Committee

We would like to thank the following individuals who served on the 2023 Hawai‘i State CEDS Update Strategic Advisory Committee (SAC) for providing valuable input, feedback, and support to help inform the CEDS process and plan.

Douglass Shipman Adams

Hawai‘i County Research and Development

Robert Agres

Hawai‘i County Research and Development

Amy Asselbaye

City & County of Honolulu
Office of Economic Revitalization

Lance Askildson

Chaminade University

Lynn Babington

Chaminade University

Nalani Brun

Kaua‘i County
Office of Economic Development

Jonathan Chun

Belles Graham Proudfoot Wilson and Chun

Gregory Chun

University of Hawai‘i, Hilo
Center for Maunakea Stewardship

Celeste Connors

Hawai‘i Green Growth

Luella Costales

O‘ahu Economic Development Board

Mary Alice Evans

Hawai‘i State DBEDT
Office of Planning and Sustainable
Development

Joseph Daisy

Kaua‘i Community College

John Harrison

Maui Economic Development Board

Len Higashi

Hawai‘i Technology Development
Corporation

Dennis Higashiguchi

DTHigashiguchi & Associates

Jacqui Hoover

Hawai‘i Island Economic Development
Board and Hawai‘i Leeward Planning
Conference

Bonnie Irwin

University of Hawai‘i, Hilo

Brent Kakesako

Hawai‘i Alliance of Community Based
Economic Development

Jaclyn Kaina

Kaua‘i Economic Development Board

Sue Kanoho

Kaua‘i Visitor’s Bureau

Esther Kia‘āina

Pacific Basin Development Council and
City & County of Honolulu Council

Keoni Kuoha

Hawai‘i Community Foundation

Harrison Kuranishi
Hawai'i Workforce Development Council

Randy Kurohara
Community First and Aloha Grown

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O'ahu Economic Development Board

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Revitalization

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Economic Development Alliance of Hawai'i

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KTA Superstores

Shawn Uehira
Hawaiian Electric Company

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Hawai'i State Senate

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Maui Economic Development Board

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Current Events

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Hawai'i Small Business Development Center

Laurie Yoshida
Corteva Agriscience

Jennifer Zelko-Schleuter
Hawaiian Electric Company

Ex Officio Members

DBEDT - Office of Planning and Sustainable Development, Special Plans Branch

Kim Ishimoto, David Kobayashi, and Lauren Primiano

Hawai‘i State Departments, Agencies, and Organizations

Sincere appreciation is extended to the following agencies and departments who provided data and information as well as invaluable guidance and support.

State

Department of Agriculture
Department of Business, Economic Development, and Tourism (DBEDT)
 Agribusiness Development Corporation
 Business Development and Support Division
 Creative Industries
 Foreign Trade Zone
 Hawai‘i Broadband and Digital Equity Office
 Hawai‘i Housing Finance and Development Corporation
 Hawai‘i State Energy Office
 Hawai‘i Technology Development Corporation
 Hawai‘i Technology Development Corporation Innovate Hawai‘i
 Hawai‘i Tourism Authority
 Natural Energy Laboratory of Hawai‘i Authority
 Office of Planning and Sustainable Development
 Research and Economic Development Analysis Division
Department of Education
Department of Hawaiian Homelands
Department of Health
Department of Land and Natural Resources
Department of Transportation
Hawai‘i Commission of Water Resource Management
Hawai‘i Emergency Management Agency
Hawai‘i Green Infrastructure Authority
Hawai‘i Public Housing Authority
University of Hawai‘i
University of Hawai‘i Economic Research Organization (UHERO)

County

County of Hawai‘i Department of Research and Development
City and County of Honolulu Office of Economic Revitalization
County of Kaua‘i Office of Economic Development
County of Maui Office of Economic Development

Other Supporting Organizations

Community First

Hawai'i Community Foundation Fresh Water Initiative

Hawai'i Data Collaborative

Vibrant Hawai'i

CEDS EDAH Working Group Members

EDAH's Working Group is also thanked for their input and contributions to the 2023 Hawai'i State CEDS process.

John Harrison, Maui Economic Development Board

Jacqui Hoover, Hawai'i Island Economic Development Board

Gary Kai, Hawai'i Business Roundtable

Jaclyn Kaina, Kaua'i Economic Development Board

Shannell Komine, Hawai'i Business Roundtable

Cyd Miyashiro, American Savings Bank

Nelson Lau, O'ahu Economic Development Board

Breanna Rose, BR Strategies and O'ahu Economic Development Board

Michael Shibata, University of Hawai'i

Jeanne Unemori Skog, Skog Rasmussen LLC

Susan Tai, Economic Development Alliance of Hawai'i

Shawn Uehira, Hawaiian Electric Company

Leslie Wilkins, Maui Economic Development Board

Laurie Yoshida, Corteva Agriscience

Sylvia Yuen, Research Corporation of University of Hawai'i (retired)

Organization of the Hawai‘i State CEDS

This 2023 Hawai‘i State CEDS captures the foundational economic planning activities for the Hawai‘i CEDS Process including the components required by the EDA:

1. **[Summary Background Information](#)**

This section of the Hawai‘i State CEDS provides the reader with a baseline understanding of Hawai‘i’s economy. It provides a current economic outlook and forecast by county. It also provides an evaluation using population demographics, labor market information, and other key data of the eight industry clusters identified. This provides the reader with both an understanding of the current trajectory of Hawai‘i’s economy and the impact and contributions to the U.S. national economy.

2. **[SWOT Analysis](#)**

Section 2 of the report provides the reader with a better understanding of what Hawai‘i’s stakeholders have identified as Hawai‘i’s strengths and weaknesses as well as the opportunities and threats for driving and mitigating economic growth in today’s dynamic, fast-paced, and correlated global markets. This section identifies the necessary investments Hawai‘i will make in its factors of production including financial capital, infrastructure, (including policy, business climate and physical capacity) and workforce, to drive economic development and vitality in the future.

NOTE: The views expressed in the SWOT are the views of the members of the issue area focus group present at the meeting and do not necessarily represent the views of the Economic Development Alliance of Hawai‘i and/or the Hawai‘i State Office of Planning and Sustainable Development.

3. **[Strategic Direction and Action Plan](#)**

This section of the 2023 State CEDS prioritizes the opportunities and threats identified in the SWOT analysis and aligns them with traded and local economic clusters to identify both industries and occupations that may benefit from or be adversely impacted by these external factors.

4. **[County Briefs](#)**

Section 4 provides brief introductions to and economic information for each of the state’s four Counties – Hawai‘i, Honolulu, Kaua‘i, and Maui. Note that respective County CEDS are accessible on the [State of Hawai‘i CEDS website](#).

5. **[Evaluation Framework](#)**

The Hawai‘i State CEDS evaluation framework provides a means by which to measure the impact of economic investments and actionable items identified in Section 4. The objectives are designed to be specific, measurable, attainable, relevant, and time-bound (SMART) and significant in driving the individual county goals. This section of the Hawai‘i State CEDS measures how well these regional initiatives are improving the overall quality of life for our residents of the State of Hawai‘i.

6. [Economic Resilience](#)

The CEDS is designed to grow and strengthen Hawai‘i’s economy to be resilient in the face of external shocks and economic disruptions by supporting economic diversification, resilient people, and resilient industries. Section 6 elaborates upon the themes of resilience that are woven throughout this document. The section examines the state’s current resilience landscape and the state’s constellation of resilience plans that the CEDS supports.

[New and Future Economic Resiliency Opportunities](#)

Hawai‘i Economic Recovery and Resiliency (HIERR) Project

7. [Conclusion](#)

Closing remarks and summary

8. [Additional Reports and Resources](#)

SECTION 1

STATE SUMMARY BACKGROUND INFORMATION

State of Hawai‘i Outlook and Summary of Economic Forecast

Profile of the State of Hawai‘i’s Economy

The economy of the State of Hawai‘i had a Gross Domestic Product (GDP) of \$90.1 billion in 2021.⁷ This is a decrease from GDP of \$91.8 billion in 2019, an increase from \$82.9 billion in 2020 at the onset of the COVID-19 pandemic, and an increase from \$73 billion in 2016⁸ when the last Hawai‘i State CEDS report was published. The State of Hawai‘i’s economy supports approximately 549,375 jobs (2020) that pay an average of \$58,190 in annual earnings.⁹

State of Hawai‘i’s Economic Outlook

The State of Hawai‘i is at an important crossroads with its economy greatly impacted by the COVID-19 pandemic in crucial areas such as population, unemployment, job growth, visitor industry/arrivals, gross domestic product, personal income, consumer inflation, and climate change.

A June 2022 University of Hawai‘i Economic Research Organization (UHERO) report explored in-depth the impact of the pandemic on Hawai‘i residents with respect to their jobs, ability to buy food, and overall mental well-being, among other areas of their lives. Almost two in three adults in the state reported negative effects on mental health, food security, job security, housing, and poverty with 23% noting that their savings had been depleted, 18% had trouble with their children’s education, 15% were unable to pay rent, and 9% lost their jobs while 12% indicated they were laid off or had their work hours reduced. More than 20% of adults reported low or extremely low food security, while those who contracted COVID-19 experienced greater food insecurity.¹⁰

⁷ Calculations by the United States Regional Economic Analysis Project (US-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis.

Hawai‘i State Department of Business, Economic Development and Tourism Research and Economic Analysis Division (2022, August 24). *Outlook for the Economy Data Table: Actual and Forecast of Hawai‘i Economic Indicators for Hawai‘i 2020 to 2025*. <https://dbedt.hawaii.gov/economic/qser/outlook-economy/>

⁸ State of Hawai‘i Office of Planning and Sustainable Development (2016). *2016-2020 Hawai‘i Statewide Comprehensive Economic Development Strategy (CEDS)*. https://files.hawaii.gov/dbedt/op/spb/CEDS_2016_final.pdf

⁹ U.S. Census Bureau (2021, July 1). *Quick Facts Hawai‘i Table: Population Estimates July 1, 2021*. <https://www.census.gov/quickfacts/HI>

¹⁰ University of Hawai‘i Economic Research Organization (May 2022). *Health Effects and Views of COVID-19 in Hawai‘i*. <https://uhero.hawaii.edu/uhero-public-health-report-health-effects-and-views-of-covid-19-in-hawaii/>

STATE OF HAWAII

The economy of the State of Hawaii had a gross domestic product of **\$90.1 Billion**

gross in 2021. This is a decrease from a gross regional product of \$91.8 billion in 2019, but an increase from \$82.9 billion in 2020 at the onset of the COVID-19 pandemic and an increase from \$73 billion in 2016.

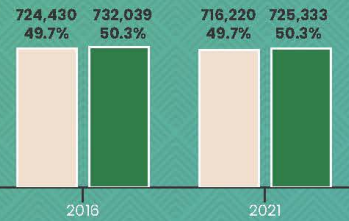
POPULATION



1,456,469
2016
1,441,553
2021

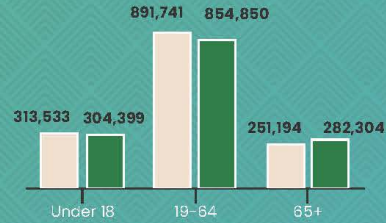
By Gender (Number of residents)

● Female
● Male



By Age

● 2016
● 2021



EDUCATION



2016-2020 Average

92.5%

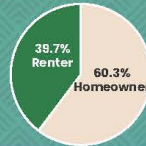
High School Graduates

33.6%

College and Higher Degree Graduates

HOUSING

2016-2020 Average



Single Family Home

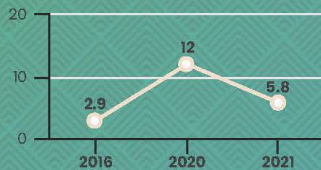


Condo



ECONOMY

Unemployment Rate (%)



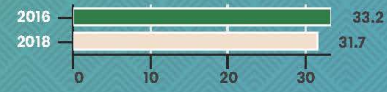
Median Household Income (\$ Thousands)



Per Capita Personal Income (\$ Thousands)



Percentage of Population considered ALICE (%)



Percentage of Population Below Poverty Level (%)



LARGEST INDUSTRIES

Top Industries By GDP (\$ Millions)	2016	2021
Government	17,784	19,182
Real Estate, Rental, and Leasing	15,255	15,981
State and Local	8,010	8,953
Accommodation and Food Services	7,538	7,930
Health Care and Social Assistance	5,674	7,014
Total GDP	83,914	90,059

Top Industries By Number of Jobs	2016	2021
Government	126,000	120,200
Leisure and Hospitality	122,400	109,000
Trade, Transportation & Utilities	121,400	94,000
Education & Health Services	85,000	84,500
Professional & Business Services	72,900	67,700
Total Employees	647,600	583,500

While the state’s economy has been impacted by the pandemic, with the easing of COVID-19 restrictions, business and community activity gradually resumed. As reported by the State of Hawai‘i DBEDT’s Research & Economic Analysis Division (READ) in the August 31, 2022 release of its *Quarterly Statistical & Economic Report (QSER)*¹¹ and associated press release,¹² Hawai‘i’s economy has performed well during the first seven months of 2022:

- **Tourism:** Hawai‘i welcomed a total of 5.4 million visitors, representing 86.8% recovery from the same period in 2019. Visitor spending totaled \$11.2 billion, representing 5.8% higher than the spending during the same period in 2019.¹³
- **Labor Market:** The labor market continued to improve with its unemployment rate at 4.2% seasonally adjusted and 3.7% not seasonally adjusted. In comparison, the seasonally adjusted unemployment rate was 6.5% and not seasonally adjusted rate was 6.3% during the first seven months of 2021. Hawai‘i’s seasonally adjusted unemployment rate during the first seven months of 2021 was the 11th highest in the nation and dropped to the 15th highest during the first seven months of 2022.¹⁴
- **Construction Activity and Home Sales:** The construction industry grew during 2020 and 2021 and, during the first four months of 2022, increased 6.7% due to the 20.5% increase in private building permit value and a 66.9% increase in the value of government contracts awarded in 2021. During the first half of 2022, government contracts awarded increased 479.2% compared with the same period in 2021, primarily due to federal government awards.

Visitor spending totaled \$11.2 billion in 2019. This represented a 5.8% increase from the same period the previous year.

In the first six months of 2022, 11,914 homes were sold statewide (down 5.5% from the same period in 2021) with the average sales price for single-family homes at \$1,113,242 (up 8% from the first half of 2021). The average sales price for condominium homes was \$717,868 (up 9.7% from the same period in 2021). Of the homes sold during first half of 2022, 8,833 units (74.1%) were purchased by local buyers and 3,801 (25.9%) by out-of-state buyers. Of the homes sold between 2008 and 2021, 25% of them were sold to out-of-state buyers.¹⁵

¹¹ Hawai‘i State Department of Business, Economic Development and Tourism Research and Economic Analysis Division (2022, August 31). *State of the Economy Quarterly Statistical & Economic Report (QSER)*. <https://dbedt.hawaii.gov/economic/qser/state-economy/>

¹² Hawai‘i State Department of Business, Economic Development and Tourism. (2022, Aug 31). *News Release Where are We in Economic Recovery?* <https://dbedt.hawaii.gov/blog/22-41/>

¹³ QSER (2022, August 31) op. cit.

¹⁴ Ibid.

¹⁵ Ibid.

- **Honolulu Consumer Inflation:** Inflation in the Honolulu area, as measured by the Consumer Price Index for All Urban Consumers (CPI-U), averaged 6.8% during the first seven months of 2022. Though it was the highest since 1991 (when the annual rate was 7.2%), it decreased from 7.5% in March to 7% in May and down to 6.8% in July.

The increase in inflation was partly driven by energy prices, which jumped 35.6% due to an increase in crude oil prices. Supply chain disruptions also contributed to the higher inflation rate with an increase for commodities in Honolulu at 12.2% in July 2022.

The increase in inflation was partly driven by energy prices, which jumped 35.6% due to an increase in crude oil prices. Supply chain disruptions also contributed to the higher inflation rate with an increase for commodities in Honolulu at 12.2% in July 2022. In fighting the high inflation rate, the Federal Reserve Bank increased the Federal Funds target rate by fifty basis points (0.5%) in May 2022 and again by seventy-five basis points (0.75%) in July with more rates hikes expected in the following months. Higher interest rates have negative impact on investments, especially on home sales.¹⁶

- **New COVID-19 Cases Declining and Global Economic Concerns:**

New COVID-19 cases in Hawai‘i have been decreasing since the beginning of June 2022. At the time, the third quarter QSER¹⁷ was written, the average daily new COVID-19 cases were at 151 for the week ending October 19, 2022, compared to 1,260 at the end of May. With no end in sight to the ongoing war in Ukraine, disruptions to global supply chains, and rising prices worldwide, inflationary pressures are likely to continue - particularly in critical areas such as energy, food, and construction.

Summary of Economic Forecast and Benchmark Data

Looking ahead, Hawai‘i’s economy is showing positive momentum and continues to move forward as evidenced by more jobs and strong tax collections. Its economic growth rate is expected to be higher than the U.S. economy (at 1.7% versus 0.7%) in 2023.

In 2023, Hawai‘i’s Gross Domestic Product (GDP) is predicted to exceed \$100 billion for the first time ever. Hawai‘i’s economic growth rate, as measured by the percentage change in real GDP, will increase 2.6% in 2022 over the previous year. In 2023, Hawai‘i’s economic growth is expected to slow further, to 1.7%, due to the expected global slow down. U.S. economic forecasts predict a growth

¹⁶ Ibid.

¹⁷ Ibid.

rate of only 0.7% in 2023 with more than a 50% possibility that the U.S. economy will be in recession according to Blue Chip Economic Indicators. In 2024 and 2025, Hawai‘i’s economic growth is predicted to return to pre-pandemic levels of about 2%.¹⁸

In the third quarter 2022 Statistical and Economic Report released on August 31, 2022, DBEDT predicts:

- **Visitor arrivals:** Projected to be 9.2 million in 2022, increase to 9.8 million in 2023, 10.2 million in 2024, and 10.5 million in 2025, returning to 2019 arrival levels.
- **Visitor spending:** Projected to be \$19.1 billion in 2022, which is greater than previously projected due to the higher-than-expected average visitor daily spending. During the first seven months of 2022, daily visitor spending increased 19.8% from the same period in 2021. Total visitor spending is projected to grow at 9.2%, 5.1% and 4.9% respectively for 2023, 2024, and 2025.



Courtesy of OPSD

- **Non-agriculture payroll jobs:** Forecast to increase by 4.2% in 2022, they are lower than previously projected due to a slowdown in construction. Job counts are anticipated to increase by 3.2% in 2023, 2.2% in 2024 and 1.9% in 2025 (i.e., recovering to the pre-pandemic (2019) level by 2025).
- **State unemployment rate:** Forecast to improve as economic recovery continues. The rate (not seasonally adjusted) is projected to be 3.8% in 2022, 3.6% in 2023, 3.2% in 2024 and decrease to 2.9% in 2025.
- **Personal Income:** During the pandemic, personal income increased due to government transfers related to unemployment insurance payments and other CARES Act funds. As government support was reduced in 2021, personal income will likely decrease in 2022 by 0.9%, then grow between 2.5% and 3.0% for the following years until 2025.
- **Inflation:** The cost of living in Hawai‘i continued to rise in 2022. In March, the Urban Hawai‘i Consumer Price Index (CPI) was 7.5% higher than it was one year ago, squeezing household budgets and disproportionately impacting low-income households. Hawai‘i last saw an elevated

¹⁸ Hawai‘i State Department of Business, Economic Development and Tourism. (2022, Aug 31). *News Release: Declining Investment Drives Down Hawaii Economic Growth*. <https://dbedt.hawaii.gov/blog/22-41/>

inflation rate of 6.0% briefly in mid-2006, but otherwise inflation has not exceeded 7.5% since 1991. The recent surge stands in stark contrast to the inflation experience of recent years: between 2017 and 2020, Hawai‘i inflation averaged just 1.9%. If we take 1.9% to be the typical inflation rate for Honolulu, then the additional 5.6% inflation for the year ending in March can be viewed as “excess inflation.”

Actual and Forecast of Key Economic Indicators for Hawai‘i: 2020 to 2025¹⁹

Economic Indicators	2020	2021	2022	2023	2024	2024
	Actual		Forecast			
Total population (thousands)	1,452	1,442	1,440	1,441	1,444	1,446
Visitor arrivals (thousands)	2,078	6,778	9,191	9,838	10,223	10,503
Visitor days (thousands)	28,660	65,312	85,476	88,909	90,748	92,456
Visitor expenditures (million dollars)	5,162	13,154	19,101	20,862	21,932	23,015
Honolulu CPI-U (1982-84=100)	286.0	296.8	315.6	325.8	333.1	340.3
Personal income (million dollars)	82,527	87,054	86,285	88,442	91,045	93,766
Real personal income (millions of 2012\$)	66,459	68,200	64,961	65,455	66,179	66,961
Personal income deflator (2012=100)	124.2	127.6	132.8	135.1	137.6	140.0
Non-agricultural wage & salary jobs (thousands)	559.9	583.5	608.1	627.6	641.4	653.5
Civillian unemployment rate	12.0	5.7	3.8	3.6	3.2	2.9
Gross domestic product (million dollars)	82,885	90,059	97,161	101,421	105,615	109,670
Real gross domestic product (millions of 2012\$)	70,625	73,880	75,805	77,131	78,781	80,376
Gross domestic product deflator (2012=100)	117.4	121.9	128.2	131.5	134.1	136.4

¹⁹ Hawai‘i State Department of Business, Economic Development and Tourism Research and Economic Analysis Division (2022). *Outlook for the Economy: Actual and Forecast of Key Economic Indicators for Hawai‘i: 2020 to 2050*. <https://dbedt.hawaii.gov/economic/qser/outlook-economy/>

SECTION 2 SWOT ANALYSIS

Strengths, Weaknesses, Opportunities, and Threats (SWOT) analyses were conducted with the 2023 State CEDS Strategic Advisory Committee (SAC) in its first two meetings, and results mirror many issues voiced by the county level SACs and focus groups. The results reflect the viewpoints of individual participants of those meetings and do not necessarily represent views of the Economic Development Alliance of Hawai‘i or Hawai‘i State Office of Planning and Sustainable Development.

Given Hawai‘i’s forecast and benchmark data, conducting a robust Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis with the Hawai‘i State CEDS Strategic Advisory Committee provided a combination of realistic, fact-based, data-driven research with real-life context, fresh perspectives, and innovative ideas from a diverse body of leaders and stakeholders throughout the community. The following recurring themes and trends emerged as areas of concern from the SWOTS analysis:

1. **Affordability, Cost of Living.** U.S. News ranked Hawai‘i as having the highest cost of living of the fifty states in 2020²⁰ and CNBC’s 2020 survey²¹ ranked Hawai‘i 46th out of fifty states for business, measuring them on more than eighty-five different metrics in ten key categories of competitiveness. The lack of affordability impacts all socio-economic measurements including and not limited to housing, labor force, age of population, poverty, and quality of life. The 2020 Aloha United Way report *ALICE (Asset Limited, Income Constrained, Employed): A Study of Financial Hardship* demonstrated that 42% of households struggled to make ends meet. Further, 9% of Hawai‘i residents were already below the federal poverty line and 33% were ALICE households.²²
2. **Diversification.** Hawai‘i currently remains dependent on one primary cluster,²³ which the pandemic demonstrated is a risk to the state’s economy and overall resilience. The hospitality and tourism cluster is by far the largest and most significant of Hawai‘i’s traded clusters. Outside of hospitality and tourism, the remaining two critically clusters (government - including

²⁰ U.S. News & World Report (2022). *Affordability Rankings: Determining the Most Affordable States*. <https://www.usnews.com/news/best-states/rankings/opportunity/affordability>

²¹ CNBC (2022, July 13). *America’s Top States for Business 2022. The full rankings*. <https://www.cnbc.com/2022/07/13/americas-top-states-for-business-2022-the-full-rankings.html>

²² Aloha United Way (2020). *ALICE in Hawai‘i: A Financial Hardship Study*. https://issuu.com/hcfhawaii/docs/2020alicereport_hi_final/1

²³ A cluster is a regional concentration of related industries connected by employee skills, technology, shared sources of supply or demand, and/or other inter-industry linkages. They arise because firms can benefit from being geographically close to one another.

U.S. Economic Development Administration, Key Definitions, op. cit.

military, and construction) employ far fewer workers. Each of Hawai‘i’s four counties remain heavily dependent on the hospitality sector as they move towards diversification, recognizing that creating a diverse and resilient economy requires a focus on expanding other clusters.

The number of tourists arriving in Hawai‘i has rebounded to exceed pre-pandemic arrivals when other areas of the economy and services have not yet fully recovered. This is increasing frustration by residents of Hawai‘i and demand for better tourism management..

3. **Education and Workforce Development.** Hawai‘i’s fastest growing cluster is the education and knowledge creation cluster. There are five key barriers to overcome when establishing and expanding statewide workforce systems - program access, program implementation, data use, funding (for both programming and individuals), and system alignment and coordination. These barriers are best addressed through collaboration and partnerships sponsored by organizations like the Hawai‘i Workforce Development Council²⁴ which includes the Superintendent of the Hawai‘i Department of Education and the President of the University of Hawai‘i. While the State has not established a policy that defines high-demand occupations, institutions of learning at all levels in Hawai‘i are striving to provide relevant curriculum in a rapidly changing world to give Hawai‘i’s students a competitive edge. These efforts include initiatives such as the Hawai‘i P-20 Partnerships for Education which is dedicated to strengthening the “education pipeline from early childhood to postsecondary education and training.”²⁵
4. **Housing.** Hawai‘i continues to be among the most expensive states in the country in which to live and ranks second in the nation for per capita houselessness at a rate of 46 per ten thousand residents experiencing homelessness,²⁶ a poverty rate of 9.3%, and a cost of living that is 11.3% higher than the national average.²⁷ As of June 2022, the median sales price of a single-family home in the State was \$1.1 million. Hawai‘i’s counties have some of the highest regulatory burdens, even when compared with the nation’s thirty most expensive counties. According to the University of Hawai‘i Economic Research Organization (UHERO), the categories that contribute most significantly to the regulatory burden in U.S. housing markets are court involvement, state political involvement, and local political pressure.²⁸ Hawai‘i ranks high in all three categories, and its level of local political pressure is particularly high, ranking in the top 5% of the national survey sample.

²⁴ State of Hawai‘i Workforce Development Council. <https://labor.hawaii.gov/wdc/>

²⁵ Hawai‘i P-20 Partnerships for Education. <https://www.hawaiip20.org/>

²⁶ National Alliance to End Homelessness (2021). *State of Homelessness: Hawai‘i Dashboard*. <https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness-report/hawaii/>

²⁷ *Ibid.*

²⁸ Inafuku, Rachel, Tyndall, Justin and Bonham, Carl. (2022, April 14). University of Hawai‘i Economic Research Organization. *Measuring the Burden of Housing Regulation in Hawai‘i*. <https://uhero.hawaii.edu/measuring-the-burden-of-housing-regulation-in-hawaii/>

Affordable housing requirements are particularly widespread in Hawai‘i and permitting wait times are roughly triple the national average. Reducing the regulatory burden of housing construction could lower housing costs. Experts contend that renters face a more uncertain future than homeowners because median household income for renters is \$57,000 compared to \$100,000 for homeowners, and federal protections for homeowners, while far from perfect, are more robust and push more responsibility for renters’ assistance to states and counties.

The housing market is further challenged by the increased number of houses that have been moved from long-term rental to short-term and vacation rental categories which contributes to the frustration and growing demand from residents to cease marketing Hawai‘i as a tourist destination without emphasizing that Hawai‘i is also our home.

5. **Infrastructure.** According to the American Society of Civil Engineers (ASCE),²⁹ the majority of Hawai‘i’s infrastructure has been operating beyond its useful life, and some components of systems are over one hundred years old. Due to a lack of funding, it has been difficult to effectively maintain and improve the existing infrastructure systems to keep up with increasing usage and rapidly changing lifestyles. As population, economic growth, and development increase, the strain on Hawai‘i’s infrastructure will continue to escalate as many of its infrastructure systems struggle to stay in operable condition. Water main breaks, flood water damage, loss of property from coastal erosion, and beach and park closures from brown water advisories are all results of deteriorating infrastructure.

In the longer view, steady sea level increases in the coming years will also present new challenges that will threaten not only our infrastructure but also our iconic beaches and coastlines.

Hawai‘i is the only state not accessible via ground transportation. The only methods of transportation to and from Hawai‘i and between islands are by sea or air, with the majority of travel occurring by air. According to the U.S. Department of Transportation, as of January 2020, 56.4% of Hawai‘i’s roads are in good or fair condition and 24.7% of bridges are in good condition. Hawai‘i’s dependence on imports through shipping requires modernization and maintenance of harbors and marine cargo facilities.

As in other regions, the COVID-19 pandemic revealed internet/broadband access to be critical for conducting daily living, health, learning, and business. There are numerous unserved and underserved areas throughout requiring updated and, in many cases, completely new access to broadband and the required infrastructure. The State and counties are taking steps toward the ubiquitous “last mile” with support from federal stimulus funds intended to assist with economic recovery and resilience. Such expansion will provide new opportunities for Hawai‘i residents from a more equitable and inclusive perspective as accessibility is increased.

²⁹ American Society of Civil Engineers (ASCE) (2021). *Report Card for America’s Infrastructure: 2019 Hawai‘i Infrastructure Report Card*. <https://infrastructurereportcard.org/state-item/hawaii/>

6. **Innovation and Technology.** Innovation is the key to regional growth and prosperity. UHERO uses a dashboard to track key innovation assets and outcomes including education, research and development, entrepreneurship, and economic prosperity.³⁰ The dashboard indicates that although Hawai‘i’s growth has fallen behind the rest of the nation since the 1990’s, the COVID-19 pandemic did reveal the resilient and innovative mindset of Hawai‘i’s people as many found ways to innovatively utilize technology and other resources to pivot and adapt.

Hawai‘i was viewed as a COVID-safe destination due to the state’s management and comparatively small numbers of infection and death from the virus. The in-migration experienced during the pandemic included many individuals who are now working remotely for corporations both on the continental United States and internationally. This wealth of expertise provides opportunities for innovation, establishment of new businesses, increased entrepreneurship, collaborations, mentoring, education, and workforce development.
7. **Labor Force Shortages.** The historic workforce shortages currently being experienced in Hawai‘i, are due in part to the high outmigration of working age individuals who leave the state seeking opportunities for higher wages, home ownership, and more balanced cost of living offered in the contiguous United States. Additionally, costs including those for housing and services related to employment such as childcare and transportation (fuel) have been identified by Hawai‘i residents as challenges.
8. **Water.** In 2022, the State of Hawai‘i faces one of the largest water crises ever experienced on O‘ahu due to the combined effects of contamination by fuel from a U.S. Navy fuel storage tank (Red Hill facilities) and historically high levels of tourism which have tested its carrying capacity. Navy fuel contamination has severely threatened the water supply, posing dangerous health risks on O‘ahu, while the tourism sector continues to also stress water supply with high usage throughout the state. Climate change is poised to exacerbate Hawai‘i’s freshwater situation even further. Across the state, wet areas are becoming wetter while other areas are experiencing drier or even drought conditions. Many aquifers are struggling to consistently absorb freshwater and it is difficult to maintain reservoir levels needed across the state due to ongoing drought conditions.

Overall, respondents to surveys and participants in CEDS discussions express a fervent desire to maintain Hawai‘i as their home, value the diversity of its people and culture, recognize Hawai‘i’s uniqueness, and seek to find ways to maximize strengths and opportunities while being aware of the weaknesses and challenges that require mitigation.

³⁰ University of Hawai‘i Economic Research Organization. *UHERO Dashboard Project: Innovation Dashboard*. <https://uhero.hawaii.edu/innovation/index.html#/>

**Hawai‘i State CEDS Strategic Advisory Committee
Strengths, Weaknesses, Opportunities, Threats³¹**

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • People resilient and with ALOHA spirit • Multi-cultural community, esp., Indigenous knowledge by host culture • Lowering silos in corporate, government, NPOs • Knowledge-based industries because of natural resources (e.g., dark skies and astronomy) • Ambitious and achievable energy climate goals recognized by United Nations et al to achieve their goals (focus on credible implementation/action) • Island economy while challenging is also tremendous asset (food security, energy, housing, natural resource management). • Hawai‘i at the forefront on how to put together solutions and be model to others, and can attract additional resources as we achieve goals • ‘Āina (Land) and place is a Strength and Weakness because we are not protecting it well, and is also Opportunity and Threat; it will be critical to strategies; facilitators from O‘ahu SWOT should share their SWOT results • Innate spirit of collaboration/kuleana (responsibility) versus competition • County that has public education system in only one district, one university system helps equity and access; also, a Weakness because of bureaucratic nature, detachment with more rural areas and less ability to act quickly to meet the rapidly changing workforce mentioned • Climate and natural environment • Visitor industry 	<ul style="list-style-type: none"> • Aging Infrastructure • High cost of living • Aging and inadequate broadband infrastructure • Shipping costs • Food insecurity and high proportion of imported food at approx. 85% • Lack of continuity and stability for good programs (challenges incl., funding, discipline, or attention paid to it) that become one-offs. Need runway to see desired outcomes for programs • Continuity and connectivity between various efforts • Climate change, sea-level rise, long-term drought • Heat stress has significant impact on health; also, an Opportunity to work on adaptations to work on heat stress with areas losing their urban tree canopy and opportunity to build healthcare system to be aware of where climate change and heat stress taking us • Lack of affordable and attainable housing: many highly educated young families moving to mainland to get affordable house. Must look at teacher housing and other housing that is transit oriented. Also, cannot rely on public subsidies entirely and must reduce costs (outside of labor costs) where possible • Heavy reliance on Visitor Industry

³¹ These responses are representative of the SAC’s responses but were edited for clarity, brevity, and repeated comments were collected under a single representative comment. The full list of responses including the individual cluster SWOT analyses can be found at: <https://planning.hawaii.gov/spb/ceds/>

OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Brilliant people with ecological mindset who leave islands because of the lack of opportunities and threats name • HI can be leader for sustainable island communities and on national AND global stage • Unique way we do business in HI can be bright light to showcase how done here and how it can be industry- leading for other areas; can help build bridges with people across the world • Workforce: to equip young and incumbent workers for jobs that we currently go to the mainland for – i.e., supply local skilled workforce. • Sustainable growth, esp., around tourism • Responsible/regenerative Visitor Industry 	<ul style="list-style-type: none"> • Cost of living and brain drain • Aging workforce and out-migration • Greenhouse gas • Visitor industry • Climate Change • Lack of clean water

SECTION 3

STRATEGIC DIRECTION AND ACTION PLAN

This section of the Hawai‘i State CEDS identifies economic development strategies that are based on the SWOT analysis and priority identification by the Hawai‘i State CEDS Strategic Advisory Committee.

The overarching goal of the Hawai‘i State CEDS is to increase the quality of life of its residents and create conditions for all people to thrive and fulfill their potential. The CEDS intends to support the well-being of the state’s diverse communities and unique natural environment as the foundation for a vibrant economy. To help achieve this, the CEDS sets out to build a diversified, resilient economy and sustainable future by advancing the statewide goals set forth by the Hawai‘i 2050 Sustainability Plan and the Aloha+ Challenge, which is Hawai‘i’s local framework to measure progress towards the United Nations 2030 Sustainable Development Goals (SDGs).

Aligning the state’s economic development strategy with the SDGs, the CEDS promotes an equitable, sustainable, economic recovery that builds long-term resilience in both Hawai‘i’s traded and local clusters. Informed by the SWOT analysis, the statewide strategy includes identified opportunities for the five-year CEDS cycle to inform Hawai‘i government, business, and civil society leaders in prioritizing economic development initiatives based on ever-changing factors that impact Hawai‘i’s economy.

Through this structure, the CEDS allows for focused strategic dialogue, regular evaluation, and ongoing cross-sector collaboration.

Each of Hawai‘i’s four counties’ CEDS includes a strategic direction and tactical action plans that will drive their respective economic strategies and where applicable, assist with statewide economic strategies. For specific initiatives and evaluation frameworks, please reference the county plans for which briefs are provided in Section 5. Complete copies of the Counties’ CEDS are linked in Section 8: Additional Reports and Resources.

The evaluation framework detailed in Section 5 provides metrics that will be used to assist in evaluating and measuring performance of the Hawai‘i State CEDS.

HAWAI‘I STATE INDUSTRY CLUSTERS

The Hawai‘i State CEDS focuses on eight industry clusters identified by the 2023 CEDS State Strategic Advisory Committee:

1. Agriculture, Aquaculture, and Food Systems
2. Creative Industries
3. Education and Knowledge Creation
4. Energy and Sustainable Renewables
5. Health and Well Being
6. Hospitality and Tourism
7. Defense and National Security
8. Science and Technology

Cross-Cutting Strategies

The Hawai‘i State CEDS strategies build on the identified cross-cutting focus areas and priorities to support the state goals and cluster action plans:

- Advance policies and programs to reduce the cost of living and increase economic stability
- Promote cross-sector collaboration to break down silos and achieve shared goals
- Increase the capacity of local education, research, development, and training institutions
- Reduce barriers to encourage innovation, foster small business development, and entrepreneurship
- Cultivate island values and strong relationships across institutions and communities
- Build regional and global partnerships

ECONOMIC INDUSTRY CLUSTERS

GOALS ♦ OBJECTIVES ♦ PRIORITY ACTIONS

:: AGRICULTURE, AQUACULTURE, AND FOOD SYSTEMS ::

Hawai‘i is renewing its commitment to its important agriculture and aquaculture industries along with overall food systems. Hawai‘i is an ocean state that imports an estimated 85% of its food from abroad making Hawai‘i’s food systems highly vulnerable to disruptions to shipping and supply chains. The pandemic highlighted the risks of Hawai‘i’s current food systems but also served as a catalyst for increased interest in food security and sustainability. The CEDS seeks to guide this interest and address the challenges Hawai‘i’s agricultural industry faces including an aging workforce, water, limited infrastructure and high labor, land, fertilizer, and energy costs. If these challenges can be met, Hawai‘i is blessed with an opportunity to use its fertile land, a year-round growing season, and strong aquaculture and agricultural traditions to build a Hawai‘i where food is available and affordable for Hawai‘i’s citizens.

GOAL

Grow Hawai‘i’s agricultural and aquaculture sectors (including non-food production) to diversify the economy, build resilient systems, and increase self-sufficiency while protecting Hawai‘i’s natural and cultural resources

OBJECTIVE 1

Build agriculture and aquaculture sector capacity to increase local food production and support successful agri/aqua business, farmers, ranchers, food, and value-added producers

Priority Actions

- **Prioritize agricultural land affordability and equitable water access** through land use and regulatory policies that promote pricing appropriate to agricultural activities and access to irrigation water
- **Increase capital investment** (e.g., low-cost capital, revolving funds, federal grants, and loans) for production and value-added outputs
- **Promote business development and back-office operations capacity**, particularly for small to medium businesses, entrepreneurs, and nonprofit organizations
- **Address high energy costs** with increased renewable energy and energy efficiency while maintaining balance between competing demands of food self-sufficiency and renewable energy production (i.e., food and energy)

- **Encourage development of restorative aquaculture** by reducing regulatory hurdles, promoting, and securing investment for early-stage research, developing cross-sector collaboration, and supporting cultivators, practitioners, and entrepreneurs.
- **Support indigenous food systems**, including taro farming, fishpond restoration, biocultural land stewardship, and traditional subsistence and cultural practices
- **Increase access to proven technology and innovation options** for farmers and agri/aqua businesses
- **Implement the Hawai'i Interagency Biosecurity Plan** to address current and mitigate future invasive species threats to the agricultural sector and enhance natural resources



Courtesy of Shawn Uehira

OBJECTIVE 2

Create a strong workforce pipeline for the agriculture, aquaculture, and food systems sector to promote local food production and sustainable food systems

Priority Actions

- **Invest in P-20 agri/aqua cultural education and workforce development** with programs and personnel across K-12 and university curricula
- **Cultivate the next generation of leaders across** agriculture and aquaculture careers, including farm succession planning and multi-generation knowledge transfer
- **Increase affordable agricultural housing** to reduce the cost of living for the agricultural workforce
- **Promote experiential learning opportunities** through paid internships, apprenticeships, hands-on training programs, and cross-industry partnerships
- **Expand food-safety certification programs**, training, and support for local producers

- **Create networks of peers and experts to share knowledge and best practices** while expanding market opportunities and scaling best practices

OBJECTIVE 3

Encourage the purchase of local agricultural products from state and county governments, businesses, visitors, and consumers

Priority Actions

- **Expand the “Farm to State” program**, government procurement, and institutional purchasing of local agricultural products
- **Market farm-to-table initiatives** (e.g., “Buy Local, It Matters,” etc.) that promote local food consumption and reduce food waste with the government, businesses, and residents
- **Promote agritourism** to integrate local agriculture and aquaculture into the visitor experience
- **Expand accessibility and affordability programs** (e.g., SNAP, Da Bux) that increase equitable access to and consumption of fresh and nutritious foods for low-income households
- **Support culturally based foods** with community biocultural land stewardship and farms
- **Identify appropriate export non-food and food crops** while prioritizing food production for local consumption

OBJECTIVE 4

Integrate local agricultural supply chain and infrastructure to increase value chain coordination

Priority Actions

- **Establish food hubs and cooperatives on all islands** to increase access to markets and aggregate services (e.g., distribution, storage, processing, and marketing) recognizing that such investments utilizing public funds should be done with agricultural operations as the core beneficiary versus operator of such facilities
- **Increase cooperative transportation** (e.g., air, water, and land) for cost-sharing and coordination of local agricultural products
- **Increase local agricultural-related facilities and access**, including processing plants, slaughterhouses, commercial kitchens, storage, and distribution
- **Review existing built infrastructure** (e.g., harbors, roads, reservoir decommission and modernization, and water infrastructure) to increase resilience, safety, and equitable access

:: CREATIVE INDUSTRIES ::

As the land of Aloha where Native Hawaiian and Pacific Islander heritages have melded between East and West, Hawai‘i is home to a unique, diverse, and artistic culture. Hawai‘i’s natural beauty, tropical climate, and vibrant culture make it a preferred destination for television and movie productions.

In 2020, Hawai‘i’s creative industries sector supported 54,071 jobs and small businesses producing \$4.2 billion in Gross Domestic Product.³² The sector is anchored by Hawai‘i’s film industry which spent a record \$405 million in 2019 with an estimated \$707 million in estimated economic impact.³³ Hawai‘i’s natural advantages offer the state an opportunity for economic diversification, equity, inclusion, and resilience as it develops its creative industries sector.

GOAL

Expand and strengthen a creative industries sector that reflects Hawai‘i’s unique culture

OBJECTIVE 1

Increase public exposure and outreach for Hawai‘i’s creative industries sector to elevate diverse local artists and their work

Priority Actions

- **Elevate art and culture** (e.g., music; dance; storytelling; cultural heritage and crafts; film; fashion; new media; publishing; and diverse fine, performing, and visual arts, etc.) as integral parts of Hawai‘i community socioeconomics for residents and visitors
- **Showcase diverse local artists** in accessible public venues and community spaces across all islands (e.g., outdoor events, festivals, art installations, and cultural activities)
- **Support Native Hawaiian culture**, arts, language, practices, and communities to perpetuate traditional cultural heritage and arts
- **Promote local Hawai‘i artists** statewide, nationally, and internationally (e.g., local designers’ work and exposure at fashion shows, etc.)

³² Hawai‘i State Department of Business, Economic Development and Tourism Research and Economic Analysis Division (May 2020). *Hawai‘i’s Creative Industries Update Report 2020*. https://files.hawaii.gov/dbedt/economic/data_reports/hawaii-creative-report/HI_Creative_Ind_2019.pdf (p. iii)

³³ Ibid.

- **Collaborate with stakeholders** to promote creative industries and mainstream key economic and trade policy recommendations

OBJECTIVE 2

Provide education that promotes creativity and increases awareness of art and culture’s contribution to fostering diverse thinking, self-expression, and self-determination

Priority Actions



Courtesy of Ke Kula 'o Pi'ilani

- **Ensure strong arts and culture education** in the P-20 school system with curricula that cultivates students’ creativity, innovation, and self-expression
- **Provide Native Hawaiian cultural education** for youth, adults, and across industries
- **Increase educational partnerships for the arts** with businesses, nonprofits, and creative professionals to create next-generation career pathways in the creative industries sector
- **Support opportunities for residents** of all ages that foster creativity and increase access to and appreciation of the arts

OBJECTIVE 3

Support creative entrepreneurs with business development and resources

Priority Actions

- **Provide business development and mentorship** for artists and creators including and not limited to technical assistance in areas such as accounting, marketing, patent law, permits and licenses, taxes, and intellectual property
- **Resource creative entrepreneurs** with access to capital, markets, and other support to assist in bringing creative products and services to market
- **Revamp the “Made in Hawai‘i” branding program** to increase the visibility and value of Hawai‘i-made products
- **Secure creative spaces** (e.g., co-working spaces, studios) that allow creative organizations and entrepreneurs to share resources, innovate, and collaborate across sectors

:: DEFENSE AND NATIONAL SECURITY ::

The military is one of Hawai‘i’s major employers and tax generators. In October 2022, the Pentagon released its annual defense spending by State revealing expenditures of \$7.9 billion in Hawai‘i in the 2021 fiscal year (October 1, 2020, to September 30, 2021)³⁴ reaffirming military spending as the State’s second-ranked (after tourism) overall economic contributor. Hawai‘i’s enviable strategic location as headquarters for the IndoPacific Command have made defense a reliable contributor to Hawai‘i’s economy and U.S. national security.

GOAL

Build and maintain healthy relationships and trust between Hawai‘i communities, diverse stakeholders, and national security partners to ensure peace and prosperity for Hawai‘i and the Pacific

OBJECTIVE 1

Foster healthy relations and trust between the military and local communities

Priority Actions

- **Foster healthy relationships** between communities, the military, and affiliated branches through facilitated dialogue, remediation projects, trust-building, and engagement



Courtesy of United States Space Force

- **Advocate for a long-term solution to the Red Hill fuel leak and water crisis** that thoroughly addresses community concerns and ensures the long-term health of the natural environment and water quality
- **Maintain funding** for and work with existing defense economy initiatives [e.g., Hawai‘i Defense Economy (HDE), Hawai‘i Defense Alliance, DFARS Compliance – eResilience]

³⁴ U.S. Department of Defense Office of Local Defense Community Cooperation (2022). *Defense Spending by State Fiscal Year 2021*.

https://oldcc.gov/sites/default/files/OLDCC_DSBS_FY2021_FINAL_WEB.pdf (p. 8)

- **Collaborate on U.S. Department of Defense grants** to advance common goals on climate adaptation, resilience, and environmental restoration that benefit military facilities, adjacent neighborhoods, and the health of Hawai‘i overall
- **Increase multi-stakeholder coordination and communication**, especially in disaster response, civil defense, and emergency management
- **Prepare local businesses to qualify for federal contracts** (e.g., high-volume, high-paying military contracts) and encourage companies to take the lead in working with military training centers to engage with local communities
- **Communicate about collaborations between the local community and military** and about mutual contributions to shared goals (e.g., wildfire mitigation, restoration projects)

OBJECTIVE 2

Support education and workforce development programs to train residents for careers in diverse security sectors, diplomacy, and peacebuilding

Priority Actions

- **Support career pathways** via apprenticeship and vocational programs for diverse security, diplomacy, peacebuilding, and defense-related fields
- **Create a talent pipeline** for information technology, cybersecurity, and innovation jobs
- **Advocate for a cost-of-living adjustment (COLA)** guarantees for civilian employees in Hawai‘i
- **Strengthen the pipeline between trade schools and skill-building programs** with available jobs at Pearl Harbor Shipyard, National Security Agency, etc.
- **Support educational opportunities and regional programs** that support regional diplomacy, partnership building, and peace
- **Build strategic partnerships and coordination capacity** across Federal, State, and County governments, businesses, and communities



Courtesy of Privateer

:: EDUCATION AND KNOWLEDGE CREATION ::

Hawai‘i’s education and knowledge creation cluster has historically been one of Hawai‘i’s fastest growing and highest wage clusters. From 1998 to 2014, the cluster was the fastest growing traded cluster in Kaua‘i and Honolulu counties, and the second fastest growing in Hawai‘i County.³⁵ Hawai‘i is an attractive location for both students and researchers who appreciate the islands’ culture, climate, lifestyle, and opportunities. In addition to the jobs and income that this cluster can bring to Hawai‘i, strengthening this cluster has substantial follow-on effects. Workforce development and the difficulty of finding trained skilled workers was one of the most commonly voiced cross-cluster challenges. A trained, skilled, and prosperous workforce is also more resilient to external shocks and will be able to better thrive in emerging knowledge economies.

GOAL

Establish Hawai‘i as a center for knowledge and innovation that leads regionally and globally in addressing 21st-century challenges³⁶

OBJECTIVE 1

Increase P-20 education degree attainment and curricula that equitably nurtures innovation, critical thinking, and creativity in Hawai‘i’s future leaders

Priority Actions

- **Advance new P-20 Attainment goals** with equity-focused early childhood education to post-secondary degree attainment targets
- **Expand P-20 education curricula and experiential learning** [e.g., ‘āina based education, Social Emotional Learning (SEL), Science, Technology, Engineering, Art, Mathematics (STEAM), diverse project-based learning]
- **Identify and implement curriculum changes** to keep pace with current needs and support well-rounded students prepared to thrive in a 21st-century context
- **Increase educational partnerships across sectors** with businesses, nonprofits, communities, and diverse professionals to create next-generation career pathways

³⁵ Bonham, Carl and Coffman, Makena. (2017, September 12). University of Hawai‘i Economic Research Organization. *A New Perspective on Hawai‘i’s Economy: Understanding the Role of Clusters*. https://uhero.hawaii.edu/wp-content/uploads/2019/08/New_Perspective_Hawaii.pdf (p. 2)

³⁶ Hawai‘i P-20 Partnerships for Education. *Strengthening Hawai‘i’s Education Pipeline*. <https://www.hawaiip20.org/>

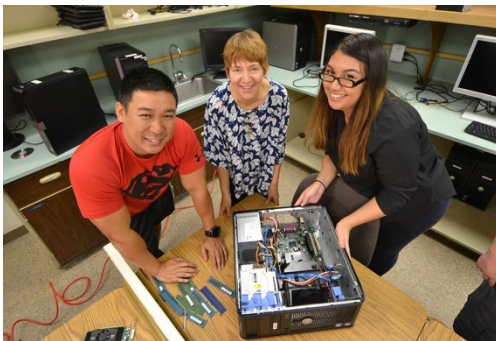
- **Increase early childhood education opportunities** including support of legislative and other initiatives responding to accessibility, affordability, and equity

OBJECTIVE 2

Build a skilled workforce prepared for existing and future jobs by investing in people at all stages of their lives and careers

Priority Actions

- **Support the “Resilient Hawai‘i: Good Jobs Challenge”** regional workforce training program (e.g., clean energy, creative industries, health, agriculture, technology, and innovation)



Courtesy of Hawai‘i Community College

- **Connect employers with educational institutions** to create skilled workforce pipelines for key clusters and critical industries
- **Increase the number of paid internships** (for all ages from high school to postdocs), apprenticeships, and other experiential learning to grow skillsets
- **Fund transitional career programs** that train, upskill, and reskill residents to pursue jobs in new and emerging knowledge-based sectors
- **Implement the Hawai‘i Early Childhood State Plan** and increase public and private support to improve access by working families to childcare and early childhood education
- **Anticipate and align training and certification programs** with community and workforce needs

OBJECTIVE 3

Grow innovation sectors and entrepreneurship, particularly in emerging and new industries aligned with the Hawai‘i 2050 Sustainability Plan, Aloha+ Challenge, and UN Sustainable Development Goals

Priority Actions

- **Provide business development and training** that promotes an innovation mindset and entrepreneurial skillsets, and new homegrown startups, businesses, and patents
- **Invest in world-class research and development** at the nexus of health, climate, water, energy, and food as an important economic opportunity and to build resilience
- **Elevate indigenous innovation and Native Hawaiian entrepreneurship**, technology, startups, and businesses with financial and other forms of capital

- **Encourage Hawai‘i-based intellectual property generation**, including breakthrough innovations, research, trademarks, and patents in aligned sectors and industries

OBJECTIVE 4

Bridge the digital divide with increased access to online learning, digital literacy opportunities, and critical infrastructure deployment for an equitable digital economy



Courtesy of Burt Lum

Priority Actions

- **Support upskilling and digital literacy programs** (e.g., the Workforce Development Council’s Digital Resiliency Initiative)
- **Increase broadband internet access** with continued subsidized payments for low-income households to access digital-learning opportunities and numerous services
- **Pilot family technology programs** for K-6 students and parents with extra-curricular evenings, afterschool, and weekend classes
- **Create well-paying jobs** (e.g., electricians, technicians) deploying critical infrastructure, particularly broadband internet, photovoltaic, and electric vehicles

:: ENERGY AND SUSTAINABLE RENEWABLES ::

In 2015, Hawai‘i became the first state to set a deadline (2045) for generating 100% of its electricity sales from renewable energy sources. As an island state with non-contiguous isolated island grids and no natural fossil fuel resources of its own, Hawai‘i imported 94% of its energy in 2010.³⁷ Due to its dependence on external supply, Hawai‘i’s economy has been highly vulnerable to fluctuations in international energy markets and other disruptions to supply. Due in part to a rapidly growing alternative energy sector, imports were reduced to 60% in 2018; however, these imports still cost the State \$3.3 billion.³⁸ This expanding sector has brought additional jobs and has benefited from the state’s favorable climate. Hawai‘i was fifth in solar jobs per capita³⁹ and the alternative power generation jobs grew at over 6% per year from 2009 to 2019.⁴⁰ The development of sustainable renewable energy and Hawai‘i’s energy cluster offers the state an opportunity to create new jobs, reduce its dependence on foreign imports, and meet its energy needs while advancing Hawai‘i’s environmental and sustainability goals.

GOAL

Meet Hawai‘i’s energy needs with increasingly efficient and innovative renewable sources and reduced carbon intensity while ensuring affordable, dependable, and resilient energy systems for Hawai‘i residents and businesses

OBJECTIVE 1

Maintain reliability and improve resilience of Hawai‘i’s energy systems

Priority Actions

- **Establish an integrated hydrogen ecosystem** across the Hawaiian Islands that builds on Hawai‘i’s unique geography and renewable energy resources as well as the energy security and national security roles Hawai‘i provides for the United States in the Asia-Pacific region
- **Strengthen and increase energy information and analysis** capability, speed, and capacity to better understand, respond to, and recover from energy system disruptions
- **Update state energy security and hazard mitigation plans** to adapt to increasing threats from climate change, cyber-attacks, or other all-hazard events

³⁷ Institute for Energy Research (2013, June 25). *Hawai‘i: An Energy and Economic Analysis*. <https://www.instituteforenergyresearch.org/fossil-fuels/coal/hawaii/>

³⁸ Hawai‘i State Energy Office (2020, November). *Hawai‘i’s Energy Facts & Figures*. https://energy.hawaii.gov/wp-content/uploads/2022/06/HSEO_FactsAndFigures-2020.pdf (p.4)

³⁹ Ibid. (p.34)

⁴⁰ Ibid.

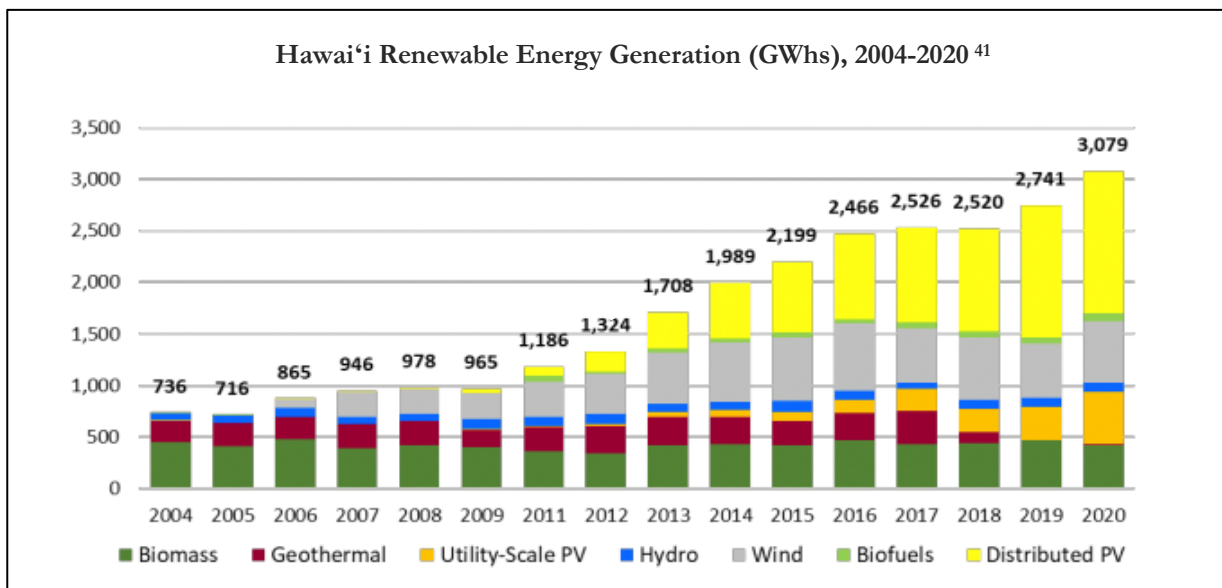
- **Obtain funding** to provide training and to encourage the planning, design, and installation of robust, integrated, and resilient cyber secure clean energy, communication, and transportation systems

OBJECTIVE 2

Increase energy affordability and price stability for Hawai‘i’s residents and businesses

Priority Actions

- **Reduce energy price volatility** by reducing reliance on imported fossil fuels
- **Increase the affordability of energy** through energy efficiency, renewable energy, conservation measures, system-wide efficiencies, rebates, and financing, with additional focus on assisting low- and moderate-income residents to participate in energy and resource conservation programs



OBJECTIVE 3

Increase renewable energy for electricity to 70% of total statewide annual output of electricity generation by 2040 and 100% by 2045

Priority Actions

- **Support a resilient and reliable grid** capable of transmitting and distributing local, renewable, and distributed energy sources
- **Study and implement smart grid, load smoothing, curtailment reduction, energy storage, and financing mechanisms** to maximize the cost-effectiveness of renewable energy

⁴¹ Hawai‘i State Energy Office (2021). *Hawai‘i State Energy Office 2021 Annual Report*. https://energy.hawaii.gov/wp-content/uploads/2022/06/HSEO_2021_Annual_Report_1.4-3.pdf (p.18)

- **Provide incentives** to encourage development, production, and installation of renewable electricity, fuels, energy storage, and projects supportive of host communities
- **Address barriers to successful renewable energy projects** (e.g., slow or delayed permitting and other factors)
- **Ensure early, consistent, and ongoing community engagement** on renewable energy projects to balance meeting Hawai‘i’s clean energy goal with the needs of local communities, especially those facing the greatest inequities

OBJECTIVE 4

Promote energy efficiency to achieve reduction of 4,300 gigawatt-hours of electricity use by 2030

Priority Actions

- **Increase energy efficiency for private and public buildings**, including via the retrofit of existing buildings, energy conservation, efficiency requirements and incentives, demand management, building controls, appliance standards, and changes to building code standards
- **Expand Hawai‘i Green Business Program** to promote energy efficiency and savings
- **Support education programs and resources** that help residents, small businesses, and the private sector increase energy efficiency

OBJECTIVE 5

Diversify and support transportation systems and low-carbon energy sources to improve mobility and accessibility while reducing the carbon intensity of Hawai‘i’s air, ground, and marine transportation systems

Priority Actions

- **Invest in research, development, and technology** to support diverse transportation modes, system planning and analysis, and low-carbon energy sources
- **Develop policies, plans, and programs to support decarbonization** of ground, air, and marine transportation sectors, including efficiency through enhanced mobility



Courtesy of Hawai‘i State Energy Office and City and County of Honolulu

OBJECTIVE 6

Support Hawai‘i’s Clean Energy Economy and the innovation sector to advance Hawai‘i’s goal “to sequester more atmospheric carbon and greenhouse gases than emitted within the State as quickly as practicable, but no later than 2045,” grow the economy, and continue to demonstrate leadership in energy and decarbonization policies

Priority Actions

- **Develop the Hawai‘i Pacific Hydrogen Hub detailed proposal** for the full application in response to the USDOE Regional Clean Hydrogen Hubs funding opportunity
- **Explore and support other means of carbon-negative products** to reduce greenhouse gas rates to meet Hawai‘i’s commitment of 50% reduction by 2030 and remain on track to achieve net-negative emissions as quickly as possible but no later than 2045
- **Invest in research, development, and technology** to develop solutions to problems, address barriers, and build projects and systems supportive of Hawai‘i’s energy, economic, and environmental goals
- **Work with partners** to implement measures that reduce the carbon intensities of Hawai‘i’s economic sectors
- **Engage the U.S. Department of Energy** to establish a permanent presence within the State of Hawai‘i
- **Provide business development and training** that promote an innovation mindset, entrepreneurial skillsets, and new homegrown startups, businesses, and patents
- **Develop and deliver training and wraparound services** supportive of Hawai‘i’s energy, technology, efficiency, and skilled trades as well as education programs that support youth and student development to support Hawai‘i’s clean energy economy
- **Expand infrastructure and physical resources** needed for innovation (e.g., broadband internet facilities and technology)
- **Encourage incentives to support startups and entrepreneurs** and address barriers to facilitate business growth

:: HEALTH AND WELL-BEING ::

Health care is an important economic engine for Hawai‘i and while the importance of the cluster was highlighted during the pandemic, pre-COVID economic challenges also remain including rising health care costs, lack of personnel, and difficulties in accessing rural, neighbor island, and other underserved communities. Health care and social assistance is a large portion of Hawai‘i’s economy employing 71,527 people or 12.2% of the state’s employment.⁴² Health care grew faster than the rest of Hawai‘i’s economy from 2010 to 2020 and also expanded slightly faster than the national average during the same period.⁴³ In addition to being a stable employer and of inherent value during the pandemic, there is an innate relationship between health and economic development as rates of mortality, disease, and overall health have dramatic impacts on Hawai‘i’s workforce and productivity.

GOAL

Build a holistic health and wellness sector that equitably improves the quality and years of life for Hawai‘i’s people

OBJECTIVE 1

Improve access to healthcare with increased telehealth opportunities to complement existing services and expand services for rural communities and neighbor islands

Priority Actions

- **Improve telehealth and broadband access**, particularly for neighbor islands, rural communities, and those facing the greatest inequities
- **Encourage insurance companies’ continued support for telehealth services** (i.e., individual coverage, payouts/reimbursements to practitioners) beyond the pandemic
- **Expand federal funding and support for Federally Qualified Health Centers (FQHC)** and clinics that serve as hubs for communities that cannot easily afford health services
- **Improve infrastructure, tools, and outreach services** for rural communities, particularly paratransit services; broadband internet; devices such as laptops and tablets; and language, cultural, and other outreach services

⁴² Li, Binsheng and Tian, Eugene. Hawai‘i State Department of Business, Economic Development and Tourism Research and Economic Analysis Division (2020, December). *Hawai‘i’s Targeted and Emerging Industries 2020 Update Report*. [https://files.hawaii.gov/dbedt/economic/data_reports/emerging-industries/Hawai‘i Targeted Emerging Industries 2020 Update Report.pdf](https://files.hawaii.gov/dbedt/economic/data_reports/emerging-industries/Hawaii%20Targeted%20Emerging%20Industries%202020%20Update%20Report.pdf)

⁴³ Ibid.

- **Support programs that allow elders to age in place including funding long-term care** and home retrofit needs that allow elders to live at home, particularly for rural communities
- **Promote place-based, cultural approaches to wellness** (e.g., culturally responsive interventions, Native Hawaiian and Pacific Islander traditional practices)
- **Establish a Health Information Technology (HIT) workgroup** to identify key information technology goals

OBJECTIVE 2

Increase access to affordable services for behavioral and mental health and substance abuse that are culturally responsive and trauma informed

Priority Actions

- **Standardize insurance coverage for mental, emotional, and behavioral health** for everyone, especially for children through 18 years of age
- **Expand school mental health services** in the P-20 education system with curriculum and support for teachers, counselors, and administrators
- **Increase training and scholarship assistance** for a diverse workforce with cultural, language, and trauma-informed care competencies
- **Provide Human Resources services for employees** in workplaces that promote behavioral and mental health and ensure trauma-informed care
- **Develop local facilities and infrastructure** that provide specialized services
- **Collaborate to address social determinants of health** (e.g., access to affordable housing, nutritious local foods, environmental factors) and promote psychosocial health
- **Encourage coordination** with the State of Hawai‘i Office of Wellness and Resiliency and other stakeholders

OBJECTIVE 3

Recruit, retain, and provide training for professionals and businesses in the health care, social services, and wellness sectors

Priority Actions

- **Create incentives** to attract and retain physicians and diverse health and wellness practitioners (e.g., healthcare, dental, social services, community health centers, nursing homes, cultural practitioners, counseling, nutrition, etc.)

- **Provide training, certification, and support pathways** for residents seeking to enter the healthcare and wellness sector for residents of all ages and education levels
- **Expand certification training for critical jobs in the healthcare system** (e.g., Physician Assistants, Advance Practice Nurses, and Advanced Paramedics)
- **Support business development and skill-building** (e.g., accounting, marketing, technology) for private practice professionals, entrepreneurs, and businesses
- **Develop and expand cultural and language workforce development opportunities** to improve care for communities with pre-existing health disparities
- **Expand affordable, quality childcare facilities** with well-paid early childhood education professionals



Courtesy of University Health Partners

OBJECTIVE 4

Support research, innovation, technology, and high-impact collaborations that promote equitable, holistic health for Hawai‘i residents and strengthen the economy

Priority Actions

- **Support medical research institutions** in leading medical technology, clinical drug trials, treatment protocols, biomedical research, and culturally informed research
- **Invest in predictive models and tools** that anticipate and help prepare for future healthcare needs (e.g., pandemics, aging population, climate impacts)
- **Promote health and wellness innovation** (e.g., entrepreneurship, technology development, cultural wellness frameworks, higher education partnerships, etc.)
- **Build and maintain wide-reaching collaborations** to address systemic health challenges (e.g., pandemics, mental health, and social determinants of health such as housing, food, and environmental factors)
- **Support equity-based indigenous innovation and wellness programs** that serve Native Hawaiian, Pacific Islander, and communities facing the greatest health inequities
- **Provide behavioral health programs** in workplaces, healthcare, and communities

:: HOSPITALITY AND TOURISM ::

As Hawai‘i transitioned from large-scale industrial agriculture in the 20th century, a natural progression to extend Aloha and expand the hospitality and tourism sector took place. The visitor industry has since emerged as the largest economic driver in the state. In 2019, tourism supported an estimated 216,000 jobs.⁴⁴ Hawai‘i’s reliance on this sector was demonstrated during the pandemic when unemployment rose to 22.9% in April 2020 as compared to a national unemployment rate of 14.7%.⁴⁵ While tourism is still on the path to recovering to its pre-pandemic levels, the pandemic highlighted the importance of alternate economic and tourism models.

GOAL

Establish Hawai‘i as a leader in regenerative tourism that balances economic, social, and environmental goals and perpetuates cultural values

OBJECTIVE 1

Position Hawai‘i as a regenerative tourism model with responsible destination management practices that create enriching experiences for residents and visitors alike

Priority Actions

- **Implement the State of Hawai‘i Destination Action Management Plans (DMAP)** for all islands with collaboration across sectors and industries to address pressure on residents, natural and cultural resources, and infrastructure while supporting the economy
- **Provide training and certification opportunities** in regenerative, sustainable, and responsible tourism for the visitor industry and workforce
- **Increase funding and maintenance** for tourism-impacted natural and cultural sites
- **Support and scale successful community-based models** for regenerative tourism (e.g., Hā‘ena State Park) to address destination hotspots
- **Host international meetings, events, and conferences** that build Hawai‘i’s brand as a global center for sustainability, innovation, and ALOHA

⁴⁴ Hawai‘i Tourism Authority (2019, December). *Fact Sheet: Benefits of Hawai‘i’s Tourism Economy*. <https://www.hawaiitourismauthority.org/media/4167/hta-tourism-econ-impact-fact-sheet-december-2019.pdf>

⁴⁵ U.S. Bureau of Labor Statistics (2018, January 26). Databases, Tables & Calculators (2020, May13). *Unemployment rate rises to record high 14.7 percent in April 2020*. <https://www.bls.gov/opub/ted/2020/unemployment-rate-rises-to-record-high-14-point-7-percent-in-april-2020.htm>

- **Increase organized visitor transportation** (i.e., shuttle buses with culturally and historically knowledgeable drivers) to reduce vehicle and parking impacts on residents
- **Focus on higher spending-lower impact market segments** while prioritizing destination management strategies articulated in island-level DMAPs
- **Conduct carrying capacity studies** at state and island levels to guide industry strategies for long-term natural and cultural resource health and resident needs

OBJECTIVE 2

Ensure authentic presentation of Hawaiian culture and values in visitor industry materials, marketing, workforce training, and resident and visitor experiences

Priority Actions

- **Elevate Hawaiian culture** across the visitor industry with cultural practitioners, advisors, and partnerships with cultural and community-based organizations
- **Provide funding for Native Hawaiian programs**, events, festivals, stewardship sites, and traditional practices perpetuating Hawaiian culture, language, and values



Courtesy of Kailua Village Business Improvement District (KV/BID)

- **Address cultural misappropriation and intellectual property issues** across the visitor industry and other sectors
- **Utilize curated tools and resources** (e.g., Hawai'i Tourism Authority Ma'ema'e Toolkit) and develop new industry-wide standards and practices

OBJECTIVE 3

Promote visitor industry alignment with the goals of the Hawai‘i 2050 Sustainability Plan

Priority Actions:

- **Track key sustainability metrics** for the visitor industry, including water consumption, renewable energy installations and kilowatt hours used, and waste generation
- **Increase sustainable commercial practices** such as local food purchases, waste reduction, decreased water usage, energy efficiency, and multi-modal transit
- **Expand the Hawai‘i Green Business Program** in the visitor industry by increasing the number of partners and organizations
- **Encourage the visitor industry to lead on climate resilience** and collaborate across sectors (e.g., coastal infrastructure, parks, beaches, land use planning, setbacks)



Courtesy of Maui Economic Development Board

OBJECTIVE 4

Provide authentic visitor experiences and opportunities that connect visitors, local communities, and businesses

Priority Actions

- **Provide visitor education and authentic experiences** through community organization and business partnerships (e.g., ecotourism, voluntourism, agritourism, and mālama ‘āina land stewardship opportunities)

- **Promote the Pledge to our Keiki** created by students across Hawai‘i to support visitor participation in youth-led community, environmental, and cultural stewardship
- **Encourage “Buy Local,” “Eat Local,” and “Made in Hawai‘i” programs** to support local agriculture and Hawai‘i-based products, businesses, and services
- **Leverage Hawai‘i’s tourism expertise and brand to increase opportunities for the export** of local products and services
- **Support business development** for diverse homegrown businesses and Native Hawaiian entrepreneurs that provide regenerative tourism opportunities and products
- **Reinvest in environmental and community programs** with visitor and regenerative tourism fees, corporate giving, and other funding mechanisms

:: SCIENCE AND TECHNOLOGY ::

Hawai‘i has a long history of exploration and discovery. The state’s climate, environment, and diversity offer innovative and comparative advantages in developing science and technology industries. Hawai‘i’s energy and national security roles in the Asia-Pacific region make it a prime location for national and international investments in strategic solutions. Pristine oceans, diverse terrestrial biomes, biodiversity, and favorable climate make the state an ideal setting for research. Hawai‘i’s cultural diversity and location between North America and Asia make the state a potential melting pot for ideas and discovery.⁴⁶ The science and technology industry is still developing and accounted for 28,587 jobs in 2020. In addition to the potential for comparatively high paying jobs, science and technology proved to be a relatively stable sector during the pandemic growing at a rate of 0.3% while the rest of Hawai‘i’s civilian economy declined at 10.5%.⁴⁷

GOAL

Build a diverse science and technology sector to address 21st-century challenges and opportunities

OBJECTIVE 1

Grow the science and technology sector to meet the Hawai‘i 2050 Sustainability Plan Goals

Priority Actions

- **Invest in and support world-class science and technology** to meet the goals of the Hawai‘i 2050 Sustainability Plan and grow economic opportunities
- **Encourage Hawai‘i-based intellectual property generation**, including breakthrough innovations, research, trademarks, and patents in aligned sectors and industries
- **Elevate Native Hawaiian knowledge as a leading foundation** by supporting indigenous science, technology, research, innovation, and entrepreneurship
- **Increase access to capital** to develop and scale technology solutions
- **Support the creation, development, retention, and profitability** of science and technology businesses including advanced manufacturing, aerospace, blue ocean technologies, energy, and research

1. ⁴⁶ University of Hawai‘i Statewide Science and Technology Committee. *Harnessing Science and Technology in Support of Hawai‘i’s Future Hawai‘i Science and Technology Plan 2020–2025*. <http://hawaii.edu/epscor/wp-content/uploads/2021/11/Hawaii-ST-Plan-08.05.2021-1.pdf>

2. ⁴⁷ *Hawai‘i’s Targeted and Emerging Industries 2020 Update Report*. op. cit.

- **Revisit exportable knowledge and intellectual property** opportunities that promote Hawai'i exporting knowledge and importing financial resources

OBJECTIVE 2

Support educational programs and funding opportunities for students to pursue careers in Science, Technology, Engineering, and Mathematics (STEM)

Priority Actions

- **Expand STEM programs**, particularly project-based and experiential learning
- **Secure funding** to expand existing science education programs (e.g., STEMworks, Journey Through the Universe, etc.)
- **Provide student scholarships**, grants, and other funding that helps to ensure equitable access to STEM education and career opportunities, especially in rural public schools
- **Build a database of opportunities** focused on science and technology that is easily accessible by students of all ages
- **Develop and conduct parent-student shared opportunities** (e.g., robotic competitions, computer program classes, fishpond innovation, cultural practices)



Courtesy of Maui Economic Development Board

OBJECTIVE 3

Build workforce development and career pathways for science and technology through partnerships with schools, organizations, and businesses

Priority Actions

- **Increase paid internships and fellowships statewide** and provide hands-on opportunities (e.g., apprenticeships, mentorship, shadowing, and experiential learning)
- **Fund transitional career programs that train, upskill, and reskill residents** to pursue jobs in the science, technology, and innovation sectors
- **Provide business development** that promotes an innovation mindset, entrepreneurial skillsets, and new homegrown startups, businesses, and patents
- **Conduct work fairs** and other opportunities for employment outreach
- **Develop and fund online tools** to match companies with local talent

OBJECTIVE 4

Encourage outreach and collaboration between diverse stakeholders to address 21st century challenges, opportunities, and enhance scientific understanding and appreciation

Priority Actions

- **Expand community engagement** in diverse science, technology, innovation, education, research, development, and job opportunities
- **Facilitate dialogue and collaboration opportunities** between government, businesses, and communities to build trusting, healthy relationships, and advance progress on shared goals via the science and technology industry and other sectors
- **Develop and support the creation of technology hubs** to drive technology- and innovation-centric growth including areas such as advanced manufacturing, aerospace, energy, and research.
- **Partner on communications and outreach** to expand public perception and understanding of diverse science and technology, including indigenous science, and its role in addressing challenges and improving quality of life (e.g., broadband)
- **Share skilled personnel and talent** across specific projects as needed statewide
- **Collaborate to promote innovation and job creation** to meet Hawai'i's 2030 goals, particularly in renewable energy, sustainable agriculture, wastewater management, cesspool conversion, marine science, health, and other areas

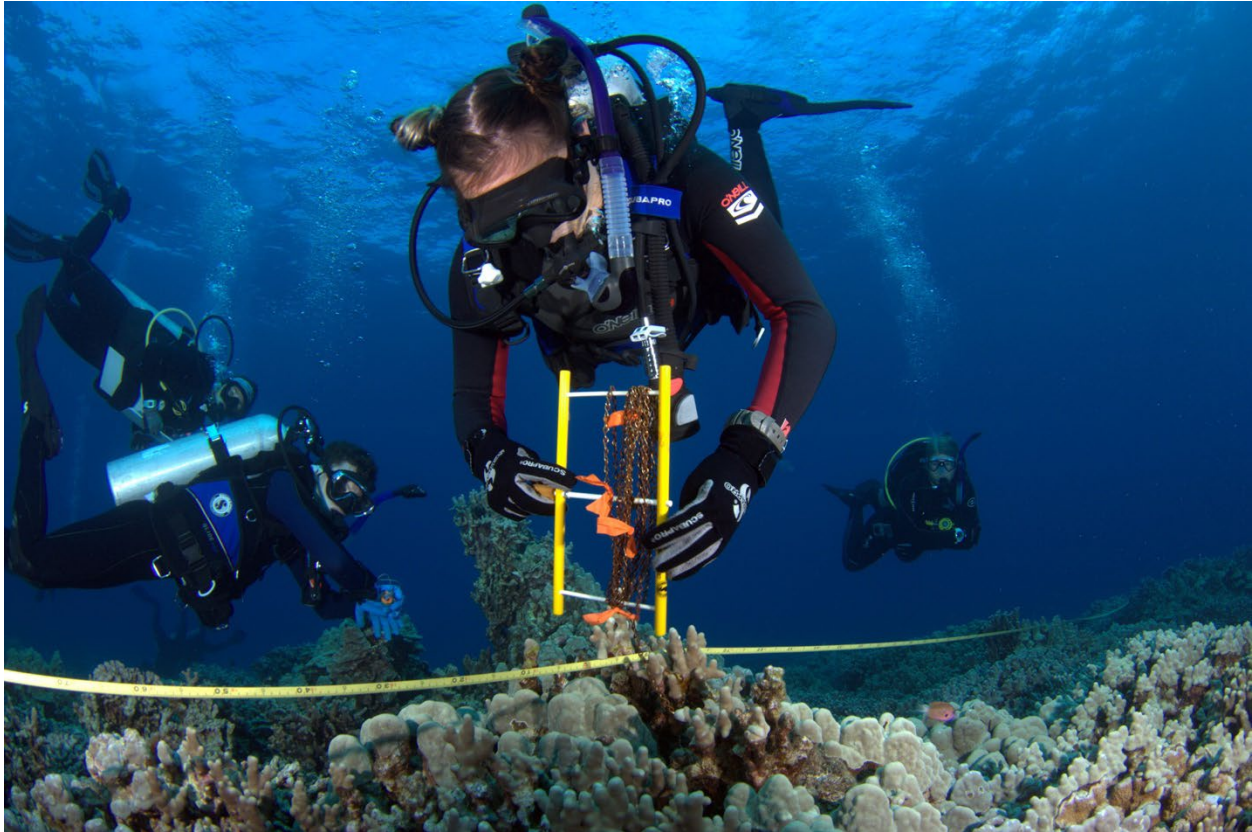


Photo Credit: Kuvabara - Courtesy of University of Hawai'i, Hilo

OBJECTIVE 5

Grow a statewide blue ocean economy cluster that uses Hawai'i's comparative advantage as a large ocean state to expand the sustainable use of our ocean resources for economic growth, improved livelihoods, and jobs while safeguarding the long-term health of ocean ecosystems

Priority Actions

- **Develop technologies to mitigate climate change** through increased focus on food security, energy security, ocean technology, and ocean conservation sectors
- **Focus on critical areas where Hawai'i has already developed comparative advantages** with a proven record by developing knowledge and disruptive technologies to
 - Increase food security and supply
 - Understand the role our ocean plays in global climate change
 - Monitor and manage marine pollution
 - Support programs in developing ocean energy technology
 - Develop better conservation technologies for our earth and ocean resources

- **Develop innovation centers of excellence** to develop knowledge and disruptive technologies that can lead to successful businesses and increase access for a wider, more diverse range of innovators and entrepreneurs
- **Create networks of peers and experts to share knowledge and best practices** while expanding market opportunities and scaling best practices



Courtesy of Maui Economic Development Board

OBJECTIVE 6

Build a cybersecurity ecosystem within the state as an industry that improves cybersecurity for local businesses and residents

Priority Actions

- **Support a lead agency** to mitigate and address cybersecurity risks
- **Establish cybersecurity clinics and risk assessments** for small businesses to ensure they meet DoD cybersecurity requirements
- **Refine training programs** with hands-on opportunities to develop specialized skillsets needed for businesses operating in Hawai‘i
- **Develop robust courses and certificate programs** to meet cybersecurity hiring needs, including experiential learning opportunities that benefit students and host companies
- **Build strategic partnerships and coordinate capacity** across Federal, State, County, business, academic, and community sectors

HAWAI‘I STATE CEDS

GOALS ♦ OBJECTIVES ♦ PRIORITY ACTIONS



Courtesy of Hawai‘i Community College

GOAL ONE

Build a Hawai‘i where housing is affordable and attainable for residents and future generations

OBJECTIVE 1

Increase the supply of housing units to meet Hawai‘i’s projected housing needs

Priority Actions

- **Direct Federal, State, and County resources and efforts** to the development of housing for purchase and rental for low- and middle-income households
- **Utilize existing Federal, State, and County financing programs** including the Low-Income Housing Tax Credit, Hula Mae Multifamily Revenue Bond, Dwelling Unit Revolving Fund, and the Rental Housing Revolving Fund programs
- **Use public lands** for development of low- and middle-income housing units including for transit-oriented development
- **Renovate, preserve, and redevelop** public housing facilities
- **Implement** the Hawai‘i State Housing Functional Plan

- **Ensure larger percentage of Hawai‘i’s housing inventory is available for local residents and workers** using tax and regulatory tools
- **Reduce burdensome regulations and streamline state and county approval and permitting processes** particularly for affordable/attainable housing units with measures such as relaxing regulations in TOD zones, reducing redundancies in the land use entitlement process, and providing additional resources to permitting departments for expedient turnaround and transparency
- **Encourage innovative housing models** and ensure legal frameworks for such models exist (e.g., tiny homes, green homes, agricultural housing, and family shared living residences)

OBJECTIVE 2

Promote Transit Oriented Development (TOD) and address TOD infrastructure needs

Priority Actions

- **Foster collaboration between State, County, and private entities** on master planning and infrastructure development in TOD areas

OBJECTIVE 3

Support the Department of Hawaiian Homelands (DHHL) efforts under Act 279 of the 2022 Hawai‘i State Legislative Session deliver and provide housing for qualified native Hawaiians.

Priority Actions

- **Facilitate the development** and construction of infrastructure and additional homes
- **Acquire additional land and new lots**
- **Provide mortgage and rental assistance**
- **Streamline government approval processes for DHHL projects**

GOAL TWO

Create a resilient and vibrant entrepreneurial ecosystem

OBJECTIVE 1

Increase access to capital and resources for small businesses, entrepreneurs, organizations, and communities through diverse, innovative public-private sources

OBJECTIVE 2

Expand critical infrastructure for innovation with affordable, accessible broadband internet, telecommunications services, clean energy, and transportation

Priority Actions

- **Create new and support existing business development programs** that support startups to scale
- **Invest in localized supply chains and circular economic models** to mitigate future disruption and build long-term resilience

OBJECTIVE 3

Increase climate resilience funding for Hawai‘i and the Pacific region, working with local governments, businesses, and nonprofit organizations on climate adaptation and resilience, clean energy, local agriculture, and environmental restoration

GOAL THREE

Position Hawai‘i as a leader regionally and globally

OBJECTIVE 1

Enable Hawai‘i to leverage and participate in the global digital economy

Priority Actions

- **Create conditions to strengthen remote work** as an option for Hawai‘i’s residents to participate in and realize the associated benefits (e.g., exclusion of commute and increased time for family)
- **Promote development and export of Hawai‘i’s professional services** as enabled by the digital economy
- **Strengthen broadband infrastructure, access, and literacy** to enable equitable access to participation in the digital economy

OBJECTIVE 2

Promote the export of goods and services by Hawai‘i’s businesses

Priority Actions

- **Support Hawai‘i’s role as a hub of international trade** including support of the Foreign Trade Zone 9 (FTZ9), Hawai‘i State Trade and Export Program (HISTEP), and other trade/export programs

OBJECTIVE 3

Establish the State of Hawai‘i as an Economic Development District

Priority Actions

- **Support enabling legislation** to designate the Office of Planning and Sustainable Development (OPSD) to organize a district organization assisted by a professional staff with economic development planning qualifications
- **Establish a planning District Organization** governing body with representatives from the private sector, public officials, community leaders, representatives of workforce development boards, institutions of higher education, minority and labor groups, and private individuals
- **Gather collaborators / supporting documents** between the economic development organizations in all four counties and OPSD

GOAL FOUR

To uphold Hawai‘i’s public trust to provide clean water to Hawai‘i’s people and land

OBJECTIVE 1

Support efforts to increase Hawai‘i’s water resources, quality, and capacity

Priority Actions

- **Support and fund contemporary studies** to develop baselines of water resources throughout the state
- **Support watershed protections and stormwater recapture** for recharge potential
- **Support new water resource development** in alignment with Hawai‘i’s resilience and sustainability strategies
- **Support water conservation measures and technologies** (including tools to improve leak detection and increased agricultural water efficiency)



Courtesy of Mauna Kahalawai

- **Support policies and practices that align with water reuse** such as ensuring that water quality is matched to end use and safely eliminating barriers to reuse
- **Improve statewide water quality** and reduce point and non-point source pollution, untreated wastewater, and the release of hazardous chemicals and other materials
- **Address the Red Hill water crisis** and prevent further contamination of Hawai‘i’s water supply by promptly and safely shutting down the Red Hill Fuel Storage Facility

OBJECTIVE 2

Build and develop Hawai‘i’s water infrastructure and security

Priority Actions

- **Build new, expand, maintain, and modernize** existing water production and transmission infrastructure
- **Identify and secure funds** to plan, engineer, and build water infrastructure
- **Identify and secure funds for technology and pilot programs** to improve water resource management

OBJECTIVE 3

Promote programs to expand water outreach and education

Priority Actions

- **Develop and conduct education and public outreach** on water conservation and environmental protection
- **Work with State Department of Education**, other public agencies, and private sector to develop and introduce curriculum on water resource conservation and management

SECTION 4 COUNTY BRIEFS

Brief introductions to and economic information for each of the State of Hawai‘i’s four counties are provided in this section.

1. Hawai‘i County
2. City and County of Honolulu
3. Kaua‘i County
4. Maui County

Comprehensive Economic Development Strategy (CEDS) processes were conducted in each county and each of the resultant CEDS reports are available digitally on the Hawai‘i State CEDS website <https://planning.hawaii.gov/spb/ceds/>.

Periodic reviews will be done throughout the five-year life of the 2023 CEDS, readers who wish to help inform future iterations of the Hawai‘i CEDS are invited to submit comments to hi.ceds2022@gmail.com.

HAWAII COUNTY

Hawaii County had a gross domestic product (GDP) of

\$8.4 Billion

which supports approximately 89,750 jobs and a median household income of \$65,401.

POPULATION



197,059

2016

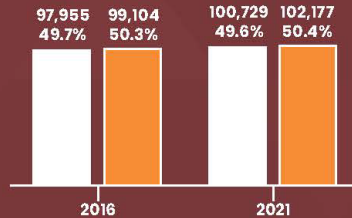
202,906

2021

By Gender

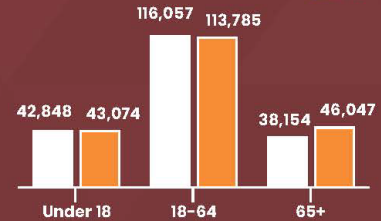
(Number of residents)

● Male
● Female



By Age

● 2016
● 2021



EDUCATION

2016-2020 Average

92.9%

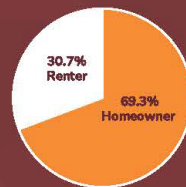
High School Graduates

29.5%

College and Higher Degree Graduates

HOUSING

2016-2020 Average



Single Family Home

\$333,083

2016

\$465,000

2022

Condo

\$294,542

2016

\$179,000

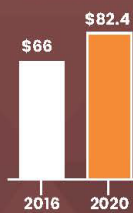
2022

ECONOMY

Unemployment Rate (%)



Median Household Income (\$ Thousands)



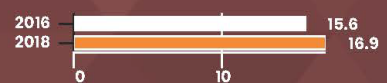
Per Capita Personal Income (\$ Thousands)



Percentage of Population considered ALICE (%)



Percentage of Population Below Poverty Level (%)



LARGEST INDUSTRIES

Top Industries By GDP (\$ Millions)	2016	2020
Real Estate, Rental, and Leasing	1,786	2,067
Government	1,296	1,515
Retail Trade	669	834
Construction	536	251
Utilities	221	235
Total GDP	7,854	8,428

Top Industries By Number of Jobs	2016	2020
Leisure and Hospitality	15,000	14,100
Trade, Transportation & Utilities	14,000	14,000
Government	13,900	12,100
Education & Health Services	9,000	8,600
Professional & Business Services	6,700	5,900
Total Employees	69,300	64,700

Economic Profile: Hawai‘i County

Hawai‘i County CEDS Targeted Industry Clusters

Hawai‘i County targeted cluster industries as identified by the Hawai‘i Island CEDS 2023 Strategic Advisory Committee are (in alphabetical order):

- Agriculture and Food Systems
- Astronomy and Technology
- Construction and Infrastructure
- Creative Arts and Industries
- Education, Knowledge Creation, and Workforce Development
- Energy and Resiliency
- Environment and Climate Change
- Government
- Health and Wellness
- Hospitality and Tourism

Introduction to Hawai‘i County’s Economic Outlook

1. The County of Hawai‘i which encompasses the Island of Hawai‘i, boasts a land mass of 4,028 square miles that is larger than the combined approximately 2,400 total square miles of the other seven major islands that comprise the State of Hawai‘i.⁴⁸ Nicknamed the “Big Island”, Hawai‘i Island’s size is one source of some of the economic challenges faced by and opportunities available to the county.

2. The largest employers on Hawai‘i Island are in the government, leisure and hospitality, and health and human (social) services sectors.

3. Hawai‘i County residents and businesses have demonstrated economic resilience multiple times in the past including transitioning from large industrial sugar plantations and agriculture to an expanded hospitality and tourism sector; and recovery from the devastating economic loss caused by the 1960 tsunami which heralded the introduction of astronomy as an important economic engine for the island with construction of the first telescope on Mauna Kea in 1967. With such proven resilience, they are well-positioned to recover from more recent socio-

Hawai‘i County residents and businesses have demonstrated economic resilience multiple times in the past...

3. ⁴⁸ U.S. Census Bureau. *Profile of Hawai‘i County, Hawai‘i*. https://data.census.gov/profile/Hawaii_County_Hawaii?g=0500000US15001

economic challenges such as those posed by natural disasters, COVID-19 pandemic, increased pressure on resources, and the digital divide.

Hawai‘i County’s Overarching Themes, Objectives and Strategies

- Agriculture
- Broadband Access, Equity
- Child Care and Early Childhood Education
- Cost of Living, Affordability
- Cost of Doing Business
- Cultural Resources
- Economic Disparity
- Housing
- Indigenous Knowledge
- Infrastructure and Carrying Capacity
- Natural Resources
- Permitting and Regulations must be streamlined and expedited
- Water

The demonstrable, historical resiliency and collaborative model of Hawai‘i Island residents as highlighted above and in more detail in the Hawai‘i County CEDS, serve as the foundation for strategizing economic recovery and endurance including:

- **Building the ecosystems necessary to attracting investments** to sustain existing and attract new business, industry sectors, and living wage/high paying jobs
- **Collaboration between government and private sector** to build capacity for economic development and diversification
- **Development and retention of a 21st century workforce** that can easily transition to modern technology and innovation
- **Support and expansion** of Hawai‘i Island’s thriving agriculture and bio-economy opportunities
- Active pursuit and integration of **indigenous knowledge**
- **Increasing equity, diversity, accessibility, and inclusion**
- **Periodic convening of stakeholders** for review of CEDS implementation, relevance, and resilience with adjustments made as necessary through the life of the document

HONOLULU COUNTY

The economy of Honolulu County has a gross domestic product of approximately

\$62.1 Billion

a year in 2020 which decreased from \$67.6 billion in 2019. Honolulu County's economy supports approximately 364,092 jobs (2020) that pay an average of \$62,793 in annual earnings.

POPULATION

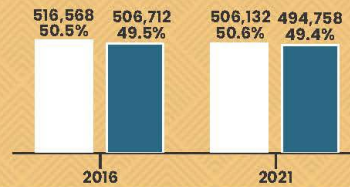
1,023,280
2016

1,000,890
2021

By Gender

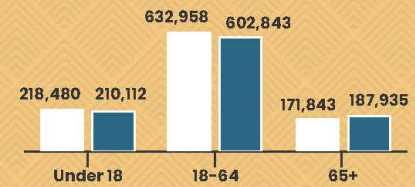
(Number of residents)

● Female
● Male



By Age

● 2016
● 2021



EDUCATION

2016-2020 average

92.4%

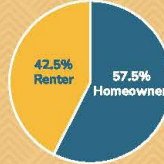
High School Graduates

35.7%

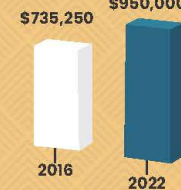
College and Higher Degree Graduates

HOUSING

2016-2020 average



Single Family Home

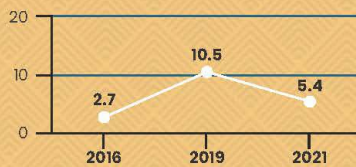


Condo

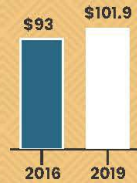


ECONOMY

Unemployment Rate (%)



Median Household Income (\$ Thousands)



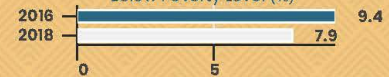
Per Capita Personal Income (\$ Thousands)



Percentage of Population considered ALICE (%)



Percentage of Population Below Poverty Level (%)



LARGEST INDUSTRIES

Top Industries By GDP (\$ Millions)	2016		2020	Top Industries by Number of Jobs	2016		2020
Government	14,987	Government	15,580	Government	97,200	Government	92,600
Real Estate, Rental, and Leasing	10,586	Real Estate, Rental, and Leasing	10,551	Trade, Transportation & Utilities	85,600	Trade, Transportation & Utilities	75,600
Health Care and Social Assistance	4,588	Health Care and Social Assistance	5,112	Leisure and Hospitality	72,400	Education & Health Services	63,600
Accommodation and Food Services	4,095	Construction	3,904	Education & Health Services	65,600	Leisure and Hospitality	55,300
Retail Trade	3,794	Retail Trade	3,807	Professional & Business Services	56,100	Professional & Business Services	52,800
Total GDP (\$ Millions)	62,953		62,124	Total Employees	468,800		421,800

Economic Profile: City and County of Honolulu

Honolulu County CEDS Targeted Industry Clusters

Targeted and emerging cluster industries in Honolulu County which encompasses the Island of O‘ahu, were identified by the O‘ahu Economic Development Board based on data analysis and island-wide consultation and further discussed in the Honolulu County CEDS Plan in the Appendix. Honolulu County’s targeted industry clusters are (in alphabetical order):

- Agriculture and Food Systems
- Art and Creativity
- Education and Innovation
- Environment and Natural Systems
- Health and Wellness
- Hospitality and Reciprocity
- Housing and Critical Services
- Safety and Peace

Honolulu County’s Economic Outlook

O‘ahu is at an important crossroads. COVID-19 caused large-scale disruption with a public health crisis and a global economic crisis. While the pandemic brought hardship and grief to O‘ahu

As other challenges loom on the horizon, particularly the real and current threat of climate change, building resilience and a sustainable, equitable future has never been more critical.

residents, it revealed crucial lessons to carry forward. It brought critical attention to the grave socio-economic disparities and income inequality. It underscored the need to reduce the vulnerability of the O‘ahu community and economy to external volatilities. In particular, over-dependence on a single industry for jobs and commerce and on imports for energy, food, and essential goods puts O‘ahu at risk.

Unemployment was at an all-time high, families struggled, supply chain disruptions impacted residents, and local businesses closed their doors. Yet, it also showed the strength of an O‘ahu community connected by a culture of ALOHA and spurred innovation and partnerships.

As other challenges loom on the horizon, particularly the real and current threat of climate change, building resilience and a sustainable, equitable future has never been more critical. The lessons learned from the pandemic response can inform preparation to ensure that O‘ahu will withstand future shocks and stressors. Importantly, it opened collaborative dialogue on Hawai‘i-wide economic recovery to build long-term resilience and prosperity through foundational Hawaiian and island values.

As the state’s largest economy, O‘ahu plays a key role in Hawai‘i’s economic future direction. This island-wide consultation revealed that O‘ahu is ready to advance values-driven economic recovery efforts that contribute to Hawai‘i-wide prosperity.

Honolulu County’s Overarching Themes, Objectives, and Strategies

Overarching themes:

- Sustainability (environmental, social, and economic) and ‘Āina Momona (abundant land)
- Equity and Peace
- Resilience and Climate Change
- Workforce/Human Development and Lifelong Learning
- Entrepreneurship and Innovation Mindset
- Cross-Sector Collaboration

Objectives:

1. **Build inclusive communities connected through ALOHA** by perpetuating Native Hawaiian and island values and shared responsibility to care for O‘ahu and Hawai‘i
2. **Increase affordability for O‘ahu residents** by addressing the projected affordable housing need of 22,000 units by 2025 through innovative approaches and reducing cost of living to ensure that all residents can afford to stay and thrive in Hawai‘i
3. **Center the community in decision-making at all levels** across government, business, and civil society to build trust and empower courageous leaders with island values
4. **Achieve healthy ‘āina and balanced land-use** by developing and implementing policies, plans, programs, and partnerships that prioritize a healthy environment mauka to makai (ridge to reef) while meeting the core needs of O‘ahu residents (e.g., affordable housing, local food, clean energy and transportation, and climate adaptation and resilience)
5. **Invest in accessible, quality P-20 education, career pathways, and workforce development** to foster innovation, support lifelong learning, create well-paying jobs, and provide an environment where businesses that align with Hawai‘i’s values can thrive
6. **Build a resilient O‘ahu community and diversified economy** through the Action Plans for eight critical economic clusters: housing and critical infrastructure, environment and natural systems, agriculture and food systems, education and innovation, health and wellness, safety and peace, art and creativity, and hospitality and reciprocity

KAUAI COUNTY

The economy of Kauai County has a gross regional product of approximately

\$3.6 Billion

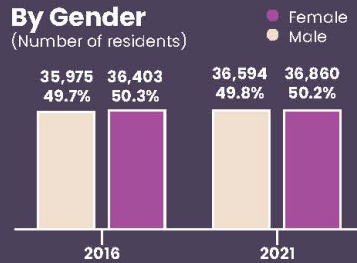
(2020), Kauai County's economy supports approximately 30,300 jobs (2021) that pay an average of \$51,3093 in annual earnings (2020).

POPULATION

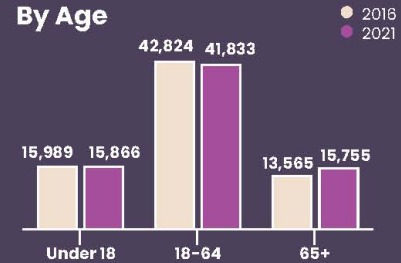


72,378
2016
73,454
2021

By Gender (Number of residents)



By Age



EDUCATION

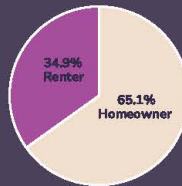
2016-2020 Average

92.4%
High School Graduates

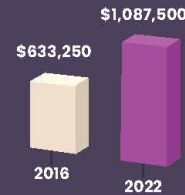
28.5%
College and Higher Degree Graduates

HOUSING

2016-2020 Average



Single Family Home

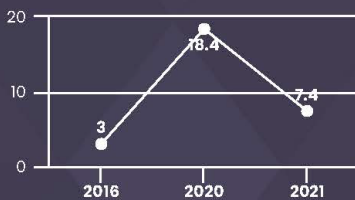


Condo

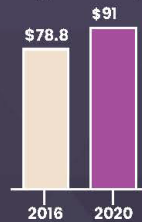


ECONOMY

Unemployment Rate (%)



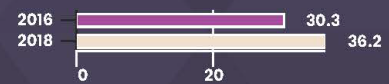
Median Household Income (\$ Thousands)



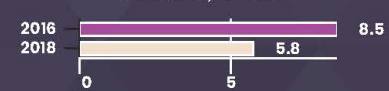
Per Capita Personal Income (\$ Thousands)



Percentage of Population considered ALICE (%)



Percentage of Population Below Poverty Level (%)



LARGEST INDUSTRIES

Top Industries By GDP (\$ Millions)	2016	2020
Real Estate, Rental, and Leasing	826	790
Government	483	567
Retail Trade	291	349
Construction	218	110
Other Services, except Government	88	97
Total GDP	3,725	3,627

Top Industries By Number of Jobs	2016	2020
Leisure and Hospitality	10,300	7,000
Trade, Transportation & Utilities	6,000	5,500
Government	4,800	5,000
Education & Health Services	3,300	3,100
Professional & Business Services	3,000	2,700
Total Employees	32,000	27,900

Economic Profile: Kaua‘i County

Kaua‘i County CEDS Targeted Industry Clusters

Kaua‘i County targeted cluster industries identified by Kaua‘i CEDS Steering Committee and further discussed in the Kaua‘i County CEDS are (in alphabetical order):

- Arts and Culture
- Food and Agriculture
- Health and Wellness
- Renewable Energy and Sustainable Technologies
- Science and Technology
- Visitor Industry, Management and Preservation

Introduction to Kaua‘i County’s Economic Outlook

Kaua‘i’s economic outlook remains positive despite COVID-19’s impact on the economy and the challenges of competing in a global economy. Many demographic and economic indicators are moving in positive directions: population is steadily increasing, renewable energy production is rising, jobs are increasing, and tourism is recovering.

1. **Renewable energy:** Kaua‘i forecasts reaching 70% renewable levels by 2030.
2. **Visitor industry:** Visitor arrivals remain strong throughout 2022. Year to date 28% increase. Visitor spending in 2022 is expected to exceed 2019 numbers.
3. **Technology and practices:** Preparing future workforce through collaboration with high schools and Kaua‘i Community College.
4. **Aging population:** In 2021, the age group with the highest percentage is the 65+ group at 21.1%. The 85+ population is projected to grow by 5.8% between 2025 and 2030 and by 7.7% between 2030 and 2035. This will require an increase in senior healthcare and related senior services.
5. **Housing:** Needed for affordable rentals and ownership units by 2025: Rental units - Single family 208; Multi-family 367. Ownership units - Single family 289; Multi-family 195.
6. **Jobs:** 17.6% increase in jobs added during first quarter of 2022 compared to 2021. Jobs are predicted to continue to grow, especially in the accommodation and service industries.
7. **Labor force:** Labor participation rates are expected to remain below 2019 levels due in large part to the effects of COVID-19.
8. **Population:** The resident population of Kaua‘i County is projected to grow at an annual rate of 0.8% during the 2016 to 2045 period. There has been a significant net loss of a core component of Kaua‘i’s workforce (residents from the ages of 40 to 59) and a significant net gain of people over sixty.

9. **Gross Domestic Product:** Kaua‘i’s Real GDP for 2020 was \$3,083,667,000 which is fourth among the State counties. In 2020, Kaua‘i County ranked second among the four Hawai‘i Counties in percent change from 2019 with a 17% decrease.
10. **Opportunity zones:** Kaua‘i County has two designated Opportunity Zones. In total these Opportunity Zones have a population of approximately 4,300 that represents 6% of the county’s total population of 72,000.

Kaua‘i County’s Overarching Themes, Objectives, and Strategies

Throughout the CEDS process the Kaua‘i community’s ability to respond to changing economic, social, and environmental needs are consistently mentioned. This ability arises from the fact that most community leaders sit on multiple boards or committees. This factor allows for greater collaboration and cooperation between organizations. Whether striving to meet the State’s renewable energy objectives or implementing a community-based management system for Hā‘ena State Park, the community’s ability to work together and respond collaboratively will be a key factor in accomplishing many of the strategies outlined in the CEDS.

- Build, attract, and retain a 21st century workforce
- Increase adaptability and resilience, particularly regarding natural disasters and climate change
- Support and enhance our island community where all residents and visitors enjoy active, secure, healthy, and fulfilled lives
- Develop plans and continue to build capacity for economic development of the six target industry clusters

... the [Kaua‘i] Community’s ability to work together and respond collaboratively will be a key factor in accomplishing many of the strategies outlined in the CEDS.

MAUI COUNTY

The economy of Maui County has a gross regional product of approximately

\$8.7 Billion

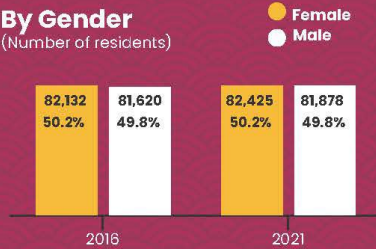
(2020). Maui County's economy supports approximately 83,650 jobs (2022, YTD) that pay an average of \$55,970 in annual earnings.

POPULATION

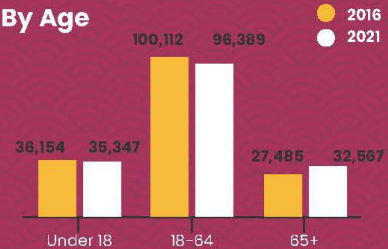


163,752
2016
164,303
2021

By Gender (Number of residents)



By Age



EDUCATION

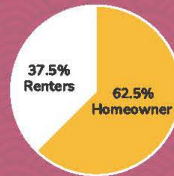
2016-2020 Average



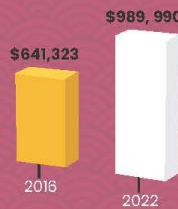
92.3%
High School Graduates
28.3%
College and Higher Degree Graduates

HOUSING

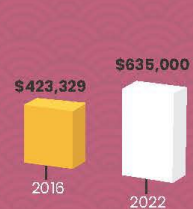
2016-2020 Average



Single Family Home

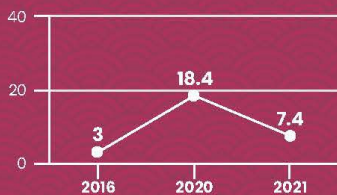


Condo



ECONOMY

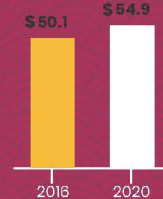
Unemployment Rate (%)



Median Household Income (\$ Thousands)



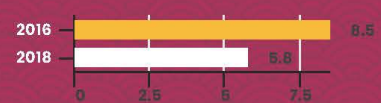
Per Capita Personal Income (\$ Thousands)



Percentage of Population considered ALICE (%)



Percentage of Population Below Poverty Level (%)



LARGEST INDUSTRIES

Top Industries By GDP (\$ Millions)	2016	2020
Real Estate, Rental, and Leasing	2,056	1,979
Accommodation and Food Services	1,948	1,446
Government	1,019	954
Retail Trade	722	830
Construction	600	6,64
Total GDP	9,382	8,704

Top Industries By Number of Jobs	2016	2020
Leisure and Hospitality	24,700	19,500
Trade, Transportation & Utilities	15,500	14,000
Government	10,200	9,100
Education & Health Services	7,100	8,700
Professional & Business Services	7,100	6,300
Total Employees	76,800	68,100

Economic Profile: Maui County

Maui County CEDS Targeted Industry Clusters

Maui County targeted cluster industries were identified by the Maui County CEDS Strategy Committee and further discussed in the Maui County CEDS plan in the Appendix. Maui County’s targeted industry clusters and regions are (in alphabetical order):

- Agriculture, Aquaculture, and Forestry
- Attainable Housing and Construction
- Creative Industries
- Eco-Economy (incl. Conservation, Ecosystem and Environmental Restoration and Management, Climate Change Adaptation)
- Energy (incl. Renewable Energy)
- Hawaiian Knowledge and Culture
- Healthcare and Wellness
- Visitor Industry
- Hana
- Lāna‘i
- Moloka‘i

Maui County’s Economic Outlook

The economic “stress test” of the COVID-19 pandemic era saw historic unemployment levels in Maui County that were the highest in the nation in 2020, attributable to the economy’s overreliance on the visitor industry and consequent lack of resilience. At the same time, the housing market saw unprecedented price increases, affecting single family homes, condominiums, and the rental market. Many families and residents are excluded from the housing market altogether due to inflated prices and the need for more attainable and workforce housing became even more acute. Maui’s economy began to recover in 2022. Unemployment has fallen although it still remains close to double pre-pandemic unemployment. Finally, rising price inflation has led to uncertainty regarding Maui County’s future economic outlook.

1. Largely dependent on external factors, beyond our control:
 - a. Visitor numbers
 - b. Intensity of COVID pandemic (or new variants or restrictions affecting travel)
 - c. Inflationary pressures (burdening economic growth, real incomes expected to decline 5% in 2022)
 - d. Interest rates and Federal Reserve/US monetary policy

- e. Continued supply chain issues, including effects of Ukraine war and China policies
 - f. U.S. trending towards recession (which could dampen visitor numbers)
2. Demography: In-migration and out-migration rates (loss of younger workforce/brain drain and influx of older workers tied to continental U.S. economy)
 3. Structural labor force changes (loss of younger workers, accelerating retirement rates, and growing undesirability of traditional jobs such as fast food and other service positions)
 4. Rising Maui County housing prices, rental prices, and low rate of increase in attainable housing stock
 5. Meaningful, measurable economic diversification requires consensus, mindful planning and coordination, funding, and assignment of tasks and responsibilities to put priorities and strategies into action. The extent to which diversification is achieved and its pace of delivery depend on the confluence and efficacy of, and sustained commitment to, these factors.
 6. UHERO forecasts Maui County unemployment to fall from 4.2% currently to pre-pandemic rates by 2024, and visitor numbers to stabilize because of the above factors.

The economic "stress test" of the COVID-19 pandemic era saw historic unemployment levels in Maui County that were the highest in the nation in 2020, attributable to the economy's overreliance on the visitor industry and consequent lack of resilience.

Maui County's Overarching Themes, Objectives and Strategies

A number of "throughlines" manifested during the Strategy Committee and cluster Focus Group deliberations that were common to most of the convened groups. Together with themes that arose more than once, and the key objectives that stood out for Maui County's more rural communities, the main takeaways were as follows:

1. Maui residents come first: Urgent need for attainable/affordable housing an overarching theme
2. Related: need to streamline and improve County permitting processes
3. Discomfort with tourism numbers and lack of reciprocity/depletion of natural resources
4. Overarching importance of education across all clusters, especially in STEM subjects to facilitate diversification and education for future occupations and needs
5. Need for increased resilience and sustainability, including food security, importance of agriculture
6. Anticipate future needs (a predictive model) for healthcare cluster, especially given demographic trends and population aging, increase in training and provider collaboration

7. Recognition of the importance and centrality to all sectors of Hawaiian knowledge and culture and increase access to capital for Native Hawaiian owned businesses
8. Recognition of potential of the Eco-Economy as an economic driver and the importance of preserving and enhancing Maui's environment for residents
9. Establish a film production/digital media/music and sound facility to anchor the creative arts in Maui County and establish a home-grown resource
10. Create a Maui County E-co testing lab to create local diagnostic, monitoring, and analytic capability
11. Increase electric vehicle infrastructure and ensure equitable access to renewable energy technology and resources such as photovoltaic and community solar projects
12. Create a science, technology, and innovation incubator/accelerator facility for Maui County businesses to further advance economic diversification
13. Importance of nurturing the non-profit sector that supports and benefits the majority of residents
14. Inadequate data collection and disaggregation for many aspects and sectors of the economy
15. Need for increased access to capital for small business
16. Need for improvement in connectivity and ability to keep pace with technology advances (fiber optics etc.)
17. Hana: Create plan for Hana Civic Center
18. Lāna'i: Establish long-term care facility and retrofit kūpuna homes to enable remaining on-island
19. Moloka'i: Maximize locally sourced renewable energy to decrease energy costs, restore forests with native plants and trees, and prioritize small business development

SECTION 5

EVALUATION FRAMEWORK

An evaluation framework for implementation of the Hawai‘i State CEDS is critical to developing accountability, benchmarking progress and success, and measuring the impact of economic investments and regional coalitions. It serves as a mechanism to gauge progress on the successful implementation of the overall CEDS while helping to inform annual performance tracking. Such periodic reviews keep the strategic direction and action plan outlined in the CEDS current and the plan relevant.

The performance measures identified below span across economic, social, and environmental data to comprehensively evaluate progress on the Hawai‘i State CEDS priorities and factor in multiple forms of capital for regional wealth.

In measuring the quality of life for Hawai‘i’s residents, the Hawai‘i State CEDS also leverages information completed by the Department of Business, Economic Development and Tourism’s (DBEDT) Research and Economic Analysis Division (READ) via its Hawai‘i Quality of Life reports⁴⁹ which focus on quantifiably measuring:

- Population and Changing Demographics
- Hawai‘i’s Economic Health
- Education
- Health
- Housing
- Crime and Communities
- Environment and Energy

Measurements

1. **Core Performance Metrics**
 - a. Population (estimated and projected)
 - b. Gross domestic product
 - c. Trade exports and imports
 - d. Industry cluster growth
 - e. Increase in business establishments
 - f. Increase in self-employment
 - g. Improved tax base

⁴⁹ Hawai‘i State Department of Business, Economic Development and Tourism Research and Economic Analysis Division (2022, November). *Quality of Life in Hawai‘i: 2022 Update*. https://files.hawaii.gov/dbedt/economic/data_reports/quality-of-life/Quality%20of%20Life%202022%20Update.pdf

- h. Unemployment rate
 - i. Employment by industry
 - j. Wages by industry
 - k. Supply of skilled workers
 - l. Number of jobs retained or created
 - m. Average annual earnings
 - i. Households in Asset-Limited, Income-Constrained, Employed (ALICE) population
 - ii. Households and individuals below poverty level
 - n. Increase in median household income
 - o. Housing (owners, renters, new construction, building permits)
 - p. Houselessness
 - q. Increase in education attainment (high school and college education attainment)
 - r. Increase in workforce training programs offered and enrollment
2. **Unique Performance Metrics**
- a. Access to healthcare
 - b. Broadband access
 - c. Climate of innovation and entrepreneurship
 - d. Energy cost
 - e. Transportation
 - f. Human services
 - g. Housing
 - h. Houselessness
3. **CEDS Plan Implementation**
- a. Number of initiatives funded by US EDA
 - b. Number of initiatives funded by non-US EDA federal sources
 - c. Number of initiatives receiving local, state, private investments

Additional and important tools to measure Hawai‘i’s economic recovery and resilience include:

- **Genuine Progress Indicator (GPI):** The Genuine Progress Indicator (GPI) is a composite indicator of economic welfare measuring the aggregate costs and benefits of a region’s economic activity. GPI has evolved since the 1980s to more accurately and holistically capture social welfare benefits and costs not evident through GDP accounting. GPI distinguishes from GDP by its composition of all welfare-contributing and reducing impacts of economic activity, including economic, social, and environmental costs and benefits. In 2014, researchers at the University of Hawai‘i and Hawai‘i Pacific University established GPI “Island Style” with localized metrics for measuring Hawai‘i’s economic wellbeing. Building on this work, the State of Hawai‘i Department of Business, Economic Development & Tourism, together with the

“Island Style” researchers, conducted a comprehensive and rigorous update and expansion of Hawai‘i’s GPI in 2020, and is now tracking GPI on an annual basis on its [GPI dashboard](#).⁵⁰

- **Hawai‘i 2050 Sustainability Plan: Charting a Course for the Decade of Action (2020 – 2030)** which serves as the State’s [sustainability and climate strategic action plan](#).
- **Aloha+ Challenge Dashboard:** Measuring Hawai‘i’s Sustainable Economic Recovery, the [Aloha+ Dashboard](#) is an online open-data platform that tracks Hawai‘i’s local contribution to the United Nations 2030 Sustainable Development Goals (SDGs) through community-based metrics developed in a multi-year statewide engagement process. The Aloha+ Challenge⁵¹ is led jointly by the State of Hawai‘i City and County of Honolulu, County of Hawai‘i, County of Maui, and County of Kaua‘i, Office of Hawaiian Affairs, State Legislature, and a network of private sector, civil society, and community-based partners. Hosted on the State of Hawai‘i data portal, the Aloha+ Dashboard tracks statewide and county-level indicators across the economy, workforce development, education, environment, housing, and community. The dashboard is managed by the Hawai‘i Green Growth Local2030 Hub, a statewide network, and recognizes UN Local2030 Hub for local models to meet the SDGs.

Implementation

Regional and Local Economic Development Stakeholders

The work of implementation often falls to local economic development groups and practitioners. Many of these groups and individuals already work on initiatives that speak to regional priorities but may have had limited connection to the CEDS in the past. By recognizing these groups as integral to CEDS implementation, this CEDS is designed to work as a practical tool for guiding regional economic development efforts and providing opportunities for local economic development groups and practitioners to access federal partners and funding.

The role of economic development practitioners in CEDS implementation should include convening and/or participating in periodic CEDS implementation meetings. These practitioners may include and not be limited to, representatives from entities, such as:

- Economic development organizations
- Business and community leaders
- Small, medium, and large businesses
- Entrepreneurial associations
- Local and state private and public institutions

⁵⁰ Hawai‘i State Department of Business, Economic Development and Tourism Research and Economic Analysis Division (February 2022). *Updating the Genuine Progress Indicator for the State of Hawai‘i*. https://files.hawaii.gov/dbedt/economic/reports/gpi_report_july_2022.pdf

⁵¹ *Aloha + Challenge*. op. cit.

- Philanthropic organizations
- Workforce development boards

During CEDS implementation meetings, practitioners should communicate their sector or organization priorities related to the CEDS Plan and discuss relevant successes and challenges from their perspective. They may also opt to participate in Working Groups to act on the strategic goals, objectives, and actions.

Additionally, local economic development practitioners may engage with CEDS implementation in the following ways:

- Building awareness and sharing the CEDS priorities with their sectors or organization's members and leadership and aligning the CEDS priorities with those of their sector or organization
- Communicating desired economic development resources to their communities

Working Groups may be the vehicles through which coordinated, regional implementation of the CEDS priorities will occur. Working Groups could be formed as a result of other CEDS implementation meetings and based on regional priority projects. Membership will be decided at CEDS implementation meetings and may include economic development practitioners and other stakeholders from across the four counties in Hawai'i based on interest, capacity, and/or the alignment of the existing work.

Stakeholders may also review the CEDS process and produce an annual report based on implementation activities and data gathering held throughout the year. An annual report is intended to inform local and regional policy makers, economic development groups and practitioners on CEDS progress, as well as track the indicators detailed in the CEDS plan. Such reports would help to inform future plan review cycles and provide an avenue for recognizing and celebrating successful regional projects.

A listing of and links to the plans mentioned in the report can be found in the [Section 8: Additional Reports and Resources](#).

Comprehensive Plans and Economic Development Strategy

The Comprehensive Economic Development Strategy (CEDS) is intended to strengthen and grow Hawai‘i’s economy to be resilient in the face of external shocks and economic disruptions by promoting steady-state initiatives such as economic diversification, resilient people, and resilient industries.

Economic diversification is vital to maintaining a resilient economy and the pandemic highlighted the dangers of reliance upon tourism as the single dominant industry for Hawai‘i’s economy. As an industry, tourism is extremely sensitive to disruptions to travel and global economic downturns. Diversifying Hawai‘i’s economy will support efforts towards more stability in the face of future shocks.

Several of the industries supported by the CEDS such as defense and healthcare are inherently resilient to external shocks and less likely to be directly impacted by national or international economic conditions. Finally, industries such as agriculture and energy reduce Hawai‘i’s dependence on imports and make the islands more resistant to disruptions to trade and supply.

Resilient people make resilient economies. Households with affordable, stable access to basic necessities such as healthcare, housing, food, and water can more readily weather disruptions to trade and other external shocks. The CEDS helps to increase the resilience of Hawai‘i’s people by ensuring that Hawai‘i’s people have affordable and uninterrupted access to basic necessities. These efforts complement the State’s efforts to reduce the cost of living in Hawai‘i. The increasing cost of living in Hawai‘i prevents many households, particularly low-income households, from saving or properly preparing for emergencies. In addition, Hawai‘i’s prohibitive cost of living is a primary driver of out-migration and labor force shortages as workers no longer can afford to remain in Hawai‘i.

In addition to creating resilient people and a diverse economy, the CEDS reaffirms and supports a larger constellation of resilience plans for the State of Hawai‘i. The CEDS encourages the implementation of statewide plans to promote climate and coastal resilience, other local plans, hazard mitigation planning, and pre- and post- disaster recovery planning.

County and Other Regional Plans

In addition to Comprehensive Statewide Strategies, Hawai‘i has a number of County and Regional Plans which emphasize the diversity and uniqueness of our communities. Like the State CEDS, each county’s CEDS was developed as a part of a collaborative process through the engagement of a broad-based group of stakeholders including government, non-profit, industry, academic, and community perspectives. This State CEDS has integrated our unique County CEDS into this document with links incorporated by reference in the appendix. These plans are further

supplemented by the county general plans and other community plans (see [Section 8: Additional Reports and Resources](#)).

Climate Adaptation and Coastal Resilience Plans

Climate change and sea level rise present unique risks to an island state like Hawai‘i which is recognized as a global leader in addressing the challenges of climate change and mitigating the risks that climate change poses to the well-being of Hawai‘i’s people and economy. Through the [Hawai‘i 2050 Sustainability Plan](#), [the Aloha+ Challenge](#), and other initiatives, Hawai‘i has set and made considerable progress towards ambitious climate change targets for renewable energy, energy efficiency, fuel use, and greenhouse gas emissions. These goals are represented in the CEDS and demonstrate Hawai‘i’s commitment to the [U.N. Sustainable Development Goals](#).⁵³

Hawai‘i has also taken steps to remain resilient in the face of climate change and other external shocks. These efforts include preparing Hawai‘i’s transportation and water infrastructure for climate change via plans such as the Hawai‘i Department of Transportation’s (HDOT) [Hawai‘i Highways Climate Adaptation Action Plan](#), [the Hawai‘i 2050 Sustainability Plan](#), and the [Hawai‘i Water Plan](#).⁵⁴

Additionally, Hawai‘i is committed to preparing for and mitigating the dangers of climate change and sea level rise by creating resilient coastal communities and effectively managing Hawai‘i’s coastal and ocean resources. The proper management of Hawai‘i’s marine and coastal resources is of vital economic, environmental, and cultural significance to Hawai‘i. The Hawai‘i Coastal Zone Management Program’s [Ocean Resources Management Plan](#) and [Section 309 Assessment & Strategy](#) guide Hawai‘i’s coastal resilience and mitigation efforts.⁵⁵

Hazard Mitigation Plans

These climate and coastal resilience projects work hand in hand with Hawai‘i’s wider hazard mitigation planning efforts. The Hawai‘i Emergency Management Agency’s [2018 Hawai‘i Hazard Mitigation Plan](#) sets forth a comprehensive, multi-hazard mitigation strategy to reduce loss of life and minimize property damage due to natural hazards.⁵⁶ The plan profiles the hazards facing the

⁵³ The [Hawai‘i Climate Change Mitigation and Adaptation Commission](#) serves also as an informational and coordination hub to promote resilient and responsive strategies to climate change.

⁵⁴ Please see [Section 8: Additional Reports and Resources](#) for additional information. These plans are further supported by the [Statewide Coastal Highways Program Report](#) and upcoming [2045 Statewide Transportation Plan](#).

⁵⁵ See [Section 8](#) for additional information. These plans take in broad-based feedback from the [Council on Ocean Resources](#) and the [Hawai‘i Ocean Partnership](#) which serve as informational and networking hubs for state and county agencies, federal partners, academia, and community groups.

⁵⁶ The [State Hazard Mitigation Forum](#) serves as a coordinating and informational network for hazard mitigation efforts in the State of Hawai‘i and is composed of a wide-ranging array of federal, state, county agencies, and community members. The 2023 update of the 2018 Plan has begun and is expected to be released at the end of 2023.

State, conducts vulnerability assessments for each hazard, and creates a mitigation strategy to address these vulnerabilities.⁵⁷

Pre- and Post- Disaster Recovery Planning

Pre- and post- disaster recovery planning is the final component of Hawai‘i’s resilience efforts and are addressed simultaneously as part of integrated plans. Hawai‘i’s statewide emergency response is led by the Hawai‘i Emergency Management Agency which implements the [Comprehensive Emergency Management Base Plan](#). This comprehensive plan includes the hazard mitigation, emergency operations, operational support (the port restoration, debris management plans) and incident specific plans catastrophic hurricane plan, tsunami, cyber disruption, terrorism, and targeted violence annexes.⁵⁸

The State has been careful to emphasize economic resilience in the face of natural disasters. The [Natural Disaster Economic Recovery Strategy](#) (NDERS) addresses pre-disaster operations continuity planning and post-disaster recovery actions for both public and private sectors, with special attention paid to small business and economic recovery. The plan identifies strengths and gaps in the preparedness, response, and recovery for Hawai‘i’s small businesses. This report identifies that the primary gap in small businesses, particularly those with twenty-five employees or less, is a lack of information and preparedness.

One specific example of a post-disaster recovery plan was developed in the aftermath of the eruption of Kilauea volcano in Puna which destroyed over 700 homes before ending in December 2018. The [Kilauea Recovery and Resilience Plan](#) includes a network of Resilience Capacity Areas and Action Teams designed to empower the community, foster partnerships, and build capacity for a stronger, more resilient Puna community.

⁵⁶ cont. State of Hawai‘i Emergency Management Agency. *State of Hawai‘i 2018 Hazard Mitigation Plan*. <https://dod.hawaii.gov/hiema/files/2018/11/State-of-Hawaii-2018-Mitigation-Plan.pdf>

⁵⁷ These state level plans are supported by the [hazard mitigation plans](#) of all four counties.

⁵⁸ These plans are also supported by the [Integrated Preparedness Plan](#) which is the product of the Integrated Preparedness Planning Workshop which serves to network, coordinate, and align the interests of government, non-profit, and private sectors in preparedness planning. These coordination efforts are further bolstered by the [National Disaster Preparedness Training Center \(NDPTC\)](#) at the University of Hawai‘i Department of Urban and Regional Planning. The NDPTC works in collaboration with a diverse array of governmental, non-profit, and community organizations to fulfill its goal of providing high quality, up-to-date training on natural disasters. See [Section 8: Additional Reports and Resources](#) for more information.



Photo Credit: USGS - Courtesy of County of Hawai'i

New and Future Economic Resiliency Opportunities

Hawai'i Economic Recovery & Resilience (HIERR) Project

The State of Hawai'i Office of Planning & Sustainable Development's Special Plans Branch was awarded a Statewide Planning Grant funded by the U.S. Department of Commerce Economic Development Administration to develop an economic recovery and resiliency plan for Hawai'i. This planning process is designed to learn from the economic impacts and experiences of hardship associated with the COVID-19 pandemic to inform and enable actions toward a more resilient, equitable, and sustainable economy.

The Project objectives include:

- Identifying gaps and strategies to mitigate Hawai'i's economic vulnerabilities and hardships revealed during the COVID-19 pandemic
- Compiling specific projects and programs that address the identified gaps
- Aligning project / program needs to resource and enable conditions necessary for implementation
- Advancing pre-disaster economic recovery planning across all hazards

The HIERR Project will build on both the statewide and county-level CEDS and will conclude by April 2024. For current information on the HIERR Project, visit <http://www.hierr.online/>.

Future Alignments and Considerations

Economic resilience is a continuous and ongoing process that requires continued maintenance by government, business, and non-profit actors. The following are potential alignments to continue fostering economic resilience in the state.

- Support emergency management authorities' ongoing efforts to help train and prepare government agencies, non-profit organizations, and economic development agencies for the implementation of recovery plans and contingency actions for future hazard events
- Promote emergency management and other appropriate agencies' efforts to train and prepare business owners, non-profit organizations, and general public on implementation of business continuity and recovery plans to help respond to and mitigate disasters
 - Incorporate economic resiliency into workforce training programs to train workers and businesses to align with the requirements and needs of post-disruption/post-hazard recovery
 - Provide training to community members such as through Community Emergency Response Teams (CERTS) to support post disruption/post-hazard recovery
 - Create an inventory and baseline of ongoing economic resilience efforts by Hawai'i businesses and non-profit organizations
- Improve coordination and communication between economic development agencies, non-profit organizations, business owners/managers, and emergency managers/hazard mitigation and risk management agencies
 - Support integration and alignment of community, County, and State planning efforts, including updating the economic development section of local comprehensive plans to include economic resilience and hazard mitigation strategies
- Foster government collaboration with private sector actors such as economic development professionals and Chambers of Commerce to streamline expedient access to business support resources in the event of a major economic shock
 - Identify and secure financial and in-kind resources to assist businesses affected by economic downturns and environmental hazard events (e.g., flooding, tsunami, seismic, volcanic) with continuity or recovery
 - Utilize Federal funding (such as FEMA's Hazard Mitigation Grant Program or HUD's Community Development Block Grants) as tools to match/maximize County, State, and/or private sector funds for business related mitigation activities

SECTION 7 CONCLUSION

While enjoying a comfortable rate of growth and economic stability prior to March 2020, when the COVID-19 pandemic arrived, it exacerbated Hawai‘i’s economic disparities and imparted some harsh lessons from being overly dependent on an economy lacking diversity and driven primarily by tourism; heavy imports including food and energy; and insufficient/aging infrastructure.

Long accustomed to the ravages of natural disasters and external economic shocks, Hawai‘i State and local government officials along with residents and businesses found themselves reeling from the severe retraction in employment, revenue generation, spending, and overall economic and social activity.

Pivoting to adapt to new challenges, residents and businesses demonstrated resilience while simultaneously changing behavior and expectations which now are proving critical in Hawai‘i’s economic recovery and rebuilding. Along with economic recovery, Hawai‘i is also undergoing demographic shifts, housing and infrastructure stresses, and pressures relating to workforce development and availability both in the present and in preparation for the future.

This CEDS is a roadmap to economic prosperity in Hawai‘i representing years of history and more recently, months of collaboration between private and public stakeholders throughout the state. Intended to provide general guidance and assist policy makers, economic development entities, and other stakeholders, the CEDS provides the opportunity to reconsider what a successful and resilient economy in Hawai‘i should be. Built into the CEDS are some tools to assist with planning, funding, and implementation of significant initiatives in building Hawai‘i’s new economy.

SECTION 8

ADDITIONAL REPORTS AND RESOURCES

A. Hawai‘i Counties CEDS

1. **Hawai‘i County CEDS 2022:**
https://files.hawaii.gov/dbedt/op/spb/Hawaii_County_CEDS_2022.pdf
2. **Honolulu County CEDS 2022:**
https://files.hawaii.gov/dbedt/op/spb/Honolulu_CEDS_2022.pdf
3. **Kaua‘i County CEDS 2022:**
https://files.hawaii.gov/dbedt/op/spb/Kauai_County_CEDS_2022.pdf
4. **Maui County CEDS 2022:**
https://files.hawaii.gov/dbedt/op/spb/Maui_CEDS_2022.pdf

B. Demographic and Economic Data and Analysis:

1. **Department of Business, Economic Development, and Tourism (DBEDT) – Research and Economic Analysis Division (READ):
Emerging Industries Updated Report, December 2021:**
https://files.hawaii.gov/dbedt/economic/data_reports/emerging-industries/Hawaii_Targeted_Emerging_Industries_2021_Update_Report.pdf
2. **DBEDT - READ:
The Impacts of COVID-19 on Hawai‘i’s Real GDP and Job Growth and Industrial Sectors, July 2022:**
https://files.hawaii.gov/dbedt/economic/reports/COVID_Impact_GDP_and_Jobs_July_2022.pdf
3. **DBEDT - READ:
Hawai‘i’s Economic Structure: An Analysis Using the Industry Level Gross Domestic Product Data: April 2022 Update, April 2022:**
https://dbedt.hawaii.gov/economic/files/2020/04/GDP_Report_Final_April2020.pdf
4. **DBEDT - READ:
Quarterly Statistical & Economic Report: 3rd Quarter 2022, August 2022:**
https://files.hawaii.gov/dbedt/economic/data_reports/qser/qser-2022q3.pdf
5. **DBEDT - READ:
GPI Dashboard:**
<https://dbedt.hawaii.gov/economic/hawaii-genuine-progress-indicator-hi-gpi/>
6. **DBEDT - READ:
Updating the Genuine Progress Indicator for the State of Hawai‘i, February 2022:**
https://files.hawaii.gov/dbedt/economic/reports/gpi_report_july_2022.pdf
7. **DBEDT - READ:
2021 The State of Hawai‘i Data Book, August 2022:**
https://files.hawaii.gov/dbedt/economic/databook/db2021/DB2021_final.pdf

- C. **Office of Planning and Sustainable Development (OPSD):**
Hawai‘i 2050 Sustainability Plan: Charting a Course for the Decade of Action (2020-2030): <https://hawaii2050.hawaii.gov/wp-content/uploads/2021/07/FINAL-Hawaii-2050-Sustainability-Plan-web-1.pdf>
- D. **Aloha+ Challenge:** <https://aloha-challenge.hawaiiingreengrowth.org/>
- E. **Sustainable Development Goals**
1. **United Nations 2030 Sustainable Development Goals:** <https://sdgs.un.org/goals>
 2. **Hawai‘i’s Aloha+ Challenge Dashboard:** <https://alohachallenge.hawaii.gov/>
- F. **Aloha United Way: Asset Limited, Income Constrained, Employed (ALICE) – 2020 Hawai‘i Report:**
https://www.auw.org/sites/default/files/pictures/2020ALICEReport_HI_FINAL.pdf
- G. **Hawai‘i Interagency Biosecurity Plan:**
<https://hdoa.hawaii.gov/wp-content/uploads/2016/09/Hawaii-Interagency-Biosecurity-Plan.pdf>
- H. **Hawai‘i Early Childhood State Plan:**
<https://earlylearning.hawaii.gov/hawaii-plans/hawaii-early-childhood-state-plan/>
- I. **Resilience Reports and Resources: County and Other Regional Plans**
1. **County of Kaua‘i Planning Department: Kaua‘i Kākou: Kaua‘i County General Plan:**
<http://plankauai.com/>
 2. **Hawai‘i County Department of Planning: General Plan:**
<https://www.planning.hawaiicounty.gov/general-plan-community-planning/gp/gp2040>
 3. **Maui County Long Range Planning Division: General Plan | Maui 2030:**
<https://www.mauicounty.gov/DocumentCenter/View/10491/Preliminary-Draft-TDR-PDR-Report?bidId=>
 4. **City and County of Honolulu: O‘ahu General Plan:**
<https://www.honolulu.gov/dpp/planning/planning-documents/oahu-general-plan.html>
 5. **Honolulu Department of Planning and Permitting: Development Plans and Sustainable Communities Plans:**
<https://www.honolulu.gov/dpp/planning/planning-documents/development-sustainable-communities-plans.html>
- J. **Resilience Reports and Resources: Climate and Coastal Resilience Plans**
1. **Hawai‘i Climate Change Mitigation and Adaptation Commission:**
<https://climate.hawaii.gov/hi-commission/>
 2. **OPSD: The Hawai‘i Coastal Zone Management Program:**
<https://planning.hawaii.gov/czm/czm-program/>

3. **State of Hawai‘i: Section 309 Assessment and Strategy:**
http://planning.hawaii.gov/wp-content/uploads/HCZMP_FINAL_309-AS_2021-2025.pdf
4. **OPSD: Ocean Resources Management Plan:**
<https://planning.hawaii.gov/czm/ormp/>
 The Ocean Resources Management Plan has three primary focus areas: 1) Managing Shorelines in the Face of Coastal Erosion and Sea Level Rise, 2) Mitigating Land-Based Pollution, and 3) Ensuring Health and Abundance of Nearshore Ecosystems. Metrics are tracked via the Ocean Resource Management Plan dashboard.
5. **The Council on Ocean Resources and the Hawai‘i Ocean Partnership:**
<https://planning.hawaii.gov/czm/ormp/council-on-ocean-resources/>
6. **State of Hawai‘i: State Sea Level Rise Resources:**
<https://climate.hawaii.gov/hi-adaptation/state-sea-level-rise-resources/>

K. Resilience Reports and Resources: Hazard Mitigation Plans

1. **2018 Hawai‘i Hazard Mitigation Plan and County Hazard Mitigation Plans:**
<https://dod.hawaii.gov/hiema/hazard-mitigation-plans/>

L. Resilience Reports and Resources: Pre- and Post- Disaster Recovery Planning:

1. **Hawai‘i Emergency Management Agency: Comprehensive Emergency Management Base Plan and other Plans:**
<https://dod.hawaii.gov/hiema/ser-resources/plans-and-planning-resources/>
2. **OPSD: Special Plans Branch: Natural Disaster Economic Recovery Strategy:**
https://files.hawaii.gov/dbedt/op/spb/2014_nders_final.pdf
3. **Waikiki Pre-Disaster Recovery Planning Project – Final Report:**
<https://sites.google.com/site/waikikirecoveryplanning/phase-i-final-report>

M. Resilience Reports and Resources: Pre- and Post- Disaster Recovery Planning: National Disaster Preparedness Training Center – University of Hawai‘i
<https://ndptc.hawaii.edu/>

The National Disaster Preparedness Training Center (NDPTC) at the University of Hawai‘i Department of Urban and Regional Planning is headquartered in the central business district of City and County of Honolulu, with divisions located at the NOAA Inouye Regional Center on Ford Island. Expanded to include the University of Hawai‘i in 2007, the NDPTC is a member of the National Domestic Preparedness Consortium (NDPC) that addresses all forms of hazards. In addition to the NDPTC, other consortium members include:

1. **Center for Domestic Preparedness (CDP):** <https://cdp.dhs.gov/>
 The CDP focuses on prevention, deterrence, and response to chemical, biological and nuclear attacks involving hazmat.
2. **Department of Energy’s Nevada Test Site/Counter Terrorism Operations Support (NTS/CTOS):** <https://www.ctosnnsa.org/>
 NTS/CTOS focus on prevention, deterrence, and response to radiological/nuclear attacks.
3. **Energetic Materials Research and Testing Center (EMRTC):**

<http://www.emrtc.nmt.edu/>

The EMRTC focuses on explosive and incendiary attacks.

4. **The National Center for Biomedical Research and Training (NCBRT):**

<https://www.ncbrt.lsu.edu/>

The NCBRT focuses on prevention, deterrence, and response to terrorist acts, chem-/bio-/ag-related terrorism response.

5. **Texas A&M Engineering Extensions Service: National Emergency Response and Rescue Training Center (NERRTC):**

<https://teex.org/homeland-security/>

NERRTC focuses on Incident Management, EMS, HAZMAT, Public Works, Threat and Risk Assessment, Senior Executive Program.

6. **Security and Emergency Response Training Center (SERTC) / Transportation Technology Center, Inc. (TTCI):** <https://sertc.org/> and <https://www.ttcitech.com/>

These organizations focus on transportation research and testing organization, providing emerging technology solutions for the railway industry.

In addition to the consortium members, the NDPTC works in collaboration with the following organizations to fulfill its goal of providing high quality, up-to-date training on natural disasters:

1. **Pacific Risk Management Ohana (PRiMO):** <https://coast.noaa.gov/primmo/>

PRiMO is a coalition of organizations for hazard risk management in the Pacific region.

2. **Pacific Disaster Center (PDC):** <https://www.pdc.org/>

The PDC is an applied science, information, and technology center, working to reduce disaster risks and impacts to people's lives and property. PDC works to foster disaster resiliency through the use of science, information, and technology for sound, evidence-based decision making.

3. **Daniel K. Inouye Asia-Pacific Center for Security Studies (DKI APCSS):**

<https://dkii.org/apcss/>

The APCSS focuses on a multilateral approach to addressing regional security issues and concerns between the U.S. Pacific Command and the armed forces of the nations in the Asia-Pacific region.

4. **National Oceanic and Atmospheric Administration (NOAA):** <https://www.noaa.gov/>

NOAA provides integrated locally relevant services and information that support the well-being of Pacific coastal and ocean communities, economies, and natural resources.

5. **Center for Excellence: In Disaster Management & Humanitarian Assistance (CFE-DM):** <https://www.cfe-dmha.org/>

The CFE-DM is a U.S. Department of Defense organization that provides academic research, civil-military coordination training, and operational insights to support decision-making before, during, and after crises.

6. **Pacific Marine Environmental Laboratory (PMEL), Center for Tsunami Research:**

<https://www.pmel.noaa.gov/project/noaa-center-tsunami-research>

PMEL conducts research in support of improved measurement technology and the design of optimal tsunami monitoring networks, development, and implementation of improved

models to increase the speed and accuracy of operational forecasts and warnings, and the research and development of improved methods to predict tsunami impacts on the population and infrastructure of coastal communities.

7. **UNESCO/IOC – International Tsunami Information Centre (ITIC):**

<http://itic.ioc-unesco.org/index.php>

The ITIC maintains and develops relationships with counties, international organizations, scientific research and academic centers, civil defense agencies, and the public to conduct its mission to mitigate the tsunami hazard by improving tsunami preparedness.

8. **U.S. Geological Survey: Volcano Hazards Program Observatories and Centers (USGS VSP):** <https://www.usgs.gov/programs/VHP>

The USGS VHP conducts monitoring and research at the five volcano observatories in conjunction with the Menlo Park Science Center. These activities help advance the understanding of active volcanism and allows the Volcano Hazards Program to provide warnings of impending eruptions in the United States.

N. **Hawai‘i Department of Education: Hawai‘i P-20 Partnerships for Education:**

<https://www.hawaiip20.org/>

O. **Hawai‘i Transportation Plans and Reports:**

1. **Hawai‘i Department of Transportation: Hawai‘i Highways Climate Adaptation Plan and Hazard Tool:**

<https://hidot.hawaii.gov/blog/2021/07/26/hawaii-highways-climate-adaptation-action-plan-and-hazard-tool-available-online/>

2. **Hawai‘i Department of Transportation: Statewide Coastal Highways Program Report:**

https://hidot.hawaii.gov/highways/files/2019/09/State-of-Hawaii-Statewide-Coastal-Highway-Program-Report_Final_2019.pdf

3. **Hawai‘i Department of Transportation: 2045 Statewide Transportation Plan (Forthcoming):**

<https://hidot.hawaii.gov/administration/hawaii-statewide-transportation-plan/>

P. **Statewide Water Infrastructure and Resource Needs:**

1. **Hawai‘i State Water Plan:**

<https://dlnr.hawaii.gov/cwrp/planning/hiwaterplan/>

The Hawai‘i Water Plan is a component plan consisting of the Water Resource Protection Plan, the Water Quality Plan, the State Water Projects Plan, the Agricultural Water Use and Development Plan, and the County Water Use and Development Plans.

2. **Commission on Water Resource Management:**

<https://dlnr.hawaii.gov/cwrp/>

3. **Hawai‘i Community Foundation: A Blueprint for Action: Water Security for an Uncertain Future 2016-2018:**

<https://www.hawaiicomunityfoundation.org/learning/a-blueprint-for-action-water->

[security-for-an-uncertain-future-2016-2018](#)

4. **Hawai‘i Department of Health: Water Reuse Task Force Legislative Report:**
<https://health.hawaii.gov/opppd/files/2019/01/Water-Reuse-Task-Force-Legislative-Report.pdf>
5. **State of Hawai‘i: Act 170: Relating to Water Management:**
<https://www.capitol.hawaii.gov/sessions/session2016/bills/GM1272 .PDF>
6. **Board of Water Supply: Watershed Management Plans:**
<https://www.boardofwatersupply.com/water-resources/watershed-management-plan>
7. **U.S. Water Alliance: National Blue-Ribbon Commission for On-site Non-potable Water Systems:** <http://uswateralliance.org/initiatives/commission/>
8. **Hawai‘i Association of Watershed Partnerships:** <http://hawp.org/>
9. **U.S. Environmental Protection Agency: National Water Reuse Action Plan Final:**
<https://www.epa.gov/sites/default/files/2020-02/documents/national-water-reuse-action-plan-collaborative-implementation-version-1.pdf>
 - a. **U.S. Environmental Protection Agency: National Water Reuse Action Plan Draft:**
<https://www.epa.gov/sites/default/files/2019-09/documents/water-reuse-action-plan-draft-2019.pdf> (p.17 Hawai‘i)
10. **One World One Water: One Water for Climate Resiliency:**
<https://static1.squarespace.com/static/5e3885654a153a6ef84e6c9c/t/5f21c29cedcf827970c3ef53/1596048041904/One+Water+For+Climate+Resiliency+White+Paper+-+Final.pdf>

Q. Additional Reports and Resources:

Review of 2016 CEDS Core Metrics

Economic Indicators	Hawai‘i GDP (current dollars, millions)¹	United States GDP (current dollars, billions)²	Hawai‘i Real GDP (chained dollars 2012, millions)	U.S. Real GDP (chained dollars 2012, billions)²
2013	74,555	16,843,196	73,063	16,533,348
2014	76,773	17,550,687	73,512	16,932,051
2015	81,230	18,206,023	75,870	17,390,295
2016	83,914	18,695,106	77,304	17,680,274
2017	87,178	19,477,337	78,942	18,076,651
2018	90,331	20,533,058	79,855	18,609,078
2019	91,781	21,380,976	79,175	19,036,052
2020	82,885	21,060,474	70,625	18,509,143
2021	91,059	23,315,081	73,880	19,609,812

1. Figures from [Department of Business and Economic Development Research & Economic Analysis](#)
2. Figures from [Bureau of Economic Analysis](#)

Education: Graduation Rates	Hawai'i Public High School (4 year cohort) ¹	U.S. Public High School (4 year cohort) ¹	Hawai'i Four Year Public Institutions (6-year cohort) ³	U.S. Four Year Public Institutions (6-year cohort) ³	Hawai'i Two Year Public Institutions (6-year cohort) ³	U.S. Two Year Public Institutions (6-year cohort) ³
2013	82%	81%	-	-	-	-
2014	82%	82%	58%	63%	40%	39%
2015	82%	83%	56%	61%	37%	38%
2016	83%	84%	56%	62%	40%	39%
2017	83%	85%	58%	65%	39%	38%
2018	85%	85%	59%	66%	41%	39%
2019	85%	86%	59%	68%	41%	41%
2020	86% ²	85%	60%	68%	36%	41%
2021	86% ²	-	62%	69%	43%	42%

1. Figures are Adjusted Cohort Graduation Rate (ACGR) from [National Center for Education Statistics, National 2020-2021](#)
2. Figures are from Hawai'i Department of Education ([2020](#) and [2021](#))
3. Figures from [National Student Clearinghouse Research Center](#), Dates correspond to cohort start 6 years prior.

Labor Force	Total Employment ¹	Civilian Employment ²	Unemployment Rate ²	Per Capita Personal Income (Current GDP) ²
2013	868,122	620,000	4.80%	43,931
2014	882,732	635,900	4.20%	46,044
2015	901,121	647,600	3.40%	47,777
2016	914,893	659,550	2.90%	49,122
2017	921,123	679,850	2.20%	51,055
2018	924,355	675,700	2.40%	52,174
2019	914,163	667,900	2.50%	53,888
2020	817,748	583,000	12.00%	56,840
2021	850,603	630,200	5.70%	60,389

1. Count of jobs, both full time and part time. Figures from [Bureau of Economic Analysis](#)
2. Figures from [Department of Business and Economic Development Research & Economic Analysis](#)



Courtesy of Mauna Kahalawai

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