OAHU WORKFORCE DEVELOPMENT BOARD
CITY AND COUNTY OF HONOLULU
715 SOUTH KING STREET, SUITE 211 • HONOLULU, HAWAII 96813
PHONE: (808) 768-7790 • www.OahuWDB.org

RICK BLANGIARDI
MAYOR

JASON C. CHANG
CHAIR

TIM WONG
VICE CHAIR

ALISON P.M. LUM
EXECUTIVE DIRECTOR

# Oahu SkillScape Report

# Request for Feedback

**Attached below is a copy of the OahuWDB SkillScape Report that is open for public comments/feedback.**
**Please submit comments/feedback to [OahuWDB@honolulu.gov](mailto:OahuWDB@honolulu.gov).**

OWDB
Oahu Workforce Development Board

Emsi | burning glass

# OAHU WORKFORCE DEVELOPMENT BOARD

## Regional Skills Analysis

DECEMBER 2021

# About

**EMSI BURNING GLASS** is the world's leading authority on job skills, workforce talent, and labor market dynamics, providing expertise that empowers businesses, education providers, and governments to find the skills and talent they need and enables workers to unlock new career opportunities. Headquartered in Boston, Massachusetts, and Moscow, Idaho, Emsi Burning Glass is active in more than 30 countries and has offices in the United Kingdom, Italy, New Zealand, and India. The company is backed by global private equity leader KKR.

Emsi Burning Glass
232 N Almon Street
Moscow, ID 83843
www.emsibg.com

## Acknowledgements

This report is prepared for the Oahu Workforce Development Board (OWDB) by Emsi Burning Glass. Emsi Burning Glass gratefully acknowledges the support of the OWDB.

The content is solely the responsibility of the author and does not necessarily represent the official views of the OWDB. Proper acknowledgement of Emsi Burning Glass should be included in publications, presentations, or other developed materials.

# Contents

# Introduction

**OAHU WORKFORCE DEVELOPMENT BOARD (OWDB)** serves as the local workforce development board for the island of Oahu consisting of Honolulu County, which also encompasses the same geography as the Urban Honolulu Metropolitan Statistical Area (MSA). OWDB is mandated to implement Workforce Innovation & Opportunity Act (WIOA) Title 1 programs via the American Job Center Hawaii. OWDB seeks to engage both job-seekers and employers to ensure adequate skills for the area economy by removing barriers to employment and promoting self-sufficiency through career pathways and development.

Oahu's current labor market is facing challenges not seen in a lifetime. A convergence of events – mass retirements of the Baby Boomer generation, a global pandemic, negative demographic growth, and enormous gaps in skills supply & demand – is causing economic consternation via an acute labor shortage. The resulting labor shortages from such skill gaps strains both employers and municipal leaders. Meanwhile, many individuals are underemployed and dissatisfied with their current jobs but lack access or guidance to acquire the necessary skills to meet soaring demand.

Furthermore, different communities feel these challenges in different ways. Certain demographic groups are over-represented among lower paying jobs; and Black and Native Hawaiian/Pacific Islander (NH/PI) populations experience a troublingly high unemployment rate – even prior to the pandemic. Leveraging such underutilized human capital by identifying key skill gaps and career pathway opportunities enables Oahu leaders to proactively — and efficiently— engage in workforce development to address its labor market challenges.

To address this challenge, OWDB partnered with Emsi Burning Glass to strengthen data-based decisions to close workforce supply-demand gaps. The Oahu Regional Skills Analysis provides a snapshot of in-demand jobs that present opportunities to aid workforce development efforts, including career pathways for students and residents in the region with little job experience or post-secondary education. This report along with the Emsi Burning Glass SkillScape tool uses Emsi Burning Glass Skills — an advanced clustering data model – along with other relevant labor market insights[1]. This report and SkillScape are designed to promote Oahu stakeholder engagement and deepen the relationship between regional employers and its residents, to advance upskilling and reskilling opportunities[2].

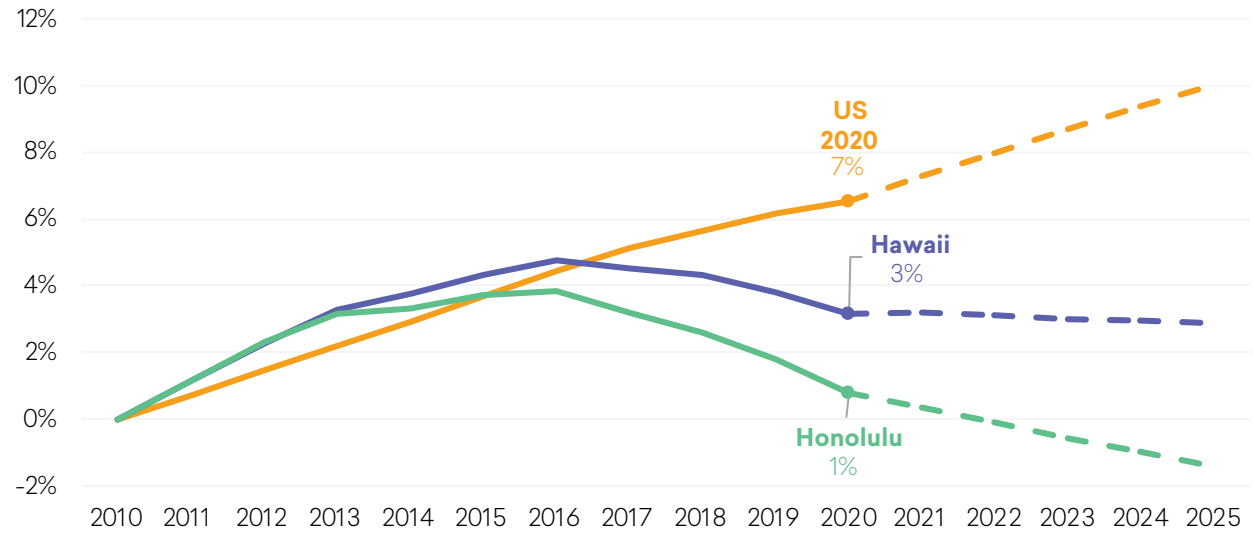
1 Insights derived from Emsi Burning Glass Q3.2021 data.

2 For an understanding of the Emsi Burning Glass Skills Cluster methodology, reference the appendix.

# About Honolulu MSA

In 2020, Oahu had a population of 963,826. The region represents the largest MSA in Hawaii by far, ahead of Hilo (203,340), and accounts for 69% of the state's total population. Oahu's population peaked in 2016 but has declined each year since. Furthermore, Oahu experienced yearly net negative migrations of thousands of people between 2016 and 2019 – with residents opting for Seattle, Portland, Las Vegas, San Diego, Phoenix, and San Antonio. About half-a-million jobs are in the MSA, spanning 20 Emsi Skills defined career areas.

**FIGURE 1:** POPULATION CHANGE FROM 2010 IN HONOLULU, HAWAII, AND THE US




*Source: Emsi Burning Glass.*

Oahu has a large share of employment in Government – mostly centered around the military which is the largest industry at the North American Industry Classification System (NAICS) 6-digit code level. Civilian federal employment is the 2nd largest sector for employment. Food & Accommodation has a large share of employment since Oahu is a tourism & recreation destination, despite the pandemic decimating roughly one third of this regional industry's jobs in 2020. The unemployment rate has gradually been declining again, though still not back to pre-pandemic levels. Health Care & Social Assistance, Retail, and Construction are also large employers, but the share of employment in these sectors does not exceed the national average. Note that since Emsi Burning Glass Skills analyzes regional data from a career area (occupational) perspective, workers in these industry sectors are distributed throughout numerous career groups.

Demographically, Oahu is extremely diverse compared to the United States. The region's 2020 Asian and Native Hawaiian/Pacific Islander populations represent about 41% and 9% of the total population, whereas the country's Asian and Native Hawaiian/Pacific Islander populations represent about 6% and 0.2% of the total population, respectively. The island is also unique in its high share of population classified as Two or More Races, with over 23% compared to just 2.9% nationally. This also means the island's shares of White, Black, and Hispanic populations are lower than the national average. For instance, Oahu's Black population is just 2.5% of the total population compared to 12.6% nationally. Its Hispanic population is 10.2% compared to 18.6% nationally.

Furthermore, Oahu's employed labor force is distorted by gender: 46.4% female and 53.6% male. These results differ from the region's population, which is 49.7% female and 50.3% male. This is almost entirely due to the heavy military presence, which is traditionally male dominated. When ignoring non-QCEW employment (which includes military personnel), the share of employment between men and women normalizes to 50-50.

# Key Insights

## ❶ Employment in Business & Finance; Healthcare; and IT & Math provide abundant economic opportunity for workers seeking a transition.

Healthcare; IT & Math; and Business & Finance are all among the highest paid career areas in terms of median posted annual salaries. Business & Finance and Healthcare are also among the largest career areas in terms of demand, with numerous skill clusters offering diverse career paths. Business & Finance and IT & Math experience talent shortages demonstrated by fewer profiles than job posting demand, meaning career opportunities are present. Many of the career area's skill clusters experiencing talent shortages are projected to grow. Furthermore, these career areas are frequently underrepresented by target populations such as Black, Hispanic, and Native Hawaiian/Pacific Islander (NP/PI) workers.

Skill cluster opportunities in **Business & Finance** include:

- Financial Services: Banking & Financial Specialists (Securities, Commodities, & Financial Services Sales Agents; Loan Interviewers & Clerks; Credit Analysts)
- Financial Services: Financial Advising (Securities, Commodities, & Financial Services Sales Agents; Personal Financial Advisors; Insurance Sales Agents)
- Financial Services: Loan & Insurance Services (Insurance Sales Agents; Loan Interviewers & Clerks; Claims Adjusters, Examiners, & Investigators)

Skill cluster opportunities in **Healthcare** include:

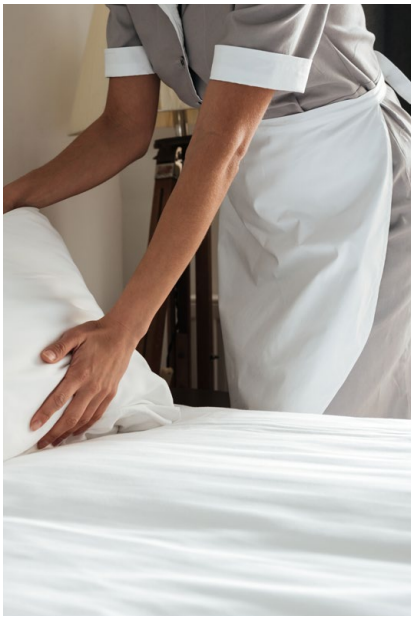
- Diagnostics & Surgery: Specialized Care (Pharmacy Technicians; Physicians; Pharmacists)
- Nursing: Clinical Care (LPNs; RNs; NPs) [3]
- Pharmacy Services: Technical Assistance (RNs; LPNs; NPs; and Nurse Anesthetists)

Skill Cluster Opportunities in **IT & Math** include:

- IT Systems: Cloud Solution Architecture (Computer & Information Systems Managers; Computer Occupations – all other)
- IT Systems: Systems & Security (Information Security Analysts; Network & Computer Systems Administrators; and Computer Systems Analysts)
- IT Systems: Quality Assurance (Computer & Information Systems Managers; Computer Occupations – all other)

3 LPNs refers to licensed practical & licensed vocational nurses. RNs refers to registered nurses. NPs refers to nurse practitioners.

## ❷ Hospitality, Recreation, & Personal Services; Sales & Customer Service; and Protective Services are career areas with large talent surpluses and low earnings.



As a result, these career areas are opportunities for transitioning workers from low-paid positions into roles which bring higher pay and have greater need based on talent shortages. Protective Services is overrepresented by target populations such as Black, Hispanic, and NH/PI workers. Transitioning these workers into higher paid, underrepresented career areas will go far in helping OWDB achieve its equity goals.

### Why transition workers from **Hospitality, Recreation, & Personal Services**?

- Jobs with these skills have earnings around $33,680, among the lowest of all career areas.
- The supply-demand ratio (number of profiles compared to number of job postings) is 2.7, indicating a large talent surplus.
- It is a large career area in terms of supply, meaning focusing on transitions can serve a large amount of people.
- Most occupations with these skills – maids & housekeeping cleaners or janitors & cleaners– have little room for career advancement within the career area.

### Why transition workers from **Sales & Customer Service**?

- Jobs with these skills have earnings around $33,943, also among the lowest of all career areas.
- The supply-demand ratio is 1.5, indicating a large talent surplus.
- It is a large career area in terms of supply, meaning focusing on transitions can serve a large amount of people.
- Most occupations with these skills – such as retail workers in particular – have little room for career advancement within the career area.

### Why transition workers from **Protective Services**?

- Jobs with these skills have earnings around $47,830, which is just below the region's median annual wage of $48,140.
- Most occupations with these skills – first-line supervisors of protective service workers and security guards – have little room for career advancement within the career area.
- Although smaller in terms of supply and higher in terms of pay compared to Transportation & Warehousing, given the current supply chain struggles we believe it prudent to avoid transitioning workers out of Transportation & Warehousing.
- Protective Services is also overrepresented by 3 key target populations – Black (6% compared to 4% regionally), Hispanic (12% compared to 10% regionally), and NH/PI (13% compared to just 7% regionally).

# Economic Overview of Oahu

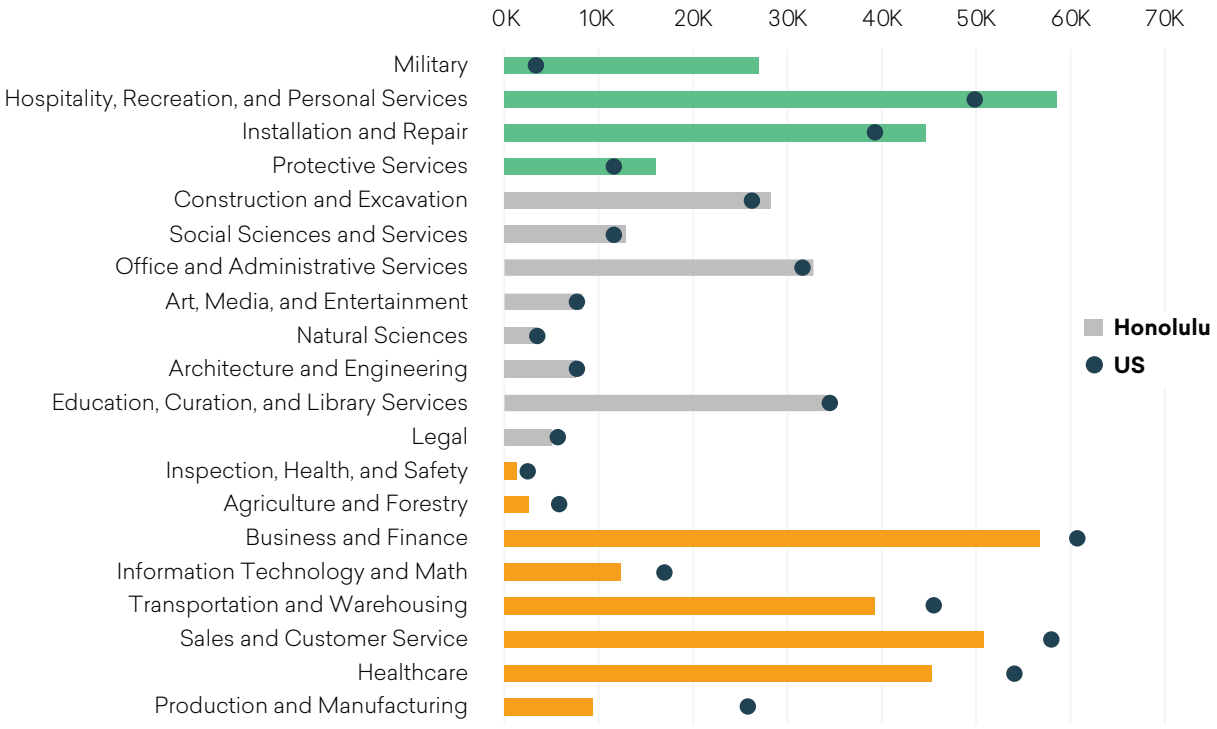
This section introduces high-level labor market information (LMI) data at the career area level for jobs in the Honolulu MSA. In the following figures and tables, data show a comparison of the region's share of talent relative to that of the U.S., the workforce makeup from a demographic lens, and the most substantial shortages of talent supply and market demand, measured by skills. Each component of the economic overview will shed light on the strengths and opportunities in the Honolulu MSA, particularly where there are differences between job opportunities and employment of target groups such as Asian, Native Hawaiian/Pacific Islander, Black, and Hispanic residents. The acute economic effects of COVID-19, particularly on already underrepresented populations, have only amplified the need to tackle these challenges. The identification of key skill gaps serves as the first step in exploring workforce-readiness solutions for OWDB.

## Career Area

Hospitality, Recreation, & Personal Services; Business & Finance; and Sales & Customer Service have the greatest career areas employment in the Honolulu MSA. However, just Hospitality, Recreation, & Personal Services has a higher share of regional employment compared to the national average, shown in light green in Figure 2. For example, an estimated 58,500 workers are employed in Hospitality, Recreation, & Personal Services occupations, whereas a typical region in the U.S. the size of the Honolulu MSA should employ an estimated

49,700 workers in the career area. On the other hand, employment in several career areas is underrepresented in the Honolulu MSA, shown in orange in the figure. They include Business & Finance; Sales & Customer Service; Healthcare; and Transportation & Warehousing among the larger career area categories.

**FIGURE 2:** EMPLOYMENT IN THE HONOLULU MSA BY CAREER AREA WITH A COMPARISON TO THE NATIONAL AVERAGE (2020)




*Source: Emsi Burning Glass Skills and BLS employment.*

**TABLE 1:** CAREER AREAS IN THE HONOLULU MSA WITH HIGHER, SIMILAR, AND LOWER LEVELS OF EMPLOYMENT THAN THE NATIONAL AVERAGE (2020)

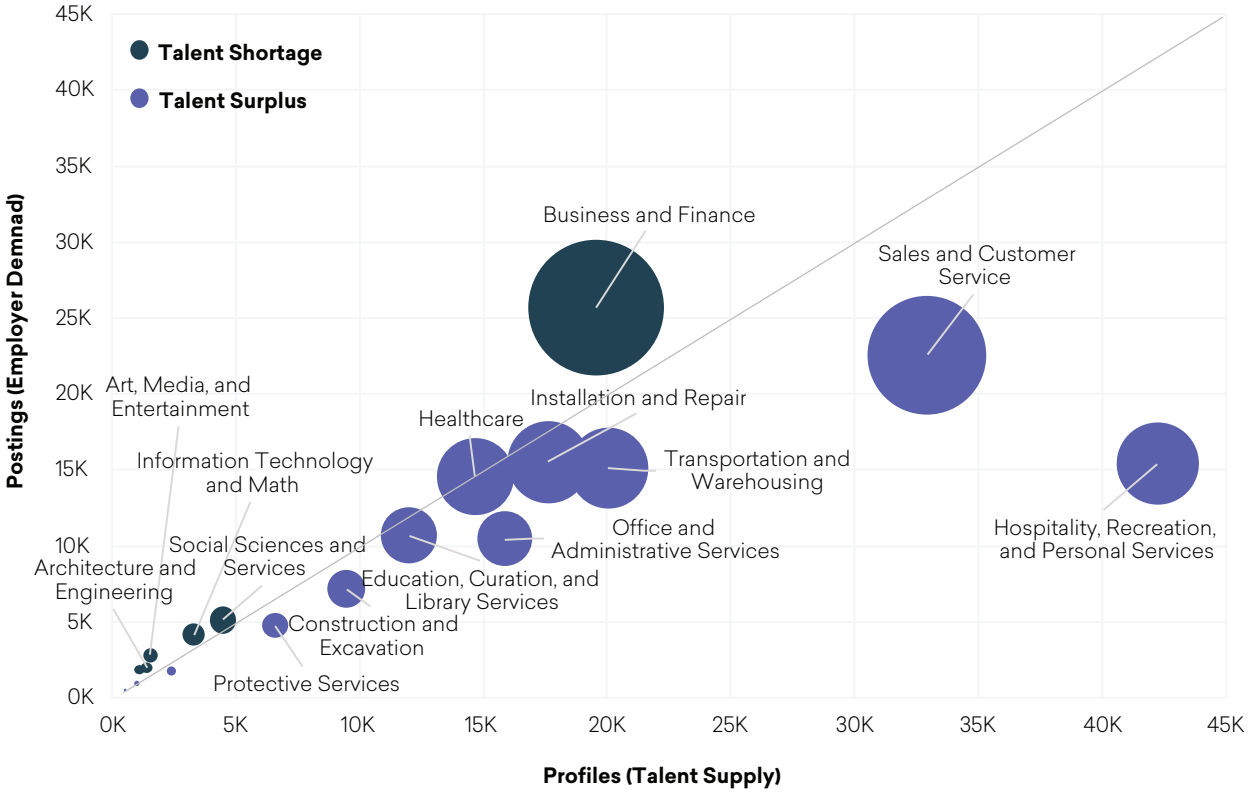
| HONOLULU SHARE OF TALENT SUPPLY RELATIVE TO U.S. | | |
|---|---|---|
| **Higher** | **Equal** | **Lower** |
| • Military | • Construction and Excavation | • Production and Manufacturing |
| • Hospitality, Recreation, and Personal Services | • Social Sciences and Services | • Healthcare |
| • Installation and Repair | • Office and Administrative Services | • Sales and Customer Service |
| • Protective Services | • Art, Media, and Entertainment | • Transportation and Warehousing |
| | • Natural Sciences | • IT and Math |
| | • Architecture and Engineering | • Business and Finance |
| | • Education, Curation, and Library Services | • Agriculture and Forestry |
| | • Legal | • Inspection, Health, and Safety |

Source: Emsi Burning Glass Skills and BLS employment.

For the figures below, data are derived from Emsi Burning Glass Profile Analytics, a database of professional profiles and resumes, and Emsi Burning Glass Job Posting Analytics (JPA), a database of more than 100 million online job postings. Profiles represent the region's talent supply, and postings, collected from January 2019 to December 2020, represent employer demand.

While Profile Analytics updates monthly and JPA data are collected daily, regional skills analyses require a longer timeframe. Utilizing data collected over the two-year period results in stronger relationships between how skills coalesce, thereby providing more meaningful, statistically significant analysis. Additionally, understanding that long-term trends ultimately shape the future of the labor market and refraining from impulsive, short-term decision-making is both prudent and necessary from a policy perspective. This is especially true given the unique economic crisis created by the COVID-19 pandemic. For additional information and context on Emsi Burning Glass Skills methodology, please refer to the appendix included at the end of this report.

**FIGURE 3:** ESTIMATED TALENT SUPPLY AND EMPLOYER DEMAND BY CAREER AREA IN THE HONOLULU MSA (JANUARY 2019-DECEMBER 2020)



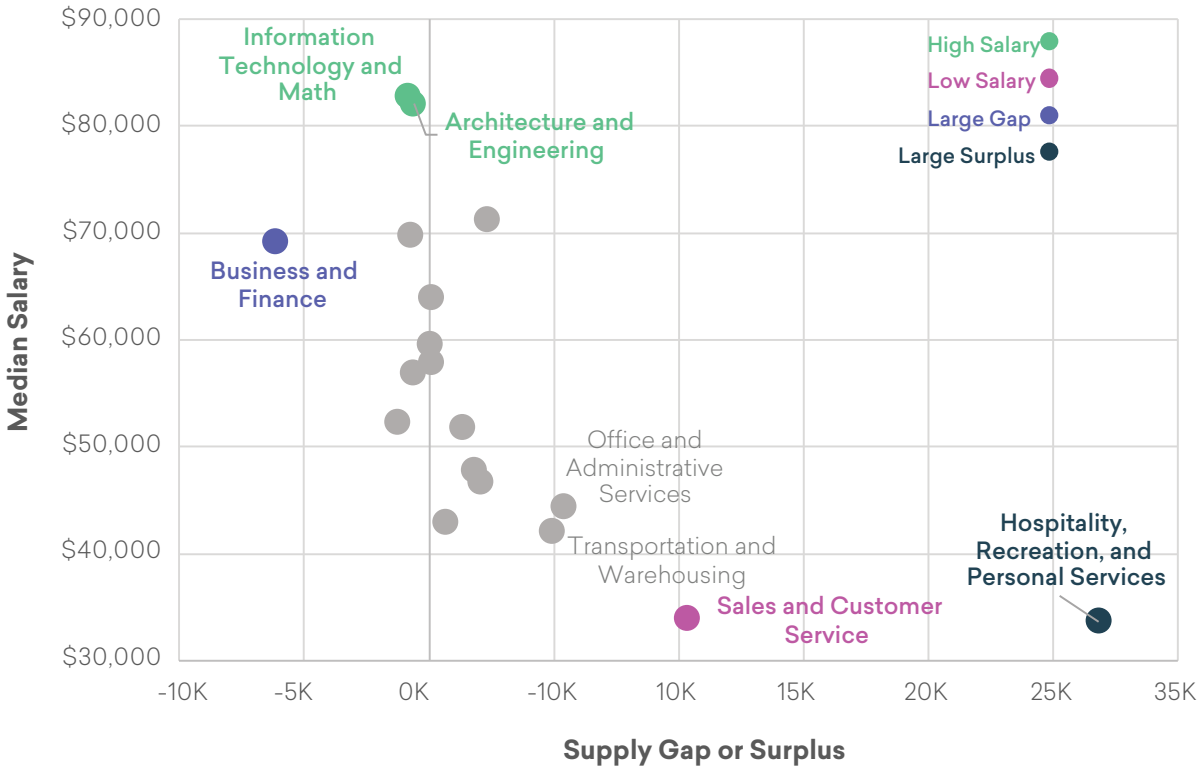

Career areas above the line depicted in **dark blue** indicate a talent shortage among the region's workers, and a those depicted below the line in indigo indicate a talent surplus among the region's workers. The size of the circle represents employer demand (job postings).

*Source: Emsi Burning Glass Skills*

As shown in Figure 3, the career areas with the greatest shortage of talent in the Honolulu MSA are Business & Finance; Art, Entertainment, & Media; and Information Technology & Math. Note that while Business & Finance has the largest demand in terms of job postings, it is the fourth-largest career area in terms of supply. On the other hand, Hospitality, Recreation, & Personal Services and Sales & Customer Service have the largest talent surpluses, followed by Office & Administrative Services and Transportation & Warehousing. Furthermore, talent supply in Hospitality, Recreation, & Personal Services and Sales & Customer Service represent the two largest career areas in the Honolulu MSA.

The differences between the career areas' median annual salaries are illustrated in Figure 4. As stated previously, Business & Finance has the largest negative gap or talent shortage by far and therefore found in the left-most area of the figure (shown in indigo). Information Technology & Math and Architecture & Engineering, which both have a talent shortage, also have the highest median annual salary, each above $80,000. These are depicted in light green. Sales & Customer Service, shown in magenta, has both a large talent surplus and low median annual salary of $33,943. Hospitality, Recreation, and Personal Services, shown in dark blue, has an even lower median annual salary of $33,680 and its talent surplus is well beyond any other career area.

**FIGURE 4:** CAREER AREA SUPPLY-DEMAND GAPS IN THE HONOLULU MSA WITH MEDIAN ANNUAL SALARY (JANUARY 2019-DECEMBER 2020)




Not all career areas are labeled. Many career areas have similar gaps/surpluses. Career areas indicated in light green have the highest median annual salaries. Career areas indicated in magenta have among the lowest median annual salaries. Career areas indicated in **dark blue** have large talent surpluses. Career areas indicated in indigo have large talent gaps.

*Source: Emsi Burning Glass Skills*

# Career Area Demographics

OWDB aims to create equitable, sustainable growth in the Honolulu MSA. As such, part of this analysis focuses upon job inequity in the MSA by race/ethnicity. Table 2 shows the region's median annual salary and 2020 employment for each of the career areas. It also includes the career areas' share of employment by Asian, Native Hawaiian/Pacific Islander, Hispanic, and Black workers. Note that the median annual salary for the Honolulu MSA is $48,140 and the region's overall share of Asian, Hispanic, NH/PI, and Black workers is 40%, 10%, 7%, and 4%, respectively.

It is readily apparent that Asian workers are frequently overrepresented across many career areas with median annual salaries above the region's average. Only one career area with a median annual salary above the regional average is over-represented by Hispanic and NH/PI workers: Construction & Excavation. Further, Black workers are not overrepresented by any of the above-average salary career areas. Shown in the table in light green, these are regional strengths. For example, 60% of all IT & Math workers are Asian, which is above the region's Asian employment share of 40%. In Construction & Excavation, for instance, Hispanic and NH/PHI workers account for 15% and 10% of workers respectively, while accounting for just 10% and 7% of the regional workforce. The career area has a median annual posted salary of $71,316, which is 48% above the region's median ($48,140).

A greater number of career areas are overrepresented in terms of employment and have median annual salaries below the region's average. Hospitality, Recreation, & Personal Services, for example, has among the lowest median annual salaries among all the career areas ($33,680) and Asian workers account for 47% of the career area's employment. Career areas overrepresented by two or more target populations with below-average salaries include Protective Services; Installation & Repair; Office & Administrative Services; Transportation & Warehousing; Agriculture & Forestry; and the Military.

**TABLE 2:** EMPLOYMENT IN THE HONOLULU MSA BY CAREER AREA AND DEMOGRAPHIC CHARACTERISTICS (2020)

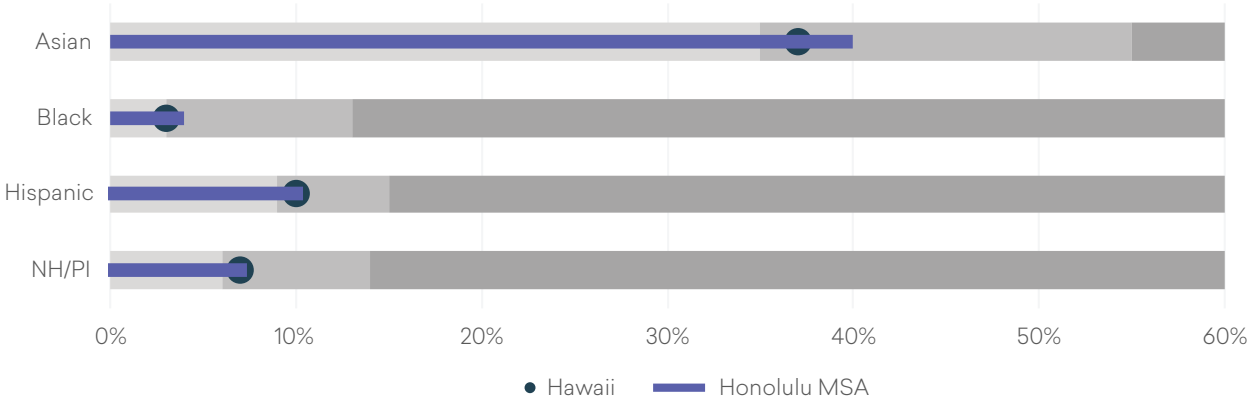
| Career Area | Median Annual Salary | 2020 Jobs | % of Career Area Employment | | | |
|---|---|---|---|---|---|---|
| | | | Asian | Latinx | NH/PI | Black |
| Information Technology and Math | $82,726 | 12,218 | 60% | 5% | 2% | 3% |
| Architecture and Engineering | $82,085 | 7,518 | 58% | 5% | 2% | 2% |
| Construction and Excavation | $71,316 | 28,153 | 28% | 15% | 10% | 2% |
| Legal | $69,810 | 4,969 | 44% | 7% | 4% | 2% |
| Business and Finance | $69,154 | 56,766 | 44% | 7% | 5% | 4% |
| Natural Sciences | $64,051 | 3,445 | 51% | 5% | 2% | 2% |
| Inspection, Health, and Safety | $59,592 | 1,255 | 43% | 8% | 4% | 4% |
| Healthcare | $57,913 | 45,350 | 52% | 7% | 6% | 3% |
| Social Sciences and Services | $57,005 | 12,856 | 37% | 9% | 7% | 3% |
| Art, Media, and Entertainment | $52,380 | 8,162 | 27% | 10% | 3% | 4% |
| Education, Curation, and Library Services | $51,911 | 34,115 | 42% | 7% | 7% | 2% |
| **Honolulu – All Occupations** | **$48,140** | **506,579** | **40%** | **10%** | **7%** | **4%** |
| Protective Services | $47,830 | 16,032 | 26% | 12% | 13% | 6% |
| Installation and Repair | $46,831 | 44,618 | 35% | 14% | 9% | 4% |
| Office and Administrative Services | $44,449 | 32,733 | 41% | 9% | 8% | 3% |
| Production and Manufacturing | $43,014 | 9,433 | 46% | 10% | 7% | 3% |
| Transportation and Warehousing | $42,180 | 39,183 | 33% | 11% | 11% | 4% |
| Agriculture and Forestry | $38,632 | 2,625 | 44% | 17% | 9% | 1% |
| Sales and Customer Service | $33,943 | 50,843 | 43% | 9% | 6% | 2% |
| Hospitality, Recreation, and Personal Services | $33,680 | 58,547 | 47% | 10% | 7% | 2% |
| Military | $32,993 | 26,916 | 6% | 12% | 1% | 19% |

Career areas are in descending order or median annual salary. Cells in light green highlight overrepresentation of target populations in career areas above the region's median annual salary, and cells in light blue highlight overrepresentation below the median annual salary.

*Source: Emsi Burning Glass Skills and BLS employment.*

In the section below, data show Asian, Black, Hispanic/Latino, and Native Hawaiian/Pacific Islander employment and describe a demographic group's representation as low, average, or high. As stated previously, Asian workers account for 40% of Honolulu MSA workers, Black workers account for 4%, Hispanic or Latino workers account for 10%, and Native Hawaiian or Pacific Islander workers account for 7%. These averages are indicated by the horizontal bars in Figure 5, and Hawaii's averages are 37%, 3%, 10%, and 7%, respectively, as indicated by the marker. The bands in the figure depict low, average, and high employment in the Honolulu MSA, statistically determined by standard deviation. For example, low Asian employment is when the group's representation accounts for less than 35% of total employment (in the career area, skill cluster, etc.), as indicated by the lightest band. High employment for Asian workers is when the group's representation accounts for greater than 55% of total employment indicated by the darkest band. Finally, average employment in each group occurs between the highest low and lowest high values.

**FIGURE 5:** AVERAGE EMPLOYMENT IN HONOLULU MSA AND HAWAII BY DEMOGRAPHICS

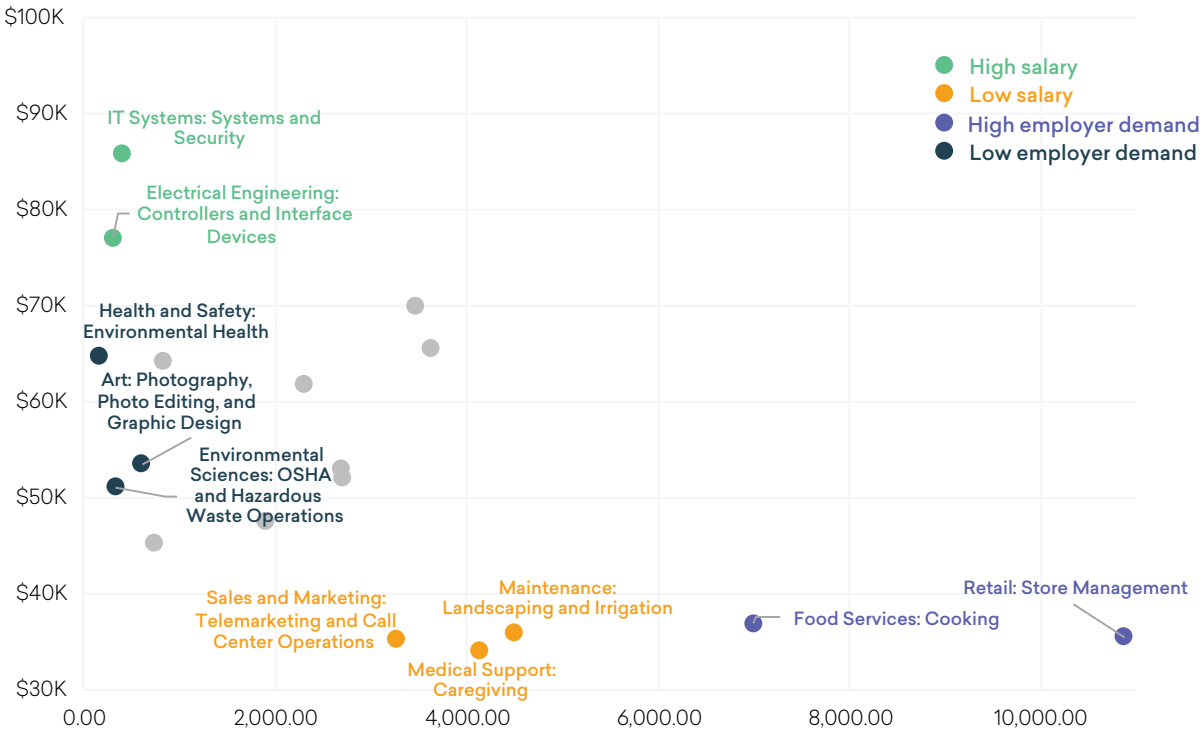



# Career Area Skills

Emsi Burning Glass profiles update monthly, and job postings data are scraped daily, but skills analyses require a longer collection timeframe. Two years of data are processed, resulting in stronger relationships between groups of skills, thereby providing a more meaningful, statistically significant analysis. In addition, understanding that long-term trends ultimately shape the future of the labor market and refraining from impulsive, short-term decision-making are both prudent and necessary from a policy perspective. Additional information on Emsi Burning Glass Skills methodology is in the appendix.

Skill clusters are composed of a broad collection of related skills. For a diverse career area like Business & Finance, more than 150 skill clusters are associated with its occupations. The career area includes skill clusters like Business Operations: System Implementation & Agile Management; Financial Services: Loan & Insurance Services; Human Resources: Talent Acquisition & Recruiting; and Logistics: Analytics Management. Figure 6 shows the skill cluster with the largest employer demand for each career area in the Honolulu MSA compared to that cluster's median annual earnings.

**FIGURE 6:** ESTIMATED EMPLOYER DEMAND AND MEDIAN ANNUAL EARNINGS IN HONOLULU MSA BY LARGEST SKILL CLUSTER IN EACH CAREER AREA




*Source: Emsi Burning Glass Skills and BLS employment.*

The figure and tables in this section identify the most represented skills in each career area, emphasizing employer demand and earnings. Figure 6 above and the corresponding Table 3 illustrate the differences between skill clusters, in terms of how often the skill clusters appear in postings and the earnings associated with each skill cluster. Eighteen skill clusters appear in the figure and are found in the table, representing the most in-demand skill cluster in each career area[4]. In the figure, the x-axis represents employer demand, estimated through Honolulu MSA job postings, and median annual posted earnings are along the y-axis. Some skill clusters are labeled by color, an indication of high salary, low salary, high employer demand, or low employer demand. The data in the figure are also shown in the table, and the table includes the top skill cluster's corresponding career area.

4 The Agriculture & Forestry and Military career areas are excluded due to insufficient data.

The results show that most in-demand skill clusters have low earnings, whereas employer demand is variable for skill clusters with higher earnings. For instance, Retail: Store Management and Food Services: Cooking skill clusters are well represented in Honolulu MSA job postings, but each are associated with earnings well below MSA's median wage. On the other hand, Electrical Engineering: Controllers and Interface Devices and IT Systems: Systems and Security have high annual wages above $75,000 but are poorly represented in Honolulu MSA job postings, indicating lower comparative demand. Data indicate that workers with the lowest-earning skills have numerous opportunities to advance in their career—by acquiring and developing new skills that may be less in-demand in the Honolulu MSA labor market but have the potential to increase earnings. Further, many of these opportunities may have lower demand but still experience a talent shortage.

**TABLE 3:** LARGEST SKILL CLUSTER BY CAREER AREA IN HONOLULU MSA JOB POSTINGS

| Skill Cluster | Career Area | Job Postings | Median Annual Earnings |
|---|---|---|---|
| Retail: Store Management | Sales and Customer Service | 10,871 | $35,519 |
| Food Services: Cooking | Hospitality, Recreation, and Personal Services | 6,996 | $36,924 |
| Maintenance: Landscaping and Irrigation | Installation and Repair | 4,503 | $35,909 |
| Medical Support: Caregiving | Healthcare | 4,145 | $34,153 |
| Construction: Electrical Systems | Construction and Excavation | 3,620 | $65,603 |
| Transportation: Air Traffic Control | Transportation and Warehousing | 3,458 | $70,000 |
| Sales and Marketing: Telemarketing and Call Center Operations | Office and Administrative Services | 3,274 | $35,360 |
| Education: Post Secondary and Adult Education | Education, Curation, and Library Services | 2,703 | $52,049 |
| Social Services: Social Work | Social Sciences and Services | 2,700 | $52,956 |
| Financial Services: Banking and Financial Specialists | Business and Finance | 2,299 | $61,906 |
| Protective Services: Floor Operations and Security | Protective Services | 1,909 | $47,570 |
| Manufacturing: Welding and Soldering | Production and Manufacturing | 837 | $64,248 |
| Legal Services: Operations Support | Legal | 731 | $45,380 |
| Art: Photography, Photo Editing, and Graphic Design | Art, Entertainment and Media | 610 | $53,500 |
| IT Systems: Systems and Security | Information Technology and Math | 414 | $85,726 |
| Environmental Sciences: OSHA and Hazardous Waste Operations | Natural Sciences | 336 | $51,095 |
| Electrical Engineering: Controllers and Interface Devices | Architecture and Engineering | 308 | $77,054 |
| Health and Safety: Environmental Health | Inspection, Health and Safety | 170 | $64,738 |

*Career areas ranked in descending order of job postings.*

*Source: Emsi Burning Glass Skills and BLS employment.*

**TABLE 4:** MOST REPRESENTED SKILLS AND OCCUPATIONS BY SKILL CLUSTER IN HONOLULU MSA JOB POSTINGS

| Skill Cluster | | Job Postings |
|---|---|---|
| Retail: Store Management | | 10,871 |
| **Top Skills** | Basic Math, Cash Handling, Cash Register, Detail Oriented, Operational Experience | |
| **Top Occupations** | First-Line Supervisors of Retail Sales Workers; Retail Salespersons; Cashiers | |
| Food Services: Cooking | | 6,996 |
| **Top Skills** | Sanitation, Cooking, Food Preparation, Merchandising, Food Safety | |
| **Top Occupations** | Cooks (Restaurant); Fast Food and Counter Workers; First-Line Supervisors of Food Preparation and Serving Workers | |
| Maintenance: Landscaping and Irrigation | | 4,503 |
| **Top Skills** | Mowing, Landscaping, Trimming, Irrigation, Pruning | |
| **Top Occupations** | Maintenance and Repair Workers (General); Janitors and Cleaners; Maids and Housekeeping Cleaners | |
| Medical Support: Caregiving | | 4,145 |
| **Top Skills** | Caregiving, Certified Nursing Assistant, Home Care, Personal Care, Compassion | |
| **Top Occupations** | Home Health and Personal Care Aides; Nursing Assistants; Medical Assistants | |
| Construction: Electrical Systems | | 3,620 |
| **Top Skills** | Troubleshooting, Electrical Wiring, Electrical Systems, Electrical Equipment, Blueprinting | |
| **Top Occupations** | Electricians; Construction Managers; First-Line Supervisors of Construction Trades and Extraction Workers | |
| Transportation: Air Traffic Control | | 3,458 |
| **Top Skills** | FAA, Planning, Demolition, Air Traffic Control, Flight Planning | |
| **Top Occupations** | Air Traffic Controllers; Passenger Vehicle Drivers; Airfield Operations Specialists | |
| Sales and Marketing: Telemarketing and Call Center Operations | | 3,274 |
| **Top Skills** | Detail Oriented, Organizational Skills, Verbal Communication Skills, Scheduling, Prioritization | |
| **Top Occupations** | Secretaries and Administrative Assistants; First-Line Supervisors of Office and Administrative Support Workers; Office Clerks (General) | |
| Education: Post Secondary and Adult Education | | 2,703 |
| **Top Skills** | Distance Learning, Broadband, Moodle, Immunization, Administering Blood Tests | |
| **Top Occupations** | Postsecondary Teachers; Instructional Coordinators; Secondary School Teachers | |
| Social Services: Social Work | | 2,700 |
| **Top Skills** | Valid Driver's License, Human Services, Accountability, First Aid, Writing | |
| **Top Occupations** | Social and Human Service Assistants; Mental Health and Substance Abuse Social Workers; Healthcare Social Workers | |
| Financial Services: Banking and Financial Specialists | | 2,299 |
| **Top Skills** | Loans, Mortgage Loans, Loan Processing, Real Estate, Verbal Communication Skills | |
| **Top Occupations** | Securities, Commodities, and Financial Services Sales Agents; Loan Interviewers and Clerks; Credit Analysts | |
| Protective Services: Floor Operations and Security | | 1,909 |
| **Top Skills** | Top Secret-Sensitive Compartmented Information (TS-SCI) Clearance, Intelligence Analysis, Planning, Vulnerability, All-Source Intelligence | |
| **Top Occupations** | Detectives and Criminal Investigators; Security Guards; First-Line Supervisors of Protective Service Workers | |
| Manufacturing: Welding and Soldering | | 837 |
| **Top Skills** | Welding, Personal Protective Equipment (PPE), Grinding, Flux-Cored Arc Welding, Fabrication | |
| **Top Occupations** | Welders, Cutters, Solderers, and Brazers; Machinists; Electrical, Electronic, and Electromechanical Assemblers | |
| Legal Services: Operations Support | | 731 |
| **Top Skills** | Filing, Detail Oriented, Clerical Works, Typing, Scheduling | |
| **Top Occupations** | Paralegals and Legal Assistants; Legal Secretaries; Lawyers | |

| Skill Cluster | | Job Postings |
|---|---|---|
| Art: Photography, Photo Editing, and Graphic Design | | 610 |
| **Top Skills** | Graphic Design, Adobe Photoshop, Adobe Illustrator, Logos, Adobe InDesign | |
| **Top Occupations** | Graphic Designers; Commercial and Industrial Designers; Art Directors | |
| IT Systems: Systems and Security | | 414 |
| **Top Skills** | Computer Science, Python, Scripting, Agile Methodology, Automation | |
| **Top Occupations** | Information Security Analysts; Network and Computer Systems Administrators; Computer Systems Analysts | |
| Environmental Sciences: OSHA and Hazardous Waste Operations | | 336 |
| **Top Skills** | Soil Science, Geology, ArgGIS, Groundwater, Detail Oriented | |
| **Top Occupations** | Environmental Scientists and Specialists; Environmental Science and Protection Technicians; Zoologists and Wildlife Biologists | |
| Electrical Engineering: Controllers and Interface Devices | | 308 |
| **Top Skills** | Electrical Engineering, Detail Oriented, Construction, AutoCAD, Consulting | |
| **Top Occupations** | Electrical Engineers; Electrical and Electronics Engineering Technicians; Electronics Engineers | |
| Health and Safety: Environmental Health | | 170 |
| **Top Skills** | Occupational Health and Safety Administration (OSHA), Safety Training, Environment Health and Safety, Corrective and Preventative Action (CAPA), Construction | |
| **Top Occupations** | Occupational Health and Safety Specialists; Health and Safety Engineers; Inspectors, Testers, Sorters, Samplers, and Weighers | |

*Skill clusters ranked in descending order of median annual earnings.*

*Source: Emsi Burning Glass Skills.*

# Skill Gaps

The skill clusters identified in the figure and table below are the largest among all skill clusters in Honolulu MSA job postings. Some of these skill clusters are both the most in-demand skill cluster in a career area and among the highest in terms of overall demand, due to the career area's size. These skill clusters are identified with an asterisk (*) in Table 5.

Three of these most in-demand skill clusters have larger employer demands than talent supply, as shown in the figure, with supply-demand ratios less than 1.0, as shown in the table. They are Social Services: Social Work; Sales: Sales Management; and Transportation: Air Traffic Control. In other words, the skills in these skill clusters are being requested by employers in the MSA job postings, but not enough of the skills are appearing in the resumes and professional profiles among the region's residents. Due to this talent shortage, it makes sense then that these skill clusters typically demand higher salaries compared to the skills clusters with talent surpluses on this list. For instance, Food Services: Cooking; Hospitality: Hosting & Guest Services; and Retail: Store Management all have an enormous surplus of profiles compared to job postings, but command earnings less than $40,000.

**FIGURE 7:** TALENT SHORTAGES AND SURPLUSES OF SKILL CLUSTERS WITH THE LARGEST EMPLOYER DEMAND IN HONOLULU MSA


*Skill clusters with a ratio less than 1.0 (arrow pointing right) indicates a talent shortage, and a ratio greater than 1.0 (arrow pointing left) indicates a talent surplus.*

*Source: Emsi Burning Glass Skills.*

**TABLE 5:** ESTIMATED EMPLOYER DEMAND IN HONOLULU MSA BY SKILL CLUSTER WITH SUPPLY-DEMAND RATIOS AND MEDIAN ANNUAL EARNINGS

| Career Area | Employer Demand | Supply-Demand Ratio | Median Annual Earnings |
|---|---|---|---|
| Food Services: Cooking* | 6,996 | 2.80 | $36,924 |
| Hospitality: Hosting & Guest Services | 6,321 | 2.73 | $34,515 |
| Retail: Store Management* | 10,871 | 1.97 | $35,519 |
| Medical Support: Caregiving* | 4,145 | 1.66 | $34,153 |
| Sales & Marketing: Telemarketing & Call Center Operations* | 3,274 | 1.61 | $35,360 |
| Transportation: Heavy Equipment Operations | 2,918 | 1.67 | $39,520 |
| Admin. Services: Payroll, Collections, & Bookkeeping | 2,903 | 1.46 | $42,411 |
| Construction: Electrical Systems* | 3,620 | 1.36 | $65,603 |
| Maintenance: Landscaping & Irrigation* | 4,503 | 1.25 | $35,909 |
| Maintenance: Housekeeping & Cleaning | 3,601 | 1.26 | $32,411 |
| Education: Post Secondary & Adult Education* | 2,703 | 1.12 | $52,049 |
| Construction: Project Management | 3,035 | 1.00 | $78,264 |
| Transportation: Air Traffic Control* | 3,458 | 0.78 | $70,000 |
| Sales: Sales Management | 2,763 | 0.69 | $71,000 |
| Social Services: Social Work* | 2,700 | 0.58 | $52,956 |

** Largest skill cluster in a career area.*

*Skill clusters ranked in descending order of supply-demand ratio.*

*Source: Emsi Burning Glass Skills.*

# Target Career Areas

Based on the data available from Emsi Burning Glass Skills, six target career areas have been identified that represent opportunities to advance and promote human capital development and equity measures in the Honolulu MSA. The target career areas are:

| Transitioning Into Career Areas | Exiting Career Areas |
| --- | --- |
| Business & Finance | Hospitality, Recreation, & Personal Services |
| Healthcare | Sales & Customer Service |
| IT & Math | Protective Services |

Business & Finance, Healthcare, and IT & Math provide multiple benefits to workers in the Honolulu MSA, and transitioning into the career areas is recommended based on the following criteria:

- Diverse, high-paying jobs for a range of experience and education levels
- Strong historical job growth and an expectation for continued growth, as evidenced by a high employer demand relative to talent supply
- A wide array of career entry and growth opportunities to help workforce training and upskilling or reskilling efforts
- Numerous skill cluster talent shortages providing career opportunities for worker transitions

Exiting Hospitality, Recreation, & Personal Services; Protective Services; and Transportation & Warehousing, on the contrary, also provides multiple benefits to workers in Oahu. The career areas are chosen based on the following criteria:

- Primarily low-paying jobs and little career advancement even with more experience and greater education
- Relatively large talent supply surplus
- Above average or high employment among workers in one or more target populations

# Transitioning Into Career Areas

Taking the initiative to acquire and develop skills can be a daunting step in a person's working career. Knowing which skills are valued by employers and have the potential to increase wages is challenging. Moreover, people of color and underrepresented populations face systemic challenges in higher education, impeding their success in STEM professions[5]. The skill clusters identified in this section can be viewed as upskilling opportunities for current Business & Finance, Healthcare, and IT & Math workers and reskilling opportunities for workers employed in other career areas.

## Business & Finance

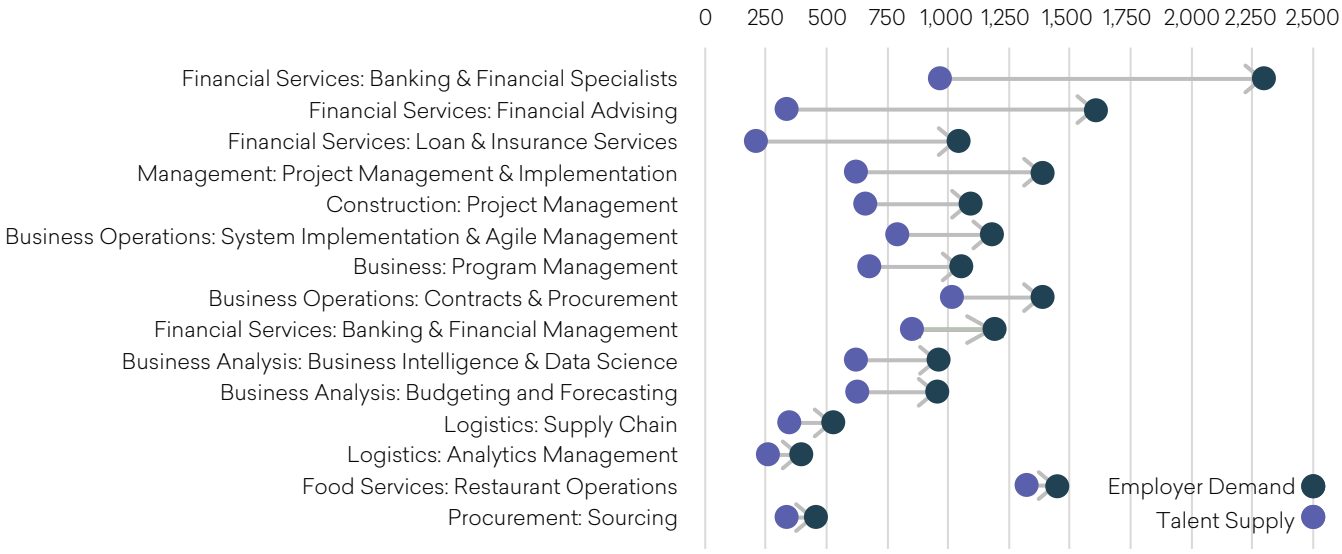
Business & Finance was selected as a target career area for three main reasons: first, it is a largely in-demand career area with generally high salaries well above the median salary of the region. Second this career area has a talent shortage indicated by many job postings with fewer profiles indicating the same necessary skills required. Finally, Hispanic and NH/PI workers are generally underrepresented in this category.

Few of the most in-demand skill clusters indicate an adequate talent supply for area demand. For example, of the 10 most in-demand skill clusters, only one (Accounting: Collections, Accounts Payable, and Accounts Receivable) has a talent surplus. This skills cluster also has a lower salary compared to the other skill clusters in Business & Finance.

Financial Services: Banking & Financial Specialists; Financial Services: Financial Advising; and Financial Services: Loan & Insurance Services have the largest overall talent shortages. Financial Services: Loan & Insurance Services also has the lowest supply-demand ratio and the highest posted median annual earnings, demonstrating how the acute shortage of talent demands a higher salary.

5 STEM refers to science, technology, engineering, and math. National Academies of Science, Engineering, and Medicine. 2019. Minority Serving Institutions: America's Underutilized Resource for Strengthening the STEM Workforce. Washington, DC: The National Academies Press. doi: https:doi.org/10.17226/25257.

**FIGURE 8:** LARGEST TALENT SHORTAGES OF **BUSINESS & FINANCE** SKILL CLUSTERS IN HONOLULU MSA




*Source: Emsi Burning Glass Skills.*

**TABLE 6:** ESTIMATED EMPLOYER DEMAND IN HONOLULU MSA BY **BUSINESS & FINANCE** SKILL CLUSTERS WITH SUPPLY-DEMAND RATIOS AND MEDIAN ANNUAL EARNINGS

| Career Area | Employer Demand | Supply-Demand Ratio | Median Annual Earnings |
|---|---|---|---|
| Procurement: Sourcing | 454 | 0.75 | $61,837 |
| Food Services: Restaurant Operations | 1,451 | 0.91 | $70,000 |
| Logistics: Analytics Management | 399 | 0.66 | $64,017 |
| Logistics: Supply Chain | 529 | 0.66 | $50,490 |
| Business Analysis: Budgeting and Forecasting | 956 | 0.66 | $75,000 |
| Business Analysis: Business Intelligence & Data Science | 961 | 0.65 | $77,500 |
| Financial Services: Banking & Financial Management | 1,196 | 0.71 | $77,365 |
| Business Operations: Contracts & Procurement | 1,390 | 0.73 | $75,000 |
| Business: Program Management | 1,055 | 0.64 | $74,896 |
| Business Operations: System Implementation & Agile Management | 1,180 | 0.67 | $79,554 |
| Construction: Project Management | 1,097 | 0.60 | $74,896 |
| Management: Project Management & Implementation | 1,391 | 0.45 | $79,500 |
| Financial Services: Loan & Insurance Services | 1,042 | 0.20 | $200,000 |
| Financial Services: Financial Advising | 1,610 | 0.21 | $86,576 |
| Financial Services: Banking & Financial Specialists | 2,299 | 0.42 | $61,906 |

*Source: Emsi Burning Glass Skills.*

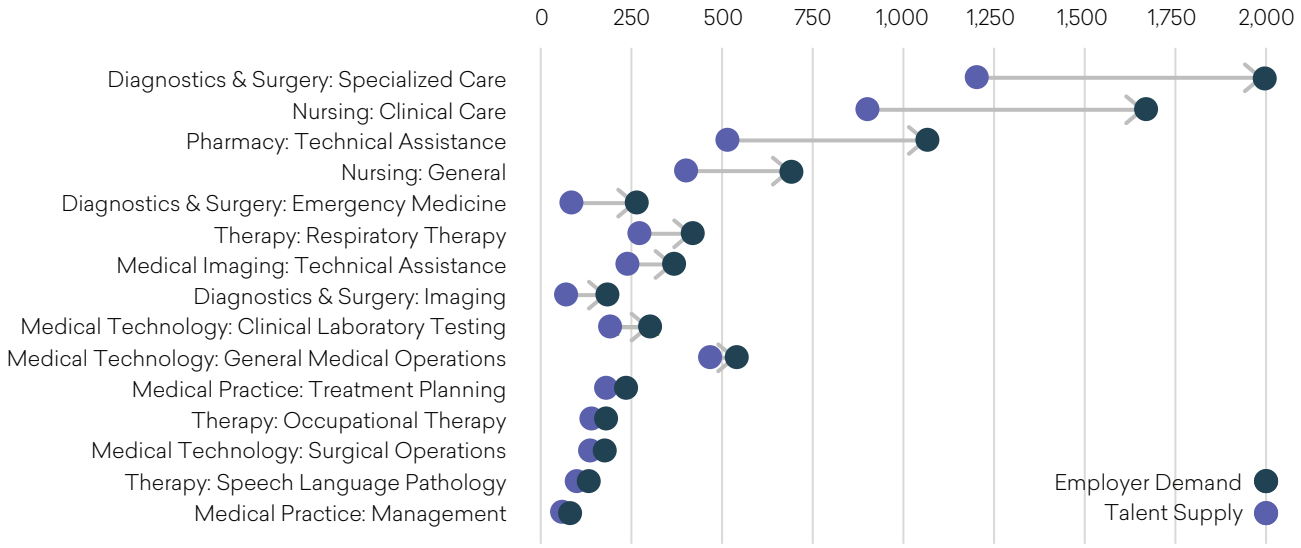
## Healthcare

Healthcare was selected as a target career area for three main reasons: first, much like Business & Finance, it is a largely in-demand career area with generally high salaries well above the median salary of the region. Second this career area has many skill clusters that indicate a shortage of profiles. Finally, Hispanic, NH/PI, and Black workers are slightly under-represented in this category.

Few Healthcare skill clusters indicate an adequate talent supply for area demand. Only Medical Support: Caregiving; Medical Support: Phlebotomy; and Medical Support: Technical Assistance indicate talent surpluses. These also happen to be on the lower end of salaries associated with Healthcare skill clusters. Medical Support: Caregiving is the most in-demand skill cluster but also has a large surplus of talent relative to demand. This represents an upskilling opportunity for workers already in the Healthcare field to chart a career pathway for roles with higher pay – the Medical Support: Caregiving skill cluster has a low median salary of just $34,153.

Diagnostics & Surgery: Specialized Care; Nursing: Clinical Care; and Pharmacy: Technical Assistance have the largest overall talent shortages. However, the skills cluster with the smallest supply-demand ratio is Diagnostics & Surgery: Emergency Medicine with a ratio of just 0.32.

**FIGURE 9:** LARGEST TALENT SHORTAGES OF **HEALTHCARE** SKILL CLUSTERS IN HONOLULU MSA




*Source: Emsi Burning Glass Skills.*

**TABLE 7:** ESTIMATED EMPLOYER DEMAND IN HONOLULU MSA BY **HEALTHCARE** SKILL CLUSTERS WITH SUPPLY-DEMAND RATIOS AND MEDIAN ANNUAL EARNINGS

| Career Area | Employer Demand | Supply-Demand Ratio | Median Annual Earnings |
|---|---|---|---|
| Medical Practice: Management | 79 | 0.77 | $81,000 |
| Therapy: Speech Language Pathology | 132 | 0.77 | $56,650 |
| Medical Technology: Surgical Operations | 177 | 0.78 | $99,753 |
| Therapy: Occupational Therapy | 181 | 0.78 | $66,830 |
| Medical Practice: Treatment Planning | 234 | 0.77 | $108,018 |
| Medical Technology: General Medical Operations | 542 | 0.86 | $49,739 |
| Medical Technology: Clinical Laboratory Testing | 302 | 0.64 | $53,768 |
| Diagnostics & Surgery: Imaging | 186 | 0.39 | $127,500 |
| Medical Imaging: Technical Assistance | 367 | 0.65 | $93,536 |
| Therapy: Respiratory Therapy | 420 | 0.65 | $68,628 |
| Diagnostics & Surgery: Emergency Medicine | 266 | 0.32 | $93,784 |
| Nursing: General | 692 | 0.58 | $85,260 |
| Pharmacy: Technical Assistance | 1,066 | 0.48 | $88,200 |
| Nursing: Clinical Care | 1,669 | 0.54 | $87,946 |
| Diagnostics & Surgery: Specialized Care | 1,996 | 0.60 | $80,358 |

*Source: Emsi Burning Glass Skills.*

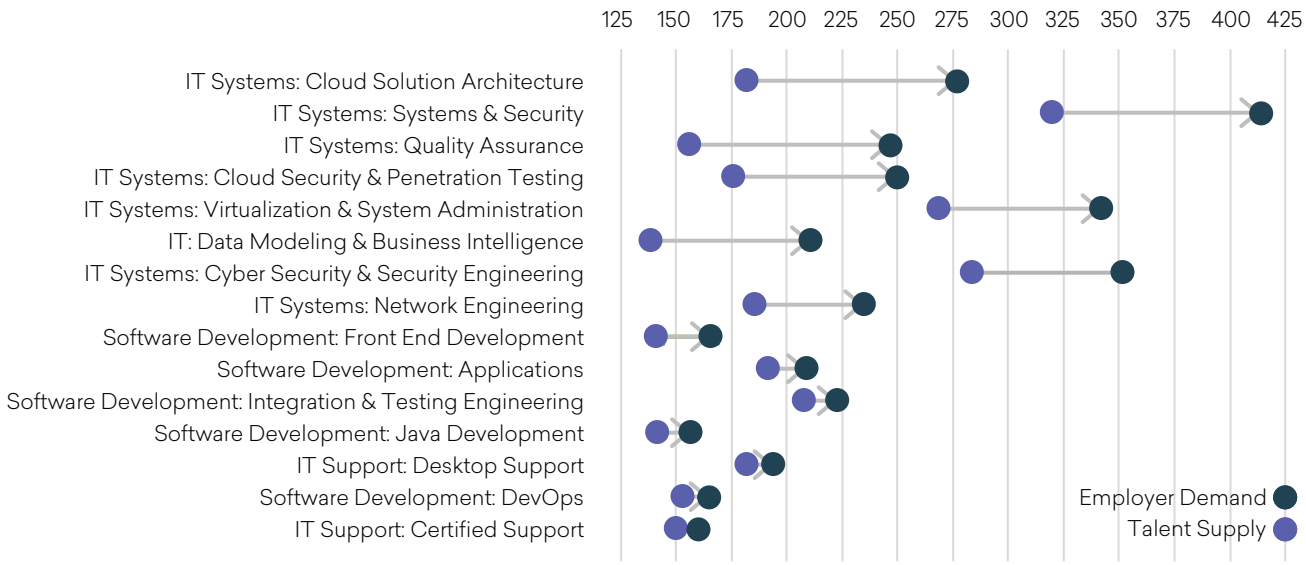
## Information Technology & Math

IT & Math was selected as a target career area for three main reasons: first, it has the highest median annual salary among career areas. Second, it is grossly underrepresented by Hispanic, NH/PI, and Black workers. The disadvantage of this category is that the career area is much smaller – employer demand for some of the most in-demand skill clusters number in the hundreds rather than thousands.

None of the skill clusters in IT & Math indicate a talent surplus. However, the skill clusters with the smallest talent shortages also are among the lowest paying: IT Support: Certified Support and IT Support: Desktop Support pay less than $58,000.

IT Systems: Cloud Solution Architecture; IT Systems: Systems & Security; and IT Systems: Quality Assurance have the largest overall talent shortages. However, a couple of these are not the highest in demand. IT Systems: Virtualization & System Administration and IT Systems: Cyber Security & Security Engineering are both in the top 3 most in-demand skill clusters, behand IT Systems: Systems & Security. The skill clusters with both larger demand and smaller supply-demand ratios (indicated more acute talent shortages) generally have higher pay associated with them.

**FIGURE 10:** ESTIMATED EMPLOYER DEMAND IN HONOLULU MSA BY **IT & MATH** SKILL CLUSTERS WITH SUPPLY-DEMAND RATIOS AND MEDIAN ANNUAL EARNINGS




*Source: Emsi Burning Glass Skills.*

**TABLE 8:** ESTIMATED EMPLOYER DEMAND IN HONOLULU MSA BY **IT & MATH** SKILL CLUSTERS WITH SUPPLY-DEMAND RATIOS AND MEDIAN ANNUAL EARNINGS

| Career Area | Employer Demand | Supply-Demand Ratio | Median Annual Earnings |
|---|---|---|---|
| IT Support: Certified Support | 160 | 0.94 | $57,200 |
| Software Development: DevOps | 165 | 0.93 | $82,240 |
| IT Support: Desktop Support | 194 | 0.94 | $55,100 |
| Software Development: Java Development | 157 | 0.90 | $82,000 |
| Software Development: Integration & Testing Engineering | 223 | 0.93 | $83,120 |
| Software Development: Applications | 209 | 0.92 | $79,210 |
| Software Development: Front End Development | 166 | 0.85 | $62,400 |
| IT Systems: Network Engineering | 235 | 0.79 | $80,000 |
| IT Systems: Cyber Security & Security Engineering | 352 | 0.81 | $80,000 |
| IT: Data Modeling & Business Intelligence | 211 | 0.66 | $110,000 |
| IT Systems: Virtualization & System Administration | 342 | 0.79 | $80,000 |
| IT Systems: Cloud Security & Penetration Testing | 250 | 0.70 | $108,500 |
| IT Systems: Quality Assurance | 247 | 0.63 | $110,000 |
| IT Systems: Systems & Security | 414 | 0.77 | $85,726 |
| IT Systems: Cloud Solution Architecture | 277 | 0.66 | $110,000 |

*Source: Emsi Burning Glass Skills.*

# Exiting Career Areas

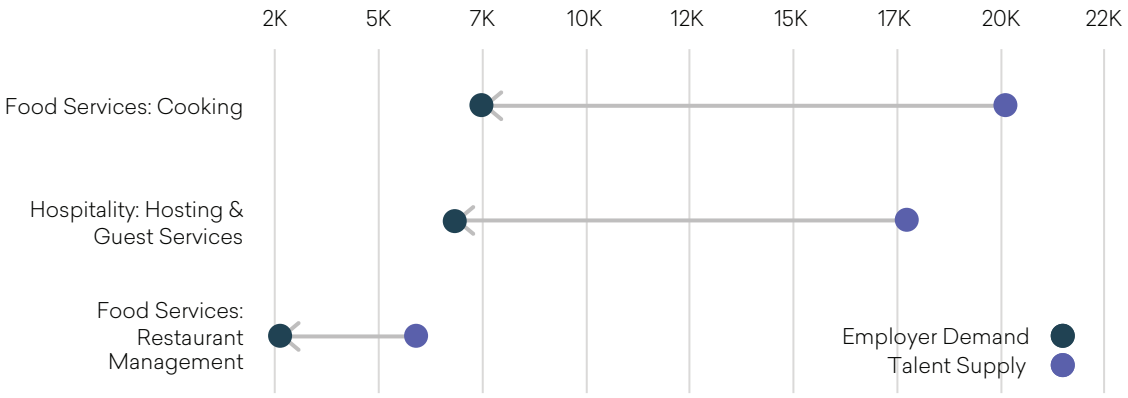
The skill clusters identified in this section are reskilling opportunities for workers looking to acquire and develop skills associated with higher earnings. The career areas below have been chosen because of primarily low-paying jobs and little career advancement even with more experience and greater education; relatively large talent supply surpluses where human capital development could better serve areas with talent shortages; and in the case of Protective Services, above average or high employment among workers in one or more target populations.

## Hospitality, Recreation, & Personal Services

Figure 11 and its corresponding table (Table 9) show that all three Hospitality, Recreation, & Personal Services skill clusters have a talent surplus in the Honolulu MSA. Both Food Services: Cooking and Hospitality: Hosting & Guess Services have similar levels of supply, demand, and talent surplus. They also have low pay with median annual earnings below $37,000. As shown in Table 12, the occupations associated with these two skill clusters include Cooks (Restaurant); Hotel, Motel, & Resort Desk Clerks; Fast Food & Counter Workers; Food Service Managers; and First-Line Supervisors of Food Preparation & Serving Workers.

Those exiting the Food Services: Cooking skills cluster tend to transition to Marketing: Public Relations & Communications most frequently. This skills cluster is underrepresented by all target populations and would bring a pay increase from $36,787 to $55,000. People exiting the Hospitality: Hosting & Guest Services skill cluster transition into higher paying jobs with Business: Program Management most frequently. The same holds true for the Food Services: Restaurant Management skill cluster.

**FIGURE 11:** TALENT SURPLUSES OF **HOSPITALITY, RECREATION, & PERSONAL SERVICES** SKILL CLUSTERS IN HONOLULU MSA




*Source: Emsi Burning Glass Skills.*

**TABLE 9:** ESTIMATED EMPLOYER DEMAND IN HONOLULU MSA BY **HOSPITALITY, RECREATION, & PERSONAL SERVICES** SKILL CLUSTERS WITH SUPPLY-DEMAND RATIOS AND MEDIAN ANNUAL EARNINGS

| Career Area | Employer Demand | Supply-Demand Ratio | Median Annual Earnings |
|---|---|---|---|
| Food Services: Restaurant Management | 2,107 | 2.56 | $43,038 |
| Hospitality: Hosting & Guest Services | 6,321 | 2.73 | $34,515 |
| Food Services: Cooking | 6,996 | 2.80 | $36,924 |

*Source: Emsi Burning Glass Skills.*

**TABLE 10: HOSPITALITY, RECREATION, & PERSONAL SERVICES** SKILL CLUSTERS WITH MOST REPRESENTED, CURRENTLY HELD OCCUPATIONS, MOST REPRESENTED SKILL CLUSTERS IN NEXT JOBS, AND DEMOGRAPHIC EMPLOYMENT

| | | % Skill Cluster Employment (Average) | | | |
|---|---|---|---|---|---|
| **Skill Cluster** | | **Asian (40%)** | **Black (4%)** | **Latinx (10%)** | **NH/PI (7%)** |
| Food Services: Cooking | | 46% | 3% | 12% | 8% |
| **Top Occupations** | Cooks (Restaurant); Fast Food & Counter Workers; First-Line Supervisors of Food Preparation & Serving Workers | | | | |
| **Skill Clusters in Next Jobs** | Marketing: Public Relations & Communications | 34% | 3% | 7% | 3% |
| | Business: Program Management | 29% | 4% | 9% | 5% |
| | Food Services: Restaurant Operations | 36% | 3% | 8% | 6% |
| Hospitality: Hosting & Guest Services | | 49% | 2% | 9% | 7% |
| **Top Occupations** | Hotel, Motel, & Resort Desk Clerks; Food Service Managers; First-Line Supervisors or Food Preparation & Serving Workers | | | | |
| **Skill Clusters in Next Jobs** | Business: Program Management | 29% | 4% | 9% | 5% |
| | Education: Preschool Teaching | 43% | 2% | 8% | 8% |
| | Marketing: Public Relations & Communications | 34% | 3% | 7% | 3% |
| Food Services: Restaurant Management | | 47% | 3% | 10% | 7% |
| **Top Occupations** | Food Service Managers; First-Line Supervisors of Food Preparation & Serving Workers; Fast Food & Counter Workers | | | | |
| **Skill Clusters in Next Jobs** | Business: Program Management | 29% | 4% | 9% | 5% |
| | Marketing: Public Relations & Communications | 34% | 3% | 7% | 3% |
| | Management: Project Management & Implementation | 23% | 5% | 10% | 4% |

*Source: Emsi Burning Glass Skills.*

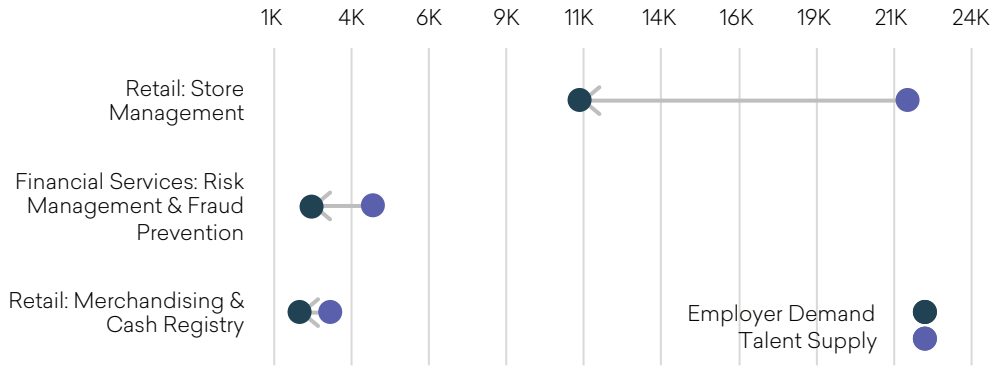
## Sales & Customer Service

Like Hospitality, Recreation, & Personal Services, Sales & Customer Service was chosen because of its large surplus of talent, low pay, and low projected growth. Even though most of the target populations' share of employment are balanced relative to their demographic share, this is still such a large talent supply category that a focus on career transitions can serve the greatest number of low-paid workers in Honolulu, including Blacks, Natives Hawaiians, and Hispanics.

The figures and tables below show the three Sales & Customer Service skill clusters that have a talent surplus in the Honolulu MSA: Retail: Store Management; Financial Services: Risk Management & Fraud Prevention; and Retail: Merchandising & Cash Registry. Retail: Store Management is the largest skill

cluster in both demand and supply, with a large talent surplus. All three skill clusters have low wages and share similarities in terms of skill cluster transitions: workers tend to move on from these skill clusters into Business: Program Management; Management: Project Management & Implementation; and Marketing: Public Relations & Communications. These roles also have higher wages that are above the region's median annual salary as well.

**FIGURE 12:** TALENT SURPLUSES OF **SALES & CUSTOMER SERVICE** SKILL CLUSTERS IN HONOLULU MSA




*Source: Emsi Burning Glass Skills.*

**TABLE 11:** ESTIMATED EMPLOYER DEMAND IN HONOLULU MSA BY **SALES & CUSTOMER SERVICE** SKILL CLUSTERS WITH SUPPLY-DEMAND RATIOS AND MEDIAN ANNUAL EARNINGS

| Career Area | Employer Demand | Supply-Demand Ratio | Median Annual Earnings |
|---|---|---|---|
| Retail: Merchandising & Cash Registry | 1,805 | 1.58 | $38,418 |
| Financial Services: Risk Management & Fraud Prevention | 2,194 | 1.91 | $31,200 |
| Retail: Store Management | 10,871 | 1.97 | $35,519 |

*Source: Emsi Burning Glass Skills.*

**TABLE 12: SALES & CUSTOMER SERVICE** SKILL CLUSTERS WITH MOST REPRESENTED, CURRENTLY HELD OCCUPATIONS, MOST REPRESENTED SKILL CLUSTERS IN NEXT JOBS, AND DEMOGRAPHIC EMPLOYMENT

| | | % Skill Cluster Employment (Average) | | | |
|---|---|---|---|---|---|
| **Skill Cluster** | | **Asian (40%)** | **Black (4%)** | **Latinx (10%)** | **NH/PI (7%)** |
| Retail: Store Management | | 40% | 3% | 11% | 6% |
| **Top Occupations** | First-Line Supervisors of Retail Sales Workers; Retail Salespersons; Cashiers | | | | |
| **Skill Clusters in Next Jobs** | Business: Program Management | 29% | 4% | 9% | 5% |
| | Management: Project Management & Implementation | 23% | 5% | 10% | 4% |
| | Marketing: Public Relations & Communications | 34% | 3% | 7% | 3% |
| Financial Services: Risk Management & Fraud Prevention | | 41% | 3% | 11% | 9% |
| **Top Occupations** | Customer Service Representatives; Tellers; Counter & Rental Clerks | | | | |
| **Skill Clusters in Next Jobs** | Financial Services: Underwriting & Loan Origination | 50% | 3% | 7% | 5% |
| | Business Analysis: Budgeting & Forecasting | 45% | 3% | 6% | 3% |
| | Business: Program Management | 29% | 4% | 9% | 5% |
| Retail: Merchandising & Cash Registry | | 40% | 3% | 11% | 8% |
| **Top Occupations** | Customer Service Representatives; Tellers; Counter & Rental Clerks | | | | |
| **Skill Clusters in Next Jobs** | Marketing: Public Relations & Communications | 34% | 3% | 7% | 3% |
| | Management: Project Management & Implementation | 23% | 5% | 10% | 4% |
| | Education: Preschool Teaching | 43% | 2% | 8% | 8% |

*Source: Emsi Burning Glass Skills.*

## Protective Services

Although Protective Services is a smaller demand category and a higher median annual salary than Transportation & Warehousing, Emsi Burning Glass selected this career area to transition out of due to its high overrepresentation of Black, Hispanic, and Native Hawaiian/Pacific Islander workers. Furthermore, this category has worse job growth projections than Transportation & Warehousing. In fact, although Transportation & Warehousing brings less pay and has some overrepresentation among target populations, it would be foolhardy to suggest career transitions out of this career area given the current supply chain crisis[6].

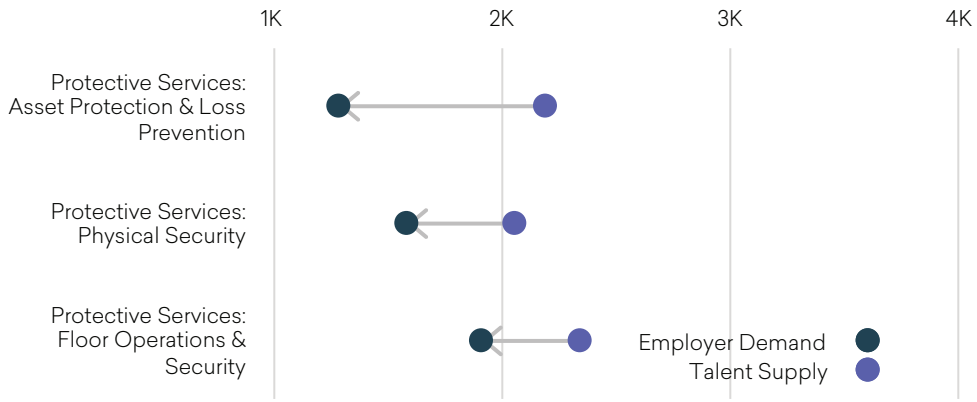
6 We recognize that the acute supply chain issues that both Hawaii and the nation are facing, and therefore this career area transition is much less of a priority at the current time. Transportation & Warehousing was initially considered due to its over-representation of target groups and generally low salary. However, trying to transition workers out of Transportation & Warehousing during a supply chain crisis would be bad policy.

Hawaii's logistics dynamics are unique due to being an island. One the one hand, ports and airports generally serve the state populace, and not as entry-points for goods to serve a larger market inland (For example, the Port of Los Angeles does not just serve the region but acts as an entry point for the entire US). On the other hand, Hawaii is more dependent on shipping from Asia and the mainland since it does not have the benefit of interstate highway transportation and is a smaller market. Goods often go to LA first before coming to Honolulu, for instance, so the supply chain issues facing the mainland ports spill over to Hawaii.

The three skill clusters of Protective Services: Asset Protection & Loss Prevention; Protective Services: Physical Security; and Protective Services: Floor Operations & Security have similar levels of talent supply with varying levels of demand. For instance, Protective Services: Asset Protection & Loss Prevention has the largest talent surplus due to its lowest demand. It also has the lowest associated median annual earnings. Protective Services: Floor Operations & Security conversely has the highest demand, lowest surplus, and highest median annual earnings.

Some transitions from these roles into new skill clusters are repeated, such as Management: Project Management & Implementation and Business: Program Management. However, some skill cluster transitions are unique. For instance, roughly 7% of transitions from Protective Services: Physical Security fall into Communication: Language Interpretation & Translation. A surprising 77% of transitions from Protective Services: Floor Operations & Security go into Food Services: Restaurant Operations.

**FIGURE 13:** TALENT SURPLUSES OF **PROTECTIVE SERVICE**S SKILL CLUSTERS IN HONOLULU MSA




*Source: Emsi Burning Glass Skills.*

**TABLE 13:** ESTIMATED EMPLOYER DEMAND IN HONOLULU MSA BY **PROTECTIVE SERVICES** SKILL CLUSTERS WITH SUPPLY-DEMAND RATIOS AND MEDIAN ANNUAL EARNINGS

| Career Area | Employer Demand | Supply-Demand Ratio | Median Annual Earnings |
|---|---|---|---|
| Protective Services: Floor Operations & Security | 1,909 | 1.23 | $47,570 |
| Protective Services: Physical Security | 1,583 | 1.30 | $33,280 |
| Protective Services: Asset Protection & Loss Prevention | 1,283 | 1.71 | $32,760 |

*Source: Emsi Burning Glass Skills.*

**TABLE 14: PROTECTIVE SERVICES** SKILL CLUSTERS WITH MOST REPRESENTED, CURRENTLY HELD OCCUPATIONS, MOST REPRESENTED SKILL CLUSTERS IN NEXT JOBS, AND DEMOGRAPHIC EMPLOYMENT

| | | % Skill Cluster Employment (Average) | | | |
|---|---|---|---|---|---|
| **Skill Cluster** | | **Asian (40%)** | **Black (4%)** | **Latinx (10%)** | **NH/PI (7%)** |
| Protective Services: Asset Protection & Loss Prevention | | 24% | 6% | 11% | 11% |
| **Top Occupations** | First-Line Supervisors of Protective Service Workers; Security Guards; Private Detectives & Investigators | | | | |
| **Skill Clusters in Next Jobs** | Management: Project Management & Implementation | 23% | 5% | 10% | 4% |
| | Business: Program Management | 29% | 4% | 9% | 5% |
| | Business Analysis: Budgeting & Forecasting | 45% | 3% | 6% | 3% |
| Protective Services: Physical Security | | 28% | 7% | 12% | v |
| **Top Occupations** | Security Guards; Detectives & Criminal Investigators; First-Line Supervisors of Protective Service Workers | | | | |
| **Skill Clusters in Next Jobs** | Management: Project Management & Implementation | 23% | 5% | 10% | 4% |
| | Business: Program Management | 29% | 4% | 9% | 5% |
| | Communication: Language Interpretation & Translation | 24% | 3% | 23% | 4% |
| Protective Services: Floor Operations & Security | | 25% | 7% | 12% | 9% |
| **Top Occupations** | Detectives & Criminal Investigators; Security Guards; First-Line Supervisors of Protective Service Workers | | | | |
| **Skill Clusters in Next Jobs** | Food Services: Restaurant Operations | 36% | 3% | 8% | 6% |
| | Management: Project Management & Implementation | 23% | 5% | 10% | 4% |
| | Human Resources: Organizational Leadership & Success Planning | 31% | 8% | 11% | 5% |

*Source: Emsi Burning Glass Skills.*

# Addressing Outcome Gaps via Reskilling Opportunities

## Reskilling Opportunities

Each skill cluster is associated with a unique set of skills. The roles identified in the previous section have talent surpluses and low salaries, considering the postings and profiles in the Honolulu MSA. Nonetheless, workers in those roles have adjacent skills that they can leverage when transitioning into in-demand careers. However, that job transition may not be seamless, and workers will find it necessary to acquire and develop new skills. In this section, four reskilling/upskilling opportunities are discussed:

### ❶ **Food Services:** Cooking transition into Food Services: Restaurant Operations

The figure below demonstrates the most frequent transitions from the Food Services: Cooking skill cluster. Although Marketing: Public Relations & Communications is the most frequent transition, we chose to highlight the transition into Food Services: Restaurant Operations because it is a role within the same industry, though different career area. There are many skills shared between the two roles, making the transition easier.

The transition from Food Services: Cooking into Food Services: Restaurant Operations is also a great opportunity for several other reasons:

- It highlights a career area transition from Hospitality, Recreation, & Personal Services into Business & Finance.
- Workers would transition from a role with a talent surplus into a role with a talent shortage.
- Workers would experience a possible pay increase from $36,924 to $70,000.
- Regarding equity goals, Food Services: Cooking has a high Hispanic share of workers (12%). Food Services: Restaurant Operations has low representation of Hispanic (8%) and NH/PI (6%) workers.

**FIGURE 14:** MOST FREQUENT TRANSITIONS FROM FOOD SERVICES: COOKING SKILL CLUSTER


*Source: Emsi Burning Glass Skills.*

## HOW CAN WORKERS TRANSITION FROM FOOD SERVICES: COOKING INTO FOOD SERVICES: RESTAURANT OPERATIONS?

**These two roles share these skills:**

- Cleanliness
- Customer Experience
- Food Safety
- Inventory Management
- Selling Techniques
- Merchandising

**These skills are needed in the new role:**

- Financial Analysis
- Key Performance Indicators (KPIs)
- Loss Prevention
- Profit & Loss Management
- Performance Management
- Sales Management
- Scheduling
- Team Building

*Source: Emsi Burning Glass Skills.*

## ❷ **Retail:** Store Management transition into Marketing: Public Relations & Communications

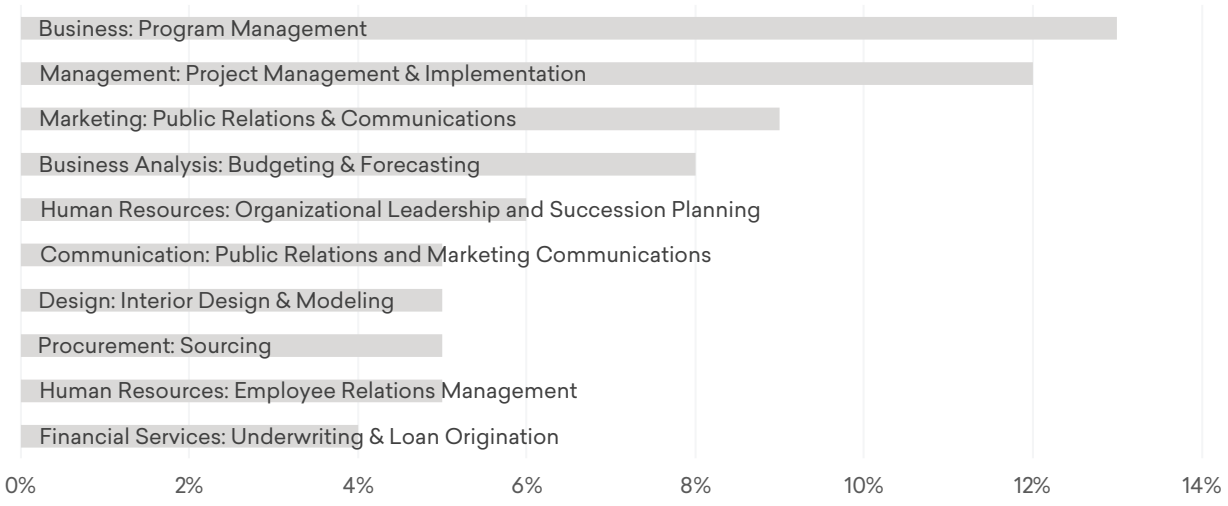
There are multiple transition opportunities for the Retail: Store Management skill cluster. Business: Program Management and Management: Project Management & Implementation are the most frequent transitions for this role, each bringing significant pay increases. However, a jump from retail directly into management positions can be difficult. We highlight Marketing: Public Relations & Communications as a career transition example because much of the skills required in Retail: Store Management can also be applied to Marketing: Public Relations & Communications. For one, both roles demand communications skills and a diplomatic demeanor. Retail workers frequently have Customer Relationship Management (CRM) skills that can be applied to the marketing field. Furthermore, they have an introductory understanding of branding, if not yet a formalized skill.

The transition into Marketing: Public Relations & Communications opens a pathway to Information Technology roles. In fact, Marketing: Public Relations & Communications is one of the top prior skill clusters for IT Systems: Virtualization & System Administration, accounting for 10% of transitions.

This transition example is a good opportunity because:

- It highlights a career area transition from Sales & Customer Service into Business & Finance.
- It brings annual earnings increase from $35,519 to $55,000.
- Marketing: Public Relations & Communications has low representation of Asian (34%), NH/PI (3%), Hispanic (7%) and Black (3%) workers.

**FIGURE 15:** MOST FREQUENT TRANSITIONS FROM RETAIL: STORE MANAGEMENT SKILL CLUSTER




*Source: Emsi Burning Glass Skills.*

### HOW CAN WORKERS TRANSITION FROM RETAIL: STORE MANAGEMENT INTO MARKETING: PUBLIC RELATIONS & COMMUNICATIONS?

**These two roles share these skills:**

- Accountability
- Detail Oriented
- Interpersonal Communications
- Professionalism

**These skills are needed in the new role:**

- Adobe Photoshop
- Branding
- Copywriting
- Editing
- Planning
- Media Relations
- Written Communications (Press Releases, Newsletters, Social Media)

*Source: Emsi Burning Glass Skills.*

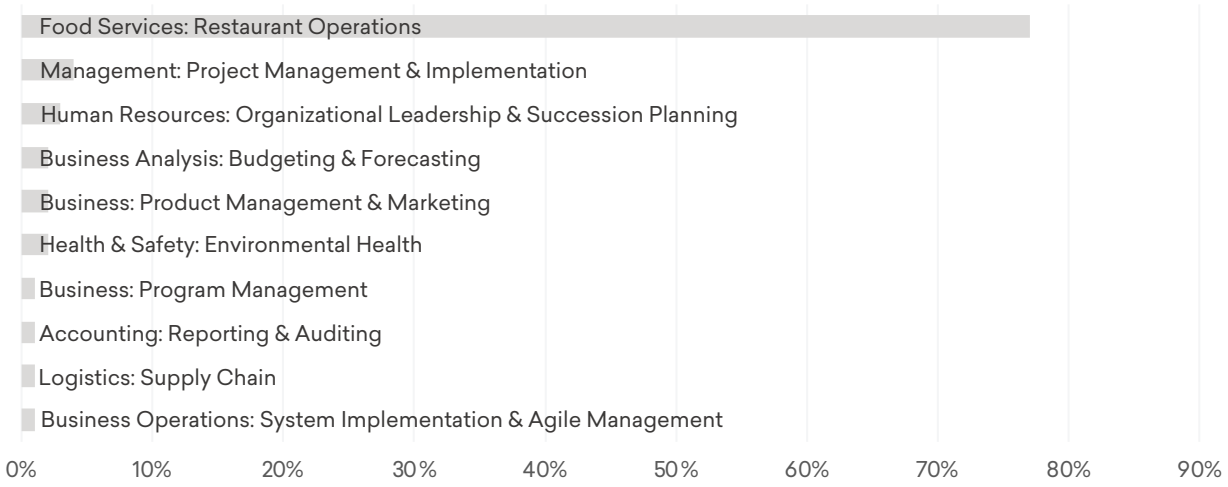
## ❸ **Protective Services:** Floor Operations & Security into Management: Project Management & Implementation

Workers from Protective Services: Floor Operations & Security overwhelmingly transition to Food Services: Restaurant Operations (77% of transitions). That said, this report has already demonstrated a transition example into Food Services: Restaurant Operations. The second-most frequent transition is into Management: Project Management & Implementation. This represents an attractive transition opportunity due to several reasons:

- It demonstrates a transition from Protective Services to Business & Finance career areas.
- Workers could experience a pay increase from $47,570 to $78,300.
- There is a surplus of talent for Protective Services: Floor Operations & Security while Management: Project Management & Implementation has a talent shortage and is the 5th largest Business & Finance skill cluster in terms of demand.
- Protective Services: Floor Operations is overrepresented by Hispanic (12%), NH/PI (9%), and Black (7%) workers while Management: Project Management & Implementation has low representation of NH/PI workers (4%).

Protective Services: Floor Operations & Security is unique in the Honolulu MSA in that much of the posted skills are related to national security, intelligence, and cybersecurity. This translates well to private contractors involved in project management on behalf of the military, given clearance level requirements. Furthermore, Protective Services: Floor Operations & Security skill cluster could also transition into the IT & Math career area via a lateral move to IT Support: Desktop Support. Many posted skills related to this cluster involve computer science, analytics, information gathering, data science, and data intelligence.

**FIGURE 16:** MOST FREQUENT TRANSITIONS FROM PROTECTIVE SERVICES: FLOOR OPERATIONS & SECURITY SKILL CLUSTER




*Source: Emsi Burning Glass Skills.*

## HOW CAN WORKERS TRANSITION FROM PROTECTIVE SERVICES: FLOOR OPERATIONS & SECURITY INTO MANAGEMENT: PROJECT MANAGEMENT & IMPLEMENTATION?

**These two roles share these skills:**

- Planning
- Program Management
- Top Secret-Sensitive Compartmented Information (TS/SCI) Clearance

**These skills are needed in the new role:**

- Agile Methodology
- Consulting
- Microsoft Project & Microsoft Visio
- Project Management Institute (PMI)
- Project Management Professional (PMP) Certification
- Project Scoping
- Subcontracting
- Systems Development Life Cycle
- Team Leadership

*Source: Emsi Burning Glass Skills.*

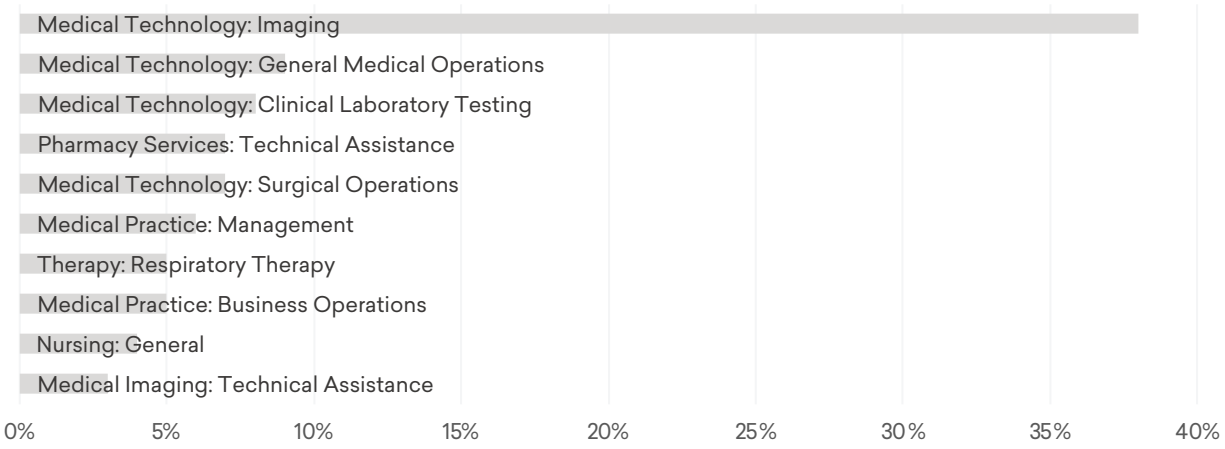
## ❹ **Medical Support:** Caregiving transition into Medical Technology: General Medical Operations

Medical Support: Caregiving is one of the lowest-paid skill clusters in the Healthcare career area ($33,561 annually), despite the important nature of the work. There is also a sizeable talent surplus in this field when comparing the number of profiles to overall postings. At the same time, there are numerous other Healthcare skill clusters that provide better pay but experience talent shortages. The challenge for workers transitioning to higher-paid skills clusters will be to find the time and resources to obtain necessary credentials and certifications, as the Healthcare industry is notoriously regulated.

Over 35% of transitions from Medical Support: Caregiving fall into Medical Technology: Imaging, followed by 9% of transitions into Medical Technology: General Medical Operations. We chose to illustrate a transition from Medical Support: Caregiving into Medical Technology: General Medical Operations for a few reasons:

- Despite the high transition rate into Medical Support: Imaging, there is little overlap of the top posted skills between the two skill clusters.
- Medical Technology: General Medical Operations has higher demand than Medical Technology: Imaging.
- This still provides a good upskilling example for the Healthcare career area.
- Medical Support: Caregiving has a large talent surplus while Medical Technology: General Medical Operations experiences a talent shortage.
- Medical Technology: General Medical Operations is underrepresented by Hispanic workers.
- Workers making this transition could experience a pay increase from $34,153 to $49,739.

**FIGURE 17:** MOST FREQUENT TRANSITIONS FROM MEDICAL SUPPORT: CAREGIVING SKILL CLUSTER




*Source: Emsi Burning Glass Skills.*

## HOW CAN WORKERS TRANSITION FROM MEDICAL SUPPORT: CAREGIVING INTO MEDICAL TECHNOLOGY: GENERAL MEDICAL OPERATIONS?

**These two roles share these skills:**

- Basic Math
- Cannula
- Dialysis
- Hemodialysis
- Medical Records
- Patient Care Technician

**These skills are needed in the new role:**

- Automated External Defibrillator
- Certified Coding Specialist/Medical Coding & Billing
- Continuous Quality Improvement (CQI)
- Electroencephalography
- Health Information Management – Registered Health Information Administrator or Registered Health Information Technician
- Nursing
- Registered Polysomnographic Technologist
- Sleep Medicine

*Source: Emsi Burning Glass Skills.*

# Conclusion

This report is intended to assist OWDB to identify key opportunities for workforce development using a skills-based approach. The report uses traditional LMI data as well as real-time job postings and profiles data to identify skills clusters that experience talent shortages and surpluses. This is followed by an identification of career area transition opportunities. We recommend that OWDB advance career transitions of workers in low-wage, high supply career areas (such as Hospitality, Recreation, & Personal Services; Sales & Customer Service; and Protective Services) into higher wage career areas experiencing skills shortages, such as Business & Finance; Healthcare; and IT & Math. By addressing these opportunities, OWDB can also advance its workforce equity goals by helping target populations achieve better outcomes in the workforce.

# Appendix 1: Skill Cluster Methodology

## Emsi Burning Glass' Detailed Skill Cluster Methodology

Emsi Burning Glass is a leader in advanced labor market analytics, including the development of skills data to better connect job seekers and employers. We provide our clients with the knowledge and tools needed to make strategic, data-driven decisions, increase the efficiency and effectiveness of their action plans, that ultimately result in wealth creation for their citizens.

For over 20 years, Emsi Burning Glass economists and data scientists have been taking traditional labor market and industry data and making it understandable and actionable for clients. Emsi Burning Glass Skills represents the next evolution of analyzing labor market information, leveraging novel insights from online job postings and professional resumes.

## Skills Clustering and Quantifying Demand, Supply, and Gaps

Emsi Burning Glass aggregates the widely used federal statistical standard of 867 detailed occupations codified in the Standard Occupation Codes (SOCs), breaking those into a more manageable and user-centric group of career areas and career sub-areas.

**EMSI BURNING GLASS CAREER AREAS ARE COMPRISED FROM GROUPS OF OCCUPATIONS, AGGREGATED BY THE OCCUPATIONS' SKILLS.**

- Agriculture & Forestry
- Architecture & Engineering
- Art, Entertainment & Media
- Business & Finance
- Construction & Excavation
- Education, Curation, & Library Services
- Healthcare
- Hospitality, Recreation, & Personal Services
- Information Technology (IT) & Math
- Installation & Repair  Legal
- Military
- Natural Sciences
- Office & Administrative Services
- Production & Manufacturing
- Protective Services
- Sales & Customer Service
- Social Sciences & Services
- Transportation & Warehousing

Rather than looking at occupational titles (for example, "software engineer"), Emsi Burning Glass analyzes the specific skills needed for a job (for example, "coding in Python"), giving a clearer picture of what a job applicant needs to get hired. Skills data in job postings are analyzed at the scale of career sub-areas for specific regions, using statistical methods that account for the relationships between skills in job postings. The result is sets of skill clusters for a given region and career sub-area, which reflect the kinds of roles that employers are posting for based on the skills they seek. Postings data is updated in real-time, but analysis of postings is completed over the most recent two years to account for seasonality. Skills clusters are updated approximately once every six months to reflect the introduction of new and emerging skills or the waning importance of skills as they are deprioritized in the labor market.

Skill demand, skill supply, and the difference between them - skill gaps - are all modeled estimates, based on job postings (market demand) and profiles (talent supply) that match to clusters, scaled according to BLS jobs data (numbers of actual jobs and annual openings).

Emsi Burning Glass matches job postings and professional profiles to regional clusters, based on alignment between the skills contained in each. The proportionate demand for skills is determined from matching postings to clusters, and proportionate supply of skills from matching profiles. The resultant relative distributions are the qualitative "skill shape" of supply and demand.

Emsi Burning Glass tags postings and profiles with occupations (SOC codes), which are rigorously tracked by the Bureau of Labor Statistics (BLS) to quantify numbers of existing new jobs by occupation. The qualitative demand estimates based on matched postings and profiles are therefore rescaled so that the SOC distributions reflect the actual distributions of SOCs in the labor market according to BLS. Emsi Burning Glass matches postings and profiles to clusters to determine the shape of demand and supply, and then uses the more reliable and representative distribution of occupations from BLS data to rescale the shape to an estimate of actual demand and supply.

Some common skills (e.g. Communications) are excluded from the cluster analysis because they are so ubiquitous that they tend to dilute or confound the important relationships between other skills, while not adding very much of value in and of themselves.

**Please note that while the incorporation of traditional Labor Market Information (LMI),--like employment data from the BLS--enhances Skills data, online profiles and job postings are inherently biased toward certain roles.** Consequently, the data presented in this report should not be directly compared to traditional LMI, such as employment data from the BLS. Employment data from the BLS aids Skills data in better reflecting a regional labor market, however,

the supply of talent in Skills does not directly correlate to traditional employment data on a 1:1 scale. Ultimately, the skills data in the MSA demonstrate the region's evolution into a hub for in-demand career areas that require complex, highly technical skillsets. Skills work highlights these sought-after skills—the examples contained in this report were explicitly chosen based on the data to showcase opportunities for regional stakeholders to create efficient training pipelines and ensure equitable growth for all citizens in the region.

## Industries and Occupations vs. Career Areas and Roles

When reading this report, remember that Emsi Burning Glass Skills language has a foundation related to SOC codes—*not industry North American Industry Classification System (NAICS) codes*. The latter are used for classifying, collecting, analyzing, and publishing business establishment data for the industry that provides a certain good or service, while SOC codes identify the workers employed by business establishments.

For example, the Business & Finance career area (Emsi Burning Glass' broadest occupational group) has one of the largest supply of workers in the Honolulu MSA. This career area represents all the different types of Business & Finance roles or jobs—including financial accountants, logistics analysts, and human resource representatives. Therefore, in this report, the Business & Finance career area does not represent companies from an industry perspective such as banks, financial advising, and insurance firms. Instead, Business & Finance represents the aforementioned roles or occupations that can be found across every industry—every company or organization in the Honolulu MSA, ranging from private firms like First Hawaiian Bank and CVS to public organizations like the US Department of the Navy and State of Hawaii. All these establishments require Business & Finance workers.

# Appendix 2 – Demographic Categories

The federal government tracks several racial categories, including white, Black or African American, and Asian, and two ethnic categories, Hispanic and non-Hispanic. The term Hispanic or Latino refers to people who identify themselves as Hispanic, Latino, or Spanish, and people of Hispanic or Latino ethnicity may be of any race. In other words, there is overlap between race and ethnicity unless the two characteristics are clearly separated, e.g., "white non-Hispanic," "white Hispanic," and "non-white Hispanic." The Emsi Burning Glass Skill methodology uses seven race/ethnic groups:

- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Other Pacific Islander
- Two or more races
- White

Federal race and ethnicity data are sourced from the Current Population Survey (CPS), a monthly household survey conducted by the US Census Bureau for the Bureau of Labor Statistics (BLS). In the early 2000s, CPS increased the number of major race categories to five by splitting the Asian and Pacific Islander (API) group into "Asian" and "Native Hawaiian or Pacific Islander" and started collecting more detailed information about those who identified as two or more races, Asian, and Hispanic or Latino. In addition, the decennial Census publishes race/ethnicity data, which is also used by BLS. Currently, BLS does not fully incorporate specific ethnicity data on Asian and Hispanic or Latino workers into its industry and occupational datasets, the primary source of Emsi Burning Glass LMI. Thus, Emsi Burning Glass Skill data use the overarching Asian and Hispanic or Latino race/ethnicity groups.

Nonetheless, a brief description about Asians is provided here, to distinguish between the diverse ethnicities and cultures along the eastern Pacific Ocean. For CPS respondents who identify themselves or another household member as Asian, an additional question asks, "Which of the following Asian groups are you: Asian Indian, Chinese, Filipino, Japanese, Korean, or Vietnamese?" Respondents choose one of these six categories or volunteer the name of another Asian group, such as Thai, Pakistani, Cambodian, Hmong, or Laotian. Groups other than the six included in the question are recorded by CPS interviewers as Other Asians. Furthermore, CPS respondents may identify themselves or other household members as belonging to more than one Asian group, which

ultimately classifies as Other Asians. See the article "Asians in the U.S. labor force: profile of a diverse population," by Mary Dorinda Allard, in the November 2011 issue of the Monthly Labor Review for an extensive analysis of Asian workers nationwide. After the 2010 Census, the US Census Bureau published an analysis of the demographic population with detailed state-level and group data, which can be found at https://www.census.gov/prod/cen2010/briefs/c2010br-11.pdf.

The Native Hawaiian and Other Pacific Islander group includes people having origins in any of the original peoples of Hawaii, Guam, and Samoa, as well as other islands in the Pacific. CPS respondents who identify themselves or another household member as Native Hawaiian and Other Pacific Islander are asked to identify their origin with the option of identifying as more than one Pacific Islander group. In Census data, origins of Native Hawaiians and Other Pacific Islanders aggregate into the Polynesian, Micronesian, Melanesian, or Other Pacific Islander detailed groups. The Polynesian detailed group includes:

- Native Hawaiian
- Samoan
- Tongan
- Tahitian
- Tokelauan
- Polynesian, Not Specified

The Micronesian detailed group includes:

- Guamanian or Chamorro
- Mariana Islander
- Saipanese
- Palauan
- Carolinian
- Kosraean
- Pohnpeian
- Chuukese
- Yapese
- Marshallese
- I-Kiribati
- Micronesian, Not Specified

The Melanesian detailed group includes:

- Fijian
- Papua New Guinean
- Solomon Islander
- Ni-Vanuatu
- Melanesian, Not Specified

See https://www.census.gov/content/dam/Census/library/publications/2012/dec/c2010br-12.pdf for a complete analysis of the Native Hawaiian and Other Pacific Islander population in the 2010 Census.

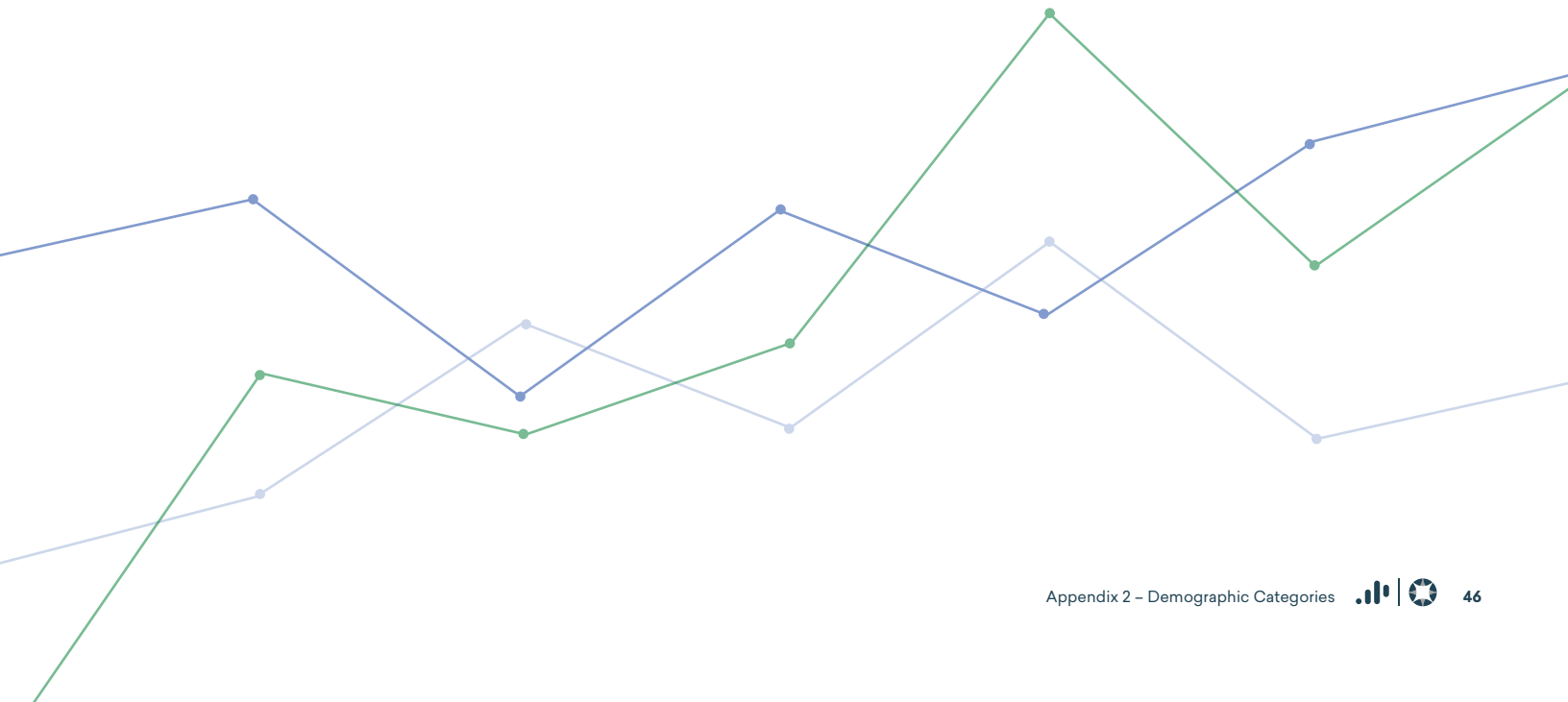
The Hispanic and Latino community is also diverse in terms of ethnicity and culture. CPS respondents who identify themselves or another household member as Hispanic or Latino are asked to identify as one (or more) of the following types. Mexicans, Puerto Ricans, and Cubans are separated from Central Americans, South Americans, Spaniards, and All Other [Types of] Hispanic or Latino in Census data. The Central American type includes:

- Costa Rican
- Guatemalan
- Honduran
- Nicaraguan
- Panamanian
- Salvadoran
- Other Central American

The South American type includes:

- Argentinean
- Bolivian
- Chilean
- Colombian
- Ecuadorian
- Paraguayan
- Peruvian
- Uruguayan
- Venezuelan
- Other South American

BLS publishes a limited amount of industry and occupational data on specific Hispanic or Latino ethnicities, and Emsi Burning Glass Skill methodology uses the overarching Hispanic or Latino ethnicity group in its data. See https://www.census.gov/prod/cen2010/briefs/c2010br-04.pdf for a complete analysis of the Hispanic or Latino population in the 2010 Census.



OWDB
Oahu Workforce Development Board

Emsi | burning glass

DECEMBER 2021