



# US Virgin Islands Labor Market Analysis



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DECEMBER 2023

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# About

Lightcast 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 enabling workers to unlock new career opportunities. Headquartered in Boston, Massachusetts, and Moscow, Idaho, Lightcast 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.

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## Acknowledgements

Lightcast gratefully acknowledges the support of the US Virgin Islands Workforce Development Board (WDB). A special thank you goes to Sonia Boyce, Executive Director, for her collaboration and commitment to the prosperity of the US Virgin Islands and its people.

This report is prepared for US Virgin Islands WDB by Lightcast. The content is solely the responsibility of the author and does not necessarily represent the official views of the WDB. Proper acknowledgment of Lightcast should be included in publications, presentations, or other developed materials.

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# Executive Summary



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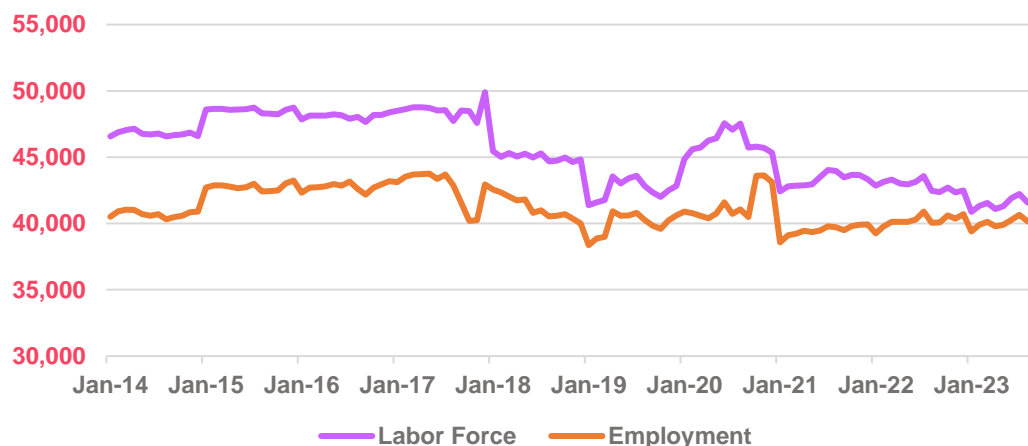
# A New Challenge

**THE US VIRGIN ISLANDS** (USVI) Workforce Development Board (WDB) retained Lightcast to conduct a labor market analysis of the territory while examining the workforce characteristics of its target industries. The report examines the overall labor market before examining Agriculture, Financial Services, Healthcare, Manufacturing, Professional & Technical Services, Tourism, and Utilities.

The US Virgin Islands' economy has faced a steady decline in population and high unemployment, largely due to the multiple economic shocks and natural disasters over the past decade and a half. Over that period, the number of people in the labor force – the people working or looking for work – was much higher than the number of people employed. The large number of unemployed individuals created a *loose* labor market, where many people competed for scarce job opportunities.

Now, however, USVI faces a different challenge: one of labor market *tightness*. While the labor force continues to shrink with population decline, overall employment has remained steady if not grown slightly since 2021. The gap between the labor force and employment is historically narrow. There are now many job opportunities competing for scarce workers.

Figure 1: USVI Labor Force and Employment Growth, 2014-2023



The result is a decline in unemployment rates, reaching just 3.5% in September 2023. This historically low unemployment rate is on par with that of the United States, which typically runs a tighter labor market than the USVI. A low unemployment rate is something to be celebrated – ample job opportunities for interested workers, fewer people unable to find work, and conditions that tend to benefit workers with higher wages, greater job stability, and more rapid upward mobility.

At the same time, the shrinking labor force comes with drawbacks: there are simply less and less people available to hire to support recovery and growth. The Labor Force Participation Rate (LFPR) for both men and women in the USVI plummeted after the shutdown of the Hovensa refinery, and it remains far below that of the United States. The lower education rates and the older population of the USVI contributed to this phenomenon.

# A Way Forward

Based on the analysis of the USVI labor market contained in this report, Lightcast has developed the following set of recommendations.

## Training, and Education, and Workforce Development

The following recommendations are tailored specifically to workforce development stakeholders.

### 1. Align Career and Technical Education (CTE) with Cross-Cutting Skills:

- Align CTE programs with cross-cutting skills and occupations that are in demand across multiple industries.<sup>1</sup>
- Prioritize occupations such as Bookkeeping & Accounting, Customer Service Representatives, First-Line Supervisors, Maintenance & Repair Workers, Truck Drivers, and others with a bright outlook.<sup>2</sup>

### 2. Ensure Foundational and Transferable Skills:

- Maximize labor market flexibility and efficiency by ensuring foundational skills in reading, math, communications, and soft skills.<sup>3</sup>
- Promote computer literacy for all exiting K-12 students and adults in the workforce system.

### 3. Expand the Labor Pool and Address Enrollment Decline:

- Attract people back to the islands by addressing the cost of living and infrastructure issues.
- Leverage remote work opportunities in marketing and recruitment efforts.<sup>4</sup>
- Offer scholarships for diaspora students from the mainland if K-12 enrollment continues to decline. Consider bridge programs where 4-year programs at UVI are not offered, or bridge programs for non-resident students. For instance, a mainland student could complete 2 years on the mainland and transfer to UVI to complete the degree.

### 4. Create Funding and Scholarships for Non-WIOA Covered Training:

- Identify funding sources and allocate scholarships for key non-WIOA covered training programs with high demand in areas such as Accounting, CDL, Heavy Equipment Training, Medical Transcription, and Graphic Design.

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<sup>1</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

<sup>2</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

<sup>3</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

<sup>4</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022



- Pilot test programs for more remote-friendly occupation training. For instance, the Insurance sector seems underutilized as an opportunity for remote work (Claims Adjusters, Underwriters, Policy Clerks, Loan Interviewers, and Bookkeeping, Accounting, and Auditing Clerks).

## 5. Empower Job Transitions from the Public Sector into the Private Sector

- Establish financial support for government employees to receive training, encouraging private sector transitions to high-demand sectors. Give flexible vouchers tied to training in addition to unemployment benefits. Prioritize pathways into the medical and professional services occupations.
- See Policy Priorities below for additional recommendations for facilitating job transitions into the private sector.

## 6. Tailor Workforce Development to Forward-Looking Sector-Specific Initiatives

- The USVI is taking a number of big bets on emerging industries: leveraging its coast and ocean access for “blue economy” or marine businesses, taking advantage of its natural resources for “green economy” or renewable energy businesses, and promoting its history and culture for experiential tourism. Workforce development programs should pave the way for new talent to enter these sectors.
- See the section on Target Sectors below to review the action items related to the target sectors identified by the VIWDB.

# Target Sector Workforce Strategies

The target sectors identified by the VIWDB are experiencing varying degrees of challenge and success. Key takeaways and recommendations for each target sector are as follows:

### 1. **Agriculture** – *growing production in terms of number of farms and acreage but limited in higher value-add activities as evidenced by low employee count.*

- Agriculture has poor training and education infrastructure for non-higher education talent. A growth in the number of farms coupled with a decrease in the size of farms suggests that subsistence farming is increasing. Relevant workforce development for these part-time farmers could include workshops on increasing yield (e.g., through techniques to resist drought or rotate crops) and commercialize the surplus at local markets.
- There is limited value-added agriculture and food manufacturing. One avenue for expansion is to develop value-added or niche products to sell to resorts or other tourism outlets. For example, specialty fruits such as dragon fruit and mesple (sapote), and value-added products such as jams, sauces, spice blends, coconut oil, aloe skin products, or fragrant soaps. Workforce development training could identify those products, host workshops to introduce the production method, and provide a forum to connect individuals who may be interested in commercializing such a product.

### 2. **Financial Services** – *employment has decreased since 2018 but is projected to grow modestly into 2030.*

- Employment is concentrated in St. John, yet no financial services workforce programs are advertised for residents on this island. This should be remedied in concert with the employers who are hiring financial services employees.
- Training and education infrastructure for non-higher education, lower skilled talent is poor. The Financial Services section of this report details the skills required for important sub-bachelor's level occupations and can serve as a curricular guide for programs targeting this population.

**3. Healthcare** – *employment has increased since 2019, but growth is limited by the availability of talent, not lack of demand.*

- There are ample workforce development training programs to serve the sector, but the volume of people served must increase in order to address the talent gap.
- Support long-term care initiatives for Healthcare, especially focusing on aging and retirement community services. With a robust healthcare workforce, the Virgin Islands could increase its profile as a destination for older individuals. With various degrees of healthcare intervention, the Virgin Islands could be home to independent living communities, assisted living facilities, and long-term skilled nursing facilities.
- Strategize with UVI to address the nursing degree faculty shortage which limits volume of nursing students. Consider credit sharing with other institutions or training existing nurses to become nurse educators.

**4. Manufacturing** – *employment is largely limited to rum production since the closure of the refinery.*

- There is still a possibility of the refinery reopening. If this occurs, hundreds of manufacturing jobs will reappear. The current workforce development training program offering is unprepared for this contingency.
- As it relates to the utilities sector's investment in green energy and the blue economy, encourage hiring engineering talent from local institutions.

**5. Professional & Technical Services** – *employment peaked at the end of 2019 but has been declining ever since the pandemic.*

- The USVI should focus on the remote-friendly nature of the sector to attract and develop talent.
- This sector could be boosted by the reopening of the refinery.

**6. Tourism** – *employment has recovered to pre-pandemic levels and is projected to grow by hundreds of jobs into 2030.*

- Much of the demand for workers is for lower skill levels. The current workforce training options for Tourism-related occupations (food preparation, for instance) are very limited.
- The USVI is formulated to receive \$125 million from the Infrastructure Investment and Jobs Act for roads, bridges, and airports. These resources can be used in a targeted way to



support access to tourism jobs for residents who today face difficulty accessing those opportunities and to support the movement of visitors on the islands.

**7. Utilities** – green energy has strong potential for USVI, but the breadth and volume of training options for related occupations needs to be improved.

- Maintenance, Installation, & Repair workers are in high demand not only for this industry but also in Tourism and other sectors – training programs for these roles need to be established and promoted.
- Establish a Tidal Center of Excellence to encourage R&D in the blue economy renewable energy space.

## Policies and Practices

Given the monumental challenges faced by the USVI, we recommend prioritizing and focusing on a smaller number of key challenges so that limited resources can be more impactful. Strategic interventions can lead to systemic changes that positively affect related issues. The three key challenges to focus on are as follows:

**1. Lower the Cost of Living:** The USVI is losing too many people to the mainland. Why do people leave? In general, the answer is simple: the territory has lower wages, less economic opportunity, and a higher cost of living. The government cannot control wages, but it can reform to create an environment that lowers the cost of living. The government must tackle this issue to retain residents, with an emphasis on areas within its control.

- Reduce the cost of utilities. The cost of utilities is a major sticking point among residents (and businesses) as it is prohibitively expensive and unreliable. The USVI is exploring many avenues for cost-reduction: investing in lower-cost solar energy, piloting wind energy, diversifying the supply of natural gas liquid fuels, better oversight of contracts and administration, debt restructuring, privatization and public-private partnerships, augmenting human labor with automated assistance, and more. Recommendation on the appropriate strategy is beyond the purview of this workforce report, but it is worth highlighting the vice-like grip that utilities prices have on individual wellbeing and economic activity.

**2. Enable Entrepreneurship:** The USVI must streamline business start-up processes and create a friendly and encouraging environment for entrepreneurship.

- Initiate a top-to-bottom regulatory and permitting review, especially in sectors like tourism and construction.
- Simplify processes for starting a new business, reducing the number of forms, days, fees, and requirements.
- Adjust local worker requirements for incentives based on the unemployment rate. One study noted that VIEDA incentives were too stringent in their local worker requirements.<sup>5</sup> First, as the labor market declines in numbers, it is not good judgement to enforce a local worker requirement

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<sup>5</sup> RAND Corporation, “Recovery in the U.S. Virgin Islands: Progress, Challenges, and Options for the Future”, 2020

when talent sorely needs to be imported. Second, USVI does not face the high unemployment problem as it has in the past. Unemployment sits well below 4%, so to impose this requirement on local businesses when there simply is not as much available labor creates an unnecessary burden.

- Encourage UVI to adopt a unique commercialization and intellectual property (IP) policy. Currently UVI has no such commercialization and IP policy in place. If USVI wants to be a destination for R&D and encourage entrepreneurship, it needs to address this shortcoming. We recommend UVI model its policy after the University of Waterloo which allows its researchers (professors and students included) to own what they invent.<sup>6</sup> This attracts the most entrepreneurial-minded talent to the institution.

**3. Enable the Private Sector to Pull Talent from the Public Sector:** The government employs a far higher share of the USVI workforce than in similar regions such as Hawaii, Puerto Rico, and other Caribbean islands. This further reduces the size of the talent pool for the private sector. There are several sectors which are hungry for growth but simply cannot find enough people, and many of these growth-starved sectors have higher multiplier effects for job creation and income/revenue generation.

- Enhance government pay transparency to facilitate a better understanding of the attraction of talent to the private sector.
- Facilitate off-ramps from the public sector and on-ramps into the private sector for like jobs. Relevant services include typical career services such as help with job seeking, resume development, and interview prep, as well as skills training for any bridge-skills that might be required by the private sector employer but not the government (e.g., certain software programs). Less typical services could include developing a government-title-to-private-sector-title map to empower public sector workers to familiarize themselves with relevant target jobs in the private sector, creating a priority list of emerging local employers with which to match job seekers, and promoting certifications that carry more value in the private sector.
- The government can support this initiative by reducing the rate of new hiring, such as by imposing a rule-of-thumb drawdown of only one new hire for every two workers who leave.

**4. Become a Remote Work Destination:** If USVI truly embraces the remote work opportunity by investing in a workforce capable of competing in the remote work environment, the claim that there are not enough jobs for USVI citizens is no longer relevant. This must be supported by **significant** and **flexible** investment in the following:

- Fiber/telecommunications infrastructure
- Overhaul of bureaucratic processes to be e-friendly (electronic signatures, electronic form submissions, etc. in lieu of in-person bureaucratic procedures)
- Basic computer skills for all
- Investment in targeted training, certifications, and certificates which feature heavily as skills in remote work job postings:

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<sup>6</sup> <https://uwaterloo.ca/entrepreneurship/our-ip-policy>



- Agile
- AWS (Amazon Web Services)
- CISA (Certified Information System Auditor) or Certified Information Systems Security Professional
- CompTIA (Computing Technology Industry Association)
- CPA (Certified Public Accountant)<sup>7</sup>
- CRM (Customer Relationship Management) such as Salesforce, HubSpot, Zendesk, Oracle, etc.
- FINRA Series 7 (General Securities Representative)
- HRIS (Human Resources Information System)
- Java, Python, SQL (Structured Query Language)
- MOS (Microsoft Office Specialist)
- PMP (Project Management Professional)
- Quickbooks
- SaaS (Software as a Service)
- Workday

## Ecosystem Improvement

1. **Data Stewardship:** Access to granular data was difficult and impacted the ability to analyze the target sectors of USVI. For instance, much of the labor market data was available at the NAICS 2-digit level but was frequently unavailable at more granular levels. Granted, given the size of USVI, it is understandable that some of this data would be suppressed. Some of the data from the same source is contradictory, as in the case of Manufacturing employment numbers from the VIDOL VIEWS website, which shows two largely different numbers in separate cards. To enable economic development and workforce development professionals with better analysis capabilities, we recommend better data hygiene. A pragmatic example to start with could be the mapping of all Eligible Training Provider List (ETPL) programs to Classification of Instructional Programs (CIP) codes for a comprehensive CIP-SOC crosswalk, making it quick and easy to find which occupations are covered by ETPL training (and which ones are not).
2. **Stakeholder Collaboration:** Lightcast recommends better coordination and collaboration among USVI departments and stakeholders. Given the limitations of data, it is important to engage with these stakeholders to gain a better understanding of the complete labor market environment. This process unfortunately had low engagement for this study.

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<sup>7</sup> Note: The Virgin Islands Board of Public Accountancy requires at least a bachelor's degree to issue a CPA certificate. <https://dca.vi.gov/boardcertifications/steps/cparequirements/>



# Labor Market Analysis



Source: Visit USVI Website





**THE US VIRGIN ISLANDS** (USVI) Workforce Development Board retained Lightcast to conduct a labor market analysis of the territory while examining the workforce characteristics of its target industries. Together, these perspectives will provide insights needed to help workers, students, employers, and the education and training ecosystem build for the future.

The US Virgin Islands' economy has faced a series of significant challenges over the past decade, resulting in a decline in job opportunities. The shocks began with the Great Recession of 2007-2008, which had a lasting impact on the region. In 2012, the closure of the Hovensa oil refinery dealt a severe blow to the local economy, leading to further job losses. The year 2019 saw the partial reopening of the oil refinery, offering a glimmer of recovery, but this was short-lived due to the facility closing again for environmental reasons. However, there is still hope for its reopening under new ownership.

In 2017, the islands were hit by two devastating hurricanes, Irma and Maria, which not only caused substantial damage but also halved government revenues. Finally, the global COVID-19 pandemic in 2020 created additional economic challenges.

Another concerning trend is the overreliance on government employment, which accounted for more than 25% of the island's workforce when Vision 2040 was published. This proportion is disproportionately high relative to peer regions such as Hawaii, Puerto Rico, and other Caribbean islands, especially given that the private sector in the USVI was contracting in size. Government employment was expanding while other sectors, particularly tourism and retail, were struggling. To enhance the resilience of the economy to future shocks, diversification and the creation of better-paying jobs are essential.<sup>8</sup>

The US Virgin Islands has outlined two potential success scenarios to reverse the economic downturn. The first scenario aims to create 1,100 net new jobs over the next 10 years, requiring an annual investment of \$11.4 million or a total of \$114 million. The second, more ambitious scenario aims for an annual addition of 1,100 jobs, accompanied by GDP growth of 2-3% and an unemployment rate of 4%. However, it was noted

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<sup>8</sup> US Virgin Islands Vision 2040 Strategic Plan



that few Caribbean peers had achieved such growth, with Turks and Caicos being an exception due to its tourism industry.<sup>9</sup>

The USVI adopted several key target sectors in its Vision 2040 Strategic Plan:

1. Agribusiness
2. Coastal/Ocean Resources
3. Health Sciences
4. Light Manufacturing
5. Professional/Technical Services
6. Renewable Energy
7. Research & Development
8. VI-Style Tourism

However, due to the limited availability of data, it was not possible to examine the labor market of certain specific target sectors (such as Coastal/Ocean Resources) which are not organized around the NAICS 2-digit system. As such, this analysis covers these targets as best it can using proxies:

1. Agriculture
2. Financial Services
3. Healthcare
4. Manufacturing
5. Professional & Technical Services
6. Tourism
7. Utilities

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<sup>9</sup> US Virgin Islands Vision 2040 Strategic Plan

# Economy Overview

**THE US VIRGIN ISLANDS** has faced a steady decline in population, largely due to the multiple economic shocks over the past decade and a half. The high unemployment, high cost of living, and decline job prospects were large contributing factors to this exodus of people. Demographically, the USVI was older than the United States, and it was experiencing an aging population with fewer young people as a share of the total population.<sup>10</sup>

Now, USVI faces a different challenge: one of labor market tightness. The Labor Force Participation Rate (LFPR) for both men and women in the USVI plummeted after the shutdown of the Hovensa refinery, far below that of the United States.<sup>11</sup> The lower education rates and the older population of the USVI contribute to this phenomenon. Many individuals who were out of the labor force in high-growth occupations were limited to jobs that required a high school diploma or less, such as carpenters, electricians, construction laborers, and cement masons. Nevertheless, these positions still necessitated training to fill the skills gap.<sup>12</sup>

Further, the labor force has continued to shrink in line with population decline, yet overall employment has remained steady if not growing slightly since 2021 (Figure 2). The result is a decline in unemployment rates, reaching just 3.5% in September 2023, on par with that of the United States (Figure 3). While such a low unemployment rate in the USVI is something to be celebrated considering the years of high unemployment it faced up to this point, it also comes with drawbacks: there are simply less and less people available to hire to support recovery and growth.

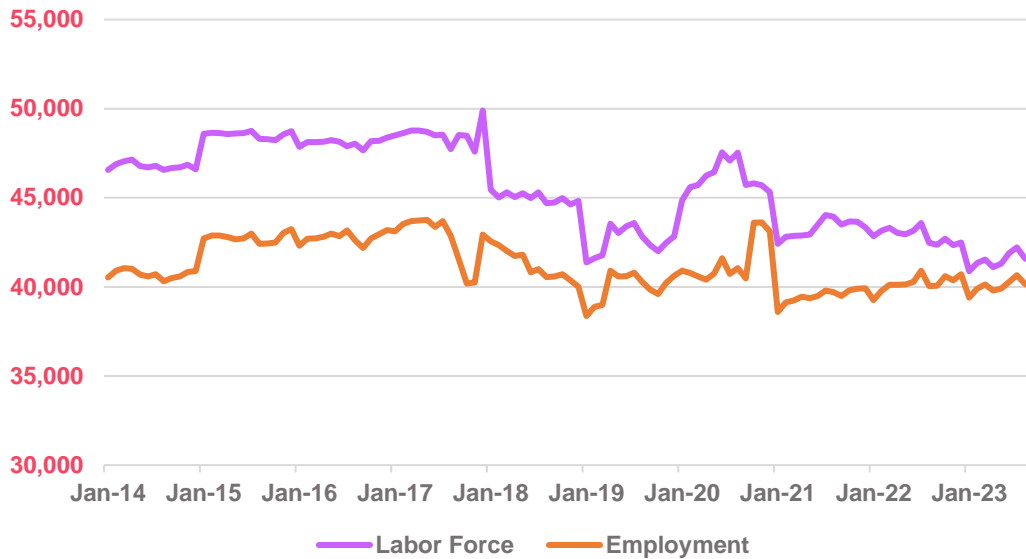
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<sup>10</sup> Dr. Lauritz Mills, "The U.S. Virgin Islands Labor Market and Economic Report", 2022

<sup>11</sup> LFPR for both men and women was just 39% in 2015 compared to the US rate of 69% and 57% for men and women, respectively. RAND Corporation, "Recovery in the U.S. Virgin Islands: Progress, Challenges, and Options for the Future", 2020

<sup>12</sup> RAND Corporation, "Recovery in the U.S. Virgin Islands: Progress, Challenges, and Options for the Future", 2020

Figure 2: USVI Labor Force and Employment Growth, 2014-2023



Source: USVI Department of Labor (VIDOL)

Figure 3: USVI Unemployment Rate, 2014-2023



Source: VIDOL

When comparing USVI industry employment share to that of the United States, the territory has a high concentration of jobs Tourism (Accommodation & Food Services and Arts, Entertainment & Recreation), Retail, Construction (related to recovery efforts), and Government (Table 1).

In terms of job growth, construction was the only 2-digit industry that has shown a net increase in jobs between 2010 and 2020, largely attributed to the post-hurricane rebuilding efforts.<sup>13</sup> One study highlighted the need for workers with specific skills in construction due to the recovery efforts. However, there was a

<sup>13</sup> Dr. Lauritz Mills, "The U.S. Virgin Islands Labor Market and Economic Report", 2022

shortage of local labor with the necessary skills, necessitating the recruitment of workers from outside the USVI. Yet, there is a lack of housing for these incoming workers. Based on forecasts, construction was expected to experience the most significant labor market tightness due to the increased occupational demand linked to recovery expenditures, followed by Installation, Maintenance, & Repair. At the same time, number of unemployed workers in the USVI would be too low to meet this demand, as indicated by the very low unemployment rate and the need to bring in outside workers.<sup>14</sup>

Employment in Government is nearly double the concentration of the mainland United States, which contributes to misalignment elsewhere in the economy. Such a high concentration of talent in Government diverts precious human capital away from the private sector at a time when the labor supply is tight. For instance, healthcare is severely undersupplied and only 1/3 the share of employment compared to the United States. High government employment constrains USVI growth potential.

*Table 1: USVI Industry Employment and Employment Share, 2022*

Industry	Employment	Employment Share	US Share Benchmark
<b>Agriculture</b>	10	0.0%	1.0%
<b>Mining</b>	68	0.2%	0.3%
<b>Utilities</b>	35	0.1%	0.4%
<b>Construction</b>	1,994	5.9%	5.0%
<b>Manufacturing</b>	532	1.6%	8.1%
<b>Wholesale Trade</b>	590	1.8%	3.8%
<b>Retail Trade</b>	4,571	13.6%	10.1%
<b>Transportation &amp; Warehousing</b>	1,159	3.5%	4.1%
<b>Information</b>	529	1.6%	1.9%
<b>Finance &amp; Insurance</b>	945	2.8%	4.3%
<b>Real Estate, Rental &amp; Leasing</b>	997	3.0%	1.5%
<b>Professional, Scientific, &amp; Technical Services</b>	1,182	3.5%	6.6%
<b>Management of Companies</b>	48	0.1%	1.5%
<b>Admin. Support &amp; Waste Management &amp; Remediation</b>	1,733	5.2%	6.0%

<sup>14</sup> RAND Corporation, "Recovery in the U.S. Virgin Islands: Progress, Challenges, and Options for the Future", 2020

<b>Education Services</b>	612	1.8%	2.4%
<b>Health Care &amp; Welfare Services</b>	1,672	5.0%	13.3%
<b>Arts, Entertainment &amp; Recreation</b>	704	2.1%	1.3%
<b>Accommodation &amp; Food Services</b>	5,147	15.3%	8.1%
<b>Other Services</b>	1,385	4.1%	4.3%
<b>Government</b>	9,681	28.8%	15.8%
<b>Total</b>	<b>33,594</b>	<b>100.0%</b>	<b>100.0%</b>

Source: VIDOL Quarterly Census of Employment and Wages (QCEW) Q3 2022

Concerning wages, most remain below that of the United States. This can be an advantage in terms of competitiveness, but a disadvantage when considering the high cost of living. Combined with lower wages, this encourages talent to seek employment prospects elsewhere. For the territory, wages break down as the following:

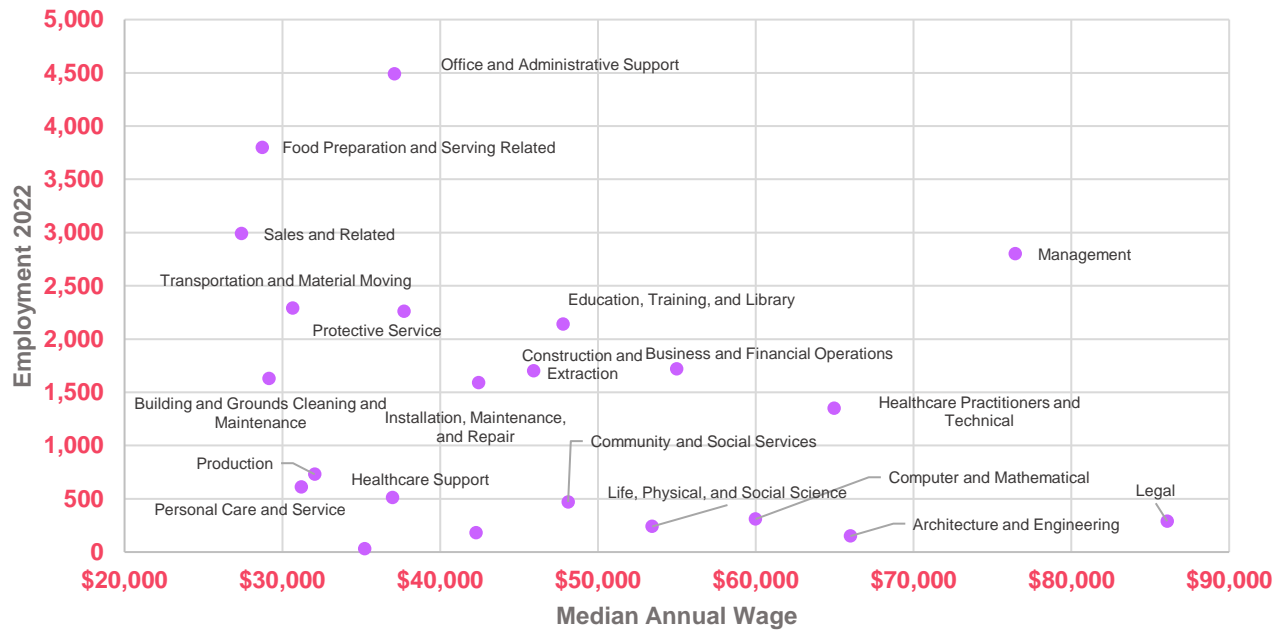
<b>Entry-Level</b>	<b>Median</b>	<b>Average</b>	<b>Experienced</b>
<b>\$28,380</b>	<b>\$37,950</b>	<b>\$47,850</b>	<b>\$55,560</b>

Source: VIDOL

Many of the higher paying occupations have lower employment numbers, with the exception of Management, as seen by Figure 4. Office & Administrative Support and Food Preparation & Serving occupations have the highest employment of any occupation group, yet their median annual wage command less than \$40,000.



Figure 4: USVI Median Wage & Employment by Occupation Group, 2022



Source: VIDOL

## Education & Training Pipeline

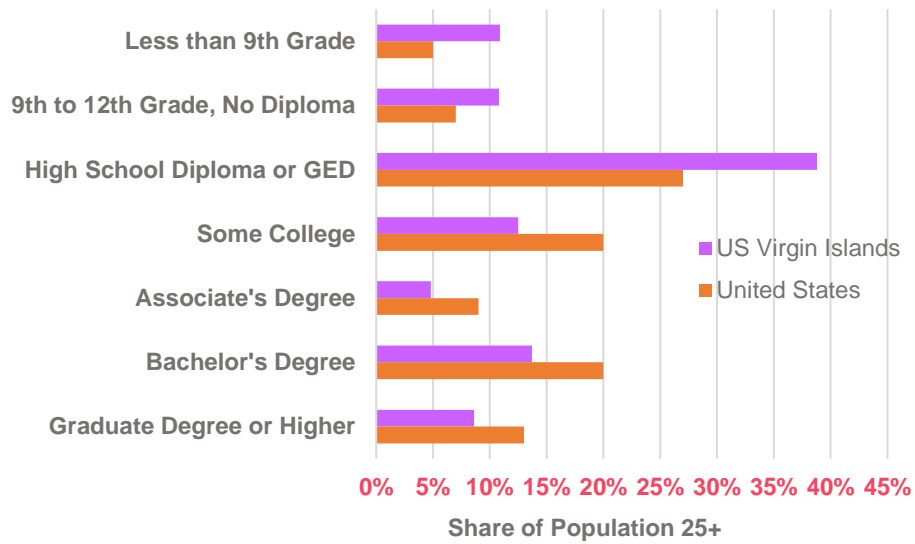
The education and training pipeline plays a pivotal role in supplying a skilled and adaptable labor force for USVI's economy. This pipeline encompasses various stages, from early childhood education to vocational training, higher education, and continuous learning opportunities throughout one's career. Here are several reasons why the education and training pipeline is of utmost importance:

- **Economic Competitiveness:** A well-educated and trained workforce is a critical driver of economic competitiveness. It enables industries to innovate, adapt to changing market conditions, and compete effectively on a global scale. As technology and industries evolve, a highly skilled labor force is necessary to remain competitive.
- **Meeting Labor Market Demands:** The education and training pipeline helps address labor market demands by supplying workers with the specific skills and knowledge required by industries. It ensures that there is a constant influx of talent into sectors experiencing growth or shortages in skilled workers.
- **Reducing Unemployment:** Education and training opportunities help reduce unemployment by equipping individuals with the skills they need to secure jobs. A well-prepared labor force ensures that people are not left unemployed due to a mismatch between their skills and available job opportunities.

Generally, a more educated labor market is more adaptable due to the depth and breadth of skills possessed. This adaptability also creates greater labor market efficiency. Unfortunately, the territory's educational attainment lags far behind the mainland United States (Figure 5). A much higher percentage of its population possesses a high school diploma or less. This lack of higher education limits the type of industries USVI hopes to grow in the territory. Indeed, target industries like R&D, Professional Services, and others would require a higher skilled workforce.



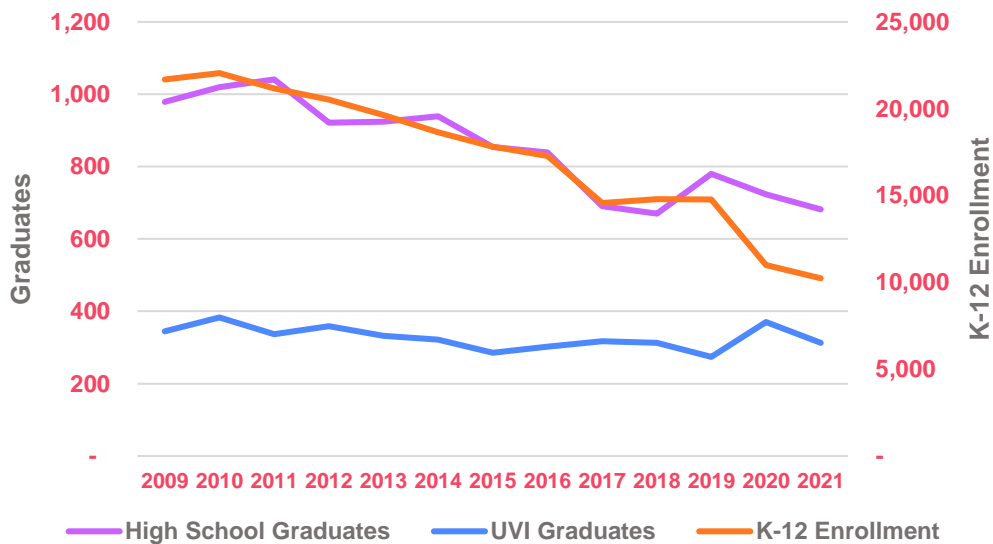
Figure 5: USVI & US Education Attainment



Source: US Census Bureau, 2020 Decennial Census of Island Areas - US Virgin Islands

A more worrying trend is the impact that population decline is having upon the overall talent pipeline. While the number of graduates from the University of the Virgin Islands (UVI) has remained fairly stable, both K-12 enrollment and high school graduate volume have declined significantly (Figure 6). This makes maintaining enrollment and graduate rates more difficult for UVI. Furthermore, it also means much of the lower-skilled jobs in the territory face a dwindling supply of talent.

Figure 6: USVI Education Pipeline, 2009-2021



Source: USVI Bureau of Economic Research (BER), Annual Economic Indicators 2021

The hurricane disaster has not only impacted the K-12 education pipeline's numbers, but also quality. A RAND study has noted that disasters negatively affected the student learning environment and reduced

high school graduation rates. This highlights the need for continued efforts to support and improve the education system, particularly in the face of such challenges.<sup>15</sup>

The USVI Department of Education has several initiatives and plans in place to support secondary graduates in the territory:

- **Free Education at UVI:** Currently, secondary graduates in the USVI have the opportunity to attend the University of the Virgin Islands (UVI) for free, with some stipulations that may apply.
- **Funding for Post-Secondary CTE:** While there are no programs providing free tuition for post-secondary Career and Technical Education (CTE) schools, the Workforce Board offers funding to assist eligible students with tuition, uniforms, and books for specific CTE programs. The Government of the Virgin Islands is also moving towards a free tuition program for post-secondary CTE offerings.
- **Alignment Programs:** To address CTE teacher shortages and enhance students' career readiness, alignment programs have been launched. These programs allow secondary students to complete courses towards a post-secondary certification while still in high school. These programs are offered at no cost to the students and involve collaboration between secondary and post-secondary educational institutions. For example, a pathway under the nursing program is being launched this semester.
- **Workforce Development:** The USVI Department of Education is actively working on developing programs that focus on skilling up the Virgin Islands workforce. These programs align with the VI Department of Labor's projected industry demand occupations and incorporate input from local VI businesses and agencies.<sup>16</sup>

The University of the Virgin Islands has not conducted a formal study on the alignment of student interests with programs connected to the local job market. However, they have been working to support majors that cater to local needs. The most popular major is Nursing, followed by Accounting, Management, Computer Science, and Biology. Other majors of interest include Psychology, Criminal Justice, Applied Mathematics (Engineering), and Hospitality and Tourism Management.

UVI expressed the desire for more completions in Nursing due to high demand, but this would require additional faculty. They face challenges in faculty recruitment and retention due to salary disparities with other institutions. There is also a need for more graduates in Social Work and Education, although these programs have recruitment challenges, possibly due to perceived parity in those professions.<sup>17</sup>

Equus plays a crucial role in workforce development in the US Virgin Islands (USVI). The company provides essential services to help individuals gain the skills and qualifications needed to enter or re-enter the workforce by enabling Workforce Investment and Opportunity Act (WIOA) programs to deliver training and education designed to meet the specific demands of the local job market.

Equus' importance in the workforce development system lies in its ability to bridge the gap between job seekers and the skills demanded by employers. By offering relevant training and education programs, they enable individuals to acquire the qualifications needed to secure well-paying jobs. This contributes to

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<sup>15</sup> RAND Corporation, "Recovery in the U.S. Virgin Islands: Progress, Challenges, and Options for the Future", 2020

<sup>16</sup> USVI Department of Education email interview

<sup>17</sup> University of the Virgin Islands email interview



reducing unemployment rates, improving economic stability, and enhancing the overall workforce in the US Virgin Islands.

In 2022, Equus served 233 participants through the WIOA programs. The most impactful and successful programs, based on data and context, include the Clinical Medical Assistant Program offered by UVI CELL and the NCCER Electrical 1 program provided by the Department of Education in St. Croix. Both of these programs are in high demand, and graduates quickly find employment after certification.

Several programs are facing challenges with client interest and demand, including NCCER Pipefitting Level 1, Workforce Development, RESET, Fundamentals of IT, 2100 PC Technician, Stress Management, Microsoft Office Specialist, and Wellness Coaching. These courses have a limited demand among clients.

- Clients frequently inquire about programs or training areas that are not covered by WIOA. These include: Licensed Practical Nursing (LPN)
- Accounting
- Commercial Driver's License (CDL)
- Heavy Equipment Training
- Graphic Design
- Medical Transcription
- Stenography.<sup>18</sup>

In short, the US Virgin Islands (USVI) has faced a population decline due to economic shocks and challenges, including high unemployment, a high cost of living, and declining job prospects. Labor market tightness is now a challenge, with a low Labor Force Participation Rate (LFPR). The education and training pipeline is essential for supplying a skilled workforce, but educational attainment lags behind the mainland United States and the pipeline is shrinking. Despite these challenges, initiatives are in place to address these issues but more are needed.



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<sup>18</sup> Equus email interview

# Agriculture

The Virgin Islands consider agriculture and agribusiness (such as aquaponics, aquaculture, and hemp) to be a strategic sector for the territory and have made a number of investments related to the opportunity: in 2020 the St. Croix Aquaponics Center was established in which UVI runs a commercial-scale aquaponic system for tilapia.<sup>19</sup>

Detailed data on agricultural employment is very limited. According to the 2018 USDA Census of Agriculture, the number of farms grew from 219 in 2007 to 565 in 2018 yet at the same time the acreage per farm shrank from 27 to 17. Total agricultural acreage grew by 3,443 acres, indicating a growth in agriculture for the territory.<sup>20</sup>

Despite over 500 farms, VIDOL reported only 11 employees in Q3 2022. Yet, the Census of Agriculture showed that over 1,100 unpaid workers (likely farm tenants or owners) and 765 hired farm workers worked in agriculture in 2018 (Figure 7). This discrepancy is likely due to how farm workers and employees are often classified separately.

*Figure 7: Number of Farms and Farm Workers by Labor Status, 2018*

LABOR STATUS							
Unpaid labor	..... farms	461	207	369	149	92	58
	..... workers	1,145	401	962	285	183	116
	..... farms	51	14	41	5	10	9
Less than 25 days	..... farms	119	31	104	14	15	17
	..... workers	99	33	77	23	22	10
25 to 149 days	..... farms	390	82	347	56	43	26
	..... workers	368	182	298	132	70	50
150 days or more	..... farms	636	288	511	215	125	73
	..... workers						
Hired farm labor	..... farms	271	56	211	38	60	18
	..... workers	765	110	627	89	138	21
	..... farms	61	20	53	12	8	8
Less than 25 days	..... farms	170	30	155	19	15	11
	..... workers	107	24	84	16	23	8
25 to 149 days	..... farms	200	39	155	(D)	45	(D)
	..... workers	147	20	111	18	36	2
150 days or more	..... farms	395	41	317	(D)	78	(D)
	..... workers						

Source: National Agriculture Statistics Service, “2018 Census of Agriculture for the U.S. Virgin Islands”

Regarding employment concentration of agriculture across the islands, St. Croix has an agricultural location quotient (LQ) of 2.42. Location quotient, or employment concentration, is a way of quantifying how concentrated a characteristic of a particular region is compared to the nation. The LQ is the calculation that reveals what makes that particular region “unique” in comparison to the territorial average. For example, if the leather products manufacturing industry accounts for 2% of jobs in an area but 1% of jobs across the territory, then the area's leather-producing industry has an LQ of  $(0.02 / 0.01) = 2.0$  in an area (as compared to the entire territory). The LQs for the other islands were suppressed.

The average wages in Agriculture are also low:

<sup>19</sup> US Virgin Islands Vision 2040 Strategic Plan

<sup>20</sup> US Virgin Islands Vision 2040 Strategic Plan



Hourly	Weekly	Annual
<b>\$15.13</b>	<b>\$603</b>	<b>\$31,460</b>

The use of the Virgin Islands Electronic Workforce System (VIEWS) for posting agricultural job openings and resumes is also limited, so not much insight can be gleaned from the real-time data.

The territory's agriculture sector faces several workforce challenges. First, the labor force of farmers is aging quickly.<sup>21</sup> Furthermore, according to the J&M Global Solutions, "Limited exposure to agriculture, in general, suppresses the potential for a new generation of students and workers in the agriculture and agri-business industries, and the lack of formal training programs or peer-to-peer training opportunities is a barrier to a viable career pathway in agriculture."<sup>22</sup>

Indeed, there needs to be an increase of exposure to Agriculture in the K-12 system. Further, there are no WIOA/workforce development programs that serve the Agricultural industry. Only UVI offers agricultural-relevant education, as follows:

- Bachelor of Science in Aquaponics (Bachelor of Science)
- Aquaculture (Certificate)
- Agricultural Business Certificate (Certificate, Associate of Applied Science)
- General Agriculture (Certificate)
- Forestry and Nursery Management (Certificate)
- Horticulture (Certificate, Bachelor of Science)




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<sup>21</sup> US Virgin Islands Vision 2040 Strategic Plan

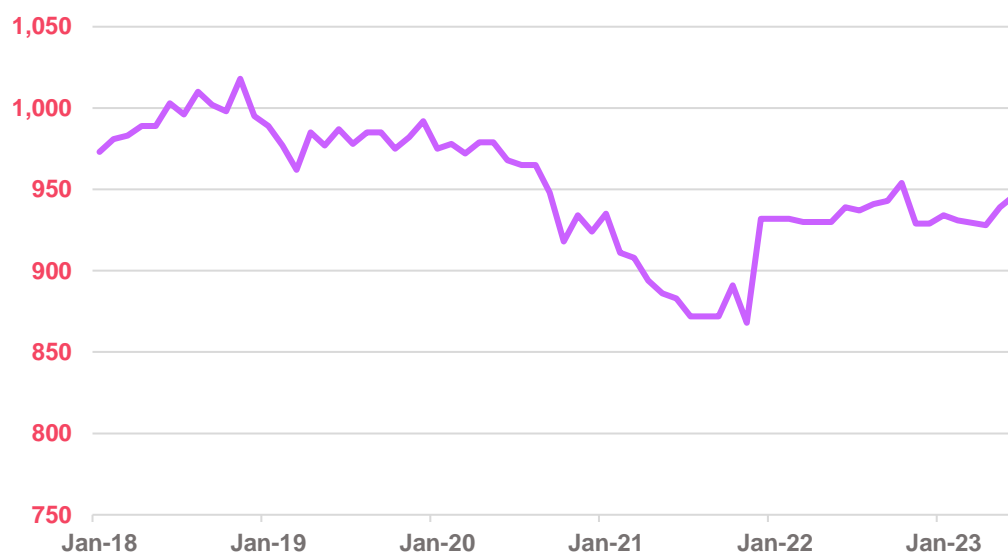
<sup>22</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

# Financial Services

## Employment

Trends in Financial Services employment reached their peak in 2018, decreasing until 2022, when it recovered and steadied to just around 950 workers (Figure 8). Employment is concentrated highest in St. John, with over 60% of employment occurring there (Table 2).

Figure 8: Financial Services Employment, 2018-2023



Source: VIDOL

Table 2: Financial Services Employment and LQ by Island

	Employment	LQ
Virgin Islands	909	N/A
St. Croix	331	0.88
St. John	566	1.17
St. Thomas	12	0.25

Source: VIDOL

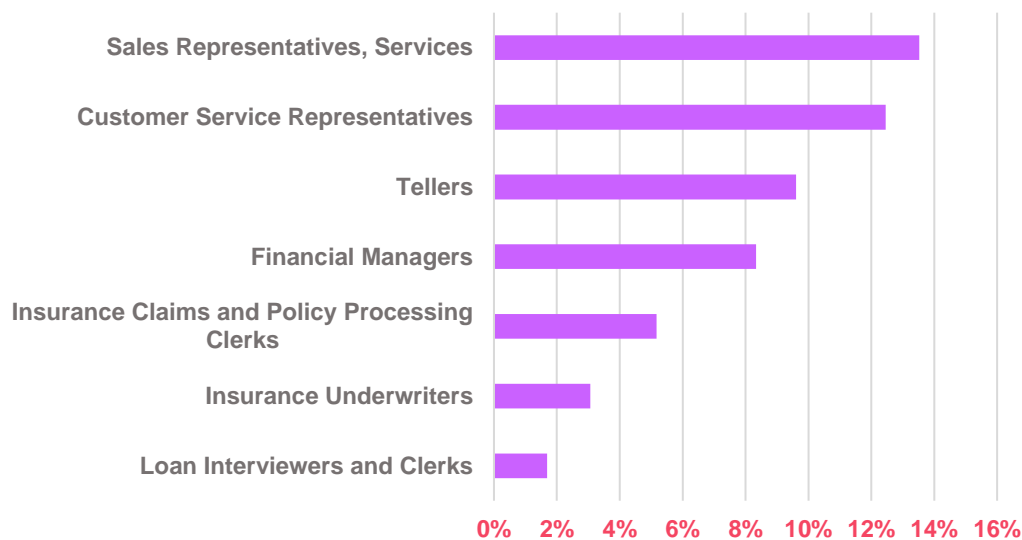
Top hiring employers represent a wide cross-section of the sector, including banking, capital investment, and insurance sales. Having diverse and actively hiring employers on the Virgin Islands provides a wider economic base in the sector and more opportunities for graduating students.

**Top 5 hiring employers (as of October 2023):**

- Oriental Bank
- St. Thomas Federal Credit Union
- Black Diamond Holdings
- Marshall & Sterling Insurance
- GC Investment Management

The sector is primarily staffed by customer-facing occupations; Sales Representative, Customer Service Representatives, and Tellers are the leading occupations, and comprise 36% of all occupations in the sector (Figure 9). Other key occupations in the sector include mid-level finance data efforts, including management, processing claims, and underwriting. Traditionally, these occupations require some level of post-secondary education, such as an associate or bachelor’s degree.

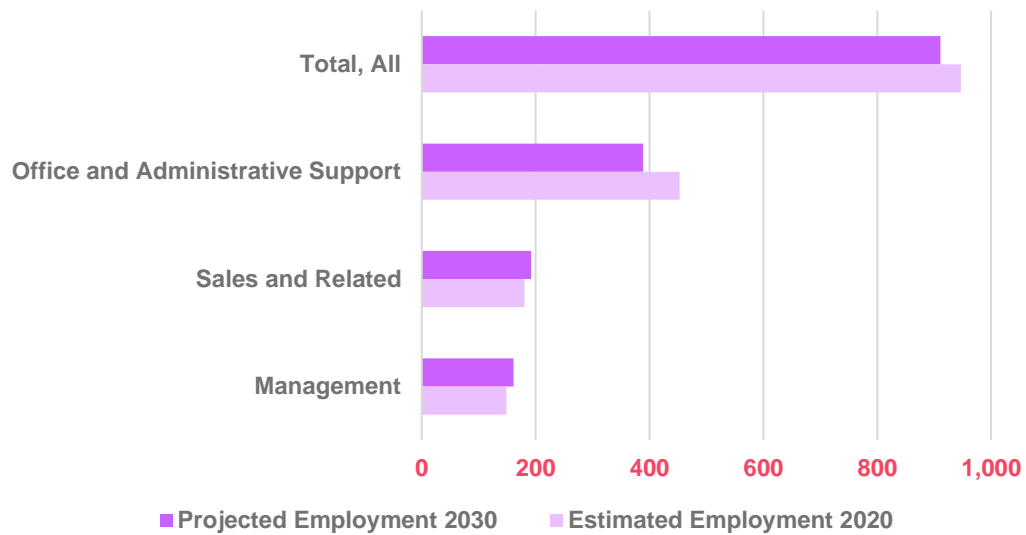
*Figure 9: Financial Services Staffing Patterns*



Source: VIDOL

Employment in the sector is projected to decrease by 2030 compared to 2020 (Figure 10). This projection is driven in large part by a projected decline in office and administrative support roles. This decline may be attributed to advances in automation and online transactions becoming the standard, which may lessen the quantity of necessary roles. While the sector is projected to decline, key occupations fields in sales and management are still projected to grow in 2030.

Figure 10: Financial Services Projected Employment, 2020-2030



Source: VIDOL

## Wages

Wage potential of occupation groups that comprise the sector at a macro level were analyzed for each group. It is broken down to three levels: entry-level, average, and experienced wages to understand the starting and potential earnings of the groups. Each occupation groups' wages represent earnings across all sectors and are not limited to occupations solely staffing the Financial Services sector.

Of these occupation groups, Management and Business & Financial Operations occupations provide the best wages, with an average above the \$45,000 target line (Table 3). As for Office and Administrative Support and Sales & Related occupations, only experienced Office Administrative occupations managed to clear the threshold, and overall wages are significantly lower than the other occupation groups in the sector. These occupations typically also require lower educational attainment or less experience and educational achievement.

Table 3: Financial Services Wage Breakdown by Occupation Group

Occupation Group	Entry-Level Avg. Wage	Average Wage	Experienced Avg. Wage
Management	\$53,650	\$85,270	\$99,420
Business & Financial Operations	\$40,020	\$60,380	\$72,330
Office & Administrative Support	\$29,310	\$41,010	\$47,850
Sales & Related	\$24,350	\$34,120	\$35,440

Source: VIDOL

More granular occupations that staff the sector were analyzed as well, and a similar trend as in the larger occupation groups is here as well. Management roles garner the highest wages, while customer facing, lower education requirement roles did not clear the desired wage threshold (Figure 11). Sales Representatives of Services, however, did manage to achieve an average wage that surpassed the \$45K threshold, unlike the overall Sales & Related occupation group in the previous table.

Figure 11: Financial Services Occupations Wages



Source: VIDOL

## Demand & Pipeline

To satisfy the occupational needs of the sector, workforce training institutions need to be aware of the skills required for the occupations staffing the sector. Job postings data of the United States from January 2022 to September 2023 were used to identify the most common skills employers are requiring in these occupations. The table below lists the top five common, specialized, and software skills required by job postings for each key occupation.

Figure 12: Top Skills of Financial Services Occupations

Occupation	Common Skills	Specialized Skills	Software Skills
<b>Sales Representatives, Services</b>	<ul style="list-style-type: none"> <li>Sales</li> <li>Customer Service</li> <li>Communications</li> <li>Management</li> <li>Self-Motivation</li> </ul>	<ul style="list-style-type: none"> <li>Sales Prospecting</li> <li>Marketing</li> <li>Selling Techniques</li> <li>Financial Services</li> <li>Loans</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Salesforce</li> <li>Spreadsheets</li> <li>Customer Relationship Management (CRM) Software</li> <li>Zoom</li> </ul>
<b>Customer Service Representatives</b>	<ul style="list-style-type: none"> <li>Customer Service</li> <li>Communications</li> </ul>	<ul style="list-style-type: none"> <li>Call Center Experience</li> <li>Customer Inquiries</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Salesforce</li> <li>Spreadsheets</li> </ul>



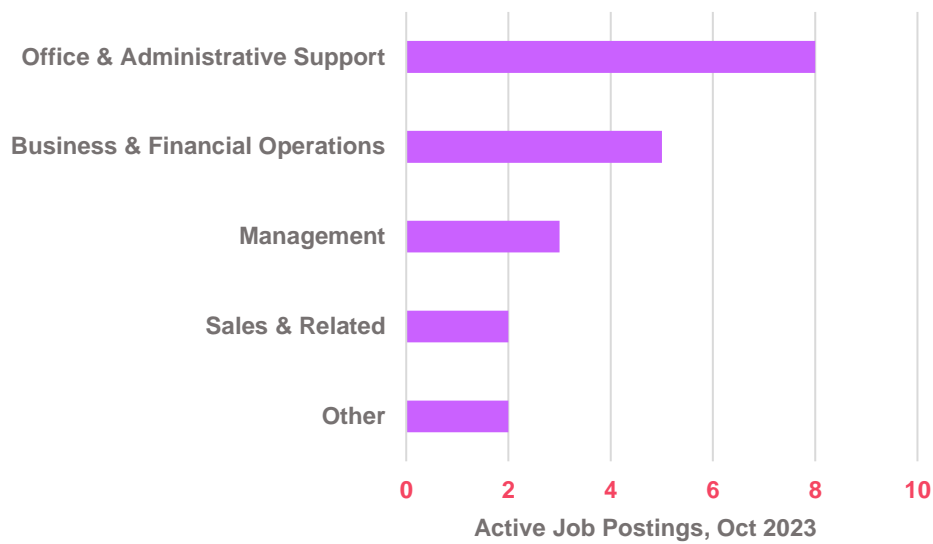
Occupation	Common Skills	Specialized Skills	Software Skills
	<ul style="list-style-type: none"> <li>• Sales</li> <li>• Management</li> <li>• Multitasking</li> </ul>	<ul style="list-style-type: none"> <li>• Merchandising</li> <li>• Data Entry</li> <li>• CRM</li> </ul>	<ul style="list-style-type: none"> <li>• SAP Applications</li> <li>• Operating Systems</li> </ul>
<b>Tellers</b>	<ul style="list-style-type: none"> <li>• Customer Service</li> <li>• Sales</li> <li>• Communications</li> <li>• Operations</li> <li>• Management</li> </ul>	<ul style="list-style-type: none"> <li>• Cash Handling</li> <li>• Balancing</li> <li>• Cash Register</li> <li>• Loans</li> <li>• Cross-Selling</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Spreadsheets</li> <li>• Banking Software</li> <li>• Human Resources Information System (HRIS)</li> <li>• Salesforce</li> </ul>
<b>Financial Managers</b>	<ul style="list-style-type: none"> <li>• Management</li> <li>• Communications</li> <li>• Leadership</li> <li>• Operations</li> <li>• Budgeting</li> </ul>	<ul style="list-style-type: none"> <li>• Accounting</li> <li>• Finance</li> <li>• Financial Statements</li> <li>• Auditing</li> <li>• Generally Accepting Accounting Principles (GAAP)</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Accounting Software</li> <li>• SAP Applications</li> <li>• QuickBooks</li> <li>• Spreadsheets</li> </ul>
<b>Insurance Claims &amp; Policy Processing Clerks</b>	<ul style="list-style-type: none"> <li>• Customer Service</li> <li>• Communications</li> <li>• Detail Oriented</li> <li>• Writing</li> <li>• Management</li> </ul>	<ul style="list-style-type: none"> <li>• Claims Processing</li> <li>• Billing</li> <li>• Data Entry</li> <li>• Underwriting</li> <li>• Auditing</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Spreadsheets</li> <li>• Database Systems</li> <li>• Epic EMR</li> <li>• Dentrix</li> </ul>
<b>Insurance Underwriters</b>	<ul style="list-style-type: none"> <li>• Communications</li> <li>• Management</li> <li>• Sales</li> <li>• Customer Service</li> <li>• Detail-Oriented</li> </ul>	<ul style="list-style-type: none"> <li>• Underwriting</li> <li>• Loans</li> <li>• Marketing</li> <li>• Mortgage Loans</li> <li>• Finance</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Encompass (Mortgage Software)</li> <li>• Spreadsheets</li> <li>• Desktop Underwriter</li> <li>• Salesforce</li> </ul>
<b>Loan Interviewers &amp; Clerks</b>	<ul style="list-style-type: none"> <li>• Communications</li> <li>• Customer Service</li> <li>• Detail-Oriented</li> <li>• Operations</li> <li>• Management</li> </ul>	<ul style="list-style-type: none"> <li>• Loans</li> <li>• Mortgage Loans</li> <li>• Underwriting</li> <li>• Loan Processing</li> <li>• Loan Origination</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Spreadsheets</li> <li>• Desktop Underwriter</li> <li>• Operating Systems</li> <li>• Software Systems</li> </ul>

Source: Lightcast

Active job posting demand adds context to the staffing patterns of a sector. Not all occupations in a sector experience the same level of demand due to factors such as skills gap, wages, and turnover rate. To provide a snapshot of the occupations currently in greatest demand, the active job postings of the territory's sector are shown below in Figure 13. Office & Administrative Support occupations, followed by Business & Financial Operations, are currently in highest demand. The job openings on the VIEWS website should be monitored to determine if this trend continues, as well as communicate with employers to confirm these trends.



Figure 13: Active Financial Services Job Postings



Source: VIDOL

The ratio of job candidates to job postings provides a supply to demand perspective on the hiring market. In the finance sector, Customer Service Representatives currently have the highest job posting demand, but also have many more candidates available. The candidate to job ratio takes both into context and shows that the need for a Customer Service Representative is not as the raw job postings counts would indicate. Table 4 below provides a snapshot in October 2023 of the job postings for key occupations in the sector and the candidates available that would qualify to fill those roles.

Table 4: Financial Services Occupational Job Posting Demand and Candidate Supply

Occupation	Job Postings	Candidates Available	Candidate/Job Ratio
Customer Service Representatives	7	101	14.43
Tellers	2	3	1.5
Financial Managers	2	3	1.5
Sales Representatives, Services	2	0	0
Insurance Claims & Policy Processing Clerks	1	0	0
Insurance Underwriters	0	0	0
Loan Interviewers & Clerks	0	0	0

Source: VIDOL

A reliable source of graduates and trainees to fill occupations in the sector is vital to its continued growth. Below is a list of related educational and related programs that are available on the USVI and should be made aware to prospective workers of this sector.

- Project Management Essentials (CAPM) - MedCerts
- Accounting (Concentration BA, BBA, MACC) or online – UVI
- Business Administration (BA, MBA, EMBA) or online – UVI
  - With Finance (Concentration)
  - With Accounting (Concentration)
  - Management



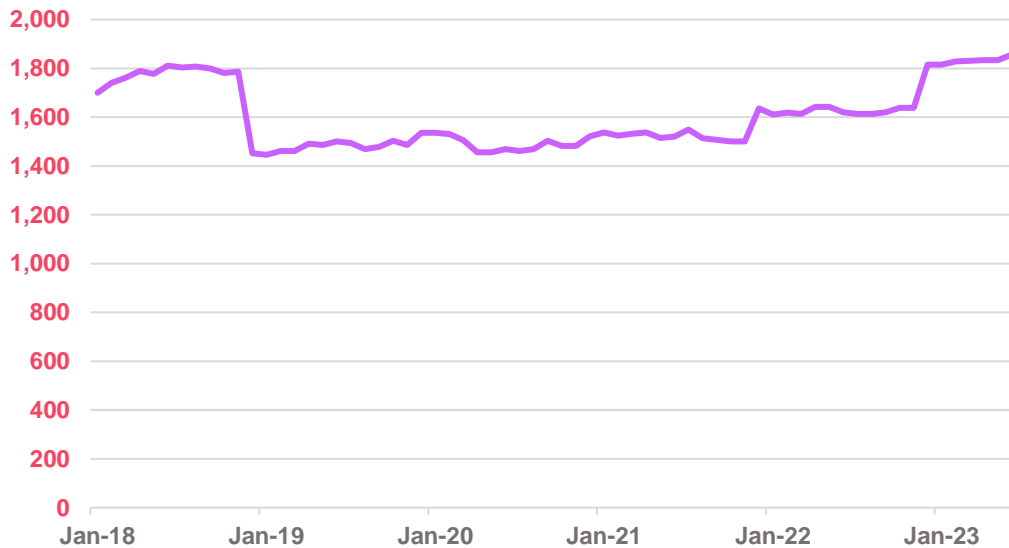
# Healthcare

## Employment

Healthcare employment declined sharply in late 2018, rising steadily since then to recently surpass 2018 levels of employment (Figure 14). Employment is split evenly between St. Croix and St. Thomas, though in terms of employment concentration, it is much higher in St. Croix (Table 5).<sup>23</sup>

Indeed, previous reports have indicated that the growth in Healthcare is limited by the labor force and not necessarily demand. As noted previously in Table 1, the share of Healthcare employment is roughly 1/3 that of the United States. Even though Healthcare services rank among the top five employment sectors in the USVI, the region is officially designated as a medical professional shortage area by the U.S. Health Resources and Services Administration (HRSA). Vacancy rates are notable, with over 40% of positions funded by the Territory and 30% of federally funded positions within the Department of Health (DOH) remaining unfilled.<sup>24</sup> This shortage of Healthcare professionals is leading to poor quality and is the leading reason people leave the territory.<sup>25</sup>

Figure 14: Healthcare Employment, 2018-2023



Source: VIDOL

<sup>23</sup> Note: There is a large discrepancy in estimated Healthcare employment between Figure 13 and Table 5. Both figures are sourced from the VIDOL VIEWS website.

<sup>24</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

<sup>25</sup> US Virgin Islands Vision 2040 Strategic Plan

*Table 5: Healthcare Employment and LQ by Island*

	<b>Employment</b>	<b>LQ</b>
<b>Virgin Islands</b>	2,804	N/A
<b>St. Croix</b>	1,472	1.27
<b>St. Thomas</b>	1,314	0.88
<b>St. John</b>	18	0.12

Source: VIDOL

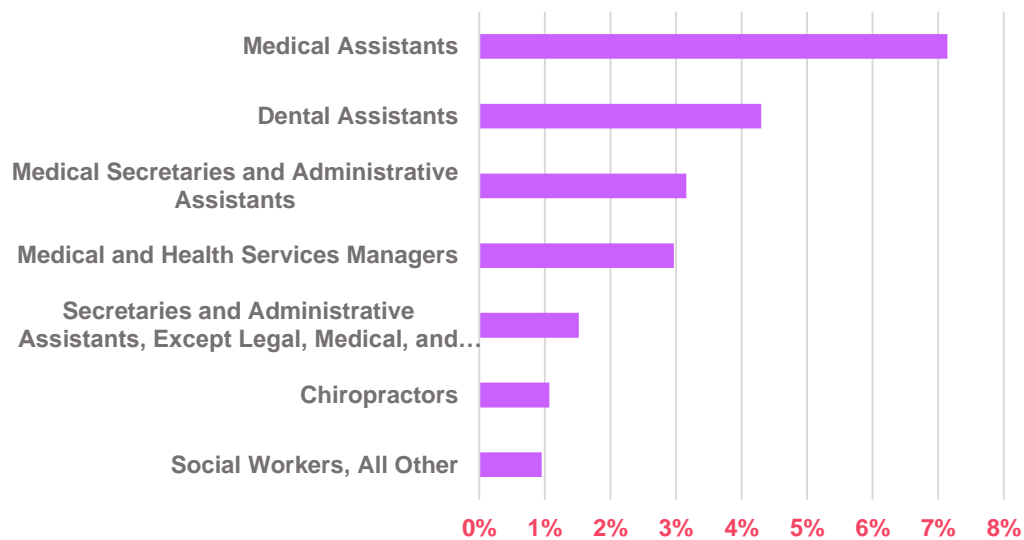
Top hiring employers represent a mix of medical centers, services, and therapy. Having diverse and actively hiring employers on the Virgin Islands provides a wider economic base in the sector, more opportunities for graduating or trained students.

**Top 5 hiring employers (as of October 2023):**

- Schneider Regional Medical Center
- Frederiksted Health Care, Inc.
- Tropical Behavioral Services
- Family Resource Center
- Island Therapy Solutions

Staffing in this sector is led by Assistants (Medical, Dental, Secretaries) and Managers, indicating that in order to keep the Health Care and Social Assistance sector thriving, not only are the highly trained doctors required, but also the support staff required to run the facilities (Figure 15).

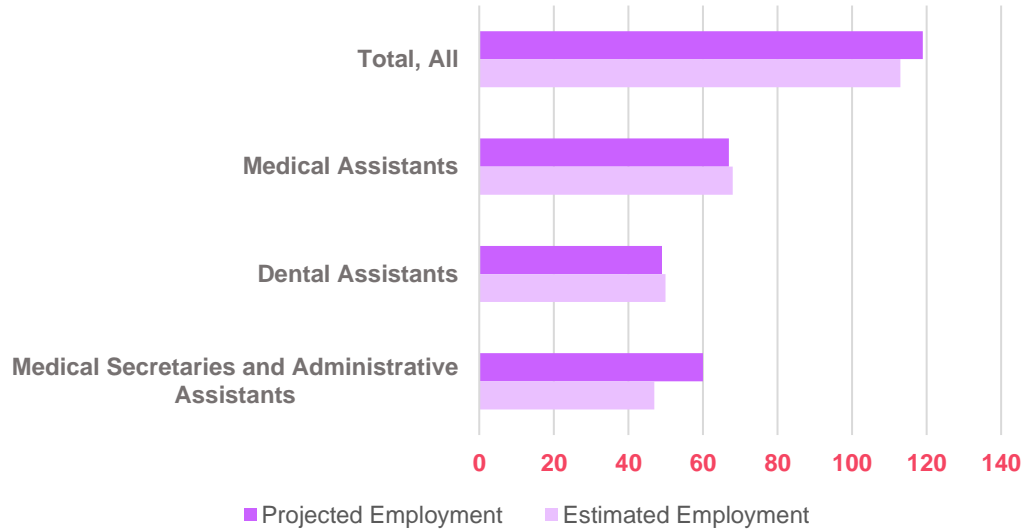
*Figure 15: Healthcare Staffing Patterns*



Source: VIDOL

Employment in the sector is projected to increase by 2030. This projection is driven in large part by a projected increase in Secretaries and Administrative Assistant roles (Figure 16). While the sector is projected to grow, Medical and Dental Assistants are projected to remain stagnant or decline slightly.

Figure 16: Healthcare Projected Employment, 2020-2030



Source: VIDOL

## Wages

Wage potential of occupation groups that comprise the sector at a macro level were analyzed for each group. Broken down to three levels: entry-level, average, and experienced wages to understand the starting and potential earnings of the groups. Each occupation groups' wages represent earnings across all sectors and are not limited to occupations solely staffing the financial services sector.

Of these occupation groups, Management and Healthcare Practitioner occupations provide the best wages, with an average well above the \$45,000 target line (Table 6). Community and Social Services also provide an average wage above the target line. As for support occupations, Healthcare Support occupations, on average, don't reach the desired wage line, and only experienced Office & Administrative Support occupations do as well.

Table 6: Healthcare Wage Breakdown by Occupation Group

Occupation Group	Entry-Level Avg Wage	Average Wage	Experienced Avg Wage
Healthcare Support	\$29,120	\$36,490	\$39,580
Healthcare Practitioners and Technical	\$43,460	\$80,540	\$92,640
Office & Administrative Support	\$29,310	\$41,010	\$47,850

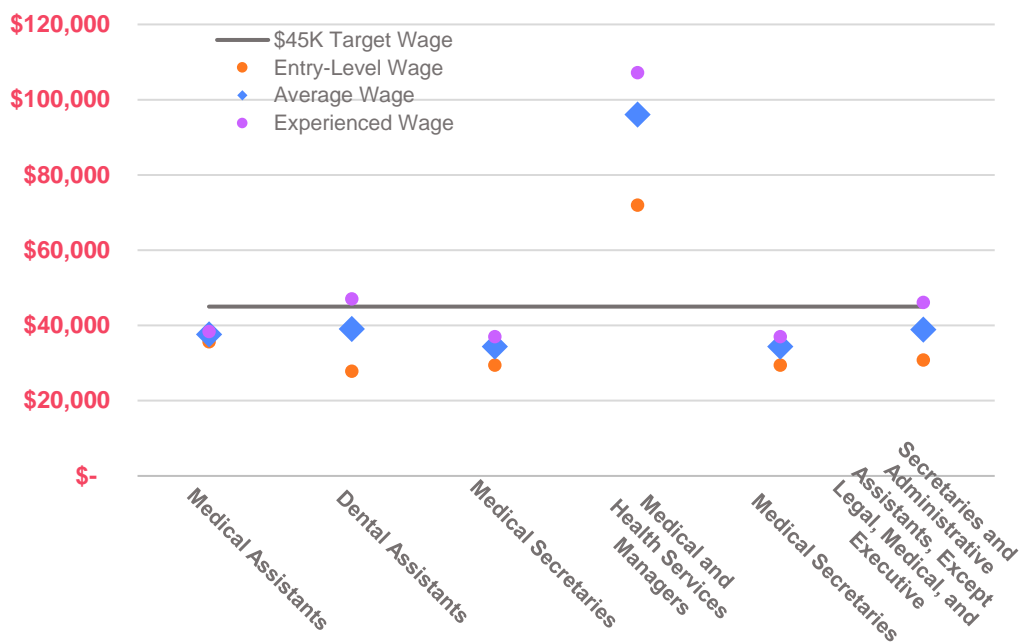


Occupation Group	Entry-Level Avg Wage	Average Wage	Experienced Avg Wage
Management	\$53,650	\$85,270	\$99,420
Community and Social Services	\$36,610	\$48,580	\$59,110

Source: VIDOL

More granular occupations that staff the sector were analyzed as well, and a similar trend as in the larger occupation groups is here as well. Management roles garner the highest wages, while customer facing, lower education requirement roles did not clear the desired wage threshold, save for the exception of experienced Secretaries and Administrative Assistants (Figure 17).

Figure 17: Healthcare Occupations Wages



Source: VIDOL

## Demand & Pipeline

To satisfy the occupational needs of the sector, workforce training institutions need to be aware of the skills required for the occupations staffing the sector. Job postings data of the United States from January 2022 to September 2023 were used to find what skills employers are requiring in these occupations. The table below lists the top five common, specialized, and software skills required by job postings for each key occupation.

Table 7: Top Skills of Healthcare Occupations

Occupation	Common Skills	Specialized Skills	Software Skills
Chiropractors	<ul style="list-style-type: none"> <li>Communications</li> </ul>	<ul style="list-style-type: none"> <li>Chiropractic</li> <li>Medical History Documentation</li> </ul>	<ul style="list-style-type: none"> <li>Software Systems</li> <li>Microsoft Office</li> </ul>



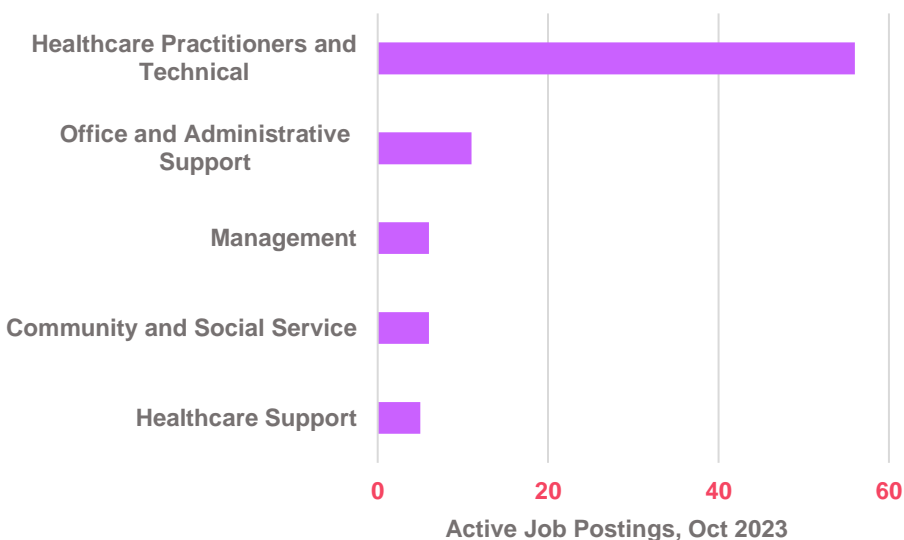


Occupation	Common Skills	Specialized Skills	Software Skills
	<ul style="list-style-type: none"> <li>• Business Administration</li> <li>• Management</li> <li>• Operations</li> <li>• Customer Service</li> </ul>	<ul style="list-style-type: none"> <li>• Human Musculo-skeletal System</li> <li>• Marketing</li> <li>• Patient Evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Patient Management Software</li> <li>• Salesforce</li> <li>• Synchro (Traffic Simulation Software)</li> </ul>
<b>Dental Assistants</b>	<ul style="list-style-type: none"> <li>• Communications</li> <li>• Customer Service</li> <li>• Detail Oriented</li> <li>• Multitasking</li> <li>• Scheduling</li> </ul>	<ul style="list-style-type: none"> <li>• Sterilization</li> <li>• Dentistry</li> <li>• Dental Procedures</li> <li>• Infection Control</li> <li>• Oral Hygiene</li> </ul>	<ul style="list-style-type: none"> <li>• Dentrix</li> <li>• Microsoft Office</li> <li>• Open Dental</li> <li>• Patient Management Software</li> <li>• Project Management Software</li> </ul>
<b>Medical Assistants</b>	<ul style="list-style-type: none"> <li>• Communications</li> <li>• Customer Service</li> <li>• Scheduling</li> <li>• Clerical Works</li> <li>• Computer Literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Medical Assistance</li> <li>• Vital Signs</li> <li>• Medical Records</li> <li>• Electronic Medical Record</li> <li>• Phlebotomy</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Epic EMR</li> <li>• eClinicalWorks (ECW)</li> <li>• Spreadsheets</li> <li>• Patient Management Software</li> </ul>
<b>Medical Secretaries and Administrative Assistants</b>	<ul style="list-style-type: none"> <li>• Customer Service</li> <li>• Communications</li> <li>• Scheduling</li> <li>• Multitasking</li> <li>• Clerical Works</li> </ul>	<ul style="list-style-type: none"> <li>• Medical Records</li> <li>• Front Office</li> <li>• Medical Terminology</li> <li>• Setting Appointments</li> <li>• Billing</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Dentrix</li> <li>• Epic EMR</li> <li>• Spreadsheets</li> <li>• eClinicalWorks (ECW)</li> </ul>
<b>Medical and Health Services Managers</b>	<ul style="list-style-type: none"> <li>• Management</li> <li>• Communications</li> <li>• Leadership</li> <li>• Operations</li> <li>• Planning</li> </ul>	<ul style="list-style-type: none"> <li>• Nursing</li> <li>• Auditing</li> <li>• Marketing</li> <li>• Project Management</li> <li>• Medical Records</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Spreadsheets</li> <li>• Clinic Management Systems</li> <li>• Epic EMR</li> <li>• Microsoft Access</li> </ul>
<b>Secretaries and Administrative Assistants, Except Legal, Medical, and Executive</b>	<ul style="list-style-type: none"> <li>• Communications</li> <li>• Customer Service</li> <li>• Microsoft Excel</li> <li>• Detail Oriented</li> <li>• Clerical Works</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative Support</li> <li>• Data Entry</li> <li>• Invoicing</li> <li>• Office Supply Management</li> <li>• Office Equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Spreadsheets</li> <li>• Microsoft Access</li> <li>• QuickBooks (Accounting Software)</li> <li>• Microsoft Share-Point</li> </ul>
<b>Social Workers, All Other</b>	<ul style="list-style-type: none"> <li>• Communications</li> <li>• Advocacy</li> <li>• Planning</li> <li>• Coordinating</li> <li>• Management</li> </ul>	<ul style="list-style-type: none"> <li>• Social Work</li> <li>• Case Management</li> <li>• Mental Health</li> <li>• Discharge Planning</li> <li>• Treatment Planning</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Spreadsheets</li> <li>• eClinicalWorks (ECW)</li> <li>• Epic EMR</li> <li>• Microsoft Access</li> </ul>

Source: Lightcast

Active job posting demand adds context to the staffing patterns of a sector. Not all occupations in a sector experience the same level of demand due to factors such as skills gap, wages, and turnover rate. To provide a snapshot of the occupations currently in greatest demand, the active job postings of the sector on the Virgin Islands are shown below in Figure 18. Healthcare Practitioners & Technical occupations are currently in highest demand by a large margin, further evidence that the growth of Healthcare seems constrained by supply, not demand.

Figure 18: Active Healthcare Job Postings



Source: VIDOL

The ratio of job candidates to job postings provides a supply-demand perspective for the hiring market. In the Healthcare sector, there is a larger pool of candidates available for Medical Assistants on the Virgin Islands database. The candidate to job ratio takes this into context, and while job postings may be higher for Medical Assistants, its existing supply in the workforce means that it still has a higher candidate-to-job ratio than other occupations in the region, making it a competitive position. Table 8 below provides a snapshot in October 2023 of the job postings for key occupations in the sector and the candidates available that would qualify to fill those roles.

Table 8: Healthcare Occupational Job Posting Demand and Candidate Supply

Occupation	Job Postings	Candidates Available	Candidate/Job Ratio
Medical Assistants	3	23	7.7
Medical Secretaries and Administrative Assistants	1	6	6.0
Dental Assistants	1	2	2.0
Medical and Health Services Managers	3	4	1.3
Social Workers, All Other	3	3	1.0



Occupation	Job Postings	Candidates Available	Candidate/Job Ratio
Chiropractors	1	0	0.0

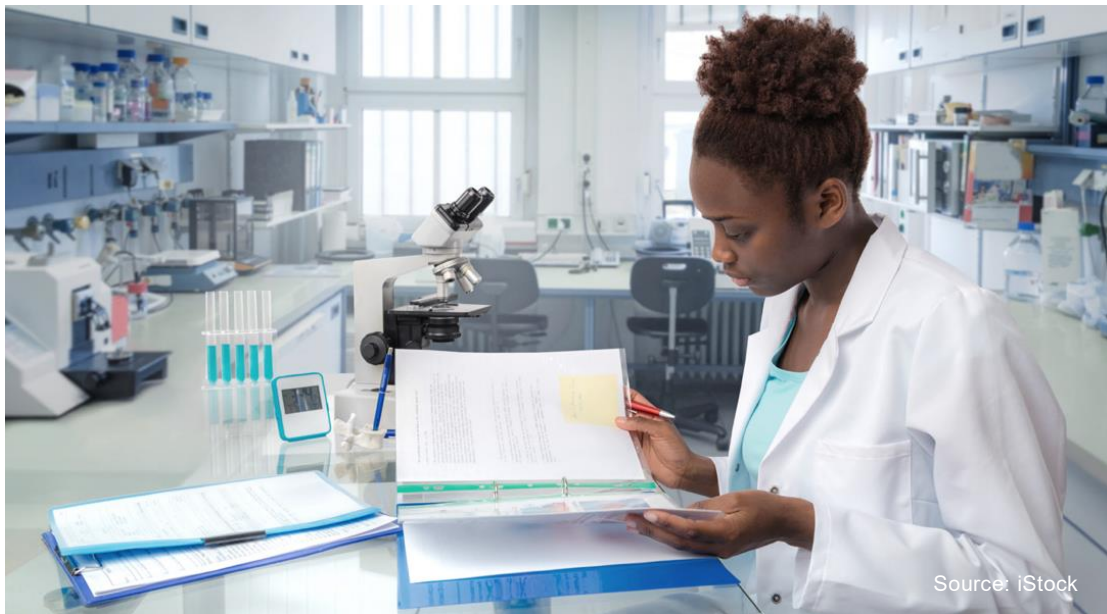
Source: VIDOL

A reliable source of graduates and trainees to fill occupations in the sector are vital for its continued growth. Below is a list of related educational and related programs that are available on the Virgin Islands and should be made aware to prospective workers of this sector given the labor supply shortage constraining the sector.

- Allied Healthcare Professional or online - MedCerts
- Bachelor of Science in Aquaponics (BS) - UVI
- Biomedical Laboratory Science (Certificate) - UVI
- Certified Nursing Assistant (STX) - Caring Health Concierge
- Certified Nursing Assistant (STX) - VI Department of Education
- Certified Professional Biller Program - M1 Enterprises USVI
- Child Development Associate (CDA) - VI Department of Education
- Clinical Medical Assistant (STT) - VI Department of Education
- Clinical Medical Professional or online - MedCerts
- Clinical Medical Specialist or online - MedCerts
- Criminal Justice Program (AAS, BA, BS) or online - UVI
- Dental Assistant or online - MedCerts
- Diploma in Health Studies Online - ALISON
- Diploma in Psychology Online - ALISON
- EKG Technician or online - MedCerts
- Electrocardiogram (EKG) Technician - Life Skills Training Center
- Electronic Health Records Specialist or online - MedCerts
- Emergency Medical Technician (STT) - VI Department of Education
- Health Sciences (Minor) - UVI
- Home Health Aide (STT) - Life Skills Training Center
- Licensed Practical Nurse Level I (STT) - VI Department of Education
- Licensed Practical Nurse Level II (STT) - VI Department of Education
- Licensed Practical Nurse Level III (STT) - VI Department of Education
- Licensed Practical Nurse Level IV (STT) - VI Department of Education
- Medical Administrative Assistant - (STT) - VI Department of Education
- Medical Assistant or online - MedCerts
- Medical Billing and Coding Professional or online - MedCerts
- Medical Billing Specialist or online - MedCerts
- Medical Front Office Administration Specialist or online - MedCerts
- Medical Insurance Coding Specialist - M1 Enterprises USVI
- Medical Massage Therapist (STT) - VI Department of Education
- Medication Care Coordinator - MedCerts
- Medication Care Coordinator or online - MedCerts
- Mental Health Technician - UVI CELL
- Nursing Assistant (STT) - Life Skills Training Center



- Patient Care Technician (STT) or online - MedCerts
- Pharmacy Technician Specialist or online - MedCerts
- Phlebotomy (STX) - VI Department of Education
- Phlebotomy Technician (STT) - Life Skills Training Center
- Phlebotomy Technician (STT) - VI Department of Education
- Physical Therapy Aide and Administration Specialist or online - MedCerts
- Social Work (BA, MSW) - UVI
- Sterile Processing Technician or online - MedCerts



# Manufacturing

## Employment

Only approximately 2% of the current employment landscape in the USVI is comprised of Manufacturing operations, with the majority—specifically, over 60%—being associated with beverage manufacturing and distillation, particularly in the realm of rum production.<sup>26</sup> The USVI receives substantial revenue from this industry through cover-over payments, which involve the transfer of excise tax payments from the United States to the territory.<sup>27</sup>

Perhaps against the common conceptions, Manufacturing employment increased by 200 jobs during the peak years of the COVID-19 pandemic, and then fell back down below pre-pandemic levels in late 2022 and into 2023 (Figure 19). This could be explained by the temporary, partial reopening of the Limetree Bay refinery before being shut down again for environmental reasons. Manufacturing employment is almost exclusively in the island of St. Croix, with only a minimal presence on the other two islands (Table 9).<sup>28</sup>

Figure 19: Manufacturing Employment, 2018-2023



Source: VIDOL

<sup>26</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

<sup>27</sup> US Virgin Islands Vision 2040 Strategic Plan

<sup>28</sup> The same discrepancy exists in employment estimates between the figure and table, both sourced from VIDOL

Table 9: Manufacturing Employment and LQ by Island

	Employment	LQ
Virgin Islands	252	N/A
St. Croix	226	2.17
St. Thomas	24	0.18
St. John	2	0.15

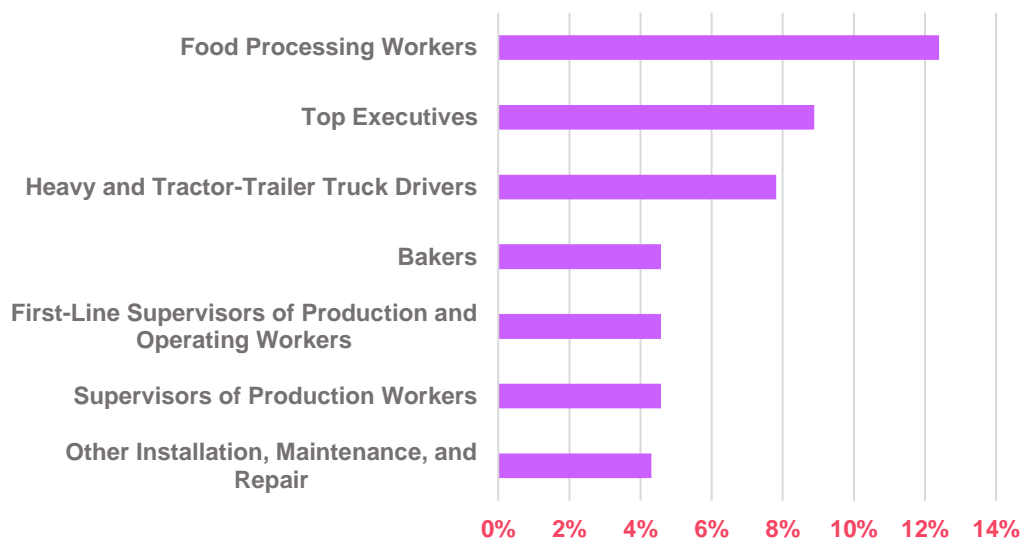
The top hiring employers represent beverage manufacturing, building materials, construction, and other Manufacturing subsectors.

**Top 5 hiring employers (as of October 2023):**

- Cruzan Rum
- Universal Concrete
- CAT5 BUILDERS
- Cool Signs
- KSBW

The Manufacturing sector is staffed primarily by Food Production workers, followed by Executives, Drivers, and Supervisors (Figure 20). Educational requirements for these roles range from a high school diploma and training for those in production and transportation, and up to a bachelor’s or master’s degree for traditional Supervisor or Executive roles.

Figure 20: Manufacturing Staffing Patterns



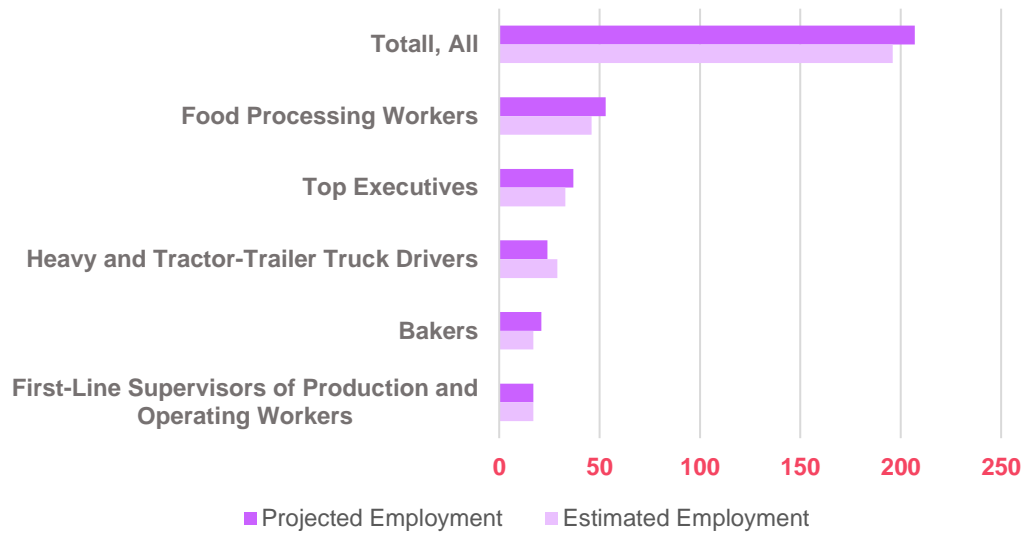
Source: VIDOL

Employment in the sector is projected to increase by 2030 (Figure 21). Projected growth is driven by an increase in Food Processing Workers, as well as growth in Executive roles. The projected decline in Tractor-Trailer Truck Drivers may be attributed to the size and nature of the islands, and it is possible



that transportation efficiency in the future could lessen the need to increased employment in that occupation.

*Figure 21: Manufacturing Projected Employment, 2020-2030*



Source: VIDOL

## Wages

Wage potential of occupation groups that comprise the sector at a macro level were analyzed for each group. Broken down to three levels: entry-level, average, and experienced wages to understand the starting and potential earnings of the groups. Each occupation groups’ wages represent earnings across all sectors and are not limited to occupations solely staffing the financial services sector.

Aside from Transportation and Material Moving, wages in other occupation areas provide a path to reaching an average wage above the \$45,000 target line (Table 10). In Management and Installation, Maintenance & Repair, the average wage is clear of the target line, while in Production, experienced workers obtain a wage higher than the target line. Unfortunately, Transportation Workers do not reach the target line at any experience level. Aside from Management, other occupation groups typically require a high school diploma and training certifications for specific manufacturing, repair, or driving, skills and certifications.

*Table 10: Manufacturing Wage Breakdown by Occupation Group*

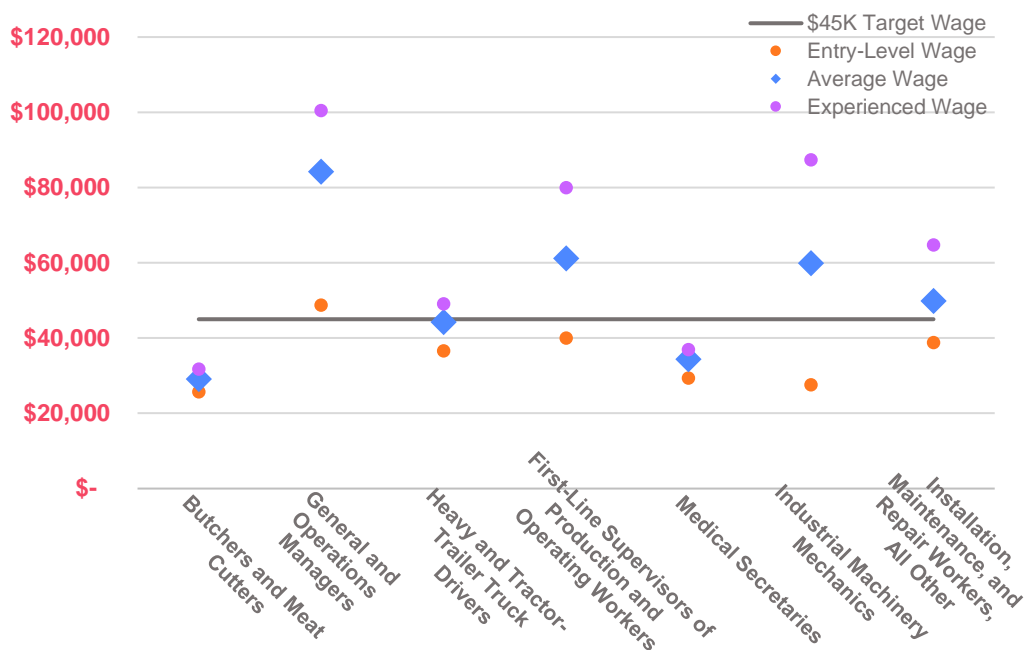
Occupation Group	Entry-Level Avg Wage	Average Wage	Experienced Avg Wage
<b>Production</b>	\$25,780	\$40,000	\$48,660
<b>Management</b>	\$53,650	\$85,270	\$99,420
<b>Installation, Maintenance, and Repair</b>	\$31,990	\$46,710	\$54,840

Occupation Group	Entry-Level Avg Wage	Average Wage	Experienced Avg Wage
Transportation and Material Moving	\$26,180	\$37,340	\$39,630

Source: VIDOL

More granular occupations that staff the sector were analyzed as well, and a similar trend as in the larger occupation groups is here as well. Management roles garner the highest wages, followed by high-skill roles in production, especially Supervisors and Installation, Maintenance, & Repair (Figure 22). Other occupations, such as Butchers & Cutters and Medical Secretaries do not reach the target wage levels of \$45,000.

Figure 22: Manufacturing Occupations Wages



Source: VIDOL

## Demand & Pipeline

To satisfy the occupational needs of the sector, workforce training institutions need to be aware of the skills required for the occupations staffing the sector. Job postings data of the United States from January 2022 to September 2023 were used to find what skills employers are requiring in these occupations. The table below lists the top five common, specialized, and software skills required by job postings for each key occupation.

Table 11: Top Skills of Manufacturing Occupations

Occupation	Common Skills	Specialized Skills	Software Skills
<b>Bakers</b>	<ul style="list-style-type: none"> <li>Customer Service</li> <li>Sanitation</li> <li>Communications</li> </ul>	<ul style="list-style-type: none"> <li>Baking</li> <li>Food Safety and Sanitation</li> </ul>	<ul style="list-style-type: none"> <li>Inventory Management System</li> <li>Microsoft Office</li> </ul>



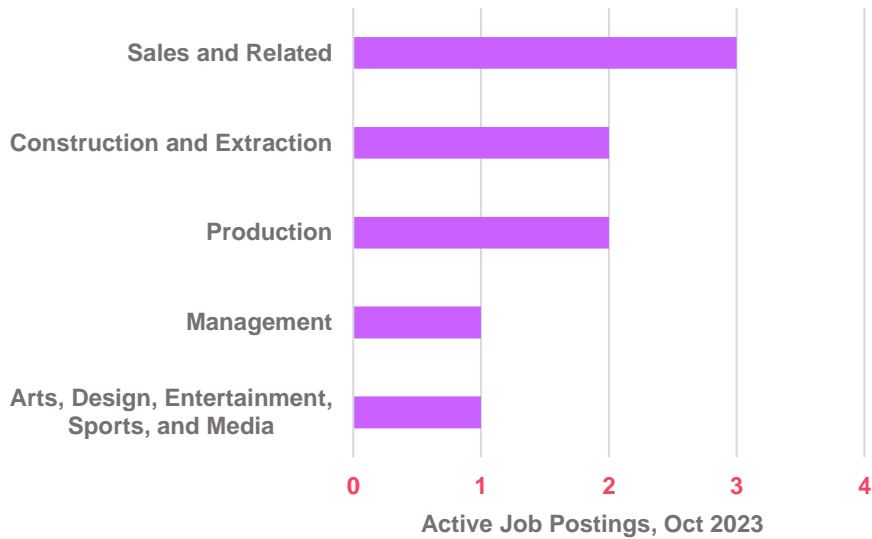
Occupation	Common Skills	Specialized Skills	Software Skills
<b>First-Line Supervisors of Production and Operating Workers</b>	<ul style="list-style-type: none"> <li>Sales</li> <li>Cleanliness</li> <li>Communications</li> <li>Leadership</li> <li>Operations</li> <li>Management</li> <li>Problem Solving</li> </ul>	<ul style="list-style-type: none"> <li>Cake Decorating</li> <li>Merchandising</li> <li>Restaurant Operation</li> <li>Lean Manufacturing</li> <li>Continuous Improvement Process</li> <li>Housekeeping</li> <li>Good Manufacturing Practices</li> <li>Auditing</li> </ul>	<ul style="list-style-type: none"> <li>Markdown</li> <li>Squeegee</li> <li>Web Browsers</li> <li>Microsoft Office</li> <li>SAP Applications</li> <li>Spreadsheets</li> <li>Operating Systems</li> <li>Operational Databases</li> </ul>
<b>Heavy and Tractor-Trailer Truck Drivers</b>	<ul style="list-style-type: none"> <li>Good Driving Record</li> <li>Loading And Unloading</li> <li>Customer Service</li> <li>Communications</li> <li>Lifting Ability</li> </ul>	<ul style="list-style-type: none"> <li>Truck Driving</li> <li>Pre-Trip and Post-Trip Vehicle Inspections</li> <li>Warehousing</li> <li>Flatbed Truck Operation</li> <li>Forklift Truck</li> </ul>	<ul style="list-style-type: none"> <li>SAP Applications</li> <li>Software Systems</li> <li>Microsoft Office</li> <li>Electronic Logbook</li> <li>Epic EMR</li> </ul>
<b>Food Processing Workers</b>	<ul style="list-style-type: none"> <li>Customer Service</li> <li>Sanitation</li> <li>Communications</li> <li>Sales</li> <li>Packaging And Labeling</li> </ul>	<ul style="list-style-type: none"> <li>Food Safety and Sanitation</li> <li>Baking</li> <li>Merchandising</li> <li>Cake Decorating</li> <li>Restaurant Operation</li> </ul>	<ul style="list-style-type: none"> <li>Inventory Management System</li> <li>Microsoft Office</li> <li>Markdown</li> <li>Web Browsers</li> <li>Squeegee</li> </ul>
<b>Other Installation, Maintenance, and Repair Occupations</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Troubleshooting (Problem Solving)</li> <li>Customer Service</li> <li>Management</li> <li>Lifting Ability</li> </ul>	<ul style="list-style-type: none"> <li>HVAC</li> <li>Plumbing</li> <li>Carpentry</li> <li>Painting</li> <li>Preventive Maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Inventory Control Systems</li> <li>Operating Systems</li> <li>SAP Applications</li> <li>Spreadsheets</li> </ul>
<b>Supervisors of Production Workers</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Leadership</li> <li>Operations</li> <li>Management</li> <li>Problem Solving</li> </ul>	<ul style="list-style-type: none"> <li>Lean Manufacturing</li> <li>Continuous Improvement Process</li> <li>Housekeeping</li> <li>Good Manufacturing Practices</li> <li>Auditing</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>SAP Applications</li> <li>Spreadsheets</li> <li>Operating Systems</li> <li>Operational Databases</li> </ul>
<b>Top Executives</b>	<ul style="list-style-type: none"> <li>Operations</li> <li>Management</li> <li>Communications</li> <li>Leadership</li> <li>Customer Service</li> </ul>	<ul style="list-style-type: none"> <li>Operations Management</li> <li>Project Management</li> <li>Marketing</li> <li>Finance</li> <li>Auditing</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Dashboard</li> <li>Salesforce</li> <li>Spreadsheets</li> <li>SQL (Programming Language)</li> </ul>

Source: Lightcast

Active job posting demand adds context to the staffing patterns of a sector. Not all occupations in a sector experience the same level of demand due to factors such as skills gap, wages, and turnover rate. To provide a snapshot of the occupations currently in greatest demand, the active job postings of the sector on the

Virgin Islands are shown below in Figure 23. Job postings data in October has a small sample size, but Sales, Construction, and Production led openings available.

*Figure 23: Active Manufacturing Job Postings*



Source: VIDOL

The ratio of job candidates to job postings provides a supply-demand perspective on the hiring market. In the Manufacturing sector, ratios across openings are lower than previous occupations, but there are candidates available to fill job current job postings demand. Table 12 below provides a snapshot in October 2023 of the job postings for key occupations in the sector and the candidates available that would qualify to fill those roles.

*Table 12: Manufacturing Occupational Job Posting Demand and Candidate Supply*

Occupation	Job Postings	Candidates Available	Candidate/Job Ratio
Heavy and Tractor-Trailer Truck Drivers	3	17	5.7
Bakers	1	3	3.0
Other Installation, Maintenance, and Repair	1	3	3.0
First-Line Supervisors of Production and Operating Workers	3	6	2.0
Chief Executives	3	5	1.7
Food Processing Workers	0	0	N/A

Source: VIDOL

A reliable source of graduates and trainees to fill occupations in the sector are vital to its continued growth, yet there are few programs available in the territory that develop Manufacturing talent. As it stands, if the refinery were to reopen, the current available programming would be insufficient:

- Carpentry (STT) - VI Department of Education
- Diploma in Workplace Safety and Health Online – ALISON
- Electrical Technician (STT) - VI Department of Education
- Construction Management (AAS, Certificate) - UVI



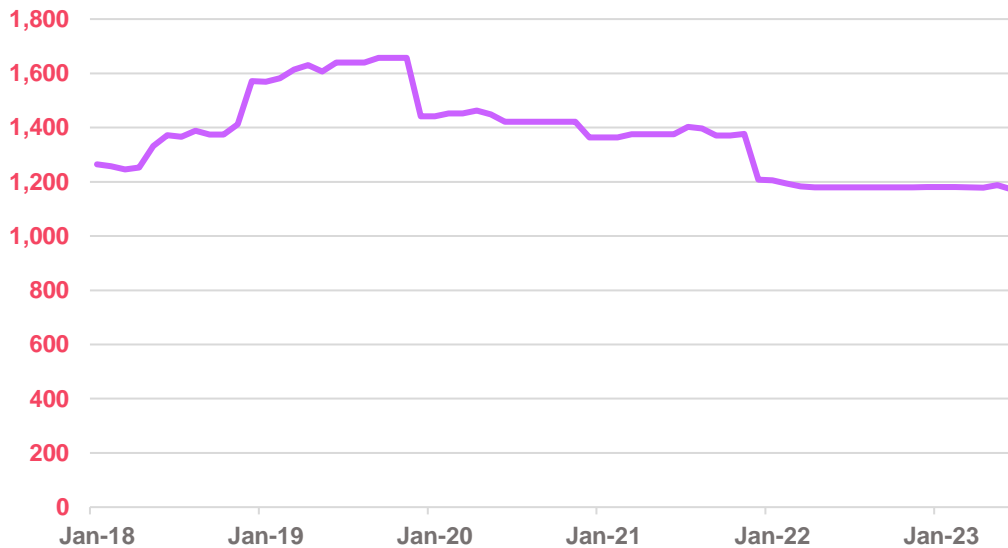
Source: VIWDB Website

# Professional & Technical Services

## Employment

Professional, Scientific, & Technical services declined by a worrying amount between 2012 and 2017, before beginning a brief rally into 2019.<sup>29</sup> Professional Services employment peaked in late 2019 and has slowly declined since (Figure 24). Reversing this trend of employment in the region should be a priority to support the Virgin Islands declared target sectors, including R&D and renewable energy, given its high wage profile. Employment is not particularly concentrated in either St. Croix or St. Thomas (Table 13).

*Figure 24: Professional & Technical Services Employment, 2018-2023*



Source: VIDOL

*Table 13: Professional & Technical Services Employment and LQ by Island*

	Employment	LQ
<b>Virgin Islands</b>	1,147	N/A
<b>St. Croix</b>	499	1.05
<b>St. Thomas</b>	610	1.00

<sup>29</sup> US Virgin Islands Vision 2040 Strategic Plan



	Employment	LQ
St. John	37	0.61

Source: VIDOL

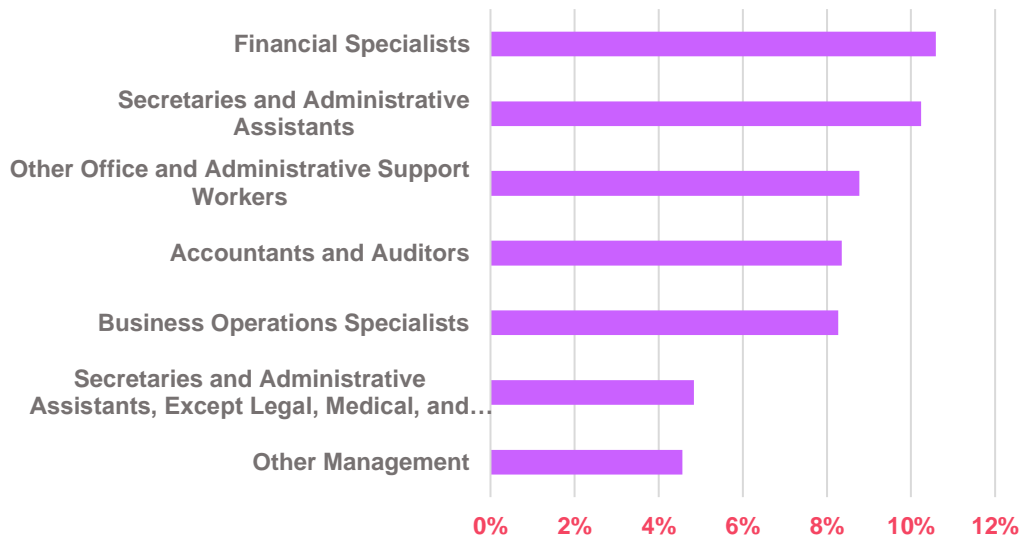
Across the territory, the breakdown of subsector employment is primarily in Management & Technical Consulting Services (32%), Offices of Lawyers (23%), Accounting & Bookkeeping Services (16%), Insurance Agencies & Brokerages (14%), Financial Investment Activities (10%), and Computer Systems Design & Related Services (5%).<sup>30</sup> The top hiring employers represent consulting, management, marketing and technology services:

**Top 5 hiring employers (as of October 2023):**

- Cane Bay Partners VI
- Plessen Management Services
- GGM Group
- SL Technology & Consulting
- Tysam Tech

The sector is primarily staffed by Financial Specialists, followed by Office Administrative Assistants and Support Workers, Accountants, and Operations occupations (Figure 25). Other top occupations include Secretaries and Other Management. Typically, the Financial Specialists, Accountants and Auditors, and Management require post-secondary education, while administrative roles may require a post-secondary education, or sometimes a high school diploma.

*Figure 25: Professional Services Staffing Patterns*

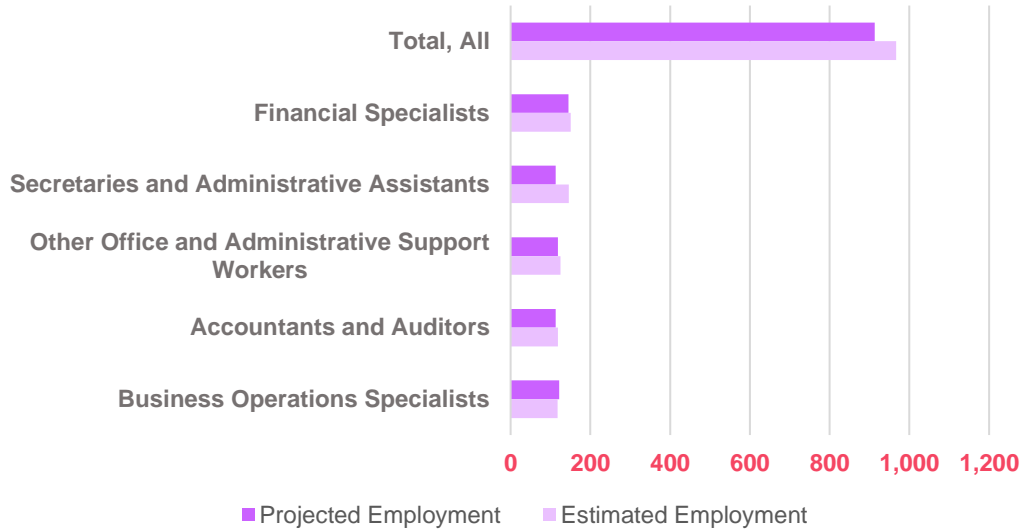


Source: VIDOL

<sup>30</sup> US Virgin Islands Vision 2040 Strategic Plan

Employment in the sector is projected to decrease by 2030 compared to 2020. Aside from Business Operations Specialists, this loss in employment is projected across all key occupations staffing the sector (Figure 26).

Figure 26: Professional Services Projected Growth, 2020-2030



Source: VIDOL

## Wages

Wage potential of occupation groups that comprise the sector at a macro level were analyzed for each group. Broken down to three levels: entry-level, average, and experienced wages to understand the starting and potential earnings of the groups. Each occupation groups' wages represent earnings across all sectors and are not limited to occupations solely staffing the Professional Services sector.

Of these occupation groups, Management, Business & Financial Operations, and Architecture & Engineering occupations provide the best wages, with an average above the \$45,000 target line (Table 14). As for Office & Administrative Support and Sales & related occupations, only experienced Office Administrative occupations managed to clear the threshold, and overall wages are significantly lower than the other occupation groups in the sector. These occupations typically also require lower educational attainment or less experience and achievement.

Table 14: Professional Services Wage Breakdown by Occupation Group

Occupation Group	Entry-Level Avg Wage	Average Wage	Experienced Avg Wage
Architecture and Engineering	\$49,980	\$75,440	\$84,640
Business & Financial Operations	\$40,020	\$60,380	\$72,330
Management	\$53,650	\$85,270	\$99,420

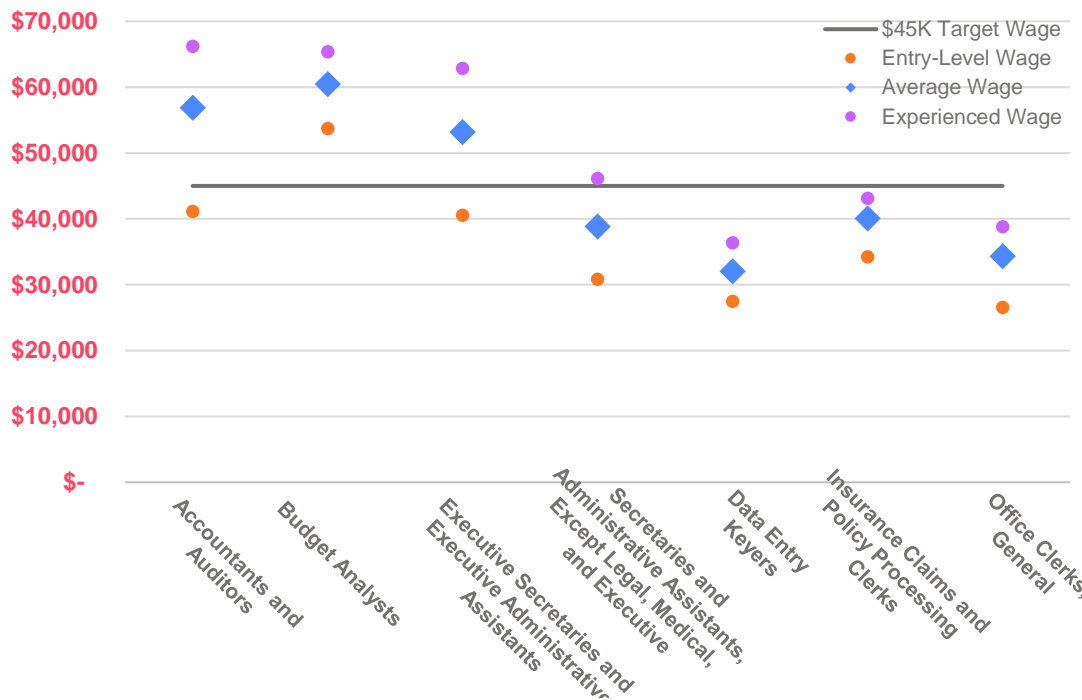


Occupation Group	Entry-Level Avg Wage	Average Wage	Experienced Avg Wage
Office and Administrative Support	\$29,310	\$41,010	\$47,850

Source: VIDOL

More granular occupations that staff the sector were analyzed as well, and a similar trend as in the larger occupation groups is here. Management and analytical roles garner the highest wages as well as being above the target wage line (Figure 27). Meanwhile, customer facing, data entry, and office administration roles did not clear the desired wage threshold.

Figure 27: Professional Services Occupations Wages



Source: VIDOL

## Demand & Pipeline

To satisfy the occupational needs of the sector, workforce training institutions need to be aware of the skills required for the occupations staffing the sector. Job postings data of the United States from January 2022 to September 2023 were used to find what skills employers are requiring in these occupations. Table 15 below lists the top five common, specialized, and software skills required by job postings for each key occupation.

Table 15: Top Skills of Professional Services Occupations

Occupation	Common Skills	Specialized Skills	Software Skills
<b>Business Operations Specialists</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Management</li> <li>Customer Service</li> <li>Detail Oriented</li> </ul>	<ul style="list-style-type: none"> <li>Project Management</li> <li>Marketing</li> <li>Auditing</li> <li>Finance</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Human Resources Information System (HRIS)</li> </ul>

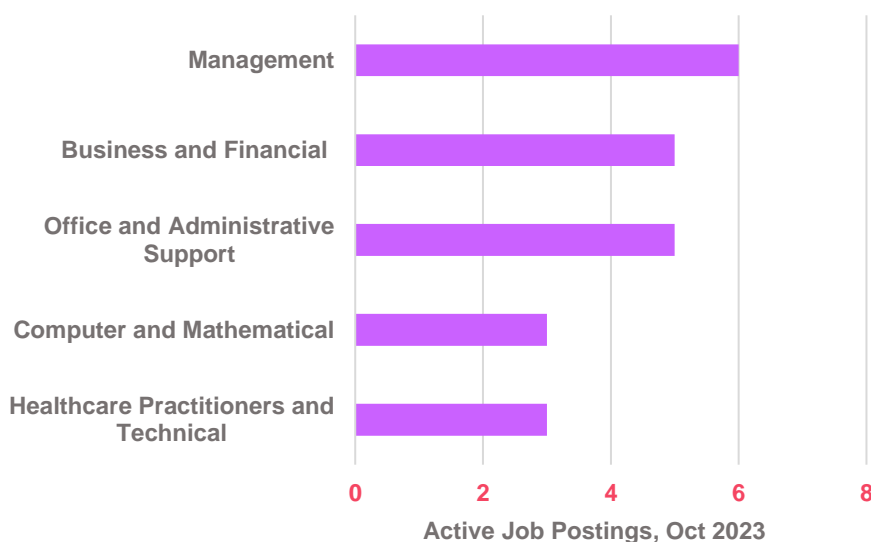


Occupation	Common Skills	Specialized Skills	Software Skills
	<ul style="list-style-type: none"> <li>Leadership</li> </ul>	<ul style="list-style-type: none"> <li>Data Analysis</li> </ul>	<ul style="list-style-type: none"> <li>Applicant Tracking Systems</li> <li>SQL (Programming Language)</li> <li>SAP Applications</li> </ul>
<b>Financial Specialists</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Management</li> <li>Microsoft Excel</li> <li>Detail Oriented</li> <li>Operations</li> </ul>	<ul style="list-style-type: none"> <li>Accounting</li> <li>Finance</li> <li>Auditing</li> <li>Financial Statements</li> <li>Financial Analysis</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Spreadsheets</li> <li>SAP Applications</li> <li>Accounting Software</li> <li>SQL (Programming Language)</li> </ul>
<b>Other Management Occupations</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Management</li> <li>Leadership</li> <li>Operations</li> <li>Customer Service</li> </ul>	<ul style="list-style-type: none"> <li>Project Management</li> <li>Marketing</li> <li>Restaurant Operation</li> <li>Auditing</li> <li>Nursing</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Spreadsheets</li> <li>Microsoft Access</li> <li>Salesforce</li> <li>Microsoft Project</li> </ul>
<b>Other Office and Administrative Support Workers</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Customer Service</li> <li>Detail Oriented</li> <li>Clerical Works</li> <li>Microsoft Office</li> </ul>	<ul style="list-style-type: none"> <li>Data Entry</li> <li>Office Equipment</li> <li>Administrative Support</li> <li>Invoicing</li> <li>Accounting</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Spreadsheets</li> <li>QuickBooks (Accounting Software)</li> <li>Microsoft Access</li> <li>Database Systems</li> </ul>
<b>Secretaries and Administrative Assistants</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Customer Service</li> <li>Detail Oriented</li> <li>Scheduling</li> <li>Clerical Works</li> </ul>	<ul style="list-style-type: none"> <li>Administrative Support</li> <li>Data Entry</li> <li>Office Equipment</li> <li>Invoicing</li> <li>Office Supply Management</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Spreadsheets</li> <li>Microsoft Access</li> <li>Microsoft Share-Point</li> <li>Google Workspace</li> </ul>
<b>Accountants and Auditors</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Management</li> <li>Microsoft Excel</li> <li>Detail Oriented</li> <li>Operations</li> </ul>	<ul style="list-style-type: none"> <li>Accounting</li> <li>Auditing</li> <li>Finance</li> <li>Financial Statements</li> <li>Generally Accepted Accounting Principles</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Accounting Software</li> <li>Spreadsheets</li> <li>QuickBooks (Accounting Software)</li> <li>SAP Applications</li> </ul>
<b>Secretaries and Administrative Assistants, Except Legal, Medical, and Executive</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Customer Service</li> <li>Microsoft Excel</li> <li>Detail Oriented</li> <li>Clerical Works</li> </ul>	<ul style="list-style-type: none"> <li>Administrative Support</li> <li>Data Entry</li> <li>Invoicing</li> <li>Office Supply Management</li> <li>Office Equipment</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Spreadsheets</li> <li>Microsoft Access</li> <li>QuickBooks (Accounting Software)</li> <li>Microsoft Share-Point</li> </ul>

Source: Lightcast

Active job posting demand adds context to the staffing patterns of a sector. Not all occupations in a sector experience the same level of demand due to factors such as skills gap, wages, and turnover rate. To provide a snapshot of the occupations currently in greatest demand, the active job postings of the sector on the Virgin Islands are shown below in the table. Management occupations, followed by business and financial operations and office and administrative support occupations are currently in highest demand. The job openings on the Virgin Islands data and job boards sites should be monitored to determine if this trend continues, as well as communicate with employers to confirm these trends.

*Figure 28: Active Professional Services Job Postings*



Source: VIDOL

The ratio of job candidates to job postings provides a supply to demand perspective on the hiring market. In the Professional Services sector, Office and Administrative Support occupations currently have high job posting demand, but also have many more candidates available (Table 16). The candidate to job ratio takes both into context, showing that the need for high posting jobs is not as the raw job postings counts would indicate. On the contrary, postings are highest for Management occupations, and while candidates still outnumber them, the candidate to job ratio is much lower than in other occupations

*Table 16: Professional Services Occupational Job Posting Demand and Candidate Supply*

Occupation	Job Postings	Candidates Available	Candidate/Job Ratio
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	3	41	13.7
Office and Administrative Support Occupations	79	410	5.2
Executive Secretaries and Executives Administrative Assistants	12	36	3.0



Occupation	Job Postings	Candidates Available	Candidate/Job Ratio
<b>Management Occupations</b>	85	160	1.9
<b>Business and Financial Operations</b>	36	64	1.8
<b>Accountants and Auditors</b>	13	15	1.2

Source: VIDOL

A reliable source of graduates and trainees to fill occupations in the sector are vital to the continued growth of Professional Services. Below is a list of related educational and related programs that are available in the territory. UVI, MedCerts, and ALISON are the largest providers of related education and training:

- Accounting (Concentration, BA, BBA, MACC or Online) - UVI
- Applied Computer Science Technology (AAS) - UVI
- Applied Computer Science Technology (Certificate) - UVI
- Applied Mathematics (BS) - UVI
- Business Administration (BA, MBA, EMBA or Online) - UVI
- Computational Sciences (Minor) - UVI
- Computer Science (AS, BS) - UVI
- Creative Educational Leadership for Change (Certificate) - UVI
- Creative Leadership for Innovation and Change (PhD) - UVI
- Creative Writing (Concentration) - UVI
- Cybersecurity (Concentration) - UVI
- Data Science (Certificate Minor) - UVI
- Diploma in Legal Studies Online - ALISON
- Diploma in Project Management Online - ALISON
- Diploma in Teaching Skills for Educators Online - ALISON
- Entrepreneurship (Certificate Minor) - UVI
- Environmental Science (Minor) - UVI
- Finance (Concentration) - UVI
- Fundamentals of IT or Online - MedCerts
- Fundamentals of Corporate Management Online - ALISON
- Fundamentals of Human Resources Online - ALISON
- Information Systems and Technology (BBA) - UVI
- Introduction to Digital Photography Online - ALISON
- IT Helpdesk Administrator or Online - MedCerts
- IT Security & Network Technician or Online - MedCerts
- IT Support Professional or Online - MedCerts
- Management (BBA) or Online - UVI
- Marketing (Concentration, BBA) - UVI
- Microsoft Office Specialist (also Online) - MedCerts
- PC Technician or Online - MedCerts
- Project Management Essentials (CAPM or Online) - MedCerts



- SHRM-CP/SHRM-SCP Certification Exam Preparation Course - The Leader's Branch
- Sustainability Professional - UVI Cell
- Workforce Development Training (STX) - Abdul R. Ali Consulting Services





# Tourism

In the wake of the 2017 hurricanes, the USVI experienced a drastic decline in the number of visitors, dealing a significant blow to its Tourism sector.<sup>31</sup> However, challenges emerged on the path to revitalizing tourism. VIEDA's stringent requirements for incentives are cited as a hindrance, prompting a call for greater flexibility. Regulatory processes and permitting have been identified as burdensome, adding layers of complexity to industry operations. Additionally, the quest for qualified talent became a challenge, impacting the sector's ability to meet its workforce demands. The constraint of workforce housing, particularly during peak seasons, added another layer of complexity to the overarching goal of rejuvenating the tourism industry in the USVI.<sup>32</sup> Despite the hurdles, there is a collective recognition of the need for strategic measures to enhance and revitalize the tourism landscape, ensuring its resilience against future challenges.

## Employment

Most visitors arrive via cruise ships rather than air travel. The overreliance on cruise-ship tourism through day visitors contributes less economically compared to those opting for extended stays.<sup>33</sup> Recognizing this, an increase in tourism through flights would be more impactful and capable of generating additional jobs, especially in the Accommodation subsector.

Tourism employment dipped between late 2018, was recovering until the COVID-19 pandemic hit, where another dip occurred. As the pandemic ended, Tourism employment returned to 2018 levels (Figure 29). While Tourism is a major employment supplier in the region, it is susceptible to outside factors such as natural disasters and global pandemics. Tourism employment is most heavily concentrated in St. John, while the largest amount of jobs can be found on St. Thomas (Table 17).

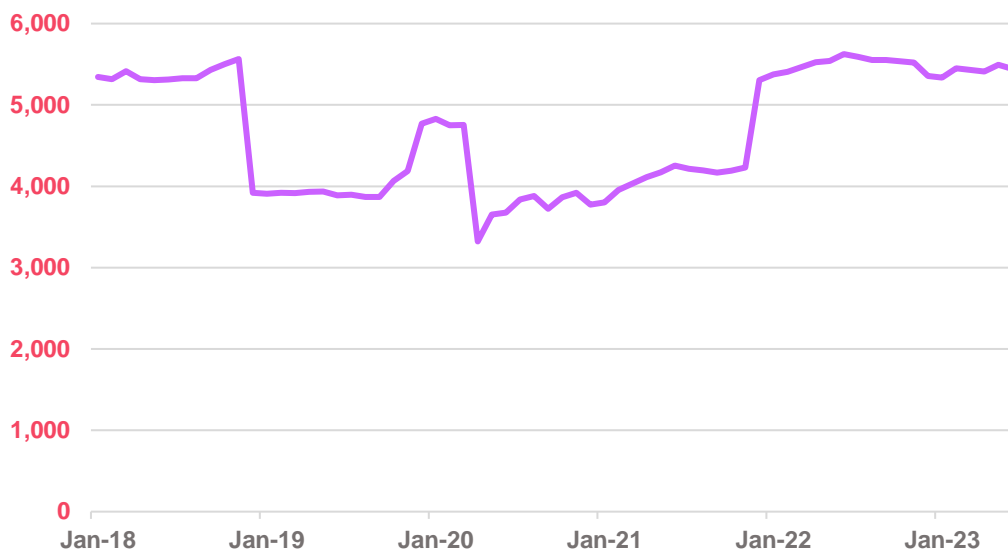
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<sup>31</sup> US Virgin Islands Vision 2040 Strategic Plan

<sup>32</sup> RAND Corporation, "Recovery in the U.S. Virgin Islands: Progress, Challenges, and Options for the Future", 2020

<sup>33</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

Figure 29: Tourism Employment, 2018-2023



Source: VIDOL

Table 17: Tourism Employment and LQ by Island

	Employment	LQ
Virgin Islands	5,253	N/A
St. Croix	1,653	0.76
St. Thomas	2,870	1.02
St. John	730	2.62

Source: VIDOL

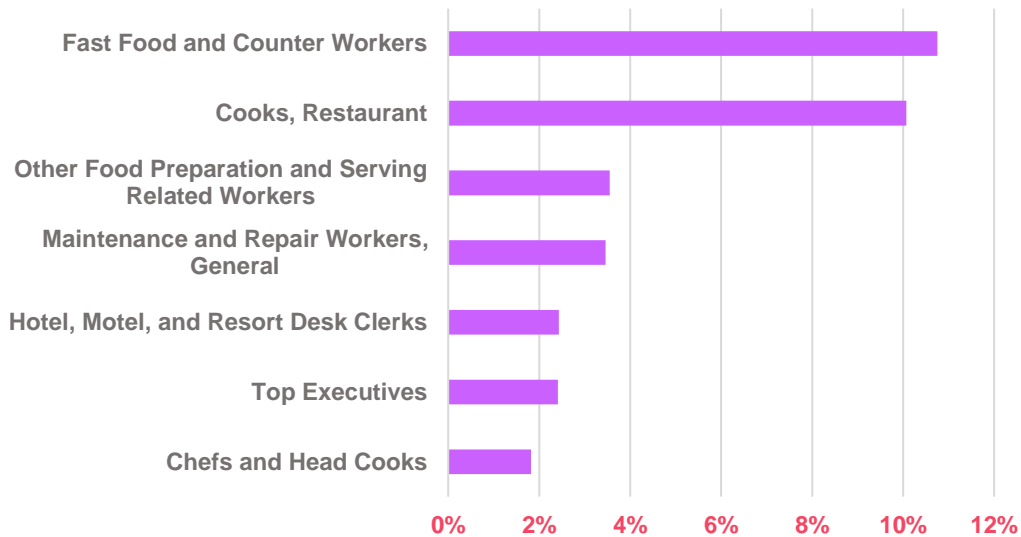
The top employers in the Tourism sector can be found below.

**Top 5 hiring employers (as of October 2023):**

- Aimbridge Hospitality
- Caribbean USVI Hotel Services
- Neighborhood Establishment
- Harborside Corp dba Bolongo Bay Beach Resort
- Marriott International

The sector is primarily staffed by Cooks and Food Preparation Workers in various restaurants, representing nearly 37% of employment in the sector (Figure 30). Other occupations in the sector include Maintenance, Clerks, and Executives. Aside from Executives, these occupations require little-to-no educational attainment, with some requiring training or certification.

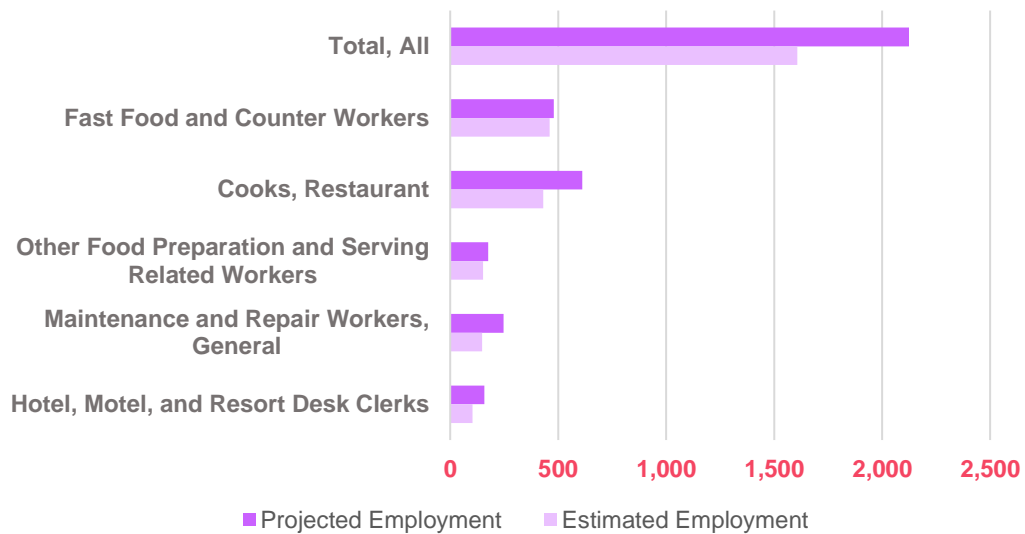
Figure 30: Tourism Staffing Patterns



Source: VIDOL

Employment in the sector is projected to increase significantly by 2030 (Figure 31). Projected growth is spread across all key occupations. This projected employment assumes Tourism will return to normal as the recovery effort winds down.

Figure 31: Tourism Projected Growth, 2020-2030



Source: VIDOL

## Wages

Wage potential of occupation groups that comprise the sector at a macro level were analyzed for each group. Broken down to three levels: entry-level, average, and experienced wages to understand the starting and potential earnings of the groups. Each occupation groups' wages represent earnings across all sectors and are not limited to occupations solely staffing the Tourism sector.

Of these occupation groups, Management and Installation, Maintenance & Repair occupations provide the best wages, with an average above the \$45,000 target line. As for Office & Administrative Support, only experienced occupations managed to clear the threshold. Food Preparation & Serving occupations did not make the threshold in any category (Table 18).

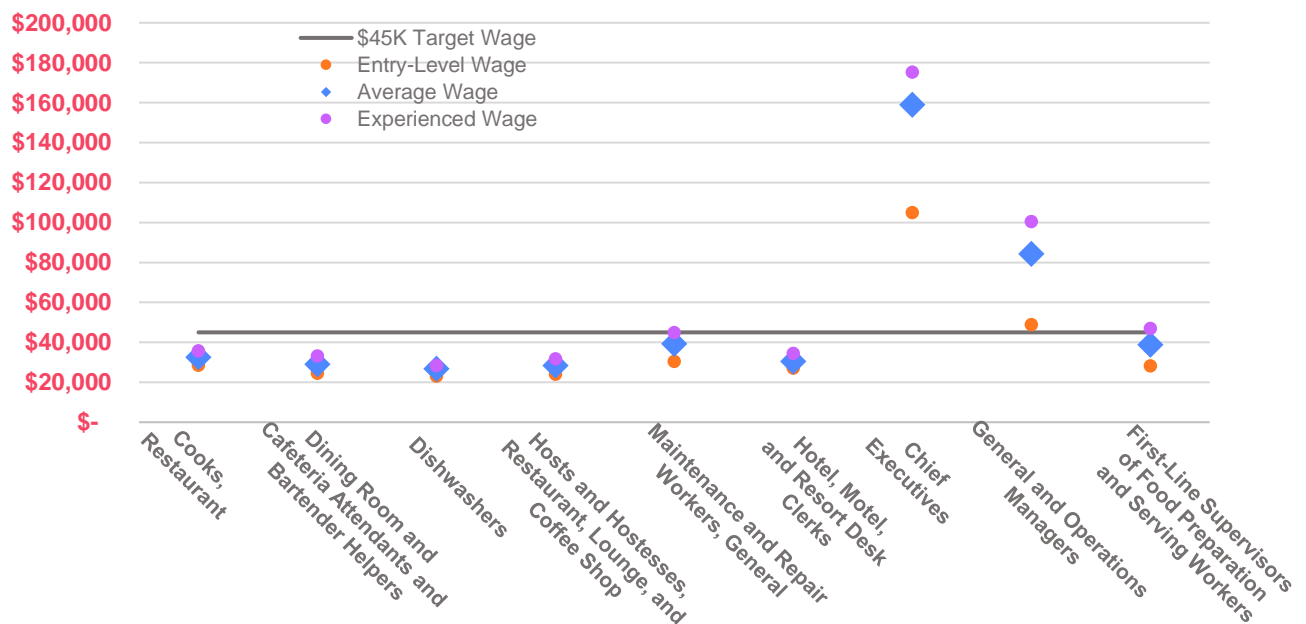
*Table 18: Tourism Wage Breakdown by Occupation Group*

Occupation Group	Entry-Level Avg Wage	Average Wage	Experienced Avg Wage
Food Preparation and Serving Related	\$24,170	\$34,180	\$36,390
Installation, Maintenance, and Repair	\$31,990	\$46,710	\$54,840
Management	\$53,650	\$85,270	\$99,420
Office and Administrative Support	\$29,310	\$41,010	\$47,850

Source: VIDOL

More granular occupations that staff the sector were analyzed as well, and a similar trend as in the larger occupation groups is here as well. Management roles garner the highest wages, while customer-facing and lower education requirement roles did not clear the desired wage threshold. Cooks, Bartenders, Dishwashers, Hosts and Clerks wages are below the targeted threshold, and have little variance between an entry level and an experienced worker (Figure 32).

*Figure 32: Tourism Occupations Wages*



Source: VIDOL

# Demand & Pipeline

To satisfy the occupational needs of the sector, workforce training institutions need to be aware of the skills required for the occupations staffing the sector. Job postings data of the United States from January 2022 to September 2023 were used to find what skills employers are requiring in these occupations. Table 19 below lists the top five common, specialized, and software skills required by job postings for each key occupation.

*Table 19: Table 15: Top Skills of Tourism Occupations*

Occupation	Common Skills	Specialized Skills	Software Skills
<b>Chefs and Head Cooks</b>	<ul style="list-style-type: none"> <li>Sanitation</li> <li>Operations</li> <li>Communications</li> <li>Management</li> <li>Customer Service</li> </ul>	<ul style="list-style-type: none"> <li>Cooking</li> <li>Restaurant Operation</li> <li>Food Preparation</li> <li>Food Safety And Sanitation</li> <li>Food Services</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Spreadsheets</li> <li>DIGITAL Command Language</li> <li>Inventory Management System</li> <li>Apple IOS</li> </ul>
<b>Cooks, Restaurant</b>	<ul style="list-style-type: none"> <li>Sanitation</li> <li>Communications</li> <li>Cleanliness</li> <li>Customer Service</li> <li>Management</li> </ul>	<ul style="list-style-type: none"> <li>Cooking</li> <li>Food Safety And Sanitation</li> <li>Food Preparation</li> <li>Restaurant Operation</li> <li>Food Services</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Software Systems</li> <li>Google Workspace</li> <li>Spreadsheets</li> <li>JavaScript (Programming Language)</li> </ul>
<b>Fast Food and Counter Workers</b>	<ul style="list-style-type: none"> <li>Customer Service</li> <li>Communications</li> <li>Sanitation</li> <li>Cleanliness</li> <li>Management</li> </ul>	<ul style="list-style-type: none"> <li>Restaurant Operation</li> <li>Food Services</li> <li>Food Safety And Sanitation</li> <li>Food Preparation</li> <li>Cash Handling</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Jersey (Java Framework)</li> <li>Protege</li> <li>Software Systems</li> <li>Spreadsheets</li> </ul>
<b>Hotel, Motel, and Resort Desk Clerks</b>	<ul style="list-style-type: none"> <li>Customer Service</li> <li>Communications</li> <li>Reservations</li> <li>Management</li> <li>Operations</li> </ul>	<ul style="list-style-type: none"> <li>Auditing</li> <li>Customer Complaint Resolution</li> <li>Front Office</li> <li>Housekeeping</li> <li>Cash Handling</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Property Management Systems</li> <li>Spreadsheets</li> <li>Operating Systems</li> <li>Software Systems</li> </ul>
<b>Maintenance and Repair Workers, General</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Customer Service</li> <li>Troubleshooting (Problem Solving)</li> <li>Management</li> <li>Lifting Ability</li> </ul>	<ul style="list-style-type: none"> <li>Plumbing</li> <li>HVAC</li> <li>Painting</li> <li>Carpentry</li> <li>Preventive Maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Inventory Control Systems</li> <li>Operating Systems</li> <li>Spreadsheets</li> <li>SAP Applications</li> </ul>
<b>Other Food Preparation and Serving Related Workers</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Cleanliness</li> <li>Customer Service</li> <li>Sanitation</li> <li>Management</li> </ul>	<ul style="list-style-type: none"> <li>Restaurant Operation</li> <li>Mopping</li> <li>Food Safety And Sanitation</li> <li>Seating Guests</li> <li>Food Preparation</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Software Systems</li> <li>Microsoft Office Project (MOPS)</li> <li>Operating Systems</li> <li>Adobe Audition</li> </ul>

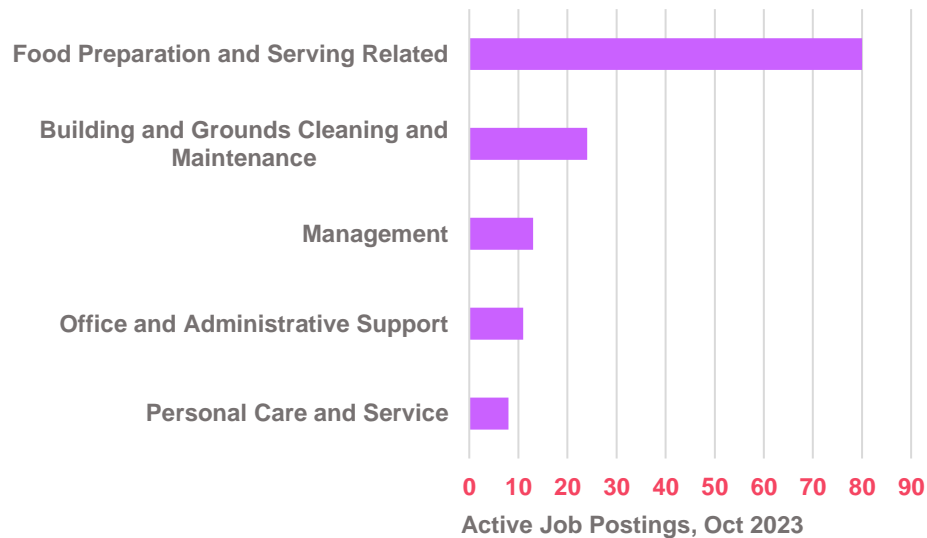


Occupation	Common Skills	Specialized Skills	Software Skills
<b>Top Executives</b>	<ul style="list-style-type: none"> <li>• Operations</li> <li>• Management</li> <li>• Communications</li> <li>• Leadership</li> <li>• Customer Service</li> </ul>	<ul style="list-style-type: none"> <li>• Operations Management</li> <li>• Project Management</li> <li>• Marketing</li> <li>• Finance</li> <li>• Auditing</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Dashboard</li> <li>• Salesforce</li> <li>• Spreadsheets</li> <li>• SQL (Programming Language)</li> </ul>

Source: Lightcast

Active job posting demand adds context to the staffing patterns of a sector. Not all occupations in a sector experience the same level of demand due to factors such as skills gap, wages, and turnover rate. To provide a snapshot of the occupations currently in greatest demand, the active job postings of the sector on the Islands are shown below in the table. Food preparation & Serving, followed by Buildings & Grounds Maintenance jobs are currently in highest demand.

*Figure 33: Active Tourism Job Postings*



Source: VIDOL

The ratio of job candidates to job postings provides a supply-demand perspective on the hiring market. In the Tourism sector, there were more job openings for Cooks than there are candidates available, forcing the ratio below one, indicating a bottleneck of candidates available for these positions. Table 20 below provides a snapshot in October 2023 of the job postings for key occupations in the sector and the candidates available that would qualify to fill those roles.

*Table 20: Tourism Occupational Job Posting Demand and Candidate Supply*

Occupation	Job Postings	Candidates Available	Candidate/Job Ratio
<b>Hotel, Motel, and Resort Desk Clerks</b>	6	18	3.0

<b>Maintenance and Repair Workers, General</b>	9	18	2.0
<b>Chief Executives</b>	3	5	1.7
<b>Chefs and Head Cooks</b>	8	10	1.3
<b>Cooks, Restaurant</b>	17	11	0.6
<b>Fast Food and Counter Workers</b>	0	6	N/A
<b>Other Food Preparation and Serving Related Workers</b>	0	1	N/A

Source: VIDOL

A reliable source of graduates and trainees to fill occupations in the sector are vital to the continued growth of Tourism. Below is a list of related educational and related programs that are available on the Virgin Islands. Given the size of the Tourism sector share of employment in USVI, the number of programs is worryingly low and may serve as a constraint on producing skilled talent and career pathways.

- TAP Culinary and Hospitality Education and Training Program (STT) - The Turn Around Place
- Culinary Arts (STT) - VI Department of Education
- Hospitality & Tourism Management Program (BBA) - UVI



Source: Visit USVI Website



# Energy & Utilities

## Previous work done by USVI Workforce Assessment

Energy in the USVI is prohibitively expensive. Residential and commercial rates are significantly higher than the most expensive state (Hawaii) and up to four times the US average. These rates are also substantially more expensive than other island competitors.<sup>34</sup> While poor infrastructure is one reason for the cost, “when comparing energy rates across the Caribbean, electricity in the USVI remains the highest. A primary driver of high electricity rates is the over-reliance on the import of fossil fuels such as fuel oil and propane gas on which the power generation stations rely.”<sup>35</sup>

In response to recent events and damage done to energy infrastructure due to natural disasters as well as the cost of oil fuels, the Virgin Islands are rebuilding their electric grid, this time with renewable energy sources as a stated goal. The region’s goal is to achieve an energy output comprised of 75% renewable energy on the Islands. To date, solar energy has been the primary method towards reaching that goal, including a 448 kW PV solar panel field on the grounds of the airport in St. Thomas.

Solar energy has been the Islands’ primary stated goal and source of renewable energy, directing the previous study to focus on that sector and its staffing needs. In analysis of sector growth outlook, three key challenges were identified:

- Low wages and high cost of living combine to make it difficult to keep energy sector employees. In a recent green energy project, a third party outside the region was brought in, and after training local workforce, took many of those trained workers away with them back to the United States for higher paying wages.
- Many trade schools were closed after 2017, providing fewer avenues available to train a workforce pipeline to build and maintain green energy projects.
- Poor infrastructure due to hurricanes Irma and Maria has resulted in time and resources being used not only to develop green energy projects, but also to fix key basic infrastructure in the region.

Previous work and reporting focused on the following solar project occupations:

- General and Operations Managers
- Logisticians
- Market Research Analysts
- Web Developers and GUI Designers
- Wind Turbine Service Technicians
- Solar Photovoltaic Installers

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<sup>34</sup> US Virgin Islands Vision 2040 Strategic Plan

<sup>35</sup> J&M Global Solutions, “USVI Workforce Assessment and Laborshed Study”, 2022

To satisfy the occupational needs of the sector, workforce training institutions need to be aware of the skills required for the occupations staffing the sector. Job postings data of the United States from January 2022 to September 2023 were used to find what skills employers are requiring in these occupations. The table below lists the top five common, specialized, and software skills required by job postings for each key occupation.

*Table 21: Top Skills & Certifications for Green Energy Occupations*

Occupation Name	Certifications	Common Skills	Specialized Skills
<b>General and Operations Managers</b>	10-Hour OSHA General Industry Card	Operations	Operations
	NABCEP Certified Energy Practitioner	Leadership	Leadership
	Master Of Business Administration (MBA)	Management	Management
	Project Management Professional Certification	Communications	Communications
	Certified Public Accountant	Customer Service	Customer Service
<b>Market Research Analysts and Marketing Specialists</b>	<i>Insufficient Data</i>	Sales	Marketing
		Communications	Project Management
		Detail Oriented	Salesforce
		Microsoft Excel	Key Performance Indicators (KPIs)
		Customer Service	Data Analysis
<b>Solar Photovoltaic Installers</b>	30-Hour OSHA General Industry Card	Customer Service	Roofing
	10-Hour OSHA General Industry Card	Lifting Ability	Solar Systems
	NABCEP Certified Energy Practitioner	Communications	Solar Energy Systems Installation
	OSHA Certification	Good Driving Record	Electrical Equipment
	DOT Certification	Detail Oriented	Construction
<b>Wind Turbine Service Technicians</b>	Commercial Driver's License (CDL)	Troubleshooting	Electrical Equipment
		Detail Oriented	Schematic Diagrams
		Microsoft Office	Wind Turbines
		Good Driving Record	Turbines
		Operations	Calibration
<b>Logisticians</b>	<i>Insufficient Data</i>	Operations	Supply Chain
		Communications	Purchasing
		Microsoft Excel	Key Performance Indicators
		Management	Procurement
		Planning	Warehousing
<b>Web Developers</b>	<i>Insufficient Data</i>	Communications	Cascading Style Sheets
		Safety Assurance	User Experience
		Leadership	HyperText Markup Language
		Innovation	Business Requirements
		Creativity	Agile Methodology

Source: Lightcast

## Employment

Across the United States, green energy generation and energy distribution is a rapidly growing and high-paying sector. Growth is highest in wind and solar energy generation; solar energy alone has grown over 200% over the past five years. In other forms of green energy, hydroelectric and geothermal power generation posted strong growth numbers as well and are projected to continue in the next five years.

*Table 22: Green Energy Generation & Energy Distribution Job Growth in the US, 2017-2022*

Sector	2022 Jobs	2017 - 2022 % Change	2022 - 2027 % Change	Current Wages, Salaries, & Proprietor Earnings
Hydroelectric Power Generation	7,858	17%	6%	\$137,823
Solar Electric Power Generation	9,681	224%	37%	\$122,095
Wind Electric Power Generation	8,455	37%	32%	\$117,561
Geothermal Electric Power Generation	1,223	7%	19%	\$130,177
Electric Bulk Power Transmission and Control	25,548	(2%)	12%	\$139,880
Electric Power Distribution	218,794	4%	6%	\$120,782

Source: Lightcast

Utilities employment in USVI is concentrated primarily on St. Thomas, while employment counts on the other two islands were not available (Table 23). Top employers hiring as of October 2023 are Caribbean Cooling and Marco, St. Croix, Inc. Employment will need to increase on islands that the Virgin Islands want to generate clean energy, and partnering with existing energy and utility companies will be necessary to facilitate that growth.

*Table 23: Utilities Employment and LQ by Island*

	Employment	LQ
Virgin Islands	581	N/A
St. Croix	N/A	N/A
St. Thomas	342	1.10
St. John	N/A	N/A

Source: VIDOL

## Wages

At the macro level, the closest occupation groups in the Virgin Islands database to staff the utilities sector are Installation, Maintenance, & Repair, Management, and Office & Administrative Support occupations (Table 24). Of the three sectors, average wages in Management and Installation, reached the target threshold of \$45,000. In the United States, green energy installation and maintenance jobs pay high wages, and growth in this area will likely lead to more high-paying jobs, or the Virgin Islands will face a threat of losing talent going stateside for higher wages.

*Table 24: Utilities Wage Breakdown by Occupation Group*

Occupation Group	Entry-Level Avg Wage	Average Wage	Experienced Avg Wage
Installation, Maintenance, and Repair	\$31,990	\$46,710	\$54,840



<b>Management</b>	\$53,650	\$85,270	\$99,420
<b>Office and Administrative Support</b>	\$29,310	\$41,010	\$47,850

Source: VIDOL

## Demand & Pipeline

To satisfy the occupational needs of the sector, workforce training institutions need to be aware of the skills required for the occupations staffing the sector. Job postings data of the United States from January 2022 to September 2023 were used to find what skills employers are requiring in these occupations. The table below lists the top five common, specialized, and software skills required by job postings for each key occupation.

*Table 25: Top Skills of Utilities Occupations*

Occupation	Common Skills	Specialized Skills	Software Skills
<b>Other Office and Administrative Support Workers</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Customer Service</li> <li>Detail Oriented</li> <li>Clerical Works</li> <li>Microsoft Office</li> </ul>	<ul style="list-style-type: none"> <li>Data Entry</li> <li>Office Equipment</li> <li>Administrative Support</li> <li>Invoicing</li> <li>Accounting</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Spreadsheets</li> <li>QuickBooks (Accounting Software)</li> <li>Microsoft Access</li> <li>Database Systems</li> </ul>
<b>Plant and System Operators</b>	<ul style="list-style-type: none"> <li>Operations</li> <li>Communications</li> <li>Troubleshooting (Problem Solving)</li> <li>Management</li> <li>Lifting Ability</li> </ul>	<ul style="list-style-type: none"> <li>Wastewater</li> <li>Valves (Piping)</li> <li>Boilers</li> <li>Water Treatment</li> <li>Machinery</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Spreadsheets</li> <li>SAP Applications</li> <li>Operating Systems</li> <li>Operational Data Store</li> </ul>
<b>Secretaries and Administrative Assistants</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Customer Service</li> <li>Detail Oriented</li> <li>Scheduling</li> <li>Clerical Works</li> </ul>	<ul style="list-style-type: none"> <li>Administrative Support</li> <li>Data Entry</li> <li>Office Equipment</li> <li>Invoicing</li> <li>Office Supply Management</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>Spreadsheets</li> <li>Microsoft Access</li> <li>Microsoft Share-Point</li> <li>Google Workspace</li> </ul>
<b>Supervisors of Production Workers</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Leadership</li> <li>Operations</li> <li>Management</li> <li>Problem Solving</li> </ul>	<ul style="list-style-type: none"> <li>Lean Manufacturing</li> <li>Continuous Improvement Process</li> <li>Housekeeping</li> <li>Good Manufacturing Practices</li> <li>Auditing</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>SAP Applications</li> <li>Spreadsheets</li> <li>Operating Systems</li> <li>Operational Databases</li> </ul>
<b>First-Line Supervisors of Production and Operating Workers</b>	<ul style="list-style-type: none"> <li>Communications</li> <li>Leadership</li> <li>Operations</li> <li>Management</li> <li>Problem Solving</li> </ul>	<ul style="list-style-type: none"> <li>Lean Manufacturing</li> <li>Continuous Improvement Process</li> <li>Housekeeping</li> <li>Good Manufacturing Practices</li> <li>Auditing</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Office</li> <li>SAP Applications</li> <li>Spreadsheets</li> <li>Operating Systems</li> <li>Operational Databases</li> </ul>



Occupation	Common Skills	Specialized Skills	Software Skills
<b>Office Clerks, General</b>	<ul style="list-style-type: none"> <li>• Communications</li> <li>• Customer Service</li> <li>• Clerical Works</li> <li>• Detail Oriented</li> <li>• Filing</li> </ul>	<ul style="list-style-type: none"> <li>• Data Entry</li> <li>• Office Equipment</li> <li>• Administrative Support</li> <li>• Invoicing</li> <li>• Office Supply Management</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Spreadsheets</li> <li>• QuickBooks (Accounting Software)</li> <li>• Microsoft Access</li> <li>• Google Workspace</li> </ul>
<b>Secretaries and Administrative Assistants, Except Legal, Medical, and Executive</b>	<ul style="list-style-type: none"> <li>• Communications</li> <li>• Customer Service</li> <li>• Microsoft Excel</li> <li>• Detail Oriented</li> <li>• Clerical Works</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative Support</li> <li>• Data Entry</li> <li>• Invoicing</li> <li>• Office Supply Management</li> <li>• Office Equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> <li>• Spreadsheets</li> <li>• Microsoft Access</li> <li>• QuickBooks (Accounting Software)</li> <li>• Microsoft Share-Point</li> </ul>

Source: Lightcast

The ratio of job candidates to job postings provides a supply to demand perspective on the hiring market. In the utilities sector (currently, without an increased green energy presence), The candidate to job ratio is high for office and administrative roles, and supply is healthy in those occupations. The ratio is lower for supervisors of production and plant and systems operators and is approaching a 1:1 ratio. The table below provides a snapshot in October 2023 of the job postings for key occupations in the sector and the candidates available that would qualify to fill those roles.

*Table 26: Utilities Occupational Job Posting Demand and Candidate Supply*

Occupation	Job Postings	Candidates Available	Candidate/Job Ratio
<b>Office Clerks, General</b>	2	62	31.0
<b>Secretaries and Administrative Assistants, Except Legal, Medical, and Executive</b>	3	41	13.7
<b>Other Office and Administrative Support Workers</b>	2	23	11.5
<b>First-Line Supervisors of Production and Operating Workers</b>	3	6	2.0
<b>Plant and System Operators</b>	1	2	2.0

Below is a list of related educational and related programs that are available on the Virgin Islands related to utilities and green energy. Fundamental skills in electronics, HVAC, and construction are needed to prepare

the workforce for the renewable energy sector, and it seems the current training offering needs to be expanded to satisfy this requirement:<sup>36</sup>

- Fiber Optics Technician/Installer Training Program - STT - Netwave Unlimited Services
- Fiber Optics Technician/Installer Training Program - STX - Netwave Unlimited Services
- NCCER Welding Level 1 (STX) - Tang How Brothers
- NCCER Pipe Fitting Level 1 (STX) - Tang How Brothers
- NCCER Electrical 1 (STX) - VI Department of Education
- Plumbing (STT) - VI Department of Education
- Renewable Energy Specialist - UVI Cell
- Sustainability Professional - UVI Cell

## Focus On Solar Energy Staffing

In conjunction with previous work done, Lightcast brought in additional data for further context on the occupations staffing the solar power generation industry in the United States. Analyzing the entire occupational staffing cross section of the industry revealed other occupations involved in solar energy generation. Workforce developers should be aware of and provide training programs for these occupations as well to enable growth in the sector.

Staffing is led by occupations for the on-site construction of the solar farms, followed by the electrical occupations to connect the solar farm to the electrical grid. Installers of Panels, Project Management Specialists, General Operations Managers, Electrical Line Installers and Electricians are all occupations employing over ten thousand jobs in the Solar Energy sector (Table 27). Many of these occupations require trade-school training and experience in the energy and electrical fields, and in order to develop and maintain more green energy in the Virgin Islands, there will be a need to train and develop these skills and wage opportunities to keep them here instead of seeking higher wages stateside.

*Table 27: US Staffing Patterns of Solar Energy Sector*

Occupation	USA Employment
Solar Photovoltaic Installers	27,882
Project Management Specialists	12,894
General and Operations Managers	11,550
Electrical Power-Line Installers and Repairers	11,042
Electricians	11,005
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	9,729
Electrical Engineers	9,156
Tree Trimmers and Pruners	6,792
Accountants and Auditors	6,115
Customer Service Representatives	5,850

<sup>36</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

Source: Lightcast

Job postings data for the staffing occupations in the solar industry revealed the top certifications, common skills, and specialized skills required by employers since 2022 in the solar energy sector (Table 28). Certifications and skills required are predominantly for solar, roofing, safety, and general business administration.

*Table 28: Top Certifications and Skills of Solar Energy Occupations*

<b>Certifications</b>	<b>Postings</b>	<b>Common Skill</b>	<b>Postings</b>	<b>Specialized Skill</b>	<b>Postings</b>
NABCEP Certified Energy Practitioner	327	Communications	8130	Solar Systems	2116
30-Hour OSHA General Industry Card	302	Sales	6215	Solar Sales	2048
10-Hour OSHA General Industry Card	289	Customer Service	5988	Roofing	1974
Master Of Business Administration (MBA)	246	Operations	4616	Project Management	1943
Registered Nurse (RN)	238	Management	4035	Construction	1694
Basic Life Support (BLS) Certification	179	Detail Oriented	3473	Solar Energy Systems Installation	1500
Journeyman Electrician	162	Self-Motivation	2847	Customer Relationship Management	1364
Cardiopulmonary Resuscitation (CPR) Certification	159	Leadership	2797	Sales Process	1334
First Aid Certification	152	Writing	2628	Salesforce	1250
Commercial Driver's License (CDL)	141	Problem Solving	2601	Auditing	1086

Source: Lightcast

## Tidal & Ocean Current Energy Review

Situated amidst the waters of the Caribbean, the USVI could be a promising destination for investment in tidal and ocean current energy, harnessing the vast potential of its strategic location and unique geography. The oceans present two distinct avenues for energy generation: tidal energy, which capitalizes on the ebb and flow of tides along shores, and ocean current energy, tapping into the kinetic energy of ocean currents. In the realm of tidal energy, innovative systems like Tidal Stream and Tidal Range Systems, including Tidal Lagoons and Barrages, have already demonstrated success in places like Korea's Sihwa Lake Tidal Power Plant and France's Rance Tidal Power Station.

Ocean current energy, an equally promising avenue, involves the utilization of floating turbines anchored to the ocean floor. These turbines, resembling long, airplane-shaped windmills submerged in water, orient



themselves with the prevailing current, generating electricity as the flow courses through them. Noteworthy potential currents for consideration in the USVI include the North Equatorial Current and the Caribbean Current, boasting speeds ranging from 1 to 2 knots per hour. While these currents exhibit slightly lower speeds than the renowned Kuroshio current near Japan. Technological advancements like Japan's Kairyu<sup>37</sup> and Scotland's O2 by Orbital Marine Power<sup>38</sup> underscore the feasibility of harnessing energy from currents with varying velocities.

The implementation of such sustainable energy projects in the USVI would not only contribute to the region's renewable energy portfolio but also create diverse employment opportunities. The typical workforce requirements span a spectrum of expertise, including Engineers, Environmental Specialists, Construction & Installation crews, Maintenance Workers, Grid Integration Experts, Regulatory and Legal Professionals, Researchers, and Administrative & Management personnel.



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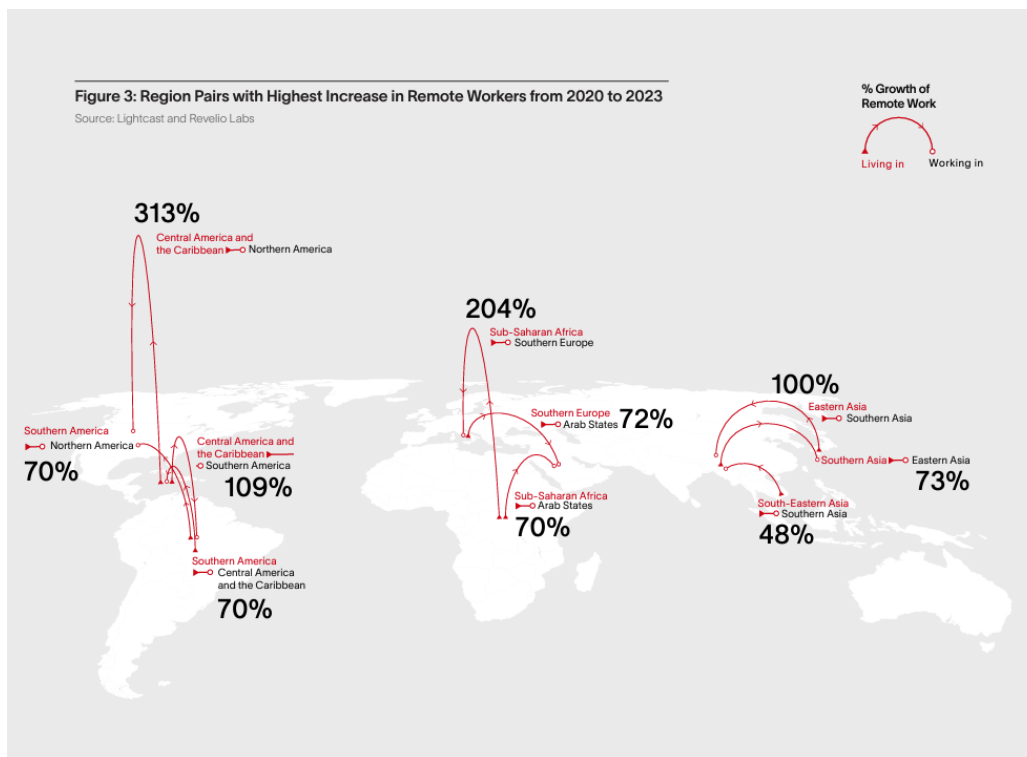
<sup>37</sup> <https://newatlas.com/energy/ihi-nedo-kairyu-ocean-current-turbine/>

<sup>38</sup> [https://newatlas.com/energy/orbital-o2-tidal-turbine/?itm\\_source=newatlas&itm\\_medium=article-body](https://newatlas.com/energy/orbital-o2-tidal-turbine/?itm_source=newatlas&itm_medium=article-body)

# Remote Work

While past its pandemic peak, Lightcast believes remote work is here to stay as an element of the labor market economy. Remote work will continue to feature much more heavily than its pre-pandemic trends in part due to worker leverage in a tight labor market. The rise of remote work is a potentially transformative opportunity for USVI to connect its population with employment opportunities that were previously blocked:

- Central America and the Caribbean enjoyed the highest increase in remote workers globally – Between 2020 and 2023, there has been a **313%** increase of remote workers in this region working jobs tied to North America.



- USVI ties to the US, along with English as a native language, give USVI talent an edge above most other Caribbean locations.
- US remote employment has doubled since pre-pandemic trends. Roughly **5%** of job postings in the US are fully remote. This might not sound like much, but put a different way, that is 1 in 20 jobs.
- Over **180,000** fully remote positions were posted in the US alone during July 2023. Grabbing even a small market share of this would dramatically change the labor market of USVI.
- The type of remote work aligns well with the target sector strategy of USVI which focuses on healthcare and tech roles.
- USVI talent enjoys significant wage competitiveness compared to its American counterpart:

- For Healthcare & Social Assistance, the US average annual wage is \$61,274 while USVI wages average **\$57,980 annually**.
- In Information, the US average annual wage is \$140,049 while USVI wages average **\$80,340 annually**.
- In Finance & Insurance, the US average annual wage is \$130,250 while USVI wages average **\$80,080 annually**.

## Analysis of Remote-Friendly Workforce Training

Lightcast used its database of job postings in the US to analyze the percentage for each occupation that are fully remote. This occupation-specific remote percentage was then compared to the national average of 5%, thus identifying remote-friendly occupations with a share of postings higher than the national average.

Next, the USVI Service Providers Certification Programs list was used to map each workforce training program to a relevant occupation. Finally, the program-occupation match revealed the following list of existing workforce training opportunities that are remote-friendly<sup>39</sup>:

*Table 29: Available Workforce Training Programs for Remote-Friendly Occupations*

SOC Code	Occupation Name	% Remote Postings (US)	USVI Training Program (s)	USVI Training Provider(s)
15-1254	Web Developers	33.3%	Information Technology	St. Croix Career and Technical Center
27-3042	Technical Writers	26.9%	Information Technology	St. Croix Career and Technical Center
15-1242	Database Administrators	25.2%	Information Technology	St. Croix Career and Technical Center
15-1242	Database Administrators	25.2%	IT Security and Network Technician	MedCerts
15-1212	Information Security Analysts	21.5%	Information Technology	St. Croix Career and Technical Center
15-1212	Information Security Analysts	21.5%	IT Security and Network Technician	MedCerts
15-1299	Computer Occupations, All Other	20.7%	Fundamentals of IT	MedCerts
15-1299	Computer Occupations, All Other	20.7%	Information Technology	St. Croix Career and Technical Center
15-1299	Computer Occupations, All Other	20.7%	IT Support Professional	MedCerts
27-1014	Special Effects Artists and Animators	20.0%	Information Technology	St. Croix Career and Technical Center
15-1211	Computer Systems Analysts	19.9%	Information Technology	St. Croix Career and Technical Center
15-1244	Network and Computer Systems Administrators	18.4%	Information Technology	St. Croix Career and Technical Center
15-1244	Network and Computer Systems Administrators	18.4%	IT Security and Network Technician	MedCerts
11-3021	Computer and Information Systems Managers	17.9%	Information Technology	St. Croix Career and Technical Center
11-3021	Computer and Information Systems Managers	17.9%	IT Security and Network Technician	MedCerts
13-1071	Human Resources Specialists	17.0%	Workforce Development and Soft Skills Training and SHRM Certification Exam Preparation Course	The Leader's Branch, Inc.
15-1255	Web and Digital Interface Designers	17.0%	Information Technology	St. Croix Career and Technical Center
29-2072	Medical Records Specialists	16.8%	Certified Coding Associate Program (Outpatient Clinic Coding)	M1 Enterprises USVI
29-2072	Medical Records Specialists	16.8%	Certified Coding Specialist Program (Inpatient Hospital Coding)	M1 Enterprises USVI

<sup>39</sup> Note: A single program can match to multiple relevant occupations. Likewise, a single occupation can match to multiple relevant programs.



SOC Code	Occupation Name	% Remote Postings (US)	USVI Training Program (s)	USVI Training Provider(s)
29-2072	Medical Records Specialists	16.8%	Certified Professional Biller Program	M1 Enterprises USVI
29-2072	Medical Records Specialists	16.8%	Electronic Health Records Specialist	MedCerts
29-2072	Medical Records Specialists	16.8%	Medical Billing and Coding Professional	MedCerts
29-2072	Medical Records Specialists	16.8%	Medical Billing Specialist	MedCerts
29-2072	Medical Records Specialists	16.8%	Medical Coding/Billing	Plessen Healthcare
27-1024	Graphic Designers	14.8%	Information Technology	St. Croix Career and Technical Center
13-1082	Project Management Specialists	14.6%	Project Management Essentials	MedCerts
15-1231	Computer Network Support Specialists	14.3%	Information Technology	St. Croix Career and Technical Center
15-1231	Computer Network Support Specialists	14.3%	IT Security and Network Technician	MedCerts
15-1251	Computer Programmers	14.3%	Information Technology	St. Croix Career and Technical Center
15-1232	Computer User Support Specialists	13.1%	Fundamentals of IT	MedCerts
15-1232	Computer User Support Specialists	13.1%	Information Technology	St. Croix Career and Technical Center
15-1232	Computer User Support Specialists	13.1%	IT Support Professional	MedCerts
21-1018	Substance Abuse, Behavioral Disorder, and Mental Health Counselors	12.2%	Mental Health Technician	UVI Cell
43-9021	Data Entry Keyers	11.6%	Certified Coding Associate Program (Outpatient Clinic Coding)	M1 Enterprises USVI
43-9021	Data Entry Keyers	11.6%	Certified Coding Specialist Program (Inpatient Hospital Coding)	M1 Enterprises USVI
43-9021	Data Entry Keyers	11.6%	Certified Professional Biller Program	M1 Enterprises USVI
43-9021	Data Entry Keyers	11.6%	Electronic Health Records Specialist	MedCerts
43-9021	Data Entry Keyers	11.6%	Medical Billing and Coding Professional	MedCerts
43-9021	Data Entry Keyers	11.6%	Medical Billing Specialist	MedCerts
43-9021	Data Entry Keyers	11.6%	Medical Coding/Billing	Plessen Healthcare
21-1023	Mental Health and Substance Abuse Social Workers	11.0%	Mental Health Technician	UVI Cell
11-3012	Administrative Services Managers	10.4%	Medical Front Office Administration Specialist	MedCerts
17-3029	Engineering Technologists and Technicians, Except Drafters, All Other	9.6%	Information Technology	St. Croix Career and Technical Center
17-3029	Engineering Technologists and Technicians, Except Drafters, All Other	9.6%	Renewable Energy Specialist	UVI Cell
43-1011	First-Line Supervisors of Office and Administrative Support Workers	9.5%	Medical Front Office Administration Specialist	MedCerts
43-3021	Billing and Posting Clerks	9.5%	Certified Coding Associate Program (Outpatient Clinic Coding)	M1 Enterprises USVI
43-3021	Billing and Posting Clerks	9.5%	Certified Coding Specialist Program (Inpatient Hospital Coding)	M1 Enterprises USVI
43-3021	Billing and Posting Clerks	9.5%	Certified Professional Biller Program	M1 Enterprises USVI
43-3021	Billing and Posting Clerks	9.5%	Medical Billing and Coding Professional	MedCerts
43-3021	Billing and Posting Clerks	9.5%	Medical Billing Specialist	MedCerts
43-3021	Billing and Posting Clerks	9.5%	Medical Coding/Billing	Plessen Healthcare
11-9111	Medical and Health Services Managers	9.2%	Medical Front Office Administration Specialist	MedCerts
43-6011	Executive Secretaries and Executive Administrative Assistants	9.1%	Administrative Assistant	UVI Cell

SOC Code	Occupation Name	% Remote Postings (US)	USVI Training Program (s)	USVI Training Provider(s)
43-6011	Executive Secretaries and Executive Administrative Assistants	9.1%	Certified Administrative Professional	Community Action Now
43-6011	Executive Secretaries and Executive Administrative Assistants	9.1%	Medical Front Office Administration Specialist	MedCerts
43-6011	Executive Secretaries and Executive Administrative Assistants	9.1%	Medical Front Office Asst. & Admin. Specialist	MedCerts
43-6011	Executive Secretaries and Executive Administrative Assistants	9.1%	Microsoft Office Specialist	MedCerts
11-1021	General and Operations Managers	9.0%	Medical Front Office Administration Specialist	MedCerts
11-1021	General and Operations Managers	9.0%	Project Management Essentials	MedCerts
43-9022	Word Processors and Typists	8.8%	Microsoft Office Specialist	MedCerts
43-6012	Legal Secretaries and Administrative Assistants	6.9%	Administrative Assistant	UVI Cell
43-6012	Legal Secretaries and Administrative Assistants	6.9%	Certified Administrative Professional	Community Action Now
43-6012	Legal Secretaries and Administrative Assistants	6.9%	Medical Front Office Asst. & Admin. Specialist	MedCerts
43-6012	Legal Secretaries and Administrative Assistants	6.9%	Microsoft Office Specialist	MedCerts
21-1091	Health Education Specialist	6.4%	Stress Management Coach	UVI Cell
21-1091	Health Education Specialist	6.4%	Wellness Coaching	UVI Cell
43-9199	Office and Administrative Support Workers, All Other	5.5%	Administrative Assistant	UVI Cell
43-9199	Office and Administrative Support Workers, All Other	5.5%	Certified Administrative Professional	Community Action Now
43-9199	Office and Administrative Support Workers, All Other	5.5%	Medical Front Office Administration Specialist	MedCerts
43-9199	Office and Administrative Support Workers, All Other	5.5%	Medical Front Office Asst. & Admin. Specialist	MedCerts
43-9199	Office and Administrative Support Workers, All Other	5.5%	Microsoft Office Specialist	MedCerts
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	5.2%	Workforce Development and Soft Skills Training and SHRM Certification Exam Preparation Course	The Leader's Branch, Inc.

Source: WDB and Lightcast

The current inventory of workforce training programs covers 37 remote-friendly occupations. Yet, when comparing to the entire list of remote-friendly occupations, there are opportunities for more program options. When looking at remote-friendly occupations that require less than an associate's degree but at least some on-the-job training, there are another 27 occupations which could benefit from workforce training programs. In particular, there are opportunities for preparing USVI talent for roles in the Insurance industry: over 20% of roles are remote for Claims Adjusters, Insurance Sales Agents, and Insurance Claims Clerks. Other Finance roles are also remote-friendly, such as Tax Preparers, Loan Interviewers, Credits Authorizers, Bookkeeping Clerks, Payroll Clerks, and Procurement Clerks.

By expanding workforce training options to the Finance & Insurance industry, USVI can both prepare its talent to be ready for remote opportunities while also preparing a labor force with the skills necessary to attract BPO companies which fall under its target sectors.

*Table 30: Underserved Remote-Friendly Occupations*

SOC Code	Occupation Name	% Remote Postings (US)
13-1031	Claims Adjusters, Examiners, and Investigators	28.2%
41-3021	Insurance Sales Agents	27.2%



SOC Code	Occupation Name	% Remote Postings (US)
31-9094	Medical Transcriptionists	21.6%
43-9041	Insurance Claims and Policy Processing Clerks	20.1%
41-3041	Travel Agents	19.9%
41-9041	Telemarketers	18.5%
13-2082	Tax Preparers	16.9%
41-9021	Real Estate Brokers	13.9%
43-4061	Eligibility Interviewers, Government Programs	12.5%
43-3011	Bill and Account Collectors	12.0%
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	11.1%
43-4051	Customer Service Representatives	10.9%
23-2093	Title Examiners, Abstractors, and Searchers	10.7%
43-4131	Loan Interviewers and Clerks	10.1%
43-4041	Credit Authorizers, Checkers, and Clerks	10.0%
43-4021	Correspondence Clerks	9.8%
43-4011	Brokerage Clerks	9.3%
43-3051	Payroll and Timekeeping Clerks	9.2%
41-9022	Real Estate Sales Agents	8.4%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	7.7%
43-4111	Interviewers, Except Eligibility and Loan	7.7%
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	6.9%
43-3061	Procurement Clerks	6.2%
43-5061	Production, Planning, and Expediting Clerks	5.4%

Source: Lightcast

In short, if USVI truly embraces the remote work opportunity by investing in a workforce capable of competing in the remote work environment, the claim that there are not enough jobs for USVI citizens is no longer relevant. This must be supported by **significant** and **flexible** investment in the following:

- Fiber/telecommunications infrastructure
- Overhaul of bureaucratic processes to be e-friendly (electronic signatures, electronic form submissions, etc. in lieu of in-person bureaucratic procedures)
- Basic computer skills for all
- Investment in targeted training, certifications, and certificates which feature heavily as skills in remote work job postings:
  - Agile
  - AWS (Amazon Web Services)
  - CISA (Certified Information System Auditor) or Certified Information Systems Security Professional
  - CompTIA (Computing Technology Industry Association)
  - CPA (Certified Public Accountant)<sup>40</sup>

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<sup>40</sup> Note: The Virgin Islands Board of Public Accountancy requires at least a bachelor's degree to issue a CPA certificate. <https://dlca.vi.gov/boardcertifications/steps/cparequirements/>



- CRM (Customer Relationship Management) such as Salesforce, HubSpot, Zendesk, Oracle, etc.
- FINRA Series 7 (General Securities Representative)
- HRIS (Human Resources Information System)
- Java, Python, SQL (Structured Query Language)
- MOS (Microsoft Office Specialist)
- PMP (Project Management Professional)
- Quickbooks
- SaaS (Software as a Service)
- Workday

Lightcast suggests exploring funding sources beyond WIOA to enhance the adaptability and effectiveness of directing resources toward remote-capable positions. When determining the party responsible for covering the costs of training and certifications, it is crucial to weigh the return on investment (ROI) associated with placing individuals in higher-paying remote positions. Increased employment translates to higher revenues and reduced government expenditures on social support programs.



Source: AdobeStock



# Economic Development Assessment

The business landscape was undergoing significant changes in the US Virgin Islands. Major business closures and downsizing such as the Hovensa facility have left their mark on the local economy, presenting both challenges and opportunities for the territory.

One notable trend is that most new jobs emerge from the expansion of existing businesses, accounting for a substantial 77% of employment growth. Meanwhile, new business starts make up the remaining 23%. Company relocations from elsewhere are not as common. The USVI recognizes the unlikelihood of landing "big game hunting" homeruns in terms of corporate giants, instead shifting the focus towards developing small and medium-sized tech-based firms.<sup>41</sup>

One critical hindrance to attracting new businesses, especially those that are energy-intensive, is the high utility costs. The islands' remote location and limited infrastructure pose a challenge in providing affordable energy, making it a struggle to entice energy-dependent industries.

## Entrepreneurship

Entrepreneurship is seen as a potential solution to diversify the economy and create new opportunities for the local workforce. However, there are hurdles to clear. According to the World Bank Doing Business report, the USVI is one of the worst-performing Caribbean countries when it comes to the number of days needed to start a business, taking anywhere from 42 to 56 days. Local authorities must recognize the need to streamline this process to 12 days or less to encourage entrepreneurship.<sup>42</sup>

In terms of business size, there has been a decline in the share of establishments and jobs in the small category (2 to 9 employees). This trend emphasizes the importance of nurturing startups and small businesses in the region. To address this issue, the USVI Small Business Development Center (SBDC) and the Small Business Incubator established by the Virgin Islands Economic Development Authority (VIEDA) provide support and resources to aspiring entrepreneurs.

The University of the Virgin Islands plays a pivotal role in fostering entrepreneurship within the territory. It offers a minor and certificate program in entrepreneurship, Innovation Centers for creative and innovative ventures, a 13D Entrepreneurship Competition providing seed money to budding entrepreneurs, and various events like Hackfest and Health Design Slam to encourage innovation and entrepreneurship.<sup>43</sup>

## Business Development Opportunities

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<sup>41</sup> US Virgin Islands Vision 2040 Strategic Plan

<sup>42</sup> US Virgin Islands Vision 2040 Strategic Plan

<sup>43</sup> University of the Virgin Islands, <https://www.uvi.edu/academics/school-business/research-and-out-reach/uviidea.html>

There are also major business investment prospects on the horizon. After EPA cleanup and compliance, there is still a possibility that the former Hovensa/Limetree Bay refinery can partially re-open, which would create hundreds of jobs and boost the manufacturing sector. However, this would require creating workforce development programs to train/retrain people for the facility's operations if it reopens. Lightcast recommends conducting an economic impact study on the number and types of jobs that would be associated with a partial and full reopening, as well as the types of training and credentialing programs needed to be in place on day one should the facility reopen.

There are a limited number of office building listings, as well as industrial real estate options, with only two industrial parks owned by VIEDA, both of which were fully occupied as of 2021. If USVI hopes to attract BPO operations to the territory, there are few options short of new construction.

One of these parks is the 158,000 square feet (sf) William D. Roebuck Industrial Park in St. Croix, which was fully occupied but has some available land for development. Another is the Virgin Islands Industrial Park in St. Thomas, which was also fully occupied, leaving little space for new occupants as of Vision 2040's publishing.<sup>44</sup>

However, there are promising developments in the pipeline, including the proposed Tech Village, a 10,500-square-foot facility focusing on sustainable agriculture. Additionally, the Virgin Islands Port Authority owns a significant 74.8 acres in Estate Lindbergh Bay, intended for the new UVI campus.<sup>45</sup>

There is also a 12.27-acre site at the west end of the St. Croix airport and the vast Renaissance Park, spanning 1,244.2 acres (though not all is readily developable) which is adjacent to a petroleum storage area. Furthermore, the region boasts 9,000 acres of available agricultural land, presenting opportunities for agricultural and food production ventures.<sup>46</sup>

The USVI is keen on finding its path to economic revitalization, embracing entrepreneurship and seizing investment opportunities as they arise.

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<sup>44</sup> US Virgin Islands Vision 2040 Strategic Plan

<sup>45</sup> US Virgin Islands Vision 2040 Strategic Plan

<sup>46</sup> US Virgin Islands Vision 2040 Strategic Plan

# Recommendations

Based on the analysis of the USVI labor market contained in this report, Lightcast has developed the following set of recommendations.

## Training, and Education, and Workforce Development

The following recommendations are tailored specifically to workforce development stakeholders.

### 1. Align Career and Technical Education (CTE) with Cross-Cutting Skills:

- Align CTE programs with cross-cutting skills and occupations that are in demand across multiple industries.<sup>47</sup>
- Prioritize occupations such as Bookkeeping & Accounting, Customer Service Representatives, First-Line Supervisors, Maintenance & Repair Workers, Truck Drivers, and others with a bright outlook.<sup>48</sup>

### 2. Ensure Foundational and Transferable Skills:

- Maximize labor market flexibility and efficiency by ensuring foundational skills in reading, math, communications, and soft skills.<sup>49</sup>
- Promote computer literacy for all exiting K-12 students and adults in the workforce system.

### 3. Expand the Labor Pool and Address Enrollment Decline:

- Attract people back to the islands by addressing the cost of living and infrastructure issues.
- Leverage remote work opportunities in marketing and recruitment efforts.<sup>50</sup>
- Offer scholarships for diaspora students from the mainland if K-12 enrollment continues to decline. Consider bridge programs where 4-year programs at UVI are not offered, or bridge programs for non-resident students. For instance, a mainland student could complete 2 years on the mainland and transfer to UVI to complete the degree.

### 4. Create Funding and Scholarships for Non-WIOA Covered Training:

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<sup>47</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

<sup>48</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

<sup>49</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

<sup>50</sup> J&M Global Solutions, "USVI Workforce Assessment and Laborshed Study", 2022

- Identify funding sources and allocate scholarships for key non-WIOA covered training programs with high demand in areas such as Accounting, CDL, Heavy Equipment Training, Medical Transcription, and Graphic Design.
- Pilot test programs for more remote-friendly occupation training. For instance, the Insurance sector seems underutilized as an opportunity for remote work (Claims Adjusters, Underwriters, Policy Clerks, Loan Interviewers, and Bookkeeping, Accounting, and Auditing Clerks).

## 5. Empower Job Transitions from the Public Sector into the Private Sector

- Establish financial support for government employees to receive training, encouraging private sector transitions to high-demand sectors. Give flexible vouchers tied to training in addition to unemployment benefits. Prioritize pathways into the medical and professional services occupations.
- See Policy Priorities below for additional recommendations for facilitating job transitions into the private sector.

## 6. Tailor Workforce Development to Forward-Looking Sector-Specific Initiatives

- The USVI is taking a number of big bets on emerging industries: leveraging its coast and ocean access for “blue economy” or marine businesses, taking advantage of its natural resources for “green economy” or renewable energy businesses, and promoting its history and culture for experiential tourism. Workforce development programs should pave the way for new talent to enter these sectors.
- See the section on Target Sectors below to review the action items related to the target sectors identified by the VIWDB.

# Target Sector Workforce Strategies

The target sectors identified by the VIWDB are experiencing varying degrees of challenge and success. Key takeaways and recommendations for each target sector are as follows:

### 1. **Agriculture** – *growing production in terms of number of farms and acreage but limited in higher value-add activities as evidenced by low employee count.*

- Agriculture has poor training and education infrastructure for non-higher education talent. A growth in the number of farms coupled with a decrease in the size of farms suggests that subsistence farming is increasing. Relevant workforce development for these part-time farmers could include workshops on increasing yield (e.g., through techniques to resist drought or rotate crops) and commercialize the surplus at local markets.
- There is limited value-added agriculture and food manufacturing. One avenue for expansion is to develop value-added or niche products to sell to resorts or other tourism outlets. For example, specialty fruits such as dragon fruit and mesple (sapote), and value-added products such as jams, sauces, spice blends, coconut oil, aloe skin products, or fragrant soaps. Workforce development training could identify those products, host workshops to introduce the production method, and provide a forum to connect individuals who may be interested in commercializing such a product.



**2. Financial Services** – *employment has decreased since 2018 but is projected to grow modestly into 2030.*

- Employment is concentrated in St. John, yet no financial services workforce programs are advertised for residents on this island. This should be remedied in concert with the employers who are hiring financial services employees.
- Training and education infrastructure for non-higher education, lower skilled talent is poor. The Financial Services section of this report details the skills required for important sub-bachelor's level occupations and can serve as a curricular guide for programs targeting this population.

**3. Healthcare** – *employment has increased since 2019, but growth is limited by the availability of talent, not lack of demand.*

- There are ample workforce development training programs to serve the sector, but the volume of people served must increase in order to address the talent gap.
- Strategize with UVI to address the nursing degree faculty shortage which limits volume of nursing students. Consider credit sharing with other institutions or training existing nurses to become nurse educators.
- Support long-term care initiatives for Healthcare, especially focusing on aging and retirement community services. With a robust healthcare workforce, the Virgin Islands could increase its profile as a destination for older individuals. With various degrees of healthcare intervention, the Virgin Islands could be home to independent living communities, assisted living facilities, and long-term skilled nursing facilities.

**4. Manufacturing** – *employment is largely limited to rum production since the closure of the refinery.*

- There is still a possibility of the refinery reopening. If this occurs, hundreds of manufacturing jobs will reappear. The current workforce development training program offering is unprepared for this contingency.
- As it relates to the utilities sector's investment in green energy and the blue economy, encourage hiring engineering talent from local institutions.

**5. Professional & Technical Services** – *employment peaked at the end of 2019 but has been declining ever since the pandemic.*

- The USVI should focus on the remote-friendly nature of the sector to attract and develop talent.
- This sector could be boosted by the reopening of the refinery.

**6. Tourism** – *employment has recovered to pre-pandemic levels and is projected to grow by hundreds of jobs into 2030.*

- Much of the demand for workers is for lower skill levels. The current workforce training options for Tourism-related occupations (food preparation, for instance) are very limited.



- The USVI is formulated to receive \$125 million from the Infrastructure Investment and Jobs Act for roads, bridges, and airports. These resources can be used in a targeted way to support access to tourism jobs for residents who today face difficulty accessing those opportunities and to support the movement of visitors on the islands.

**7. Utilities** – green energy has strong potential for USVI, but the breadth and volume of training options for related occupations needs to be improved.

- Maintenance, Installation, & Repair workers are in high demand not only for this industry but also in Tourism and other sectors – training programs for these roles need to be established and promoted.
- Establish a Tidal Center of Excellence to encourage R&D in the blue economy renewable energy space.

## Policies and Practices

Given the monumental challenges faced by the USVI, we recommend prioritizing and focusing on a smaller number of key challenges so that limited resources can be more impactful. Strategic interventions can lead to systemic changes that positively affect related issues. The three key challenges to focus on are as follows:

- 1. Lower the Cost of Living:** The USVI is losing too many people to the mainland. Why do people leave? In general, the answer is simple: the territory has lower wages, less economic opportunity, and a higher cost of living. The government cannot control wages, but it can reform to create an environment that lowers the cost of living. The government must tackle this issue to retain residents, with an emphasis on areas within its control.
  - Reduce the cost of utilities. The cost of utilities is a major sticking point among residents (and businesses) as it is prohibitively expensive and unreliable. The USVI is exploring many avenues for cost-reduction: investing in lower-cost solar energy, piloting wind energy, diversifying the supply of natural gas liquid fuels, better oversight of contracts and administration, debt restructuring, privatization and public-private partnerships, augmenting human labor with automated assistance, and more. Recommendation on the appropriate strategy is beyond the purview of this workforce report, but it is worth highlighting the vice-like grip that utilities prices have on individual wellbeing and economic activity.
- 2. Enable Entrepreneurship:** The USVI must streamline business start-up processes and create a friendly and encouraging environment for entrepreneurship.
  - Initiate a top-to-bottom regulatory and permitting review, especially in sectors like tourism and construction.
  - Simplify processes for starting a new business, reducing the number of forms, days, fees, and requirements.



- Adjust local worker requirements for incentives based on the unemployment rate. One study noted that VIEDA incentives were too stringent in their local worker requirements.<sup>51</sup> First, as the labor market declines in numbers, it is not good judgement to enforce a local worker requirement when talent sorely needs to be imported. Second, USVI does not face the high unemployment problem as it has in the past. Unemployment sits well below 4%, so to impose this requirement on local businesses when there simply is not as much available labor creates an unnecessary burden.
- Encourage UVI to adopt a unique commercialization and intellectual property (IP) policy. Currently UVI has no such commercialization and IP policy in place. If USVI wants to be a destination for R&D and encourage entrepreneurship, it needs to address this shortcoming. We recommend UVI model its policy after the University of Waterloo which allows its researchers (professors and students included) to own what they invent.<sup>52</sup> This attracts the most entrepreneurial-minded talent to the institution.

**3. Enable the Private Sector to Pull Talent from the Public Sector:** The government employs a far higher share of the USVI workforce than in similar regions such as Hawaii, Puerto Rico, and other Caribbean islands. This further reduces the size of the talent pool for the private sector. There are several sectors which are hungry for growth but simply cannot find enough people, and many of these growth-starved sectors have higher multiplier effects for job creation and income/revenue generation.

- Enhance government pay transparency to facilitate a better understanding of the attraction of talent to the private sector.
- Facilitate off-ramps from the public sector and on-ramps into the private sector for like jobs. Relevant services include typical career services such as help with job seeking, resume development, and interview prep, as well as skills training for any bridge-skills that might be required by the private sector employer but not the government (e.g., certain software programs). Less typical services could include developing a government-title-to-private-sector-title map to empower public sector workers to familiarize themselves with relevant target jobs in the private sector, creating a priority list of emerging local employers with which to match job seekers, and promoting certifications that carry more value in the private sector.
- The government can support this initiative by reducing the rate of new hiring, such as by imposing a rule-of-thumb drawdown of only one new hire for every two workers who leave.

**5. Become a Remote Work Destination:** If USVI truly embraces the remote work opportunity by investing in a workforce capable of competing in the remote work environment, the claim that there are not enough jobs for USVI citizens is no longer relevant. This must be supported by **significant** and **flexible** investment in the following:

- Fiber/telecommunications infrastructure

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<sup>51</sup> RAND Corporation, "Recovery in the U.S. Virgin Islands: Progress, Challenges, and Options for the Future", 2020

<sup>52</sup> <https://uwaterloo.ca/entrepreneurship/our-ip-policy>

- Overhaul of bureaucratic processes to be e-friendly (electronic signatures, electronic form submissions, etc. in lieu of in-person bureaucratic procedures)
- Basic computer skills for all
- Investment in targeted training, certifications, and certificates which feature heavily as skills in remote work job postings:
  - Agile
  - AWS (Amazon Web Services)
  - CISA (Certified Information System Auditor) or Certified Information Systems Security Professional
  - CompTIA (Computing Technology Industry Association)
  - CPA (Certified Public Accountant)<sup>53</sup>
  - CRM (Customer Relationship Management) such as Salesforce, HubSpot, Zendesk, Oracle, etc.
  - FINRA Series 7 (General Securities Representative)
  - HRIS (Human Resources Information System)
  - Java, Python, SQL (Structured Query Language)
  - MOS (Microsoft Office Specialist)
  - PMP (Project Management Professional)
  - Quickbooks
  - SaaS (Software as a Service)
  - Workday

## Ecosystem Improvement

1. **Data Stewardship:** Access to granular data was difficult and impacted the ability to analyze the target sectors of USVI. For instance, much of the labor market data was available at the NAICS 2-digit level but was frequently unavailable at more granular levels. Granted, given the size of USVI, it is understandable that some of this data would be suppressed. Some of the data from the same source is contradictory, as in the case of Manufacturing employment numbers from the VIDOL VIEWS website, which shows two largely different numbers in separate cards. To enable economic development and workforce development professionals with better analysis capabilities, we recommend better data hygiene. A pragmatic example to start with could be the mapping of all Eligible Training Provider List (ETPL) programs to Classification of Instructional Programs (CIP) codes for a comprehensive CIP-SOC crosswalk, making it quick and easy to find which occupations are covered by ETPL training (and which ones are not).
2. **Stakeholder Collaboration:** Lightcast recommends better coordination and collaboration among USVI departments and stakeholders. Given the limitations of data, it is important to engage with these stakeholders to gain a better understanding of the complete labor market environment. This process unfortunately had low engagement for this study.

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<sup>53</sup> Note: The Virgin Islands Board of Public Accountancy requires at least a bachelor's degree to issue a CPA certificate. <https://dlca.vi.gov/boardcertifications/steps/cparequirements/>



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