



From Today to Tomorrow

A Talent Roadmap to Support Economic Recovery in Hawai'i

August 2020

At a Glance

This roadmap outlines how Hawai'i can rebuild its economy and build a talent pipeline that provides all of the state's residents with access to education and training opportunities that lead to economic advancement. Doing so will require the development of career pathway strategies in the recession-resilient career clusters of healthcare, technology, and skilled trades. Three core strategies to advance this work are expanding work-based learning, rapid reskilling and credentialing, and growing sector-based strategies. The successful implementation of these strategies will require stakeholders to organize and work across sectors. **This roadmap shows how state leaders can fill Hawai'i jobs with local workers, ensure employment for displaced workers, and create lasting and effective partnerships across education and industry.**



About the Cover Image

Pu‘u ‘O Moa‘ulaiki (pictured) and Kealaikahiki, on the island of Kaho‘olawe, are locations in the central latitude of the main Hawaiian Islands. Archeological evidence and oral traditions substantiate the importance of these places where navigators of old would ho‘opa‘a, or affix, the sky at the halfway point of Hawai‘i in their mind’s eye. From this seat, navigators would study the stars and sea.

Modern resurgence of the sailing and navigational tradition has brought today’s navigators to study in this very spot of their kūpuna (elders). These actions honor the place, the people, and traditions of voyaging through traditional chants of welcome, performing cultural ceremonies and protocols and ensure safety for all who enter and depart from this sacred place.

PHOTO CREDIT: Kaho‘olawe Island Reserve Commission

Acknowledgements

The Hawai'i Executive Collaborative, Hawai'i Community Foundation, Harold K.L. Castle Foundation, and Strada Education Network have joined together to commission national expert Jobs for the Future (JFF) to work alongside local partners Hawai'i P-20 and the Chamber of Commerce Hawaii to produce a *Talent Roadmap to Support Economic Recovery in Hawai'i*.

We would like to thank the industry, education, training, and workforce development leaders across Hawai'i who contributed to the development of this roadmap, particularly members of the Advisory Committee, the 175 people who responded to our survey, and the participants in our interviews, each of whom provided insight around which strategies to pursue and on-the-ground knowledge of existing initiatives. We are particularly grateful for the partnership of Alex Harris (Harold K.L. Castle Foundation), Kelly Miyamura (Hawai'i P-20), and Keala Peters (Chamber of Commerce Hawaii) who provided guidance, feedback, and resources throughout this project. This work would not be possible without the leadership of Terry George of the Harold K.L. Castle Foundation and Chris Van Bergeijk of the Hawai'i Community Foundation.

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JFF is a national nonprofit that drives transformation in the American workforce and education systems. For 35 years, JFF has led the way in designing innovative and scalable solutions that create access to economic advancement for all. Join us as we build a future that works.

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Table of Contents

Introduction	1
Our Challenge	1
Our Opportunity	2
Our Call to Action	4
Overview of the Roadmap	5
Labor Market Considerations	6
Moving Forward	9
Strategic Opportunities to Invest and Scale	12
Expand Work-Based Learning.....	12
Rapidly Reskill and Credential	17
Grow Sector-Based Strategies.....	23
Organizing for Outcomes	26
Supportive Policies	30
Key State Policy Levers	30
Federal Funding Opportunities	33
Conclusion	35
APPENDIX A: Supplementary Labor Market Information	37
APPENDIX B: Skills Transferability Sample	39
APPENDIX C: Draft Outcomes Dashboard.....	41
APPENDIX D: Stakeholder Survey Data.....	42

Introduction

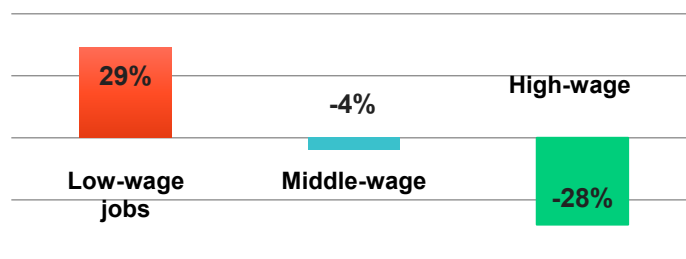
The crisis created by the COVID-19 pandemic and subsequent economic recession demands a response from leaders representing industry, education, training, and workforce and economic development across the state of Hawai‘i. **Leaders have the opportunity to invest in talent development strategies with a double benefit: spurring economic recovery and growth and ensuring that all residents of Hawai‘i have the education and skills needed to succeed in careers that offer family-sustaining wages.** Working together, leaders can use this crisis as an opportunity to reimagine education, training, and workforce development to successfully address the state’s most pressing economic challenges.

Our Challenge

In May 2020, Hawai‘i faced the second-highest unemployment rate nationwide (22.6 percent, compared to 13.3 percent nationally), and the state had lost 128,200 non-farm jobs compared to one year ago.¹ Both Kaua‘i and Maui counties have been particularly hard hit, with unemployment rates of 29.9 percent and 33.4 percent, respectively.² While the challenge that the state faces is significant, the current economic context also creates an opportunity for Hawai‘i to both build a comprehensive talent development strategy and lay the groundwork for a more equitable economy that will be less vulnerable to future downturns and shocks.

A strong and inclusive recovery requires new strategies that build a different economy for the state. In the wake of the 2008 recession, the lack of a clear talent strategy for Hawai‘i led to an economy built in significant part on low-wage jobs. Between 2007 and 2018, low-wage jobs increased by 29 percent, while middle- and high-wage jobs decreased by four percent and 28 percent, respectively.³ (See Figure 1.) The COVID-19 pandemic has highlighted the underlying weakness of the state’s economy. With the prevalence of tourism, the state has a significant proportion of workers in low-wage occupations with little opportunity for

Figure 1. Change in the Share of Jobs in Hawai‘i, 2007-2018



¹ UHERO, “[Total Nonfarm Jobs](#),” June 2020.

² State of Hawaii Department of Labor and Industrial Relations, “[Monthly Data Release](#),” June 18, 2020.

³ Hawai‘i Budget and Policy Center, “[Hawai‘i Wages and Household Costs](#),” May 2020.

advancement. These workers are the most vulnerable to economic shocks, as noted by recent research by the Brookings Institution.⁴ The United for ALICE Research Center found that, pre-COVID, 42 percent of households in the state were classified as “asset limited, income constrained, and employed” (ALICE). That number has jumped to 59 percent as a result of the pandemic-induced recession.⁵ **To build a strong, sustainable state economy, leaders must seek to simultaneously decrease unemployment and increase the availability of high-wage jobs.**

Our Opportunity

The evidence is clear: education pays—for workers and for the state’s economy. Higher levels of education are tied to lower unemployment, higher wages, and stronger economic growth.⁶ In 2008, state leaders set a goal that 55 percent of working-age adults would hold postsecondary degrees by 2025. However, Hawai‘i is not yet on track to achieve that goal. In the ten years after the goal was set, the state’s postsecondary attainment rate grew only slightly, from 42 percent to 46 percent. And even if the state reaches its goal, 55 percent falls short of the state’s talent needs. Projections showed that, by this year, 70 percent of jobs in the state will require some postsecondary education.⁷

This mismatch between educational attainment and labor-market needs is a threat to the state’s economic health. Research clearly demonstrates that education not only increases individuals’ wages and success in the labor market, it also spurs overall economic growth. For every percentage point increase in the growth rate of the portion of a state’s population with at least a bachelor’s degree, the state’s real gross domestic product (GDP) growth rate increases by about 0.08 percentage points. If Hawai‘i had increased the growth rate at which people receive bachelor’s degrees by one percentage point for the past decade, that would have translated to about a \$464 million increase in the state’s real GDP.⁸

Education is an avenue to living-wage jobs that provide residents of Hawai‘i with a means to support themselves and their families—thus reversing the increase in the number of households in the state classified as ALICE. In Hawai‘i, the return on investment in education for individuals is clear. Postsecondary education provides a path to economic advancement, with

⁴ Robert Muro et al., “[The Places a COVID-19 Recession will Hit Hardest](#),” March 2020.

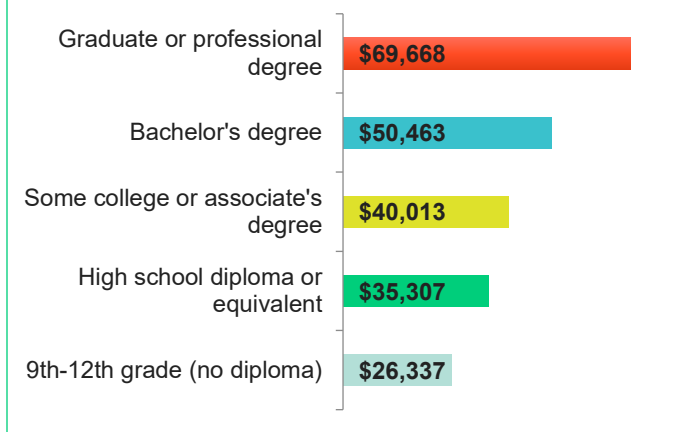
⁵ United for ALICE Research Center, [Hawai‘i profile](#).

⁶ 55 by ‘25, [Why College](#).

⁷ 55 by ‘25, [Why College](#).

⁸ Douglas Holtz-Eakin and Tom Lee, “[The Economic Benefits of Educational Attainment](#),” American Action Forum, June 2019.

Figure 2. Median Earnings for Adult Civilian Workers by Degree



wages steadily increasing with educational attainment. (See Figure 2.⁹) Extensive research has demonstrated the benefits of higher educational credentials, including higher employment rates and earnings.^{10, 11} In addition, education is associated with increased access to better-paying jobs.¹² The benefits of education also extend beyond its immediate labor-market value; increased educational attainment is associated with decreased participation in public benefit programs,

improved perception of one's health, and greater civic engagement, including higher levels of volunteerism and voting.¹³

The opportunity before state leaders is the ability to transform the lives of residents of the state who are struggling to gain a foothold in the state's economy—while also creating a climate in which the state's economy can thrive and grow. This dual transformation—for individuals and the economy—can be achieved through the development of short-and long-term education and training strategies designed to meet the state's needs. For example, a short-term training strategy could support an out-of-work hotel worker in pairing their existing customer service skills with knowledge gained through short-term training in health care, putting a displaced worker on a path to economic advancement. A longer-term strategy might focus on engaging youth in career exploration opportunities in emerging sectors such as clean energy, providing young people with hope and an understanding of the possibilities for economic advancement available in the state.

These strategies also benefit industry and the state's economy by building a talent pipeline that can meet both short- and long-term needs. Industry leaders in high-wage fields such as

⁹ 55 by '25, [55 by '25 Dashboard](#).

¹⁰ Research and Economic Analysis Division, Hawaii State Department of Business, Economic Development and Tourism, "[Statistics Brief](#)," January 2016.

¹¹ Pearl Iboshi, "[Analysis of Differential Characteristics of Those who Leave Without a Degree and Those who Attain a Degree](#)," Institutional Research and Analysis Office, University of Hawai'i, May 2017.

¹² Jean Osumi and Anita Huang, "[Hawaii's Education-to-Workforce Pipeline](#)," Hawai'i ACTE Conference, November 9, 2017.

¹³ Institute for Higher Education Policy, "[The Investment Payoff: A 50-State Analysis of the Public and Private Benefits of Higher Education](#)," February 2005.

engineering are prepared to offer technical training to new employees, but need a pipeline of workers who come to the job with strong employability skills. Education and training programs can meet that need if educators partner with industry leaders to build programs that incorporate internships, team projects, and design challenges to equip thousands of young people with needed employability skills. For example, Hawaiian Electric is launching 29 grid-scale renewable energy projects, representing an investment of as much as \$4 billion in clean energy and the state's economy.¹⁴ But the state will only be able to take full advantage of this opportunity if Hawai'i has a pipeline of the skilled workers needed for these projects, thus preventing the need to bring in workers from outside the state. The current crisis provides an opportunity for state leaders to redouble their efforts to build just such a talent pipeline.

Our Call to Action

The current crisis offers state leaders an opportunity to break away from business as usual and embrace bold new strategies and ways of working that can transform Hawai'i and the lives of its residents. We know that education is vital for a skilled workforce and productive economy: it increases earnings and employment and drives growth. Yet Hawai'i's progress toward building a workforce with valuable degrees and industry-recognized credentials is not keeping pace with the state's economic needs. Hawai'i needs new strategies to get people back to work and spur economic growth. In ten years, postsecondary attainment in the state grew by four percentage points. This roadmap calls on state leaders to more than double that growth in half the time—a 10-point gain in five years. This is the growth needed to build a strong Hawai'i economy.

As leaders in Hawai'i pivot from responding to the immediate effects of the COVID-19 crisis, they will need to create the conditions that accelerate the state's transition to renewing and rebuilding for long-term recovery—the third phase of the state's [Beyond Recovery](#) strategy—and finally into building resilience for a stronger Hawai'i in phase four of the strategy. This roadmap lays out strategies through which cross-sector leaders in the state can seize the opportunity they now have to reorient state systems to support statewide economic growth and economic advancement for all residents of Hawai'i.

By pairing federal, state, and private resources with new learning and training models, Hawai'i can accelerate more people into jobs that are insulated from economic shocks and point the way toward recovery and resilience. We call on public officials and leaders in business and philanthropy to secure the necessary capital to invest in these strategies. And we call on education and workforce development leaders to double down on the promising practices from

¹⁴ Hawaiian Electric, "[29 planned renewable projects represent \\$3.5-\\$4 billion clean energy investment in Hawaii](#)," July 1, 2020.

across the state highlighted in this road map and to pursue bold new ideas to reimagine education and workforce development systems that work for all. **These programs can no longer serve dozens or even hundreds. Now they must literally serve thousands. By working together—and measuring our progress—we can open the door to economic advancement for all of the state’s residents, ensure a qualified applicant for every job opening, and build an economy that works for Hawai‘i’s future.**

Overview of the Roadmap

Hawai‘i has set forth an economic recovery plan that moves the state from stabilization to recovery—and ultimately resilience.¹⁵ This roadmap is designed to serve as a guide for how state leaders can accelerate this work by taking bold action to grow the talent and skills of Hawai‘i’s residents. State leaders have long sought to create opportunities that improve access to education and employment for all citizens, but these efforts take on new urgency in the context of the current crisis. Fragmented, standalone efforts must not continue. It is imperative that leaders from across systems rally together, collectively evaluate data, and invest limited resources in smarter ways. Success will require that cross-sector leaders commit to a shared set of strategic outcomes that drive work across systems and institutions.

The roadmap identifies both short-term priorities and long-term systemic adaptations; it also outlines tactics to strengthen alignment of initiatives across education and industry. These will require dedicated collaboration across K-12 education, postsecondary education, workforce development agencies, and industry leadership. The roadmap focuses on three areas for strategic action to support economic recovery in Hawai‘i:

- Expand work-based learning
- Rapidly reskill and credential
- Grow sector-based strategies

A sustainable and inclusive economic recovery will require that efforts in each of these strategic action areas prioritize recession-resilient career clusters and sectors that offer high-wage, high-growth career pathways. This roadmap identifies three industry clusters for targeted investment and strategic support:

- **Health care**, including both clinical and community health
- **Technology**, including IT, biotechnology, and emerging clean energy occupations
- **Skilled trades**, including sustainable agriculture, manufacturing, and construction

¹⁵ Office of the Governor of the State of Hawai‘i David Y. Ige, “[Creating a Roadmap to Recovery for Hawai‘i](#),” April 30, 2020.

Tourism obviously represents a large share of the economy, and it is not surprising that the state seeks to reimagine tourism as many of the small businesses comprising large swaths of Hawai'i's tourism economy increasingly struggle for survival. One bright spot is a tourism industry that is increasingly grounded in sustainable practices and cultural experiences. By prioritizing skill development in sustainable practices, host culture, and technology, Hawaii can reimagine tourism and prepare employees with the skills and knowledge necessary to survive and even thrive during this transition.

A multi-phase, two-month process led to the development of this roadmap. The first phase included research to identify work in progress and best practices across the state to replicate and scale. A statewide stakeholder survey, completed by 175 respondents, gathered supplemental information regarding the current challenges, impacts of the pandemic, and opportunities to leverage. Interviews with neighbor island thought leaders provided critical insights into the state's diverse regional contexts and needs. A stakeholder advisory committee composed of community, industry, state, education, and philanthropic leaders assembled to review and revise strategies as they emerged. (See Acknowledgements for a list of committee members.) This iterative process was informed by analysis of the current and evolving realities of Hawai'i's labor market and the identification of prioritized industries.

This roadmap is designed to speak to multiple audiences, each with a stake in the state's economic recovery:

- **Education leaders** who are seeking new ways to get students to and through a credential with value in the labor market;
- **Business leaders**—including those from the Hawaii Business Roundtable, Hawai'i Executive Collaborative, and Chamber of Commerce Hawai'i — who seek to build the state's talent pipeline and expand opportunity for the residents of Hawai'i to gain skills and training necessary to succeed in their careers;
- **Government leaders** who seek to steer the significant available funds for recovery toward proven, innovative ideas that will strengthen the state's economy; and
- **Philanthropic leaders** who seek to fund promising ideas that lead to economic resilience.

Labor Market Considerations

With the closure of non-essential businesses, curtailment of travel, and move to online work and services, the pandemic continues to reshape the American economy, even as many states are struggling to reopen. Because of its reliance on service-sector jobs, Hawai'i has been particularly hard hit. This section provides a snapshot of the current labor market context in Hawai'i and

provides key data points on the impact of the pandemic on the state. (For more detailed labor market information, see Appendix A.)

The June unemployment rate in Hawai'i was among the highest nationwide, though there are significant differences across counties.

The statewide unemployment rate in May was 22.6 percent, representing the second-highest rate nationwide.¹⁶ For the same period, the U.S. unemployment rate was 13.3 percent. Since then, the June unemployment rate fell to 13.9 percent. However, it remains to be seen whether this trend can be sustained following the phasing out of the Paycheck Protection Program (PPP) in July, and the state's tourism sector remains constrained by both the ongoing scale of the pandemic and quarantine restrictions for visitors to the state.¹⁷

- Unemployment was lowest in Honolulu county (19.9) percent and highest in Maui county (33.4 percent) in May.¹⁸
- Statewide initial unemployment claims peaked during the week of April 4, 2020 and have dropped steadily since. However, compared to May 2019, initial claims expanded 81.3 percent.^{19,20} Further, since May 2019, the state has lost approximately 20 percent of non-farm jobs, illustrating the severity of the current downturn.²¹ (Note: The change in agriculture jobs was not captured in the most recent analysis of pandemic-related trends conducted by the Hawaii Department of Labor and Industrial Relations).
- Since January 2019, job postings in the state were down 35.5 percent in May (compared to a decrease of 13.8 percent in the U.S.).

¹⁶ U.S. Department of Labor, Bureau of Labor Statistics, Local Area Unemployment Statistics, [Preliminary data for May 2020](#).

¹⁷ Hawaii Department of Labor and Industrial Relations, "[Hawaii's Unemployment Rate at 13.9 percent in June](#)," July 16, 2020. See also UHERO, "[COVID-19 Developing Economic Recovery Scenarios for Hawaii](#)," May 4, 2020.

¹⁸ State of Hawaii Department of Labor and Industrial Relations, "[Monthly Data Release](#)," June 18, 2020.

¹⁹ Opportunity Insights, [Economic Tracker](#).

²⁰ Federal Reserve Bank of Atlanta, [Unemployment Claims Monitor](#). Claims submitted during the week of April 4, 2020 represented 8.5 percent of the eligible labor force. During the week of June 13, 2020, 1.1 percent of those eligible submitted claims.

²¹ State of Hawaii Department of Labor and Industrial Relations, "[Monthly Data Release](#)," June 18, 2020.

- Since 2007, the proportion of high-wage jobs in the state has shrunk, while the number of low-wage jobs has grown 29 percent, indicating that approximately one-third of Hawai‘i’s workforce is particularly vulnerable to this downturn.²²

In contrast to the 2008 recession, unemployment claimants in Hawai‘i are more likely to be women and are most concentrated in the accommodation and food services and retail trade sectors.

- **Gender:** Claimants are more likely to be female; women make up 55.7 percent of claimants, but only 48.9 percent of the overall labor force. This is because women are more heavily represented in service-sector jobs, a trend which was also reported by UHERO in their recent analysis of the differential impact of the economic shutdown.²³
- **Race/ethnicity:** Because the majority of claimants indicate that they belong to “other” racial and ethnic categories, these data are limited. Among those who provided racial/ethnic data, 25.3 percent of May claimants were Asian (compared to 36 percent of the population); 10.7 percent of claimants were Native Hawaiian or Pacific Islander (compared to 9 percent of the population); and 10.8 percent of claimants were white (compared to 22 percent of the population).²⁴
- **Service-sector workers:** The pandemic has disproportionately affected lower-income workers who are concentrated in service-sector jobs that do not lend themselves to telework.

The early recovery is uneven, with several sectors particularly affected by the downturn.

The pandemic spurred job losses across nearly all major sectors of Hawai‘i’s economy. UHERO reports that, as of June, the year-to-date change in jobs experienced the greatest decrease in the accommodation and food services (-26.9 percent); arts, entertainment, and recreation (-24.7

²² Hawai‘i Budget and Policy Center, [Hawai‘i Wages and Household Costs: A Chartbook for Building a Better Economy](#), May 2020.

²³ Claims data drawn from Federal Reserve Bank of Atlanta. See also Justin Tyndall and Philip Garboden, [“Early UI Data Reveals Differential Impacts of the Economic Shutdown,”](#) UHERO, June 10, 2020.

²⁴ Claims data drawn from Federal Reserve Bank of Atlanta. [Unemployment Claims Monitor](#). Drawing on May data. Note: 54 percent of claimants did not disclose race/ethnicity and are listed as “unknown.” Overall state demographic breakdown is drawn from Emsi 2020. 2. Data extracted by S. Lamback.

percent); and transportation and utilities (-11.6 percent) sectors. In contrast, the year-to-date change was positive in construction and mining (+1.5 percent) and the loss in healthcare jobs was relatively modest (-0.6 percent).²⁵

Small businesses have been particularly hard hit in Hawai‘i .

A striking 99.3 percent of businesses in Hawai‘i are small businesses—and small businesses employ 51.8 percent of workers in the state.²⁶

- Across all sectors, small business revenue in Hawai‘i was down 48.3 percent since January 2020, compared to 19.1 percent nationally.
- The impact on the leisure and hospitality sector small business revenue—which experienced a 70.9 percent decline—has been particularly pronounced. In addition, revenue losses were highest in Kauai county and Maui counties.²⁷

Moving Forward

Target recovery efforts to key industries and clusters.

A set of established and emerging high-impact industries have the potential to buoy the economy during the recovery period and beyond. The target industry sectors were identified based upon an analysis of industry size (including both current and historical data), the impact of the sector on the state’s economy (using an analysis of industry cluster data), review of desk literature on the impact of the past recession, and qualitative insights on the role that stakeholders envision the sector playing in the state’s economy in the long term.²⁸

²⁵ UHERO, “[Employment – Jobs](#),” June 2020.

²⁶ U.S. Small Business Administration, Department of Advocacy, [Hawai‘i Small Business Profile](#), 2018.

²⁷ Small business revenue loss by county: Kaua‘i (-76 percent), Honolulu (-33 percent), Maui (-71 percent), and Hawai‘i (-54 percent). [Opportunity Insights Economic Tracker](#).

²⁸ Using Emsi 2020.2 data and cluster definitions drawn from the [U.S. Cluster Mapping Project](#), JFF conducted a ranking of industry clusters based upon earnings per worker, overall job growth, regional competitiveness, regional specialization, and gross regional product.

Maintain the Strong Health Care Sector

Overview: The health care sector has a significant economic footprint statewide (71,100 jobs) and the total number of jobs has remained fairly steady in the midst of the pandemic.²⁹ This sector is critical to addressing the current public health crisis, supporting the state’s aging population, and providing jobs with career pathways and strong long-term earning potential.³⁰

The opportunity: Across all occupations, the top job posting was for registered nurses, with 254 postings statewide in May. Physicians, nursing assistants, medical and health service managers, and intensive/critical care nurses were also among the top 25 occupations by postings statewide in May.³¹ During the 2008 recession, the health care sector actually gained jobs, signaling that it is likely to be durable amidst economic downturns.³² Moving forward, there is also a need to support advancement within health care career ladders through short-term credentials (e.g., certified nurse assistant, medical assisting) and to target family-sustaining wages in entry-point occupations.

Re-Envision Hospitality and Tourism³³

Overview: The recession has severely impacted the hospitality and tourism industry in Hawai‘i and spurred a sharp decline in metrics such as the number of visitors, spending, and duration of stay.³⁴ Both the accommodation sector and the arts, entertainment, and recreation sector—each of which derives around 90 percent of its revenue from tourism—lost over three-quarters of their typical revenue from January to April.³⁵ The Hawai‘i Department of Business, Economic Development and Tourism estimates that it will take six years for tourism to recover to its 2019 level—indicating that the recovery period for hospitality and tourism may be prolonged.³⁶

²⁹ State of Hawaii Department of Labor and Industrial Relations, “[Monthly Data Release](#),” June 18, 2020. As of June 2020, there was a year-over-year loss of 1.5% in health care jobs. UHERO, “[Health Care & Social Assistance Jobs](#),” monthly analysis.

³⁰ Hawai‘i Research and Economic Analysis Division, [Hawaii Population Characteristics](#), 2018.

³¹ There were 117 postings for Physicians, 69 for Nursing Assistants, and 62 for Intensive/Critical Care Nurses. Note: while the posting numbers have not rebounded to pre-COVID levels, the Burning Glass Labor/Insight shows available opportunities. Full-month data for May 2020, extracted by S. Lamback.

³² Hawai‘i Budget and Policy Center, [Hawai‘i is Still Very Vulnerable to a Global Economic Recession](#), 2019.

³³ Note: the hospitality and tourism sector definition is adapted from the [U.S. Cluster Mapping Project](#) and includes both Hospitality and Tourism and local Hospitality-focused industries.

³⁴ Hawai‘i Department of Business, Economic Development and Tourism, “[Statistical and Economic Report](#),” Quarter One, 2020. More detailed data—including information on islands visited—is available via the [Tourism Dashboard by Market](#).

³⁵ UHERO, “[COVID-19’s Uneven Impact on Businesses and Workers: Results from a UHERO-Chamber of Commerce Hawaii Survey](#),” April 27, 2020. Outlook for the Economy: 2nd Quarter 2020 Report.

³⁶ Hawai‘i Department of Business, Economic Development, and Tourism, “[Outlook for the Economy](#),” 2nd Quarter, 2020.

Nevertheless, the sector is likely to remain an anchor industry cluster for the state in the future, especially if it can shift to higher-value experiences centered on culture and sustainability.

The opportunity: Estimates indicate that Hawai'i is the state with the most small businesses impacted by the pandemic.³⁷ While immediate support for workers who are seeking to transition to other industries is needed in the short term, the current economic downturn also offers an opportunity to rebuild hospitality and tourism in a manner that intentionally prioritizes smaller-scale local businesses within the sector, builds cultural ecotourism, and promotes more sustainable and 'āina (land)-based tourism practices.

Leverage the Range of Opportunities in Technology³⁸

Overview: IT occupations cut across multiple industries, including the prioritized sectors identified in this roadmap. There has been significant growth in IT occupations over the last decade, with more than half experiencing growth of 10 percent or more from 2010 to 2020.³⁹ Other industries that require technical knowledge, such as energy (including clean energy) and biotech have also demonstrated growth.

The opportunity: Technology offers strong wages and valuable flexibility for workers.⁴⁰ Because IT jobs cut across multiple sectors, workers in those jobs are well positioned to seek employment in growing industries. Industry-recognized credentials are widely valued by employers in this sector, paving the way for rapid reskilling and credentialing initiatives to quickly prepare a technology workforce. In addition, remote work arrangements are common in tech companies, offering workers who live in Hawai'i the opportunity to find employment with companies based outside the state. Further, the recent commitment to \$3.5-\$4B in 29 new clean energy projects by Hawaiian Electric has the potential to boost significant job growth in this sector in the coming years.⁴¹

³⁷ Adam McCann, "[Affected Small Businesses Due to Coronavirus](#)," WalletHub, April 13, 2020.

³⁸ Technology was also one of the "targeted and emerging industry sectors" identified by the Hawai'i Department of Business, Economic Development and Tourism in [their 2018 report](#).

³⁹ Of the 20 occupations analyzed within the IT occupational group, more than half experienced growth of 10 percent or higher from 2010 to 2020. In addition, several specific occupations experienced much higher growth: computer and information systems managers (19 percent); computer and information research scientists (20 percent); information security analysts (107 percent); software developers, applications (49 percent); web developers (34 percent); computer network architects (32 percent); and, computer occupations, all other (58 percent). Emsi 2020.3 Extracted by S. Lambach.

⁴⁰ Both the professional services and information sectors, each of which includes IT jobs, have seen a share of unemployment claims smaller than the overall share of the workforce. UHERO, "[Early UI Data Reveals Differential Impacts of the Economic Shutdown](#)," June 10, 2020.

⁴¹ Hawaiian Electric. "[29 Planned Renewable Projects Represent \\$3.5-4 Billion Clean Energy Investments in Hawaii](#)," July 1, 2020.

Strengthen Established and Emerging Industries Across Skilled Trades

Overview: Recent growth across several manufacturing industries⁴² and the construction sector in Hawai‘i is significant.⁴³ In addition, growth in industries such as aquaculture and sustainable agriculture is notable in Hawai‘i. Although the number of high-wage jobs in the agriculture sector is currently limited, leaders in the state are committed to supporting its continued growth.

The opportunity: Each of these industries has unique needs; however, when taken together, they have the potential to support a more highly skilled workforce that is positioned to withstand future economic downturns. The prevalence of apprenticeships in manufacturing and other skilled trades offers a clear chance to scale and prepare far more people for future-oriented jobs. Research also suggests that skilled trades and apprenticeship programs can support small business creation and growth.⁴⁴

Strategic Opportunities to Invest and Scale

This section of the roadmap identifies three key strategic areas that promise a high level of return on investment for state leaders who prioritize them in the state’s recovery strategy.

Expand Work-Based Learning

Create and scale equitable work-based learning opportunities that deliver clear benefits for both participants and employers.

Work-based learning solves a problem that many jobseekers face: it’s hard to get a job without previous work experience, and it’s hard to get work experience without a job. Ninety-three percent of the business leaders in Hawai‘i who responded to the June 2020 stakeholder survey prioritize experience and skills over educational credentials in their hiring processes (see Appendix D), though job postings also usually include educational requirements. Work-based

⁴² From 2010–2020, the manufacturing sector experienced an 8 percent increase in jobs. Job growth was concentrated in several industries, including food manufacturing, beverage and tobacco manufacturing, transportation and equipment manufacturing, and chemical manufacturing. Emsi 2020.3 Extracted by S. Lamback.

⁴³ Skilled trades is not a traditional industry under the NAICS framework, but there are similarities in skill needs across industries within this grouping. Construction grew 31 percent and manufacturing grew by 8 percent during the same time period. Emsi data 2020.2. Extracted by S. Lamback.

⁴⁴ Andrew A. Pak, “[Apprenticeships, Skilled Trades, and Small Business Creation](#),” *Bridges* (Federal Reserve Bank of St. Louis), 2017.

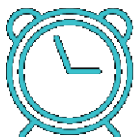
learning is an approach to training in which workers or students complete meaningful job tasks in a workplace, and includes both short-and long-term models, such as job shadowing, internships, apprenticeships, and on-the-job training.

For employers, work-based learning can be an important talent development strategy. But businesses in Hawai‘i, many of which are facing reductions in their current workforce, may not yet see an immediate value in prioritizing work-based learning. However, investments in work-based learning are a critical strategy for accelerating the state’s economic recovery. Work-based learning provides employers with access to job candidates who have the hands-on experience they seek.

People of all ages, experience levels, and backgrounds benefit from the opportunity work-based learning provides. Work-based learning offers workers and students a chance to enter new career fields or advance at their companies as they gain the workplace experience and skills sought by employers while simultaneously earning in-demand credentials. Paid work-based learning models, such as internships and apprenticeships, provide participants with a source of income as they skill up and prepare for careers. In addition, work-based learning creates opportunities for participants to build professional networks and social capital with labor-market value; these networks and connections are critical to success in the labor market.

“Work-based learning is the most relevant educational experience a student can have and is an area that is open to development.”
– Survey respondent

Just as work-based learning was gaining momentum across Hawai‘i, the COVID-19 pandemic threatened this important talent development strategy. And even before the pandemic, providing equitable access to the benefits of work-based learning was a significant challenge, particularly in rural areas of the state that lack a substantial employer base. Strategies for the implementation of work-based learning models that overcome the limitations of physical location are thus an important equity strategy now and for the future.



Short-Term Action Items

- **Transition to virtual work-based learning and career exploration.** High-quality strategies should leverage existing online career exploration platforms, such as Nepris, and build out fully remote internships and other work-based learning models in industries—such as IT—in which employees are already working remotely. In order to mitigate the effects of the digital divide, virtual strategies must be paired with efforts to expand access to broadband and devices. Current strategies led by Hawai‘i P-20 provide career exploration through virtual career fairs and statewide college fairs that connect individuals with employment and education opportunities and resources.
- **Create paid experiences for young people—many of whom are out of work—that enable them to build employability skills while working for community benefit in fields such as conservation, tutoring, and human services.** Stakeholders could consider creating a pool of funds—which might include a mix of philanthropic and federal dollars—to support equity by compensating young people participating in service learning and other models that have historically been unpaid. Strong examples of this strategy, such as a DBEDT-supported, five-month “Hawai‘i Works” internship program focused on knowledge-worker jobs and Kupu’s Hawai‘i Youth Conservation Corps (see below), already exist or are in development and could be expanded or replicated to meet the immediate need.
- **Develop on-the-job training (OJT) programs designed to meet their immediate talent needs in priority industry sectors.** OJT programs, which generally last six months or less, are an effective way to quickly train new employees for entry-level jobs and to retrain or upskill incumbent workers. This work is already happening in the state’s health care sector, which is creating ladders from entry-level jobs, such as certified nursing assistant and community health worker, to occupations such as registered nurse and social worker. The federal Workforce Innovation and Opportunity Act (WIOA) provides funding to subsidize the wages of some employees participating in OJT programs.



Longer-Term Action Items

- Develop and scale apprenticeships.** Apprenticeship is a proven model that combines on-the-job training with classroom instruction, enabling apprentices to launch careers in high-wage, in-demand fields while gaining skills and credentials that are valued by employers. Apprenticeship represents an opportunity for participants, including workers dislocated by COVID-19, to get to work and earn needed income immediately while building skills for the Hawai‘i of tomorrow. Ninety-four percent of registered apprentices retain their jobs after completion; they earn a \$300,000 premium relative to other workers over their careers.⁴⁵ And employers earn a strong return on investment for delivering apprenticeship.⁴⁶ Especially well-suited to Hawai‘i’s context is the [Industry-Recognized Apprenticeship Program \(IRAP\)](#) model, which is designed to be more flexible than the traditional [Registered Apprenticeship](#) model. Efforts to scale apprenticeship should leverage opportunities in priority sectors, such as IT and clean energy, as well as promising practices and models that already exist in the state. These include the [Hawaii Carpenters Apprenticeship and Training Fund](#) and [Pearl Harbor Apprenticeship Training](#), as well as other opportunities that can be found on the [Hawaii is Hiring](#) site.
- Incentivize employer engagement in work-based learning while ensuring that work-based learning delivers clear benefits for employers.** Organize employers by region and sector to identify their talent needs and map those needs to work-based learning possibilities. Create a detailed work-based learning “menu” for employers that includes remote and virtual options and clearly defines the employer partner’s role and anticipated time commitment for each. Ask employers to input their commitments in ClimbHi Bridge, the match.com-like tool the Hawai‘i Department of Education will be using in the upcoming school year. Employers can also develop models that reduce the burden on individual businesses, such as the Moonshot Lab run by [Education Incubator](#) that curates real industry challenges for groups of students to tackle.

⁴⁵ United States Department of Labor, “[Apprenticeship.gov Homepage](#).”

⁴⁶ Susan Helper et al, “[The Benefits and Costs of Apprenticeship: A Business Perspective](#),” Case Western University and United States Chamber of Commerce, 2016.

- **Fund and grow regional intermediary organizations.** Too often business/school partnerships depend on personal relationships. Intermediaries drive scale by brokering and aggregating work-based learning experiences, bridging education and industry, and providing equitable access to these opportunities. The Chamber of Commerce Hawaii and Kaua'i Economic Development Board both provide models for how intermediary organizations can connect businesses and educational institutions, thus reducing the burden on businesses while supporting the development of a talent pipeline.



Existing State Initiatives to Leverage

- **Pathway to Employment “[Hawaii Works](#)” Internship Program:** This program, which is funded using CARES Act dollars, seeks to enroll 2,000 participants in a five-month earn-and-learn internship program that could include opportunities for participants to earn certifications through a higher education partner.
- **[Next Steps to Your Future](#):** Hawai'i P-20 Partnerships for Education and the University of Hawai'i have created a summer on-ramp program that engaged nearly 3,000 high school seniors in planning for transitions to college and career and connected soon-to-be graduates to postsecondary education, training, and/or employment. Students received text messages and a dedicated counselor to advise them on next steps and could also take up to two free summer UH Community College classes, including a Career Exploration course, for credit.
- **[Work-Based Learning Framework](#) and Virtual Work-Based Learning:** Hawai'i P-20 Partnerships for Education has designed a framework that includes work-based learning opportunities that span awareness, exploration, preparation, and training from Pre-K through Grade 13+. In addition, Hawai'i P-20 is developing virtual career exploration and work-based learning opportunities across the continuum, including college and career fairs, mock interviews, and internships.

Strategic Bright Spots to Replicate and Scale

Small Business Innovation Challenge

The [Small Business Innovation Challenge](#) is a paid internship program that is explicitly designed to support economic recovery in a rural region of Hawai'i. Led by the [Kō Education Center](#), the program centers on an innovative and extremely promising internship model for youth between the ages of 16 and 21. Youth in the program work remotely with a team that includes a business seeking to innovate and an innovation coach; projects focus on supporting small business response to the COVID-19 crisis through activities such as establishing an online presence or developing social media and marketing campaigns.

Kupu

Nonprofit [Kupu](#) provides internships and service-learning opportunities for youth that are designed to build both technical and leadership skills, with an emphasis on conservation, sustainability, and environmental education. Hawai'i Youth Conservation Corps (HYCC) programs, which serve youth ages 16-24, provide two to four months of full-time paid work experience paired with mentoring and academic supports. In addition, Kupu's leadership and fellowship programs place youth and young professionals in a paid position in a single organization for up to a year.

Rapidly Reskill and Credential

Increase opportunities for workers to quickly reskill and upskill through the expansion of short-term credentialing opportunities that develop in-demand, transferable skills.

Helping dislocated workers to quickly reskill and earn credentials that are aligned with promising careers in the evolving economy will lead to a faster recovery. Employees of all skill levels need increased opportunities to develop in-demand skills and earn industry-aligned credentials that put workers on pathways to new employment and immediate wages. As many as 71 million low-wage workers in the U.S. have the ability to perform more highly skilled—and better paid—work, but are overlooked for career advancement opportunities.⁴⁷ Upskilling strategies could enable those working in retail and hospitality jobs to move into careers in fields

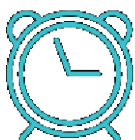
⁴⁷ Michelle R. Weise, "[How Workers Shift From One Industry to Another](#)," *Harvard Business Review*, July 7, 2020.

such as sales, marketing, office/administration, and management. (For a more detailed example, see Appendix B.)

A targeted effort to expand access to short-term, stackable, and industry-recognized credentialing programs across Hawai'i directly provides the skills needed to succeed in the state's growing and prioritized industries. Short-term credentials take less time to earn than degrees—generally less than a year—and stackable credentials create on- and off-ramps, enabling workers to get ahead in their careers while leaving open the door to further education. All credentials should be valued by industry in order to ensure that they will actually help those who earn them to compete in the labor market.

This strategy benefits workers, employers, and postsecondary institutions alike:

- As unemployment claims increase, workers across Hawai'i need to earn wages and health benefits to survive. An investment in short-term, skill-building opportunities saves workers both time and money compared to traditional degree programs, enabling them to quickly enter or re-enter the workforce prepared to succeed and advance on a career ladder. Short-term, stackable credentials also enhance workers' ability to return to advanced education when they are ready and able.
- Short-term credentials meet employer needs because they are more flexible in design and easily adapted to meet the needs of a growing industry or employer.
- Postsecondary institutions that support rapid reskilling strategies and expedite the development of micro-credentials are able to strengthen connections with employers and increase enrollments.



Short-Term Action Items

- **Identify and expand short-term credentials that develop transferable skills and lead to high-demand occupations.** The credentials listed in the table below are

currently in high demand and should be considered for rapid credentialing efforts.⁴⁸ In September 2020, the Chamber of Commerce Hawaii, Hawai‘i P-20, Harold K.L. Castle Foundation, and Kamehameha Schools will release a set of promising credentials based on extensive labor market analysis and employer insights, with considerations for anticipated industry growth and median wages. This report will further inform the list of promising credentials that should be prioritized in rapid reskilling and credentialing efforts.

Technology	IT: Security clearance, IT Infrastructure Library Certification (ITIL), Certified Information Security Professional (CISSP), CompTIA A+, PMP, Cisco Certified Network Associate, Python, JavaScript/HTML/CSS, JavaScript frameworks (Angular, Ember, etc.) iOS and Android mobile app programming, CAD design
Skilled trades	Manufacturing: Driver’s license, Forklift Operating Certification, Project Management Certification, Certified Public Accountant, security clearance
	Construction: Driver’s license, Electrician Certification, Occupational Safety and Health Administration Certification, CDL Class A, Licensed Professional Engineer
Health care	Registered nurse, First Aid/CPR, basic life saving, advanced cardiac life support, licensed practical nurse, certified nursing assistant, American Heart Association Certification
Accommodation and food services	Driver’s license, ServSafe Certification, Food Handler Certification, First Aid/CPR, Training for Intervention Procedures (TIPS)

- **Use labor market information to identify targeted transferable skills.**

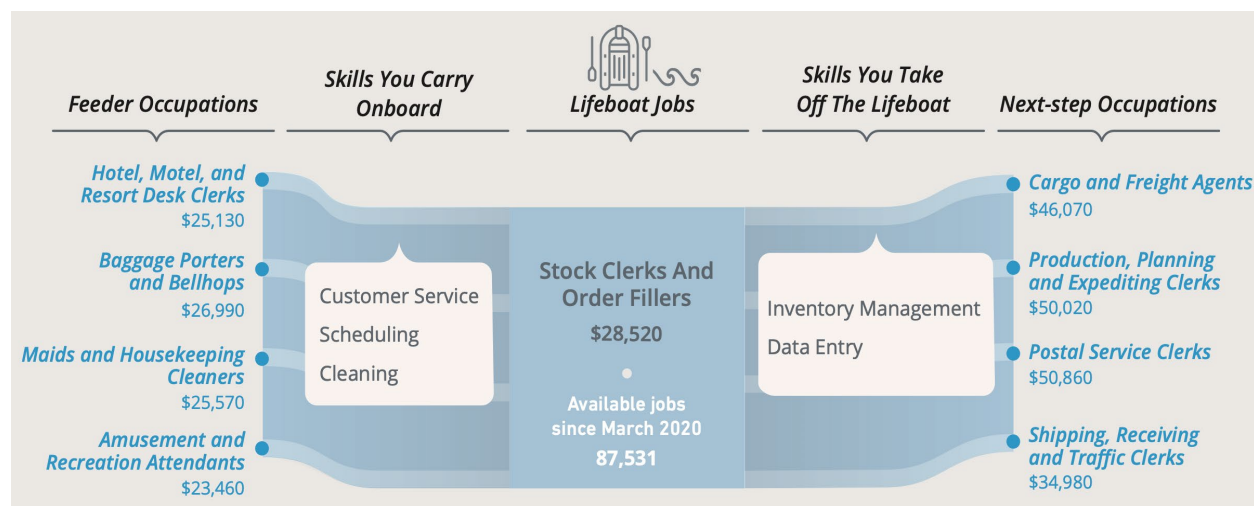
Substantial labor market information has been compiled by the University of Hawai‘i Career Explorer, Hawai‘i Data Exchange Partnership, Burning Glass, and EMSI to

⁴⁸ All certification data is based on 2019 full-year job postings for the state of Hawai‘i. Data extracted from Burning Glass/Labor Insight by S. Lambach in July 2020.

identify in-demand knowledge, skills, and abilities across all industries. The highest in-demand skill clusters across the state in 2019 were customer service, sales, IT (Office productivity tools), administration (scheduling and general administrative tasks), and business management and people skills.⁴⁹ These data can be used to target skills that are in demand across multiple sectors. Technical skill development can position youth and adults for both immediate job opportunities and longer-term economic advancement.

- Build immediate re-connections to the labor market through “lifeboat” jobs.**⁵⁰ Lifeboat jobs are those occupations that support individuals who are out of work so that they can earn an immediate income without additional education or licensure while developing in-demand skills. (See Figure 3.) Imagine, for example, placing a cohort of displaced hospitality workers with strong customer service skills into jobs as stock clerks in the logistics sector or into health care jobs (e.g., personal care aides) that require similar skills—and allow workers to build other sector-specific competencies over time. These “lifeboat” roles could also include current high-demand jobs such as office and administrative assistant, sales associate, customer service representative, or delivery driver. These occupations can support the development of highly transferable skills, such as project management—though individuals may need support to understand how their skills can transfer to other roles in the mid- or longer term. The [UH Career Explorer](#) site provides data on and visualizations illustrating these skills.

Figure 3. An illustration of lifeboat jobs courtesy of Burning Glass Technologies



⁴⁹ Burning Glass Labor/Insight. The data represents the skill cluster demand during the full year of 2019, based upon job posting data. Extracted by S. Lamback.

⁵⁰ Burning Glass, “[Filling the Lifeboats – Getting Americans Back to Work in the Pandemic](#),” 2020.



Longer-Term Action Items

- **Align K-12 Career and Technical Education (CTE) programs to in-demand credentials and prioritized industries.** The Hawai'i Perkins V plan approved prior to the COVID-19 pandemic outlines industry-specific programs of study to support individuals in obtaining industry-recognized credentials. Aligning CTE programming directly to the prioritized industries of health care, technology, and skilled trades will strengthen connections across secondary education, postsecondary training, and employers.
- **Leverage the strengths of the University of Hawai'i system to develop clearly outlined career ladders.** On- and off-ramps enable individuals to continue education at the time that is right for them, but to take advantage of this opportunity, workers and learners need to understand the available opportunities to advance along career ladders. Postsecondary institutions should intentionally align course work to ease the process of returning to advanced education. Offering credit for prior learning—a strategy that recognizes and awards credit for college-level learning that takes place on the job or in other settings outside of formal academic programs—is also a powerful tool for accelerating postsecondary completion. Expanded access to short-term credentials should be coupled with clear messaging and transitional supports for workers returning to advanced education and training.
- **Support industry investments in tuition reimbursement, career advancement, and earn-and-learn strategies.** Employers and industry leaders should consider long-term investments in tuition reimbursement strategies and other earn-and-learn strategies. Expanding these programs supports employee retention rates and eases hiring challenges. To incentivize employers to take on these efforts, state policy can provide them with additional support through tax credits and subsidies to ensure regional employers have the resources they need to implement and sustain these strategies.



Existing State Initiatives to Leverage

- **Promising Credentials in Hawai'i Occupation Analyses:** The Chamber of Commerce, Hawai'i P-20, Harold K.L. Castle Foundation, and Kamehameha Schools, with consultancy from Education Strategy Group, are conducting an analysis of promising credentials based on labor market information and employer insights, with considerations for anticipated industry growth and median wages. The full list of vetted promising credentials is scheduled for release in September 2020 and should be leveraged to inform rapid credentialing efforts.
- **State Perkins V Plan for CTE:** The [Hawai'i Perkins V State Plan](#) includes strategies and activities to strengthen the state's CTE system and its capacity to continually improve, innovate, and transform Hawai'i's CTE offerings in grades 6-14. CTE programming supports students with access to industry recognized credentials, early college coursework, and on-the-job training in in-demand, high-skill, and high-wage career pathways.

Strategic Bright Spots to Replicate and Scale

UH Maui College

Maui County is facing the highest unemployment numbers in Hawai'i. [Maui College](#) realized their work in providing shorter-term, workforce-oriented training programs could help those recently unemployed from tourism/hospitality fields to rapidly transition to new job opportunities. To do this successfully, the college braided private, state, and federal resources and worked across partners in the community. UH Maui College is committed to aligning workforce programs with credit pathways to ensure that students are able to both continue education and advance in their careers on a timeframe that meets their individual needs.

Kapi'olani Rapid Health Education Programs (RHEP)

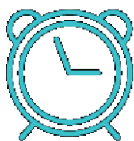
UH Kapi'olani Community College offers [non-credit, short-term certificate programs](#) designed to fast-track students into the job market and meet industry needs by providing students with a specific credential or licensure. Courses are often offered in the evenings or on weekends, which supports students who may work full-time.

Grow Sector-Based Strategies

Advance industry-driven solutions to meet shared goals to bounce back from economic downturn.

Economic recovery depends on the success of industry. Our strategies must support industry to ensure that businesses are positioned to drive economic growth and create needed jobs, especially in light of the high unemployment rate in Hawai'i. Sector strategies are a proven approach to supporting business leaders—especially in emerging industries—by galvanizing cross-sector partnerships to meet workforce needs. Sector strategies create economies of scale by elevating leaders in a sector or industry to work collaboratively to address industry-wide challenges. Sector-based strategies offer important benefits for both employers and workers:

- Collaboration reduces the talent development burden for individual employers and supports dissemination of best practices in workforce development.
- Industry leaders are supported by partners (education, workforce development, economic development, industry associations, and other relevant stakeholders) who leverage their resources to support industry initiatives.
- Workers receive training aligned with industry needs, increasing the likelihood of their chance of success in the labor market. Training can refer to either a business's internal training or to external credentialing programs; sector-based approaches can be backwards-mapped to education and training programs that are offered through educational institutions or workforce development agencies.



Short-Term Action Items

- **Create targeted supports— such as funding and incentives—for small businesses, especially those in priority sectors.** Ninety-nine percent of businesses in Hawai'i are small businesses, and 58.1 percent of employees work for small businesses.⁵¹ Sector-based strategies enable small businesses to benefit from economies

⁵¹ U.S. Small Business Administration, Department of Advocacy, [Hawai'i Small Business Profile](#), 2018.

of scale through collaboration that creates talent development and grows strategies that are often accessible only to large firms. It is especially critical to stabilize small businesses and support innovation to enable the state's many small businesses to grow and thrive.

- Design sector-sponsored, short-term reskilling and upskilling programs.** Employer-sponsored programs enable workers to quickly reskill or upskill by teaching employer- or industry-specific competencies through an accelerated approach. These programs are often more nimble, allowing them to make quick adaptations and implement more quickly than credentialing programs at traditional postsecondary institutions. These programs can include digital and micro-credentialing that can be obtained in three months or less.
- Strengthen relationships across businesses and educational institutions to ensure new graduates meet industry needs and seamlessly transition into the workforce.** Industry and education leaders can co-develop sector-based essential competencies—both technical and professional skills—to be integrated into educational programs and curricula. One example can be found in how the University of Hawai'i Community Colleges system developed new training for universal banker positions at the behest of the Hawaii Bankers Association. Industry partners can also collaborate to support state-of-the-art curriculum and equipment to develop the talent pipeline they need.



Longer-Term Action Items

- Develop new networks in priority sectors to determine common needs, share best practices, and develop sector-based solutions.** Network-developed sector strategies can be particularly helpful for Hawai'i's many small businesses. They enable small businesses to engage in the kinds of activities focused on talent pipeline development that are often limited to large employers with the ability to support a training or apprenticeship program.

- **Reimagine a tourism industry focused on sustainable practices grounded in Aloha ‘āina and the culture of Hawai‘i.** Accounting for nearly \$9.5 billion of the state’s gross regional product, accommodation, food services, and entertainment represent a significant portion of the economy.⁵² However, there is widespread acknowledgement of the need to spur evolution of this industry to intentionally shift to focus on eco-tourism, cultural tourism, and agri-tourism. As the industry recovers from the COVID-19 pandemic and expands to include sustainable practices, skills related to those developed in the prioritized industries of technology and skilled trades—as well as skills in education and cultural awareness—will be increasingly in demand. As the industry develops a collective sector strategy, it is also possible to leverage this reimagination and develop training programs that target the development of essential cultural competencies and ‘āina-based approaches to tourism.



Existing State Initiatives to Leverage

- **Sector Partnerships:** These efforts—convened by organizations such as Chamber of Commerce Hawaii, University of Hawaii, and Maui Economic Development Board—remove administrative burdens from industry and enable industry leaders to collaborate on shared workforce development opportunities to strengthen and grow their sectors. They are supported by partners in education, workforce development, economic development, and the nonprofit sector who leverage their resources to support industry initiatives. Active partnerships in health care and engineering exist on Oahu, in health care on Maui, and in agriculture on Hawai‘i Island.
- **Uplift Hawai‘i** : This coordinated effort highlights a new model of tourism focusing on culturally grounded and sustainable practices. Such a model will prioritize health and prevent overcrowding, root experiences in Native Hawaiian values, and strengthen — not just market or deplete—the land’s natural resources.
- **Hawai‘i Investment Ready (HIR)**: This business accelerator provides capacity-building and consulting support to scale innovative resilient business models. By combining place-based knowledge with tools to empower entrepreneurs, this cohort-

⁵² Emsi Developer 2020.4, extracted by S. Lamback in July 2020.

model opportunity can support the resilience of a business in the face of a changing labor market. One example social enterprise is MA'O, which strives to meet five areas of need (underprivileged youth, sustainable economic development, organic agriculture, health and well-being, and the culture of Hawai'i) through an organic farming business.

- **‘Āina Aloha Economic Futures:** This grassroots movement is gathering input and support to develop a vision for Hawai'i's economic future that is grounded in a core set of values that embrace unique island culture and identity.

Strategic Bright Spot to Replicate and Scale

Healthcare Workforce Initiative

The Healthcare Association of Hawai'i (HAH) began the [Healthcare Workforce Initiative](#) (HWI) in 2018 to address the need for a stronger workforce pipeline. Their 2019 report details the greatest areas of need for healthcare employers, which healthcare professions had the most openings, and alignment opportunities and challenges across education and workforce. Based on their findings, the HWI has started developing education programs to address the shortage of skilled workers for particular health care occupations, and they plan to continue addressing workforce supply and the skills gap through partnerships with educational institutions.

Organizing for Outcomes

Drive a coordinated talent strategy by establishing a state leadership team with executive representation from industry, secondary and postsecondary education, workforce and economic development, government, and philanthropy to achieve measurable results for all residents of Hawai'i and accelerate economic recovery.

Successful implementation of the strategies outlined in this roadmap will require collaboration across sectors that include industry, secondary and postsecondary education, workforce and economic development, government, and philanthropy. State leaders representing these sectors will need to work across systems and silos—and create new systems that put more of the state's residents on paths to economic advancement and drive economic recovery. **Now is the time to organize a cross-sector leadership group at the state level and to collectively take action to solve pressing challenges in Hawai'i.** As Hawai'i responds to the immediate and sustained impact of the recession due to the COVID-19 pandemic, leaders in the state should leverage the unique opportunity to commit to a shared vision for recovery.

Efforts focused on cross-sector work and leadership were already underway before the pandemic, and there is widespread support for these efforts. When asked to select high-priority strategies for recovery, 78 percent of survey respondents indicated a cross-sector committee focused on statewide recovery should be prioritized within the next 90 days (see Appendix D).

Many building blocks have been laid. Existing work aligned to the strategies described here includes initiatives focused on sector strategies, work-based learning, and promising credentials. Statewide goals for postsecondary attainment, a framework for college and career pathways, and state-level data systems are also in place.

But to date, cross-sector coordination remains sporadic. In order to operationalize the strategies outlined in this roadmap, leaders from across industry, education, and workforce development must formalize partnerships, connect across existing initiatives, and commit to measuring implementation progress and data-informed results. This state leadership team should guide the implementation of the action steps described below.

Identify an intermediary organization to develop partnerships and ensure the ongoing momentum of this work.

An intermediary organization can serve as a neutral, credible convener of all partners and provide staff support to advance the work. State-level conveners such as the University of Hawai‘i, Hawai‘i Executive Collaborative, and Hawai‘i P-20 are examples of institutions that are well positioned to lead in this space. The establishment of an agreed-upon intermediary will help streamline federal and philanthropic investments, formalize partnerships, and scale evidence-based strategies. Hawai‘i currently has multiple successful convening institutions and initiatives, each of which has independently set strategic priorities. This frustrating tangle of well-meaning efforts must be better organized for Hawai‘i to achieve its goals. An intermediary organization will require dedicated funding to support staffing for this work. Ideally, an intermediary organization would be identified early in the process of establishing cross-sector leadership and would be positioned to mobilize partners to make progress on the other action steps outlined here.

Develop a shared vision and action plan for implementation.

The state leadership team—and other partners as needed—should convene regularly to develop and implement a shared vision and action plan to which all organizations and agencies should commit through a formal, collective agreement. Key topics for consideration by this group include planning for dedicated funding and staffing, amplifying the shared work across stakeholders, and communicating collective accountability around a common agenda.

Establish measurable goals and metrics for success that align with agreed-upon strategies and action plans.

Metrics such as degree attainment, wage data, or enrollment in apprenticeship opportunities should be collectively identified to ensure buy-in across education, industry, and civic leaders. In addition to defining measures for success, cross-sector leaders must commit to shared data systems and regularly scheduled opportunities to take stock of and communicate progress. An initial draft of recommended metrics for success can be found in Appendix C.

Plan for sustainability to ensure initiatives adapt and grow over time.

Intentional planning for growth and scale includes a commitment to continuous quality improvement, revisiting priorities to reflect evolving economic and community needs, and identifying new leaders as the work unfolds.

Ensure recovery strategies meet regional needs and respect the diversity of regional contexts and economies in Hawai‘i .

Cross-sector state and regional leaders should co-create economic recovery strategies that consider the unique needs of the state’s diverse regions, labor market differences, and opportunities for development. A uniform statewide approach could result in a mismatch between workforce talent and industry needs at the regional level. A focus on local, place-based collaboration between government, industry, community, and education partners will better inform and shape effective educational and training programs. There is a clear need to coordinate across sectors at the regional level, as well as at the state level, to increase opportunity for economic advancement in communities and regions, produce sustainable economic growth for all, and deploy educational strategies with a focus on equity and inclusion. Feedback from the stakeholder survey and advisory committee meetings further reinforced the need for regional economic development that considers the unique needs of each of the islands and the differences between rural and urban areas.

Design targeted supports for those most in need.

Economic recovery strategies must deliberately be designed to support vulnerable populations, including dislocated workers, low-wage workers, and young people seeking access to the labor market. Additionally, our labor market analysis demonstrated that women are disproportionately impacted by COVID-19, and our survey and committee named a need to support rural populations across all islands. Targeted supports should include: expanded broadband access to support access to education, training, and jobs; partnerships with community-based organizations to support a wide range of needs, from wrap-around services—such as transportation and childcare—to restorative practices; and career navigation supports that ensure all residents of the state understand the available options and are empowered to make informed decisions about their futures.

State Example: Delaware

Delaware Pathways is a statewide initiative focused on building college and career pathways in order to achieve the Delaware Promise: 65 percent of the state's workforce will have a college degree or professional certificate by 2025. Delaware Pathways has achieved remarkable growth and scale since its launch in 2014, thanks in large part to state leaders' commitment to collaboration and breaking down silos to do what works for all Delawareans, including:

Cross-sector leadership: The Delaware Pathways state leadership team convenes monthly and includes representatives from public-sector entities that include the Delaware Departments of Education and Labor, Delaware Technical Community College, the Delaware Workforce Development Board, the Governor's Office, the Delaware Economic Development Office, and Delaware Health and Social Services. Private-sector partners include nonprofit organizations such as the United Way of Delaware, Rodel, and the Delaware Business Roundtable Education Committee. Industry leaders guide pathways design and advise on key decisions.

Shared vision and action plan: The [Delaware Pathways strategic plan](#) drives all of the work undertaken by state leaders. The strategic plan identifies a set of five core priorities for the work and assigns core organizations on the state team to lead the state's collective work on each of the priorities. For each priority, the state team has developed a detailed action plan, including timelines and milestones, and a budget that reflects needs related to work on the priority, not funding needs for a particular partner organization.

Dedicated intermediary: The [Delaware Office of Work-Based Learning](#) supports the development of work-based learning opportunities statewide and convenes sector-based industry councils.

Identified outcomes: The state leadership team identified a [set of metrics](#), aligned to the core priorities in the strategic plan, that are used to measure progress on the core priorities and to inform future planning. The state leadership team also conducts a stocktake twice annually in which they assess progress and challenges, problem solve, and make updates to action plans as needed.

Braided funding: Shared strategies, goals, and outcomes have enabled state leaders to effectively braid and blend state, federal, and private funding sources to support Delaware Pathways.

Supportive Policies

Create a supportive policy environment that drives scale, removes barriers to success, and leverages key funding opportunities.

The creation of a supportive policy environment is critical to the success of the strategies outlined in this roadmap. Supportive policies drive scale and sustainability, ensure the availability of needed funding, enable the creation of data systems to monitor outcomes and drive continuous improvement, remove barriers to implementation, and create needed culture changes. Hawai'i has the opportunity to develop state policies that accelerate economic recovery while leveraging federal funding streams designed to support this work.

Key State Policy Levers

State policies will create needed conditions for success and facilitate coordination across systems. The policy levers outlined in this section are starting points with the power to accelerate the initial phase of economic recovery efforts. As state leaders work toward scale, they will likely identify additional opportunities to change or align policies to support the development of efficient and effective education and training systems. In the early phases of this work, state policy can:

Sustain and Grow Cross-Sector Leadership

State policy can support and incentivize the alignment of strategies and initiatives across state agencies and systems—which also ensures that all relevant parties have the opportunity to inform future policy decisions. Policies that support cross-sector leadership are a particularly powerful starting place because they often require little or no financial investment; the emphasis is instead on aligning existing structures and systems. To do this, leaders in Hawai'i can:

- **Adopt policies focused on cross-agency collaboration.** State agencies are often constrained by policies that limit their ability to pursue flexible and innovative strategies in partnership with other state agencies. Legislative or executive support for cross-agency collaboration can jumpstart these efforts and sustain them over the long term.
- **Revisit state WIOA and Perkins plans.** Requirements and funding associated with the federal Workforce Innovation and Opportunity Act (WIOA) and the Strengthening Career and Technical Education for the 21st Century Act (Perkins V) are designed to encourage cross-sector partnerships. Leaders in Hawai'i can look for opportunities to make fixes that allow them to leverage additional funding to bring agency voices together, better align programing, and leverage WIOA and Perkins to support innovation. In addition, WIOA and Perkins requirements can serve as building blocks for

a broad push for cross-sector collaboration, and alignment creates an opportunity to streamline cross-sector meeting and collaboration structures.

State Example: Illinois

The [Postsecondary and Workforce Readiness \(PWR\) Act](#) is designed to support Illinois students in preparing for postsecondary education and future careers. The PWR Act implements four aligned strategies that require coordinated efforts among school districts, postsecondary education institutions, employers, and other public and private organizations. At the state level, the PWR Act drove new, strengthened cross-agency partnerships to design the rollout of the legislation and support its implementation. These state-level efforts encompass models that work across the Illinois Perkins, WIOA, and Every Student Succeeds Act (ESSA) plans.

Incentivize Industry Leadership and Engagement

State policy can support business leaders, who are now facing unprecedented disruptions, in taking action to drive economic recovery in Hawai'i. This could include enacting policies that:

- **Offer financial incentives and promote sector strategies.** Investments such as tax incentives, subsidized employment, and loan forgiveness can support industry commitment to skill development across the state. WIOA creates opportunities to strengthen sector strategies, which should be prioritized in the state plan.
- **Invest in intermediaries.** The time and effort required for high-quality talent development efforts often create a significant barrier to industry engagement. Intermediaries reduce this burden and enable education and training providers to make effective and efficient use of employers' time. However, the creation of funding streams to support the work of intermediaries can be a significant challenge best addressed by state policy.

State Examples: Massachusetts and Texas

[Connecting Activities](#) funds intermediary support for work-based learning across the state of Massachusetts. The initiative works through the state's workforce boards to establish public-private partnerships that connect schools and businesses. Connecting Activities is funded through a line item in the Massachusetts state budget.

The Texas Education Agency is leveraging [Perkins Reserve funding](#) to support regional intermediary organizations in the [Texas Regional Pathways Network](#), through which cross-

sector regional leaders are building college and career pathways designed to increase postsecondary attainment and workforce readiness. [Intermediaries](#) in the Texas Regional Pathways Network agree to both broker work-based learning experiences and to convene [cross-sector regional leadership teams](#) to advance overall pathways development.

Support High-Quality Rapid Reskilling and Credentialing Programs

State policy is an important tool for implementing high-quality reskilling and credentialing programs that support student success and completion. To increase access to these opportunities, state policy should:

- **Expand state aid for postsecondary education and training.** Federal financial aid currently does not cover many short-term and workforce-oriented programs. Policymakers can leverage existing workforce dollars and provide additional funds to offer tuition assistance for participants in high-quality, short-term programs, whether for credit or continuing education.
- **Encourage competency-based education and training models.** Education and training models that assess learners based on skills and competencies support completion while ensuring that participants develop skills that employers need. State policy should provide flexibility in seat-time requirements in order to remove barriers to the adoption of these models.
- **Support career navigation and counseling services.** Students, jobseekers, and workers need access to high-quality career navigation services in order to make informed choices about careers. In addition, advising and counseling services are needed to ensure learners persist in and complete their programs. State policy can encourage education and training providers to invest in these services and provide funding for them.

State Example: Virginia

Virginia's [FastForward](#) program is a statewide initiative that offers short-term (6-12 week) training courses through community colleges across the state. Employers are engaged in the development of all courses, ensuring that they align with industry needs and will prepare participants with the skills needed to succeed in the labor market. In order to support student success, the program also includes FastForward Coaches located on community college campuses. FastForward utilizes an [outcomes-based funding model](#) that incentivizes student

completion. Upon enrollment in the program, a student pays one-third of the tuition costs. The Commonwealth of Virginia pays the remaining two-thirds upon the student's successful completion of the program and certification. If the student does not complete the program, the student is required to pay for the second third of the tuition cost, and the college is required to pay the last third.

Federal Funding Opportunities

Numerous federal resources are available to support the strategies outlined in this roadmap. Independently these resources are helpful; by leveraging and aligning ongoing work related to these programs, state leaders can drive transformative change. As noted above, both WIOA and Perkins V emphasize connections to industry and business to ensure these opportunities are informed by regional labor-market needs.⁵³ Additionally, programs like the Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF), include education and training components designed to support individuals in need in building the skills necessary for success. Hawai'i must blend and braid federal and state funds to support workforce development efforts across the state.⁵⁴

In response to the COVID-19 pandemic, the federal government has appropriated new and substantial stimulus funding,⁵⁵ including the CARES Act,⁵⁶ the largest investment in our nation's history. These stimulus packages were created to respond to the increased needs of families, systems, businesses, and communities. Hawai'i has received some of these stimulus dollars to help support the state in crisis response—ensuring individuals and local economies bounce back and advance. The list below elevates specific funds Hawai'i has received that can be used to support the strategies outlined in this roadmap:

- The Governor received \$9.9 million through the **CARES Governor's Emergency Education Relief** fund. This grant is authorized under the Educational Stabilization Fund and provides for awards to support local education entities that have been and continue to be significantly impacted by the COVID-19 crisis. The Governor is able to put resources toward recovery efforts across the state's education system, which could include the development and scaling of short-term and rapid-reskilling postsecondary

⁵³ JFF, [Leveraging Perkins V to Support College and Career Pathways](#), November 2018.

⁵⁴ Hawai'i Workforce Development Council and the Career and Technical Education Center, [Total State and Federal Expenditures on Education and Workforce Resources](#), 2018.

⁵⁵ JFF, [COVID-19 Federal Policy Summary](#), March 2020.

⁵⁶ JFF, [CARES Act is a Break for the Hardest Hit](#), March 2020.

opportunities; career learning and experiences in high school; and work with industry to develop and expand college and career pathways in priority sectors across the state.

- The Hawai'i Department of Labor and Industrial Relations received \$1.5 million through the **CARES National Emergency Dislocated Worker Grants**. This grant provides assistance to states and communities as they respond to the needs of dislocated workers and others impacted by the coronavirus. These funds can be used for usual activities under WIOA, including career services, advisement services, education and training/reskilling programs, and working with employers to develop and expand sector partnerships and strategies.
- The Governor's Office received \$1.25 billion through the **CARES Coronavirus Relief Fund**, which supports states and local governments in crisis response. Again, this pot of money is extremely flexible. Governors are allowed to use these resources across departments and communities they identify as most disrupted. As the economy opens back up, Governor Ige has the opportunity to be intentional about where these dollars go, investing in the future by supporting economic development strategies that equitably engage all communities in Hawai'i in recovery and advancement.

In addition to these already allocated dollars, there are other opportunities for the state, institutions of higher education, workforce boards, and small businesses to leverage federal resources:

The Paycheck Protection Program (PPP) authorized and expanded in the CARES Act and the 3.5 Stimulus Small Business Administration

This program provides loans forgiveness to small businesses to keep them afloat during this time. If businesses use PPP loans for employee salaries, the loan does not need to be repaid.

CARES Education Stabilization Funds-Reimagining Workforce Preparation Grants (ESF-RWP)

ESF-RWP is a competitive grant to state workforce boards to partner with institutions of higher education, industry, trade associations, and others to develop or expand short-term and industry sector-based education and training programs, including career pathways programs, to help prepare unemployed or underemployed individuals for high-demand jobs in their communities.

CARES Economic Development Assistance Program

This is a competitive grant provided through the Economic Development Administration to help communities respond to the COVID-19 crisis. Again, uses of funds are flexible and include a broad set of activities related to economic development, such as supporting industry, sector partnerships, and small businesses.

CARES Research Resources

The CARES Act also included large increases in spending on research: \$75 million for Rapid Response Research (RAPID) grants under the National Science Foundation (NSF); \$945.5 million for the National Institutes of Health (NIH) to prevent, prepare and respond to COVID-19; and \$500 million to the Centers for Disease Control to invest in better tools and build state and local public health data infrastructure.⁵⁷ This could be a great opportunity for Hawai‘i’s institutions of higher education, including the University of Hawai‘i. Last year, UH received \$425 million, which supported thousands of local jobs, from these three organizations.

As Hawai‘i determines how to best use designated dollars and pursues other federal funding opportunities, it is important for state and local leaders to remember that these flexible funds provide an opportunity to look beyond crisis response and put real resources toward recovery. To ensure recovery efforts are equitable, these resources cannot be leveraged separately. State leaders must work across sectors and partner with industry to blend and braid funding to reach the state’s goal of building stronger talent pipelines, better supporting local employers, and rejuvenating regional economies across the state.

Conclusion

Hawai‘i’s leaders have the opportunity to respond to the current crisis by collectively committing to—and holding themselves accountable for—a collaborative effort that will achieve measurable results. These include reducing the unemployment rate, creating local job opportunities for the state’s youth and adults, and creating the conditions for families to thrive in Hawai‘i’s new economy.

A critical first step in successfully implementing the strategies recommended in this roadmap is the development of the cross-sector leadership structures needed to support them. State leaders will need to pursue short- and long-term strategies, balancing

⁵⁷ Center for Disease Control and Prevention. Information for CDC Applicants and Recipients of CDEC Funding. Collection of resources: <https://www.cdc.gov/grants/public-health-emergencies/covid-19/index.html>.

the immediate need for re-employment and economic recovery with the reality that sustainable economic growth. Doing so will require the implementation of high-quality education and training strategies, including work-based learning and rapid reskilling and credentialing, that create a talent pipeline for the state's emerging priority industry sectors. These initiatives must be paired with an expansion of sector-based strategies to support businesses in Hawai'i and with approaches that meet the unique needs of the state's diverse regions. Working together, state leaders can drive economic growth, support Hawai'i's industries, and put all of the state's residents on a path to economic advancement.

APPENDIX A: Supplementary Labor Market Information

Figure 1. Workforce and Unemployment Claim Shares by Industry in April (State)

Source: [UHERO](#)

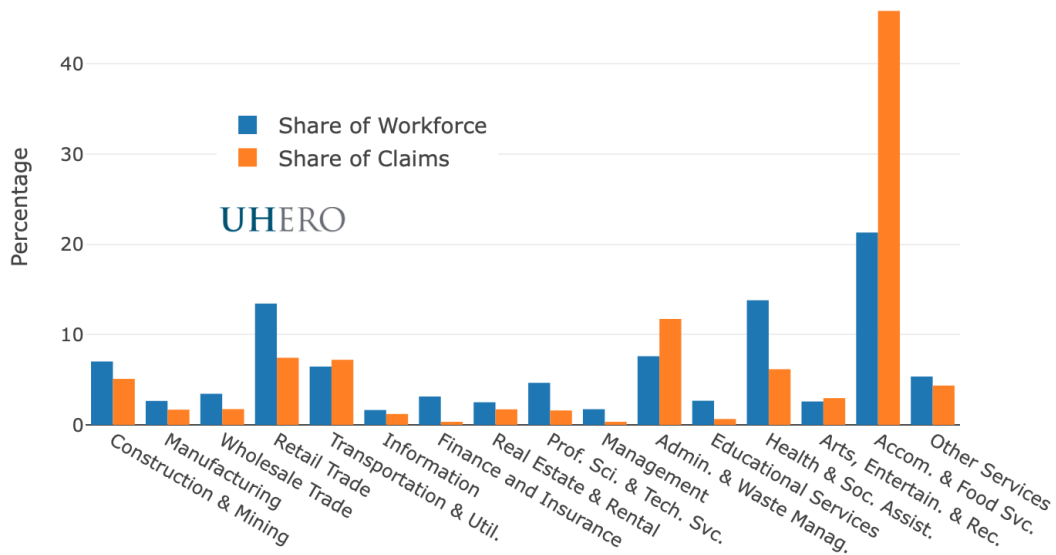


Figure 2. Unemployment Claims by Industry

Source: Federal Reserve Bank of Atlanta, [Unemployment Claims Monitor Dashboard](#)

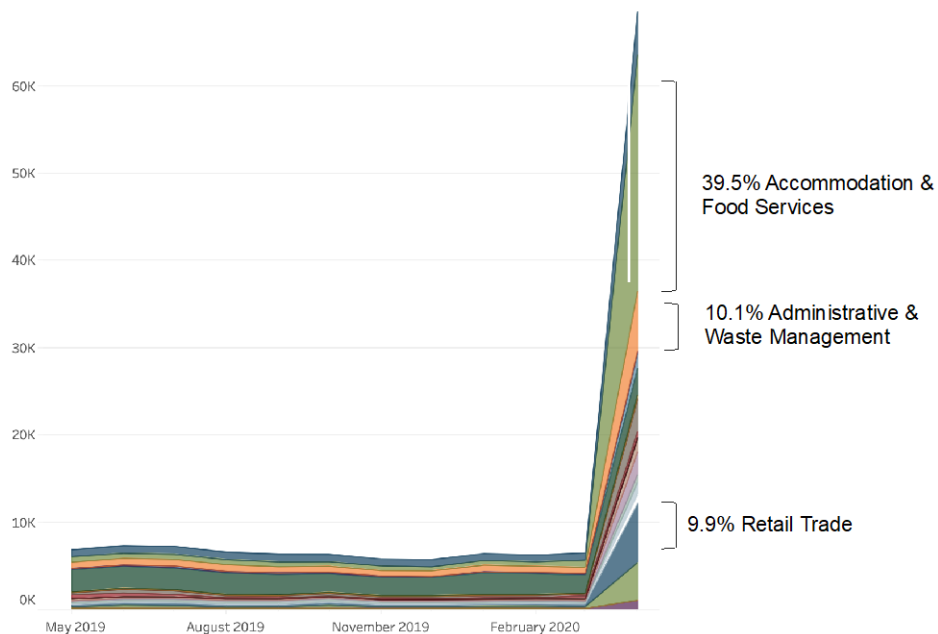
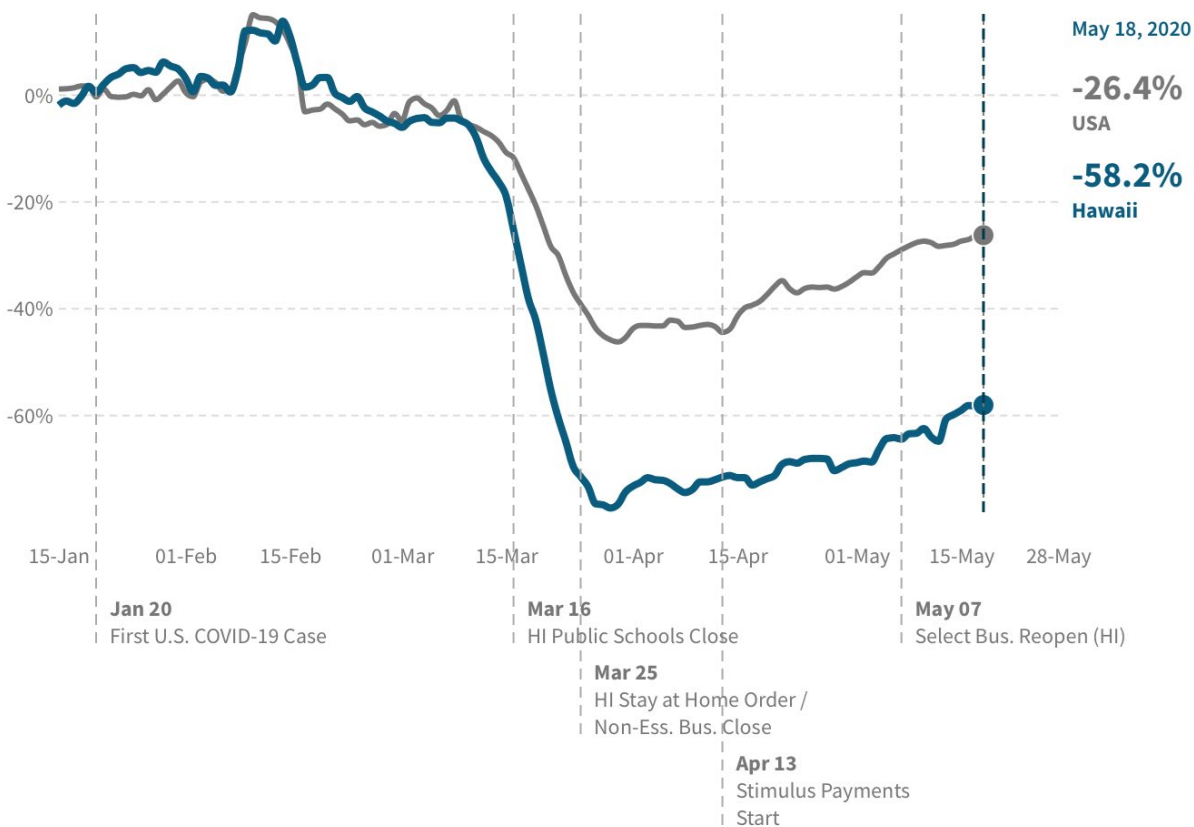


Figure 3. Small Business Impact

Source: [Opportunity Insights Tracker](#)



APPENDIX B: Skills Transferability Sample

Tour Guide to Events Planner

The example below highlights the transferability of occupational skills for an individual transitioning from a career as a tour guide to one as an events planner. This represents an example of how individuals from the tourism and hospitality sector can leverage skills that they gained in one job to access more highly paid opportunities with long-term growth potential.

Wages in events planning are typically higher than wages for tour guides. An individual transitioning from a lost job as a tour guide to a job as an events planner is likely to earn a higher wage overall.

Occupation	25 th Percentile	Median Percentile	75 th Percentile
Travel / Tour Guide	\$25,058	\$29,294	\$35,290
Events Planner	\$31,626	\$37,564	\$46,503

There is no gap in experience requirements between occupations, with the majority of those in each occupation having 0-2 years of experience. Experience is unlikely to be a barrier in transitioning between occupations.

Individuals with experience as tour guides can already demonstrate the following in-demand baseline skills needed for the role of events planner:

Baseline Skill (overlap across occupations)	Importance
Planning	4
Organizational skills	2
Microsoft Office	2
Microsoft Excel	2
Detail-oriented	2
Teamwork/collaboration	1
Building effective relationships	1
Creativity	1
Problem solving	1

Source: Burning Glass Labor/Insight (Burning Glass Technologies), 2020

Individuals with experience as tour guides are likely to need to be upskilled/reskilled to develop the following specialized competencies:

Specialized Skill	Importance
Event planning	4
Budgeting	3
Event management	2
Project management	1
Integrated master plan	1
Staff management	1

Burning Glass Labor/Insight (Burning Glass Technologies Source), 2020

APPENDIX C: Draft Outcomes Dashboard

	Metric
Family-Sustaining	Unemployment insurance claims
	% of employers who agree there is a qualified local candidate for job posting
	Recent UH graduate with a job that pays ALICE level or above
Pipeline	Percentage of high school completers that successfully transition to college or work
	% of college students that receive degree or certificate in priority sectors
	% who complete an apprenticeship in the trades
	# who re-skill and credential in high-demand sectors
Preparation	% of high school students who graduate with a DOE honors certificate
	% of students who enter college without the need for remediation
Intervention	% of high school students who earn 6 dual credits or score 3 or above on AP exam*
	% of high school students who enroll in Hawaii Career Pathways*
	% who complete a work-based learning experience*
Capacity	# of unique visitors to Hawaii Career Pathways website
	# of employers that are actively engaged
	% attainment of public and private funding goal

* These indicators will show aggregate data as well as a breakout for high-need students.

APPENDIX D: Stakeholder Survey Data

A Roadmap for Education, Training, and Workforce Development in Hawai'i: Stakeholder Survey Summary

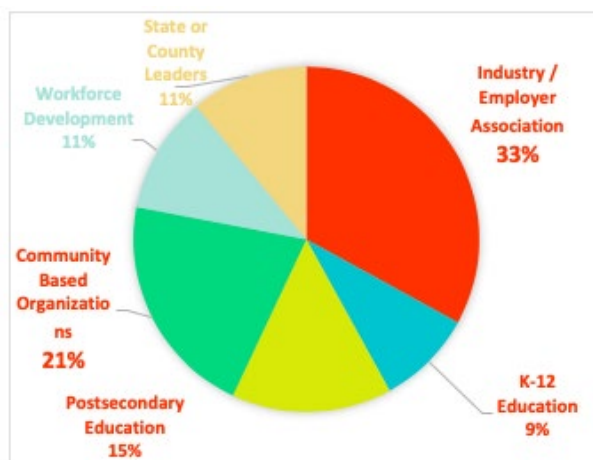
Stakeholder Survey Goals

In response to the rapidly evolving economy and the impacts of the current global pandemic, leaders across education, training, and workforce development are collaborating to identify and prioritize scalable best practices and innovative strategies that ensure all residents have access to the training, skills, and careers that lead to family-sustaining wages and economic recovery for the state.

In order to better understand how leaders across Hawai'i are navigating the current education and workforce landscape a survey, designed and evaluated by [Jobs for the Future](#), was conducted from June 4-14, 2020. The survey data outlined below provides perspectives from stakeholders across education, training, philanthropy, industry, and the community to inform the immediate and long-term strategies that should be prioritized in the process of economic recovery.

Survey Responses

A total of 175 survey responses were collected from stakeholders representing multiple sectors and perspectives. Of the responses collected, 33 percent of respondents self-selected as industry or employer association representatives, 24 percent represented education (15 percent postsecondary education and 9 percent from K-12 education), 21 percent represented community-based organizations, 11 percent represented workforce development, and 11 percent represented state or county leaders.



Influential Survey Findings

Requests to actively fund work-based learning, career exploration, and career experience opportunities.

Ninety-three percent of businesses responding to the survey value experience and skills in hiring practices. However, businesses also highlighted a decrease in career exploration, internships, and on-the-job training opportunities due to the impacts of COVID-19. Survey respondents noted the need to allocate federal and local funds to support expanding work-based learning, internship programs, on-the-job training, and apprenticeships. These strategies ensure individuals gain the hands-on work experience necessary for hiring. Open-response questions in the survey also indicated the need to prioritize effective career advising strategies, specifically for K-12 and community college students. Survey respondents recommend that federal and philanthropic funding be dedicated to support targeted career advising structures, highlighting the example of virtual colleges and career coaches currently utilized within the community college system.

Examples of respondent comments in support of this strategy include:

- “We need more on-the-job training, mentoring, and applied learning. What we’re solving for can’t be learned solely in a four-walled classroom.”
- “Work-based learning is the most relevant educational experience a student can have and is an area that is open to development.”

Need to target supports for small and local businesses

When asked to identify the most immediate priorities to accelerate economic recovery, 85 percent of survey respondents indicated a need to provide targeted support directly to small businesses. Federal funding for recovery for small businesses was identified as a particular need, with specific recommendations for subsidies to help these businesses hire interns or apprentices as full-time employees and support for innovation by small and local businesses.

Examples of respondent comments in support of this strategy include:

- “The State may want to think about sustained training and support of micro-businesses. These entities make up a significant number of jobs in our state and, more importantly, they create the identity of Hawai‘i. If our smallest businesses fail, we lose our character and values and gain economic loss in the community.”
- “My recommendations include more small business funding, innovation investment, investment into smart local innovation ecosystem infrastructure (i.e., accelerators/incubators that incubate companies based in Hawai‘i.) Local corporations need capacity to run internship programs in order to bring on more non-college degree

holders into internship and entry-level roles; more talent development professionals need to be recruited and hired in local companies.”

Initiatives and institutions with a proven track record of success

When asked to prioritize strategies, survey respondents emphasized the need to leverage the strength of the University of Hawai‘i system. Exemplar programs that currently offer short-term credentials, as well as nationally recognized academic programming, in prioritized industries such as sustainable agriculture or cyber security can provide a starting point to accelerate the work. In addition to world-class academic institutions, respondents highlighted the opportunity to provide deeper investment in workforce training programs supported through WIOA. Those training programs with proven success in career placement and retention could be identified and financially supported for scale or expansion.

Examples of respondent comments in support of this strategy include:

- “Utilize the capacity and expertise of the higher education sector in Hawai‘i to educate and train students for careers and support their continued education.”
- “Acknowledge that UH has world-recognized and nationally ranked programs and that across its many disciplines it contributes to the community and what Hawai‘i will become.”

Need to reimagine tourism and hospitality and prioritize sustainability in the redesign process

Survey data shows a tension between opportunities to rebuild the tourism industry and to diversify the economy. However, the majority of survey respondents indicated the need to rebuild tourism as an avenue to rapid re-employment, while identifying the need to reconsider the focus of the industry and develop strategies to directly connect tourism with appreciation of the land and sustainable practices. Additionally, survey data suggests that if there is to be a focus on the tourism industry, it should embed practices that support family-sustaining wages.

Examples of respondent comments in support of this strategy include:

- “Consolidate and integrate tourism with our core agricultural initiatives with a focus on the hybridized agri-/eco-/cultural tourism themes. Distance ourselves from the “Sun ‘n Surf” fake Hawai‘i with a focus on the “Real Hawai‘i ” that we and all residents of Ka‘ū District fight each day to preserve.”
- “Tourism needs to be reimaged as well so that Hawai‘i provides a richer cultural and leisure experience to fewer people at perhaps a slightly higher price.”

Embrace of aloha ‘āina and investment in local and sustainable practices

While there is an emphasis on immediately addressing the high unemployment needs, 74 percent of survey respondents indicated that embedding aloha ‘āina in economic recovery strategies should be a strategy that is prioritized over the next six months. Survey respondents commented on the need to elevate Native Hawaiian cultural practices that honor and respect the land with approaches that actively contribute to sustainable practices. Additionally, respondents prioritized investments in funding work-based learning and other pipeline initiatives to local businesses over large, national, or international corporations.

Examples of respondent comments in support of this strategy include:

- “We need to rethink our approach to our economy with an aloha ‘āina-first lens. We need to focus on industries that serve the broader community and not outside investors.”
- “First, we need to change the prevailing narratives around our economy in Hawai‘i. We need to emphasize a vision for a new economy that is in alignment with our island values. We cannot continue to act (and lead) as if we are on the continent. That does not work for us on remote islands. We need to reorient our society to be in better balance with our natural systems that sustain us and move away from being so import dependent. A circular economy framework for Hawai‘i that incorporates these ideas and principles is needed.”
- “Utilize traditional Hawaiian concepts (moku and ahupua‘a based systems) to build resilience and to focus on food and water security and other basic needs.”

Support for emerging industries to diversify the economy

When asked an open-ended question about the changes necessary to transform education and workforce development systems so they are prepared for future disruption and able to more rapidly meet the needs of all Hawai‘i residents, many survey respondents recognized the need to decrease Hawai‘i’s heavy reliance on tourism. There was recognition that high unemployment rates are largely a result of that industry being devastated by this crisis. While respondents identified the need to rapidly re-employ those who have lost jobs in tourism, responses indicated an interest in investing in long-term reemployment strategies that support reskilling into tech-forward and green industries.

Examples of respondent comments in support of this strategy include:

- “We need to focus on place-based business development now to be in a better spot in the near and distant future. Special focus through investment, partnership, and ecosystem development should be placed on food-systems/agriculture-sector companies (farms, producers/exporters, technology), tech/IT, and renewable energy.”
- “As we fix tourism, we also need to identify new business sectors that are viable in Hawai‘i to help offset our major dependency on tourism. As these are identified, we then

need to provide support for education and training in these new sectors so that we are developing home-grown talent to lead these new sectors.”

- “It is critical to diversify Hawai‘i’s economy into many thriving sectors. A multitude of career options would also encourage local talent to stay in the islands, rather than move to the mainland and contribute to ‘brain drain’.”

Enhanced statewide capacity for remote learning

When respondents in the education sector were asked to identify what support their institution most needed to successfully navigate the COVID-19 crisis and beyond, 72 percent identified a need for faculty training and professional development to support remote learning. Of the total survey respondents, 62 percent indicated this strategy should be prioritized in the next 90 days. Concerns about quality of remote instruction and equitable access were noted by survey respondents in their comments to open-ended questions.

Examples of respondent comments in support of this strategy include:

- “Leveraging federal stimulus funds to dramatically improve virtual learning experiences is a no-brainer, as Hawai‘i students have been experiencing learning at a wide range of quality. Education remains the foundation for our community's resilience. Similarly, we will necessarily have to expand our state's capacity for this learning, and urgently close the digital divide.”
- “The ‘New Normal’ is, by all accounts, going to involve some level of virtual learning for students moving forward. It is imperative that the Department of Education have a plan in place for students to have equitable access to virtual learning to prevent any further divide in the achievement gap in this regard.”

Cross-sector collaboration

In open-ended responses, multiple respondents identified the need for “systematic” or “seamless” approaches to workforce development. Other surveys encouraged a “strong call for cross-sector collaboration,” strategic planning, or formalized positions that support the infrastructure necessary to operationalize recovery strategies. Many respondents voiced the need to examine existing plans and focus on investments that enact previously identified strategies before developing new plans. When asked to select high-priority strategies for recovery, 78 percent indicated that “participating in a cross-sector committee focused on statewide recovery” should be prioritized within the next 90 days.

Examples of respondent comments in support of this strategy include:

- “Hawai‘i needs an economic overhaul, not more band-aid fixes. Doing so will require a long-term systemic perspective that will enable all stakeholders to work more effectively

together by managing shared risks and opportunities. There will be sacrifices needed to get us out of the mess we are in.”

- “Look for high-leverage actions that can link education and employers in a more systematic and seamless way.”
- “Industry and education collaborating on meaningful, recognized, and valuable broad-based skills, micro-credentialing, and badges.”
- “Developing a robust apprenticeship program, influencing policy, and diversifying our economy to include more tech industries are longer term projects. However, the groundwork should begin now.”

Emergency resources are needed while focusing on long-term strategic planning

When asked to prioritize immediate strategies for recovery in the next 90 days, 72 percent of respondents indicated a need for continued support for emergency funds to citizens in need as one of the highest priorities, and 79 percent identified a need to direct continued federal funding to crisis response as the highest priority. However, when asked to identify strategies that will ensure economic recovery over time, respondents identified the need for dual-transformation approaches that prioritize emergency services, followed by reemployment, followed by reskilling strategies.

Examples of respondent comments in support of this strategy include:

- “Given the state's high unemployment rate and sudden drastic reduction in income for an unprecedented number of individuals and families, ensuring they are fed and housed are of utmost priority.”
- “Getting help to those directly impacted first. Ensuring that the community has food and shelter, and then redesigning a more just and equitable recovery for all—the health and well-being of our island residents.”
- “In order for people to learn and grow, they have to have their basic needs, such as food, shelter, childcare, eldercare addressed; otherwise, they cannot reap the rewards of learning, teaching, coaching and mentoring.”

Strengthened technology infrastructure and equitable broadband access

In order for the economy to effectively recover, respondents identified both immediate and long-term strategies that rely on online learning, remote work competencies, and virtual work-based learning experiences. However, in order to implement these strategies, there is an imperative to support the infrastructure necessary for all individuals to have reliable access to technology to participate in remote learning and work. Respondents highlighted that infrastructure needs to include supports across all islands and in both urban and rural areas.

Examples of respondent comments in support of this strategy include:

- “We need major upgrades in technology infrastructure across all departments and services, including health care. Investments in equity of access to online/distance learning across our state are essential, and we must address the digital divide economically and geographically across our island state.”
- “Assuring core technology infrastructure is robust, resilient, and accessible to enable remote working, telehealth, distance learning, and related industries. Investments must be made now to assure momentum is sustained and we are prepared for the next shock.”