



2023 Growth and Diversification Plan Review

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I. 2023 Priority Targeted Industry Sectors

Sector	NAICS Code
Controlled Environment Agriculture*	111400, 112500, 115000
Business Services	541110 – 561422
Agriculture and Food Processing	311111 – 312140
Energy, Natural Resources, and Finished Products	212111 – 337910 541360 – 541620
Health Care Services	621991 – 622310
Information Technology and Communications Services	511210 – 541519
Advanced Manufacturing and Advanced Materials	313110 – 399999

*New Priority Cluster – Controlled Environment Agriculture (CEA)

Institute for Advanced Learning and Research/GO Virginia Controlled Environment Agriculture Strategy and Roadmap (9.2023)

Controlled Environment Agriculture (CEA) uses technology and automation to enhance indoor growing conditions for crops, fish, and related products.

The CEA industry is relatively new and still developing compared to long-established industry sectors like manufacturing, electronics, logistics, information technology, and healthcare. Accordingly, finding accurate, timely, and detailed data and metrics for the CEA industry is challenging. One challenge is that the industry's unique nature makes it difficult to frame industry activity and employment based on established industry codes (NAICS_North American Industry Code System) and occupation codes (SOC_Standard Occupation Codes). No existing NAICS or SOC code fully captures this industry's types of businesses and jobs.

In response, Region 3 staff relied upon professional judgment in the CEA Strategy and Roadmap prepared by the Virginia Tech Center for Economic and Community Engagement to select codes most relevant to the industry. Furthermore, many businesses in this industry are starting to emerge, operating on a small scale, making them difficult to identify and track. Regardless, efforts to analyze the industry presence in Region 3 and the state have been guided by professional judgment and takeaways from interviews with CEA industry representatives.

The industry codes added to the table above were selected to estimate CEA-related employment best and prevent the exclusion of essential industries and businesses that contribute to CEA. These include, for example:

- crop production
- animal production and aquaculture (indoor fishery and aquaponics activity)
- machinery manufacturing (value chain manufacturing of grow systems, lighting, irrigation and pump systems, electrical, etc.)
- computer, robotic, and electronic product manufacturing
- sensor or microchip production (automation and coding of environmental control processes in CEA production)

II. State of the Region 3 Economy

For 2023, the Region 3 economy has not materially changed from the metrics presented in the 2021 Growth and Diversification Plan. Longwood University's Office of Community and Economic Development was engaged to update the 2021 report. Jennifer Cox, Director of Local and Community Relations at Longwood University, prepared the Performance of the Region 3 Economy for the 2023 Growth and Diversification Plan review.

The economic data collected and analyzed include the following items:

- employment and wage growth across all Region 3 industry sectors
- employment and wage growth in Region 3 targeted traded industry sectors
- economic development announcements (new and expanding businesses)
- situational analysis (SWOT) of targeted industry-traded sectors
- identification and recommendation of broadening current targeted sectors, which incorporates existing targeted sectors)
- workforce gaps of immediately employable talent in the targeted sectors/clusters

Exhibit 1 - Performance of the Region 3 Economy (10.9.23)

III. Talent Pathways Initiative Alignment

The GO Virginia State Board established a program in late 2022 for a new "talent pathways" planning initiative "...to foster collaboration between business and education to meet workforce needs by developing, retaining, and attracting talent to the Commonwealth to meet the needs of Virginia businesses."

Each regional council is to identify a targeted industry or industries to analyze, develop, and provide startup funding for a talent pathway that supports sustained economic growth and talent development and retention in the state.

GO TEC has been developed, launched, and maintained by the Institute for Advanced Learning and Research and is considered a best-in-class *talent pathway* among GO Virginia's nine (9) regions. This recognition is evidenced by GO TEC currently being implemented and scaled in GO Virginia Regions 1 (Southwest), 6 (Richmond-Petersburg), and 5 (Hampton Roads)

The GO TEC model focuses on experiential learning and skill acquisition from middle school to high school to community college to meet local business needs. Because of this longitudinal approach among a coalition of educational and business stakeholders, it is ready-made as Region 3's preferred and proven *talent pathway*.

The Region 3 Council has identified healthcare workforce development as readily aligned with the GO TEC *talent pathway*. Further, Controlled Environment Agriculture will be another *talent pathway* priority for implementation by GO TEC. Moreover, the GO TEC model will allow all of Region 3's targeted industry sectors to benefit from *talent pathways* funding.

Exhibit 2 - Schematic of Region 3 Talent Pathway GO TEC

IV. Region 3 Goals, Strategies, and Implementation Mechanisms for Target Industries

Exhibit 3 – Goals, Strategies, and Implementation Mechanisms for Targeted Industries

V. Region 3 Growth and Diversification Plan Alignment with Project Development

The Region 3 Growth and Diversification Plan is referenced for all projects brought forward to the Region 3 Council. Each project must be aligned with the Growth and Diversification Plan before proceeding through the project development process. The type and character of that alignment are highlighted in the reports prepared for the Project Review Committee and the Region 3 Council or the Region 3 Executive Committee.

The 2023 Growth and Diversification Plan Review will not affect project development since the 2021 plan's targeted traded-sector industries and its goals, objectives, and strategies remain in place. Projects for the Controlled Environment Agriculture sector will now be pursued because of its inclusion in the 2023 plan review.

VI. 2023 Growth and Diversification Plan Review Process

The 2023 Growth and Diversification Plan review was prepared by GO Virginia Region 3 staff with input from an ad hoc workgroup of Region 3 Council members. The Region 3 Executive Committee and the Region 3 Council were regularly apprised of the plan review throughout 2023. The Region 3 Council approved the 2023 Growth and Diversification Plan review on October 18, 2023.

Because of the time and expense, the stakeholder and allied group survey was not used for the 2023 review. Also, the detailed stakeholder input given in 2021 has likely not changed in two (2) years, given the ongoing interaction with these stakeholders and allied groups by the Region 3 Council and staff.

EXHIBIT 1

Performance of the Region 3 Economy

Prepared by the Office of Community & Economic
Development

Jennifer Cox
Director of Local & Community Relations



REGION 3 ECONOMIC PERFORMANCE AND SKILLS GAP ASSESSMENT

EXECUTIVE SUMMARY

This Economic Performance and Skills Gap Analysis, completed by the Office of Community and Economic Development at Longwood University, is provided for the Southern Virginia Region 3 Council as part of the GO Virginia Growth & Diversification Plan, for submission to the Virginia Department of Housing & Community Development. The analysis is intended to provide insight and direction to both the Regional Council and stakeholders with the region's status (historical, current, and forecasted) in:

- Employment growth across all sectors (Pg. 3)
- Wage growth across all sectors (Pg. 4)
- Employment growth in targeted traded industry sectors (Pg. 7)
- Wage growth in targeted traded industry sectors
- Wage growth in targeted traded industry sectors (Pg. 13)
- New business formation activity (source: RISE Collaborative) (Pg. 15)
- Economic development announcements for new and expanding businesses (Pg17)
- Situational analysis (SWOT) of targeted industry traded sectors (Pg. 19)
- Identification and recommendation of broadening current targeted sectors (incorporates existing targeted sectors) (Pg. 25)
- Workforce Gaps of Immediately Employable Talent in the Targeted Sectors/Clusters (Pg. 26)
- Summary Conclusions for GO Virginia Region 3 Growth & Diversification Plan Update 2023 (Pg. 29)

Employment Growth across All Sectors

As an update to the previous report, employment for the region from JobsEQ 2023Q1 data saw an increase in employment (0.84%) and an increase in annual wages (19.54%) compared to 2020Q3 datasets.

		2023 - Q1			2020 - Q3		
NAICS	Industry	Employment	Average Annual Wages	LQ	Employment	Average Annual Wages	LQ
	Total - All Industries	129,135	\$43,408	1.00	128,053	\$36,308	1.00

		2023 - Q1 5 Year History			2020 - Q3 5 Year History		
NAICS	Industry	Employment Change	Annual %		Employment Change	Annual %	
	Total - All Industries	-5,547	-0.8%		-6,703	-1.00%	

However, looking at the employment change forecasted for the next two years and the next five years, that attrition is expected to slow, at a change of -0.7% and -1,825 nominal value over two years and -4,513 nominal value over five years. This result is illustrative that the region's employment is improving and trending toward breakeven and positive employment growth.

2-Year Forecast				
Total Demand	Exits	Transfers	Employment Growth	Annual %Growth
27,537	12,495	16,866	-1,825	-0.7%
5-Year Forecast				
Total Demand	Exits	Transfers	Employment Growth	Annual %Growth
68,696	31,156	42,053	-4,513	-0.7%

Wage Growth across All Sectors (By Region)

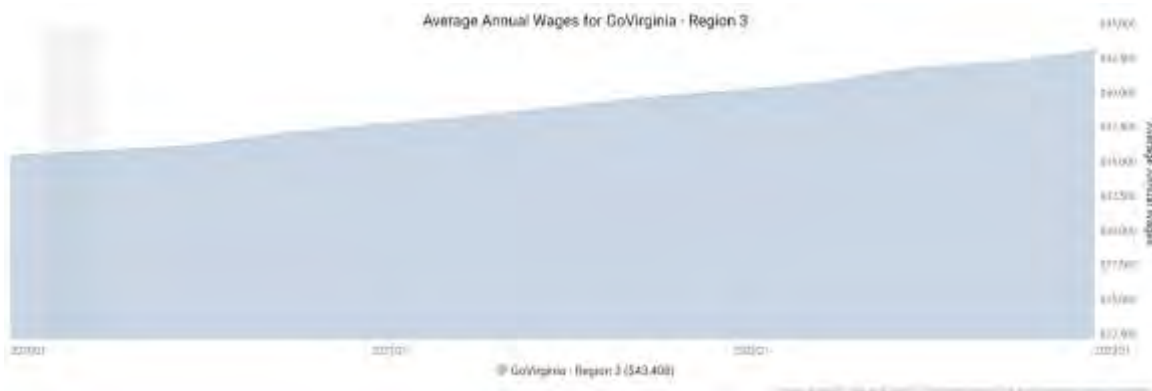
Regions	2021 Q1 Average Annual Wages	2022 Q1 Average Annual Wages	2023 Q1 Average Annual Wages	Growth Rate (% increase) from 2021Q1 to 2023 Q1
1	\$37,080	\$39,492	\$42,517	14.66%
2	\$46,516	\$49,183	\$51,842	11.45%
3	\$38,001	\$40,471	\$43,408	14.23%
4	\$58,449	\$61,813	\$64,411	10.20%
5	\$52,092	\$54,600	\$57,128	9.66%
6	\$51,137	\$52,865	\$55,136	7.82%
7	\$85,852	\$88,530	\$91,426	6.49%
8	\$45,900	\$48,478	\$50,696	10.45%
9	\$54,273	\$56,783	\$59,499	9.63%
Virginia	\$63,745	\$66,870	\$69,733	9.39%

Wage Growth across All Sectors (By 2023 Q1 Average Annual Wages)

Regions	2021 Q1 Average Annual Wages	2022 Q1 Average Annual Wages	2023 Q1 Average Annual Wages	Growth Rate (% increase) from 2021Q1 to 2023 Q1
7	\$85,852	\$88,530	\$91,426	6.49%
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Wage Growth across All Sectors (By % Increase 2021 to 2023)

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Observing the tables above, GOVAR3 has shown positive average annual wage increases from 2021 Q1 to 2023 Q1. This is also true for the entirety of Virginia, as each of the other regions highlight positive growth rates. However, it is important to note that while the growth rate is 2nd highest of all the regions, this can be contributed to lower annual wages compared to most of the other regions.

GO Virginia Region	2023 Q1 Regional Average Annual Wage	PDC Name	2023 Q1 Sub Regional Average Annual Wages
3	\$43,408	West Piedmont PDC	\$42,551
		Southside PDC	\$44,074
		Commonwealth RC	\$44,933

Referencing the table above, the sub regional average annual wages for 2023 Q1 are within close proximity to each other (~1.9% difference) for the Southside PDC and Commonwealth RC; however, there is a 5.44% disparity in wages between the West Piedmont PDC region and the Commonwealth RC. The wage differences are on trend with the previous report.

Employment Growth in Targeted Traded Industry Sectors

IBISWorld Q42022 Executive Summary (Wood Product Manufacturing)

The Wood Product Manufacturing industry produces a diverse range of wood products, including wood ladders, cabinets, toothpicks, wood flour and kiln-dried lumber, among others. The construction sector is the industry's largest source of demand and as a result, operators have benefited going into 2022 from strong growth in housing starts and consumer spending, boosting demand from households for other wood products. However, the current performance of the Wood Product Manufacturing industry is strong, but is projected to experience a slight decline in 2023. This is due to the former economic effects of the COVID-19 pandemic and the rising potential of a recession. Over the past five years, total revenue has been decreasing at a CAGR of 0.3% to an estimated \$6.8 billion, including a decrease of 6.0% in 2023 alone.



A decrease in the residential construction market has continued declines first caused by the COVID-19 pandemic. Additionally, historically high interest rates have further decentered construction activity, leading to decreased demand for miscellaneous architectural products. Similarly, consumer spending faltered in 2020, temporarily decreasing revenue sourced from miscellaneous retail and consumer wood products. Moreover, a surge in the price of sawmill lumber, a primary input cost, is causing profit to contract during the period.

The value of residential construction is expected to increase, helping demand from one of the industry's key markets. Moreover, due to an anticipated devaluation of the US dollar, industry exports are expected to increase as foreign demand for wood pellets used for renewable energy wanes. However, increases in consumer spending will likely partially sustain industry demand. Ultimately, industry revenue is expected to increase at a CAGR of 0.7% to \$7.0 billion over the next five years.

Agribusiness

IBISWorld Q42022 Executive Summary

Agribusiness includes the production, wholesale and processing levels of the food supply chain to the point of retail sale. Businesses in the industry include meat processors, grain wholesalers, agricultural machinery manufacturers and farmers. In recent years, COVID-19 caused revenue for the industry to decline, as spending on food away from home took a big hit. Despite this, agribusinesses benefited from the fact that grocery spending was still strong. The recovery from the pandemic created supply chain disruptions and excess demand, which resulted in high agricultural prices, boosting revenue. The relaxation of pandemic restrictions also made more people eat out, creating another source of income for agribusinesses.



Despite these positive trends, the industry faces major threats from rising interest rates, which has made the cost of borrowing for new food processing plants and farm equipment more expensive, causing revenue to drop in 2022 and 2023. International markets have also disrupted agribusinesses, as trade wars and the appreciating dollar has caused exports and revenue to fall. Overall, revenue for agribusiness has declined at a CAGR of 0.7% over the past five years, reaching \$4.1 trillion in 2023. Revenue will creep downward 1.9% in that year.

The near future looks more optimistic for agribusinesses. The growing economy will result in rising incomes, raising spending on agricultural products and boosting revenue. The dollar will also depreciate, causing a boom in exports and reviving international markets. Biofuels are forecasted to become more important, as concerns about climate change will increase their production. Since biofuels are made from crops, more investment in them will benefit the industry. Agricultural prices will decline modestly, so this will dampen the performance of agribusinesses somewhat. Overall, revenue for agribusiness will rise at a CAGR of 0.5% during the outlook period, reaching \$4.2 trillion in 2028. Profit will remain steady, comprising 4.8% of revenue in 2028.

Healthcare

IBISWorld Q42022 Executive Summary

The Healthcare and Social Assistance sector has steadily grown over the five years to 2022. The majority of services offered by subsectors in the industry, which includes hospitals, ambulatory healthcare services, residential care facilities and social assistance services, experienced steady demand during the five-year period, driven by demographic changes and rising health expenditure. At the same time, many health providers have had to adjust to a complex and changing regulatory environment. Past and future changes to the Patient Protection and Affordable Care Act will continue to have profound effects on operators in the sector. More recently, the industry experienced a demand shift as the COVID-19 (coronavirus) pandemic overwhelmed hospitals while causing non-essential healthcare services to be postponed. Though pandemic concerns have alleviated more broadly, the long-term effects of the coronavirus continue to shape and define this industry.



Rising health expenditure and federal funding for Medicare and Medicaid were the principal drivers of sector revenue during the current period. Total health expenditure, which measures private and public spending on health, grew an annualized 2.8% to \$3.7 trillion over the five years to 2022, according to IBISWorld estimates. In addition, federal funding for Medicare and Medicaid grew substantially at an annualized rate of 4.4% during the same period. Accordingly, industry profit increased slightly from 9.9% of revenue in 2017 to 10.4% in 2022. Thus, IBISWorld estimates revenue for the Healthcare and Social Assistance sector to rise over the five years to 2022, increasing an annualized 2.5% to \$3.3 trillion, growing an estimated 1.3% by year-end 2022.

Over the five years to 2027, sector revenue is forecast to continue rising. Spending on sector services is expected to be driven by aging and growing populations, which will require more health services from the nursing and residential care facilities subsector, in particular. Expanded federal funding for Medicaid and Medicare also reflects this shift. In addition, federal funding allocated for the sector is expected to target rural areas and the growing unmet need for mental health and substance abuse treatment. Rising demand, however, will be met with labor shortages, placing an upward pressure on wage growth and constraining growth in profit. In all, sector revenue is estimated to expand an annualized 2.8% to \$3.8 trillion during the five-year period to 2027.

Advanced Manufacturing & Materials

IBISWorld Q42022 Executive Summary

The Manufacturing sector has been experiencing a revenue decline at a CAGR of 0.4% to \$7.0 trillion over the past five years, including an estimated 2.0% decline in 2023, while profit is projected to fall to 8.0%. The outbreak of COVID-19 had a negative effect on the sector, but it recovered with the rollout of vaccines and stimulus money in 2021. In 2022, revenue continued to grow, but at a slower rate, driven by a favorable international trade climate and growth in the US GDP. However, manufacturing revenue is forecast to decline in 2023 because of rising interest rates and high uncertainty. The sector remains

vital to the US economy, but its importance has been declining as the economy becomes more service-oriented and manufacturers offshore production to countries with lower labor costs.

Wholesalers, retailers and construction companies are some of the key markets for manufacturers. These markets have been affected by the COVID-19 pandemic in different ways. For example, wholesalers' demand for manufactured goods declined following the outbreak of COVID-19, but recovered in 2021 and stayed strong in 2022. Retailers continued to purchase manufactured goods in 2020 despite the pandemic, with demand from retailers remaining strong in the following years. Demand from other manufacturers fluctuated largely in line with the economy, declining in 2020 and rebounding in the second half of the current period.

Over the next five years, the Manufacturing sector is expected to see growth, with revenue increasing at a CAGR of 1.6% to reach \$7.6 trillion. This growth is expected to be driven by an increase in the overall economy and a decline in the value of the US dollar, which will make US-manufactured goods more affordable for foreign markets. Profit, measured as earnings before interest and taxes, for the sector, is also forecast to increase to 8.4%. Manufacturers will likely continue to integrate advanced technologies to improve efficiency and supply chain resilience.



Business Services & IT Data

IBISWorld Q42022 Executive Summary

In recent years, consumer spending and business investment growth drove growth for the sector. The sector even grew in 2020 amid the outbreak of COVID-19. Demand for architects, engineers, lawyers and interior designers surged alongside a booming housing market. Advertisers enjoyed heightened demand in 2020 as companies demanded COVID-19-focused advertising campaigns. Sector-wide revenue has been growing at a CAGR of 3.6% over the past five years and is expected to total \$3.1 trillion in 2023, when revenue will increase by an estimated 0.3%.



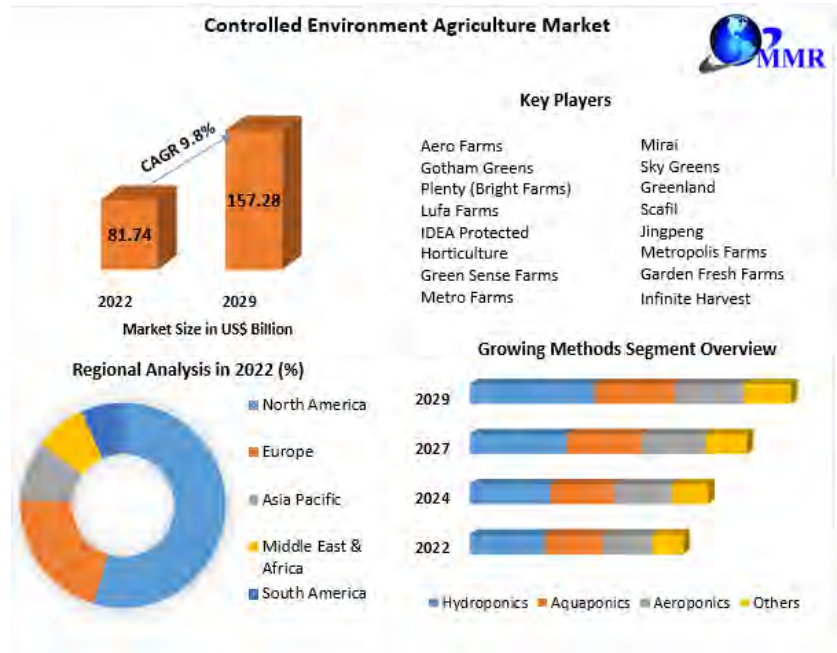
The sector has been highly affected by the rise in cloud computing and data analytics, prompting downstream businesses to hire consultants to upgrade outdated systems. Demand for these services has driven growth for IT consultants and management consultants. IT systems have become more prevalent amid the coronavirus pandemic and remote work conditions. Digital media has continued to shake up industries offering advertising-related services.

Sector revenue is forecast to grow at a CAGR of 1.4% through the end of 2028 to total \$3.3 trillion. The sector will benefit from consumer spending and corporate profit growth. The recently passed infrastructure bill will provide a source of consistent demand for engineers, architects and scientific and economic consultants in the next few years. Ongoing trends in technology change, globalization and environmental needs will drive substantial demand for many industries in the sector. Sector profit will creep downward as wage costs rise.

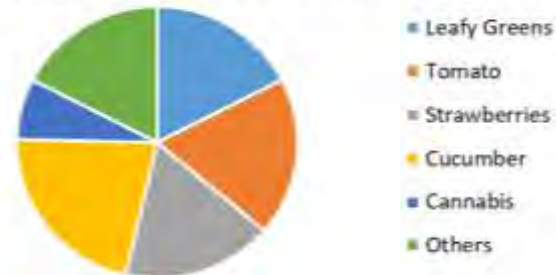
Controlled Environment Agriculture Executive Summary

Controlled environment agriculture is an emerging industry. As such, there are no dedicated NAICS codes. Current best practices include utilizing higher-level NAICS codes to encompass the variety of specialties under the CEA umbrella. Some industries could include 1114 (Greenhouse, Nursery, and Floriculture Production) and 1151 (Support Activities for Crop Production).

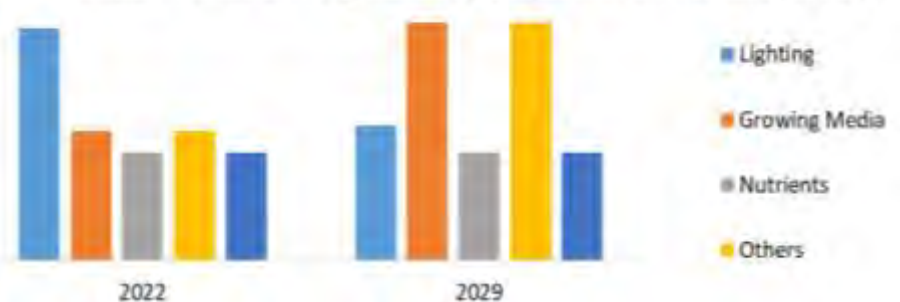
Controlled Environment Agriculture Market was valued at US\$ 81.74 Bn. in 2022 and is estimated to reach a value of US\$ 157.28 Bn. in 2029. The Global Controlled Environment Agriculture Market size is estimated to grow at a CAGR of 9.8% over the forecast period.



Controlled Environment Agriculture Market, by Crop Outlook 2022 (%)



Controlled Environment Agriculture by Components, 2022 Vs 2029 (US\$ Bn)



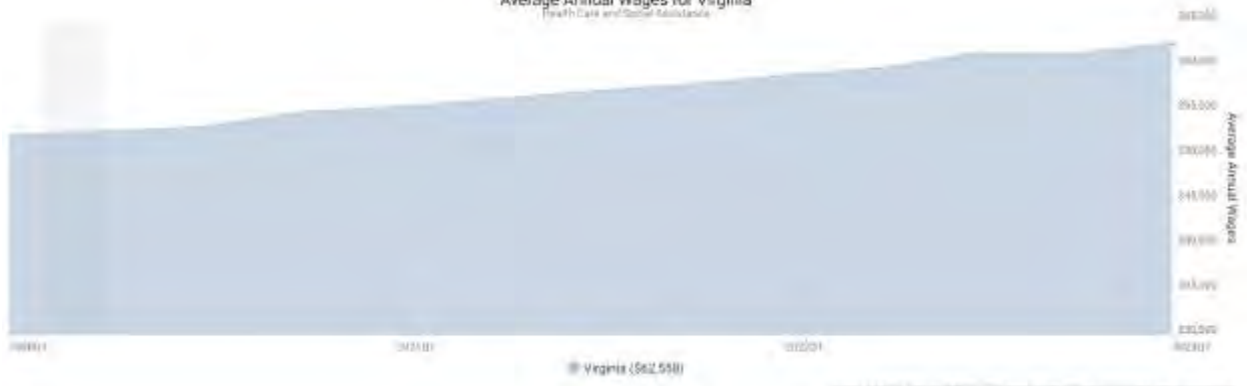
[Source: Controlled Environment Agriculture Market – Global Industry Analysis and Forecast \(2023 to 2029\)](#)

Wage Growth in Targeted Traded Industry Sectors in Virginia

Industry	Year	Average Wage	Growth Rate
HVNRP	2021	\$45,207	20.50%
	2022	\$50,375	
	2023	\$54,477	
Healthcare	2021	\$55,438	12.84%
	2022	\$58,930	
	2023	\$62,558	
Adv. Manu. & Materials	2021	\$64,101	8.29%
	2022	\$66,492	
	2023	\$69,421	
Business Services & IT	2021	\$111,013	8.29%
	2022	\$116,507	
	2023	\$121,586	
Controlled Environmental Agriculture	2021	TBD	N/A
	2022	TBD	
	2023	TBD	

Although wages are trending upwards across the target sectors for the state. Based on the above table, it is evident that high levels growth have started to rebound post-2020. The below charts show wage growth by sector.

Average Annual Wages for Virginia
Health Care and Social Assistance



Average Annual Wages for Virginia
Manufacturing



Average Annual Wages for Virginia
Wood Product Manufacturing





New Business Formation Activity (Source: RISE Collaborative)

RISE Collaborative was created in 2021 to drive the development of a more inclusive and vibrant regional economy in which makers, entrepreneurs, innovators, and service providers interact organically and collaboratively. Specifically, Region 3 has supported the work of the collaborative through a grant to support and uplift the entrepreneurial ecosystem.

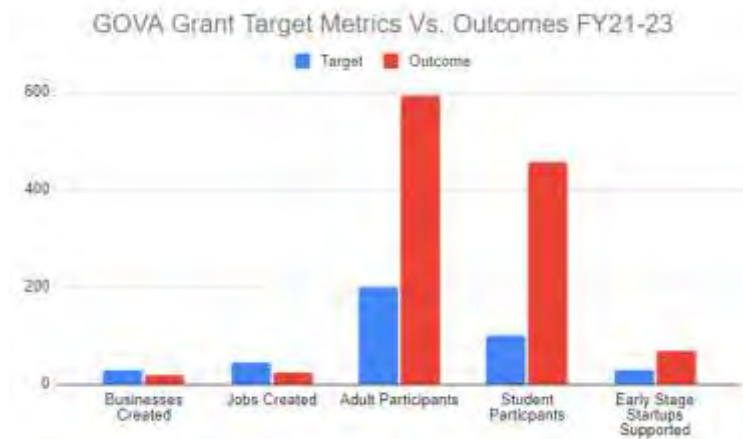
Southern Virginia Regional Ecosystem

- Entrepreneur Resources
- SOVA Innovation Hub
- SEED Innovation Hub
- Dan River Region Entrepreneur Ecosystem
- Henry County/Martinsville Ecosystem
- Patrick County Ecosystem
- South Hill/Mecklenburg Ecosystem
- Brunswick County Ecosystem
- West Piedmont Planning District Commission
- Southside Planning District Commission
- Commonwealth Regional Council
- GO Virginia Region 3
- VTRRC Counties Not in Region 3



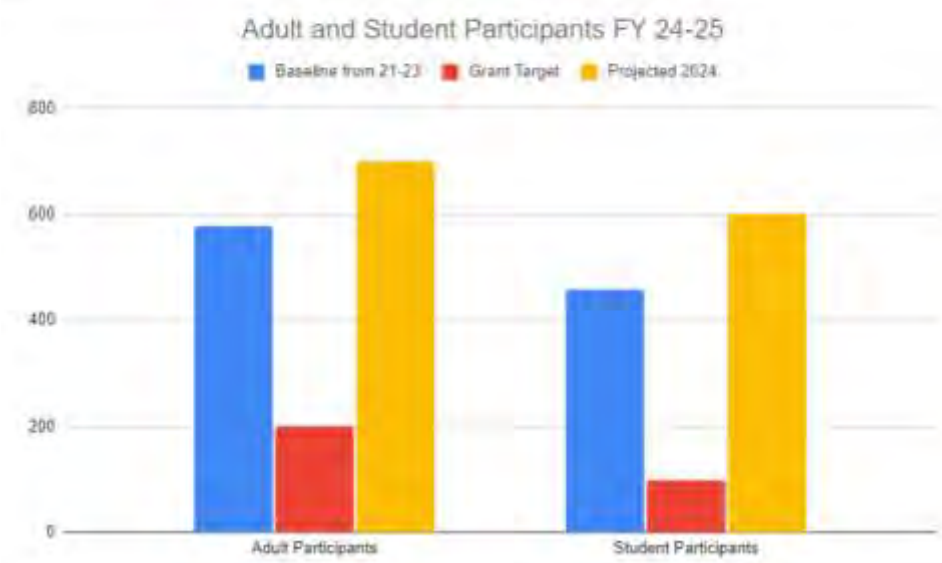
The grant outcomes from FY21-FY23 include 20 businesses created, 24 jobs created, and early stage startup support for 70 startups.

A	B	C	D	E	F
	Businesses Created	Jobs Created	Adult Participants	Student Participants	Early Stage Startups Supported
Target	30	45	200	100	30
Outcome	20	24	593	458	70
% difference	66.67%	53.33%	289.00%	458.00%	233.33%



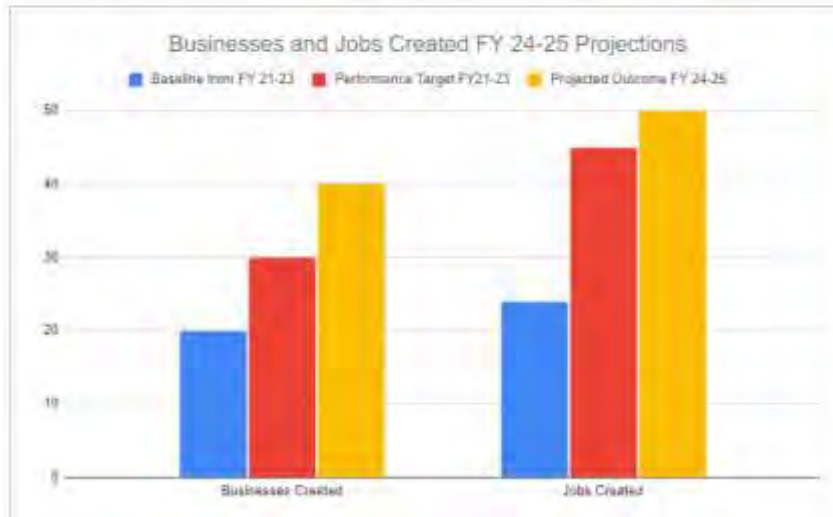
In addition to the metrics noted above, it is worth highlighting that participation (in the form of entrepreneurship courses and summits) have significantly increased the number of adults and students in Region 3 who are aware of the resources to support their entrepreneurial journey and the and networking opportunities available.

	Adult Participant	Student Participants	Early Stage Startups Supported
Baseline from 21-23	578	458	70
Grant Target	200	100	30
Projected Outcome	700	600	100
% exceed target	350%	600%	333%



The FY24-FY25 projections show a continued increase in both business created and the jobs created.

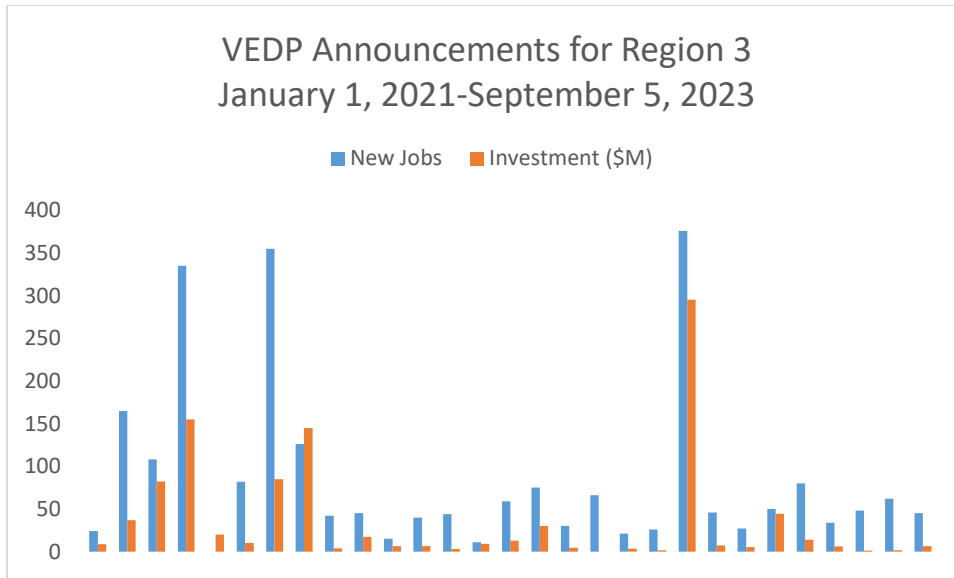
	Businesses Created	Jobs Created	Adult Participants	Student Participants	Early Stage Startups Supported
YTD from FY21-23	20	24	578	458	70
Performance Target FY21-23	30	46	200	100	30
Projected Outcome	40	50	700	600	100
% exceed target	133%	111%	350%	600%	333%



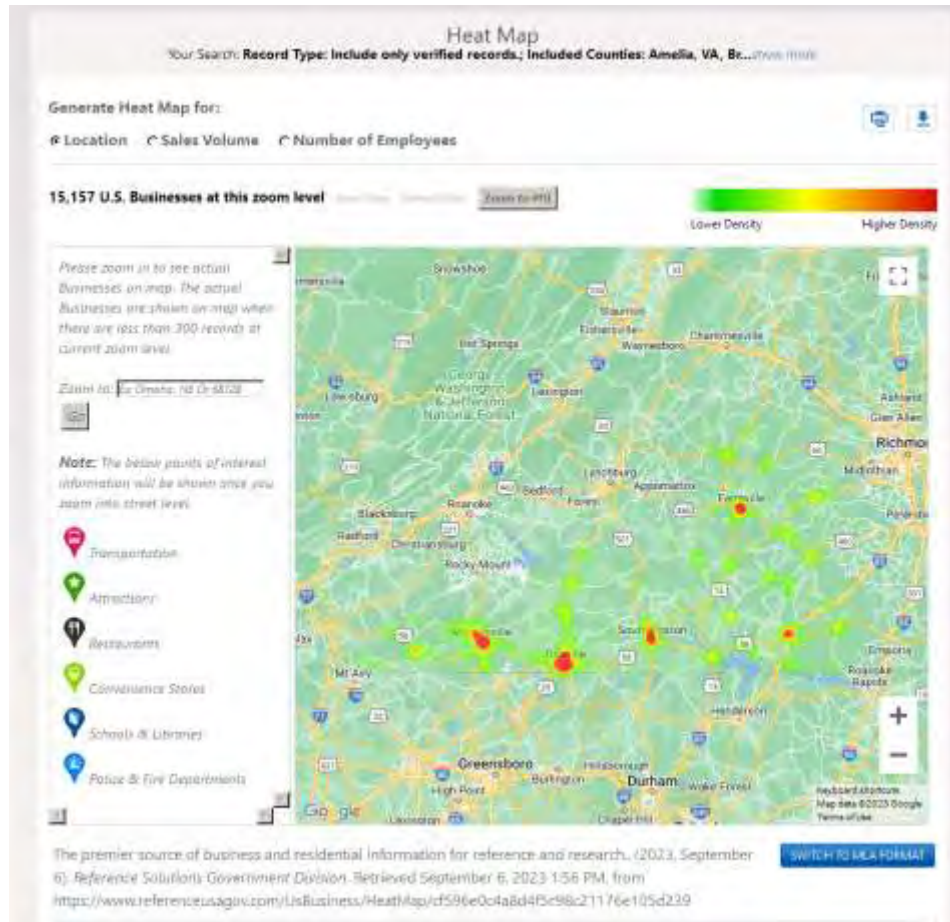
Economic Development Announcements (New and Expanding Businesses)

(Source: VEDP Website)

When looking VEDP announcements compiled from January 1, 2021-September 5, 2023 there were 29 announcements made. Of those 29 announcements 21 pertained to Manufacturing which represents ~72% of total investment within all of GOVA Region 3, be it new or expanding operations.



It is worth noting that the VEDP announcements (29) represents a miniscule percent (0.01%) of business activity within the region, according to cross referencing a dataset from Data Axle/ReferenceUSA; which includes verified U.S. historical businesses in Region 3 (15,157 total businesses).



Situational Analysis (SWOT) of Targeted Industry Traded Sectors

High Value Natural Resource Products – *Wood Product Manufacturing*

Highlights/Key Trends:

- The ability of a corporation to control input and operating expenses has a direct effect on industry profitability
- The United States is a net importer of various wood products
- Industry exports have increased in value
- Demand for home furnishings and architectural items will likely be hampered by the greater contraction of the residential sector
- Manufacturers of domestic wood products will certainly face competition from substitute materials
- The European Union's renewable fuel standards will probably continue to sustain stable export demand
- Resurgence in the residential construction market has offset more substantial declines



High Value Natural Resource Products – Agribusiness

Highlights/Key Trends:

- Trade tensions with China have limited revenue growth
- The recovery from the pandemic resulted in a surge in revenue
- The significant appreciation of the US dollar has made US agricultural products less competitive
- Profit will remain steady
- Exports will be strengthened by the appreciating US dollar
- Demand for agricultural products will remain strong
- The industry faces threats from the fluctuating US dollar, the pandemic, rising interest rates and high gas prices

Industry Structure

POSITIVE IMPACT

- Industry Assistance: High / Steady
- Concentration: Low

MIXED IMPACT

- Life Cycle: Mature
- Revenue Volatility: Medium
- Capital Intensity: Medium
- Technology Change: Medium
- Barriers to Entry: Medium / Steady
- Industry Globalization: Medium / Increasing
- Competition: Medium / Steady

NEGATIVE IMPACT

- Regulation & Policy: Heavy / Steady

SWOT in the Industry

STRENGTHS

- Low Volatility
- Low Customer Class Concentration
- Low Product/Service Concentration
- High Revenue per Employee

WEAKNESSES

- Low & Steady Barriers to Entry
- Medium & Decreasing Level of Assistance
- Medium Imports
- Low Profit vs. Sector Average
- High Capital Requirements

OPPORTUNITIES

- Population

THREATS

- Low Revenue Growth (2005-2023)
- Low Revenue Growth (2018-2023)
- Low Outlier Growth
- Low Revenue Growth (2023-2028)
- Low Performance Drivers

Trade-weighted index

Healthcare

Highlights/Key Trends:

- Spending on healthcare and social assistance providers will not slow in the coming years.
- Providers will contend with the drop-offs in federal programs related to COVID-19, but demographic and economic forces will continue driving healthcare consumption.
- Healthcare and social assistance providers will be increasingly vital in meeting an aging population's complex medical and societal needs.
- As Medicare enrollment expands, healthcare providers will become more reliant on these reimbursements as a revenue source. , private insurers will remain the top payer.
- COVID-19 exacerbated staffing shortages predating the pandemic. Staffing shortages and employee burnout will continue challenging healthcare and social assistance providers.
- Healthcare providers will permanently pay more for pharmaceuticals and labor. Rising drug costs will be the main factor driving costs upward for providers.
- Tech advances can potentially transform every aspect of healthcare and social assistance delivery. Providers will hasten their adoption of digital tools, yet higher capital costs could slow the pace of a digital transformation for many.
- Many healthcare and social assistance providers will adopt digital and telehealth tools to bridge the gap between urban and rural communities regarding healthcare access. Grants awarded by the Biden Administration will help rural healthcare organizations expand critical services through digital tools.
- Consolidation activity defining the health sector will continue despite a higher interest rate environment.



Advanced Manufacturing & Materials

Highlights/Key Trends:

- The outbreak of COVID-19 has had a negative effect on the Manufacturing sector
- The US economy has continued to become increasingly service-oriented, contributing to the declining role of the sector
- A substantial portion of the variance in the value of exports is explained by the strength of the US dollar
- Despite high uncertainty in 2023, US GDP is expected to grow over the next five years
- Over the next five years, the value of exports will likely increase at a faster rate than revenue
- More manufacturers will continue to invest in additive manufacturing to make the supply chain more resilient
- Wholesalers, retailers and construction companies are some of the key markets for manufacturers



Highlights/Key Trends:

- Growing consumer spending and corporate profit will likely benefit some subsectors
- Fluctuations in the level of residential and nonresidential construction activity also influence sector demand
- Investment in technology is expected to increase in 2023
- Sector profit is expected to marginally decrease during the outlook period
- Increased advertising expenditure will likely stem from demand for online advertising services
- This sector will experience an increasing number of enterprises
- Increasing consumer spending and business investment drove revenue growth



Controlled Environment Agriculture*

Strengths:

- Extensive knowledge, R&D Assets, and track-record of technical assistance
- Existing industry presence and agricultural heritage
- Progress in entrepreneurial, small business, and existing agricultural producer support
- High site availability suitable for CEA
- Coordinated workforce and talent programs and relevant credentialing
- Strong coordinated statewide support

Weaknesses:

- Limited awareness, knowledge and understanding of CEA
- Some gaps in entrepreneurial support
- Limited prepared sites
- Workforce and talent attraction limitations

Opportunities:

- Positive growth trajectory due to demand
- Industry sustainability and resilience due to predictability and reliability
- Positive for promoting resilient food systems for local communities
- Alignment with entrepreneurship and potential for new allied support industries
- Good jobs for workforce and talent

Threats:

- Nascent industry status
- Limited economies of scale at present
- Lack of public awareness and understanding
- Industry sustainability and resilience due to predictability and reliability
- Positive for promoting resilient food systems for local communities
- Alignment with entrepreneurship and potential for new allied support industries
- Good jobs for workforce and talent

*SWOT Analysis from Controlled Environment Agriculture Strategy and Roadmap in GO Virginia Region 3 by the Virginia Tech Center for Economic and Community Engagement

Identification and Recommendation of Broadening Current Targeted Sectors (Incorporates Existing Targeted Sectors)

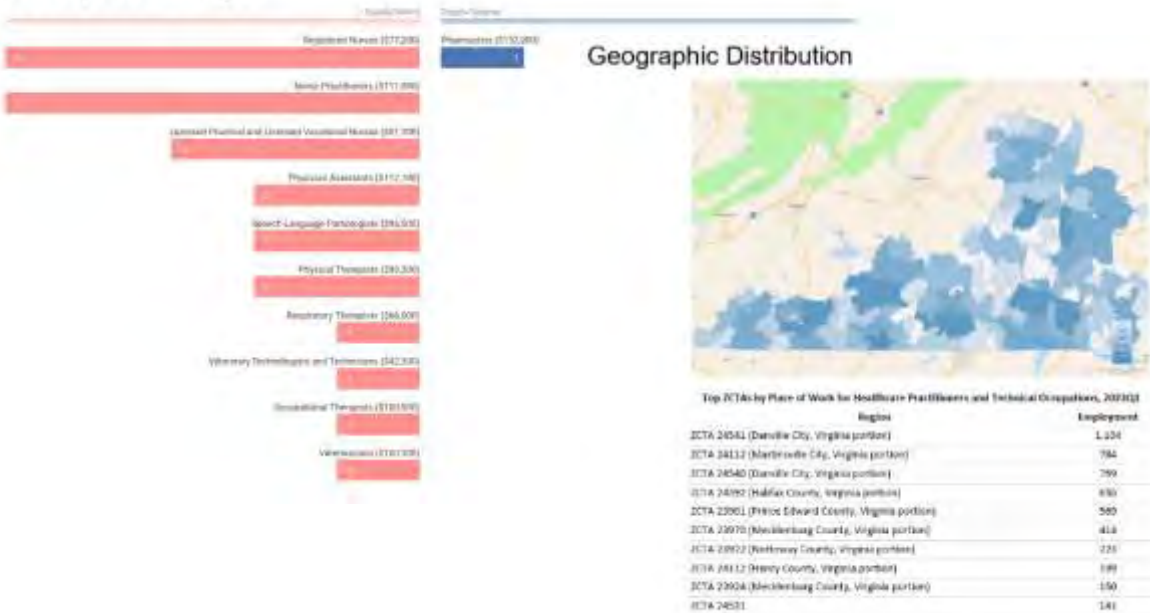
- **Intention needs to be placed around supporting emerging opportunities for the region**
 - Controlled environmental agriculture already has a footing in Region 3 and there are opportunities to capitalize off this emerging industry
 - Other environmental technologies
 - Ag-based products (hemp)
 - Drone & Autonomous vehicle technology
- **Encompassing the current target sectors is still important.**
 - The current targeted sectors, especially HVNRP, have a significant concentration of talent and should be taken advantage of within the region.
- In 2021 two additional recommendations were made that are still important to consider in 2023:
 - Redefining target sector definitions/protocols to cast a wider net would be beneficial.
 - An “emerging industries” R&D process/committee could to developed and incorporated to examine ongoing opportunities.

Workforce Gaps of Immediately Employable Talent in the Targeted Sectors/Clusters(Source: JobsEQ)

Healthcare

- A JobsEQ snapshot of occupation gaps for healthcare shows a supply deficit for most occupations with the greatest deficit for RNs and NPs.

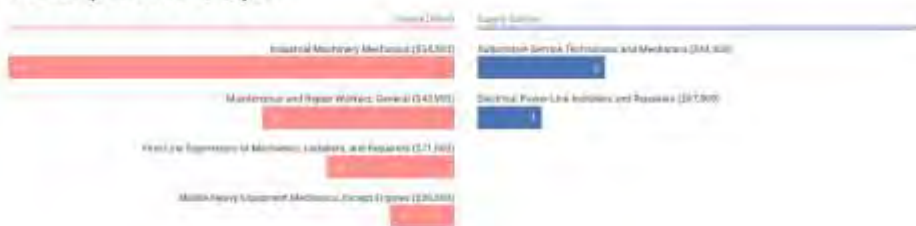
Occupation Gaps



Advanced Manufacturing

- A JobsEQ snapshot of occupation gaps for advanced manufacturing shows a supply deficit for mechanics and general maintenance and repair workers.

Occupation Gaps



High Value Natural Resource Products

- A JobsEQ snapshot of occupation gaps for high value natural resources shows a supply deficit for woodworking machine setters and first-line supervisors.

Geographic Distribution



Top 20774 by Place of Work for Installation, Maintenance, and Repair Occupations, 2019Q2

Region	Employment
CTIA 22341 (Spotsylvania Co., Virginia part)	619
CTIA 22342 (Stafford Co., Virginia part)	609
CTIA 22343 (Stafford Co., Virginia part)	426
CTIA 22327 (Prince George County, Virginia part)	387
CTIA 22322 (Stafford Co., Virginia part)	353
CTIA 22321 (Stafford Co., Virginia part)	279
CTIA 22340	247
CTIA 22321 (Stafford Co., Virginia part)	223

Occupation Gaps



Geographic Distribution



Top 20 ZCTAs by Place of Work for Production Occupations, 2023Q1

Region	Employment
ZCTA 24541 (Danville City, Virginia portion)	1,778
ZCTA 24112 (Henry County, Virginia portion)	1,303
ZCTA 24540 (Danville City, Virginia portion)	966
ZCTA 24592 (Halifax County, Virginia portion)	943
ZCTA 24112 (Martinsville City, Virginia portion)	770
ZCTA 24148	587
ZCTA 24540 (Pittsylvania County, Virginia portion)	406
ZCTA 23970 (Mecklenburg County, Virginia portion)	372
ZCTA 24531	362
ZCTA 24089	312

Business Services & IT Data

- A JobsEQ snapshot of occupation gaps for business services & IT data shows a supply deficit for business analysts, logisticians, and specialists.

Occupation Gaps



Geographic Distribution



Top ZCTAs by Place of Work for Business Operations Specialists, 2021Q1

ZCTA	Region	Employment
ZCTA 24541	(Danville City, Virginia portion)	450
ZCTA 24112	(Martinsville City, Virginia portion)	389
ZCTA 24112	(Henry County, Virginia portion)	319
ZCTA 24540	(Danville City, Virginia portion)	312
ZCTA 24552	(Halifax County, Virginia portion)	263
ZCTA 23901	(Prince Edward County, Virginia portion)	255
ZCTA 23970	(Mecklenburg County, Virginia portion)	165
ZCTA 24531		162
ZCTA 23824	(Nottoway County, Virginia portion)	153
ZCTA 23930		105

Overall

SOC	Occupation	CURRENT			5-YEAR HISTORY			5-YEAR FORECAST						
		Empl	Mean Ann Wages ²	LO	Unempl	Unempl Rate	Online Job Ads ³	Empl Change	Ann %	Total Demand	Exts	Transfers	Empl Growth	Ann % Growth
48-0000	Office and Administrative Support Occupations	13,299	\$19,600	0.83	521	3.2%	967	-1,661	-2.3%	3,863	2,023	2,474	-634	-1.6%
53-0000	Transportation and Material Moving Occupations	12,111	\$29,700	1.97	679	5.6%	676	94	0.2%	4,600	1,076	2,981	-227	-0.7%
41-0000	Sales and Related Occupations	11,880	\$42,900	2.87	666	4.7%	852	-1,115	-1.8%	4,076	2,033	2,553	-632	-1.6%
51-0000	Production Occupations	11,549	\$41,000	1.58	705	4.5%	238	-707	-1.2%	3,226	1,418	2,310	-302	-1.5%
35-0000	Food Preparation and Serving Related Occupations	9,492	\$29,700	0.52	779	3.4%	852	-459	-0.9%	5,309	2,459	2,851	0	0.0%
35-0000	Educational Instruction and Library Occupations	8,899	\$52,000	1.29	217	2.5%	397	-257	-0.8%	2,125	1,137	1,154	-166	-0.6%
31-0000	Healthcare Support Occupations	8,028	\$29,500	1.47	253	2.7%	268	173	0.4%	3,616	1,618	1,768	201	0.6%
11-0000	Management Occupations	7,800	\$94,800	0.89	109	1.4%	546	-48	-0.1%	1,867	848	1,172	-158	-0.7%
29-0000	Healthcare Practitioners and Technical Occupations	6,991	\$95,000	0.92	134	1.7%	1,912	-409	-1.3%	1,145	616	610	-81	-0.4%
13-0000	Business and Financial Operations Occupations	5,956	\$71,200	0.72	124	2.0%	330	629	2.3%	1,487	525	1,019	-88	-0.6%
47-0000	Construction and Extraction Occupations	5,622	\$46,300	0.36	427	4.3%	190	-117	-0.4%	1,490	368	1,254	-112	-0.7%
48-0000	Installation, Maintenance, and Repair Occupations	5,554	\$31,200	1.11	166	2.9%	489	-131	-0.4%	1,416	682	957	-129	-0.7%
37-0000	Building and Grounds Cleaning and Maintenance Occupations	4,716	\$31,700	1.81	325	5.0%	217	-1,034	-4.2%	1,591	774	907	-60	-0.7%
33-0000	Protective Service Occupations	3,748	\$43,600	1.26	130	3.1%	191	-179	-0.9%	965	484	618	-135	-1.2%
21-0000	Community and Social Service Occupations	3,256	\$49,500	1.45	92	2.2%	288	-181	-1.1%	856	387	586	12	0.1%
39-0000	Personal Care and Service Occupations	2,775	\$31,600	-0.88	152	4.4%	80	-843	-2.3%	1,451	582	381	18	0.2%
15-0000	Computer and Mathematical Occupations	2,338	\$89,500	0.52	83	2.0%	142	175	1.5%	468	133	221	16	0.3%
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	1,505	\$39,500	0.66	47	4.3%	106	-89	-0.3%	455	193	279	-38	-0.4%
45-0000	Farming, Fishing, and Forestry Occupations	1,411	\$40,000	1.73	72	4.5%	18	-48	-0.6%	565	195	450	-60	-1.4%
17-0000	Architecture and Engineering Occupations	1,306	\$84,600	0.62	23	1.7%	166	-74	1.2%	331	169	175	-29	-0.9%
19-0000	Life, Physical, and Social Science Occupations	771	\$77,800	0.84	13	2.3%	102	44	1.2%	188	31	152	-36	-0.7%
23-0000	Legal Occupations	677	\$93,300	0.62	9	1.2%	16	3	0.2%	124	62	75	-11	-0.8%
...	99-0000 Total - All Occupations	129,135	\$41,700	1.00	9,556	9.8%	8,480	6,547	-0.8%	41,280	18,715	25,262	-1,217	-0.7%

Source: BLS/BLS
Data as of 2/22/23 unless noted otherwise.
Note: Figures include both direct and indirect.
1. Data based on a four-quarter moving average unless noted otherwise.
2. Wage data represents the average for all covered employment.
3. Data adjustment based on the size and date of the last three years of the published report. Due to alternative economic adjustment algorithms, all counts in this table may not match those shown in OPI (or in the press release) all time. All counts for 2023 based on the latest available data.

Summary Conclusions for GO Virginia Region 3 Growth & Diversification Plan Update 2023

- Region 3 sits in a position to capitalize off the growth of CEA and the continued concentration of talent in the other traded sectors highlighted in this report.
- The vast majority of economic growth is new business formation on a much smaller scale compared to VEDP announcements for traded sector businesses (though these announcements are exciting and bring media attention to Region 3 localities and the work being done to support businesses)
- Region 3 will need to pay attention to the total population. Overall, the region is anticipated to lose population (with Census 2020 beginning to show the impact of out-migration). Additionally, lower birth rates will contribute to a smaller pool of people in the workforce. Additionally, the population retained will continue to grow older putting pressures on the Healthcare industry. Additionally, there could be a small bump in Construction to retrofit homes for aging in place.

EXHIBIT 2

REGION 3 TALENT PATHWAY*



An employer-driven system to empower and connect students to careers

K12 SCHOOL DIVISIONS

Career AWARENESS
•GO TEC™



Career EXPOSURE & ENGAGEMENT
•Mock Interview Day
•Teacher Externships
•Sector-focused camps



Career EXPERIENCE
•Apprenticeships
•Internships
•Externships
•Job Shadowing
•Jobs (PT/FT)
•Next Generation of Work



POST-SECONDARY EDUCATION & TRAINING - COMMUNITY COLLEGES AND HIGHER EDUCATION CENTERS



EMPLOYMENT

Public-Private Collaboration Supports this Workforce Development System

*

SKILL READINESS
Certifications Clubs/ Extracurriculars Dual Enrollment
Bootcamps Career Readiness Certificates
Continuing Technical Education Coursework

EXHIBIT 3

REGION 3 GOALS, STRATEGIES, AND IMPLEMENTATION MECHANISMS FOR TARGETED INDUSTRIES

TARGETED SECTORS	GOALS	STRATEGIES	OUTCOMES / IMPACT MEASURES (not exclusive-subject to amendment)	STRATEGIC PARTNERS	CURRENT PROJECTS
Controlled Environment Agriculture	<ul style="list-style-type: none"> Site Development Talent Evolution Entrepreneurial Ecosystem 	<ul style="list-style-type: none"> Support subregional efforts to prioritize, develop, and market business-ready sites Support efforts to advance GO TEC, close training gaps, grow apprenticeship and occupation crosswalk opportunities, and talent retention and attraction Support efforts to advance SOVA Rise Collaborative, grow emerging traded-sector start-up business sectors, and establish, operate, and maximize regional entrepreneur hubs 	<ul style="list-style-type: none"> # of acres up tiered per VEDP business ready site criteria # of students trained # of jobs created or retained # of credentials awarded # of entrepreneurs engaged # of new businesses created # of entrepreneur programs operationalized region-wide 	<ul style="list-style-type: none"> regional businesses planning district commissions local governments and allied institutions regional economic development organizations and allied entities community colleges entrepreneur ecosystems Institute for Advanced Learning and Research higher educational degree-granting institutions K12 school systems chambers of commerce TRRIC state and federal economic development organizations workforce investment boards allied non-profit organizations 	<ul style="list-style-type: none"> Institute for Advanced Learning and Research/GO Virginia Region 3 Controlled Environment Agriculture Strategy and Roadmap
Agriculture and Food Processing	<ul style="list-style-type: none"> Site Development Talent Evolution Entrepreneurial Ecosystem 	See Above	See Above	See Above	<ul style="list-style-type: none"> IALR/Region 3 Controlled Environment Agriculture Strategy and Roadmap GO TEC 2025 SOVA Rise Collaborative Southern Virginia Regional Alliance_Business Ready Sites Virginia Growth Alliance_Business Ready Sites Amelia County Regional Commerce Center_Amelia County EDA & Heartland RIFA (pending)
Business Services	<ul style="list-style-type: none"> Site Development Talent Evolution Entrepreneurial Ecosystem 	See Above	See Above	See Above	<ul style="list-style-type: none"> IALR/Region 3 Controlled Environment Agriculture Strategy and Roadmap GO TEC 2025 SOVA Rise Collaborative Southern Virginia Regional Alliance_Business Ready Sites Virginia Growth Alliance_Business Ready Sites Amelia County Regional Commerce Center_Amelia County EDA & Heartland RIFA (pending)
Energy, Natural Resources, and Finished Products	<ul style="list-style-type: none"> Site Development Talent Evolution Entrepreneurial Ecosystem 	See Above	See Above	See Above	<ul style="list-style-type: none"> SOVA Rise Collaborative GO TEC 2025 Southern Virginia Regional Alliance_Business Ready Sites Virginia Growth Alliance_Business Ready Sites Amelia County Regional Commerce Center_Amelia County EDA & Heartland RIFA (pending)

REGION 3 GOALS, STRATEGIES, AND IMPLEMENTATION MECHANISMS FOR TARGETED INDUSTRIES

TARGETED INDUSTRIES	GOALS	STRATEGIES	OUTCOMES / IMPACT MEASURES (not exclusive-subject to amendment)	STRATEGIC PARTNERS	CURRENT PROJECTS
Health Care Services	<ul style="list-style-type: none"> Site Development Talent Evolution Entrepreneurial Ecosystem 	See Above	See Above	See Above	<ul style="list-style-type: none"> Southern Virginia Partnership for Health Science Careers GO TEC 2025 Southern Virginia Regional Alliance_Business Ready Sites Virginia Growth Alliance _Business Ready Sites Amelia County Regional Commerce Center_Amelia County EDA & Heartland RIFA (pending)
Information Technology and Communications Services	<ul style="list-style-type: none"> Site Development Talent Evolution Entrepreneurial Ecosystem 	See Above	See Above	See Above	<ul style="list-style-type: none"> Mid-Atlantic Broadband Communities Corporation_Middle Mile Fiber Expansion Project GO TEC 2025 SOVA Rise Collaborative GO TEC 2025 Southern Virginia Regional Alliance_Business Ready Sites Virginia Growth Alliance _Business Ready Sites Amelia County Regional Commerce Center_Amelia County EDA & Heartland RIFA (pending)
Advanced Manufacturing and Advanced Materials	<ul style="list-style-type: none"> Site Development Talent Evolution Entrepreneurial Ecosystem 	See Above	See Above	See Above	<ul style="list-style-type: none"> GO TEC 2025 Gupton Initiative P&HCC Welding Instructor SVCC Mechatronics Instructor Southern Virginia Regional Alliance_Business Ready Sites Virginia Growth Alliance _Business Ready Sites Amelia County Regional Commerce Center_Amelia County EDA & Heartland RIFA (pending)
Leadership	<ul style="list-style-type: none"> Anticipate the Future Sustain Strong Council and Regional Leadership Support Sustainable REDOs Build Regional Coalitions 	<ul style="list-style-type: none"> Identify and adapt strategies for emerging trends Create a sustainability model for leadership and funding Support strategies and plans for regional approaches and solutions at the subregion level Sustain regular and predictable dialogue with regional economic and workforce development stakeholders Increase the diversity and number of audiences with Region 3 	To Be Determined	See Above	<ul style="list-style-type: none"> Virginia Growth Alliance (REDO)_Refresh Commonwealth Regional Council_REDO Strategy and Business Plan Southern Virginia Partnership for Health Science Careers IALR/Region 3 Controlled Environment Agriculture Strategy and Roadmap