

KAUA`I COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY (CEDS) Update 2016-2020



Prepared by

KAUA`I ECONOMIC DEVELOPMENT BOARD

In partnership with



**County of Kaua`i
Office of Economic Development**

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Executive Summary

Talent. Infrastructure. Capital. These are the three critical factors for economic development that have been identified by the Hawai'i State Department of Business, Economic Development and Tourism (DBEDT) and also by the stakeholders who contributed to the Comprehensive Economic Development Strategy (CEDS) update for Kaua'i for 2016-2020.

Kaua'i's fast-growing population was a significant consideration regarding the economic development strategy for the next five years, as were many local issues including housing, growth management, land use and sustainability. Marketplace factors that were considered included climate change, the globalization of business, the Internet and social media, and grassroots movements of passionate citizens. It was clear from the analysis of Strengths, Weaknesses, Opportunities and Threats (SWOT) that Kaua'i is a talent-rich community in need of more job creation, workforce development, infrastructure improvements and greater access to capital.

The Goals, Objectives and Actions that emerged in light of these circumstances focus on:

1. **Workforce development** through greater education and training;
2. **Innovation and small businesses** through more resources for entrepreneurs;
3. **Adaptability and resilience** through further disaster and climate change planning;
4. **Collaboration** within, between and beyond industry clusters;
5. **Sustainable development** of natural resources;
6. **Greater food self-sufficiency** through increased local farming and consumption of local produce and livestock;
7. **Capacity building for economic development** for industry clusters through planning and assessment; and
8. **Enhancing the community's ability to thrive** in terms of health and wellness, technology and affordable housing.

Ultimately, the greatest outcome of updating the Kaua'i CEDS was the engagement of leaders from all aspects of government, business and the community in moving Kaua'i forward together. This report captures their input and the current state of Kaua'i's economy as best as possible during the CEDS update as of February 2016. However, there is recognition in the community that the CEDS is in actuality a living document to be championed, adapted and built upon as more ideas, strategies and action items emerge. The outcomes from the CEDS over the next five years will depend on the community's ownership, commitment and efforts to be bold in seizing the opportunities at hand, collaborative in addressing challenges, willing to find compromise among diverse perspectives, and steadfast in the vision for Kaua'i's future.

Summary Background

The County of Kaua'i is at an economic crossroad. With the highest percentage of conservation-zoned land and the smallest population of the counties of the State of Hawai'i¹, Kaua'i is celebrated and treasured as a stronghold of untouched natural beauty and small towns, and a thriving melting pot of Hawaiian and other cultures. Simultaneously, these assets draw increasing numbers of visitors and new residents to Kaua'i, resulting in a fast-growing population, infrastructure strain, increasing traffic, and pressing questions about land use and economic development for this burgeoning island community.

The balancing of Kaua'i's rural identity and the vision for its future is top-of-mind for local leaders in government, business and the community, and the update of the County's Comprehensive Economic Development Strategy (CEDS) for 2016-2020 comes at a critical time. Following the guidelines set forth by the U.S. Economic Development Administration (EDA), the CEDS is a strategy-driven plan for regional economic development, the result of a regionally owned planning process designed to build capacity and guide the economic prosperity and resiliency of an area or region. Regions must update their CEDS at least every five years to qualify for EDA assistance under its Public Works and Economic Adjustment Assistance programs, and a CEDS is a prerequisite for designation by EDA as an Economic Development District (EDD).² The Kaua'i CEDS update was spearheaded by the Kaua'i Economic Development Board (KEDB) with the partnership of the County of Kaua'i Office of Economic Development and input from numerous stakeholders and leaders throughout the community, who are listed and acknowledged in the Appendix. It was funded by the U.S. EDA and done in concert with the CEDS updates for the other Counties in the State of Hawai'i and the statewide CEDS update under the auspices of the Economic Development Alliance of Hawai'i (EDAHA) and the Office of Planning under the State of Hawai'i Department of Business, Economic Development & Tourism (DBEDT).

At the time of this report, there were also several other major strategic planning and assessment initiatives underway or recently completed for the County of Kaua'i, namely:

1. [The Kaua'i County General Plan Update: 2016-2035](#), which is the top-level policy document that guides growth management and land use, housing, town character, infrastructure priorities, natural resource management and conservation, cultural and heritage resources, economic development, agricultural lands, sustainability and renewable energy, climate change and hazard preparedness, public access, parks and open space, public services, pedestrian networks, bicycle networks, transit, roads and traffic, harbors and airports, public health and community design. The update of the General Plan began in November 2014 and the draft final plan is anticipated to be submitted to the Kaua'i County Planning Commission in the fall of 2016. (plankauai.com)

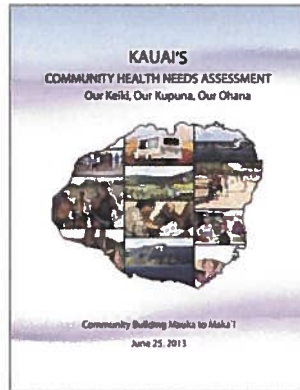
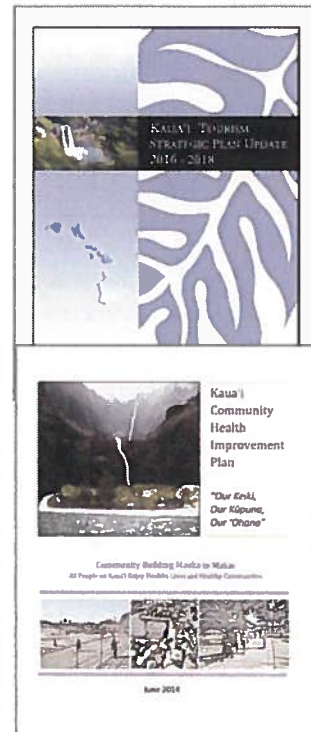


¹ State of Hawai'i Data Book 2014, State of Hawai'i Department of Business, Economic Development & Tourism.

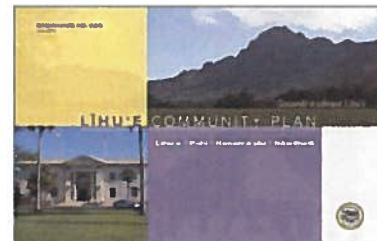
² U.S. Economic Development Administration Comprehensive Economic Development Strategy (CEDS) Content Guidelines: Recommendations for Creating an Impactful CEDS, January 2016.

2. [The Kaua'i Tourism Strategic Plan Update: 2016-2018](http://www.kauai.gov/OED), which examines challenges and opportunities in the visitor industry, Kaua'i's largest industry and primary economic driver. (<http://www.kauai.gov/OED>)

3. Kaua'i's Community Health Needs Assessment (CHNA) Update 2016, which is required by the Affordable Care Act every three years and, on Kaua'i, is truly a community effort that involves numerous partners from the public and private sectors. The CHNA identifies five priority themes for the improvement of public health and health care on Kaua'i, namely: 1) Health and Wellness (Upstream Prevention); 2) Medical Care; 3) Education and Lifelong Learning; 4) Housing; and 5) Community Design and Planning. At the time of this CEDS update report, the CHNA update for 2016 was beginning; consequently, our references were the [existing CHNA report from 2013](http://health.hawaii.gov/kauai/) (<http://health.hawaii.gov/kauai/>) and the [Kaua'i Community Health Improvement Plan](https://www.livehealthykauai.org/media/1443/kauai-plan-june-2014-8-8-14.pdf) from June 2014, which is the comprehensive plan that is being implemented through the Kaua'i County Health Improvement Initiative (<https://www.livehealthykauai.org/media/1443/kauai-plan-june-2014-8-8-14.pdf>).



In addition, the [Līhu'e Community Plan Update](http://lihuecp.com/) was completed and signed into law in June 2015 under Ordinance No. 989 to provide a guide for growth in Kaua'i's government and commercial center. (<http://lihuecp.com/>)



Finally, the [South Kaua'i Community Plan](#) was adopted in July 2015 and established three Special Planning Areas with updated policies and guidelines for development in the Planning District that includes the towns of Po'ipū, Kukui'ula, Kōloa, 'Ōma'o, Lāwa'i and Kalāheo.

<http://www.kauai.gov/Government/Departments-Agencies/Planning-Department/Long-Range-Division/South-Kauai-Community-Plan>



This CEDS update report takes into consideration the materials from those other strategic planning initiatives wherever possible and available as of February 2016. Also, many leaders who were part of the CEDS update were also spearheading or participating in the other initiatives mentioned above and provided input that helps to unify the various documents. It will be important in the implementation of the CEDS to align to these other strategic plans and initiatives wherever possible. For a full list of reports referenced during this CEDS update, see the References section.

CEDS Update Methodology Summary

The Kaua'i CEDS update for 2016-2020 was conducted according to the U.S. EDA's [Comprehensive Economic Development Strategy \(CEDS\) Content Guidelines](http://eda.gov/ceds) available on eda.gov/ceds in 2015 and finalized according to the latest version of the content guidelines as of Jan. 26, 2016.

A four-pronged approach as shown in the graphic below was used to gather both qualitative and quantitative data through primary and secondary research.



Stakeholder Meetings

KEDB formed a CEDS Update Steering Committee of 46 leaders from government, businesses and the community in November 2015. Two Steering Committee meetings were held – one on Monday, Nov. 16, 2015 to commence the CEDS update and the second on Thursday, Feb. 11, 2016 to discuss finalizing the report.

The previous CEDS update from 2010 utilized an approach to economic development that focused on priority projects of six target industry clusters, which were identified because of their existing and potential impact on the economy and quality of life in the County. The industry cluster approach was continued in the CEDS update for 2016-2020, and the same six target industry clusters were identified by KEDB and the Steering Committee:

1. Food & Agriculture
2. Sustainable Technologies & Practices
3. Science & Technology
4. Health & Wellness
5. Sports & Recreation
6. Arts & Culture

KEDB formed an Industry Cluster Committee for each of the six target industry clusters to represent and provide input from diverse perspectives and different types and sizes of businesses and organizations – from sole-proprietor small businesses to some of Kaua'i's largest employers, and from independent nonprofit volunteer-run organizations to government agencies, offices and departments. Nearly 100 leaders from all aspects of Kaua'i's six target industry clusters, the main economic engine of tourism and government were invited to the Industry Cluster Committee meetings. The Industry Cluster Committees convened three times and discussions were conducted with the County Office of Economic Development thus:

1. Initial Industry Cluster meetings were held from Jan. 6-12, 2016.
2. Additional discussions with County Office of Economic Development staff from Jan. 28-29, 2016.
3. The second round of Industry Cluster meetings was held from Feb. 5-9, 2016.
4. The final round of Industry Cluster meetings was held from Feb. 23-25, 2016.

Online Survey

In addition to the Steering Committee and Industry Cluster meetings, an online survey was created and disseminated to gather responses from government, business and community leaders on Kaua'i. This was to provide another way for stakeholders to share their insights, ideas and opinions, particularly those who were not able to attend the meetings.

The survey was comprised of six sections – one for each target industry cluster – and asked various questions related to economic development in the County. The questions were a mix of open-ended and close-ended (i.e., multiple-choice) questions.

In the span of 25 days (Jan. 15 through Feb. 8, 2016), 66 respondents took the survey. Those 66 respondents were able to choose as many of the six industry cluster sections as they wished, as many leaders on Kaua'i are involved in initiatives or organizations that span multiple industry clusters. Many respondents answered questions in more than one industry cluster section, resulting in a total of 143 industry cluster section responses.

Survey findings were gathered as a qualitative measure of business leaders' perceptions and outlook on economic development for Kaua'i, and do not represent a statistically valid or quantitative measure of the community's perceptions on the economic development of Kaua'i as a whole.

For a full copy of the survey questions and the collected responses, see the Kaua'i CEDS Update 2016-2020 Appendix.

Jobs and Earnings Data

Jobs and earnings data from the North American Industry Classification System (NAICS) was provided by the State of Hawai'i Department of Business, Economic Development & Tourism (DBEDT). DBEDT also provided its draft report on Hawaii's Cluster Economic Performance as of November 2015.

The Kaua'i CEDS update for 2016-2020 used both the NAICS data and the report on Hawaii's Cluster Economic Performance to analyze Kaua'i's economy overall and the six target industry clusters in particular.

The report on Hawaii's Cluster Economic Performance analyzed jobs and earnings data from 2001-2014 that was collected through the Quarterly Census of Employment and Wages (QCEW). The Kaua'i CEDS update for 2016-2020 uses these years as a point of comparison to remain consistent with the report and the related data.

In addition, the NAICS data was classified and sorted into the six target industry clusters for the Kaua'i CEDS update to provide a baseline for tracking and comparison over the next five years. It is important to note that the industry cluster classifications for the Kaua'i CEDS are different from the industry clusters used in the report on Hawaii's Cluster Economic Performance, though the report helped guide classification decisions for the NAICS data.

Not all businesses on Kaua'i are classified through NAICS due to collection standards, business size and margin of error. For a more detailed explanation of the limitations and methodologies that went into the Kaua'i CEDS update for 2016-2020, see the Appendix.

Secondary Research

Secondary research helped to construct a thorough representation of the state of Kaua'i's economy and the strategic planning and assessment initiatives that have been completed or are underway in the various industry clusters. Outside sources included both State and County plans and reports as well as reports pertaining specifically to the industry clusters on Kaua'i. Many of the findings from secondary research was used to enhance the analysis of findings from industry cluster meetings, the online survey and jobs and earnings data.

Sources are cited individually and collectively throughout this report. A complete list of References is included at the end of the report.

Economic Highlights About Kaua‘i³

The County of Kaua‘i includes the islands of Kaua‘i and Ni‘ihau in the State of Hawai‘i. While much of the statistical data in this CEDS document encompasses the entire County, the economic development goals, objectives and action items are primarily specific to the island of Kaua‘i, as the island of Ni‘ihau is privately owned and access to the island is limited.

The island of Kaua‘i is Hawai‘i’s fourth largest island and the oldest and northernmost of the major populated islands in the Hawaiian Islands archipelago. It is known as “The Garden Isle” because of its lush greenery. The center of the island is largely mountainous and uninhabited, and the populated areas and roadways are generally located on the coast and in the valleys. Kaua‘i is a place of small towns and agricultural expanses, one-lane bridges and two-lane highways, scenic beaches and jagged sea cliffs.

The [Kaua‘i County General Plan Update Issues and Opportunities](#) paper from September 2015 notes that Kaua‘i residents value independence and self-sufficiency, and that this can be traced back to the history of Kaua‘i and Ni‘ihau as the last Hawaiian Islands to be conquered and join King Kamehameha I’s kingdom. The same paper also notes that Kaua‘i’s residents are highly resilient, and that past hurricanes ‘Iwa and ‘Iniki “loom large in the collective consciousness of the island, and there is an acute awareness that island residents need to continue to band together to protect what is most important and plan for future changes, whether environmental, social, or economic.”⁴



The Kaua‘i County General Plan Update designates six planning districts as shown in this map. Each district has its own distinct character, and economic development must account for the unique aspects of each community. The most developed and populous districts, and the ones forecast to have the most growth in population by 2020, are Līhu‘e, the government and commercial center and the district that is home to the island’s airport is located; East Kaua‘i; and Kōloa-Po‘ipū-Kalāheo.⁵

Kaua‘i County encompasses 620.0 square miles (9.65% of the state). According to State Land Use Districts, 54.8% of the

island of Kaua‘i is designated as Conservation District, 40.7% is designated as Agricultural District, 4.2% is designated as Urban District and 0.4% is designated as Rural District.⁶

³ Data in this section is taken from the State of Hawai‘i Data Book 2014 unless otherwise cited.

⁴ Kaua‘i County General Plan Update Issues and Opportunities, September 2015.

⁵ Kaua‘i General Plan Update: Socioeconomic Analysis and Forecasts, February 2014.

⁶ Kaua‘i General Plan Update Technical Study Land Use Buildout Analysis, May 2015.

Brief Facts About Kaua'i County⁷

Population Composition

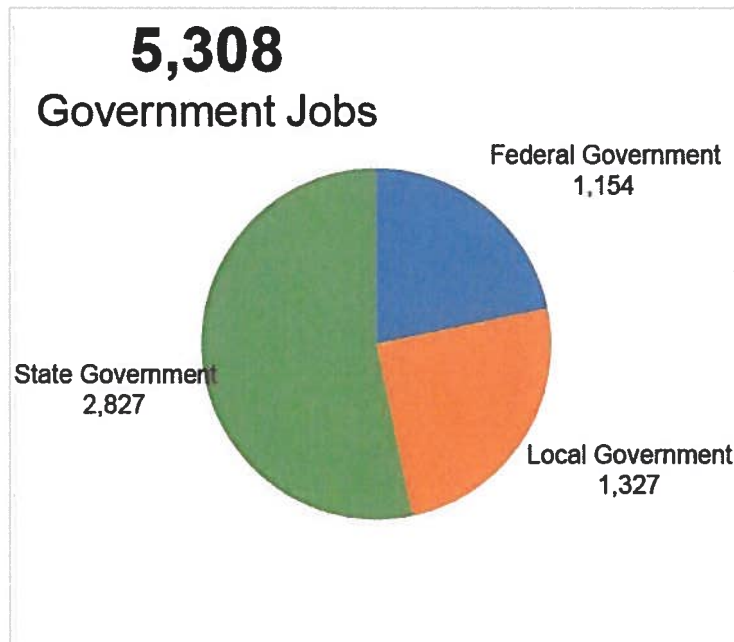
- Population, 2014 estimate: **70,475**
(4.96% of the state)
- Persons per square mile, 2010: **108.2**
(lower than the state average of 211.8)
- Households, 2010: **23,240**
(5.10% of the state)
- Ages, 2014
 - Under 18 years: **22.3%**
 - 18-64 years: **60.3%**
 - 65 years and over: **17.4%** (higher than state total 16.1%)
- Dependency ratio, 2014: **66** dependent people to every 100 working-age people
(higher than statewide total of 61)
- Education attainment:
 - High school graduate or higher, persons age 25+, 2009-2013: **90.1%**
(approx. equal to the state average of 90.4%)
 - Bachelor's degree or higher, persons age 25+, 2009-2013: **25.1%**
(lower than the state average of 30.1%)

Jobs & Income

- Median household income, 2013: **\$55,844**
(17.63% lower than the state average of \$67,798)
- Persons in poverty, 2013: **11.8%**
(higher than state level of 11.2%)
- Per capita income, 2009-2013, in inflation-adjusted dollars: **\$26,658**
(average of the five-year period; 9.03% lower than the state average \$29,305)
- Average annual wage, 2013:
 - Including government: **\$39,059** (lower than state total \$43,828)
 - Excluding government: **\$36,476** (lower than state total \$41,466)
- Total personal income, 2013: **\$2,728,398,000**
(lowest among the counties and 4.30% of the state total)
- Total employment, 2014: **43,815**
 - Wage and salary employment, 2014: **31,599**
 - Proprietors employment, 2014: **12,216**
 - Number of nonfarm proprietors: **11,730**

- Number of farm proprietors: **486**
 - Civilian job projections by sector and county:
 - Total civilian jobs 2015: **43,720**
 - Private: **38,710**
 - Government: **5,010**
 - Wage and salary: **30,760**
 - Self-employed: **12,960**
 - Total civilian jobs 2020: **46,520** (6.40% increase)
 - Private: **41,310** (6.72% increase)
 - Government: **5,210** (4.00% increase)
 - Wage and salary: **31,940** (3.84% increase)
 - Self-employed: **14,580** (12.5% increase)

(higher than 10.64% increase projected state total 2015-2020)
 - Public Sector Jobs, 2014:⁸ **5,308** jobs
 - 53% State Government (**1,154** jobs)
 - 25% Local Government (**1,327** jobs)
 - 22% Federal Government (**2,827** jobs)



⁷ Data in this callout box is from the State of Hawai'i Data Book 2014, State of Hawai'i Department of Business, Economic Development & Tourism (DBEDT) unless otherwise cited.

⁸ North American Industry Classification System (NAICS) 2014 data provided by the State of Hawai'i Department of Business, Economic Development & Tourism (DBEDT).

High Cost of Living Requires Higher Wages

Kaua'i workers struggle with lower wages as compared with the state as a whole. The high cost of living on Kaua'i exacerbates the economic impact of this, and in fact, Kaua'i residents must earn more annual income than residents of any other county to be self-sufficient. According to the 2013 estimates detailed in the Self-Sufficiency Income Standard report from the State of Hawai'i Department of Business, Economic Development & Tourism (DBEDT) Research & Economic Analysis Division, Kaua'i has the highest self-sufficiency requirements among all five family types when compared to other counties and statewide averages. The report found that the County of Kaua'i's self-sufficiency family budgets were impacted by relatively higher costs in most categories, especially housing and transportation. The following table outlines annual self-sufficiency family budgets for selected family types as of 2013 which shows a range of 11.3% to 31.7% higher as compared to the state.

County	Family Type (2013)				
	One Adult	Two Adult Family	One Adult + One Preschooler	One Adult + One Preschooler + One Schoolage	Two Adult + One Preschooler + One Schoolage
Kaua'i	\$42,026	\$53,544	\$61,912	\$74,550	\$83,602
State	\$31,901	\$41,183	\$55,031	\$67,006	\$73,799
% Higher than State	31.7%	30.0%	12.5%	11.3%	13.3%

Further details in the report reveal that a single adult with no children needs to earn an hourly wage of \$19.90 to be economically self-sufficient. That was **174.5%** above the state minimum wage level and **217.7%** above the federal poverty threshold for Hawai'i. Likewise, a two- adult family with one preschooler and one schoolage child needed to earn a combined hourly wage of \$39.58 (or \$19.79 each on average) to be able to be economically self- sufficient. That was **173.0%** above the state minimum wage level and **208.6%** above the federal poverty threshold for Hawai'i.

Kaua'i's Economy is Driven by Small Business

Small businesses make up the fabric of Kaua'i's economy. According to the State of Hawai'i Data Book 2014, compared with statewide percentages, more Kaua'i workers are employed at businesses with fewer than 250 employees and significantly fewer Kaua'i workers are employed at businesses with 250 or more employees. Based on the sample of businesses captured in the report, more than half of businesses on Kaua'i have four or fewer employees and more than 70% of all workers are employed by businesses with fewer than 100 employees.

Size of Firm	Reporting Units	Employment
0 to 4	1,275 (57.35%) <i>Higher than state total of 56.53%</i>	2,114 employment (8.32%) <i>Higher than state total 6.52%</i>
5 to 9	403 (18.13%)	2,672 employment (10.52%) <i>Higher than state total 8.73%</i>
10 to 19	276 (12.42%)	3,692 employment (14.53%) <i>Higher than state total 11.73%</i>
20 to 49	173 (7.78%)	5,331 employment (20.98%) <i>Higher than state total 18.05%</i>
50 to 99	64 (2.88%)	4,283 employment (16.86%) <i>Higher than state total 15.32%</i>
100 to 249	25 (1.12%)	3,931 employment (15.57%) <i>Higher than state total 14.58%</i>
250 or more	7 (0.31%)	3,382 employment (13.31%) <i>Lower than state total 25.07%</i>
<i>As of December 2013</i>		

While these facts provide a snapshot in time, perhaps the more telling statistics are the projections for the next 10-30 years. Further examination of trends and projections reveals the magnitude of opportunities and challenges facing Kaua'i in the near-term and long-term future.

Tourism, the Largest Economic Engine

Tourism is the primary economic engine for Kaua'i and has been steadily recovering since the recession that began in 2008. According to the [Hawai'i Tourism Authority – 2014 Annual Visitor Research Report](#), the tourism industry contributed to a 1.4 percent growth in visitor expenditures to \$1.4 billion in 2014. Additional facts from the Tourism Strategic Plan Update are as follows, from data captured by the Hawai'i Tourism Authority in 2014:

- Kaua'i visitors in 2014 spent more on lodging (\$72) but slightly less on transportation (\$19). Spending on food and beverages (\$34), entertainment and recreation (\$19) and shopping (\$14) was unchanged from 2013.
- More than half (52.9%) of these visitors stayed on Kaua'i exclusively.
- The average daily census rose 1.1 percent from to 23,589 visitors per day.
- The U.S. West (50.9%) continued to have the largest share of visitors to Kaua'i, followed by U.S. East (30.7%), Canada (7%), Europe (2.9%), Oceania (2.8%), Japan (2.1%) and Other Asia (1%).
- Among the top four visitor markets, Canadian arrivals to Kaua'i increased 12.3 percent but Japanese arrivals declined 19 percent from 2013. Arrivals from U.S. East rose slightly (+0.8%) and while the number of U.S. West visitors to Kaua'i were similar to last year.
- There were more visitors from Other Asia (+6.9%), Europe (+4.3%) and Latin America (+2.1%) to Kaua'i but fewer visitors from Oceania (-1.5%) than in 2013.
- Repeat visitors comprised 69.9 percent of Kaua'i visitors in 2014.
- A higher percent of visitors who went to Kaua'i in 2014 were independent travelers (77.1%) compared to 2013 (75.8%).
- Half (50.5%) of those who visited Kaua'i stayed in hotels while in the state. Some stayed in condominium properties (22.6%), timeshare properties (19.4%), and rental homes (12.6%).
- Usage of rental homes (+12%) by Kaua'i visitors were higher compared to 2013 but stays in condominiums (-1.8%) and timeshare properties (-0.8%) declined.
- Most of the visitors were in the state for vacation (84.8%), 6.6 percent visited friends or relatives, 6.5 percent honeymooned, and 3.9 percent came for meetings, conventions, and incentives

The Tourism Strategic Plan Update discusses the need for infrastructure improvements, particularly to handle peak visitor counts from mid-June to August and during the winter holidays. It also discusses the need to live up to the promise of "relaxation and rejuvenation" and offer an authentic Hawaiian cultural experience. Finally, it emphasizes the need to consider the impacts of social media, and to continue to address crime and visitor safety.

The 10 strategies listed in the Tourism Strategic Plan Update as absolutely essential to complete by 2018 are (in brief):

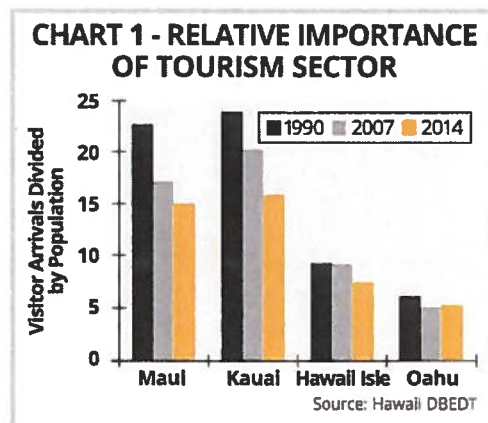
1. Support traffic management systems to address and reduce traffic congestion and improve pedestrian safety.
2. Support career preparation programs to attract new employees, especially local residents, to the visitor industry to ensure an available, well-qualified workforce.

3. Advocate for lifting the cap on existing Transient Accommodation Tax (TAT) funds distributed to counties, thus increasing the allocation to Kaua'i for services and infrastructure that support the island community.
4. Advocate for significant progress and/or completion of essential infrastructure improvements.
5. Encourage two-way communications among residents, Native Hawaiians and the visitor industry to increase understanding of the visitor industry and local Kaua'i culture and their collective value to the island's economy.
6. Increase awareness of the Hawaiian culture among residents of all ages and the visitor industry, including employees and employers.
7. Support adequate funding and staffing for capital improvements, including maintenance and enforcement for public parks, trails and recreation areas.
8. Support the development of regulations and the administrative structure to appropriately identify, monitor and enforce homestays (Bed & Breakfasts) and individual Vacation Units (homes and condos) and report the annual number of visitors staying in these accommodations.
9. Encourage the visitor industry, airlines and the growing cruise line industry to buy and promote Kaua'i products and support businesses on Kaua'i.
10. Support the development and promotion of community-driven programs that reinforce the unique sense of place of communities, such as those with historical and/or cultural significance.

While tourism is projected to be strong over the next several years, there is widespread recognition that Kaua'i must focus on diversifying its economy and growing other industries to increase economic resiliency and provide further opportunities for its residents. This analysis is summarized in the First Hawaiian Bank Economic Forecast Kauai Edition 2015-2016 thus:

Following the statewide pattern, Kaua'i's economy is benefiting from strong visitor numbers that will set records in 2015. Construction is gaining momentum and will add to economic vitality in 2016. Confidence is reflected in airline seat commitments and, more firmly, by investments in resort, commercial, and residential real estate. Diversifying the economic base should continue to be a priority for Kaua'i.

More than any other island, Kaua'i's economic health depends on tourism. Even some diversified agriculture businesses such as Kauai Coffee and Koloa Rum owe their success to tourism sales. Chart 1 illustrates tourism's economic importance in a simple way: annual visitor arrivals divided by resident population. As seen here, Kauai's ratio has been declining, as is the case for all the state's counties. Yet, Kauai continues to have the highest ratio, three times that of Oahu and twice that of Hawaii Island.



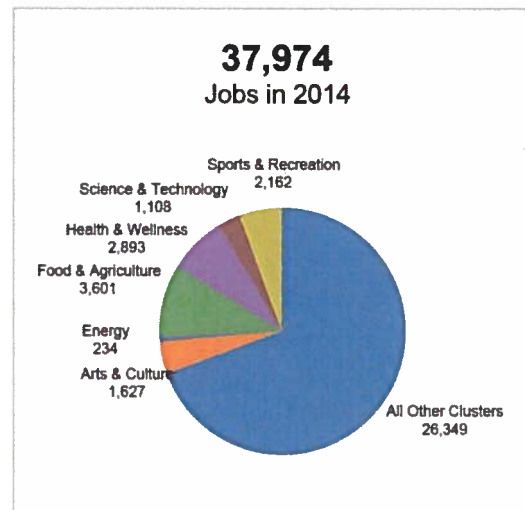
Diversifying Kaua'i's Economy

The Kaua'i CEDS Update for 2016-2020 maintains the focus of the previous CEDS on diversifying Kaua'i's economy by boosting other industry clusters beyond the primary economic engine of tourism.

The six target industry clusters – Food & Agriculture, Sustainable Technologies & Practices, Science & Technology, Health & Wellness, Sports & Recreation and Arts & Culture – were identified in the previous CEDS in 2010 because of a variety of factors: their size in terms of number of jobs and/or earnings, the amount of current industry activity observed, and/or the estimated potential for growth. These same industry clusters were determined to still be relevant for 2016-2020. Analysis of the industry clusters was conducted using jobs and earnings data from the North American Industry Classification System (NAICS) that was provided by the State of Hawai'i Department of Business, Economic Development & Tourism (DBEDT). The NAICS data was classified and sorted into the six target industry clusters for the Kaua'i CEDS update to provide a baseline for tracking and comparison over the next five years.

The chart at right shows that the six target industry clusters together comprised approximately 30%⁹ of the private sector jobs on Kaua'i in 2014, a total nearly equal to the tourism industry and significantly larger than all other clusters in the County.

In addition to analyzing NAICS data, the Kaua'i CEDS update also examined the findings in DBEDT's draft report on Hawaii's Cluster Economic Performance as of November 2015. The report categorizes NAICS classifications into 33 traded clusters that sell products and services across regions, 16 local clusters that provide goods and services primarily to a local market and 1 resource-based cluster that is centralized where needed natural resources are found. The industry clusters were then placed on a performance matrix to assess the relative competitiveness of Hawai'i as compared to the nation.



It is important to note that the industry cluster classifications for the Kaua'i CEDS are different from the industry clusters used in the report on Hawaii's Cluster Economic Performance, though the report helped guide classification decisions for the NAICS data. Despite the differences in industry cluster definitions, the overall performance map in Hawaii's Cluster Economic Performance report reveals important trends about cluster growth on Kaua'i between 2001 and 2014. Many DBEDT industry clusters that relate to and/or overlap with the six target industry clusters for this CEDS update fall in the right side of the matrices, indicating strong current performance and future growth potential.

⁹ Jobs data by NAICS classification provided by State of Hawai'i Department of Business, Economic Development & Tourism and categorized for the purposes of this report.

Kaua'i County Traded Cluster Jobs:

- Number of jobs in the traded clusters increased by 13.2% between 2001 and 2014
- Earnings averaged \$45,179 in 2014 (lower than statewide \$49,617)

<p>Transitioning Group: 5.3% of traded cluster jobs (Growing slower than national counterparts)</p> <ul style="list-style-type: none"> • <i>Financial Services</i> 	<p>Base-Growth Jobs: 67% of traded cluster jobs (Higher proportion of jobs in Hawai'i as compared to national (key economic driver))</p> <ul style="list-style-type: none"> • <i>Jewelry and Precious Metals</i> • <i>Hospitality and Tourism</i> • <i>Transportation and Logistics</i> • <i>Agricultural Products</i>
<p>Declining Group: 9.0% of traded cluster jobs (Lost jobs over period of study)</p> <ul style="list-style-type: none"> • <i>Publishing and Printing</i> • <i>Processed Food</i> • <i>Fishing and Fishing Products</i> • <i>Entertainment</i> • <i>Other Traded Clusters</i> 	<p>Emerging Group: 18.1% of traded cluster jobs (High performance, but not as concentrated in the Kaua'i economy (potential in the future))</p> <ul style="list-style-type: none"> • <i>Sporting, Recreational and Children's Goods</i> • <i>Education and Knowledge Creation</i> • <i>Oil and Gas Products and Services</i> • <i>Information Technology</i> • <i>Distribution Services</i>

Kaua'i County Local Cluster Jobs:

- Number of jobs in the traded clusters increased by 19.9% between 2001 and 2014
- Earnings averaged \$35,143 in 2014 (lower than statewide \$43,363)

<p>Transitioning Group: 23.7% of local cluster jobs Growing slower than national counterparts</p> <ul style="list-style-type: none"> • <i>Local Logistical Services</i> • <i>Local Health Services</i> • <i>Local Retail Clothing and Accessories</i> • <i>Local Food and Beverage Processing and Distribution</i> 	<p>Base-Growth Jobs: 51.1% of local cluster jobs Higher proportion of jobs in Hawai'i as compared to national (key economic driver)</p> <ul style="list-style-type: none"> • <i>Local Personal Services (non-medical)</i> • <i>Local Hospitality Establishments</i> • <i>Local Real Estate, Construction and Development</i> • <i>Local Entertainment and Media</i>
<p>Declining Group: 5.0% of local cluster jobs Lost jobs over period of study</p> <ul style="list-style-type: none"> • <i>Local Education and Training</i> • <i>Local Household Goods and Services</i> • <i>Local Motor Vehicle Products and Services</i> • <i>Local Industrial Products and Services</i> 	<p>Emerging Group: 20.1% of local cluster jobs High performance, but not as concentrated in the Kaua'i economy (potential in the future)</p> <ul style="list-style-type: none"> • <i>Local Financial Services</i> • <i>Local Utilities</i> • <i>Local Community and Civic Organizations</i> • <i>Local Commercial Services</i>

SWOT Analysis

The following table summarizes the current strengths, weaknesses, opportunities and threats regarding economic development on Kaua'i.

Strengths	Weaknesses
<p>Robust visitor industry</p> <p>Abundant natural resources for conservation and agriculture</p> <p>Pacific Missile Range Facility, one of the foremost aerospace test sites in the U.S.</p> <p>Political leadership</p> <p>Premier filmmaking destination</p> <p>Vibrant arts</p> <p>Model achievements in renewable energy, education</p> <p>Close-knit, resilient community</p> <p>Desirable place to live with a unique, diverse 'melting pot' cultural history</p> <p>Kaua'i leaders are striving for greater synergy</p>	<p>High cost of living and doing business</p> <p>Increasing lack of affordable housing</p> <p>Aging and/or inadequate infrastructure</p> <p>Need for more workforce development, especially skilled workforce such as engineers</p> <p>Need to identify and cultivate the next generation of industry leadership</p> <p>Need for greater collaboration, compromise and consensus</p> <p>Need for greater recruitment and retention of educators and education administrators, who often move after a couple of years on the island because of the high cost of living</p> <p>"Not in my backyard" mentality</p>
Opportunities	Threats
<p>Statewide economic growth</p> <p>Multiple strategic planning initiatives (GP, TSP, AMP, CHNA, etc.) are bringing the community together and assessing opportunities</p> <p>Statewide goal 100% RPS by 2045</p> <p>Nationwide transformation in health care, transportation, education</p> <p>Growing consumer interest in sustainability, wellness</p> <p>Age of Information and Innovation</p> <p>State and Federal focus on STEM jobs, entrepreneurship, infrastructure</p> <p>Increased partnerships within industry clusters and between the public and private sectors</p>	<p>Global competition for talent and products</p> <p>Climate change</p> <p>Natural disasters</p> <p>The spread of invasive species and diseases</p> <p>Fast-growing population that is projected to exceed current infrastructure</p> <p>Low unemployment, which makes it more challenging for employers seeking qualified workers</p> <p>Changing attitudes that are different from local culture and hinder collaboration</p> <p>Through globalization, the 'ripple effect' of any socioeconomic shift or event is both accelerated and magnified</p>

Strengths

- **Robust visitor industry**, as reported in the Kaua'i Tourism Strategic Plan Update: 2016-2018 and as evidenced by statistics from HTA. See Tourism section in Summary Background.
- **Abundant natural resources for conservation and agriculture.** Kaua'i County has the highest percentage (54.8%) of Conservation District according to State Land Use Districts.¹⁰ It also has enough suitable agricultural lands to meet its needs, according to the [Kaua'i County General Plan Update Issues and Opportunities](#) paper from September 2015. That paper states that, based on a current population of approximately 70,000 people, about 21,158 acres of land in food production would be required to attain food self-sufficiency, and that 53,547 acres of Kaua'i's lands meet all the criteria of Act 183 (SLH 2008; HRS §205-41) Important Agricultural Lands.
- **Pacific Missile Range Facility Barking Sands (PMRF)**, one of the foremost aerospace test sites in the U.S., located on the west side of Kaua'i. PMRF maximizes Hawai'i's unique position in the center of the Pacific Ocean for the benefit of aerospace and space launch testing. The base is responsible for around 900 civilian jobs and 75 active duty members. The 900 civilian jobs comprise \$89.72 million and the 75 active duty members comprise approximately \$7.5 million of the facility's \$118 million operating budget in FY 2016.
- **Local political leadership**, which is supportive of economic development through innovation and entrepreneurship and is committed to the sustainability, self-sufficiency and health and wellness of the community.
- **Success as a premier film, TV and photo shoot destination** for the past 80 years. Most recently, in 2015, Kaua'i garnered attention and publicity as the setting of blockbusters like *Jurassic World*, TV shows like *The Biggest Loser*, and photo spreads in *Sports Illustrated's* Swimsuit Edition.
- **Vibrant arts scene**, with events, galleries and shops all over the island. The [Kaua'i Arts & Culture Feasibility Study Final Report](#) from September 2015 found "robust pockets of arts and culture" and reported that "visual arts and crafts such as painting, drawing, ceramics, woodworking and jewelry-making; performing arts including music, dance and theater; literary arts and publishing; media arts in photography, film and graphic design; and arts and traditions from Hawaiian culture, Japanese culture, Filipino culture and more can all be found."
- **Model achievements and momentum in renewable energy** through the initiatives of the Kaua'i Island Utility Cooperative (KIUC), the County and private firms. KIUC increased renewable generation by 27% in 2014¹¹ and reported 64.8 MW (36.6%) power generation from renewable energy in 2015, with a projection of 116.2 MW (70.6%)

¹⁰ Kaua'i General Plan Update Technical Study Land Use Buildout Analysis, May 2015.

¹¹ State of Hawai'i Energy Resources Coordinator's Annual Report 2015.

renewable energy by 2025.¹² As of 2015, there were 17 renewable energy projects (8 hydroelectric, 7 solar, 1 biomass, and 1 biofuel) on Kaua'i with estimated capacity of over 48 MW.¹³ In January 2016, KIUC reported hitting 90% renewable energy on four separate occasions.¹⁴

- **Achievements and momentum in education**, particularly regarding College and Career Readiness Indicators as measured by the Hawai'i P-20 Council. There were double-digit gains from 2012-2014 in the percentage of graduates from all three high schools on Kaua'i who enrolled in college-level mathematics and college-level English in the University of Hawai'i system.¹⁵
- **Close-knit, resilient community**, where government, business and community leaders alike report a special small-town culture and close connections between colleagues, friends and family members.
- **Desirable place to live with a unique, diverse 'melting pot' cultural history**. Kaua'i's steadily growing population over the past 15 years is due both to natural increase and migration to the island¹⁶, which contribute to the racial and ethnic diversity of the community. In 2010, nearly 1 in 4 residents reported being of two or more races. Of those who reported being of one race, 44% were White, 42% were Asian, and 12% were Native Hawaiian and other Pacific Islander.¹⁷
- **Kaua'i leaders are striving for greater synergy**. In the Steering Committee meetings and the Industry Cluster Committee Meetings for the CEDS update, all participants expressed a desire and a willingness to increase collaboration, forge stronger partnerships and ensure more regular communication between organizations to foster progress toward shared goals.

¹² Kaua'i Island Utility Cooperative 2014 Annual Report.

¹³ State of Hawaii Energy Resources Coordinator's Annual Report 2015.

¹⁴ News release, "Kaua'i Island Utility Cooperative hits 90% Renewable Milestone," Feb. 3, 2016.

¹⁵ 2014 College and Career Readiness Indicators (CCRI) Data, Hawai'i P-20 Partnerships for Education.

¹⁶ Kaua'i County General Plan Update Issues and Opportunities, September 2015.

¹⁷ State of Hawai'i Data Book 2014.

Weaknesses

- **High cost of living and doing business.** For information on the high cost of living, see the section on the Self-Sufficiency Income Standard in the Summary Background. Regarding the business environment, in 2015, CNBC rated Hawai'i as "America's Bottom State for Business" for the second time in three years because of the need for infrastructure repairs, high traffic congestion, heavy union presence, modest success of state worker training programs, high utility bills, high office rent, high taxes and complex tax code, and lack of business incentives.¹⁸
- **Increasing lack of affordable housing.** According to Steering Committee members, the need for more affordable housing is currently being discussed as part of the Kaua'i County General Plan Update. The State of Hawai'i Data Book 2014 reports that Kaua'i's accepted value per housing unit in 2014 was \$546,498 for a one-family home, 31% higher than the state average of \$417,721.
- **Aging and/or inadequate infrastructure.** The Kaua'i General Plan Issues and Opportunities paper from September 2015 reports that 14 of 20 water systems or sub-systems are at capacity or near capacity, 9 of 13 water systems have an existing storage deficiency, and 1 of 4 municipal wastewater systems is at full capacity and the other 3 are at half capacity. The same report states that "traffic congestion is one of the community's most frequently expressed concerns."
- **Need for more workforce development, especially skilled workforce such as engineers.** This was a universally expressed need from the Steering Committee members and the members of the six Industry Cluster Committees.
- **Need to identify and cultivate the next generation of industry leadership.** This was also a need that was expressed by both the Steering Committee and every Industry Cluster Committee. Committee members shared that the same individuals are part of multiple strategic planning initiatives, that a small core group of organizations are usually responsible for implementation, and that there is a need for additional participation by others and the formation of core task forces for initiatives in order to see further economic development. See section on Characteristics of a Core Task Force.
- **Need for greater collaboration, compromise and consensus.** Members of every Industry Cluster Committee spoke to the challenges of finding community compromise and consensus around economic development initiatives. These challenges have become heightened in recent years as groups of residents with diverse perspectives have become increasingly vocal and organized. There is a need for government, businesses and organizations to develop plans for community engagement and community building along with plans for economic development.
- **Need for greater recruitment and retention of educators and education administrators,** who often move after a couple of years on the island because of the

¹⁸ CNBC America's Top States for Business, "Worst state for business: America's paradise lost," June 24, 2015.

high cost of living. Educator turnover contributes to the challenges of strengthening the educational continuum and workforce development pipeline.

- **“Not in my backyard” mentality** expressed by some members of the community. While there is a shared desire in the community for greater opportunity and more solutions to the high cost of living on Kaua’i, there is also often concern or opposition to proposed economic development initiatives. The community must choose what type and how much economic development to pursue while still preserving Kaua’i’s rural character.

Opportunities

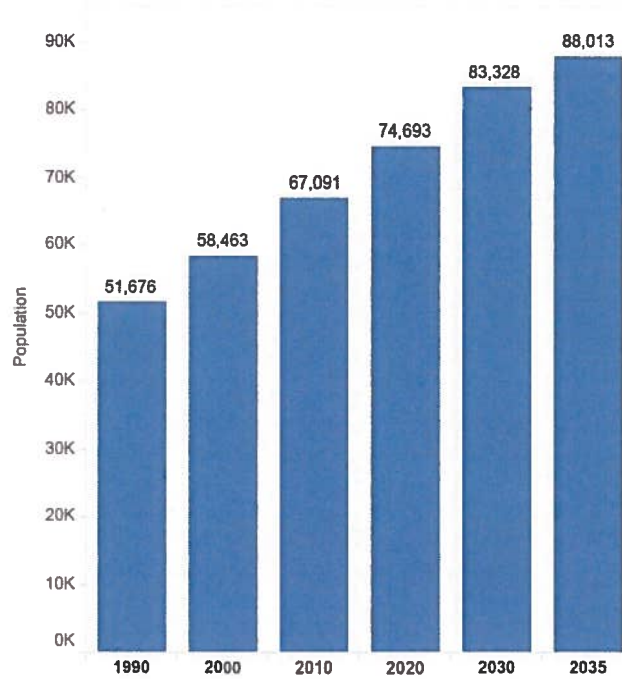
- **Statewide economic growth.** The State of Hawai'i Department of Business, Economic Development and Tourism (DBEDT) reported in February 2016 that Hawai'i Gross Domestic Product (GDP) is forecast to grow 2.3% in 2016 and 2.4% in 2017. DBEDT Director Luis Salaveria released a statement saying that "Hawai'i ended 2015 with historical high levels for labor force, employment and job count, [...] and the economic fundamentals remain positive."¹⁹
- **Multiple strategic planning initiatives are bringing the community together and assessing opportunities.** As previously mentioned, the County General Plan Update, Tourism Strategic Plan Update, Agriculture Master Plan, Community Health Needs Assessment, and other planning initiatives are currently underway and indicate a high amount of attention and discussion regarding the future of Kaua'i.
- **Statewide goal of 100% Renewable Portfolio Standard by 2045.** In 2015, Hawai'i became the first state to sign into a law a bill mandating 100% of energy for power generation from renewable sources by 2045. The state's commitment to renewable energy indicates opportunity for Kaua'i to further pursue its renewable energy goals.
- **Nationwide transformation in health care, transportation and education.** The Affordable Care Act and the national conversion to electronic medical records, the rise of ride sharing services, a growing focus on science, technology, engineering and math (STEM) in education, and a movement to make higher education more affordable and accessible are just some of the trends sweeping the country. While these changes are highly disruptive, they also present new opportunities for businesses and organizations.
- **Growing interest in sustainability and wellness.** Consumers are interested in supporting local businesses and farms, eating locally grown and organic produce, and pursuing wellness through activities like biking, hiking, yoga and water sports.
- **Age of Information and Innovation.** The rise of the Internet and social media has been one of the most disruptive occurrences of the 21st century, but has also fostered an increase in technology companies and enabled further globalization. Companies are able to be based anywhere in the world, with employees in disparate locations. Social media can be used to share information and further build community.
- **State and Federal focus on STEM jobs, entrepreneurship and infrastructure,** meaning potential funding in these areas of greatest need and/or opportunity for Kaua'i.
- **Increased partnerships within industry clusters and between the public and private sectors.** Anecdotally, there appears to be a growing acceptance of the idea that the public sector and private sector must work together to accomplish major initiatives efficiently and effectively. Public-private partnerships may be viable for many of the Actions identified in the Goals, Objectives & Actions section.

¹⁹ State of Hawai'i Department of Business, Economic Development and Tourism 1st Quarter 2016 Quarterly Statistical & Economic Report (QSER) and news release.

Threats

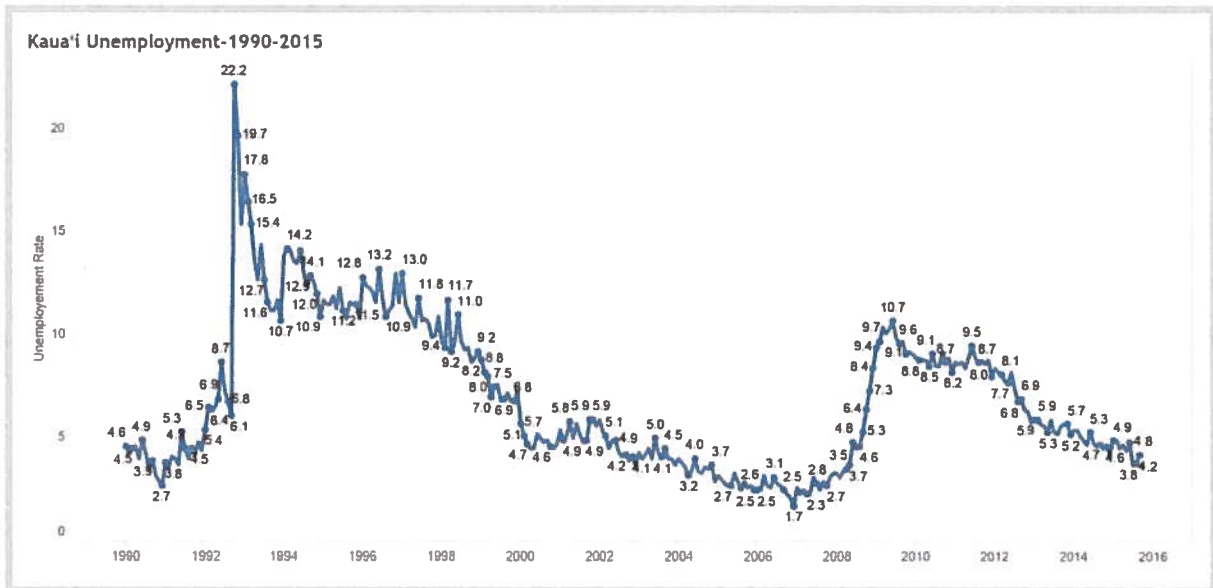
- **Global competition for talent and products.** College and career opportunities on the mainland U.S. or in other countries attract talent away from Kaua'i and contribute to "brain drain." The globalization of business and the rise of e-commerce is a double-edged sword, opening up Kaua'i products to competition with products from around the world. The primary economic engine of tourism is not immune to the phenomenon of growing global competition, as other "sand and surf" destinations ramp up their marketing efforts. The marketplace is glutted with choices for both the job seeker and the consumer.
- **Natural disasters.** The [Kaua'i Climate Change and Coastal Hazards Assessment](#) from June 2014 identifies that Kaua'i is susceptible to a variety of natural hazards such as coastal storms, hurricanes, high wave events, flooding, coastal erosion, tsunamis, drought, wildfire, landslides and vog. Kaua'i was hit by two hurricanes in recent memory – 'Iwa and 'Iniki – which devastated the island. The members of the Steering Committee and the Industry Cluster Committees identified a need for further natural disaster planning and preparedness.
- **Climate change.** The [Kaua'i County General Plan Update Issues and Opportunities](#) paper from September 2015, which cites the [Kaua'i Climate Change and Coastal Hazards Assessment](#) from June 2014 also states that existing hazards will be exacerbated by climate change and sea-level rise. The sea level is projected to rise 3 feet by 2100, and this "has the potential to adversely impact coastal communities, critical infrastructure, agricultural productivity, recreation and access to natural and human-made recreational facilities, cultural resources, natural habitats, tourism and other economic sectors. [...] Twenty percent of Kaua'i's residents live near the shoreline. Low-lying roads, wastewater systems, energy facilities, stormwater systems, and docking facilities in harbors will be at risk of impaired function due to the collective hazards of climate change and sea-level rise." The projected impacts of climate change also add further urgency to the need to increase food self-sufficiency – at the Hawai'i Energy Policy Forum Legislative Briefing on Jan. 22, 2016, speakers shared that food prices could double by 2030 due to decreases in crop yields because of climate change.
- **The spread of invasive species and infectious diseases.** The transportation of people and goods to the islands from out of state and between the islands presents the risk of spreading species or diseases. Mosquito-transmitted diseases are of particular concern at the present, as the Big Island of Hawai'i is currently dealing with an outbreak of dengue fever, and Central and South America are grappling with an outbreak of Zika virus.
- **Fast-growing population that is projected to exceed current infrastructure.** Kaua'i's population has been growing steadily for the past 15 years and is already straining the island's roads. According to the [Socioeconomic Analysis and Forecasts](#) study prepared in February 2014 for the Kaua'i County General Plan update, Kaua'i's population is projected to increase from 67,091 in 2013 to 88,013 in 2035 – a total growth of 31.2% or about 1.10% per year.

Kaua'i Population Projections



Source: SMS Research Kaua'i General Plan Update: Socioeconomic Analysis and Forecasts (February 2014)

- **Low unemployment, which makes it more challenging for employers seeking qualified workers.** Kaua'i's unemployment rate has dropped from a high of 10.7% during the recession to 4.2% as of late 2015.



- **Changing attitudes that are different from local culture and hinder collaboration.** As more new residents arrive on Kaua'i from diverse places around the world, they bring new ideas and attitudes that can be utilized for the benefit of the Kaua'i community and that can also be at odds with the views of longtime residents. Through the rise of the Internet and social media, there are also changing attitudes among the younger generations of residents that are sometimes at odds with the views of older generations. These differences must be reconciled and greater mutual understanding and cooperation must be fostered in order for economic development initiatives to move forward.
- **Through globalization, the 'ripple effect' of any socioeconomic shift or event is both accelerated and magnified.** While Kaua'i is an island in the middle of the Pacific, it is more connected than ever with the rest of the world through the Internet and air and sea travel. Any major events on the global stage have a greater effect on Kaua'i today than in the past because of greater interconnectivity.

CEDS Update Survey Highlights

The themes of the SWOT analysis for Kaua'i were echoed and reinforced in the responses to the CEDS update survey of government, business and community leaders across the six target industry clusters. The commonalities that emerged among the 66 survey respondents show common perceptions and sentiments regarding the current state and future potential of economic development on Kaua'i.

- High cost of living and/or doing business was cited as a top barrier to economic development on Kaua'i in 4 out of 6 industry clusters (Arts & Culture, Food & Agriculture, Health & Wellness, Science & Technology).
- Respondents felt mixed or disagreed that there is adequate leadership in all 6 industry clusters (Arts & Culture, Food & Agriculture, Health & Wellness, Sustainable Technologies & Practices, Science & Technology, Sports & Recreation).
- Agriculture or agriculture-related industries were cited as an opportunity for growth on Kaua'i in 3 out of 6 clusters (Food & Agriculture, Sustainable Technologies & Practices, Science & Technology).
- Respondents felt mixed or disagreed that there are enough qualified workers in 5 out of 6 clusters (Arts & Culture, Food & Agriculture, Health & Wellness, Sustainable Technologies & Practices, Science & Technology).
- Lack of facilities and/or infrastructure were cited as a barrier to economic development in 5 out of 6 clusters (Arts & Culture, Health & Wellness, Sustainable Technologies & Practices, Science & Technology, Sports & Recreation).
- Approximately 35% of respondents stated that their organization is likely or extremely likely to hire more employees in the next 12 months.

Nearly 75% of respondents stated that it is unlikely or extremely unlikely that their organization will expand to a new location Kaua'i in the next 12 months.

Strategic Direction & Action Plan

The following section articulates the strategic direction, goals, objectives and action plan for economic development on Kaua'i for 2016-2020.

The input from the Steering Committee, industry cluster meeting participants and survey respondents indicated a high amount of integration, overlap and synergy among the six target industry clusters (Food & Agriculture, Sustainable Technologies & Practices, Health & Wellness, Science & Technology, Sports & Recreation, and Arts & Culture).

Thus, the vision, goals, objectives and action plan below have been consolidated to represent the overall picture on Kaua'i and reflect the integration of the six industry clusters.

For ease of use, the second half of this report also contains a section-by-section breakdown of data and action items by industry cluster.

Food & Agriculture	59
Sustainable Technologies & Practices	81
Science & Technology	104
Health & Wellness	123
Sports & Recreation	143
Arts & Culture	160

Vision Statement

The proposed vision for Kaua'i 2035 in *Kaua'i Kākou: Kaua'i County General Plan: Updating the Vision for Kaua'i, Version 3.0, July 2015* is as follows. Definitions for Hawaiian words and phrases are provided in brackets, using the glossary provided in *Kaua'i Kākou: Kaua'i County General Plan: Issues and Opportunities, Final, September 2015* and definitions from *Nā Puke Wehewehe 'Ōlelo Hawai'i* at wehewehe.org.

In 2035, Kaua'i will be...

1. A "Garden Island" of unique natural beauty, rooted in principles of *aloha* [affection, compassion for others] and *mālama 'āina* [to care for the land, stewardship of the land], and remarkable in its thriving ecosystems;
2. A place where conservation and restoration of land and water resources provides the foundation of sustainable policies for land use, energy, infrastructure, society, and economy;
3. A resilient community that shares *kuleana* [right, privilege, concern, responsibility] in planning for the future, preparing for environmental changes, and providing for the needs of people from *keiki* [child/children] to *kūpuna* [elders];
4. A place where view planes and open space are preserved through compact, walkable communities separated by scenic and functional open spaces;
5. A place with vibrant community life, safe facilities for walking and biking, places to gather and socialize, and venues for arts and culture.
6. A place where housing for all ages and income levels is integrated into the fabric of each community, and where people can live close to work and recreational opportunities.
7. A society that honors its Native Hawaiian heritage, values historic places and is shaped by diverse languages and cultural traditions;
8. An island of unique communities that are united in a common vision and in care for their neighbors and *'ohana* [family];
9. A social system that embraces sustainable practices for farming, hunting, and fishing and that encourages production of locally grown food for its populace;
10. A place that protects residents' access and customary use of shoreline areas, trails, and places for religious and cultural observances, fishing, gathering, hunting and recreation; and
11. A welcoming place with visitor facilities and experiences that create a positive experience without creating effects at the expense of others;
12. An island where businesses, cottage industries, and entrepreneurs thrive, and where youth have broad access to education, enrichment, and economic opportunity.

Guiding Principles of Economic Development on Kaua'i

Kaua'i is a unique place in its rural character, cultural traditions and storied history. The stakeholders who shared their insights and input in the CEDS update for 2016-2020 agreed that there must be balance, foresight and sound judgement in pursuing economic development for the benefit of all.

The following principles are intended to guide strategies and decisions regarding economic development on Kaua'i, particularly if and when any goals, objectives or actions appear to be in conflict with one another.

1. Pursue **sustainable** economic development, not economic growth at any cost.
2. Be **comprehensive** in evaluating the resources needed (facilities, capital, talent, technology) and the impact on the community.
3. Be **collaborative** in determining the best course of action to create synergies and compromise.

Characteristics of a Core Task Force

The implementation of the actions and initiatives documented in this CEDS update for 2016-2020 will rely on the formation of core task forces to champion and organize the community's efforts.

At the Steering Committee meeting on Feb. 11, 2016, the following list of possible characteristics of a core task force was drafted to describe the qualities and resources that must be present to move an initiative forward. It is unlikely and undesired that any one organization would be able to provide all qualities and resources for an initiative, and so the concept of the core task force was suggested as a way for organizations to work together to complement and supplement one another.

Motivation	1. Motivated to be part of the core task force by the potential benefits for their own organization or business.
Network	2. Strong network with members of industry cluster. 3. Serves in key roles in industry organizations. 4. Strong network with key legislators, policymakers and other spheres of influence in the industry cluster.
Capacity	5. Human resources (administrative expertise, subject expertise). 6. Financial resources (access to capital and/or fundraising expertise). 7. Facility/technology resources. 8. Strategic communications capacity and expertise.
Vision	9. Ability to clearly define specific, measurable objectives and the pathway toward goals. 10. Strategic skills/expertise. 11. Innovative thinking and ability to inspire stakeholders and secure buy-in around ideas/projects.
Experience	12. Proven track record in developing and delivering projects. 13. Demonstrated ability to convene stakeholders, facilitate meetings, gather consensus. 14. Demonstrated longevity/continuity through succession planning. 15. Demonstrated ability to partner with County of Kaua'i Office of Economic Development (OED), Kaua'i Economic Development Board (KEDB) and other economic development entities.

Goals, Objectives & Actions

This section provides an integrated overview of the economic development Goals, Objectives and Actions for Kaua'i. The six target industry clusters share significant overlap in the Actions identified for growth. The tables on the following pages indicate connections between Actions and industries through use of color-coded industry cluster abbreviations.

The Actions for each industry cluster can also be found within each industry cluster section (see Table of Contents).

Industry cluster abbreviations:

A&C	Arts & Culture
F&A	Food & Agriculture
H&W	Health & Wellness
S&T	Science & Technology
S&R	Sports & Recreation
ST&P	Sustainable Technologies & Practices

Kaua'i Economic Development Goals 2016-2020

- 1. Build, attract and retain a 21st century workforce.***
- 2. Encourage innovation and the development of small, mid-size and large businesses and organizations.***
- 3. Increase adaptability and resilience, particularly regarding natural disasters and climate change.***
- 4. Increase collaboration.***
- 5. Ensure sustainable development.***
- 6. Achieve greater food self-sufficiency.***
- 7. Develop plans and continue to build capacity for economic development in each of the six target industry clusters.***
- 8. Enhance the community's ability to thrive.***

Overview of Goals and Objectives

The achievement of the following Goals and Objectives will require the support of all government, business and community leaders and key stakeholders who belong to, influence or are connected with the six target industry clusters. However, for the purposes of the CEDS, the checkmarks in the table below indicate only the target industry cluster(s) who will be ***most critical*** to help champion the Actions under each Objective. For more details on the Actions under each Objective, please refer to the page numbers indicated in the table.

G = Goal O = Objective

	A & C	F & A	H & W	S & T	S & R	ST & P
G1: Build, attract and retain a 21st century workforce.						
O1: Increase college and career readiness among students in grades K-20.	✓	✓	✓	✓	✓	✓
O2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'	✓	✓	✓	✓	✓	✓
O3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.	✓	✓	✓	✓	✓	✓
G2: Encourage innovation and small business development.						
O1: Cultivate entrepreneurs and new small businesses / organizations.	✓	✓	✓	✓	✓	✓
O2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.	✓	✓	✓	✓	✓	✓
O3: Increase innovation initiatives and testbed projects on Kaua'i.				✓		✓
G3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.						
O1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.	✓	✓	✓	✓	✓	✓
O2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.	✓	✓	✓	✓	✓	✓

	A & C	F & A	H & W	S & T	S & R	ST & P
G4: Increase collaboration.						
O1: Increase collaboration both within and across industries.	✓	✓	✓	✓	✓	✓
O2: Increase communication, engagement and collaboration between industry cluster businesses / organizations and their key stakeholders such as public officials and community members with diverse viewpoints.	✓	✓	✓	✓	✓	✓
G5: Ensure sustainable development.						
O1: Meet the State's goal of 100% Renewable Portfolio Standard by 2045 for the electricity sector.						✓
O2: Meet the State's goal of 30% Energy Efficiency Portfolio Standard by reducing electricity demands by 2030.						✓
O3: Implement the Kaua'i Multimodal Land Transportation Plan (MLTP) by 2035.		✓	✓		✓	✓
O4: Achieve 70% diversion of Kaua'i's solid waste stream by 2023 per County Council Resolution 2011-73 and in alignment with the Aloha+ Challenge Targets for Sustainability.						✓
O5: Preserve/protect/manage utilization of Kaua'i natural resources.	✓	✓	✓	✓	✓	✓
G6: Achieve greater food self-sufficiency.						
O1: Increase food crop production and processing.		✓				
O2: Increase distribution and consumption of locally grown food.		✓				
G7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters.						
O1: Assess economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed.	✓	✓			✓	
O2: Continue to build capacity for economic development in each of the six target industry clusters, as needed.	✓				✓	
G8: Enhance the community's ability to thrive.						
O1: Support the health and wellness of the community.			✓		✓	
O2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.	✓	✓	✓	✓	✓	✓
O3: Increase the quality and affordability of life on Kaua'i.	✓	✓	✓	✓	✓	✓

Summary List of the 49 Highest Priority Actions

The following table lists only the Highest Priority Actions. Each action has been labeled with a unique identifying code that locates it within the master list of Goals (G), Objectives (O) and Actions (A). For more details on these Highest Priority Actions, please refer to the page numbers indicated in the table.

	A & C	F & A	H & W	S & T	S & R	ST & P
G1.O1.A1: Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations.	✓	✓	✓	✓	✓	✓
G1.O1.A2: Increase vocational training opportunities for careers that do not require college degrees.	✓	✓	✓	✓	✓	✓
G1.O1.A3: Strengthen the continuum of science, technology, engineering and math (STEM) education K-20.		✓	✓	✓		✓
G1.O1.A4: Develop and open the Kaua'i Creative Technology Center.	✓			✓		
G1.O1.A5: Expand health care training, certification and degree programs on the island, particularly for primary care, mental health (psychiatrists), substance abuse prevention and treatment, and elder care.			✓			
G1.O2.A3: Increase high-tech workforce development, training and apprenticeships, particularly in areas of growth such as energy, geriatric research, and cybersecurity.			✓	✓		✓
G1.O2.A4: Increase aerospace workforce development.				✓		
G1.O3.A1: Establish and / or expand top talent recruitment and 'bring Kaua'i home' initiatives.	✓	✓	✓	✓	✓	✓
G2.O1.A1: Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs.	✓	✓	✓	✓	✓	✓
G2.O1.A2: Increase farmer recruitment and training in business.		✓				
G2.O1.A3: Support farm incubation initiatives such as Kilauea Agricultural Park.		✓				✓
G2.O1.A5: Increase collaboration with and funding through state and federal entrepreneurship and /or mentorship programs.	✓	✓	✓	✓	✓	✓
G2.O2.A1: Provide and increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices.	✓	✓	✓	✓	✓	✓

	A & C	F & A	H & W	S & T	S & R	ST & P
G2.O3.A1: Increase aerospace testing at the Pacific Missile Range Facility (PMRF).				✓		
G2.O3.A2: Secure more science, technology and energy testbed projects that will take place on Kaua'i.				✓		✓
G3.O1.A1: Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community.	✓	✓	✓	✓	✓	✓
G3.O1.A2: Identify and cultivate the next generation of leaders in each industry.	✓	✓	✓	✓	✓	✓
G3.O2.A1: Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster.	✓	✓	✓	✓	✓	✓
G4.O1.A1: Form core task forces to champion CEDS Actions and other initiatives.	✓	✓	✓	✓	✓	✓
G4.O1.A3: Increase communication and collaboration with the visitor industry.	✓	✓	✓	✓	✓	✓
G4.O1.A6: Form an arts and culture industry cluster working group.	✓					
G4.O2.A1: Build capacity for industry cluster businesses & organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise & find synergies.	✓	✓	✓	✓	✓	✓
G5.O1.A1: Seek diverse, complementary, cost-effective and efficient resources in energy production with an emphasis on locally developed resources and facilities.						✓
G5.O2.A1: Design, renovate and/or upgrade public and private facilities with clean energy and energy efficiency as priorities.						✓
G5.O3.A1: Implement a transit program that includes increasing operating revenue, increasing external funding, increasing County transit appropriations, and using savings and increased funding to ramp up transit services, per the 2035 target of nearly 4% of daily trips of 18,000 weekday riders.						✓
G5.O3.A2: Implement a bicycle program that includes regular investment in bicycle infrastructure, a well-connected bicycle network, integration with the County roads program and managing safe vehicular traffic speeds.			✓		✓	✓
G5.O3.A3: Implement a pedestrian program that encourages more pedestrian trips through planning and infrastructure improvements to address deterrents to walking such as safety, connectivity and attractiveness.			✓		✓	✓

	A & C	F & A	H & W	S & T	S & R	ST & P
G5.O3.A4: Implement a County roads program that includes limiting road widening, accommodating all modes of transportation, protecting scenic road corridors, supporting freight transport, reducing excessive speeding, improving the safety of streets for all users and preventing future traffic growth.						✓
G5.O3.A5: Implement an agriculture transportation program that includes reducing the cost of transporting and processing locally grown farm products, protecting against disruption of on-island transportation networks during emergencies, improving access for residents and visitors to healthy foods and ensuring agriculture workers have affordable and reliable access to their jobs.		✓				✓
G5.O3.A6: Implement a land use program that is guided by the three principal requirements for sustainable development: compactness, completeness and connectedness.						✓
G5.O3.A7: Investigate electric vehicle (EV) policy and roadmap implementation.						✓
G5.O4.A1: Build zero waste infrastructure.						✓
G5.O4.A2: Develop a Materials Recovery Facility.						✓
G5.O4.A3: Develop a state-of-the-art composting facility that will produce high-quality saleable soil conditioner or compost.		✓				✓
G5.O4.A4: Develop a center for hard-to-recycle materials (CHARM).						✓
G5.O4.A6: Pursue additional waste reduction / avoidance, recycling and waste recovery initiatives.						✓
G6.O1.A1: Develop a Food Production & Education Center.		✓				
G6.O1.A3: Provide training and education on compliance with the Food Safety Modernization Act.		✓				
G7.O1.A1: Create an economic development plan for the Food & Agriculture industry cluster.		✓				
G7.O1.A2: Assess and catalogue all sports and recreation facilities and events as well as visitor accommodations and rates.					✓	
G7.O1.A5: Expand and / or build upon existing sports events such as the Kaua'i Marathon.					✓	
G7.O2.A4: Define the role of and establish an arts commission and arts commissioner at the County level.	✓					

	A & C	F & A	H & W	S & T	S & R	ST & P
G8.O1.A2: Increase access to health care prevention and treatment programs and services, e.g., chronic diseases (diabetes, high blood pressure and high cholesterol), substance abuse, mental health and elder care (including Alzheimer's disease / dementia).			✓			
G8.O1.A2: Develop Life's Choices Kaua'i adolescent substance abuse treatment and healing facility.			✓			
G8.O1.A3: Increase access to and community interest in health and wellness programs, including worksite wellness.			✓		✓	
G8.O1.A5: Increase elder care facilities, including those that serve patients with dementia / Alzheimer's disease.			✓			
G8.O2.A1: Increase access to reliable, high-speed broadband Internet.	✓	✓	✓	✓	✓	✓
G8.O3.A1: Increase availability of affordable housing.	✓	✓	✓	✓	✓	✓
G8.O3.A2: Continue to improve public education on the island.	✓	✓	✓	✓	✓	✓

Glossary of Abbreviations

The following are the names of various organizations that have been abbreviated in the Goals, Objectives and Actions Tables.

COK-KWIB	County of Kaua`i Workforce Investment Board
COK-OED	County of Kaua`i Office of Economic Development
COK-WIOA	County of Kaua`i Workforce Investment Opportunity Act
DBEDT	Department of Business, Economic Development and Tourism
EDA	United States Economic Development Administration
HIDOA	Hawai`i Department of Agriculture
HIDOE	Hawai`i State Department of Education
HIDOH	Hawai`i Department of Health
HI-FUU	Hawai`i Farmers Union United
HISBDC	Hawai`i Small Business Development Center - Kaua`i Center
HTDC	High Technology Development Corporation
Kaua`i JA	Kaua`i Junior Achievement
KCC	Kaua`i Community College
KCFB	Kaua`i County Farm Bureau
KEDB	Kaua`i Economic Development Board
KIUC	Kaua`i Island Utility Cooperative
KVB	Kaua`i Visitors Bureau
KVMH	Kaua`i Veterans Memorial Hospital
PMRF	Pacific Missile Range Facility
UH CTAHR	University of Hawai`i College of Tropical and Human Resources

Goal #1: Build, attract and retain a 21st century workforce.

Objective #1: Increase college and career readiness among students in grades K-20. <i>Metrics may include, but are not limited to:</i> <ul style="list-style-type: none"> • Effort measures such as type and rigor of STEM classes or programs offered at schools, teacher and student participation in college and career readiness programs, and partnerships formed between schools and businesses • Outcome measures such as those tracked by the Hawai'i State Assessment of reading/math/science proficiency for grades K-12 and Hawai'i P-20 Partnerships for Education College and Career Readiness Indicator Reports (CCRl). 						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-17: Form core task force, establish model 2018-19: Recruit initial partners; launch	HIDOE, COK-WIOA, COK-KWIB, KCC, KEDB, Kauai JA, Keiki to Careers	\$25K-\$50K for pilot program \$20K/student for a paid 3-mo internship	HIDOE KCC Private Sector	No
2. Increase vocational training opportunities for careers that do not require college degrees. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form a core task force; next steps TBD	HIDOE, COK-WIOA, COK-KWIB, KCC, KEDB, Kauai JA, Keiki to Careers	TBD	HIDOE KCC Private Sector	No
3. Strengthen the continuum of science, technology, engineering and math (STEM) education K-20. F&A, H&W, S&T, ST&P	1st Priority	2016-20: Continue to increase collaboration and synergy; offer early college STEM courses in the 3 public health high schools (starting 2017-18)	HIDOE KCC	TBD	HIDOE KCC Private Sector	No
4. Develop and open the Kaua'i Creative Technology Center. A&C, S&T	1st Priority	Fundraising, environment study, construction, community engagement toward opening in late 2018	KEDB; COK-OED; HSBDC; Kaua'i Partners for business Incubation; Creative/Tech Industry	\$20.5 million	State of HI COK EDA KEDB Private Businesses	Yes

5. Expand health care training, certification and degree programs on the island, particularly for primary care, mental health (psychiatrists), substance abuse prevention and treatment, and elder care. H&W	1st Priority	See steps in Kaua'i CHIP, which include establishing consortia, developing strategic / financial plans, monitoring / reporting access / supply / demand, getting participation in Wilcox programs, introducing legislation by 2017	KCC Wilcox Hospital WorkWise Hawaii	TBD	TBD	No
6. Increase arts education in DOE schools / community. A&C	2nd Priority	Form core task force, next steps TBD	KCC	TBD	TBD	No
<p>Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'</p> <p><i>Metrics may include, but are not limited to:</i></p> <ul style="list-style-type: none"> • <u>Effort</u> measures such as efforts of business and organization recruitment programs, Hawai'i State Dept. of Education Career and Technical Education, and initiatives under the Workforce Investment Act. • <u>Outcome</u> measures such as applications from qualified residents, hiring of residents and retention of residents at local firms. 						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	2016-20: Form core task force, coordinate / sequence with job creation, conduct and promote / advertise job fairs annually, other next steps TBD	HIDOE KCC	TBD for logistics and promotion of job fairs	TBD	No
2. Increase ability of workforce training programs to respond to both hard and soft infrastructure needs in transportation and energy. S&T, ST&P	2nd Priority	2016-20: Increase programs; ongoing evaluation and coordination	HIDOE KCC KWIB	TBD	TBD	No
3. Increase high-tech workforce development, training and apprenticeships, particularly in areas of growth such as energy, geriatric research, and cybersecurity. H&W, S&T, ST&P	1st Priority	2016-2020: Form core task force, establish model, recruit partners, launch program(s) – including creating a pre-engineering track at KCC (2016-17)	HTDC KCC PMRF Industry	Summer college internships \$5K-10K per student	State, Federal	No

4. Increase aerospace workforce development, incl building on the existing program at Kaua'i Community College. S&T	1st Priority	2016-2020: Assess needs, design program	PMRF DBEDT KEDB Industry	Summer college internships \$5K-10K per student	Federal agencies including NASA	No
<p>Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.</p> <p><i>Metrics may include, but are not limited to:</i></p> <ul style="list-style-type: none"> • <u>Effort</u> measures such as efforts of business and organization recruitment programs, Hawai'i State Dept. of Education Career and Technical Education, initiatives under the Workforce Investment Act, and acculturation programs for new hires from outside Kaua'i. • <u>Outcome</u> measures such as number and diversity of applications from qualified candidates, new hires and retention of talent. 						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-2020: Form core task force, coordinate / sequence with job creation, develop and launch program	KEDB Businesses	TBD	TBD	No

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses/organizations.

Metrics may include, but are not limited to:

- Effort measures such as programs like the Hawai'i Small Business Development Center or participation in incubator/accelerator/startup types of programs.
- Outcome measures such as business registrations, number of self-employed and number of proprietors on Kaua'i.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, recruit and utilize industry mentors, other next steps TBD	KEDB HISBDC JA	TBD	TBD	No
2. Increase farmer recruitment and training in business. F&A	1st Priority	Continue GoFarm program at KCC and partner with Kilauea Ag Park; other next steps TBD	KCC HISBDC UH CTAHR KCFB HI- FUU	TBD	TBD	No
3. Support farm incubation initiatives such as Kilauea Agricultural Park. F&A, ST&P	1st Priority	Continue GoFarm Program at KCC and partner with Kilauea Ag Park; other, next steps TBD	KCC HISBDC UH CTAHR KCFB HI- FUU	TBD	TBD	Yes
4. Grow the entrepreneur / startup / maker community. A&C, S&T	2nd Priority	Form core task force, next steps TBD	TBD	TBD	TBD	No
5. Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, next steps TBD	KCC HISBDC North Shore Venture Gang and Hanalei Rotary (potential partners)	TBD	TBD	No

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.

Metrics may include, but are not limited to:

- Effort measures such as capacity-building workshops.
- Outcome measures such as increased market share, increased profits, or diversification of nonprofit funding sources.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Provide and increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KCC HISBDC	TBD	TBD	No
2. Hold an island-wide arts and culture conference to build capacity. A&C	2nd Priority	TBD	Industry working group and arts commissioner	TBD	TBD	No

Objective #3: Increase innovation initiatives and testbed projects on Kaua'i.

Metrics may include, but are not limited to:

- Effort measures such as the submission of bids for testbed projects.
- Outcome measures such as securing commitments and funding for projects.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Increase aerospace testing at the Pacific Missile Range Facility (PMRF). S&T	1st Priority	Possibly increase availability / capacity of the base, other next steps 2016-20 TBD	PMRF	TBD	TBD	No
2. Secure more science, technology and energy testbed projects that will take place on Kaua'i. S&T, ST&P	1st Priority	TBD	Federal / State / County government Industry businesses	TBD	TBD	No

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.

Metrics may include, but are not limited to:

- Effort measures such as natural disaster and climate change preparedness strategic planning, establishment and maintenance of infrastructure and databases, and community engagement efforts.
- Outcome measures such as economic diversification or safe development that accounts for natural disasters and climate change.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD, adapt / build upon SBDC Hawaii Disaster Guide (Disaster Recovery Guide for Business)	American Red Cross HISBDC	TBD	TBD	No
2. Identify and cultivate the next generation of leaders in each industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB Businesses & organizations	TBD	TBD	No

Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.

Metrics may include, but are not limited to:

- Effort measures such as public-private collaboration and communication and establishment of communication networks and information protocols.
- Outcome measures such as the mobilization of business emergency or recovery operations when needed.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	COK KIUC PMRF Civil Defense	TBD	TBD	No

Goal #4: Increase collaboration.

Objective #1: Increase collaboration both within and across industries.

Metrics may include, but are not limited to:

- Effort measures such as the convening of leaders and influencers.
- Outcome measures such as the achievement of key initiative milestones and goals.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Form core task forces to champion CEDS Actions and other initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
2. Foster greater inter-industry collaboration. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	KEDB	TBD	TBD	No
3. Increase communication and collaboration with the visitor industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
4. Increase collaboration among small to mid-size farms to achieve greater economies of scale. F&A	2nd Priority	TBD	TBD	TBD	TBD	No
5. Increase collaboration with the film and television industry. S&R	2nd Priority	TBD	TBD	TBD	TBD	No
6. Form an arts and culture industry cluster working group. A&C	1st Priority	TBD	TBD	TBD	TBD	No
7. Hold an island-wide arts and culture festival. A&C	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #4: Increase collaboration.

Objective #2: Increase communication, engagement and collaboration between industry cluster businesses/organizations and their key stakeholders such as public officials and community members with diverse viewpoints.
 Metrics may include, but are not limited to:

- Effort measures such as the quantity and type of communication and outreach activities.
- Outcome measures such as the achievement of key initiative milestones and goals.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	TBD	TBD	TBD	No
2. Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Businesses & organizations	TBD	TBD	No
3. Increase statewide, national and international partnerships and collaborations. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Businesses & organizations	TBD	TBD	No

Goal #5: Ensure sustainable development.

Objective #1: Meet the State's goal of 100% Renewable Portfolio Standard by 2045 for the electricity sector.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Seek diverse, complementary, cost-effective and efficient resources in energy production with an emphasis on locally developed resources and facilities. ST&P	1st Priority	TBD	TBD	TBD	TBD	No

Objective #2: Meet the State's goal of 30% Energy Efficiency Portfolio Standard by reducing electricity demands by 2030.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Design, renovate and/or upgrade public and private facilities with clean energy and energy efficiency as priorities. ST&P	1st Priority	TBD	TBD	TBD	TBD	No

Objective #3: Implement the Kaua'i Multimodal Land Transportation Plan (MLTP) by 2035.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Implement a transit program that includes increasing operating revenue, increasing external funding, increasing County transit appropriations, and using savings and increased funding to ramp up transit services, per the 2035 target of nearly 4% of daily trips or 18,000 weekday riders. ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	COK	TBD	TBD	No

<p>2. Implement a bicycle program that includes regular investment in bicycle infrastructure, a well-connected bicycle network, integration with the County roads program and managing safe vehicular traffic speeds. H&W, S&R, ST&P</p>	<p>1st Priority</p>	<p>2016: Address remaining immediate priorities 2016-20: Address mid-range priorities</p>	<p>COK</p>	<p>TBD</p>	<p>TBD</p>	<p>No</p>
<p>3. Implement a pedestrian program that encourages more pedestrian trips through planning and infrastructure improvements to address deterrents to walking such as safety, connectivity and attractiveness. H&W, S&R, ST&P</p>	<p>1st Priority</p>	<p>2016: Address remaining immediate priorities 2016-20: Address mid-range priorities</p>	<p>COK</p>	<p>TBD</p>	<p>TBD</p>	<p>No</p>
<p>4. Implement a County roads program that includes limiting road widening, accommodating all modes of transportation, protecting scenic road corridors, supporting freight transport, reducing excessive speeding, improving the safety of streets for all users and preventing future traffic growth. ST&P</p>	<p>1st Priority</p>	<p>2016: Address remaining immediate priorities 2016-20: Address mid-range priorities</p>	<p>COK</p>	<p>TBD</p>	<p>TBD</p>	<p>No</p>
<p>5. Implement an agriculture transportation program that includes reducing the cost of transporting and processing locally grown farm products, protecting against disruption of on-island transportation networks during emergencies, improving access for residents and visitors to healthy foods and ensuring agriculture workers have affordable and reliable access to their jobs. F&A, ST&P</p>	<p>1st Priority</p>	<p>2016: Address remaining immediate priorities 2016-20: Address mid-range priorities</p>	<p>COK</p>	<p>TBD</p>	<p>TBD</p>	<p>Yes</p>
<p>6. Implement a land use program that is guided by the three principal requirements for sustainable development: compactness, completeness and connectedness. ST&P</p>	<p>1st Priority</p>	<p>2016: Address remaining immediate priorities</p>	<p>COK</p>	<p>TBD</p>	<p>TBD</p>	<p>No</p>

7. Investigate electric vehicle (EV) policy and roadmap implementation. ST&P	1st Priority	TBD	TBD	TBD	TBD	No
8. Develop a transportation sharing program. ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
9. Investigate and implement alternative fuel fleet vehicles. ST&P	2nd Priority	TBD	TBD	TBD	TBD	No

Objective #4: Achieve 70% diversion of Kaua'i's solid waste stream by 2023 per County Council Resolution 2011-73 and in alignment with the Aloha+ Challenge Targets for Sustainability.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Build zero waste infrastructure. ST&P	1st Priority	TBD	COK	TBD	TBD	Yes
2. Develop Materials Recovery Facility (MRF). ST&P	1st Priority	2016-18: construct	COK	TBD	County General Fund	Yes
3. Develop a state-of-the-art Composting Facility that will produce high-quality saleable soil conditioner or compost. F&A,ST&P	1st Priority	TBD	COK	TBD	TBD	Yes
4. Develop a center for hard-to-recycle materials (CHARM). ST&P	1st Priority	TBD	COK	TBD	TBD	Yes
5. Adopt ordinances to give incentives for reduce/reuse/recycle solid waste and disincentives for disposing of solid waste. ST&P	2nd Priority	TBD	COK	TBD	TBD	No
6. Pursue additional waste reduction / avoidance, recycling and waste recovery initiatives. ST&P	1st Priority	TBD	TOK	TBD	TBD	TBD

Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.

Metrics may include, but are not limited to:

- Effort measures such as implementation of conservation, control and protection programs.
- Outcome measures such as preservation or restoration of native species & the control and eradication of invasive species.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Develop and implement more invasive species and pest prevention and control initiatives. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
2. Develop and implement more native species protection and restoration initiatives. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
3. Support conservation and natural resource management efforts, including watershed management. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
4. Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
5. Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #6: Achieve greater food self-sufficiency.

Objective #1: Increase food crop production and processing.

Metrics may include, but are not limited to:

- Effort measures such as utilization of agricultural lands.
- Outcome measures such as crop yields.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Develop a Food Production & Education Center. F&A	1st Priority	KEDB	KEDB KCC	TBD	TBD	Yes?
2. Increase responsible, sustainable utilization of agricultural lands. F&A	2nd Priority	TBD	TBD	TBD	TBD	No
3. Increase food processing capacity and facilities. F&A	2nd Priority	TBD	KCC	TBD	TBD	Yes
4. Provide training and education on compliance with the Food Safety Modernization Act (FSMA). F&A	1st Priority	TBD	KCC KCFB UH CTAHR	TBD	TBD	No

Objective #2: Increase distribution and consumption of locally grown food.

Metrics may include, but are not limited to:

- Effort measures such as collaboration and marketing.
- Outcome measures such as sales of local produce.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Increase awareness/consumption of locally grown and processed food & agriculture products, incl. more promotion of the Kaua'i Grown and Kaua'i Made programs. F&A	2nd Priority	TBD	COK	TBD	TBD	No
2. Establish a system to sell more futures. F&A	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters.

Objective #1: Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Create an economic development plan for the Food & Agriculture industry cluster. F&A	1st Priority	2016-17: Assess industry, develop plan?	KEDB		COK HIDOA	No
2. Assess and catalogue all sports and recreation facilities and events as well as visitor accommodations and rates. S&R	2nd Priority	TBD	TBD	TBD	TBD	No
3. Investigate the economics of sports and recreation on Kaua'i. S&R	2nd Priority	TBD	TBD	TBD	TBD	No
4. Create a sports and recreation marketing plan and promotional materials. S&R	2nd Priority	TBD	TBD	TBD	TBD	No
5. Expand and/or build upon existing sports events such as the Kaua'i Marathon. S&R	1st Priority	TBD	TBD	TBD	TBD	No
6. Create a business plan for a multipurpose sports and recreation facility. S&R	2nd Priority	TBD	TBD	TBD	TBD	No
7. Create and maintain an online inventory of arts and culture facilities, events and artists and cultural practitioners. A&C	2nd Priority	TBD	County arts commissioner or arts nonprofit	\$40,000 to create the inventory; cost for updates TBD	TBD	No

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters.

Objective #2: Continue to build capacity for economic development in each of the six target industry clusters, as needed.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Secure more sponsorships (cash / in-kind) for sports and recreation events. S&R	2nd Priority	TBD	Event organizers	TBD	TBD	No
2. Revamp sports and recreation events and facilities to comply with industry regulations and sanction requirements. S&R	2nd Priority	TBD	TBD	TBD	TBD	No
3. Maintain & renovate existing facilities as needed. S&R	2nd Priority	TBD	TBD	TBD	TBD	No
4. Define the role of and establish an arts commission and arts commissioner at the County level. A&C	1st Priority	2016-20: Develop job descr. & budget, propose to County Council	COK	TBD, should include salary and program budget	TBD	No
5. Learn from and involve the "living treasures" (arts and culture experts, leaders and elders) in every community. A&C	2nd Priority	TBD	TBD	TBD	TBD	No
6. Support the organized development and continuation of community Art Nights. A&C	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #8: Enhance the community's ability to thrive.

Objective #1: Support the health and wellness of the community.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Increase access to health care prevention and treatment programs and services, e.g., chronic diseases (diabetes, high blood pressure and high cholesterol), substance abuse, mental health and elder care (including Alzheimer's disease / dementia). H&W	1st Priority	TBD	Wilcox Hospital, KVMH Kaiser HIDOH	TBD	Substance Abuse and Mental Health Services Admin. (SAMHSA)	No
2. Develop the Life's Choices Kaua'i adolescent substance abuse treatment and healing facility. H&W	1st Priority	TBD	COK Life's Choices Kaua'i	TBD	Substance Abuse and Mental Health Services Admin. (SAMHSA)	No
3. Increase access to and community interest in health and wellness programs, including worksite wellness. H&W, S&R	1st Priority	TBD	GetFit Kaua'i	TBD	TBD	No
4. Increase elder care facilities, including those that serve patients with dementia / Alzheimer's disease. H&W	1st Priority	TBD	Garden Isle Healthcare	TBD	TBD	Possibly
5. Increase access to integrated, culturally relevant health and wellness facilities and / or programs. H&W	2nd Priority	TBD	Ho'ola Lahui	TBD	TBD	No

Goal #8: Enhance the community's ability to thrive.

Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Increase access to reliable high-speed broadband Internet. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-20: Assess access and capacity; identify next steps and implement	DBEDT County	TBD	U S DOA	No
2. Expand telemedicine and health care information technology (IT) utilization. H&W	2nd Priority	TBD	TBD	TBD	TBD	No

Objective #3: Increase the quality and affordability of life on Kaua'i.
Metrics may include, but are not limited to:

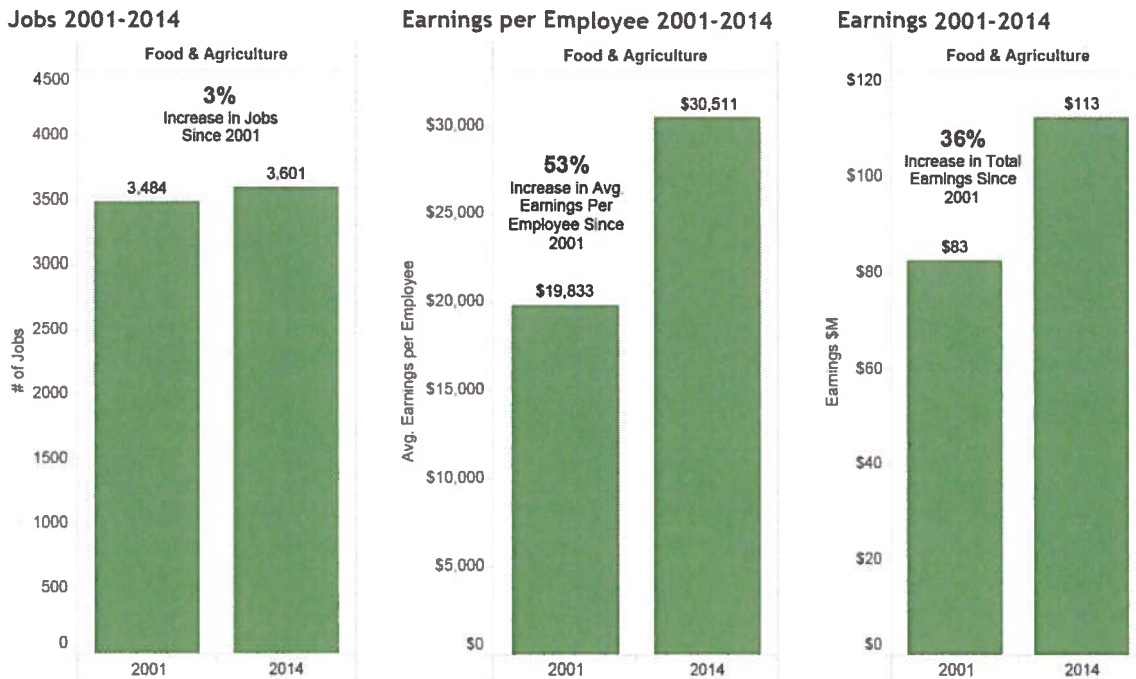
- Effort measures through programs and policies.
- Outcome measures such as changes in the Self-Sufficiency Income Standard as measured by the State of Hawai'i Department of Business, Economic Development & Tourism (DBEDT).

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
1. Increase availability of affordable housing. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016: Completion of County General Plan 2017-2020: Possible policy changes and construction of affordable housing	County Major landowners Developers	TBD	Private sector	No
2. Continue to improve public education on the island. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD in line with HIDEOE's initiatives	HIDEOE	TBD	HIDEOE Federal grants Private sector	No

Food & Agriculture

Jobs & Earnings

In 2014, there were a total of 3,601 jobs within the Food & Agriculture (F&A) cluster. While total jobs within the cluster have stayed relatively flat with a 3% increase since 2001, earnings have increased by 53% to \$30,511 average annual earnings per employee. Total employee earnings for the cluster have increased by 36% since 2001 to approximately \$113 million.



The F&A cluster includes 50 subcategories of NAICS codes. The following table provides detail for each of the identified NAICS subcategories and the corresponding number of jobs, average earnings per employee and total employee earnings for the cluster. Crop production (943 jobs) drives the largest number of jobs followed closely by grocery stores (876 jobs), which are an important part of the supply chain. Those two categories comprise approximately 50% of all jobs and employee earnings within the F&A cluster.

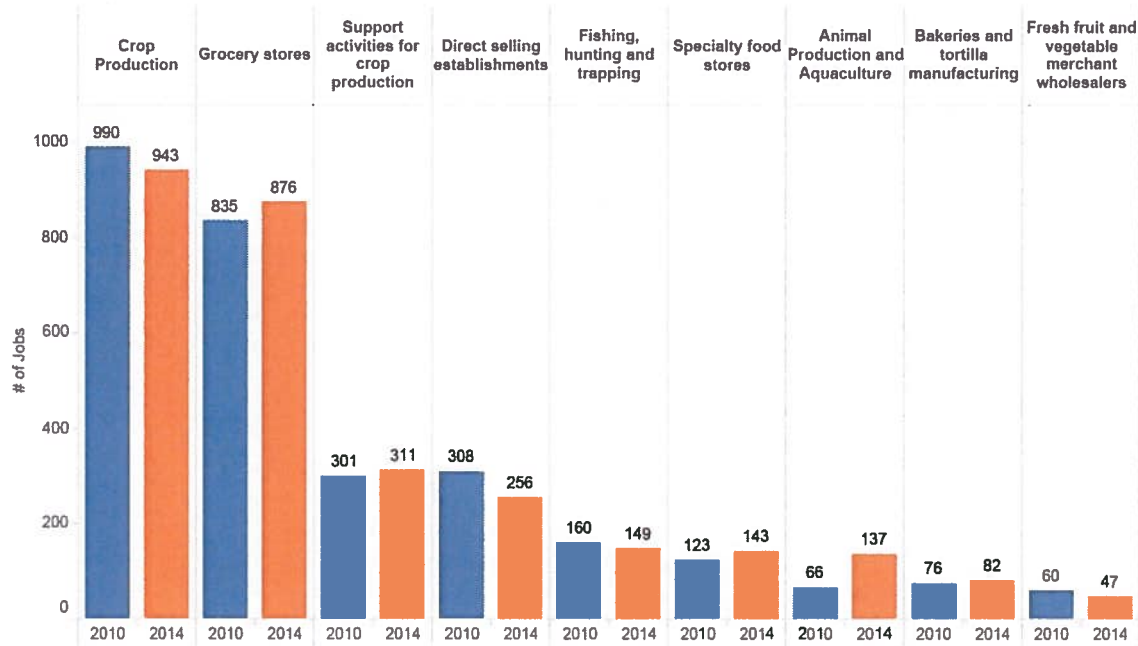
All jobs related to restaurant and food services (NAICS 722), which totaled 4,155 jobs in 2014, are not included in this cluster as they are best reflected as part of the hospitality industry. This conclusion was reached based on consultation and discussion with leaders from within the cluster.

NAICS Code Description	NAICS Code #	# of Jobs (2014)	Earnings per Employee (2014)	Total Employee Earnings \$M (2014)
Crop Production	111	943	\$35,964	\$33.9
Grocery stores	4451	876	\$30,894	\$27.1
Support activities for crop production	1151	311	\$29,489	\$9.2
Direct selling establishments	4543	256	\$13,702	\$3.5
Fishing, hunting and trapping	114	149	\$7,440	\$1.1
Specialty food stores	4452	143	\$26,769	\$3.8
Animal Production and Aquaculture	112	137	\$23,571	\$3.2
Bakeries and tortilla manufacturing	3118	82	\$28,215	\$2.3
Beer, wine, and distilled alcoholic beverage merchant wholesalers	4248	68	\$65,640	\$4.5
Florists	4531	57	\$17,741	\$1.0
General line grocery merchant wholesalers	42441	55	\$50,951	\$2.8
Confectionery merchant wholesalers	42445	49	\$42,764	\$2.1
Fresh fruit and vegetable merchant wholesalers	42448	47	\$33,853	\$1.6
Dairy product manufacturing	3115	41	\$55,450	\$2.3
Perishable prepared food manufacturing	311991	34	\$26,426	\$0.9
Fish and seafood merchant wholesalers	42446	30	\$31,181	\$0.9
Other grocery and related products merchant wholesalers	42449	28	\$49,024	\$1.4
Lawn and garden equipment and supplies stores	4442	27	\$41,855	\$1.1
Tobacco stores	453991	25	\$9,086	\$0.2
Dairy product (except dried or canned) merchant wholesalers	42443	24	\$58,362	\$1.4
Farm supplies merchant wholesalers	42491	24	\$55,529	\$1.3
Distilleries	31214	23	\$51,269	\$1.2
Beer, wine, and liquor stores	4453	20	\$63,375	\$1.2
Ice manufacturing	312113	20	\$26,136	\$0.5
Sugar and confectionery product manufacturing	3113	17	\$25,443	\$0.4
Packaged frozen food merchant wholesalers	42442	15	\$26,901	\$0.4
Forestry and logging	113	12	\$21,721	\$0.3
Fruit and vegetable preserving and specialty food manufacturing	3114	12	\$52,594	\$0.6
Animal slaughtering and processing	3116	8	\$55,450	\$0.4
Seafood product preparation and packaging	3117	8	\$23,454	\$0.2
Support activities for animal production	1152	8	\$16,391	\$0.1
Support activities for forestry	1153	8	\$31,035	\$0.2

All other miscellaneous food manufacturing	311999	6	\$26,426	\$0.2
Coffee and tea manufacturing	31192	6	\$26,837	\$0.2
Breweries	31212	5	\$38,388	\$0.2
Farm product raw material merchant wholesalers	4245	5	\$48,661	\$0.2
Flower, nursery stock, & florists' supplies merchant wholesalers	42493	5	\$20,000	\$0.1
Vending machine operators	4542	5	\$13,702	\$0.1
Animal food manufacturing	3111	2	\$35,949	\$0.1
Farm and garden machinery and equipment merchant wholesalers	42382	2	\$51,075	\$0.1
Seasoning and dressing manufacturing	31194	2	\$43,683	\$0.1
Snack food manufacturing	31191	2	\$26,837	\$0.1
Soft drink manufacturing	312111	2	\$27,905	\$0.1
Wineries	31213	2	\$38,388	\$0.1
Flavoring syrup and concentrate manufacturing	31193	0	\$0	\$0.0
Grain and oilseed milling	3112	0	\$0	\$0.0
Meat and meat product merchant wholesalers	42447	0	\$0	\$0.0
Poultry and poultry product merchant wholesalers	42444	0	\$0	\$0.0
Tobacco and tobacco product merchant wholesalers	42494	0	\$0	\$0.0
Tobacco Manufacturing	3122	0	\$0	\$0.0

Between 2010 and 2014, Kaua'i added approximately 151 jobs within the F&A cluster. The top 10 categories based on total jobs are summarized in the chart below. The largest increase of 71 jobs came from the animal production and aquaculture sector, followed by 41 more jobs from the grocery category.

Food & Ag: Jobs-2010 to 2014 (Top 10)



It is important to note that NAICS data and the categorization for the purposes of this report will have a margin of error in accurately reflecting all jobs on Kaua'i within the cluster. Efforts were taken to incorporate the nuances and considerations within the cluster, however some relevant jobs and their corresponding wages may not be reflected within this data analysis.

Survey Highlights

Between Jan. 15 and Feb. 8, 2016, 34 respondents from the community provided answers to online survey questions regarding the state of the F&A industry cluster. Below are highlights from the responses.

- 68% agreed or strongly agreed that exports are needed to sustain F&A businesses on Kaua'i
- Less than 10% agreed that there is strong leadership in the F&A industry cluster.
- 77% agreed or strongly agreed that seed companies will continue to be major players in this cluster for the next five years.
 - When asked what changes made the greatest positive impact in the industry cluster, examples of what respondents said included:
 - *"The growth of the seed corn industry."*
 - *"Growth of seed companies and coffee company. Increase of anti-pesticide Disregard of the right to farm"*
 - *"The seed companies have been very instrumental in providing Ag jobs and promoting Ag events on Kauai. Also our Kaua'i legislative team has been very supportive of pro agriculture vision for Kaua'i."*
- 77% agreed or strongly agreed that demand for Kaua'i products is growing. Nobody disagreed.

- When asked what changes made the greatest positive impact in the industry cluster, examples of what respondents said included:
 - *“Kauai Grown (products), the growth of farmers markets and consumer interest in local food KCC agriculture programs.”*
 - *“The demand for local food and produce in local markets.”*
 - *“Expansion of support for local-grown ag products. Interest at restaurants and markets in local beef and lamb. Farmers markets.”*
- Nearly 25% agreed or strongly agreed that there are enough qualified workers on Kaua'i for F&A.
- When asked what the biggest opportunity for growth in this cluster, examples of what respondents said included:
 - *“The amount of available land that has the ‘potential’ to be turned into productive farmland. Unfortunately, the political will to foster the changes needed is sorely lacking.”*
 - *“Niche markets; organic produce; nutraceuticals; value added products that tie into tourism.”*
 - *“One centralized hub, or group, that can be a place where farmers from across the island feel comfortable sharing opportunities, information, resources and ideas.”*

For a full copy of the survey questions and the collected responses, see the Kaua'i CEDS Update 2016-2020 Appendix.

Additional Data

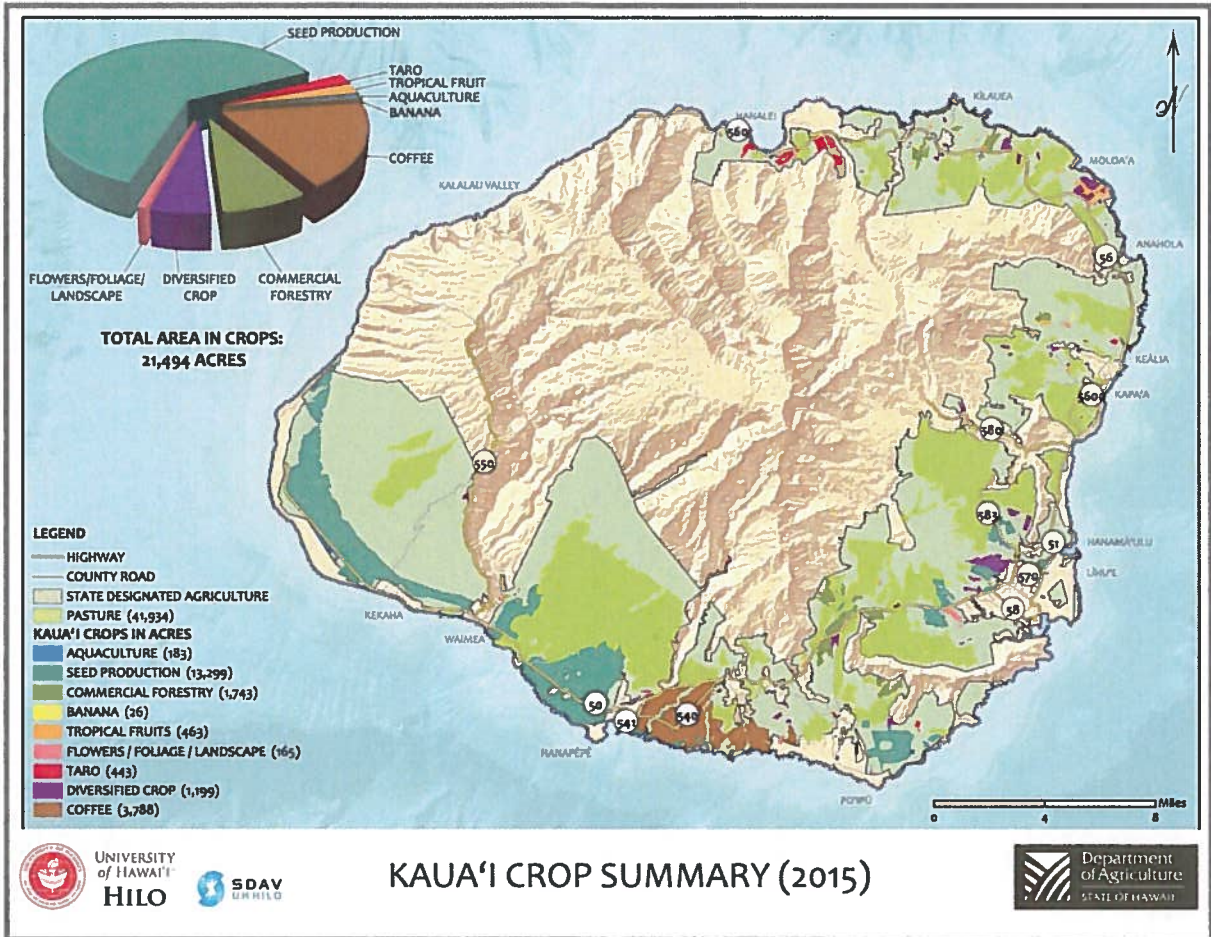
The implementation of the Goals, Objectives & Actions in the Kaua'i CEDS update for 2016-2020 should also draw upon other data, studies, plans and reports regarding the Food & Agriculture industry cluster.

For instance, the State of Hawai'i Data Book 2014 notes that in 2012, there were 591 farms in the County of Kaua'i totaling 144,127 acres. The average size of those farms was 244 acres, which was the largest of all the counties. Farms broken down by size were as follows:

- 1 to 9 acres: 348 farms (58.88%)
- 10 to 49 acres: 156 farms (26.40%)
- 50 to 179 acres: 42 farms (7.11%)
- 180 to 499 acres: 20 farms (3.38%)
- 500 to 999 acres: 7 farms (1.18%)
- 1,000 or more acres: 18 farms (3.05%)

The State of Hawai'i Data Book 2014 also notes that in 2012, the market value of agricultural products sold was \$64,514,000, of which \$55,696,000 was from crops, including nursery and greenhouse crops, and \$8,817,000 was from livestock, poultry and their products.

Most recently, the [Statewide Agricultural Land Use Baseline 2015](#) was released, showing where and what Hawai'i farms and ranches. The report includes this visualization of Kaua'i farms and ranches:



Goals, Objectives & Actions – Food & Agriculture

The following Goals, Objectives & Actions have been excerpted from the integrated Goals, Objectives & Actions section in the first half of the report and represent ***only*** those items labeled as pertaining to the Food & Agriculture industry cluster.

Goal #1: Build, attract and retain a 21st century workforce.

Objective #1: Increase college and career readiness among students in grades K-20.

Action:

- A1) Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations
- A2) Increase vocational training opportunities for careers that do not require college degrees.
- A3) Strengthen the continuum of science, technology, engineering and math (STEM) education K-20.
- A4) Provide Business and Technical Assistance by developing more industry specific business and technical assistance certification programs
- A5) Provide education and training to local producers to meet WOTUS and other required regulations and certifications
- A6) Create inventory of Ag training programs

Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'

Action:

- A1) Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College.
- A2) Recruit and mentor students to enter the agricultural industry

Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.

Action:

- A1) Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives.

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses / organizations.

Action:

- A1) Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs.
- A2) Increase farmer recruitment and training in business.
- A3) Support farm incubation initiatives such as Kilauea Agricultural Park.
- A5) Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs.

Objective #2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.

Action:

- A1) Provide and increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices.
- A2) Provide office space to KCFB to centralize staffing, programs, and activities

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.

Action:

- A1) Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community.
- A2) Identify and cultivate the next generation of leaders in each industry.

Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.

Action:

- A1) Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster.

Goal #4: Increase collaboration.

Objective #1: Increase collaboration both within and across industries.

Action:

- A1) Form core task forces to champion CEDS Actions and other initiatives.
- A2) Foster greater inter-industry collaboration.
- A3) Increase communication and collaboration with the visitor industry.
- A4) Increase collaboration among small to mid-size farms to achieve greater economies of scale.

Objective #2: Increase communication, engagement and collaboration between industry cluster businesses / organizations and their key stakeholders such as public officials and community members with diverse viewpoints.

Action:

- A1) Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies.
- A2) Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i.
- A3) Increase statewide, national and international partnerships and collaborations.
- A4) Hold food events to promote Kaua'i Agriculture
- A5) Coordinate marketing and distribution

Goal #5: Ensure sustainable development.

Objective #3: *Implement the Kaua'i Multimodal Land Transportation Plan (MLTP) by 2035.*

Action:

- A5) Implement an agriculture transportation program that includes reducing the cost of transporting and processing locally grown farm products, protecting against disruption of on-island transportation networks during emergencies, improving access for residents and visitors to healthy foods and ensuring agriculture workers have affordable and reliable access to their jobs.

Objective #4: Achieve 70% diversion of Kaua'i's solid waste stream by 2023 per County Council Resolution 2011-73 and in alignment with the Aloha+ Challenge Targets for Sustainability.

Action:

A3) Develop a state-of-the-art Composting Facility that will produce high-quality saleable soil conditioner or compost.

Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.

Action:

A1) Develop and implement more invasive species and pest prevention and control initiatives.

A2) Develop and implement more native species protection and restoration initiatives.

A3) Support conservation and natural resource management efforts, including watershed management.

A4) Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment.

A5) Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community.

A6) Develop facility and programs to screen and prevent invasive species, entering/leaving Kaua'i

A7) State to reorganize focus on Disease/Invasive species

A8) Connect farmers with available land potentially via ADC and private landowners

A9) Manage water rights vis-à-vis issuing of licenses to ensure agricultural development

Goal #6: Achieve greater food self-sufficiency.

Objective #1: Increase food crop production and processing.

Action:

A1) Develop a Food Production & Education Center.

A2) Increase responsible, sustainable utilization of agricultural lands.

A3) Increase food processing capacity and facilities.

A4) Provide training and education on compliance with the Food Safety Modernization Act (FSMA).

A5) Create facility and programs to consolidate process, handle and distribute produce to promote import replacement

Objective #2: Increase distribution and consumption of locally grown food.

Action:

A1) Increase awareness and consumption of locally grown and processed food and agriculture products, including more promotion of the Kaua'i Grown and Kaua'i Made programs.

A2) Establish a system to sell more futures.

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters.

Objective #1: Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed.

Action:

A1) Create an economic development plan for the Food & Agriculture industry cluster.

A2) New product research and development

A3) CTAHR- Increase staffing, facilities and programs capacity to expand research and extension capabilities

- A4) Food technology to turn 'ulu into new product for our diet (taro also)
- A5) Promote production of local feedstock for renewable energy businesses
- A6) Develop an Kaua'i County Agricultural Economic Development Plan

Goal #8: Enhance the community's ability to thrive.

Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.

Action:

- A1) Increase access to reliable high-speed broadband Internet.

Objective #3: Increase the quality and affordability of life on Kaua'i.

Action:

- A1) Increase availability of affordable housing.
- A2) Continue to improve public education on the island.

Food & Agriculture

Goal #1: Build, attract and retain a 21st century workforce.

Objective #1: Increase college and career readiness among students in grades K-20.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O1.A1: Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-17: Form core task force, establish model 2018-19: Recruit initial partners; launch	HIDOE; County WIOA; County KWIB; KCC; KEDB; Keiki to Careers; Junior Achievement; Businesses	\$25,000 to \$50,000 for pilot program \$20,000 per student for a paid 3-month internship	HIDOE KCC Private sector	No
G1.O1.A2: Increase vocational training opportunities for careers that do not require college degrees. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form a core task force; next steps TBD	State Dept. of Ed; County WIOA; KWIB; WorkWise Kaua'i; KCC; KEDB; Businesses	TBD	Private sector HIDOE	No
G1.O1.A3: Strengthen the continuum of science, technology, engineering and math (STEM) education K-20. F&A, H&W, S&T, ST&P	1st Priority	2016-20: Continue to increase collaboration & synergy; offer early college STEM courses in the 3 public health high schools (starting in 2017-18)	HIDOE KCC	TBD	HIDOE KCC Private sector	No
G1.O1.A4: Provide Business and Technical Assistance by developing more industry specific business and technical assistance certification programs F&A	1st Priority	TBD	TBD	TBD	TBD	TBD

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O1.A5: Provide education and training to local producers to meet WOTUS and other required regulations and certifications F&A	1st Priority	TBD	TBD	TBD	TBD	No
G1.O1.A6: Create inventory of Ag training programs F&A	1st Priority	TBD	TBD	TBD	TBD	No
Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O2.A1: Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	2016-20: Form core task force, coordinate / sequence with job creation, conduct and promote / advertise job fairs annually, other next steps TBD	State Dept of Education, KCC, Industry	TBD for logistics and promotion of job fairs	TBD	No
G1.O2.A2: Recruit and mentor students to enter the agricultural industry F&A						
Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O3.A1: Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-2020: Form core task force, coordinate / sequence with job creation, develop and launch program	KEDB Businesses	TBD	TBD	No

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses/organizations.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G2.O1.A1: Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, recruit and utilize industry mentors, other next steps TBD	KEDB; HISBDC – Kaua'i JA(partner for youth programs)	TBD	TBD	No
G2.O1.A2: Increase farmer recruitment and training in business. F&A	1st Priority	Continue GoFarm program at KCC and partner with Kilauea Ag Park; other next steps TBD	KCC; HISBDC – Kaua'i; UH CTAHR; KCFB; Farmers Union United	TBD	TBD	No
G2.O1.A3: Support farm incubation initiatives such as Kilauea Agricultural Park. F&A, ST&P	1st Priority	Continue GoFarm Program at KCC and partner with Kilauea Ag Park; other, next steps TBD	KCC; HISBDC – Kaua'i; UH CTAHR; KCFB; Farmers Union United	TBD	TBD	Yes
G2.O1.A5: Increase collaboration with & funding through state & federal entrepreneurship/mentorship programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, next steps TBD	KCC HI SBDC Kaua'i North Shore Venture Gang and Hanalei Rotary (potential partners)	TBD	TBD	No
Objective #2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.						
G2.O2.A1: Provide & increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KCC HISBDC – Kaua'i	TBD	TBD	No
G2.O2.A2: Provide office space to KCFB to centralize staffing, programs, and activities F&A	1st Priority	TBD	TBD	TBD	TBD	Yes

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O1.A1: Develop natural disaster & climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries – incl. tourism & the 6 target industry clusters, and engage the community. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD; adapt / build upon SBDC Hawaii Disaster Guide (Disaster Recovery Guide for Business)	American Red Cross HISBDC – Kaua'i	TBD	TBD	No
G3.O1.A2: Identify and cultivate the next generation of leaders in each industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB as facilitator Industry businesses and organizations	TBD	TBD	No
Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O2.A1: Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	County, KIUC, PMRF, Civil Defense	TBD	TBD	No

Goal #4: Increase collaboration.

Objective #1: Increase collaboration both within and across industries.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O1.A1: Form core task forces to champion CEDS Actions and other initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A2: Foster greater inter-industry collaboration. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A3: Increase communication and collaboration with the visitor industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A4: Increase collaboration among small to mid-size farms to achieve greater economies of scale. F&A	2nd Priority	TBD	TBD	TBD	TBD	No
Objective #2: Increase communication, engagement and collaboration between industry cluster businesses/organizations and their key stakeholders such as public officials and community members with diverse viewpoints.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O2.A1: Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise & find synergies. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	TBD	TBD	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O2.A2: Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No
G4.O2.A3: Increase statewide, national and international partnerships and collaborations. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No
G4.O2.A4: Hold food events to promote Kaua'i Agriculture F&A						
G4.O2.A5: Coordinate marketing and distribution F&A						

Goal #5: Ensure sustainable development.

Objective #3: Implement the Kaua'i Multimodal Land Transportation Plan (MLTP) by 2035.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O3.A5: Implement an agriculture transportation program that includes reducing the cost of transporting and processing locally grown farm products, protecting against disruption of on-island transportation networks during emergencies, improving access for residents and visitors to healthy foods and ensuring agriculture workers have affordable and reliable access to their jobs. F&A, ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	County	TBD	TBD	Yes
Objective #4: Achieve 70% diversion of Kaua'i's solid waste stream by 2023 per County Council Resolution 2011-73 and in alignment with the Aloha+ Challenge Targets for Sustainability.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O4.A3: Develop a state-of-the-art Composting Facility that will produce high-quality saleable soil conditioner or compost. F&A, ST&P	1st Priority	TBD	County	TBD	TBD	Yes

Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O5.A1: Develop and implement more invasive species and pest prevention and control initiatives. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A2: Develop and implement more native species protection and restoration initiatives. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A3: Support conservation and natural resource management efforts, including watershed management. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A4: Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A5: Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A6: Develop facility and programs to screen and prevent invasive species, entering/leaving Kaua'i F&A	1st Priority	TBD	TBD	TBD	TBD	No
G5.O5.A7: State to reorganize focus on Disease/Invasive species F&A	1st Priority	TBD	TBD	TBD	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O5.A8: Connect Farmers with available land via ADC and private landowners F&A	1st Priority	TBD	TBD	TBD	TBD	No
G5.O5.A9: Manage water rights vis-à-vis issuing of licenses to ensure agricultural development F&A	1st Priority	TBD	TBD	TBD	TBD	No

Goal #6: Achieve greater food self-sufficiency.

Objective #1: Increase food crop production and processing.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G6.O1.A1: Develop a Food Production & Education Center. F&A	1st Priority	KEDB to fill in?	KEDB KCC	?	?	Yes?
G6.O1.A2: Increase responsible, sustainable utilization of agricultural lands. F&A	2nd Priority	TBD	TBD	TBD	TBD	No
G6.O1.A3: Increase food processing capacity and facilities. F&A	2nd Priority	TBD	KCC	TBD	TBD	Yes
G6.O1.A4: Provide training and education on compliance with the Food Safety Modernization Act (FSMA). F&A	1st Priority	TBD	KCC KCFB	TBD	TBD	No
G6.O1.A5: Create facility and programs to consolidate process, handle and distribute produce to promote import replacement F&A	1st Priority	TBD	KCC KCFB UH CTAHR	TBD	TBD	Yes

Objective #2: Increase distribution and consumption of locally grown food.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G6.O2.A1: Increase awareness and consumption of locally grown and processed food and agriculture products, including more promotion of the Kaua'i Grown and Kaua'i Made programs. F&A	2nd Priority	TBD	COK	TBD	TBD	No
G6.O2.A2: Establish a system to sell more futures. F&A	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters.

Objective #1: Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G7.O1.A1: Create an economic development plan for the Food & Agriculture industry cluster. F&A	1st Priority	2016-17. Assess industry, develop plan?	KEDB	TBD	TBD	No
G7.O1.A2: New product research and development F&A	1st Priority	TBD	TBD	TBD	TBD	NO
G7.O1.A3: CTAHR- Increase staffing, facilities and programs capacity to expand research and extension capabilities F&A	1st Priority	TBD	TBD	TBD	TBD	NO
G7.O1.A4: Food technology to turn 'ulu into new product for our diet (taro also) F&A	1st Priority	TBD	TBD	TBD	TBD	NO
G7.O1.A5: Promote production of local feedstock for renewable energy businesses F&A	1st Priority	TBD	TBD	TBD	TBD	NO
G7.O1.A6: Develop an Kaua'i County Agricultural Economic Development Plan F&A	1st Priority	TBD	TBD	TBD	TBD	NO

Goal #8: Enhance the community's ability to thrive.

Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O2.A1: Increase access to reliable high-speed broadband Internet. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-20: Assess access and capacity; identify next steps and implement	DEBDT COK	TBD	HIUSDA	No
Objective #3: Increase the quality and affordability of life on Kaua'i.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O3.A1: Increase availability of affordable housing. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016: Completion of County General Plan 2017-2020: Possible policy changes and construction of affordable housing	COK Major landowners Developers	TBD	Private sector	No
G8.O3.A2: Continue to improve public education on the island. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD in line with HIDEO's initiatives	HIDOE	TBD	HIDOE Federal grants Private sector	No

Food & Agriculture – Metrics

- Increase in land that is in active crop production and pasture
- Progress in core task force formation and implementation
- Development of 2016-2026 Agricultural Economic Development Plan

Core Task Force Suggested Members:

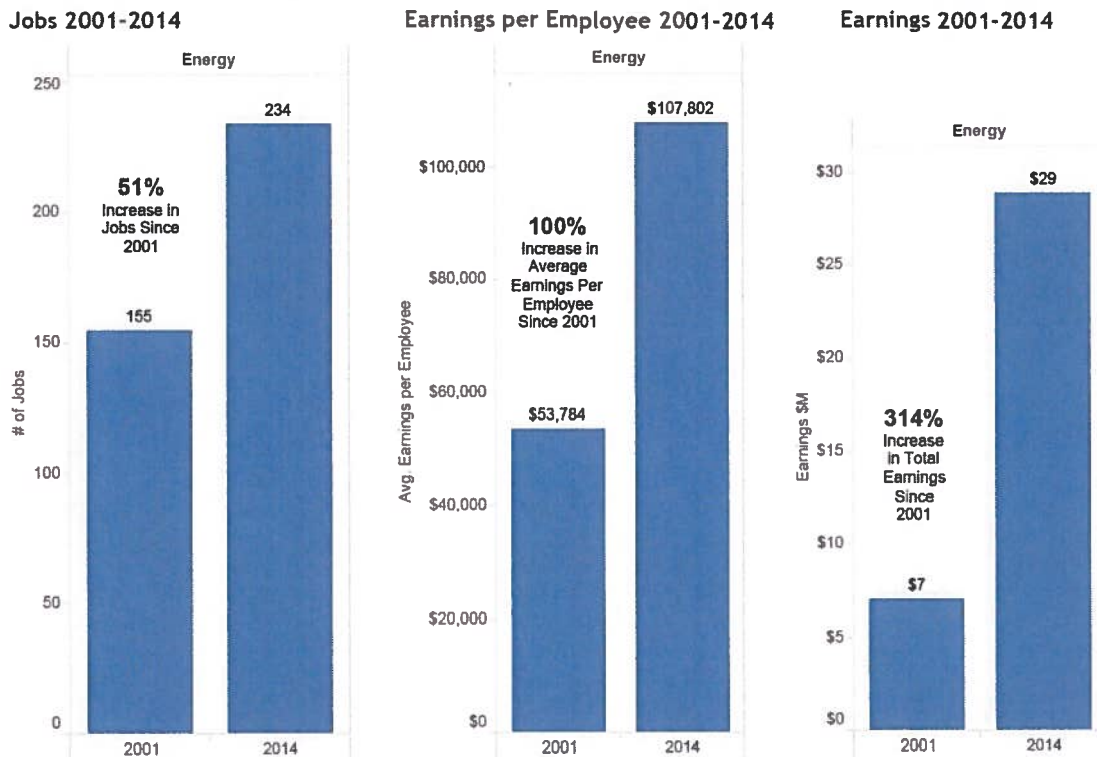
The following is an alphabetical list of organizations identified by the focus group as potential participants and collaborators in this industry cluster's activities. However, the organizations outlined in red have been identified by the focus group as those that should play a key role in the Core Task Force to be formed for this cluster, based on the Core Task Force Characteristics outlined on page 33:

- Agribusiness Development Corporation
- Alexander & Baldwin Properties
- County of Kaua'i Office of Economic Development
- Friends & Family of Agriculture
- Hawai'i Crop Improvement Association
- Hawai'i Department of Business, Economic Development and Tourism (DBEDT)
- Hawai'i Department of Education
- Hawai'i Farm Service Agency
- Hawai'i Farmers Union United
- Hawai'i Small Business Development Center – Kaua'i Center
- Hawai'i Floriculture and Nursery Association
- Hawai'i Tropical Flower & Foliage Association – Kaua'i Chapter
- Kaua'i Community College
- Kaua'i County Farm Bureau
- Kaua'i Economic Development Board
- Kaua'i Taro Growers Association
- State of Hawai'i Department of Agriculture
- UH College of Tropical Agriculture and Human Resources
- US Department of Agriculture – Rural Development

Sustainable Technologies & Practices

Jobs & Earnings

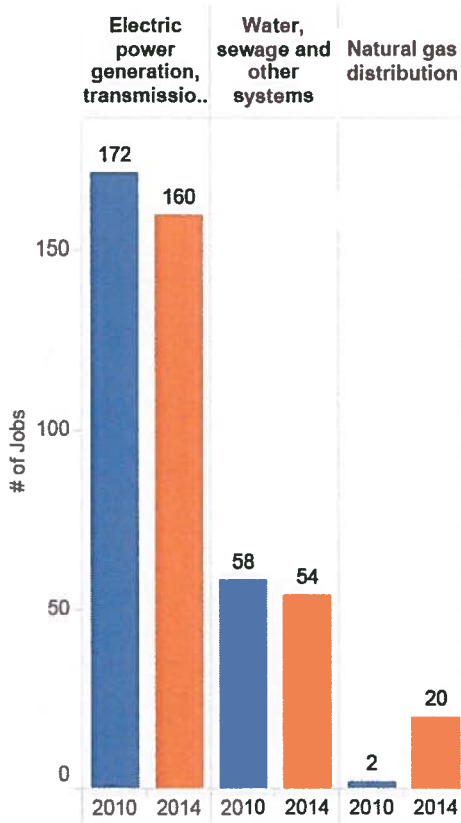
Jobs and earnings in the Sustainable Technologies & Practices (ST&P) cluster have increased significantly since 2001. Based on NAICS data identifiable for this cluster, available jobs have increased by 51% between 2001 and 2014 to at least 234 jobs with earnings per employee doubling to an approximate \$107,802 per year. The overall cluster reports \$29 million in employee earnings according to three key NAICS categories.



The following table provides detail for the three identified NAICS subcategories and the corresponding number of jobs, average earnings per employee and total earnings for the ST&P cluster. The electric power generation, transmission and distribution category is largest, which includes jobs associated with solar, wind, biomass other forms of electric power generation.

NAICS Code Description	NAICS Code #	# of Jobs (2014)	Earnings per Employee (2014)	Total Employee Earnings \$M (2014)
Electric power generation, transmission and distribution	2211	160	\$144,817	\$23.1
Water, sewage and other systems	2213	54	\$64,993	\$3.5
Natural gas distribution	2212	20	\$113,596	\$2.3

Sustainable Technologies & Practices: Jobs-2010 to 2014



Growth slowed slightly in the 4 year period between 2010 and 2014 with a slight reduction in jobs related to electric power generation and an increase in jobs related to natural gas distribution. (See chart: Jobs 2010-2014)

It is important to note that NAICS data and the categorization for the purposes of this report will have a margin of error in accurately reflecting all jobs on Kaua'i within the cluster. Efforts were taken to incorporate the nuances and considerations within the cluster, however some relevant jobs and their corresponding wages may not be reflected within this data analysis.

In addition to the three identified NAICS categories, some solar companies and contractors are categorized under a separate industry titled to Plumbing, Heating and Air Conditioning (NAICS 23822). As of 2014, there are an additional 162 jobs in that category, which directly support this cluster. Average earnings in this category are approximately \$50,129 per employee with total earnings at just over \$8 million.

For the purposes of NAICS data, businesses are categorized by their primary operation, which may not be captured under the main ST&P categories. This means that other related contractors that support this cluster could be captured under separate NAICS codes that aren't reflected in this

analysis, specifically those related to the construction industry. In general, NAICS sorts businesses based solely on their primary operation, so some establishments may be classified elsewhere if most of their revenue originates from different operations.

Given the dynamics of this evolving sector, it's important to look at jobs data from multiple perspectives. According to the Hawai'i Energy Policy Forum from the College of Social Sciences at the University of Hawai'i at Mānoa's September 2015 report, *Updating the Baseline: Hawaii's Clean Energy Jobs*, Kaua'i has a projected 190 jobs in clean energy and energy efficiency as of 2015.

It should also be noted that in 2015, according to Industry Cluster Committee members, private companies created approximately 39 new jobs related to biomass that may not be reflected in the above figures. At least 33 biomass jobs are included within NAICS 2211 above as of 2014, which could potentially have doubled this sector with the recent increases in new jobs created in 2015.

Survey Highlights

Between Jan. 15 and Feb. 8, 2016, 26 respondents from the community provided answers to online survey questions regarding the state of the ST&P industry cluster. Below are highlights from the responses.

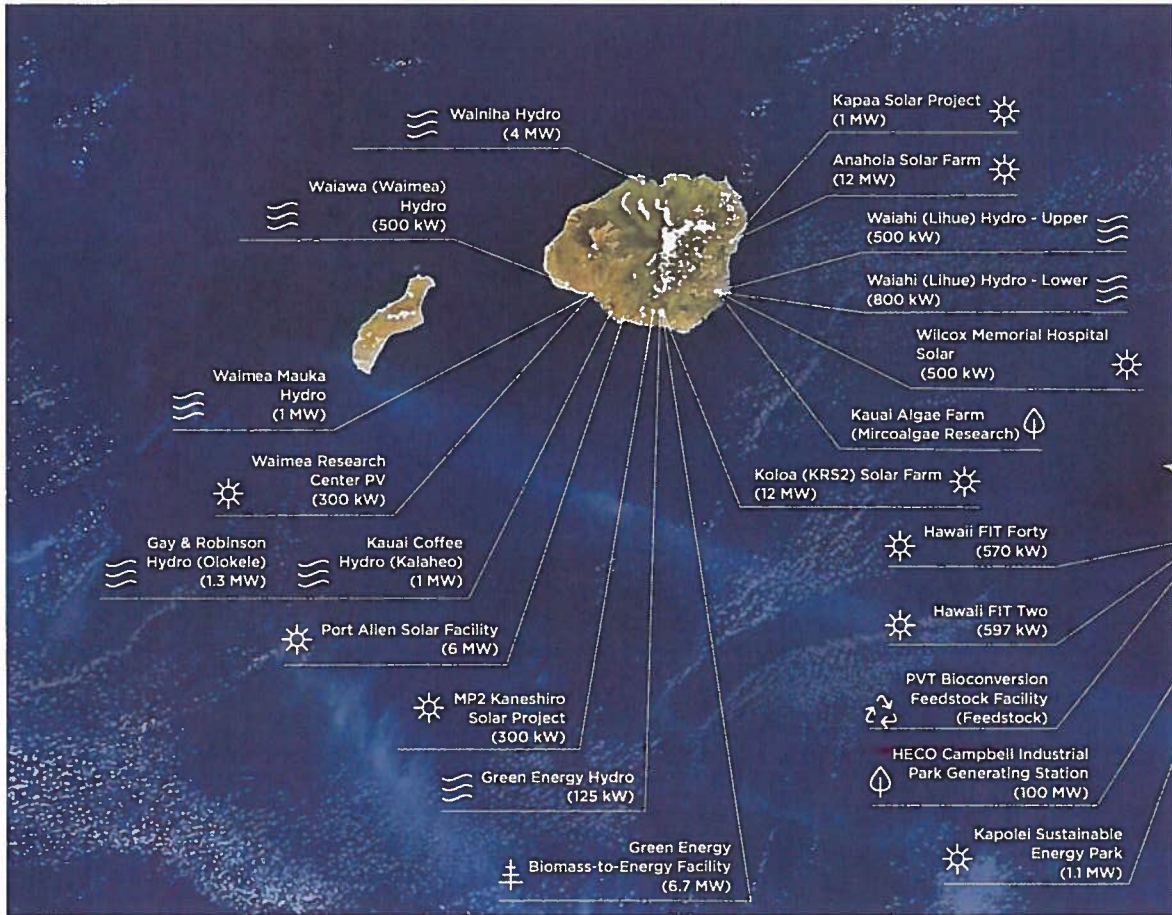
- 73% agreed or strongly agreed that more R&D projects on Kaua'i are critical to increasing jobs, wages and funding in cluster.
- Only 19% agreed that the public will support projects in this cluster if it means higher utility bills.
- 69% agreed or strongly agreed that organizations see Kaua'i as a testbed for this cluster.
- Only 12% disagreed that government policies support the development of this cluster.
- 85% agreed or strongly agreed that there is potential to create many more jobs in this cluster.
- 65% disagreed or strongly disagreed that there are enough qualified workers in this cluster.
 - When asked what would be the most important skills in the next 5 years, respondents said:
 - *"A workforce that is adaptive and willing to continue learning. That's not so much a specific skill as a practice. It requires some level of culture change in the workforce that we need to cultivate. Integrated IT skills in all trades are needed also."*
 - *"A workforce that is adaptive and willing to continue learning. That's not so much a specific skill as a practice. It requires some level of culture change in the workforce that we need to cultivate. Integrated IT skills in all trades are needed also."*
 - *"Students graduating from high school with a firm grounding in science and math, as well an understanding of how to use a computer."*
 - When asked what changes made the greatest positive impact to the cluster, respondents said:
 - *"Dropping prices on PV panels, more options for PV financing, tax credits, aggressive marketing have all contributed to strong upswing in PV installations on Kauai."*
 - *"National/international recognition of KIUC's management of high penetration of renewable on its system can be a driver but has not necessarily have had an impact in creating new jobs or increasing wages."*
 - *"Renewable energy tax credits and KIUC support of Renewable projects."*

For a full copy of the survey questions and the collected responses, see the Kaua'i CEDS Update 2016-2020 Appendix.

Additional Data

The implementation of the Goals, Objectives & Actions in the Kaua'i CEDS update for 2016-2020 should also draw upon other data, studies, plans and reports regarding the Sustainable Technologies & Practices industry cluster.

For example, the [State of Hawaii Energy Resources Coordinator's Annual Report 2015](#) includes a map of renewable energy projects on Kaua'i as shown:



Goals, Objectives & Actions – Sustainable Technologies & Practices

The following Goals, Objectives & Actions have been excerpted from the integrated Goals, Objectives & Actions section in the first half of the report and represent only those items labeled as pertaining to the Sustainable Technologies & Practices industry cluster.

Goal #1: Build, attract and retain a 21st century workforce.

Objective #1: Increase college and career readiness among students in grades K-20.

Action:

- A1) Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations.
- A2) Increase vocational training opportunities for careers that do not require college degrees.
- A3) Strengthen the continuum of science, technology, engineering and math (STEM) education K-20.

Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'

Action:

- A1) Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College.
- A2) Increase ability of workforce training programs to respond to both hard and soft infrastructure needs in transportation and energy.
- A3) Increase high-tech workforce development, training and apprenticeships, particularly in areas of growth such as energy, geriatric research, and cybersecurity.
- A4) Develop training and education for workforce to maintain/repair new and evolving energy technology/equipment

Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.

Action:

- A1) Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives.

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses / organizations.

Action:

- A1) Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs.
- A3) Support farm incubation initiatives such as Kilauea Agricultural Park.
- A5) Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs.

Objective #2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.

Action:

- A1) Provide and increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices.

Objective #3: Increase innovation initiatives and testbed projects on Kaua'i.

Action:

- A2) Secure more science, technology and energy testbed projects that will take place on Kaua'i.

- A3) Increase aerospace testing at PMRF
- A4) Secure more science, technology and energy testbed projects that will take place of Kaua'i
- A5) Identify opportunities and facilitate innovative and creative collaborations and partnerships to implement solutions and ideas
- A6) Create innovation-based working group that addresses workforce development, efficiency innovation, and business development opportunities
- A7) Create innovative approach to promote energy efficiency
- A8) Leverage energy usage data to drive innovative energy efficiency solutions

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.

Action:

- A1) Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community.
- A2) Identify and cultivate the next generation of leaders in each industry.

Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.

Action:

- A1) Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster.

Goal #4: Increase collaboration.

Objective #1: Increase collaboration both within and across industries.

Action:

- A1) Form core task forces to champion CEDS Actions and other initiatives.
- A2) Foster greater inter-industry collaboration.
- A3) Increase communication and collaboration with the visitor industry.

Objective #2: Increase communication, engagement and collaboration between industry cluster businesses / organizations and their key stakeholders such as public officials and community members with diverse viewpoints.

Action:

- A1) Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies.
- A2) Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i.
- A3) Increase statewide, national and international partnerships and collaborations.

Goal #5: Ensure sustainable development.

Objective #1: Increase collaboration both within and across industries.

Action:

- A1) Seek diverse, complementary, cost-effective and efficient resources in energy production with an emphasis on locally developed resources and facilities.
- A2) Position Kaua'i as a leader in an energy storage laboratory, innovation and application
- A3) Meet state goal of 100% renewables by 2045

Objective #2: Increase communication, engagement and collaboration between industry cluster businesses / organizations and their key stakeholders such as public officials and community members with diverse viewpoints.

Action:

- A1) Design, renovate and/or upgrade public and private facilities with clean energy and energy efficiency as priorities.
- A2) Meet state goal of 30% energy efficiency portfolio standard by reducing electricity demand by 2030

Objective #3: Implement the Kaua'i Multimodal Land Transportation Plan (MLTP) by 2035.

Action:

- A1) Implement a transit program that includes increasing operating revenue, increasing external funding, increasing County transit appropriations, and using savings and increased funding to ramp up transit services, per the 2035 target of nearly 4% of daily trips or 18,000 weekday riders.
- A2) Implement a bicycle program that includes regular investment in bicycle infrastructure, a well-connected bicycle network, integration with the County roads program and managing safe vehicular traffic speeds.
- A3) Implement a pedestrian program that encourages more pedestrian trips through planning and infrastructure improvements to address deterrents to walking such as safety, connectivity and attractiveness.
- A4) Implement a County roads program that includes limiting road widening, accommodating all modes of transportation, protecting scenic road corridors, supporting freight transport, reducing excessive speeding, improving the safety of streets for all users and preventing future traffic growth.
- A5) Implement an agriculture transportation program that includes reducing the cost of transporting and processing locally grown farm products, protecting against disruption of on-island transportation networks during emergencies, improving access for residents and visitors to healthy foods and ensuring agriculture workers have affordable and reliable access to their jobs.
- A6) Implement a land use program that is guided by the three principal requirements for sustainable development: compactness, completeness and connectedness.
- A7) Investigate electric vehicle (EV) policy and roadmap implementation.
- A8) Develop a transportation sharing program.
- A9) Investigate and implement alternative fuel fleet vehicles.
- A10) Pursue portfolio approach to transportation solutions
- A11) Emphasize mode-shift in ground transportation to promote greater transportation options
- A12) Explore behavior modification that affects timing/load/use on roads
- A13) Promote adoption of EV's through inexpensive and widely dispersed system of chargers
- A14) Leverage tourism market to promote innovative, low-carbon rental cars

Objective #4: Achieve 70% diversion of Kaua'i's solid waste stream by 2023 per County Council Resolution 2011-73 and in alignment with the Aloha+ Challenge Targets for Sustainability.

Action:

- A1) Build zero waste infrastructure.
- A2) Develop a Materials Recovery Facility (MRF).
- A3) Develop a state-of-the-art Composting Facility that will produce high-quality saleable soil conditioner or compost.
- A4) Develop a center for hard-to-recycle materials (CHARM).
- A5) Adopt ordinances that give incentives for reducing, reusing and/or recycling solid waste and disincentives for disposing of solid waste.
- A6) Pursue additional waste reduction / avoidance, recycling and waste recovery initiatives.
- A7) Explore hydrogen as transportation fuel option

- A8) Bring biofuels to Kaua'i market
- A9) Reduce solid waste stream prior to disposal by 70% by 2030 per Aloha + Challenge
- A10) Reduce food waste by onsite and offsite management to maximize output value

Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.

Action:

- A1) Develop and implement more invasive species and pest prevention and control initiatives.
- A2) Develop and implement more native species protection and restoration initiatives.
- A3) Support conservation and natural resource management efforts, including watershed management.
- A4) Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment.
- A5) Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community.

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters

Objective #1: Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed.

Action:

- A1) Benchmark, evaluate, and adapt beneficial best practices from other regions to Kauai to enable sustainable growth

Goal #8: Enhance the community's ability to thrive.

Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.

Action:

- A1) Increase access to reliable high-speed broadband Internet.
- A2) Early education to key stakeholders to garner buy-in and advocate in community activism

Objective #3: Increase the quality and affordability of life on Kaua'i.

Action:

- A1) Increase availability of affordable housing.
- A2) Continue to improve public education on the island.

Sustainable Technologies & Practices

Goal #1: Build, attract and retain a 21st century workforce.

Objective #1: Increase college and career readiness among students in grades K-20.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O1.A1: Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-17: Form core task force, establish model 2018-19: Recruit initial partners, launch	HIDOE; HI WIOA; COK KWIB; KCC; KEDB; Keiki to Careers; JA; Businesses	\$25,000 to \$50,000 for pilot program \$20,000 per student for a paid 3-month internship	HIDOE KCC Private sector	No
G1.O1.A2: Increase vocational training opportunities for careers that do not require college degrees. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form a core task force; next steps TBD	HIDOE; COK WIOA; COK KWIB; WorkWise Kaua'i; KCC; KEDB; Businesses	TBD	Private sector HIDOE	No
G1.O1.A3: Strengthen the continuum of science, technology, engineering and math (STEM) education K-20. F&A, H&W, S&T, ST&P	1st Priority	2016-20: Continue to increase collaboration and synergy; offer early college STEM courses in the 3 public health high schools (starting in 2017-18)	HIDOE KCC	TBD	HIDOE KCC Private sector	No
Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O2.A1: Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	2016-20: Form core task force, coordinate / sequence with job creation, conduct and promote / advertise job fairs annually, other next steps TBD	HIDOE, KCC, Industry	TBD for logistics and promotion of job fairs	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O2.A2: Increase ability of workforce training programs to respond to both hard and soft infrastructure needs in transportation and energy. S&T, ST&P	2nd Priority	2016-20: Increase programs; ongoing evaluation and coordination	HIDOE, KCC, COK KWIB	TBD	TBD	No
G1.O2.A3: Increase high-tech workforce development, training and apprenticeships, particularly in areas of growth such as energy, geriatric research, and cybersecurity. H&W, S&T, ST&P	1st Priority	2016-2020: Form core task force, establish model, recruit partners, launch program(s) – including creating a pre-engineering track at KCC (2016-17)	HTDC, KCC, PMRF	Summer college internships \$5,000 - \$10,000 per student	State, Federal	No
G1.O2.A4: Develop training and education for workforce to maintain/repair new and evolving energy technology/equipment ST&P	1st Priority	TBD	TBD	TBD	TBD	TBD
Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O3.A1: Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-2020: Form core task force, coordinate / sequence with job creation, develop and launch program	KEDB Businesses	TBD	TBD	No

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses/organizations.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G2.O1.A1: Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, recruit and utilize industry mentors, other next steps TBD	KEDB HISBDC – Kaua'i (partner for business incubation) JA(partner for youth programs)	TBD	TBD	No
G2.O1.A3: Support farm incubation initiatives such as Kilauea Agricultural Park. F&A, ST&P	1st Priority	Continue GoFarm Program at KCC and partner with Kilauea Ag Park; other, next steps TBD	KCC; HISBDC – Kaua'i; UH CTAHR; KCFB; FUU-Kaua'i	TBD	TBD	Yes
G2.O1.A5: Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, next steps TBD	KCC HISBDC Kaua'i North Shore Venture Gang and Hanalei Rotary (potential partners)	TBD	TBD	No
Objective #2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.						
G2.O2.A1: Provide and increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KCC HISBDC – Kaua'i	TBD	TBD	No

Objective #3: Increase innovation initiatives and testbed projects on Kaua'i.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G2.O3.A1: Secure more science, technology and energy testbed projects that will take place on Kaua'i. S&T. ST&P	1st Priority	TBD	Federal / State / County government Industry businesses	TBD	TBD	No
G2.O3.A3: Increase aerospace testing at PMRF ST&P		TBD	TBD	TBD	TBD	NO
G2.O3.A4: Secure more science, technology and energy testbed projects that will take place of Kaua'i ST&P		TBD	TBD	TBD	TBD	NO
G2.O3.A5: Identify opportunities and facilitate innovative and creative collaborations and partnerships to implement solutions and ideas ST&P		TBD	TBD	TBD	TBD	NO
G2.O3.A6: Create innovation-based working group that addresses workforce development, efficiency innovation, and business development opportunities ST&P		TBD	TBD	TBD	TBD	NO
G2.O3.A7: Create innovative approach to promote energy efficiency ST&P		TBD	TBD	TBD	TBD	NO
G2.O3.A8: Leverage energy usage data to drive innovative energy efficiency solutions ST&P		TBD	TBD	TBD	TBD	NO

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O1.A1: Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD; adapt / build upon SBDC Hawaii Disaster Guide (Disaster Recovery Guide for Business)	American Red Cross HISBDC – Kaua'i	TBD	TBD	No
G3.O1.A2: Identify and cultivate the next generation of leaders in each industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB as facilitator Industry businesses and organizations	TBD	TBD	No
Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O2.A1: Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	County, KIUC, PMRF, Civil Defense	TBD	TBD	No

Goal #4: Increase collaboration.

Objective #1: Increase collaboration both within and across industries.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O1.A1: Form core task forces to champion CEDS Actions and other initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A2: Foster greater inter-industry collaboration. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A3: Increase communication and collaboration with the visitor industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
Objective #2: Increase communication, engagement and collaboration between industry cluster businesses/organizations and their key stakeholders such as public officials and community members with diverse viewpoints.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O2.A1: Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	TBD	TBD	TBD	No
G4.O2.A2: Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O2.A3: Increase statewide, national and international partnerships and collaborations. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No

Goal #5: Ensure sustainable development.

Objective #1: Meet the State's goal of 100% Renewable Portfolio Standard by 2045 for the electricity sector.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O1.A1: Seek diverse, complementary, cost-effective and efficient resources in energy production with an emphasis on locally developed resources and facilities. ST&P	1st Priority	TBD	TBD	TBD	TBD	No
G5.O1.A2: Position Kaua'i as a leader in an energy storage laboratory, innovation and application ST&P	1st Priority	TBD	TBD	TBD	TBD	No
G5.O1.A3: Meet state goal of 100% renewables by 2045 ST&P	1st Priority	TBD	TBD	TBD	TBD	No

Objective #2: Meet the State's goal of 30% Energy Efficiency Portfolio Standard by reducing electricity demands by 2030.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O2.A1: Design, renovate and/or upgrade public and private facilities with clean energy and energy efficiency as priorities. ST&P	1st Priority	TBD	TBD	TBD	TBD	No
G5.O2.A2: Meet state goal of 30% energy efficiency portfolio standard by reducing electricity demand by 2030 ST&P	1st Priority	TBD	TBD	TBD	TBD	No

Objective #3: Implement the Kaua'i Multimodal Land Transportation Plan (MLTP) by 2035.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O3.A1: Implement a transit program that includes increasing operating revenue, increasing external funding, increasing County transit appropriations, and using savings and increased funding to ramp up transit services, per the 2035 target of nearly 4% of daily trips or 18,000 weekday riders. ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	COK	TBD	TBD	No
G5.O3.A2: Implement a bicycle program that includes regular investment in bicycle infrastructure, a well-connected bicycle network, integration with the County roads program and managing safe vehicular traffic speeds. H&W, S&R, ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	COK	TBD	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O3.A3: Implement a pedestrian program that encourages more pedestrian trips through planning and infrastructure improvements to address deterrents to walking such as safety, connectivity and attractiveness. H&W, S&R, ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	COK	TBD	TBD	No
G5.O3.A4: Implement a County roads program that includes limiting road widening, accommodating all modes of transportation, protecting scenic road corridors, supporting freight transport, reducing excessive speeding, improving the safety of streets for all users and preventing future traffic growth. ST&P	1st Priority	2016: Address remaining immediate priorities	COK	TBD	TBD	No
G5.O3.A5: Implement an agriculture transportation program that includes reducing the cost of transporting and processing locally grown farm products, protecting against disruption of on-island transportation networks during emergencies, improving access for residents and visitors to healthy foods and ensuring agriculture workers have affordable and reliable access to their jobs. F&A, ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	COK	TBD	TBD	Yes
G5.O3.A6: Implement a land use program that is guided by the three principal requirements for sustainable development: compactness, completeness and connectedness. ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	COK	TBD	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.03.A7: Investigate electric vehicle (EV) policy and roadmap implementation. ST&P	1st Priority	TBD	TBD	TBD	TBD	No
G5.03.A8: Develop a transportation sharing program. ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.03.A9: Investigate and implement alternative fuel fleet vehicles. ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.03.A10: Pursue portfolio approach to transportation solutions ST&P	1st Priority	TBD	TBD	TBD	TBD	No
G5.03.A11: Emphasize mode-shift in ground transportation to promote greater transportation options ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.03.A12: Explore behavior modification that affects timing/load/use on roads ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.03.A13: Promote adoption of EV's through inexpensive and widely dispersed system of chargers ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.03.A14: Leverage tourism market to promote innovative, low-carbon rental cars ST&P	2nd Priority	TBD	TBD	TBD	TBD	No

Objective #4: Achieve 70% diversion of Kaua'i's solid waste stream by 2023 per County Council Resolution 2011-73 and in alignment with the Aloha+ Challenge Targets for Sustainability.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O4.A1: Build zero waste infrastructure. ST&P	1st Priority	TBD	COK	TBD	TBD	Yes
G5.O4.A2: Develop a Materials Recovery Facility (MRF). ST&P	1st Priority	2016-18 construct	COK	TBD	County General Fund	Yes
G5.O4.A3: Develop a state-of-the-art Composting Facility that will produce high-quality saleable soil conditioner or compost. ST&P	1st	TBD	COK	TBD	TBD	Yes
G5.O4.A4: Develop a center for hard-to-recycle materials (CHARM). ST&P	1st Priority	TBD	COK	TBD	TBD	Yes
G5.O4.A5: Adopt ordinances that give incentives for reducing, reusing and/or recycling solid waste and disincentives for disposing of solid waste. ST&P	2nd Priority	TBD	COK	TBD	TBD	No
G5.O4.A6: Pursue additional waste reduction / avoidance, recycling and waste recovery initiatives. ST&P	1st Priority	TBD	TBD	TBD	TBD	TBD
G5.O4.A7: Explore hydrogen as transportation fuel option ST&P	1st Priority	TBD	TBD	TBD	TBD	TBD
G5.O4.A8: Bring biofuels to Kaua'i market ST&P	1st Priority	TBD	TBD	TBD	TBD	TBD

G5.O4.A9: Reduce solid waste stream prior to disposal by 70% by 2030 per Aloha + Challenge ST&P	1st Priority	TBD	TBD	TBD	TBD	TBD
G5.O4.A10: Reduce food waste by onsite and offsite management to maximize output value ST&P	1st Priority	TBD	TBD	TBD	TBD	TBD
Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O5.A1: Develop and implement more invasive species and pest prevention and control initiatives. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A2: Develop and implement more native species protection and restoration initiatives. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A3: Support conservation and natural resource management efforts, including watershed management.. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A4: Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A5: Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters

Objective #1: Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O2.A1: Benchmark, evaluate, and adapt beneficial best practices from other regions to Kauai to enable sustainable growth ST&P		TBD	TBD	TBD	TBD	No

Goal #8: Enhance the community's ability to thrive.

Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O2.A1: Increase access to reliable high-speed broadband Internet. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-20: Assess access and capacity; identify next steps and implement	DBEDT County	TBD	HIUSDA	No
G8.O2.A2: Early education to key stakeholders to garner buy-in and advocate in community activism ST&P	1st Priority	TBD	TBD	TBD	TBD	No

Objective #3: Increase the quality and affordability of life on Kaua'i.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O3.A1: Increase availability of affordable housing. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016: Completion of County General Plan 2017-2020: Possible policy changes and construction of affordable housing	County Major landowners Developers	TBD	Private sector	No
G8.O3.A2: Continue to improve public education on the island. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD in line with HIDOE's initiatives	HIDOE	TBD	HIDOE Federal grants Private sector	No

Sustainable Technologies & Practices Metrics:

- Number of jobs created
- Increase in industry cluster earnings and / or earnings per NAICS code description
- Increase in average annual wages and / or earnings per employee
- Increase in traded clusters, i.e., goods and services being exported out of the County
- Increase in workforce readiness as indicated by high school and college graduation rates and other academic indicators

Core Task Force Suggested Members:

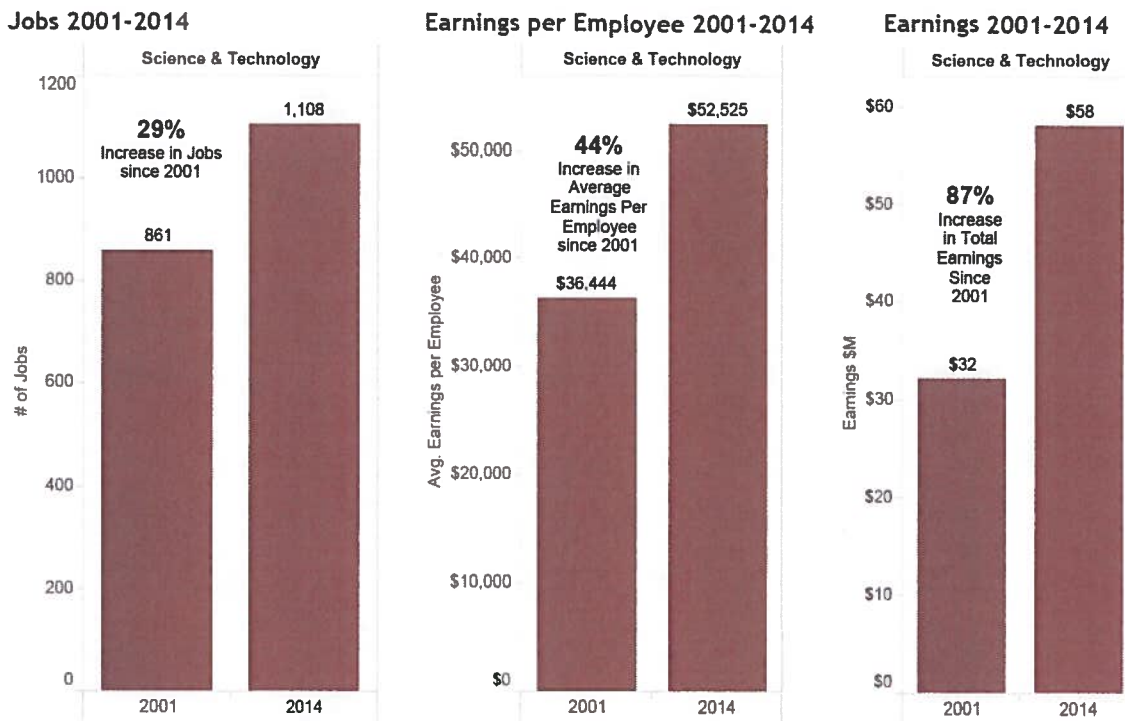
The following is an alphabetical list of organizations identified by the focus group as potential participants and collaborators in this industry cluster's activities. However, the organizations outlined in red have been identified by the focus group as those that should play a key role in the Core Task Force to be formed for this cluster, based on the Core Task Force Characteristics outlined on page 33:

- Apollo Kaua'i
- **County of Kaua'i Office of Economic Development**
- Energy Accelerators (PICHTR, HTDC, et.al)
- Energy Entrepreneurs & Business Owners
- Hawai'i Department of Business, Economic Development and Tourism - Energy office
- Hawai'i Department of Transportation
- Hawai'i Tourism Authority
- **Kaua'i Community College**
- **Kaua'i Economic Development Board**
- **Kaua'i Island Utility Cooperative**
- Kaua'i Visitors Bureau
- Large Landowners
- Local Business Association Reps
- Local Schools
- Malama Kaua'i
- **Pacific Missile Range Facility**
- State DOFAW & Fed F&W
- USDA
- USDOE- HI Office

Science & Technology

Jobs & Earnings

From 2001 to 2014, the Science & Technology (S&T) cluster added 247 more jobs and increased by 29% to a total of 1,108 jobs. Likewise, average earnings within the cluster increased by 44% to approximately \$52,525 annually per employee, which is a significant increase from the 2001 average of \$36,444. Total earnings for the cluster are approximately \$58 million as of 2014, which is an increase of approximately 87% since 2001.



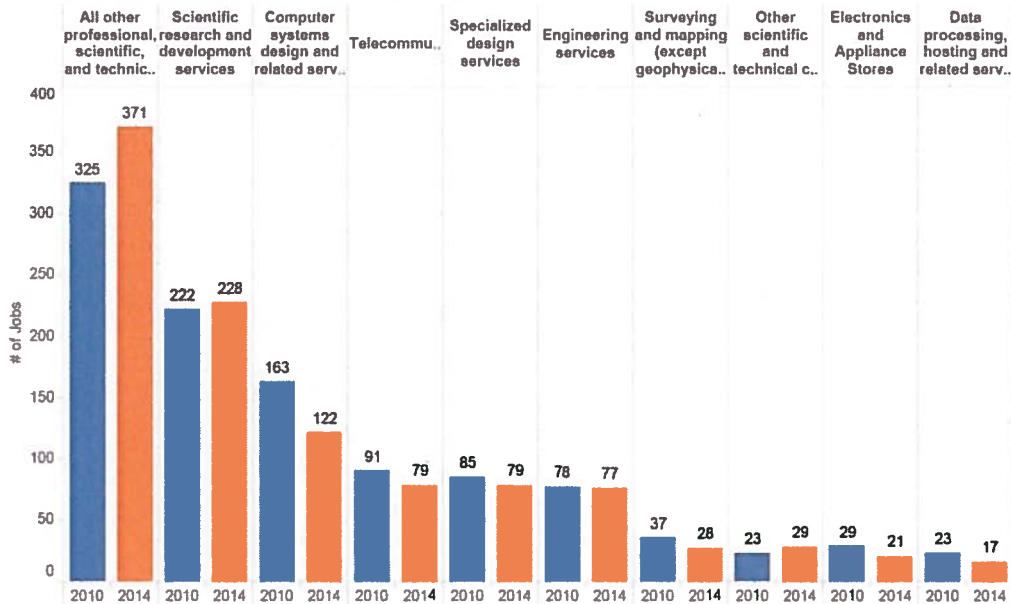
The following table provides detail for the 18 identified NAICS subcategories and the corresponding number of jobs, average earnings per employee and total earnings for the S&T cluster. The largest category of jobs within the S&T cluster are comprised of establishments primarily engaged in professional, scientific or technical services that aren't included in the other 17 categories referenced. This includes jobs related to appraisal services, marine surveyor services, and pipeline or powerline inspection services, among others.

The scientific research and development services sector also represents a significant number of jobs (228 or 20% of the industry). Average earnings within that sector are comparatively high at \$91,458 annually per employee. This also represents the largest portion of total employee earnings for the cluster at \$21M in 2014. The highest level of average earnings falls within the telecommunications field at \$109,772 annually per employee.

NAICS Code Description	NAICS Code #	# of Jobs (2014)	Earnings per Employee (2014)	Total Employee Earnings \$M (2014)
All other professional, scientific, and technical services	54199	371	\$9,201	\$3.4
Scientific research and development services	5417	228	\$91,458	\$20.8
Computer systems design and related services	5415	122	\$68,907	\$8.4
Specialized design services	5414	79	\$33,115	\$2.6
Telecommunications	517	79	\$109,772	\$8.7
Engineering services	54133	77	\$59,174	\$4.5
Other scientific and technical consulting services	54169	29	\$85,197	\$2.5
Surveying and mapping (except geophysical) services	54137	28	\$62,860	\$1.7
Electronics and Appliance Stores	44314	21	\$47,515	\$1.0
Data processing, hosting and related services	518	17	\$69,191	\$1.2
Other information services	519	17	\$95,689	\$1.7
Chemical manufacturing	325	13	\$23,786	\$0.3
Computer and electronic product manufacturing	334	12	\$45,467	\$0.5
Consumer electronics and appliances rental	53221	5	\$30,307	\$0.2
Medical equipment and supplies manufacturing	3391	5	\$51,000	\$0.3
Software publishers	5112	5	\$62,816	\$0.3
Electrical equipment, appliance, and component manufacturing	335	0	\$0	\$0.0
Household appliances, electric housewares, and consumer electronics merchant wholesalers	42362	0	\$0	\$0.0

Since the 2010 CEDS report, growth has slowed in this cluster according to NAICS data with the largest increase coming from the "all other professional, scientific, and technical services" category and slight decreases in other categories. The largest decline in jobs in this period came from computer system design and related services, with the industry losing 41 jobs since 2010.

Science & Technology: Jobs-2010 to 2014 (Top 10)



It is important to note that NAICS data and the categorization for the purposes of this report will have a margin of error in accurately reflecting all jobs on Kaua'i within the cluster. Efforts were taken to incorporate the nuances and considerations within the cluster, however some relevant jobs and their corresponding wages may not be reflected within this data analysis.

As a key provider of jobs and wages in this industry cluster, the Pacific Missile Range Facility (PMRF) accounts for 975 jobs on Kaua'i. This data was provided by PMRF, as these jobs fall outside the limitations of the available NAICS data used for the rest of this report. According to the PMRF, 900 of those jobs are held by civilians whose salaries totaled \$89.72 million in FY 2016. The total combined base and range operating budget for the facility was \$118 million, with civilian salaries accounting for 76% of the budget. Active duty military members of the facility account for an estimated \$7.5 million of the operational budget.

Survey Highlights

Between Jan. 15 and Feb. 8, 2016, 24 respondents from the community provided answers to online survey questions regarding the state of the S&T industry cluster. Below are highlights from the responses.

- Only 17% agreed that there are many internship and development opportunities for students. 58.4% of respondents disagreed or strongly disagreed.
- When asked what change made the greatest positive impact on the industry cluster, respondents said:
 - *“Development of a pre-engineering program at KCC and also an associates in Natural Science, coupled with more emphasis on transfer and internships.”*

- *“Faculty at KCC who write proposals have increased funding for projects. While not creating new jobs, internships at the college have increased, which ultimately supports the community”*
- *“The fact that the majority of people rely on science and tech in their everyday lives, especially tech. Science is on the rise as we look for ways to remediate our soils, regrow our forests, restore watersheds, mitigate hazards impacts. We need satellite ed centers. Waimea and Kapaa.”*
- Only 21% agreed that technology resources are developed enough to meet demand.
- 71% disagreed or strongly disagreed that facilities are modern enough to serve businesses on Kaua’i.
- Talented workforce moving off island is the top barrier (54%) to creating new jobs, increasing wages and funds.
- When asked what the most important skills needed in this industry cluster in the next 5 years, respondents said:
 - *“Adequate training in construction, repair and maintenance of Kauai’s sustainable energy infrastructure, computer programing and lobbying or public relations.”*
 - *“Natural resources management engineering for climate change urban planning for climate change.”*
 - *“Computer engineering & programming”*

For a full copy of the survey questions and the collected responses, see the Kaua’i CEDS Update 2016-2020 Appendix.

Additional Data

The implementation of the Goals, Objectives & Actions in the Kaua’i CEDS update for 2016-2020 should also drawn upon other data, studies, plans and reports regarding the Science & Technology industry cluster.

For example, the High Technology Development Corporation (HTDC) and the Hawai’i Strategic Development Corporation (HSDC) have both released reports regarding the state of the tech industry or “Startup Paradise.” A new report, [The Evolution of the HI Growth Initiative](#), was recently released by HSDC about the success of the HI Growth Initiative in multiplying local, public monies for tech 12 times through private investments.

Goals, Objectives & Actions – Science & Technology

The following Goals, Objectives & Actions have been excerpted from the integrated Goals, Objectives & Actions section in the first half of the report and represent ***only*** those items labeled as pertaining to the Science & Technology industry cluster.

Goal #1: Build, attract and retain a 21st century workforce.

Objective #1: Increase college and career readiness among students in grades K-20.

Action:

- A1) Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations.
- A2) Increase vocational training opportunities for careers that do not require college degrees.
- A3) Strengthen the continuum of science, technology, engineering and math (STEM) education K-20.
- A4) Develop and open the Kaua'i Creative Technology Center.
- A5) Support Aloha 'Ike, STEM, and other programs
- A6) Support robotic programs
- A7) Develop incentives/incentivize Science Fair programs for local schools
- A8) Support DOE "Design Thinking" program

Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'

Action:

- A1) Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College.
- A2) Increase ability of workforce training programs to respond to both hard and soft infrastructure needs in transportation and energy.
- A3) Increase high-tech workforce development, training and apprenticeships, particularly in areas of growth such as energy, geriatric research, and cybersecurity.
- A4) Increase aerospace workforce development, including building on the existing program at Kaua'i Community College.
- A5) Develop training and learning opportunities at KCC
- A6) Expand and fund KCC Internship program
- A7) Create career development/counseling program to supplement DOE counseling program
- A8) Develop bridge programs or "bootcamps" in which graduates and others may enter workforce and advance

Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.

Action:

A1) Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives.

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses/organizations.

Action:

A1) G2.O1.A1: Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs.

A4) G2.O1.A4: Grow the entrepreneur / startup / maker community.

A5) G2.O1.A5: Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs.

A6) G2.O1.A6: Identify business development and technical assistance to support Science & Technology entrepreneurs

A7) G2.O1.A7: Create competitive, prize based program that includes money, counseling, and other mentorship and fee payments (Business Plan Competition)

Objective #2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.

Action:

A1) Provide and increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices.

A2) Bridge develop test center that enables residents to take tests needed for credentials required for jobs

Objective #3: Increase innovation initiatives and testbed projects on Kaua'i.

Action:

A1) Increase aerospace testing at the Pacific Missile Range Facility (PMRF).

A2) Secure more science, technology and energy testbed projects that will take place on Kaua'i.

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.

Action:

A1) Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community.

- A2) Identify and cultivate the next generation of leaders in each industry.
- A3) Create a "Science & Tech Community" (e.g. Singapore)
- A4) "Train the Trainers"

Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.

Action:

- A1) Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster.

Goal #4: Increase collaboration.

Objective #1: Increase collaboration both within and across industries.

Action:

- A1) Form core task forces to champion CEDS Actions and other initiatives.
- A2) Foster greater inter-industry collaboration.
- A3) Increase communication and collaboration with the visitor industry.

Objective #2: Increase communication, engagement and collaboration between industry cluster businesses/organizations and their key stakeholders such as public officials and community members with diverse viewpoints.

Action:

- A1) Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies.
- A2) Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i.
- A3) Increase statewide, national and international partnerships and collaborations.
- A4) Progress in bringing together stakeholders and completing projects/programs identified in this cluster

Goal #5: Ensure sustainable development.

Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.

Action:

- A1) Develop and implement more invasive species and pest prevention and control initiatives.
- A2) Develop and implement more native species protection and restoration initiatives.
- A3) Support conservation and natural resource management efforts, including watershed management.
- A4) Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment.
- A5) Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community.

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters

Objective #1: Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed

Action:

- A1) Study what S&T businesses we lose to out-of-state and “why” to determine next steps to develop S&T industry cluster
- A2) Identify types of technology jobs can be done on Kaua’i
- A3) Identify available technology jobs currently on Kaua’i (an inventory)
- A4) Identify opportunities using high-tech backbone in infrastructure
- A5) Monitor developments in Health & Wellness industry vis-à-vis information/data management and billing

Objective #2: Continue to build capacity for economic development in each of the six target industry clusters, as needed

Action:

- A1) G7.O2.A1: Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies
- A2) G7.O2.A2: Increase statewide national and international partnerships and collaborations

Goal #8: Enhance the community's ability to thrive.

Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua’i and the world.

Action:

- A1) Increase access to reliable high-speed broadband Internet.

Objective #3: Increase the quality and affordability of life on Kaua’i.

Action:

- A1) G8.O3.A1: Increase availability of affordable housing.
- A2) G8.O3.A2: Continue to improve public education on the island

Science & Technology

Goal #1: Build, attract and retain a 21st century workforce.

Objective #1: Increase college and career readiness among students in grades K-20.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O1.A1: Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-17: Form core task force, establish model 2018-19: Recruit initial partners; launch	HIDOE; COK WIOA; COK KWIB; KCC; KEDB; Keiki to Careers; JA; Businesses	\$25,000 to \$50,000 for pilot program \$20,000 per student for a paid 3-month internship	HIDOE KCC Private sector	No
G1.O1.A2: Increase vocational training opportunities for careers that do not require college degrees. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form a core task force; next steps TBD	HIDOE; COK WIOA; COK KWIB; WorkWise Kaua'i; KCC; KEDB; Businesses	TBD	Private sector HIDOE	No
G1.O1.A3: Strengthen the continuum of science, technology, engineering and math (STEM) education K-20. F&A, H&W, S&T, ST&P	1st Priority	2016-20: Continue to increase collaboration & synergy; offer early college STEM courses in the 3 public health high schools (starting in 2017-18)	HIDOE KCC	TBD	HIDOE KCC Private sector	No
G1.O1.A4: Develop and open the Kaua'i Creative Technology Center. A&C, S&T	1st Priority	Fundraising, environment study, construction, community engagement toward opening in late 2018	KEDB; COK OED; HISBDC – Kaua'i Creative / tech industry	\$20.5 million	EDA, State, private foundations & individuals	Yes
G1.O1.A5: Support Aloha 'Ike, STEM, and other programs S&T	1st Priority	TBD	KEDB; COK OED; HIDOE; KCC; JA; Keiki to Careers	TBD	private foundations & individuals	No
G1.O1.A6: Support robotic programs S&T	1st Priority	TBD	KEDB; COK OED; HIDOE; KCC; JA; Keiki to Careers	TBD	private foundations & individuals	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O1.A7: Develop incentives/incentivize Science Fair programs for local schools S&T		TBD	KEDB, HIDEO, KCC, PMRF	TBD	TBD	No
G1.O1.A8: Support DOE "Design Thinking" program S&T		TBD	KEDB, HIDEO, KCC, PMRF	TBD	TBD	No
Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O2.A1: Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	2016-20: Form core task force, coordinate / sequence with job creation, conduct and promote / advertise job fairs annually, other next steps TBD	HI DOE, KCC, Industry	TBD for logistics and promotion of job fairs	TBD	No
G1.O2.A2: Increase ability of workforce training programs to respond to both hard and soft infrastructure needs in transportation and energy. S&T, ST&P	2nd Priority	2016-20: Increase programs, ongoing evaluation and coordination	HIDEO, KCC, COK KWIB	TBD	TBD	No
G1.O2.A3: Increase high-tech workforce development, training and apprenticeships, particularly in areas of growth such as energy, geriatric research, and cybersecurity. H&W, S&T, ST&P	1st Priority	2016-2020: Form core task force, establish model, recruit partners, launch program(s) – including creating a pre-engineering track at KCC (2016-17)	HTDC, KCC, PMRF, Industry	Summer college internships \$5,000 - \$10,000 per student	State, Federal	No
G1.O2.A4: Increase aerospace workforce development, incl., building on the existing program at Kaua'i Community College. S&T	1st Priority	2016-2020: Assess needs, design program	PMRF, DBEDT, KEDB, Industry	Summer college internships \$5K-10K per student	Federal agencies including NASA	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O2.A5: Develop training and learning opportunities at KCC S&T		TBD	KEDB, KCC, KCC-OCET	TBD	TBD	No
G1.O2.A6: Expand and fund KCC Internship program S&T		TBD	KEDB, KCC, KCC-OCET	TBD	TBD	No
G1.O2.A7: Create career development/counseling program to supplement DOE counseling program S&T		TBD	KEDB, KCC, KCC-OCET	TBD	TBD	No
G1.O2.A8: Develop bridge programs or "bootcamps" in which graduates and others may enter workforce and advance S&T		TBD	KEDB, KCC, KCC-OCET	TBD	TBD	No
Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O3.A1: Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-2020: Form core task force, coordinate / sequence with job creation, develop and launch program	KEDB Businesses	TBD	TBD	No

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses/organizations.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G2.O1.A1: Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, recruit and utilize industry mentors, other next steps TBD	KEDB; HISBDC – Kaua’i; Junior Achievement (partner for youth programs)	TBD	TBD	No
G2.O1.A4: Grow the entrepreneur / startup / maker community. A&C, S&T	2nd Priority	Form core task force, next steps TBD	TBD	TBD	TBD	No
G2.O1.A5: Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, next steps TBD	KCC HI SBDC Kauai North Shore Venture Gang and Hanalei Rotary (potential partners)	TBD	TBD	No
G2.O1.A6: Identify business development and technical assistance to support Science & Technology entrepreneurs S&T		TBD	TBD	TBD	TBD	No
G2.O1.A7: Create competitive, prize based program that includes money, counseling, and other mentorship and fee payments (Business Plan Competition) S&T		TBD	TBD	TBD	TBD	No

Objective #2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.

Action	Priority	Steps Required and Time	Key Implementers	Estimated	Funding	EDA
G2.O2.A1: Provide and increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KCC HISBDC – Kaua'i	TBD	TBD	No
G2.O2.A2: Bridge develop test center that enables residents to take tests needed for credentials required for jobs S&T						

Objective #3: Increase innovation initiatives and testbed projects on Kaua'i.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G2.O3.A1: Increase aerospace testing at the Pacific Missile Range Facility (PMRF). S&T	1st Priority	Possibly increase availability / capacity of the base; other next steps 2016-20 TBD	PMRF	TBD	TBD	No
G2.O3.A2: Secure more science, technology and energy testbed projects that will take place on Kaua'i. S&T, ST&P	1st Priority	TBD	Federal / State / County government Industry businesses	TBD	TBD	No

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O1.A1: Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD; adapt / build upon SBDC Hawaii Disaster Guide (Disaster Recovery Guide for Business)	American Red Cross HISBDC – Kaua'i	TBD	TBD	No
G3.O1.A2: Identify and cultivate the next generation of leaders in each industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB as facilitator Industry businesses and organizations	TBD	TBD	No
G3.O1.A3: Create a "Science & Tech Community" (e.g. Singapore) S&T	1st Priority	TBD	KEDB as facilitator Industry businesses and organizations	TBD	TBD	No
G3.O1.A4: "Train the Trainers" S&T	1st Priority	TBD	KEDB, KCC/OCET, COK-OED, Industry businesses and organizations	TBD	TBD	No
Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O2.A1: Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	COK, KIUC, PMRF, Civil Defense	TBD	TBD	No

Goal #4: Increase collaboration.

Objective #1: Increase collaboration both within and across industries.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O1.A1: Form core task forces to champion CEDS Actions and other initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A2: Foster greater inter-industry collaboration. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A3: Increase communication and collaboration with the visitor industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
Objective #2: Increase communication, engagement and collaboration between industry cluster businesses/organizations and their key stakeholders such as public officials and community members with diverse viewpoints.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O2.A1: Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	TBD	TBD	TBD	No
G4.O2.A2: Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O2.A3: Increase statewide, national and international partnerships and collaborations. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations, KEDB	TBD	TBD	No
G4.O2.A4: Progress in bringing together stakeholders and completing projects/programs identified in this cluster S&T	1st Priority	TBD	Industry businesses and organizations, KEDB	TBD	TBD	No

Goal #5: Ensure sustainable development.

Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O5.A1: Develop and implement more invasive species and pest prevention and control initiatives. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A2: Develop and implement more native species protection and restoration initiatives. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A3: Support conservation and natural resource management efforts, including watershed management. F&A, S&T, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A4: Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A5: Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters

Objective #1: Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G7.O1.A1: Study what S&T businesses we lose to out-of-state and "why" to determine next steps to develop S&T industry cluster S&T	1st Priority	TBD	TBD	TBD	TBD	No
G7.O1.A2: Identify types of technology jobs can be done on Kaua'i S&T	1st Priority	TBD	TBD	TBD	TBD	No
G7.O1.A3: Identify available technology jobs currently on Kaua'i (an inventory) S&T	1st Priority	TBD	TBD	TBD	TBD	No
G7.O1.A4: Identify opportunities using high-tech backbone in infrastructure S&T	1st Priority	TBD	TBD	TBD	TBD	No
G7.O1.A5: Monitor developments in Health & Wellness industry vis-à-vis information/data management and billing S&T	2 nd Priority	TBD	TBD	TBD	TBD	No

Objective #2: Continue to build capacity for economic development in each of the six target industry clusters, as needed

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G7.O2.A1: Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies S&T	1st Priority	TBD	TBD	TBD	TBD	TBD
G7.O2.A2: Increase statewide national and international partnerships and collaborations S&T	1st Priority	TBD	TBD	TBD	TBD	TBD

Goal #8: Enhance the community's ability to thrive.

Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O2.A1: Increase access to reliable high-speed broadband Internet. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-20: Assess access and capacity, identify next steps and implement	DBEDT County	TBD	U. S. Dept. of Agriculture	No

Objective #3: Increase the quality and affordability of life on Kaua'i.

G8.O3.A1: Increase availability of affordable housing. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016: Complete County Gen Plan 2017-2020: Possible policy changes & construct affordable housing	County Major landowners Developers	TBD	Private sector	No
G8.O3.A2: Continue to improve public education on the island. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD in line with HIDEO's initiatives	HIDEO	TBD	HIDEO Federal grants Private sector	No

Science & Technology Metrics:

- Number of jobs created
- Increase in industry cluster earnings and / or earnings per NAICS code description
- Increase in average annual wages and / or earnings per employee
- Increase in traded clusters, i.e., goods and services being exported out of the County
- Increase in workforce readiness as indicated by high school and college graduation rates and other academic indicators

Core Task Force Suggested Members:

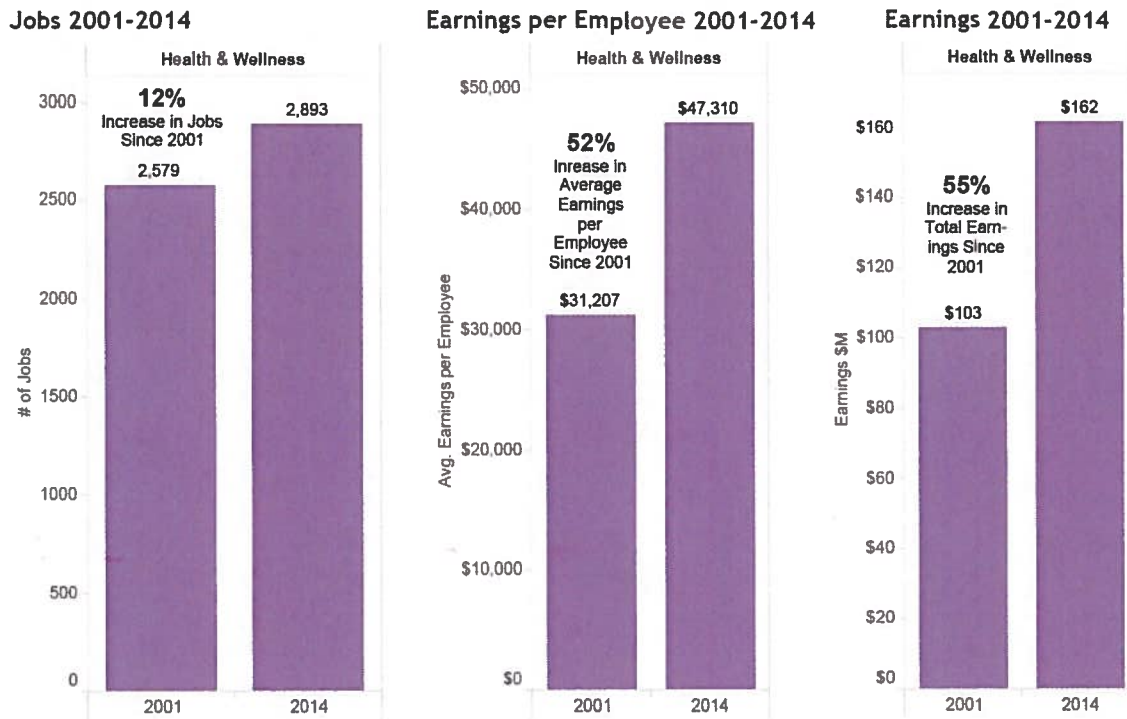
The following is an alphabetical list of organizations identified by the focus group as potential participants and collaborators in this industry cluster's activities. However, the organizations outlined in red have been identified by the focus group as those that should play a key role in the Core Task Force to be formed for this cluster, based on the Core Task Force Characteristics outlined on page 33:

- County of Kaua'i Office of Economic Development and Kaua'i Workforce Investment Opportunity Act staff
- Hawai'i Department of Education
- Hawai'i Workwise & Hawai'i Department of Labor and Industrial Relations
- General Dynamics – Mission Systems
- High Technology Development Corporation
- Kaua'i Economic Development Board
- Kaua'i Community College/ UH
- Kaua'i Veteran's Memorial Hospital
- Pacific Missile Range Facility
- Wilcox Medical Center

Health & Wellness

Jobs & Earnings

The number of jobs in the Health & Wellness cluster (H&W) increased by 12% since 2001 for a total of 2,893 in 2014. In the same period, the cluster saw a 52% increase in average earnings per employee which increased to \$47,310. Total employee earnings increased by 55% from \$103 million in 2001 to \$162 million in 2014.



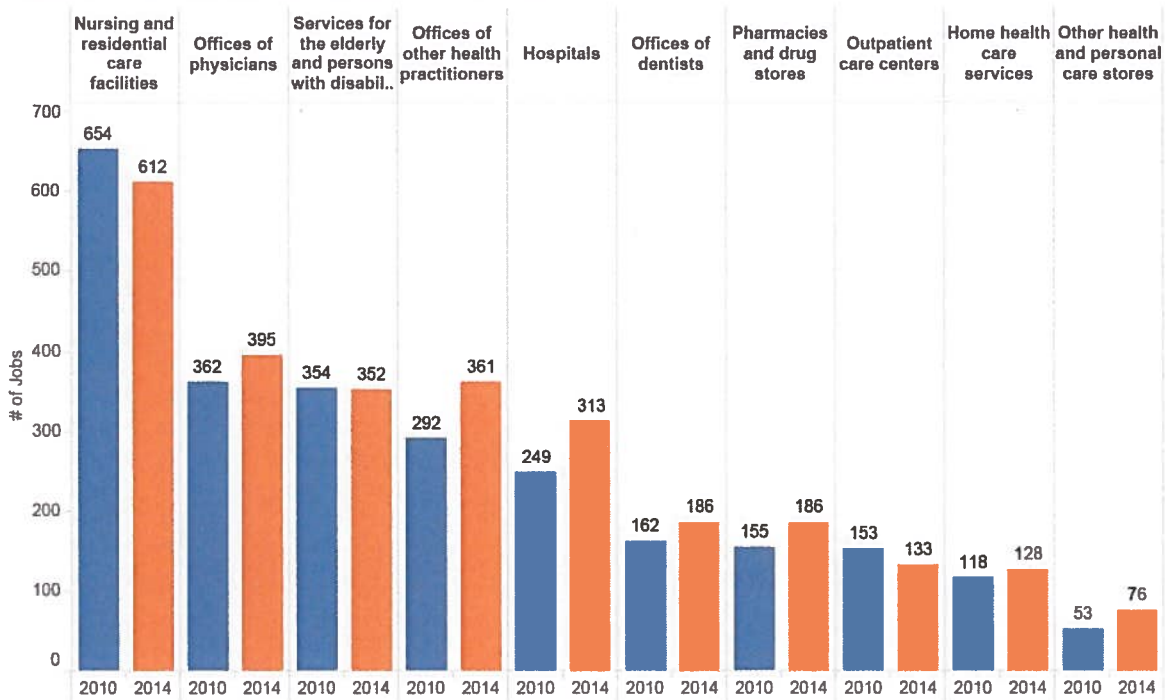
The following table provides detail for the 16 identified NAICS subcategories and the corresponding number of jobs, average earnings per employee and total earnings for the H&W cluster. The top employee earnings fall within the categories of offices of physicians (NAICS 6211, \$47.1 million in total employee earnings), nursing and residential care facilities (NAICS 623, \$33.3 million in total employee earnings) and hospitals (NAICS 622, \$21.7 million in total employee earnings) for a total of \$102.1 million or 63% of all H&W employee earnings.

Also of note is the inclusion of mental health professionals within the following two NAICS codes: offices of mental health practitioners (NAICS 621330) includes 49 jobs within the overall grouping of offices of other health practitioners (NAICS 6213) and outpatient mental health and substance abuse centers (NAICS 621420) that includes 33 jobs within the broader category of outpatient care centers (NAICS 6214).

NAICS Code Description	NAICS Code #	# of Jobs (2014)	Earnings per Employee (2014)	Total Employee Earnings \$M (2014)
Nursing and residential care facilities	623	612	\$54,450	\$33.3
Offices of physicians	6211	395	\$119,087	\$47.1
Offices of other health practitioners	6213	361	\$36,470	\$13.2
Services for the elderly and persons with disabilities	62412	352	\$19,275	\$6.8
Hospitals	622	313	\$69,324	\$21.7
Offices of dentists	6212	186	\$64,632	\$12.0
Pharmacies and drug stores	44611	186	\$43,159	\$8.0
Outpatient care centers	6214	133	\$62,137	\$8.3
Home health care services	6216	128	\$31,374	\$4.0
Other health and personal care stores	44619	76	\$18,628	\$1.4
Medical and diagnostic laboratories	6215	50	\$55,905	\$2.8
Cosmetics, beauty supplies, and perfume stores	44612	34	\$24,937	\$0.8
Optical goods stores	44613	24	\$16,888	\$0.4
Death care services	8122	20	\$52,897	\$1.0
Home health equipment rental	532291	13	\$50,969	\$0.7
Other ambulatory health care services	6219	10	\$36,829	\$0.4

Between 2010 and 2014, the H&W cluster added 210 additional jobs. The following table illustrates the growth and decreases amongst the top 10 categories with the largest number of total jobs. The largest growth increases are among offices of other healthcare practitioners (69 new jobs) and hospitals (64 jobs).

Health & Wellness: Jobs-2010 to 2014 (Top 10)



It is important to note that NAICS data and the categorization for the purposes of this report will have a margin of error in accurately reflecting all jobs on Kaua'i within the cluster. Efforts were taken to incorporate the nuances and considerations within the cluster, however some relevant jobs and their corresponding wages may not be reflected within this data analysis.

For example, direct life, health and medical insurance carriers are not reflected in the above groupings based on their level of categorization. This category contributes significantly to the H&W cluster with 216 jobs and more than \$18 million in total employee earnings. Additionally, other individual and family services (NAICS 624190) which among others includes suicide crisis centers, family welfare services, and alcoholism and drug addiction self-help organizations with 92 jobs and \$2.6 million in total employee earnings in 2014 on Kaua'i.

Lastly, Hawaii state-owned hospitals are not included in the jobs and wage data above. In 2014, there were 483 jobs held by workers in government hospitals, earning an average of \$100,731 per employee. Jobs in that category on Kaua'i have increased by 160 since 2001, with average earnings per employee nearly doubling from \$50,386.

Survey Highlights

Between Jan. 15 and Feb. 8, 2016, 25 respondents from the community provided answers to online survey questions regarding the state of the H&W industry cluster. Below are highlights from the responses.

- 72% agreed or strongly agreed that more specialized healthcare is a priority strategy to create jobs and increase wages and funds in H&W.

- Only 16% agreed that H&W organizations are equipped to adapt to the changing marketplace.
- When asked what is the biggest opportunity for growth in this industry cluster, respondents said:
 - *“Worksite wellness programs, health and fitness options for all ages and demographic groups, broad range of services for growing elderly segment.”*
 - *“Aging population, wellness and prevention.”*
 - *“We really need to create an on-island substance abuse treatment facility.”*
 - *“Long-Term Care/geriatric services, behavioral health”*
- 64% disagreed or strongly disagreed that there are adequate senior care services.
- 50% cited declining reimbursements and high healthcare costs as key barriers to growth in the H&W cluster.

For a full copy of the survey questions and the collected responses, see the Kaua’i CEDS Update 2016-2020 Appendix.

Kaua’i Vision 2024 & A Note About Additional Data

The following vision is taken from the Kaua’i Community Health Improvement Plan (CHIP) from June 2014, the action plan developed by the Kaua’i Community Health Improvement Initiative (CHII). The CHIP as well as the Kaua’i Community Health Needs Assessment (CHNA) contain extensive data on the Health & Wellness industry cluster and should be utilized and aligned with in the implementation of the CEDS.

In 2024, nearly 80,000 residents, young and old, are enjoying the benefits of a healthy life in the County of Kaua’i. According to the County Health Rankings and Roadmaps, Kaua’i ranks highest in the State of Hawai’i with the most favorable physical environment, social and economic indicators, clinical care, health behaviors, and health outcomes. Keiki (children) are blessed to be born, raised, and educated on the island. Parents, nā kūpuna (elders), and the community lay a solid foundation for the keiki to perpetuate family values, and to have the life skills to build strong families for the future. Nā kūpuna live full and active lives, knowing they are healthy, contributing to family and community, and growing old with dignity and self-determination. All of the County’s residents honor and practice the culture of being respectful, treating everyone equally, caring for one another, sharing, taking care of the ‘āina (land), being good stewards of the island’s resources, and being accountable to future generations. These characteristics make Kaua’i a special place to be born, learn, play, work, and grow old.

Goals, Objectives and Actions – Health & Wellness

The following Goals, Objectives & Actions have been excerpted from the integrated Goals, Objectives & Actions section in the first half of the report and represent ***only*** those items labeled as pertaining to the Health & Wellness industry cluster.

Goal #1: Build, attract and retain a 21st century workforce

Objective #1: Increase college and career readiness among students in grades K-20

Action:

- A1) Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations
- A2) Increase vocational training opportunities for careers that do not require college degrees.
- A3) Strengthen the continuum of science, technology, engineering and math (STEM) education K-20.
- A5) Expand health care training, certification and degree programs on the island, particularly for primary care, mental health (psychiatrists), substance abuse prevention and treatment, and elder care.
- A6) Create a regular Career Development Roadshow to educate teachers and students on various options
- A7) Develop outreach/education and training resources for individuals interested in the Health & Wellness field
- A8) Build awareness of stipends, scholarships, internships, and other resources for students in Health & Wellness field
- A9) Create mentorship opportunities in Health & Wellness career areas
- A10) Coding/Tech Education at local community college
- A11) Identify existing and upcoming workforce training needs and facilitate connecting workforce job opportunities in the Health & Wellness sector
- A12) Identify workforce development funding resources to develop needed training programs
- A13) Develop and identify training and technical assistance resources for Health & Wellness organizations (backbone support)
- A14) Use opportunities in telehealth to identify IT and medical workforce development trades to meet specialty care needs

Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'

Actions:

- A1) Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College.
- A3) Increase high-tech workforce development, training and apprenticeships, particularly in areas of growth such as energy, geriatric research, and cybersecurity.

Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.

Actions:

- A1) Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives.
- A2) Explore the "Mobile Medicine" and "Pop-up Clinics" concepts
- A3) Explore the "Traveling Physicians" programs to expand availability of additional healthcare providers for unmet needs

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses/organizations.

Actions:

- A1) Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs.
- A5) Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs.

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.

Actions:

- A1) Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community.
- A2) Identify and cultivate the next generation of leaders in each industry.

Goal #4: Increase collaboration

Objective #1- Increase collaboration both within and across industries

Actions:

- A1) Form core task forces to champion CEDS Actions and other initiatives.
- A2) Foster greater inter-industry collaboration.
- A3) Increase communication and collaboration with the visitor industry.
- A4) Increase collaboration among health and wellness providers
- A5) Explore and implement Kaua'i relevant programs in the "Transform Hawaii Government" statewide initiative
- A6) Align recommended activities from KMHCC with CEDS updated plan
- A7) Take annual inventory/status updates via CEDS

Objective #2: Increase communication, engagement and collaboration between industry cluster businesses/organizations and their key stakeholders such as public officials and community members with diverse viewpoints.

Actions:

- A1) Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies.
- A2) Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i.
- A3) Increase statewide, national and international partnerships and collaborations.

Goal #5: Ensure sustainable development.

Objective #3: Implement the Kaua'i Multimodal Land Transportation Plan (MLTP) by 2035.

Actions:

- A2) Implement a bicycle program that includes regular investment in bicycle infrastructure, a well-connected bicycle network, integration with the County roads program and managing safe vehicular traffic speeds.
- A3) Implement a pedestrian program that encourages more pedestrian trips through planning and infrastructure improvements to address deterrents to walking such as safety, connectivity and attractiveness.

Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources

Actions:

- A4) Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment.
- A5) Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community.

Goal #8: Enhance the community's ability to thrive

Objective #1- Support the health and wellness of the community

Actions:

- A1) Increase access to health care prevention and treatment programs and services, e.g., chronic diseases (diabetes, high blood pressure and high cholesterol), substance abuse, mental health and elder care (including Alzheimer's disease / dementia).
- A2) Develop the Life's Choices Kaua'i adolescent substance abuse treatment and healing facility.
- A3) Increase access to and community interest in health and wellness programs, including worksite wellness.

- A4) Increase elder care facilities, including those that serve patients with dementia / Alzheimer's disease.
- A5) Increase access to integrated, culturally relevant health and wellness facilities and / or programs.
- A6) Conduct inventory of existing resources for eldercare, mental health, and other high-risk populations to identify gaps in availability of services
- A7) Create an inventory (GIS mapped) of senior services available online/electronically and updated regularly
- A8) Develop coalition of caregivers for senior population (for safety-net services)
- A9) Create affordable care services
- A10) Expand accessibility of affordable assisted living facilities and services island-wide
- A11) Support the "Kaua'i Mental Health Care Consortium" plan
- A12) Expand mental and drug abuse services
- A13) Build residential drug and alcohol treatment facilities
- A14) Develop prevention and wellness services address obesity, eating disorders, and diabetes

Goals, Objectives & Actions – Health & Wellness

Goal #1: Build, attract and retain a 21st century workforce.

Objective #1: Increase college and career readiness among students in grades K-20.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O1.A1: Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-17: Form core task force, establish model 2018-19: Recruit initial partners; launch	HIDOE; County WIOA; County KWIB; KCC; KEDB; Keiki to Careers; Junior Achievement; Businesses	\$25,000 to \$50,000 for pilot program \$20,000 per student for a paid 3-month internship	HIDOE KCC Private sector	No
G1.O1.A2: Increase vocational training opportunities for careers that do not require college degrees. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form a core task force; next steps TBD	HIDOE; County WIOA; County KWIB; WorkWise Kaua'i; KCC; KEDB; Businesses	TBD	Private sector HIDOE	No
G1.O1.A3: Strengthen the continuum of science, technology, engineering and math (STEM) education K-20. F&A, H&W, S&T, ST&P	1st Priority	2016-20: Continue to increase collaboration and synergy; offer early college STEM courses in the 3 public health high schools	HIDOE KCC	TBD	HIDOE KCC Private sector	No
G1.O1.A5: Expand health care training, certification and degree programs on the island, particularly for primary care, mental health (psychiatrists), substance abuse prevention and treatment, and elder care. H&W	1st Priority	See steps in Kaua'i CHIP, which include establishing consortia, developing strategic / financial plans, monitoring	KCC Wilcox Hospital WorkWise Kaua'i	TBD	TBD	No
G1.O1.A6: Create a regular Career Development Roadshow to educate teachers and students on various options H&W		TBD	HIDOE; County WIOA; County KWIB; KCC; KEDB; HIDOH; Wilcox Hospital; KVMH, Ho'ola Lahui; Kaiser Permanente	TBD	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O1.A7: Develop outreach/education and training resources for individuals interested in the Health & Wellness field H&W		TBD	HIDOE, County WIOA, County KWMB, KCC, KEDB, HIDOH, Wilcox Hospital, KVMH, Ho'ola Lahui, Kaiser Permanente	TBD	TBD	No
G1.O1.A8: Build awareness of stipends, scholarships, internships, and other resources for students in Health & Wellness field H&W		TBD	HIDOE, County WIOA, County KWMB, KCC, KEDB, HIDOH, Wilcox Hospital, KVMH, Ho'ola Lahui, Kaiser Permanente	TBD	TBD	No
G1.O1.A9: Create mentorship opportunities in Health & Wellness career areas H&W		TBD	HIDOE, County WIOA, County KWMB, KCC, KEDB, HIDOH, Wilcox Hospital, KVMH, Ho'ola Lahui, Kaiser Permanente	TBD	TBD	No
G1.O1.A10: Coding/Tech Education at local community college H&W		TBD	KCC/OCET, HIDOH, Wilcox Hospital, KVMH, Ho'ola Lahui, Kaiser Permanente	TBD	TBD	No
G1.O1.A11: Identify existing and upcoming workforce training needs and facilitate connecting workforce job opportunities in the Health & Wellness sector H&W		TBD	KEDB, KCC/OCET, COK-OED, HIDOH, Wilcox Hospital, KVMH, Ho'ola Lahui, Kaiser Permanente	TBD	TBD	No
G1.O1.A12: Identify workforce development funding resources to develop needed training programs H&W		TBD	KEDB, KCC/OCET, COK-OED, HIDOH, Wilcox Hospital, KVMH, Ho'ola Lahui, Kaiser Permanente, OHA	TBD	TBD	No
G1.O1.A13: Develop and identify training and technical assistance resources for Health & Wellness organizations (backbone support) H&W		TBD	KEDB, KCC/OCET, COK-OED, HIDOH, Wilcox Hospital, KVMH, Ho'ola Lahui, Kaiser Permanente, OHA	TBD	TBD	No
G1.O1.A14: Use opportunities in telehealth to identify IT & medical workforce development trades to meet specialty care needs H&W		TBD	COK-OED, HIDOH, Wilcox Hospital, KVMH, Ho'ola Lahui, Kaiser Permanente, OHA	TBD	TBD	

Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O2.A1: Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	2016-20: Form core task force, coordinate / sequence with job creation, conduct and promote / advertise job fairs annually, other next steps TBD	HIDOE, KCC, Industry	TBD for logistics and promotion of job fairs	TBD	No
G1.O2.A3: Increase high-tech workforce development, training and apprenticeships, particularly in areas of growth such as energy, geriatric research, and cybersecurity. H&W, S&T, ST&P	1st Priority	2016-2020: Form core task force, establish model, recruit partners, launch program(s) – including creating a pre-engineering track at KCC (2016-17)	HTDC, KCC, PMRF, Industry	Summer college internships \$5,000 - \$10,000 per student	State, Federal	No

Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O3.A1: Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-2020: Form core task force, coordinate / sequence with job creation, develop and launch program	KEDB Businesses	TBD	TBD	No
G1.O3.A2: Explore the "Mobile Medicine" and "Pop-up Clinics" concepts H&W	1st Priority	TBD	KEDB, COK-OED, HIDOH, Wilcox Hospital, KVMH, Ho'ola Lahui, Kaiser Permanente, OHA	TBD	TBD	No
G1.O3.A3: Explore the "Traveling Physicians" programs to expand availability of additional healthcare providers for unmet needs H&W	1st Priority	TBD	KEDB, COK-OED, HIDOH, Wilcox Hospital, KVMH, Ho'ola Lahui, Kaiser Permanente, OHA	TBD	TBD	No

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses/organizations.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G2.O1.A1: Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, recruit and utilize industry mentors, other next steps TBD	KEDB HISBDC – Kaua'i (partner for business incubation) Junior Achievement (partner for youth programs)	TBD	TBD	No
G2.O1.A5: Increase collaboration w/and funding through state & federal entrepreneurship/ mentorship programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, next steps TBD	KCC HI SBDC Kauai North Shore Venture Gang and Hanalei Rotary (potential partners)	TBD	TBD	No
Objective #2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
Provide and increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KCC HISBDC – Kaua'i	TBD	TBD	No

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O1.A1: Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD, adapt / build upon SBDC Hawaii Disaster Guide (Disaster Recovery Guide for Business)	American Red Cross HISBDC – Kaua'i	TBD	TBD	No
G3.O1.A2: Identify and cultivate the next generation of leaders in each industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB as facilitator Industry businesses and organizations	TBD	TBD	No
Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O2.A1: Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	County, KIUC, PMRF, Civil Defense	TBD	TBD	No

Goal #4: Increase collaboration.

Objective #1: Increase collaboration both within and across industries.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O1.A1: Form core task forces to champion CEDS Actions and other initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB, COK-OED, KCC/OCET, Industry Businesses, PMRF, State, Federal	TBD	TBD	No
G4.O1.A2: Foster greater inter-industry collaboration. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	KEDB, COK-OED, KCC/OCET, Industry Businesses, PMRF, State, Federal	TBD	TBD	No
G4.O1.A3: Increase communication and collaboration with the visitor industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB, COK-OED, KCC/OCET, Industry Businesses, PMRF, State, Federal	TBD	TBD	No
G4.O1.A4: Increase collaboration among health and wellness providers H&W	2nd Priority	TBD	KEDB, HODOH; Wilcox Hospital; KVMH, Ho'ola Lahui; Kaiser Permanente, OHA	TBD	TBD	TBD
G4.O1.A4: Explore and implement Kaua'i relevant programs in the "Transform Hawaii Government" statewide initiative H&W	1st Priority	TBD	KEDB, HODOH; Wilcox Hospital; KVMH, Ho'ola Lahui; Kaiser Permanente, OHA	TBD	TBD	TBD
G4.O1.A5: Align recommended activities from KMHCC with CEDS updated plan H&W	1st Priority	TBD	KEDB, HODOH; Wilcox Hospital; KVMH, Ho'ola Lahui; Kaiser Permanente, OHA	TBD	TBD	TBD
G4.O1.A6: Take annual inventory/status updates via CEDS H&W	1st Priority	TBD	KEDB, HODOH; Wilcox Hospital; KVMH, Ho'ola Lahui; Kaiser Permanente, OHA	TBD	TBD	TBD

Objective #2: Increase communication, engagement and collaboration between industry cluster businesses/organizations and their key stakeholders such as public officials and community members with diverse viewpoints.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O2.A1: Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	TBD	TBD	TBD	No
G4.O2.A2: Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No
G4.O2.A3: Increase statewide, national and international partnerships and collaborations. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No

Goal #5: Ensure sustainable development.

Objective #3: Implement the Kaua'i Multimodal Land Transportation Plan (MLTP) by 2035.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O3.A2: Implement a bicycle program to incl. regular investment in bicycle infrastructure, a well-connected network, integration with the County roads program and managing safe vehicular traffic speeds. H&W, S&R, ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	County	TBD	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O3.A3: Implement a pedestrian program that encourages more pedestrian trips through planning and infrastructure improvements to address deterrents to walking such as safety, connectivity and attractiveness. H&W, S&R, ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	County	TBD	TBD	No
Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O5.A4: Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A5: Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #8: Enhance the community's ability to thrive.

Objective #1: Support the health and wellness of the community.						
Action	Priority	*Steps Required and Time Frame	*Key Implementers	*Estimated Costs	*Funding Sources	EDA Eligible?
G8.O1.A1: Increase access to health care prevention and treatment programs and services, e.g., chronic diseases (diabetes, high blood pressure and high cholesterol), substance abuse, mental health and elder care (including Alzheimer's disease / dementia). H&W	1st Priority	TBD	Wilcox Hospital, KVMH, Kaiser, HDOH, Ho'ola Lahui Hawaii, KEDB, COK-OED	TBD	Substance Abuse and Mental Health Services Admin.	No
G8.O1.A2: Develop the Life's Choices Kaua'i adolescent substance abuse treatment and healing facility. H&W	1st Priority	TBD	COK-OED, Life's Choices Kaua'i	TBD	Substance Abuse and Mental Health Services	No
G8.O1.A3: Increase access to and community interest in health and wellness programs, including worksite wellness. H&W, S&R	1st Priority	TBD	GetFit Kaua'i, KEDB	TBD	TBD	No
G8.O1.A4: Increase elder care facilities, including those that serve patients with dementia / Alzheimer's disease. H&W	1st Priority	TBD	Garden Isle Healthcare	TBD	TBD	Possibly
G8.O1.A5: Increase access to integrated, culturally relevant health and wellness facilities and / or programs. H&W	2nd Priority	TBD	Ho'ola Lahui	TBD	TBD	No
G8.O1.A6: Conduct inventory of existing resources for eldercare, mental health, and other high-risk populations to identify gaps in availability of services H&W	1st Priority	TBD	KEDB	TBD	TBD	
G8.O1.A7: Create an inventory (GIS mapped) of senior services available online/electronically and updated regularly H&W	2nd Priority	TBD	KEDB	TBD	TBD	

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O1.A8: Develop coalition of caregivers for senior population (for safety-net services) H&W	2nd Priority	TBD	Wilcox Hospital, KVMH, Kaiser, HIDOH, Ho'ola Lahui Hawaii, KEDB, COK-OED	TBD	TBD	
G8.O1.A9: Create affordable care services H&W	1st Priority	TBD	Wilcox Hospital, KVMH, Kaiser, HIDOH, Ho'ola Lahui Hawaii, KEDB, COK-OED	TBD	TBD	
G8.O1.A10: Expand accessibility of affordable assisted living facilities and services island-wide H&W	1st Priority	TBD	Wilcox Hospital, KVMH, Kaiser, HIDOH, Ho'ola Lahui Hawaii, KEDB, COK-OED	TBD	TBD	
G8.O1.A11: Support the "Kaua'i Mental Health Care Consortium" plan H&W	1st Priority	TBD	Wilcox Hospital, KVMH, Kaiser, HIDOH, Ho'ola Lahui Hawaii, KEDB, COK-OED	TBD	TBD	
G8.O1.A12: Expand mental and drug abuse services H&W	1st Priority	TBD	Wilcox Hospital, KVMH, Kaiser, HIDOH, Ho'ola Lahui Hawaii, KEDB, COK-OED	TBD	TBD	
G8.O1.A13: Build residential drug and alcohol treatment facilities H&W	2nd Priority	TBD	Wilcox Hospital, KVMH, Kaiser, HIDOH, Ho'ola Lahui Hawaii, KEDB, COK-OED	TBD	TBD	
G8.O1.A14: Develop prevention and wellness services address obesity, eating disorders, and diabetes H&W	1st Priority	TBD	Wilcox Hospital, KVMH, Kaiser, HIDOH, Ho'ola Lahui Hawaii, KEDB, COK-OED	TBD	TBD	

Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O2.A1: Increase access to reliable high-speed broadband Internet. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-20: Assess access and capacity; identify next steps and implement	DBEDT County	TBD	U.S. Dept. of Agriculture	No
G8.O2.A2: Expand telemedicine and health care information technology (IT) utilization. H&W	2nd Priority	TBD	TBD	TBD	TBD	No

Objective #3: Increase the quality and affordability of life on Kaua'i.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O3.A1: Increase availability of affordable housing. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016: Completion of County General Plan 2017-2020: Possible policy changes and construction of affordable housing	County Major landowners Developers	TBD	Private sector	No
G8.O3.A2: Continue to improve public education on the island. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD in line with HIDEO's initiatives	HIDOE	TBD	HIDOE; Federal grants Private sector	No

Health & Wellness Metrics:

- Increase in enrollment at KCC, especially in Health and Wellness classes
 - Degree & Non-degree courses
- Number of Health & Wellness programs identified
- Percentage of High School graduates who advance to Health & Wellness careers
- Number of KCC graduates who stay and return to Kaua'i
- Percentage of Kama'aina Health and Wellness workers
- Completion of substance abuse/drug treatment center cases
- Increase of psychiatrists by 50%

Core Task Force Suggested Members:

The following is an alphabetical list of organizations identified by the focus group as potential participants and collaborators in this industry cluster's activities. However, the organizations outlined in red have been identified by the focus group as those that should play a key role in the Core Task Force to be formed for this cluster, based on the Core Task Force Characteristics outlined on page 33:

- Area Health Education Center (AHEC, Fran Becker)
- Alzheimer's Association
- **County of Kaua'i – Office of Economic Development**
- Get Fit Kaua'i
- Health Clubs/Crossfits
- **Ho'ola Lahui Hawaii**
- **Hawaii Department of Health**
- Hawai'i Medical Service Association
- Integrated Healthcare Providers
- Kaiser Permanente Lihue Clinic
- Kaua'i Community College
- **Kaua'i Economic Development Board**
- Kaua'i Veteran's Medical Hospital
- Keiki to Career
- Leadership Kaua'i
- Mahelona Hospital
- Office of Hawaiian Affairs
- 'Ohana Healthcare Management
- Puakea Regency
- Veteran's Affairs
- **Wilcox Medical Center**
- **US Department of Education**

Sports & Recreation

Jobs & Earnings

The Sports & Recreation (S&R) cluster has grown by 19% in total jobs since 2001. The cluster includes at least 2,162 jobs with total earnings for the cluster increasing significantly to approximately \$69 million in 2014. Average annual earnings per employee are modest and increased by 14% to \$22,279 in 2014.



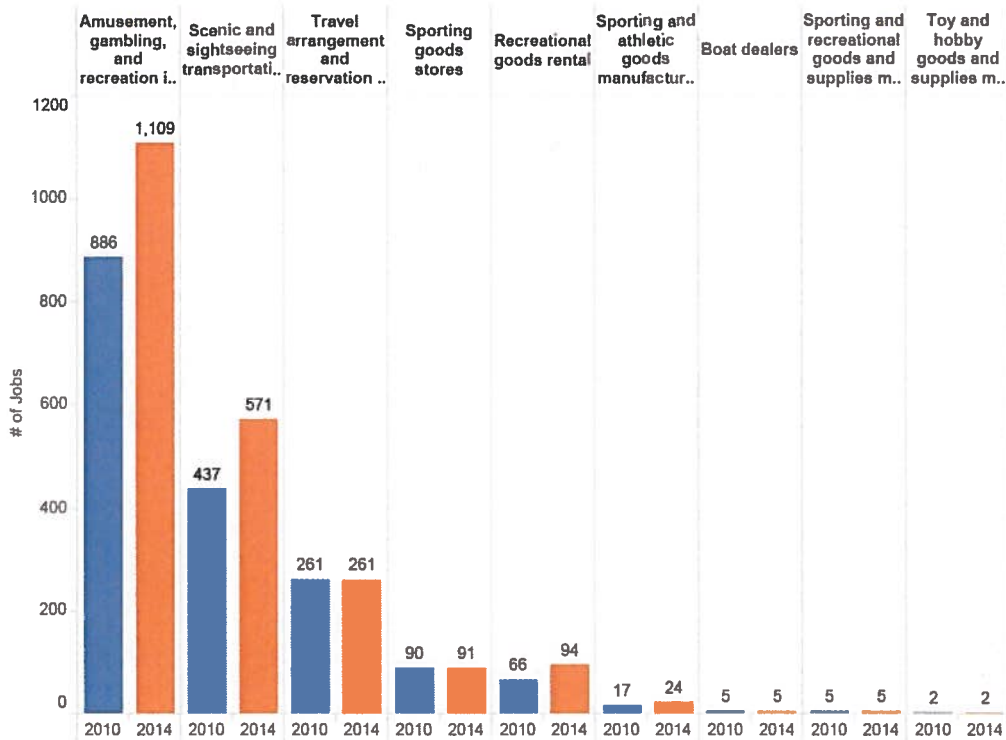
The following table provides detail for the 12 identified NAICS subcategories and the corresponding number of jobs, average earnings per employee and total employee earnings for the cluster. More than 50% of the total jobs in S&R are part of the amusement, gambling and recreation industries category (NAICS 713) which includes golf courses and country clubs, fitness and recreational sports centers, bowling centers and all other amusement and recreation industries. The highest earnings per employee are for the sporting and athletic goods manufacturing (NAICS 33992) at \$45,149 annually.

NAICS Code Description	NAICS Code #	# of Jobs (2014)	Earnings per Employee (2014)	Total Employee Earnings \$M (2014)
Amusement, gambling, and recreation industries	713	1,109	\$28,830	\$32.0
Scenic and sightseeing transportation	487	571	\$40,462	\$23.1
Travel arrangement and reservation services	5615	261	\$31,198	\$8.1
Recreational goods rental	532292	94	\$27,918	\$2.6

Sporting goods stores	45111	91	\$23,755	\$2.2
Sporting and athletic goods manufacturing	33992	24	\$45,149	\$1.1
Boat dealers	441222	5	\$40,386	\$0.2
Sporting and recreational goods and supplies merchant wholesalers	42391	5	\$14,825	\$0.1
Toy and hobby goods and supplies merchant wholesalers	42392	2	\$14,825	\$0.0
Charter bus industry	4855	0	\$0	\$0.0
Coastal and great lakes passenger transportation	483114	0	\$0	\$0.0
Deep sea passenger transportation	483112	0	\$0	\$0.0

The table below illustrates the recent growth within the S&R cluster subcategories from 2010 to 2014. Amusement and recreation industries (NAICS 713) grew by 223 since 2010 to 1,109 jobs in 2014. Scenic and sightseeing transportation (NAICS 487) grew by 134 jobs in the same period. All other categories were relatively flat in terms of number of jobs.

Sports & Recreation: Jobs-2010 to 2014



It is important to note that NAICS data and the categorization for the purposes of this report will have a margin of error in accurately reflecting all jobs on Kaua'i within the cluster. Efforts were taken to incorporate the nuances and considerations within the cluster; however, some relevant jobs and their corresponding wages may not be reflected within this data analysis.

For example, one additional job category not reflected in the above based on its level of specificity includes sports and recreation instruction (NAICS 611620) which is comprised of all sports instruction (baseball, basketball, football and golf) as well as gymnastics, riding, martial arts and swimming instruction. In 2014, this category included 48 jobs and \$300,000 in earnings. There is also some overlap in this specific industry with hula instruction being included in sports and recreation instruction instead of the Arts & Culture industry sector.

Survey Highlights

Between Jan. 15 and Feb. 8, 2016, 20 respondents from the community provided answers to online survey questions regarding the state of the S&R industry cluster. Below are highlights from the responses.

- 70% agreed or strongly agreed that events and facilities are well attended.
- 65% disagreed or strongly disagreed that there are enough sporting facilities on Kaua'i to meet demand.
- 70% disagreed or strongly disagreed that there is strong leadership in cluster.
- Only 15% agreed that harbors on Kaua'i are modern and well maintained.
- When asked what the changes have made the greatest positive impact on the cluster, respondents said:
 - *"The rise of "adventure" or outdoor recreation for visitors have increased the number of businesses and jobs. For example, ATV Tour companies, Kayak rentals, bicycle rentals, ZIP lines etc. These types of activities have only recently been introduced to the visitor market."*
 - *"There is an excellent program for senior citizens in Kauai's neighborhood centers. But not much for younger, working mothers or other middle aged folks.-- unless they want to paddle. But that is very competitive and not always welcome to all comers."*
 - *"The Kauai Marathon is well marketed and has good attendance. There has been little to no focus on marketing Sports & Recreation, with the exception those events that fall under CPEP's Festivals & Events."*
 - *"Private/membership golf courses and golf tournaments Statewide local youth sports competitions, Kauai Marathon."*
- 65% agreed that there are enough qualified workers in this cluster.
- 74% of respondents cited a lack of government funds for parks and recreational facilities as a barrier.
 - *"Bike trails for safe exercising would be great for locals and tourists, but road improvements should happen first."*
 - *"Creating a welcoming atmosphere for participants in high profile international sporting events, coupled with better facilities. This would include basic things like public restrooms of the quality one finds in places like New Zealand."*
 - *"The coastal bike path has huge potential."*

For a full copy of the survey questions and the collected responses, see the Kaua'i CEDS Update 2016-2020 Appendix.

Goals, Objectives, and Actions – Sports & Recreation

Goal #1: Build, attract and retain a 21st century workforce

Objective #1 Build, attract and retain a 21st century workforce

Action:

- A1) Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations.
- A2) Increase vocational training opportunities for careers that do not require college degrees.
- A3) Develop education and training for players and officials for Sports & Recreation activities
- A4) Address water safety issues by monitoring and educating the community regarding appropriate behavior vis-à-vis hiking and other accessibility

Objective #2- Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain'

Action:

- A1) Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College.
- A2) Explore business development opportunities in the Sports & Recreation industry
- A3) Explore business development opportunities, leveraging sports & recreation events and activities
- A4) Assess upcoming trends and opportunities
- A5) Leverage sister-city relations to enhance existing and develop new activities and events
- A6) Cluster events together vis-à-vis timing and location

Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.

Action:

- A1) Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives.

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses/organizations.

Action:

- A1) Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs.
- A5) Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs.

Objective #2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.

Action:

A1) Provide and increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices.

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.

Action:

A1) Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community.

A2) Identify and cultivate the next generation of leaders in each industry.

Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.

Action:

A1) Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster.

Goal #4: Increase collaboration

Objective #2- Increase communication, engagement and collaboration between industry cluster businesses/organizations and their key stakeholders such as public officials and community members with diverse viewpoints

Action:

A1) Form core task forces to champion CEDS Actions and other initiatives.

A2) Foster greater inter-industry collaboration.

A3) Increase communication and collaboration with the visitor industry.

A5) Increase collaboration with the film and television industry.

Goal #5: Ensure sustainable development.

Objective #3: Implement the Kaua'i Multimodal Land Transportation Plan (MLTP) by 2035.

Action:

A2) Implement a bicycle program that includes regular investment in bicycle infrastructure, a well-connected bicycle network, integration with the County roads program and managing safe vehicular traffic speeds.

A3) Implement a pedestrian program that encourages more pedestrian trips through planning and infrastructure improvements to address deterrents to walking such as safety, connectivity and attractiveness.

Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.

Action:

A4) Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment.

A5) Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community.

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters

Objective #1- Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed

Actions:

A2) Assess and catalogue all sports and recreation facilities and events as well as visitor accommodations and rates.

A3) Investigate the economics of sports and recreation on Kaua'i.

A4) Create a sports and recreation marketing plan and promotional materials.

A5) Expand and/or build upon existing sports events such as the Kaua'i Marathon.

A6) Create a business plan for a multipurpose sports and recreation facility.

Goals, Objectives & Actions – Sports & Recreation

The following Goals, Objectives & Actions have been excerpted from the integrated Goals, Objectives & Actions section in the first half of the report and represent only those items labeled as pertaining to the Sports & Recreation industry cluster.

Goal #1: Build, attract and retain a 21st century workforce.

Objective #1: Increase college and career readiness among students in grades K-20.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O1.A1: Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-17: Form core task force, establish model 2018-19: Recruit initial partners; launch	HIDOE; COK-WIOA; COK-KWIB; KCC; KEDB; Keiki to Careers; Junior Achievement; Businesses	\$25,000 to \$50,000 for pilot program \$20,000 per student for a paid 3-month internship	HIDOE KCC Private sector	No
G1.O1.A2: Increase vocational training opportunities for careers that do not require college degrees. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form a core task force; next steps TBD	HIDOE; COK-WIOA; COK-KWIB; WorkWise Kaua'i; KCC; KEDB; Businesses	TBD	Private sector HIDOE	No
G1.O1.A3: Develop education and training for players and officials for Sports & Recreation activities S&R	1st Priority	Form a core task force; next steps TBD	HIDOE; COK-WIOA; COK-KWIB; WorkWise Kaua'i; KCC; KEDB; Businesses	TBD	TBD	No
G1.O1.A4: Address water safety issues by monitoring and educating the community regarding appropriate behavior vis-à-vis hiking and other accessibility S&R	1st Priority	Form a core task force; next steps TBD	HIDOE; COK-WIOA; COK-KWIB; WorkWise Kaua'i; KCC; KEDB; Businesses	TBD	TBD	No

Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O2.A1: Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	2016-20: Form core task force, coordinate / sequence with job creation, conduct and promote / advertise job fairs annually, other next steps TBD	HIDOE, KCC-OCET, Industry Businesses	TBD for logistics and promotion of job fairs	TBD	No
G1.O2.A2: Explore business development opportunities in the Sports & Recreation industry S&R	2nd Priority	TBD	COK-OED, KEDB, Businesses	TBD	TBD	TBD
G1.O2.A3: Explore business development opportunities, leveraging sports & recreation events and activities S&R	2nd Priority	TBD	COK-OED, KEDB, Businesses	TBD	TBD	TBD
G1.O2.A4: Assess upcoming trends and opportunities S&R	2nd Priority	TBD	COK-OED, KEDB, Businesses	TBD	TBD	TBD
G1.O2.A5: Leverage sister-city relations to enhance existing and develop new activities and events S&R	2nd Priority	TBD	COK-OED, KEDB, Businesses	TBD	TBD	TBD
G1.O2.A6: Cluster events together vis-à-vis timing and location S&R	2nd Priority	TBD	COK-OED, KEDB, Businesses	TBD	TBD	TBD

Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O3.A1: Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-2020: Form core task force, coordinate / sequence with job creation, develop and launch program	KEDB Businesses	TBD	TBD	No

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses/organizations.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G2.O1.A1: Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, recruit and utilize industry mentors, other next steps TBD	KEDB, HISBDC – Kaua'i (partner for business incubation), Junior Achievement (partner for youth programs)	TBD	TBD	No
G2.O1.A5: Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, next steps TBD	KCC Kaua'i Small Business Development Center (SBDC) North Shore Venture Gang and Hanalei Rotary (potential partners)	TBD	TBD	No

Objective #2: Build capacity among existing businesses and nonprofit organizations to grow their enterprises and increase their sustainability.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G2.O2.A1: Provide and increase participation in capacity-building workshops on business planning, grant writing, marketing and other business practices. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KCC HISBDC – Kaua'i	TBD	TBD	No

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O1.A1: Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD; adapt / build upon SBDC Hawaii Disaster Guide (Disaster Recovery Guide for Business)	American Red Cross HISBDC – Kaua'i	TBD	TBD	No
G3.O1.A2: Identify and cultivate the next generation of leaders in each industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB as facilitator Industry businesses and organizations	TBD	TBD	No

Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O2.A1: Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	COK, KIUC, PMRF, Civil Defense, KVB	TBD	TBD	No

Goal #4: Increase collaboration.

Objective #1: Increase collaboration both within and across industries.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O1.A1: Form core task forces to champion CEDS Actions and other initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A2: Foster greater inter-industry collaboration. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A3: Increase communication and collaboration with the visitor industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB, COK-OED, KVB	TBD	TBD	No
G4.O1.A5: Increase collaboration with the film and television industry. S&R	2nd Priority	TBD	KEDB, COK-OED, KVB	TBD	TBD	No

Objective #2: Increase communication, engagement and collaboration between industry cluster businesses/organizations and their key stakeholders such as public officials and community members with diverse viewpoints.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O2.A1: Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	TBD	TBD	TBD	No
G4.O2.A2: Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No
G4.O2.A3: Increase statewide, national and international partnerships and collaborations. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No
G4.O2.A4: Clarify hotel rates to indicate affordable rates offered for special sports & recreation related events S&R	2nd Priority	TBD	KEDB, COK-OED, KVB, Businesses	TBD	TBD	No

Goal #5: Ensure sustainable development.

Objective #3: Implement the Kaua'i Multimodal Land Transportation Plan (MLTP) by 2035.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O3.A2: Implement a bicycle program that includes regular investment in bicycle infrastructure, a well-connected bicycle network, integration with the County roads program and managing safe vehicular traffic speeds. H&W, S&R, ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	COK	TBD	TBD	No
G5.O3.A3: Implement a pedestrian program that encourages more pedestrian trips through planning and infrastructure improvements to address deterrents to walking such as safety, connectivity and attractiveness. H&W, S&R, ST&P	1st Priority	2016: Address remaining immediate priorities 2016-20: Address mid-range priorities	COK	TBD	TBD	No
Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O5.A4: Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A5: Investigate the Small Town America Main Street Program as a means of revitalizing Rice Street Business Community. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters.

Objective #1: Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G7.O1.A2: Assess and catalogue all sports and recreation facilities and events as well as visitor accommodations and rates. S&R	1st Priority	TBD	TBD	TBD	TBD	No
G7.O1.A3: Investigate the economics of sports and recreation on Kaua'i. S&R	2nd Priority	TBD	TBD	TBD	TBD	No
G7.O1.A4: Create a sports and recreation marketing plan and promotional materials. S&R	2nd Priority	TBD	TBD	TBD	TBD	No
G7.O1.A5: Expand and/or build upon existing sports events such as the Kaua'i Marathon. S&R	1st Priority	TBD	TBD	TBD	TBD	No
G7.O1.A6: Create a business plan for a multipurpose sports and recreation facility. S&R	1st Priority	TBD	TBD	TBD	TBD	No
G7.O1.A7: Feasibility study on multi-use regional parks S&R	1st Priority	TBD	TBD	TBD	TBD	No
G7.O1.A8: Identify appropriate location for multi-use sports arena S&R	1st Priority	TBD	TBD	TBD	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G7.O1.A9: Prioritize feasibility of regional athletic facilities/community centers S&R	1st Priority	TBD	TBD	TBD	TBD	No
G7.O1.A10: Encourage and support more state funding for state and county parks/facilities S&R	1st Priority	TBD	TBD	TBD	TBD	No
Objective #2: Continue to build capacity for economic development in each of the six target industry clusters, as needed.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G7.O2.A1: Secure more sponsorships (cash / in-kind) for sports and recreation events. S&R	2nd Priority	TBD	Event organizers	TBD	TBD	No
G7.O2.A2: Revamp sports and recreation events and facilities to comply with industry regulations and sanction requirements. S&R	2nd Priority	TBD	TBD	TBD	TBD	No
G7.O2.A3: Maintain and renovate existing facilities as needed. S&R	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #8: Enhance the community's ability to thrive.

Objective #1: Support the health and wellness of the community.						
Action	Priority	*Steps Required and Time Frame	*Key Implementers	*Estimated Costs	*Funding Sources	EDA Eligible?
G8.O1.A3: Increase access to and community interest in health and wellness programs, including worksite wellness. H&W, S&R	1st Priority	TBD	GetFit Kaua'i	TBD	TBD	No
Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O2.A1: Increase access to reliable high-speed broadband Internet. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-20: Assess access and capacity; identify next steps and implement	State Dept. of Business, Economic Development & Tourism (DBEDT) County	TBD	U.S. Dept. of Agriculture	No
Objective #3: Increase the quality and affordability of life on Kaua'i.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O3.A1: Increase availability of affordable housing. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016: Completion of County General Plan 2017-2020: Possible policy changes and construction of affordable housing	County Major landowners Developers	TBD	Private sector	No
G8.O3.A2: Continue to improve public education on the island. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD in line with HIDEO's initiatives	HIDOE	TBD	HIDOE Federal grants Private sector	No

Sports & Recreation – Metrics:

- Number of jobs created
- Increase in industry cluster earnings and / or earnings per NAICS code description
- Increase in average annual wages and / or earnings per employee
- Increase in traded clusters, i.e., goods and services being exported out of the County
- Increase in workforce readiness as indicated by high school and college graduation rates and other academic indicators

Core Task Force Suggested Members:

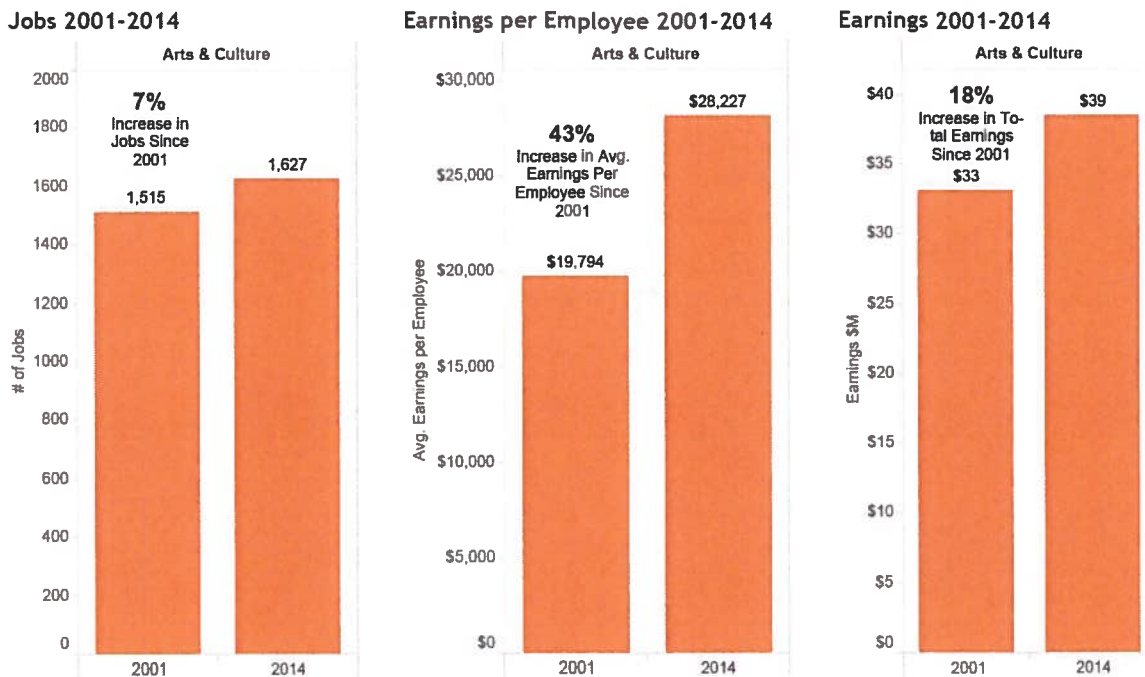
The following is an alphabetical list of organizations identified by the focus group as potential participants and collaborators in this industry cluster's activities. However, the organizations outlined in red have been identified by the focus group as those that should play a key role in the Core Task Force to be formed for this cluster, based on the Core Task Force Characteristics outlined on page 33:

- County of Kaua'i – Office of Economic Development (OED)
- County of Kaua'i – Department of Parks & Recreation
- Kaua'i Economic Development Board
- Kaua'i Visitor's Bureau

Arts & Culture

Jobs & Earnings

The Arts & Culture (A&C) cluster has grown 7% since 2001 to account for 1,627 jobs in 2014. The industry cluster has seen an 18% growth in total employee earnings with approximately \$39 million in 2014. While wages grew significantly by 43%, earnings overall are relatively low as compared to other clusters with employees earning \$28,227 on average annually.



The following table provides detail for the 18 identified NAICS subcategories and the corresponding number of jobs, average earnings per employee and total employee earnings for the A&C cluster. In 2014, the largest number of jobs remains within the category comprised of performing arts, spectator sports and related industries (681 jobs or 41% of the industry). That category is amongst the lowest earners per employee at only \$10,189 per year among jobs included by NAICS.

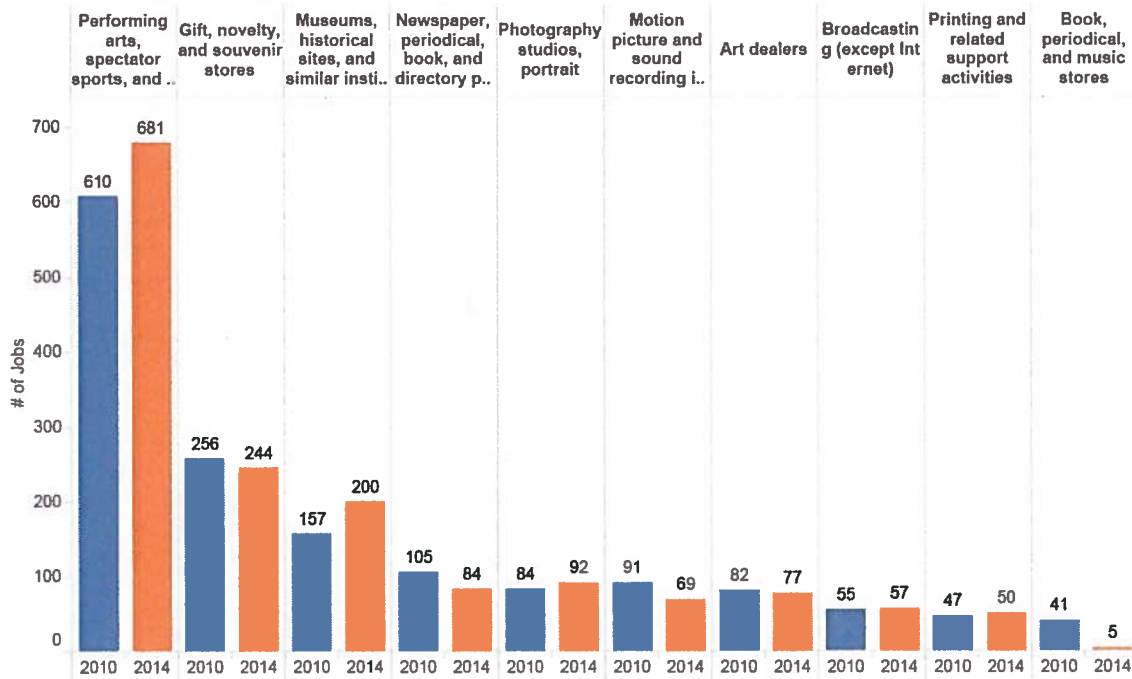
The largest contributor to total earnings for the A&C cluster are museums, historical sites and similar institutions at \$8.4 million in total employee earnings and 200 jobs. Earnings for that cluster are among the highest in the cluster at approx \$41,849 per employee annually.

NAICS Code Description	NAICS Code #	# of Jobs (2014)	Earnings per Employee (2014)	Total Employee Earnings \$M (2014)
Performing arts, spectator sports, and related industries	711	681	\$10,189	\$6.9
Gift, novelty, and souvenir stores	45322	244	\$22,763	\$5.6
Museums, historical sites, and similar institutions	712	200	\$41,849	\$8.4
Photography studios, portrait	541921	92	\$13,682	\$1.3
Newspaper, periodical, book, and directory publishers	5111	84	\$43,021	\$3.6
Art dealers	45392	77	\$33,681	\$2.6
Motion picture and sound recording industries	512	69	\$31,542	\$2.2
Broadcasting (except Internet)	515	57	\$90,243	\$5.1
Printing and related support activities	323	50	\$26,480	\$1.3
Commercial photography	541922	22	\$23,258	\$0.5
Sewing, needlework, and piece goods stores	45113	18	\$9,571	\$0.2
Photofinishing	81292	11	\$47,547	\$0.5
Book, periodical, and music stores	4512	5	\$29,194	\$0.1
Hobby, toy, and game stores	45112	5	\$19,839	\$0.1
Musical instrument and supplies stores	45114	5	\$19,556	\$0.1
Video tape and disc rental	53223	5	\$12,000	\$0.1
Book, periodical, and newspaper merchant wholesalers	42492	2	\$33,670	\$0.1
Paper manufacturing	322	0	\$0	\$0.0

Also of note is the motion picture and sound recording industries category (NAICS 512) which included at least \$2.2 million in employee earnings on Kaua'i in 2014 includes jobs within the video production, distribution and post production categories.

Between 2010 and 2014, total jobs in the A&C cluster increased by 31 from 1,596 to 1,627. The top 10 categories based on total jobs are summarized in the table below. The highest growth of 71 jobs came from within the performing arts, spectator sports and related industries followed by museums, historical sites and similar institutions. Slight increases and decreases are reflected in other categories with the largest decrease in book, periodical and music stores.

Arts & Culture: Jobs-2010 to 2014 (Top 10)



It is important to note that NAICS data and the categorization for the purposes of this report will have a margin of error in accurately reflecting all jobs on Kaua'i within the cluster. Efforts were taken incorporate the nuances and considerations within the cluster, however some relevant jobs and their corresponding wages may not be reflected within this data analysis.

The subcategories of fine arts schools (NAICS 611610) is not reflected in the above total. It is comprised of dance, music and performing arts schools, which would include many of the hula halaus throughout the island, among other types of entities. In 2014, fine arts schools included 40 jobs and approximately \$540,000 in total employee earnings. Total wages in this subcategory decreased from \$20,332 to \$13,402 per employee on average. Dance companies with paid dancers are also included under the performing arts categories, which is reflected in the totals presented above and could include halaus as well, depending on their classification.

Survey Highlights

Between Jan. 15 and Feb. 8, 2016, 14 respondents from the community provided answers to online survey questions regarding the state of the A&C industry cluster. Below are highlights from the responses.

- 86% agreed or strongly agreed that Arts & Culture organizations need programs to help develop revenue streams, be more self-sustaining and reduce dependence on funding.
- When asked what was the biggest opportunity for growth in this cluster, respondents said:

- *“Fashion, jewelry, furniture/fabricated products such as material (for clothing, upholstery, etc). We need to make available more industrially zoned lands for rent/incubators.”*
- *“I see a market for EXCELLENCE in any of the arts. Many times arts on Kauai are of moderate quality and they do not foster the kind of interest and appreciation seen by a higher caliber of arts.”*
- *“Marketing and international studies”*
- 86% agreed or strongly agreed that more leadership and collaboration is needed. Nobody disagreed.
 - *“The quality of artists living on Kauai can be reinforced if more high quality artists/performers are brought here to perform and share their gifts with upcoming artists in all areas. This will also bring in more revenue when the quality of performances is enhanced by experts.”*
 - *“Collaboration between successful artist/related businesses and the willingness of champions to share their tools for success. Also KUGA, Kauai Art Factory, Fashion month.”*
- 71% agreed or strongly agreed that creative technology media is among the greatest areas of opportunity to increase jobs, earnings and funding in the cluster.
- 86% agreed or strongly agreed that there should be more collaboration with the visitor industry.
- When asked what the most important skills are that’s needed in this cluster, respondents said:
 - *“Entrepreneurial mindset and spirit, business training, confidence that art and culture can provide right livelihood, ability of artists, community and government to work cooperatively and strategically.”*
 - *“Creativity and opportunities, mentors, leadership, outlets”*
 - *“Basic work skills Management skills Specific field skills – videography”*

For a full copy of the survey questions and the collected responses, see the Kaua’i CEDS Update 2016-2020 Appendix.

Additional Data

The implementation of the Goals, Objectives & Actions in the Kaua’i CEDS update for 2016-2020 should also draw upon other data, studies, plans and reports regarding the Arts & Culture industry cluster.

For instance, the KEDB (KEDB) and the County of Kaua’i Office of Economic Development (OED) conducted a feasibility study for an arts and culture center in 2015. The [Kaua’i Arts & Culture Feasibility Study Final Report](#) identified 256 arts and culture organizations throughout Kaua’i and defined the industry cluster’s needs in terms of facilities, programs, marketing, funding and leadership.

Other resources include the State of Hawai’i Department of Business, Economic Development & Tourism’s [Hawaii’s Creative Industries Update Report 2015](#) and other reports released by the Creative Industries Division. It should also be noted that Kaua’i Planning & Action Alliance conducted a facility visioning and collaboration building project in 2012, and developed the following vision for the Arts & Culture industry cluster for 2023, updated from the 2010 CEDS vision for the industry cluster for 2020:

KPAA Report Vision for 2023

The CEDS report contains a very eloquent culture and arts vision. It was originally intended that this project would create a vision related to the development of a culture and arts center, but given the lack of support for that effort at this time, the group stated its vision for the year 2023. What follows is the third draft of that vision.

The culture and the arts sector on Kaua'i is vibrant and robust with a wide range of talented artists, artisans and cultural practitioners. We have become a collaborative community of visual arts, fine arts and performing arts and cultural organizations and individuals.

We receive enthusiastic support from residents as well as visitors, who plan their travel around our well-coordinated, active calendar of events and activities. There is community-wide recognition and appreciation that these arts and cultural events also provide opportunities for education, youth enrichment and enhancing artistic creativity.

We have taken advantage of training and technical assistance to increase our organizational capacity. As a result, we have strong leadership, our programs are well-funded, and our practitioners and organizations are thriving and prosperous, offering creative career and volunteer opportunities. Culture and arts organizations are vital partners in maintaining a high quality of life and strong economy for the island.

We have ensured that there are facilities located around the island which serve the culture and arts needs of our varied geographic regions and local communities. These facilities include performance and rehearsal space, galleries, classroom and meeting space, and studios. We have access on an as-needed basis to shared offices, with staff, equipment and conference rooms.

Our culture and arts community is committed to sustaining the solid, financially-viable foundation we have created. We are now ready and excited to work together toward establishing an affordable multi-purpose space designed for cultural and arts events and activities that would accommodate up to 300 people.

In addition, Councilmember JoAnn Yukimura provided the following verbiage for consideration as part of an Arts and Culture industry cluster vision in the CEDS update for 2016-2020:

Flourishing Arts and Culture. *We celebrate life and express our deepest yearnings through a richness of song, dance, poetry, visual arts, music, and drama—and through the perpetuation and sharing of the various cultures that have taken root on Kaua'i. Kaua'i's artists have found ways to leverage their craft into money-generating businesses that give them both right livelihoods and contribute to the economic sustenance of Kaua'i.*

Goals, Objectives, and Actions - Arts & Culture

Goal #1: Build, attract and retain a 21st century workforce

Objective #1- Increase college and career readiness among students in grades K-20

Action:

- A1) Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations.
- A2) Increase vocational training opportunities for careers that do not require college degrees.
- A4) Develop and open the Kaua'i Creative Technology Center.
- A6) Increase arts education in DOE schools / community.
- A7) Support programs that teach our youth Hawaiian language, art, and culture.

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations

Objective #1- Cultivate entrepreneurs and new small businesses/organizations

Action:

- A1) Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs.
- A4) Grow the entrepreneur / startup / maker community.
- A5) Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs.
- A6) Create "Maker Spaces"

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.

Action:

- A1) Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community.
- A2) Identify and cultivate the next generation of leaders in each industry.

Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.

Action:

- A1) Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster.

Goal #4: Increase collaboration

Objective #1- Increase collaboration both within and across industries

Action:

- A1) Form core task forces to champion CEDS Actions and other initiatives.
- A2) Foster greater inter-industry collaboration.
- A3) Increase communication and collaboration with the visitor industry.
- A6) Form an arts and culture industry cluster working group.
- A7) Hold an island-wide arts and culture festival.
- A8) Improve communications between businesses and Arts & Culture organizations
- A9) Hold an island-wide arts and culture festival
- A10) Form an Arts & Culture industry working group

Goal #5: Ensure sustainable development.

Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.

Action:

- A4) Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment.
- A5) Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community.

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters

Objective #1- Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed

Action:

- A6) Create and maintain an online inventory of arts and culture facilities, events and artists and cultural practitioners
- A7) Conduct a feasibility study for the Kaua'i Center for Culture & Arts
- A8) Conduct a feasibility study for permanent fair ground around the island

Objective #2- Continue to build capacity for economic development in each of the six target industry clusters, as needed

Action:

- A4) Define the role of and establish an arts commission and arts commissioner at the County level.
- A5) Learn from and involve the "living treasures" (arts and culture experts, leaders and elders) in every community.
- A6) Support the organized development and continuation of community Art Nights.
- A7) Construct Kaua'i Center for Culture & Arts
- A8) Create affordable space for halau, exhibitors, and practitioners

- A9) Create exhibit space alternatives
- A10) Acquire, rehab, adapt existing historic facilities for new commercial purposes
- A11) Develop interpretive trails and walking tours

Goal #8: Enhance the community's ability to thrive.

Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.

Action:

- A1) Increase access to reliable high-speed broadband Internet.

Objective #3: Increase the quality and affordability of life on Kaua'i.

Actions:

- A1) Increase availability of affordable housing.
- A2) Continue to improve public education on the island.

Goals, Objectives & Actions – Arts & Culture

The following Goals, Objectives & Actions have been excerpted from the integrated Goals, Objectives & Actions section in the first half of the report and represent only those items labeled as pertaining to the Arts & Culture industry cluster.

Goal #1: Build, attract and retain a 21st century workforce.

Objective #1: Increase college and career readiness among students in grades K-20.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O1.A1: Strengthen student interest in careers through increased experiential learning, internships, externships and partnerships among schools, higher education institutions and industry companies or organizations. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-17: Form core task force, establish model 2018-19: Recruit initial partners; launch	HIDOE; County WIOA; County KWIB; KCC; KEDB; Keiki to Careers; Junior Achievement; Businesses	\$25,000 to \$50,000 for pilot program \$20,000 per student for a paid 3-month internship	HIDOE KCC Private sector	No
G1.O1.A2: Increase vocational training opportunities for careers that do not require college degrees. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form a core task force; next steps TBD	HIDOE; County WIOA; County KWIB; WorkWise Kaua'i; KCC; KEDB; Businesses	TBD	Private sector HIDOE	No
G1.O1.A4: Develop and open the Kaua'i Creative Technology Center. A&C, S&T	1st Priority	Fundraising, environment study, construction, community engagement toward opening in late 2018	KEDB; County OED; HISBDC – Kaua'i (partner for business incubation) Creative / tech industry	\$20.5 million	EDA, State, private foundations & individuals	Yes
G1.O1.A6: Increase arts education in DOE schools / community. A&C	2nd Priority	Form core task force, next steps TBD	KCC	TBD	TBD	No
G1.O1.A7: Support programs that teach our youth Hawaiian language, art, and culture. A&C	1st Priority	Form a core task force; next steps TBD	HIDOE; County WIOA; County KWIB; WorkWise Kaua'i; KCC; KEDB; Businesses	TBD	TBD	No

Objective #2: Increase hiring and retention of Kaua'i residents among target industry cluster companies and organizations to reduce or prevent 'brain drain.'

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O2.A1: Establish and/or expand workforce recruitment programs at local high schools and at Kaua'i Community College. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	2016-20: Form core task force, coordinate/sequence with job creation, conduct and promote/advertise job fairs annually, other next steps TBD	HIDOE, KCC, Industry	TBD for logistics and promotion of job fairs	TBD	No

Objective #3: Increase recruitment and acculturation of top talent from all over the world, including bringing former Kaua'i residents home.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G1.O3.A1: Establish and/or expand top talent recruitment and 'bring Kaua'i home' initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-2020: Form core task force, coordinate / sequence with job creation, develop and launch program	KEDB Businesses	TBD	TBD	No

Goal #2: Encourage innovation and the development of small, mid-size and large businesses and organizations.

Objective #1: Cultivate entrepreneurs and new small businesses/organizations.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G2.O1.A1: Support entrepreneurs in all CEDS target industry clusters with more business training, incubator and accelerator programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, recruit and utilize industry mentors, other next steps TBD	KEDB; HISBDC – Kaua'i (partner for business incubation); Junior Achievement (partner for youth programs)	TBD	TBD	No
G2.O1.A4: Grow the entrepreneur / startup / maker community. A&C, S&T	2nd Priority	Form core task force, next steps TBD	TBD	TBD	TBD	No

G2.O1.A5: Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, next steps TBD	KCC HI SBDC Kaua'i North Shore Venture Gang and Hanalei Rotary (potential partners)	TBD	TBD	No
G2.O1.A6: Create "Maker Spaces" A&C,						

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O1.A1: Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD adapt / build upon SBDC Hawaii Disaster Guide (Disaster Recovery Guide for Business)	American Red Cross HISBDC – Kaua'i	TBD	TBD	No
G3.O1.A2: Identify and cultivate the next generation of leaders in each industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB as facilitator Industry businesses and organizations	TBD	TBD	No

ment in each of the six target industry clusters, as needed.

Time	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
County	County	TBD; should include salary and program budget	TBD	No
	TBD	TBD	TBD	No
	TBD	TBD	TBD	No
	TBD	TBD	TBD	TBD
	TBD	TBD	TBD	TBD
	TBD	TBD	TBD	TBD
	TBD	TBD	TBD	TBD
	TBD	TBD	TBD	TBD

G2.O1.A5: Increase collaboration with and funding through state and federal entrepreneurship and / or mentorship programs. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	Form core task force, next steps TBD	KCC HI SBDC Kaua'i North Shore Venture Gang and Hanalei Rotary (potential partners)	TBD	TBD	No
G2.O1.A6: Create "Maker Spaces" A&C,						

Goal #3: Increase adaptability and resilience, particularly regarding natural disasters and climate change.

Objective #1: Ramp up steady-state resilience initiatives to bolster Kaua'i's long-term economic durability.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O1.A1: Develop natural disaster and climate change mitigation, adaptation, preparedness and recovery plans for Kaua'i's major industries, including tourism and the six target industry clusters, and engage the community. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD; adapt / build upon SBDC Hawaii Disaster Guide (Disaster Recovery Guide for Business)	American Red Cross HISBDC – Kaua'i	TBD	TBD	No
G3.O1.A2: Identify and cultivate the next generation of leaders in each industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB as facilitator Industry businesses and organizations	TBD	TBD	No

Objective #2: Ramp up responsive resilience initiatives to enable more rapid recovery after an incident.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G3.O2.A1: Establish a system for swift communication, coordination and mobilization of public and private sectors in the event of a natural disaster. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	County, KIUC, PMRF, Civil Defense	TBD	TBD	No

Goal #4: Increase collaboration.

Objective #1: Increase collaboration both within and across industries.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O1.A1: Form core task forces to champion CEDS Actions and other initiatives. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A2: Foster greater inter-industry collaboration. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A3: Increase communication and collaboration with the visitor industry. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	KEDB	TBD	TBD	No
G4.O1.A6: Form an arts and culture industry cluster working group. A&C	1st Priority	TBD	TBD	TBD	TBD	No
G4.O1.A7: Hold an island-wide arts and culture festival. A&C	2nd Priority	TBD	TBD	TBD	TBD	No

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G4.O1.A8: Improve communications between businesses and Arts & Culture organizations A&C	1st Priority	TBD	TBD	TBD	TBD	No
G4.O1.A9: Hold an island-wide arts and culture festival A&C	1st Priority	TBD	TBD	TBD	TBD	No
G4.O1.A10: Form an Arts & Culture industry working group A&C	1st Priority	TBD	TBD	TBD	TBD	No
Objective #2: Increase communication, engagement and collaboration between industry cluster businesses/organizations and their key stakeholders such as public officials and community members with diverse viewpoints.						
G4.O2.A1: Build capacity for industry cluster businesses and organizations to perform strategic communications, community building and/or advocacy to move initiatives forward, reach compromise and find synergies. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD	TBD	TBD	TBD	No
G4.O2.A2: Increase engagement with public officials at the local, state and federal levels to advance initiatives and policies that will benefit Kaua'i. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No
G4.O2.A3: Increase statewide, national and international partnerships and collaborations. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	Industry businesses and organizations	TBD	TBD	No

Goal #5: Ensure sustainable development.

Objective #5: Preserve, protect and manage utilization of Kaua'i's natural resources.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G5.O5.A4: Support Complete Streets initiative and other initiatives to increase livability and resilience in the built environment. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No
G5.O5.A5: Investigate the Small Town America Main Street Program as a means of revitalizing the Rice Street Business Community. A&C, F&A, H&W, S&T, S&R, ST&P	2nd Priority	TBD	TBD	TBD	TBD	No

Goal #7: Develop plans and continue to build capacity for economic development in each of the six target industry clusters.

Objective #1: Assess the economic potential and/or develop plans for economic development in each of the six target industry clusters, as needed.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G7.O1.A6: Create and maintain an online inventory of arts and culture facilities, events and artists and cultural practitioners. A&C	2nd Priority	TBD	County arts commissioner or arts nonprofit	\$40,000 to create the inventory; cost for updates TBD	TBD	No
G7.O1.A7: Conduct a feasibility study for the Kaua'i Center for Culture & Arts. A&C	1st Priority	TBD	KEDB, COK-OED	TBD	TBD	TBD
G7.O1.A8: Conduct a feasibility study for permanent fair ground around the island A&C.	1st Priority	TBD	KEDB, COK-OED	TBD	TBD	TBD

Objective #2: Continue to build capacity for economic development in each of the six target industry clusters, as needed.

Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G7.02.A4: Define the role of and establish an arts commission and arts commissioner at the County level. A&C	1st Priority	2016-20: Develop job descr. & budget, propose to County Council	County	TBD, should include salary and program budget	TBD	No
G7.02.A5: Learn from and involve the "living treasures" (arts and culture experts, leaders and elders) in every community. A&C	2nd Priority	TBD	TBD	TBD	TBD	No
G7.02.A6: Support the organized development and continuation of community Art Nights. A&C	2nd Priority	TBD	TBD	TBD	TBD	No
G7.02.A7: Construct Kaua'i Center for Culture & Arts A&C	1st Priority	TBD	TBD	TBD	TBD	TBD
G7.02.A8: Create affordable space for halau, exhibitors, and practitioners A&C	1st Priority	TBD	TBD	TBD	TBD	TBD
G7.02.A9: Create exhibit space alternatives A&C	1st Priority	TBD	TBD	TBD	TBD	TBD
G7.02.A10: Acquire, rehab, adapt existing historic facilities for new commercial purposes A&C	1st Priority	TBD	TBD	TBD	TBD	TBD
G7.02.A11: Develop interpretive trails and walking tours. A&C	1st Priority	TBD	TBD	TBD	TBD	TBD

Goal #8: Enhance the community's ability to thrive.

Objective #2: Increase the availability and utilization of technology to facilitate greater learning, collaboration, communication and connectivity on island and between Kaua'i and the world.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O2.A1: Increase access to reliable high-speed broadband Internet. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016-20: Assess access and capacity; identify next steps and implement	HI-DBEDT, COK-OED	TBD	U.S. Dept. of Agriculture	No
Objective #3: Increase the quality and affordability of life on Kaua'i.						
Action	Priority	Steps Required and Time Frame	Key Implementers	Estimated Costs	Funding Sources	EDA Eligible?
G8.O3.A1: Increase availability of affordable housing. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	2016: Completion of County General Plan 2017-2020: Possible policy changes and construction of affordable housing	COK, Major landowners, Developers	TBD	Private sector	No
G8.O3.A2: Continue to improve public education on the island. A&C, F&A, H&W, S&T, S&R, ST&P	1st Priority	TBD in line with HIDOE's initiatives	HIDOE	TBD	HIDOE Federal grants Private sector	No

Arts & Culture Metrics:

- Number of jobs created
- Increase in industry cluster earnings and/or earnings per employee
- Increase in average annual wages and/or earnings per employee
- Increase in traded clusters, i.e., goods and services being exported out of the County
- Increase in workforce readiness as indicated by high school and college graduation rates and other academic indicators

Core Task Force Suggested Members:

The following is an alphabetical list of organizations identified by the focus group as potential participants and collaborators in this industry cluster's activities. However, the organizations outlined in red have been identified by the focus group as those that should play a key role in the Core Task Force to be formed for this cluster, based on the Core Task Force Characteristics outlined on page 33:

- County of Kaua'i – Office of Economic Development
- Garden Island Arts Council
- Kaua'i Economic Development Board
- Kaua'i Visitors Bureau

Evaluation Framework

Evaluation of the progress toward and achievement of the Goals, Objectives and Actions can be tracked by metrics such as those mentioned in the integrated Goals, Objectives and Actions section table.

Broadly speaking, progress regarding the CEDS can be measured by metrics such as:

- Number of jobs created
- Increase in industry cluster earnings and / or earnings per NAICS code description
- Increase in average annual wages and / or earnings per employee
- Increase in traded clusters, i.e., goods and services being exported out of the County
- Increase in workforce readiness as indicated by high school and college graduation rates and other academic indicators

In addition, the numerous stakeholders and organizations who were involved in the Kaua'i CEDS update for 2016-2020 can utilize and define other metrics as relevant.

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