ABLE
OPERATIONS
ECONOMIC & WORKFORCE ANALYTICS

Florida's Great Northwest

Labor Supply & Demand Research Analysis
Year 2 Update

May 2, 2023

Florida's Great Northwest

LABOR SUPPLY & DEMAND RESEARCH ANALYSIS YEAR 2 UPDATE

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LABOR SUPPLY & DEMAND RESEARCH ANALYSIS YEAR 2 UPDATE

PROJECT OVERVIEW:

ABLE Operations was tasked with providing Florida's Great Northwest (FGNW) with research and analysis of the regional labor market. This document is an update to Florida's *Great Northwest Supply & Demand Research Analysis* completed in March 2021. In addition to the industries and occupations identified in the previous study, this update will consider the labor market for nursing and cyber security occupations. The update of this study includes additional years of data and adjusted growth forecasts for the region. The purpose of this study is to inform Florida's Great Northwest and Triumph Gulf Coast of strengths and potential gaps between key regional industries' demand for employees, and the ability of the local training/education institutions to supply these skills.

This document will provide a holistic view of the industries, occupations, workforce, and labor market conditions throughout thirteen counties in Northwest Florida (Florida's Great Northwest 12-county region plus Wakulla: FGNW+). The first section will include an industry overview, considering the region's current employment, wages, and expected growth. The next section will reiterate specific groups of high economic impact industries (clusters), that provide higher than average growth and wages to the region. The third section will identify the occupations and skill sets associated with these clusters.   A wage comparison and gap analysis will follow. Finally, the document will conclude with a series of findings from the analysis, reflecting on the recommendations provided from the initial study.

INDUSTRY OVERVIEW:

The thirteen-county region is home to approximately 650,000 jobs. Figure 1 highlights industry employment, average earnings, and forecasted job growth over the next 10-years. The size of the circle represents total employment in a specific industry (based on color). The vertical axis measures average earnings for the FGNW+ region. The horizontal axis provides expected growth over the next decade. The axes intersect at FGNW+ average earnings of $55,307. This is roughly 14% higher than the average earnings provided in the previous study (2021). These earnings are about 10% lower than Florida's average, and roughly 28% lower than the national average. From an economic and workforce development perspective, focus is usually on the upper right quadrant of Figure 1. This represents industries that are expected to grow and have higher earnings relative to the FGNW+ region. Although earnings have increased since the previous study, overall expected growth has somewhat declined. For example, manufacturing was previously expected to grow 16% between 2020 – 2030. That growth rate has since declined to 5.5%, adding roughly 960 new jobs by 2033.

For the 13-county region, the largest circle (light green) represents the ***Government***. Given the concentration of military, Government accounts for almost 115,000 jobs, or 17.5% of the workforce. Although the industry is expected to remain relatively stable, average earnings are over $77,400. This military presence not only impacts the region through direct employment, but through Department of Defense contracts and grants. In the last fiscal year (2022) the 13-county region was awarded $4.5 billion through the Department of Defense and Homeland Security. Most of that funding has been allocated to construction for rebuilding Tyndall Air Force Base and professional and business services. ***Professional and business services*** (orange) was awarded $1.1 billion in fiscal year 2022. This industry is expected to grow 10.7% over the next decade, adding roughly 8,900 new jobs. Professional and business services pay above the region's average earnings by 7.7% at $59,573.

Figure 1. Industry Concentration and Growth for the FGNW+ Region, 2023 - 2033

Source: Lightcast 2023.2

The second largest industry in the region is ***Trade, transportation, and utilities*** (red). This industry employs over 106,000 and is expected to grow 7% by adding 7,350 new jobs over the next decade. The average earnings vary by detailed industry, but on average pays roughly $46,000. ***Financial Services*** (dark green) pays 3% higher earnings than the region's average. This industry is expected to grow nearly 20% over the next decade, adding 15,200 net new jobs to the region. This accelerated growth is largely due to real estate transactions, real estate rentals, and other financial investment activities.

The four high level industries in bold above *(Government, Professional and business services, Trade, transportation and utilities,* and *Financial services)*, remain consistent with the last study in identification of clusters for the region's workforce analysis. Given the industry concentration, expected growth in jobs, average wages, current and potential economic development projects in the region, and previous Northwest Florida research (*Florida Forward, UWF Haas Center, FGNW, etc.*), ABLE Operations will focus on the following industry clusters:

- Aerospace and Defense
- Chemical Products
- Production Technology
- Financial Services
- Water and Logistics
- Distribution and eCommerce
- Cybersecurity (new)
- Healthcare (new)

SKILLS AND OCCUPATIONS OVERVIEW:

Given the targeted clusters identified from the previous study, Cybersecurity, and Healthcare, this section will consider the skill sets needed to support these industry clusters. Using staffing patterns, ABLE Operations has identified the talent needs of the clusters. The next two tables provide the supporting occupations for these clusters. Table 2 considers occupations that typically require an Associate's degree or less than 2-years of training. Table 3 identifies the occupations that typically require a Bachelor's degree or higher.

Table 2: Occupations Supporting the Targeted Clusters (Associate's or Less)								
Occupation Description	Aerospace & Defense	Chemical Products	Production Technology	Financial Services	Water & Logistics	Distribution eCommerce	Cybersecurity	Healthcare
Aerospace Engineering & Operations Technicians	X							
Aircraft Mechanics & Service Technicians	X							
Avionics Technicians	X							
Bookkeeping, Accounting, Auditing Clerks				X		X		
Brokerage Clerks				X				
Chemical Equipment Operators & Tenders		X						
Chemical Plant & System Operators		X						
Chemical Technicians		X						
Computer User Support Specialists				X			X	
CNC Tool Operators	X		X					
Electrical & Electronic Engineering Technicians	X		X					
Electrical & Electronics Drafters	X							
Electricians					X			
Heavy and Tractor-Trailer Truck Drivers		X			X	X		
Industrial Engineering Technicians			X					
Industrial Machinery Mechanics	X	X	X					
Insurance Sales Agents				X				
Light Truck Drivers						X		
Loan Interviewers & Clerks				X				
Machinists	X		X		X			
Mechanical Drafters	X		X		X			
Nursing (LPN)								X
Plumbers, Pipefitters, & Steamfitters					X			
Tellers				X				
Welders, Cutters, Solderers, & Brazers			X		X			

Source: Staffing Patterns, Lightcast and Bureau of Labor Statistics

Table 3: Occupations Supporting the Targeted Clusters (Bachelor's or Higher)								
Occupation Description	Aerospace & Defense	Chemical Products	Production Technology	Financial Services	Water & Logistics	Distribution eCommerce	Cybersecurity	Healthcare
Accountants & Auditors				X				
Aerospace Engineers	X							
Chemical Engineers		X						
Chemists		X						
Computer Systems Analysts	X			X			X	
Credit Analysts				X				
Electrical / Electronics Engineers	X		X					
Financial Advisors				X				
Financial Managers				X				
Industrial Engineers	X		X					
Information Security Analysts							X	
Lawyers				X				
Loan Officers				X				
Logisticians	X					X		
Marine Engineers					X			
Mechanical Engineers			X		X			
Nurse Practitioners								X
Registered Nurses								X
Software Developers	X					X	X	

Source: Staffing Patterns, Lightcast and Bureau of Labor Statistics

SUPPLY AND DEMAND ANALYSIS:

The identified occupations (Tables 2 and 3) to support the targeted clusters will require specific skills and talents. The remainder of this analysis will consider the supply, demand, and market characteristics of such workforce.

There are many factors to consider when analyzing supply and demand of a specific occupation. Typically, this process considers expected job openings (demand) relative to potential training programs for those occupations. This can be quite a tough task, as matching Classification of Instructional Programs (CIP) to Standard Occupational Classification (SOC) codes is not straightforward. For example, an individual who obtains an accounting degree may not necessarily become an accountant. The skills that individual has are in demand by other occupations, such as a financial analyst or credit analyst.

Consider the supply and demand for an electrical/electronics drafter (SOC 17-3012). Figure 2 represents the Primary Occupation, which typically requires and Associates degree. Employers looking to hire an electrical drafter would usually request a degree in CAD/CADD drafting, drafting and design technology, or electrical drafting CAD/CADD (CIP 15.1302, 15.1301, and 15.1305 respectively located under Degrees). The standard analysis would compare this degree production to demand of electrical drafters.

However, other occupations are also looking for these skills, such as architectural/civil, mechanical, and other drafters (Secondary Occupations). This analysis will take a more holistic approach by considering both potential supply (degrees) with potential demand (occupations).

**Figure 2. Electrical and Electronics Drafters**
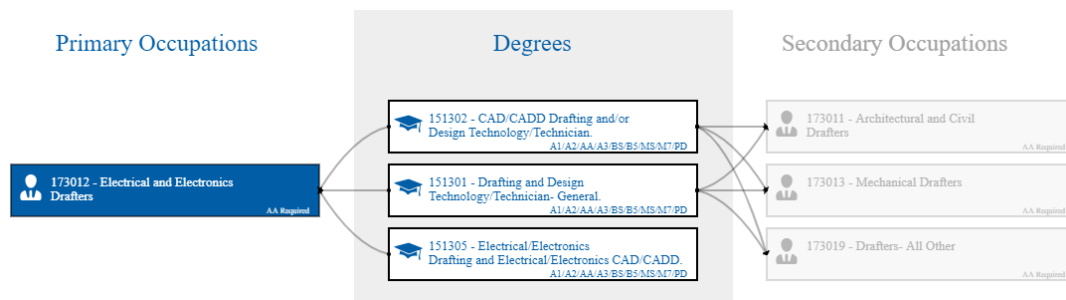
Source: Bureau of Labor Statistics, Department of Labor

When combining the secondary occupations with the primary, a workforce grouping of skill sets is created. Figure 3 provides the drafting skills group of four different occupations. Once these four drafting occupations are together it is straightforward to see the seven associated instructional programs. There are no longer any secondary occupations, and a complete grouping is identified with seven instructional programs (typically Associates) as a pipeline of talent for four drafting occupations.

Figure 3. Drafting Skills Grouping
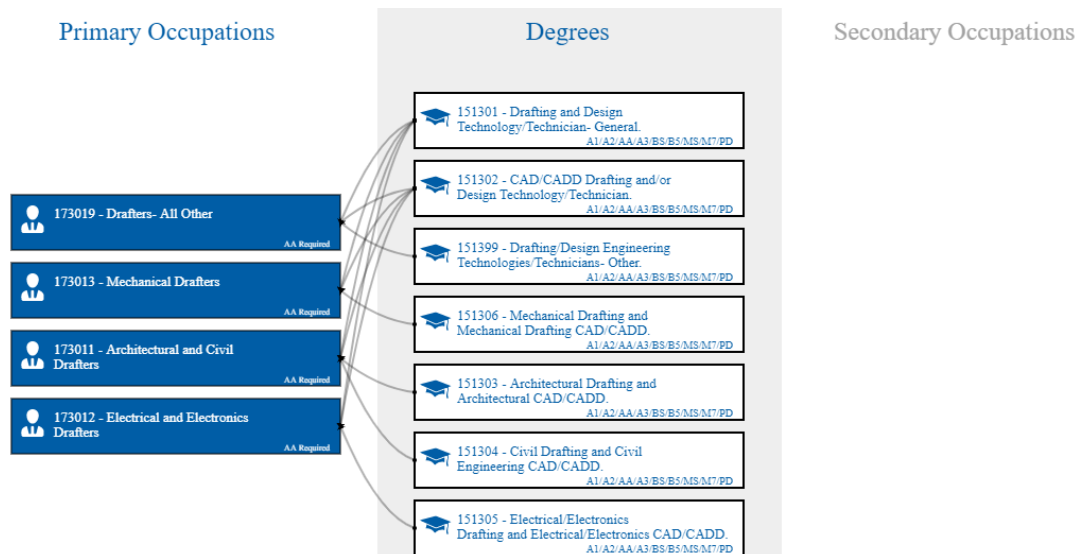
Source: Bureau of Labor Statistics, Department of Labor

Tables 4 and 5 identify wage and supply to demand ratio for the 13-county FGNW+ region, Florida, and U.S. A supply to demand ratio (S/D ratio) less than 1.0 implies a talent gap might exist as regional training/education programs are not meeting industry regional demands. A S/D ratio greater than 1.0 indicates supply of regional talent might be higher than industry demands. The Talent Quotient compares the S/D ratio of the FGNW+ region to the U.S. ratio. The Talent Quotient is provided for the previous analysis (2021), and this updated study (2023). The S/D ratio is listed in red if it is less than 1.0 and less than the national ratio.

The first reaction might be of concern given most of the S/D Ratios are red (less than 1). However, it is important to note that these occupations do not always require a certificate or Associate degree. For example, tellers are one of the occupations included in Banking Support Services. Typically, this occupation is provided on the job training and not formal instruction. When making relative comparisons to either the State or Nation, workforce data are more informative.

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Table 4. Occupation Workforce Analysis (Certificate or Associate's)								
	FGNW+ Region		**Florida**		**U.S.**		**Talent Quotient**	
Required Skills	**Median Wage**	**S/D Ratio**	**Median Wage**	**S/D Ratio**	**Median Wage**	**S/D Ratio**	*2021*	**2023**
Aerospace Engineering Technicians	$76,513	**0.83**	$77,506	**0.52**	$73,252	**0.79**	*0.00*	**1.04**
Aircraft Maintenance	$61,723	**0.35**	$58,589	**0.55**	$63,294	**0.34**	*0.89*	**1.03**
Banking Support Services	$39,131	**0.00**	$39,685	**0.00**	$39,588	**0.01**	*0.00*	**0.00**
Bookkeeping and Clerical	$37,859	**0.06**	$39,150	**0.14**	$45,913	**0.09**	*0.64*	**0.68**
Chemical & Industrial Technicians	$46,007	**0.09**	$42,939	**0.54**	$51,859	**0.33**	*0.18*	**0.26**
Computer Support Specialists	$49,586	**0.83**	$51,594	**0.63**	$62,897	**0.59**	*1.57*	**1.40**
Drafting	$48,362	**0.11**	$50,945	**0.30**	$59,094	**0.37**	*0.42*	**0.31**
Electrical Technicians	$56,474	**0.17**	$47,163	**0.21**	$52,382	**0.41**	*0.98*	**0.43**
Electricians	$45,538	**0.08**	$46,436	**0.05**	$56,678	**0.16**	*0.51*	**0.50**
Industrial Mechanics	$57,982	**0.00**	$50,785	**0.01**	$60,009	**0.11**	*0.00*	**0.00**
Insurance	$56,192	**0.00**	$54,694	**0.00**	$57,613	**0.00**	*0.00*	**0.00**
Machinists	$40,750	**0.13**	$41,628	**0.05**	$44,188	**0.05**	*0.73*	**2.35**
Nursing (LPN)	$34,225	**0.28**	$34,482	**0.24**	$35,920	**0.34**	*N/A*	**0.83**
Plumbers	$45,155	**0.01**	$46,128	**0.06**	$56,153	**0.03**	*0.31*	**0.42**
Ship Engineers and Captains	$64,920	**0.00**	$58,579	**0.00**	$75,516	**0.05**	*0.00*	**0.00**
Truck & Bus Drivers	$38,519	**0.02**	$40,518	**0.02**	$44,695	**0.02**	*0.00*	**0.66**
Welding	$39,700	**1.55**	$43,241	**0.69**	$41,862	**0.67**	*2.18*	**2.31**

Source: Lightcast 2023.2, National Center for Education Statistics

Table 5. Occupation Workforce Analysis (Bachelor's +)							
	FGNW+ Region		Florida		U.S.		Talent Quotient	
Required Skills	Median Wage	S/D Ratio	Median Wage	S/D Ratio	Median Wage	S/D Ratio	2021	2023
Aerospace Engineers	$100,266	0.00	$101,887	2.13	$122,527	1.50	0.00	0.00
Accounting & Finance	$65,086	0.05	$76,443	0.12	$83,560	0.18	0.26	0.31
Chemical Engineers	$91,296	0.00	$85,778	8.05	$102,765	6.74	0.00	0.00
Chemists & Scientists	$62,093	0.68	$58,808	1.57	$77,475	1.83	0.58	0.37
Computer Database & Programming	$88,069	0.36	$91,625	0.55	$108,104	0.64	0.65	0.57
Cybersecurity	$113,055	0.43	$121,141	0.12	$141,690	0.19	N/A	2.34
Electronics Engineers	$98,508	0.57	$89,092	1.09	$101,807	1.08	0.58	0.53
Industrial Engineers	$85,169	0.00	$84,971	0.42	$95,182	0.38	0.00	0.00
Lawyers	$93,213	0.00	$96,181	0.44	$120,946	0.60	0.00	0.00
Logisticians	$78,219	0.23	$61,383	0.41	$76,374	0.25	0.51	0.90
Marine Engineers	$82,199	0.00	$74,755	0.00	$93,371	0.43	0.00	0.00
Mechanical Engineers	$93,357	1.05	$79,682	2.92	$95,264	1.73	0.28	0.61
Nurse Practitioners	$100,891	0.42	$100,454	1.02	$120,082	1.37	N/A	0.31
Registered Nurses	$61,613	0.94	$74,775	0.69	$77385	0.76	N/A	1.24

*Source: Lightcast 2023.2, National Center for Education Statistics*

FINDINGS:

Please note that a summary of the previous study recommendations is provided in the appendix. Given the impact of the targeted clusters, in-demand occupations, and skills gap analysis, ABLE Operations divided program offerings into three strategies: new investment, continued support, and strong-supply.

New Investment

There has been a lot of progress in the last few years supporting new institutional programs in the FGNW+ region. Arguably, the greatest impact has likely been with Aerospace Engineering Technicians. In 2021, 7 students completed the Aerospace Engineering Technology/Technician program at Gulf Coast State College. If enrollment is maintained in this program, most of the region's demand can be met by local talent over the next five years. This will likely save businesses costly recruiting efforts, provide regional employment opportunities, and allow growth in the Aerospace and Defense industry cluster.

Figure 4. Truck and Bus Driver/Commercial Vehicle Operator Completions – FGNW+
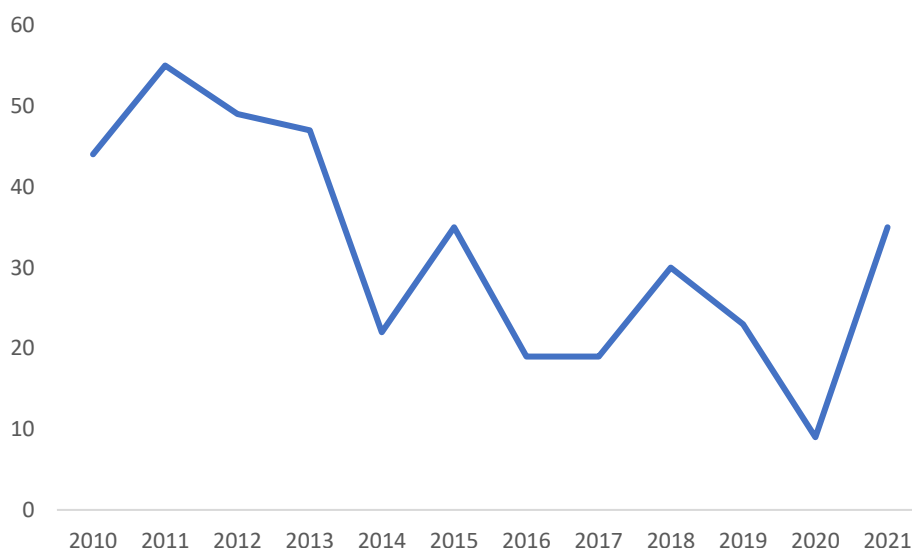
Source: National Center for Education Statistics (IPEDS)

Another positive outlook on new investment has been in Pensacola State College's Commercial Vehicle Operator program. In 2021, this program completed 23 new graduates, giving a boost to a declining trend in the 13-county region (Figure 4). As of January 2023, there were over 200

job postings for Truck and Bus drivers in the region (Florida's Department of Economic Opportunity Help Wanted OnLine).

Continued Support

The trend remains strong for training skills in the Aerospace and Defense cluster. Figure 5 shows the impressive growth in aircraft maintenance completions, with 95 graduates in the FGNW+ region in 2021. This has been driven by Tom P Haney Technical College and George Stone Technical College, in Bay and Escambia Counties, respectively. The talent quotient in the region has increased to above 1.0, providing a slightly higher supply and demand ratio relative to the U.S. Demand expectations in the region for aircraft maintenance skills have increased 40% from the previous study. Therefore, this trend to produce a local talented pipeline will keep the region competitive in the Aerospace and Defense cluster.

**Figure 5. Aircraft Maintenance Completions – FGNW+**
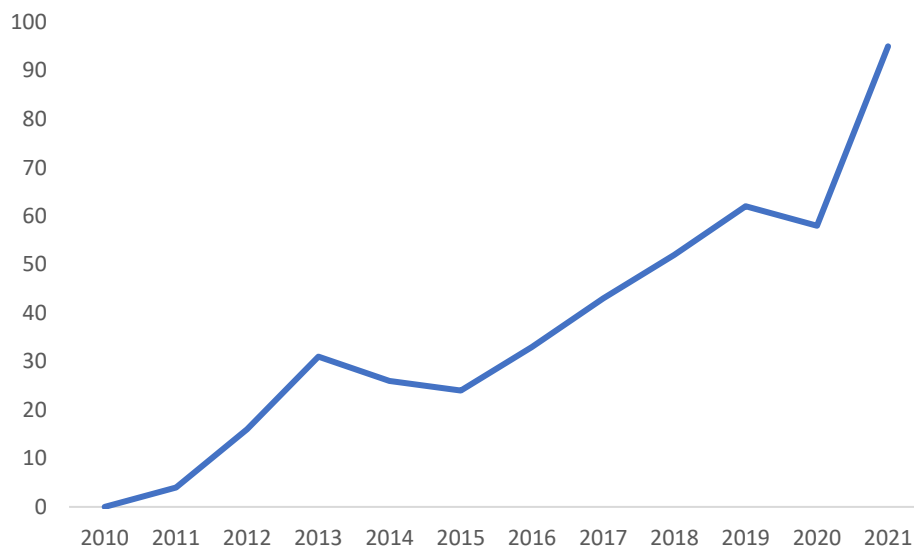
Source: National Center for Education Statistics (IPEDS)

Strong Supply

The region continues to train welders and computer support skills at a talent quotient higher than the nation (greater than 1.0). This supports a variety of industries in the region and can be an advantage for employers in the region. **Figure 6** represents the welding certificate or completions in the 13-county region, which appear to be stabilizing after extraordinary growth between 2012 and 2018.

Figure 6. Welding Technology Completions – FGNW+
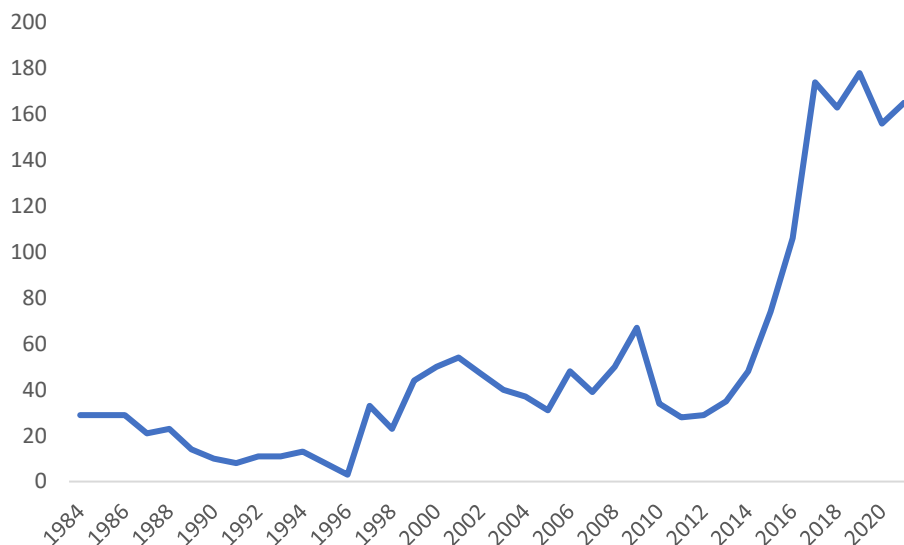
Healthcare and Cybersecurity

In addition to the updated data from the previous study, it was requested that the talent supporting healthcare and cybersecurity be considered for analysis. ABLE Operations used staffing patterns for these industries and data supporting in-demand occupations (both current and five-year expected demand).

In support of healthcare, nursing contributes to the highest in-demand skill sets. This includes nursing assistants, licensed practical nurses (LPN), registered nurses (RN), and nurse practitioners. In January 2023, the FGNW+ region had over 830 RN and 200 LPN job postings! There are expected to be more than 7,500 job openings for these occupations in the region over the next five years. Fortunately, the region is poised to train most of this needed talent. For example, the regional supply to demand ratio for RN's is roughly 24% higher relative to the nation.

Finally, cybersecurity also boasts very strong initial results from programmatic investment. The University of West Florida Center for Cyber Security offers a variety of training programs. Early success has provided the region with in-demand talent that more than doubles the concentration relative to supply at the national level. Over 100 of these high paying jobs were posted in January 2023. In addition, these occupations are expected to nearly double in terms of net-new jobs in the next five years.

APPENDIX:

Labor Supply and Demand Analysis – Recommendations

New Investment	Continued Support	Strong Supply
Industrial Mechanics - Currently paying a premium for these occupations relative to the State (National Avg). These occupations are in-demand across a variety of industries including Aerospace, Chemicals, and Production Technology. 7 different occupations and 4 potential programs.	**Chemical and Industrial Technicians** - Currently offered at PSC and GCSC. These occupations are in-demand across a variety of industries including Chemicals and Production Technology. 6 different occupations and 28 potential programs.	**Welding** - Currently offered at PSC, NWFSC, GCSC. 2 different occupations and 2 potential programs.
Aerospace Engineering Technicians - Given the commitment to Aerospace & Defense, opportunity to meet local needs. Prepare for potential pipeline and continued DoD contract revenues. 1 occupation and 3 potential program.	**Aircraft Maintenance** - Currently offered at Tom P Haney and George Stone. Meet local demands given Aerospace/Defense pipeline. 3 different occupations and 3 potential program.	**Computer Support Specialists** - Currently offered at numerous institutions. 3 different occupations and numerous potential programs.
Truck and Bus Drivers - Strong demand at all regions. These occupations are in-demand across a variety of industries including Chemicals, Water & Logistics, and Distribution/eCommerce. 4 different occupation and 1 potential program.	**Drafting** - Currently offered at numerous institutions. ITT Pensacola gap not yet filled. 4 different occupations and 7 potential programs.	
Industrial Engineers - Currently paying a premium for these occupations relative to the State (National Avg). The occupation is in-demand across a variety of industries including Aerospace and Production Technology. 1 occupation and 2 potential program.	**Plumbing** - Currently offered at Pensacola State College. 3 different occupations and 3 potential program.	
Insurance - Unique opportunity to leverage local cluster. Potential for job seekers and employers, with opportunity for future career paths. 4 occupations and 3 potential programs.		
Banking Services - Unique opportunity to leverage local cluster. Potential for job seekers and employers, with opportunity for future career paths (3+3). 5 occupations and 1 potential program.		