



VIRGINIA INITIATIVE FOR  
**GROWTH &  
OPPORTUNITY**  
IN EACH REGION

## *GO Virginia Region 2*

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### **GO Virginia Region 2 Council**

November 2, 2022, 1:00 p.m.-3:00 p.m.

Mill Mountain Conference Room Side B, Carilion Children's  
Tanglewood Center, 4348 Electric Road, Roanoke, Virginia, 24018.

- Introductions (1:00-1:05)
- Financial Review (1:05-1:15)
- Project Proposals (1:15-2:20)
  - “Expanding Welding Training Capacity and Jobs in the Roanoke Valley” – Botetourt Technical Education Center
  - “Center for Entrepreneurship” – Lynchburg Regional Business Alliance
  - “Airport Commerce Park Regional Development” – City of Lynchburg and Campbell County
  - “Industry 4.0 for the ACE Workforce” – Virginia Tech College of Engineering
- Special Updates (2:20-2:40)
  - GO Virginia Talent Pipeline Innovation program
- Council Business (2:40-2:55)
  - Quarterly project reporting
  - Minutes
  - Region 2 project extension requests
- Packet information items (2:55-3:00)
  - Life Sciences and Entrepreneurship White Paper
  - Dearing Ford Industrial Park project withdrawal
  - Electronic meeting authorization



## *GO Virginia Region 2*

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The meeting will adjourn at 3:00p.m.

Public comment is welcome in writing. Please submit to Region 2 staff, John Provo, [jprovo@vt.edu](mailto:jprovo@vt.edu) or Rachel Jones, [rachelcj@vt.edu](mailto:rachelcj@vt.edu) by 11/1 at 1:00p.m.

**Region 2 Allocations**

Updated 10/31/2022

**FY 21 Per Capita Projects**

FY 21 Original allocation	\$1,545,403.00
Transfers from FY 20 Per capita	-\$2,357.83
Transfer from FY20 Capacity Building	\$14,700.00
Biotech Lab Space Development (Region 2 - Flexible Laboratory Space Assessment)	-\$99,360.00
Workforce for Industry 4.0	-\$45,360.00
Regional Health Sciences Talent Pipeline	-\$100,000.00
<i>Dearing Ford Industrial Park (Altivista Gas) *Project Pulled</i>	\$0.00
Project Eagle+	-\$599,437.00
<i>Remaining FY21 Fund Balance Swept</i>	<i>-\$207,588.17</i>
<b>FY21 Remaining Balance</b>	<b>\$506,000.00</b>

**FY 22 Per Capita Projects**

FY 22 Allocation	\$1,542,945.00
Lynchburg Beacon of Hope	-\$97,740.00
Regional Talent Strategy	-\$315,911.00
Workforce & Entrepreneurship Initiatives in a Regional Makerspace (Vector Space)	-\$324,000.00
Gupton Initiative (Statewide) Region 2 support requested	-\$10,000.00
CS/root	-\$175,000.00
<b>FY22 Remaining Balance</b>	<b>\$620,294.00</b>

**FY 23 Per Capita Projects**

FY 23 Allocation	<b>\$1,527,228.00</b>
Transfer from FY 21/22 Capacity Building	<b>\$106,575.67</b>
<b>FY23 Remaining Balance</b>	<b>\$1,633,803.67</b>

**FY 22/23 Capacity Building (Support)**

Remaining Balance from FY 21	\$26,550.08
Remaining Balance from FY 22	\$80,025.59
FY23 Allocation	\$250,000.00
Surplus Transfer to FY23 Per Capita Allocation	-\$106,575.67
<b>Current Balance</b>	<b>\$250,000.00</b>

**Applications Under Consideration (Per Capita)**

Airport Commerce Park Regional Development	-\$190,000.00
Center for Entrepreneurship	-\$295,812.00
Industry 4.0 for the ACE Workforce	-\$500,000.00
Expanding Welding Training Capacity & Jobs in the Roanoke Valley	-\$166,667.00
<b>Total:</b>	<b>-\$1,152,479.00</b>
<b>Balance if All Approved:</b>	<b>\$1,607,618.67</b>

<b>FY22 Planning Cap</b>	<b>\$52,260.00</b>
<i>Planning applications</i>	<i>\$10,000.00</i>
<i>Percentage of planning cap</i>	<i>19%</i>

<b>Project Status Summary</b>									
Project Type & FY	GOVA Funding Approved	GOVA Drawn Down to date	GOVA Funds Remaining	Match Funding	Match Drawn Down	Match Funds Remaining	Admin Fee	Admin Fee Draw Down	Admin Fee Remaining
Per Capita FY18 Projects:	\$1,263,507.00	\$1,086,718.14	\$176,788.86	\$3,252,380.71	\$2,901,110.76	\$353,216.13			
Per Capita FY19 Projects:	\$1,197,486.00	\$1,058,036.14	\$139,449.86	\$1,732,722.00	\$1,503,098.03	\$242,744.45			
Per Capita FY20 Projects:	\$1,782,567.00	\$1,053,928.13	\$728,638.87	\$1,279,290.00	\$854,042.29	\$440,614.49	\$27,140.00	\$11,513.65	\$15,626.35
ERR FY20 Projects:	\$1,110,700.00	\$1,109,141.94	\$1,558.06	\$566,610.00	\$570,743.57	\$0.00	\$23,598.00	\$23,598.00	\$0.00
Per Capita FY21 Projects:	\$844,157.00	\$120,255.91	\$723,901.09	\$695,042.00	\$108,723.05	\$586,318.95	\$25,367.00	\$8,822.35	\$16,544.65
Per Capita FY22 Projects:	\$912,651.00	\$74,851.18	\$837,799.82	\$583,704.00	\$46,579.31	\$537,124.69	\$67,520.00	\$5,544.52	\$61,975.48
<b>TOTAL:</b>	<b>\$7,111,068.00</b>	<b>\$4,502,931.44</b>	<b>\$2,608,136.56</b>	<b>\$8,109,748.71</b>	<b>\$5,984,297.01</b>	<b>\$2,160,018.71</b>	<b>\$143,625.00</b>	<b>\$49,478.52</b>	<b>\$94,146.48</b>

## **Region 2 GO Virginia Council – REVISED 10.28.22**

Project Title: BTEC- Expanding Welding Training Capacity & Jobs in the Roanoke Valley  
Applicant: Botetourt County Economic Development Authority  
Localities covered: This is a locality-initiated project from Botetourt and Craig County. The project would serve localities across the Roanoke Valley.  
Growth & Diversification Plan Strategy Area (s): Workforce Development  
**GOVA Funds Requested:** \$166,667 in GOVA funds requested, with a match of \$83,333

### **Project Description:**

This project seeks to enhance the region's capacity to train and prepare welders. The GO Virginia funding would help support the installation of ten (10) new welding booths at BTEC's campus in Fincastle. This expansion is projected to deliver forty-five (45) new welders to the regional workforce over the initial three-year project term.

Currently, BTEC annually instructs welding to approximately eighty to ninety (80-90) high school students in Craig and Botetourt counties. Also, BTEC has launched an adult welding instruction program this Fall of 2022, currently with seven enrollees taking ten available seats; adult classes will be taught twice per year. Adding ten welding booths will allow BTEC to increase enrollment in its first-year high school level Welding I class by twenty (20) students per year and increase enrollment in the adult classes by twenty (20) students per year. From this enrollment increase, we estimate that an additional fifteen (15) welders will complete a BTEC welding program annually, with an opportunity to earn American Welding Society (AWS) credentials. (NOTE: this estimate of 15 new welders is above the current projection of fifteen to twenty (15-20) annual welding graduates trained with the existing ten welding booths.)

In a three-year period, the project expects an ROI based on producing an additional forty-five (45) welders, who should expect to earn a starting salary of \$41,200; the average experienced welder's salary is \$45,700 according to recent data provided by the Roanoke Regional Partnership. Over a 5 year period, the project would produce a total of 75 welders, with a 240.86% ROI to the state.

Increasing the number of welding booths from ten to twenty booths will also double the hands-on training time capacity for students learning to weld. Currently, BTEC high school students receive 112 hours of welding time during an academic year. By increasing the number of available welding booths from ten to twenty, each student will have his or her own booth, reducing the need to share booths and limit welding time. Students will become better-trained and better-skilled to meet employers' needs for capable welders.

**Project Assessment:** (Reviewers included Region 2 staff Quina Weber-Shirk, GO Virginia Council member Vince Hatcher, and Nettie Simon-Owens, Chief Workforce Development Officer with the Southern Virginia Higher Education Center

(Detailed review comments on the original submission were provided and shared with the applicant and executive committee in an initial version of this brief. Applicants have had an opportunity to respond to comments and provide revised materials. Below is a more concise synopsis of strengths, revisions by applicant, and any remaining areas of question or weakness from the revised materials):

### Strengths

- The project demonstrates a clear industry demand for more skilled welders, and a region with an integrated talent pathway to teach welding to high-school and adult students in Botetourt and Craig counties.
- If successful, this project will create an additional 15 welders/year (average). This will help close the gap between supply and demand for this skill in the regional workforce. The demand is currently strong and should remain strong for several years in the areas of manufacturing and fabrication/maintenance services.
- There is evidence of collaboration and support in the region, including letters from school systems, workforce development board, community colleges, and manufacturing companies.
- Along with the new welding booths, a key part of this overall effort is to promote welding to high school students and adults by utilizing the Career Signing Day event and the BTEC Welding Advisory Committee (which includes regional welding employers).
- Serves students in both Craig and Botetourt Counties and also adults from other localities.

### Major Areas of Revision:

- Applicant has revised match to remove disallowable FUTURE private sector fundraising (match must be on hand at application). The Botetourt Education Foundation has committed to provide the \$29,577 cash match with its own funds and seek corporate contributions to offset its investment in the project. An updated letter from the Foundation is being provided.
- Performance measures were revised based on feedback.

### Weaknesses or Questions

- No remaining areas of concern are noted.

## Region 2 GO Virginia Council

Project Title: LRBA Center of Entrepreneurship  
Applicant: Lynchburg Regional Business Alliance  
Localities covered: Localities covered by the project include the city of Lynchburg, the counties of Amherst, Appomattox, Bedford and Campbell and the towns of Bedford and Altavista.

Growth & Diversification Plan Strategy Area (s): Entrepreneurship and Business Development

**GOVA Funds Requested:** \$ 240,192 in GOVA funds requested, with a match of \$199,035

### Project Description:

This project seeks to establish an entrepreneurial center of excellence for the Greater Lynchburg region, to serve as an anchor and catalyst for the region's entrepreneurial ecosystem. The Center would foster an environment for new and serial entrepreneurs to raise capital, access resources and garner the support system needed to take their products and/or solutions into the marketplace.

The project includes providing direct assistance to entrepreneurs, (30 clients per year); increasing the available support space for targeted startups by 5,000 square feet; increasing the access to capital by up to \$400,000; and providing 10-12 training and business development events to 200 attendees each year in areas of access to capital, business development, and Knowledge, Skills and Abilities (KSA) development.

The project seeks to create 93 jobs over a 5 year period with a 205.17% ROI. The project also seeks to advance regional collaboration to strengthen and grow the region's entrepreneurial ecosystem and increase awareness of, and access to resources for new start-ups and businesses.

Project Assessment: (from Region 2 staff Quina Weber-Shirk , Region 2 Council member Victor Ianello, and Meredith Hundley, and a subject matter expert on ecosystem development with the Virginia Innovation Partnership Corporation).

(Detailed review comments on the original submission were provided and shared with the applicant and executive committee in an initial version of this brief. Applicants have had an opportunity to respond to comments and provide revised materials. Below is a more concise synopsis of strengths, revisions by applicant, and any remaining areas of question or weakness from the revised materials):

### Strengths

- The project addresses a clear need in Lynchburg area for the support of technology start-ups.
- There are letters of support from key stakeholders in the region such as SBDC, Innovate Lynchburg, localities (Lynchburg, Amherst, Bedford, Campbell), and Liberty University CERE
- This proposal addresses and integrates priorities for entrepreneurship from the GO Virginia G&D plan, and the Entrepreneurial Ecosystem Strategic Investment Plan.
- Clearly defined and identified need for a physical gathering and work space, educational and professional networking opportunities, and access to seed state capital in the Lynchburg region
- It appears that significant ground work, research, planning, and coalition building led to the proposal to create the Center of Entrepreneurship.
- Strong 5 year ROI of 205.17% and 93 jobs.
- Solid match and locality contribution.

Major Areas of Revision:

- Applicant made necessary budget revisions to remove disallowable uses of GOVA funds from GOVA request portion of budget and to clarify that costs per space are for equipment and refurbishing not for construction.
- Applicant clarified physical space questions – actually 2 spaces, a designated 2,965 sq ft of space at/by LRBA AND 2,000 sq ft of space at Liberty CERE.
- Applicant clarified and updated ROI calculations. ROI per 5 years is now at 87 jobs and an 815% 5 year return.
- Applicant more concisely outlined project activities per support space for startups, increased access to capital, training and business development events and programs, and etc.
- Applicant described the non-duplicative nature of this work, and how it would help connect Lynchburg entrepreneurs to resources in other parts of Region 2.
- Applicant better outlined staffing and org. structure.
- Applicant clarified and expanded on roles of partners.

Remaining areas of Weakness or Question:

- New Match verification forms may still be needed on all sources of match.
- How will the project seek to locate and reach entrepreneurs and possible entrepreneurs? How will entrepreneurs be identified and accepted as clients for the Center's spaces and/or programming? Referral, outreach efforts, etc? Any special strategies considered or needed to reach target sector/high growth potential entrepreneurs?
- Applicant mentions making sure non-Lynchburg services are listed on a portfolio of resources. This is good, but are there other ways to ensure that non-Lynchburg region 2 entrepreneurs can be aware of and access Lynchburg region resources and vice versa? Would applicant be open to participating in some type of Region 2 wide regular convening (perhaps quarterly or semi-annually) of entrepreneur resource providers in Region 2?
- How will the project activities grow the actual number of new entrepreneurs in region and not just focus on the existing group of SBDC clients that might be served regardless?
- Applicant will need to provide their new responses to some of the application questions on a fresh application form that we can submit to CAMS.



## **Region 2 GO Virginia Council – REVISED 10.28.22**

Project Title: Airport Commerce Park Regional Development  
Applicant: city of Lynchburg  
Localities covered: This project is led by the city of Lynchburg in partnership with Campbell County.  
Growth & Diversification Plan Strategy Area (s): Sites and Buildings.  
**GOVA Funds Requested:** \$ 190,000 in GOVA funds requested, with a match of \$95,000

### **Project Description:**

This project seeks funding for due diligence to advance the Airport Commerce Park site from a Virginia Business Ready Sites Program site characterization Tier 2 to a Tier 3 to strengthen competitive position in the global marketplace and attract advanced manufacturing, technology and life sciences with a potential focus on aerospace. This effort will be completed within the first 12 months.

This will include a traffic impact analysis, a preliminary geotechnical exploration and report, a boundary and topographic survey, a Phase 1 environmental assessment, a waters of the US delineation and determination, a cultural resources review, a threatened and endangered species review and a preliminary engineering report.

Concurrently and through the second year, the participating local governments will be identifying grants and other funding to support the design and permitting of the initial infrastructure to the site, as recommended by the TIA and PER. Ideally, the preliminary design process will start in year two. Final design and permitting of the initial infrastructure are planned to be completed in year three. The localities will collaborate throughout the first 36 months to secure funding sources for construction of the initial infrastructure.

This site was included in the latest application cycle for the Business Ready Sites Program grant funding. Due to its Tier 2 rating and lack of shovel readiness, it was not selected by VEDP. VEDP has the site listed on Virginia Scan. While the site was not included in the 2019 Site Characterization because of a lack of political will at the time, the Master Plan for the Airport Commerce Park was completed in 2022 to verify with VBRSP standards as a Tier 2.

Development of the Airport Commerce Park would positively position Lynchburg and Campbell County for a number of opportunities for mix businesses, industrial and aeronautical uses, to include advanced air mobility, advanced manufacturing, technology and life sciences (in particular Aerospace). This location is strategically located to accommodate all modes (air, ground and rail) of transportation for business development. Developing 70+ acres for manufacturing or innovation has the potential to represent thousands of jobs and millions of dollars with capital investment. In 2021 all parties on this project collaborated to reply to an RFI on this specific property that represented a \$125M capital investment and the creation of 906 jobs, ranging from white collar management to blue collar labor. Understanding that a prospect of that size would occupy the maximum space available at this location, the Central Virginia region would see significant economic impacts from having this property developed.

The City of Lynchburg is a built environment that has little available greenfield sites with two industrial parks currently at capacity. This site is one of just two City-owned properties over 100 acres. Campbell County has two other industrial parks that are in various stages of development and present different challenges when pursuing prospects from outside the region. The Airport Commerce Park will have the advantage of being at the crossroads of the region, near the airport, and closer to the workforce markets in Lynchburg, Forest, and the Timberlake area.

Project Assessment: (from Region 2 staff Quina Weber-Shirk, Region 2 Council Sandy Davis, and a subject matter expert on regional economic development from outside the region, David Denny)

(Detailed review comments on the original submission were provided and shared with the applicant and executive committee in an initial version of this brief. Applicants have had an opportunity to respond to comments and provide revised materials. Below is a more concise synopsis of strengths, revisions by applicant, and any remaining areas of question or weakness from the revised materials):

Strengths

- This is a strong well-planned project, with evidence of strong long-term collaboration,
- Focuses on a site with high potential for development and industry attraction.
- Goal is to attract advanced manufacturing, technology and life sciences with a potential focus on aerospace – all targeted industry clusters for Region 2
- Site development is supported by the Lynchburg Regional Business Alliance (LRBA) Strategic Plan, the City of Lynchburg's Blueprint for Opportunity and the Campbell County Comprehensive Plan.
- The Airport Commerce Park will have the advantage of being at the crossroads of the region, near the airport, and closer to growing, available workforce in Lynchburg, Forest, and the Timberlake area.
- Strong support and participation from localities.

Major Areas of Revision:

- The applicant revised the submission as a site planning application, since the project would move site from Tier 2 to Tier 3, and based on DHCD guidance for Regional Site Development.
- Applicant provided new match verification forms from localities per DHCD new match policies.
- Match verification from AEP is pending and expected to be provided prior the meeting of Region 2 Council.

Remaining Areas of Weakness or Questions

- No remaining areas noted provided that pending match verification forms are provided.

## **Region 2 GO Virginia Council Project Brief REVISED 10.28.22**

Project Title: Industry 4.0 for the Automated-Connected-Electrified (ACE) Workforce  
Applicant: Virginia Tech College of Engineering  
Localities covered: Localities covered by the project include all of Region 2 localities, with the counties of Roanoke, Botetourt, and Montgomery the city of Roanoke providing letters of commitment and support to the project.  
Growth & Diversification Plan Strategy Area (s): Cluster Scale up and Workforce Development  
**GOVA Funds Requested:** \$ 500,000 in GOVA funds requested, with a match of \$250,000

### **Project Description:**

*“Industry 4.0 for the Automated-Connected-Electrified (ACE) Workforce”* is a cluster scale-up project led by Virginia Tech College of Engineering and focused on the transportation manufacturing and technologies sector. In 2021, Virginia Tech was competitively selected as one of the finalists in the Economic Development Administration’s Build Back Better Regional Challenge Competition. The Phase I award helped establish an Automated-Connected-Electrified (ACE) Coalition of over 150+ public, private, and non-profit organizations. Though the Phase II funding was not awarded, the Coalition desires to proceed with initiatives to facilitate asset alignment, develop plans to assist in firm growth, build a shared identity for the cluster, and develop a diverse and technically ready workforce

This project seeks to will advance the region’s transportation and autonomous vehicles sector by:

1. Providing **Direct Technical Assistance and Advising** to sector companies, fostering mutually beneficial relationships and delivering customized solutions for workers and firms, with the assistance of Virginia Tech College of Engineering (VTCOE) faculty domain experts, GENEDGE, and a Project Technical Advisory Committee (PTAC).
2. Creating a **Network Navigator** position, to have a designated individual to serve as a point of contact to help companies navigate the network and find the resources that best fit their needs. COE, the PTAC, and the Network Navigator will work as a team to facilitate industry connections to training, testing, and technical assistance resources. The Coalition will also form a **Project Technical Advisory Committee** (PTAC) consisting of partners from public agencies, business support nonprofits, and regional community organizations such as EDA-supported Economic Development Districts (EDD). Members will have expertise in education, training, and technical assistance relevant to the cluster.
3. Enhancing and implementing the **Industry 4.0 Curriculum** that was developed through a prior Virginia Tech-led GO Virginia ECB grant. The Coalition will develop a multiscale curriculum with hands-on training for in-demand jobs and skills for designing, fabricating, testing, production, installation, and maintenance of automated transportation systems.

The Project ROI includes 143 total jobs created with an average annual salary of \$70,436. The overall goals include improving coordination and utilization of resources to better advance sector growth; and to create a pipeline for a highly skilled manufacturing technology workforce that produces industry-ready workers and retains/upskills existing workers and reduces the number of unfilled in-demand positions in the transportation and autonomy sector in Region 2.

Project Assessment: (Reviewers included Pace Lochte, assistant vice president for economic development at the University of Virginia; John Putney, Region 2 Council; Shannon Holland, GO Virginia Region 9); James Groves, Associate Professor, School of Engineering at the University of Virginia; Shawn Avery, President and CEO, Hampton Roads Workforce Council)

(Detailed review comments on the original submission were provided and shared with the applicant and executive committee in an initial version of this brief. Applicants have had an opportunity to respond to comments and provide revised materials. Below is a more concise synopsis of strengths, revisions by applicant, and any remaining areas of question or weakness from the revised materials):

#### Strengths

- Aligns nicely with 4 of the 5 Regional Council's stated Growth and Diversification Plan priorities.
- Impressive array of partners including business sector partners.
- The project capitalizes on the extensive work already invested.
- This project offers a comprehensive, multi-pronged approach per technology advancement, cluster/hub strengthening, and workforce development.
- The proposal also leverages prior GO Virginia funding that initiated the Industry 4.0 Curriculum, advancing it for delivery through the many workforce training providers that have been identified and brought to the table.
- The project estimates the creation of 84 jobs at \$70K+ per year, which is approximately \$15K above our region's current average wage of \$55K

#### Major Areas of Revision:

- The applicant has more clearly defined some of the technical assistance activities which may include: autonomy research, electric vehicle technical training, manufacturing supply-chain retooling assistance, and business-focused technology acceleration.
- The applicant has better described some of the other activities to strengthen cluster such as networking, a resource portal, and outreach activities.
- Applicant has included letters of support for entities across the region, including the Lynchburg sub-region with Liberty University and Central Virginia Community College playing key roles
- The applicant has better described that this curriculum is customizable and can be used as modules to enhance existing courses and trainings at community colleges and other institutions. The applicant has described professional development training for educators and workforce system providers to better help them use and employ the material.
- The Network Navigator will be a key figure. The applicant has better defined this role and the administrative and oversight structure for this position and the PTAC group.
- ROI re-calculated and more detail added. Details per sustainability were added

#### Remaining Areas of Weakness or Question:

- 3 year ROI is negative but 5 year ROI is over 350% with creation of 265 jobs. Per original review, applicant may want to discuss rationale and confidence level in ROI.
- Much more clarity on program design and approach than original submission, yet a few areas still could be even more clear:
  - If instructional modules are to be flexibly incorporated into existing curriculum, how would workers in area companies be reached, trained? Will the project work with workforce boards and companies to deliver training (upskilling) for existing workers? Will VT offer its own trainings to existing workers in an additive, non-duplicative way to existing area offerings? If so, how might that work? How will the 3 regional workforce boards be partners?
  - If modules will only be delivered in existing curriculum (and that may not be the case bit still a bit less clear), then how can these represent new workers trained, per ROI and performance metrics?

# Recommendation- GO Virginia Region 2 Talent Pathways Initiative (TPI) Planning Grant

## Summary

The Talent Pathways Initiative (TPI)<sup>1</sup> is a new planning grant to help regional councils build better buy-in from industry leaders and strengthen alignment with workforce and education in one or two priority industry clusters. The GO Virginia State Board will allot each region up to \$250,000, with current match rules of 1:2 non-state match (up to \$125,000). With subsequent funding, the Board can support implementation projects that align training curricula with business needs, facilitate work-based learning experiences, and develop entrepreneurial talent.

Region 2 is well-placed to act rapidly on this opportunity, as council engagement with the region's target clusters is at a project high. The council engaged stakeholders for the updated Growth and Diversification plan in 2021 and has since granted significant projects for talent development, attraction, and retention. The TPI planning grant is a catalyst to create sustainable industry cluster coalitions. These coalitions of high-level industry partners, workforce, and education partners will be critical to addressing workforce needs, identifying skills, training, and high-impact strategies and projects for future implementation.

The Region 2 Executive Committee recommends that the TPI focus on two of the region's largest and fastest-growing clusters: Life Sciences & Health Care and Transportation Manufacturing & Autonomy. From both a market perspective and an assessment of cluster capacity, these clusters are ripe for the sustained transformational growth the state envisions will follow the planning effort.

Further, the Executive Committee recommends that Virginia Tech's Center for Economic and Community Engagement (VT-CECE) take on the TPI planning grant's project manager role. This comes with a charge to develop substantial implementation roles in the process for regional and outside experts, who will also be supported by the grant. This hybrid approach will allow the region to launch this effort quickly, achieve broad engagement across all parts of Region 2, bring new voices to the table, and align with the council's strategic goals.

Adjacent Regions 1 and 3 are likely to include industry clusters that overlap with the ones selected by Region 2. Aligning the visions emerging from these opportunities will be vital as we build an agenda beyond the Region 2 council's funding. Building multi-regional projects can open doors to the state's larger competitive funding stream and other opportunities.

The Executive Committee proposes submitting the Region 2 TPI planning grant application to the state this quarter. It can then be discussed and voted on by the GO Virginia State Board at their March meeting. If approved, the one-year TPI plan period would run from May 2023-May 2024. The first 6 months will prioritize Life Sciences & Healthcare; months 7-12 will focus on Transportation Manufacturing & Autonomy.

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<sup>1</sup> Talent Pathways Initiative Planning Guidance. Retrieved from: <https://www.dhcd.virginia.gov/go-virginia-regional-materials>. House Bill 29, approved by the 2022 General Assembly, provided \$2.5 million to the GO Virginia State Board for planning grants.

## Priority Industry Cluster(s)

### Required qualifications for priority industry cluster(s):

1. The **highest growth opportunities in Region 2**, considering both performance and projection metrics used in the Growth and Diversification Plan (2021).
2. The **greatest opportunities for transformation**, considering identified opportunities for significant current and future external funding and investments
3. **Existing and emerging collaborative efforts** among stakeholders.
4. **Engagement and leadership** from industry leaders, and workforce and education partners.

### Proposed Priority Industry Cluster 1: Life Sciences & Health Care

The region's life sciences and healthcare cluster is multifaceted. The life sciences component of this cluster broadly captures industries vested in medical research and the production of healthcare products, including pharmaceuticals, surgical equipment, etc. Healthcare refers to industries vested in the provision of residential care and vital healthcare support industries. The region's life sciences and healthcare cluster is anchored by several medical programs and research institutions (including programs at each of the four community colleges, RUC, VTC, VCOM, LUCOM, and FBRI), multiple hospital and healthcare networks (including the VA), and a patchwork of manufacturers. In 2020, this cluster's gross regional product (GRP) for this cluster was \$2.44 billion <sup>2</sup>. In projected employment change in the next 5-year period, this sector is expected to lead the region, with 5.7% employment growth forecasted<sup>3</sup>. Region 2 has strengths in the following areas:

- **Biopharmaceuticals and Medical Devices Manufacturing:** Research, development, and production of pharmaceuticals and medical devices. Region 2 has strengths in optical instrument and lens manufacturing, due to Bausch and Lomb in Lynchburg, Virginia.
- **Residential Care:** Hospitals and residential care facilities. Carillion, Centra and Lewis Gale anchor this subcluster.
- **Elderly Care:** Retirement communities like Richfield in Salem, Brandon Oaks in Roanoke, Westminster-Canterbury in Lynchburg, and English Meadows in Blacksburg.
- **Diagnostic Support Services:** Diagnostic laboratories and imaging centers.

Leaders in this cluster have come together to secure support from GO Virginia, US Economic Development Administration, and the state general fund. These resources led to a series of initiatives accelerating technology companies in this cluster, building appropriate lab spaces for their growth and development, and developing workforce pipelines that could sustain their future. Currently, a severe workforce shortage continues to plague health care and residential care providers.

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<sup>2</sup> *GO Virginia Region 2 Growth and Diversification Plan (2021)*. Figure 7: Region 2 Target Clusters- GRP, LQ, and Shift-Share. Retrieved from <https://cece.vt.edu/GOVAR2.html>.

<sup>3</sup> *Ibid.* Table 8: Region 2 Industry Cluster Performance Trends, 2021-2026. Retrieved from <https://cece.vt.edu/GOVAR2.html>.

## Proposed Priority Industry Cluster 2: Transportation Manufacturing & Autonomy

Manufacturing continues to play a leading role in the region's economy, particularly commercial transportation manufacturing. With a significantly higher employment concentration (LQ) and contribution to GRP<sup>4</sup>, cluster strengths include:

- **Heavy Duty Truck Manufacturing:** Region 2 has industry strengths in heavy duty truck manufacturing. Compared to other regions of the U.S., employment in this industry is 43 times more concentrated. Region 2 is home to Volvo Trucks USA, which produces all Volvo trucks sold in North America, as well as Mack Trucks, a subsidiary of Volvo.
- **Motor Vehicle Parts Manufacturing:** Manufacturers of motor vehicle parts vary across the region. Most notably, Metalsa Structural Products and Eldor Powertrain have grown in Botetourt County. The region also contains a manufacturing branch of Yokohama Tires, which was the world's eighth largest tire manufacturer by global sales at the time of this report.
- **Automation:** Automated vehicles, both land and air, are of growing interest to transportation manufacturers. With its wealth of research and infrastructure assets, this region has grown companies such as TORC Robotics and Aeroprobe to provide innovative technologies for automation. Region 2 is also home to Wing, the first company in the U.S. to receive clearance from the FAA to deliver commercial goods via drone.

This cluster has long been a focus for workforce development and research efforts. Most recently, the educational and training partners, along with researchers, and industry leaders, came together to build a coalition that was one of 60 finalists nationally, for a US Economic Development Administration Challenge grant. With more than 150 institutional or corporate members, the coalition has secured state general fund support and is working toward several federal and state funding opportunities.

## Industry Cluster Talent Coordinating Entity

**Required qualifications for the coordinating entity:**

1. Existing relationships among leaders in priority industry cluster(s)
2. Demonstrated ability to build networks across all 3 sub-regions of Region 2
3. Prior experience and capacity during the 1-year timeframe to:
  - a. develop and engage a coalition in this effort
  - b. complete substantial data-gathering and analysis
  - c. lead situational analyses and gap analyses of workforce needs
  - d. identify the skills and training needed for jobs by industry clusters
  - e. create asset maps and evaluate regional capacity

## Proposed: Virginia Tech Center for Economic and Community Engagement (VTCECE)

VT-CECE, an engagement center of Virginia Tech, has broad experience building coalitions and partnerships throughout the three sub-regions of GO Virginia Region 2 and across the state. As the support organization for GO Virginia Region 2, VT CECE has established working relationships with grantees and is well-positioned to explore strategic alignment with adjoining GO Virginia Regions in Southwest and Southside Virginia.

The talent coordinating entity will serve as the project manager in this year-long planning process. It will engage third parties to complete substantial parts of the project. In service to a transformative planning process, VT-CECE will assemble an inclusive and non-duplicative effort with workforce and education partners, working with industry

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<sup>4</sup> *Ibid.* Figure 7: Region 2 Target Clusters- GRP, LQ, and Shift-Share. Retrieved from <https://cece.vt.edu/GOVAR2.html>.

across the region. The state intends on fostering new high-level engagement, directly with senior industry leaders in the region, while building their buy-in for efforts at all levels.

VT-CECE has experience with talent pathways development and workforce systems planning. This includes providing on-call data analysis and strategic planning services for multiple workforce investment boards and non-profits as well as labor market and industry cluster analysis for economic development organizations.

VT-CECE will ground the TPI process in several ways. First, by aligning with the workforce plans articulated by the three workforce investment boards in our region; and next, by bringing in experts from the Lynchburg, Roanoke, and New River Valley subregions as consultants and sub-awardees. Together, these experts will develop industry coalitions directed by industry leaders, complete situational and gap analyses, identify skills and training needed, evaluate the region's capacity and assets, and identify strategies and high-impact projects for future implementation. VT-CECE may also engage outside expertise as key advisors to help think anew about opportunities in each cluster.

## Anticipated Budget

		GO Virginia TPI Funds	1:2 Non-State Match
Personnel			
	Dedicated staff for TPI	\$140,000	
	Consultants/ Sub-awardees (to be named)	\$100,000	
	In-kind Personnel time		\$125,000
Travel		\$5,000	
Materials (Meetings)		\$5,000	
<b>Total</b>		<b>\$250,000</b>	<b>\$125,000</b>



# GO Virginia Region 2 Quarterly Report

Period: July- September 2022

Total Projects Funded	Total Funds Allocated	Jobs Created to Date	External Investment Generated
37 (25 Projects Completed)	\$7,153,068	691	\$7,816,844

## Area One: Talent development, attraction, and retention



Talent: Aggregated Metrics (from beginning of project – present)									
Status	Project Title (grey indicates closed project)	Metrics							
		Internships completed	Business es served	New jobs created	Jobs retained	Students trained	Upskilled employees	Credentials awarded	Dual enrollment
	Blockchain Ecosystem Catalyst	-	85	4	-	365	-	46	-
	ELITE Internship Program	17	3	7	-	-	-	-	-
	Classrooms to Careers	10	4	-	-	168	-	129	130
	CVCC-CTE Academy	-	101	-	-	160	-	288	344
	Project Eagle +	N/A	1	-	-	N/A	-	N/A	N/A
	Regional Talent Strategy Implementation	N/A	53	9	-	5	24	-	N/A
	Workforce & Entrepreneurship Initiatives in a Regional Makerspace – also see entrepreneurship metrics	N/A	1	-	-	6	-	N/A	N/A
	AMPL (also in sites)	-	34	75	-	500	-	-	-
	Developing a Destination for Talent	217	52	150	-	217	-	-	-

# GO Virginia Region 2 Quarterly Report


Period: July- September 2022

	Ignite Internship Expansion (ECB)	12	6	-	-	12	-	-	-
	Drone Zone	7	4	2.5	0	7	0	0	17
	Talent Collaborative	-	45	-	-	-	141	-	-
	CERE	N/A	78	98	-	-	-	-	-
	<b>Current Project Totals</b>	<b>263</b>	<b>467</b>	<b>345.5</b>		<b>1440</b>	<b>165</b>	<b>463</b>	<b>491</b>

## ECB Progress Notes:

	<b>BRPHSC - Carilion</b>	Began documentation for a blueprint that will outline the need, purpose, and plan for BRPHSC within GO Virginia Region 2. Conducting review in coordination with George Mason's Center for Health Workforce Development. Draft core curriculum has been identified; early-stage discussions have begun with the VA Dept. of Education representative in charge of the Health & Medical Sciences and Related Clusters in the Office of Career, Technical, and Adult Education. Project did not meet Q3 milestones due to a delay in the completion of the situational analysis. Project has requested a no-cost extension in order to complete this deliverable.
	<b>Future Centers Expansion</b>	The content of the Playbook was developed and revised in August/September 2022. Project team engaged 434 Marketing, a local web developer, to design the production of the Playbook. Playbook will be virtually based with the ability to evolve as information changes. It incorporates a 'RESOURCE' section that will allow Future Centers around Region 2 to share findings, information, and best practices with one another.

## Implementation Progress Notes:

-  **Project Eagle +:** Recruiting for the JLABS Accelerator program is underway. Contract for the build out of the Blacksburg lab was awarded to Kesler Contracting and Property Management, LLC on August 22<sup>nd</sup>. A JLABS information session was held on July 13<sup>th</sup>, with 20 companies in attendance. Four companies attended a 1:1 office hours session with JLABS leadership. This resulted in one company's acceptance into the cohort. An RFQ was issued on July 11<sup>th</sup> for programming and schematic design services of the Roanoke facility. Out of 6 responses, the team selected Gensler, and are in the process of finalizing a contract. The project did not meet Q3 milestones due to delays in finalizing a contract with Gensler and the hiring of a lab manager. The position is expected to be filled in Q4.

## Staff Action:

**Carilion's Building a Regional Health Sciences Talent Pipeline:** The project team has proposed a contract extension through June 2023 to complete the Regional Situational Assessment and Analysis.

# GO Virginia Region 2 Quarterly Report

Period: July- September 2022

The primary use of grant funds is to hire George Mason's Center for Health Workforce to assist with coordination efforts in data collection from stakeholders that will inform talent development priorities and accelerate the work of the regional initiative. A data framework has been established and data collection methods are underway. The project team will collect data from regional stakeholder employers and educational institutions, with the expected completion date of June 30, 2023. This amendment is currently under review with state staff (DHCD).

**Lynchburg Beacon of Hope:** The project team has proposed a contract extension through December 1, 2022, in order to complete the Future Center's Playbook. Beacon of Hope has partnered with an outside contractor (434 Marketing) to assist with the development of the interactive web-based playbook. A web-based version can be regularly updated and is considered more user-friendly than a pdf. This amendment is currently under review with state staff (DHCD).

## Area Two: Collaborative Sites and infrastructure

Collaborative Sites and Infrastructure Implementation Projects: Aggregated Metrics							
Status	Project	Metrics					
		Acres advanced	Increased locality engagement	Prospects	Businesses attracted	Linear feet of sewer/water/gas	Acres developed
	Amherst Site Readiness	N/A	-	N/A	N/A	N/A	N/A
	AMPL- see talent metrics	N/A	Yes	Yes	4	N/A	N/A
	CERE – see talent metrics						
	Woodhaven	110	Yes	20	0	1150/375/0	110
	Lynchburg Due Diligence	6 sites	Yes				
	<b>Totals</b>	<b>Unknown</b>	<b>Yes</b>	<b>20+</b>	<b>4</b>	<b>Unknown</b>	<b>110+</b>

### ECB Progress Notes:



**Industry 4.0:** The grant team finalized the industry 4.0 draft curriculum deliverable based on output from the draft curriculum review session. The final product was circulated to the review session participants and no additional input was received.

# GO Virginia Region 2 Quarterly Report

Period: July- September 2022

## Implementation Progress Notes:



**Amherst Site Readiness:** Project received no-cost extension through March 31, 2023, due to delays caused by the Department of Environmental Quality (DEQ). DEQ has approved grading documents for the Amelon site and are currently reviewing grading documents submitted for the Brockman site.

## Area Three: Entrepreneurship and Business Development

Entrepreneurship: Aggregated Metrics from Implementation Projects							
Status	Project Name	Metrics					
		Jobs created	Existing businesses expanded	New businesses created	Businesses served	Entrepreneurs engaged	Mentors engaged
	Workforce & Entrepreneurship Initiatives in a Regional Makerspace – also see talent metrics	-	N/A	-	1	N/A	N/A
	VIC-REI	-	-	-	-	-	-
	TAF – Increasing the Birth Rate of High Growth Companies 2	19	-	-	50	22	30
	TAF – Increasing the Birth Rate of High Growth Companies	-	17	-	51	51	29
	RAMP	210	13	2	45	36	93
	Roanoke SBDC	66	-	27	-	-	-
	Pivot and RAMP Up	TBD	TBD	TBD	24	11	72
	<b>Project Totals</b>	<b>295</b>	<b>30</b>	<b>29</b>	<b>171</b>	<b>120</b>	<b>224</b>

## Progress Notes:

None.

## Area Four: COVID Response

COVID (ERR) Response: Aggregated Metrics					
Status	Project Name	Metrics			
		Businesses engaged	Businesses served	Jobs retained	Jobs created
	Roanoke Regional Recovery (ECB)	44	-	-	-
	NRV BCT 2	3606	618	52283	
	VT Covid-19 Response	-	1000+	-	51
	NRV BCT 1	39	182	-	-

# GO Virginia Region 2 Quarterly Report

Period: July- September 2022

	PHRE Mobile App	-	10	70	-
	<b>Current Totals</b>	<b>3689</b>	<b>1810</b>	<b>52353</b>	<b>51</b>

## Progress Notes:

None.

## Projects in Process of Contracting:

CS/root



## **GO Virginia Region 2 Council Meeting Minutes**

**August 2, 2022, 1:00p.m.- 3:00p.m.**

**Roanoke Higher Education Center, Room 212, 108 N Jefferson St, Roanoke Virginia, 24016.**

Council members in attendance: Eddie Amos (Vice-chair), Michelle Austin, Nathaniel Bishop, John Capps, Kenneth Craig, Beverley Dalton, Sandy Davis, Paul Denham, John Dooley, Don Halliwill, Patricia Huber, Victor Iannello, Foud Kemper, Ray Smoot (Chair), Luke Towles, Justin Yalung.

Council members attending remotely: Janice Crawford, Floyd Merryman, Kimball Payne, Debbie Petrine, John Putney.

Staff in attendance: John Provo, Scott Tate, Rachel Jones, Julia Kell, Alyssa McKenney.

Public in attendance: Lisa Soltis, Central VA Planning District Commission, Mary Zirkle, Megan Lucas, Sara Dunnigan, Pam Bailey, Erin Burcham, Aileen Helsel, Hal Irvin, Beth Simms.

The meeting convened at 1:02p.m. and adjourned at 3:01p.m.

### ***Financials Review***

Alyssa McKenney reviewed the financial reports. Council has a remaining balance of \$805,294 in FY22 per-capita funds. Alyssa then reviewed drawdown status of all active Region 2 projects, as well as support org staff drawdown for administrative purposes.

### ***Project Proposal***

#### ***CS/root***

Scott Tate began with a brief overview of the new project proposal, *CS/root*, submitted by the Virginia Tech Department of Computer Science. Through its project, *CS/Root*, the Virginia Tech Department of Computer Science is requesting \$175,00 in GO Virginia grant funds to be used towards establishment of a computer science focused entrepreneurial hub for pre-launch and new founders in highly specialized areas such as cybersecurity, blockchain, cloud and quantum computing, artificial intelligence, and systems integration. James Harder and Kirk Cameron, Virginia Tech Department of Computer Science reviewed project deliverables and answered questions from the council. Eddie Amos recommended partnering with the various higher education institutions in the region.

Chairman Smoot asked if there were any additional questions. There were none.

VT Department of Computer Science's request totaled \$175,000 in Region 2 per-capita funds, with a match of \$175,000.



Victor Iannello motioned to approve this proposal, and John Capps seconded. All were in favor and none opposed.

### ***Life Sciences/Entrepreneurship Cluster and Strategy Discussion***

Scott Tate, Region 2 support staff, Aileen Helsel, Carilion Clinic, and Hal Irvin, Fralin Biomedical Research Institute, discussed model impacts of the newly identified cluster of Life Sciences and Entrepreneurship within Region 2. The group reviewed regional needs, as well as short-term and long-term outcomes that would best serve the region. Existing Region 2 projects existing in this space were reviewed, with metrics to date including 295 jobs created, 30 existing businesses expanded, 29 new businesses created, 170 businesses served, 120 entrepreneurs engaged, and 224 mentors engaged.

### ***Council Business***

#### ***Region 2 MOU and Budget Review and Action***

John Provo led the council through a review of the Region 2 MOU and Budget, which would allow the Virginia Tech Center for Economic and Community Engagement to continue their work as the Region 2 support organization. Chairman Smoot informed the council of the executive committee's review and discussion of the MOU, recommending the council continue their contract with the current support organization.

Kenneth Craig motioned to approve the Region 2 MOU and budget. Victor Iannello seconded. All were in favor and none opposed.

#### ***Quarterly Project Reporting***

Rachel Jones reviewed quarterly project reporting stating all projects are on listed in green, meaning all projects have met Q2 milestones and are on track. Rachel then reviewed a mitigation strategy submitted by ELITE Internship Program. Erin Burcham, project manager, then reviewed the revised milestones and outcomes for the grant.

### ***Minutes***

Council reviewed meeting minutes from the GO Virginia Region 2 Council Meeting, held on May 5, 2022. Chairman Smoot asked if there were any corrections, additions, or questions regarding the minutes; there were none.

John Capps motioned to approve the minutes, with Justin Yalung seconding. All were in favor and none opposed.

The meeting adjourned at 3:01p.m.



## GO Virginia Contract Completion Date Extension Form

Please complete the information below requesting a completion date extension for a GO Virginia contract. Your request will be reviewed by the Department of Housing and Community Development, and if approved, the agency will sign the request and send it through DocuSign for the appropriate parties. A copy will also be sent to you via email.

Contract Number	_____ 22-GOVA-02A
GRANTEE Organization:	
GRANTEE Contact	
Project name:	
SUBGRANTEE	
SUBGRANTEE Contact:	

Please explain the reasons for needing an extension.

What is the requested amended completion date?

Please provide an updated set of quarterly milestones between now and the requested amended completion date:

By what date do you anticipate requesting your next remittance? (If applicable).






## GO Virginia Contract Completion Date Extension Form

Please acknowledge your agreement to this amendment by signing below. This amendment to extend the contract will be attached to the original contract. The effective date of this amendment is

\_\_\_\_\_

\_\_\_\_\_ (SUBGRANTEE)

BY:  DATE: Aug 22 2022

Name: \_\_\_\_\_

Title: \_\_\_\_\_

\_\_\_\_\_ (GRANTEE)

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

\_\_\_\_\_ (REGIONAL COUNCIL)

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT**

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

## GO Virginia Contract Completion Date Extension Form

Please complete the information below requesting a completion date extension for a GO Virginia contract. Your request will be reviewed by the Department of Housing and Community Development, and if approved, the agency will sign the request and send it through Docusign for the appropriate parties. A copy will also be sent to you via email.

Contract Number	21-GOVA-02B
GRANTEE Organization:	Virginia Polytechnic Institute & State University Continuing & Prof. Education
GRANTEE Contact	Alyssa McKenney
Project name:	Future Workforce for Industry 4.0
SUBGRANTEE	Virginia Tech Roanoke Center
SUBGRANTEE Contact:	Scott Weimer

Please explain the reasons for needing an extension.

The project team has successfully completed activities and deliverables as planned during the grant period. However, only \$13,968.30 of the awarded \$45,360 grant was expended during the project. The project team requests a "no cost extension" of the Future Workforce for Industry 4.0 ECB project to apply the unspent grant funds (\$31,391.70) to a Pilot Delivery of the Fundamentals of Industry 4.0 Draft Curriculum project deliverable.

What is the requested amended completion date?

The amended completion date will be June 1, 2023.

Please provide an updated set of quarterly milestones between now and the requested amended completion date:

This pilot course would be delivered as a 32 hour in-person program designed to provide a foundation of Industry 4.0 skills to a select audience of K12 STEM / Career and Technical Education students, 1st-year Community College students, and individuals employed in the workforce who are new to manufacturing.

### MILESTONES:

4th Quarter 2022 (Oct – Dec):

- Fully Develop the Pilot - A draft of the pilot module is attached. During Q4, the project team will manage the instructional design process to fully develop the pilot offering. This will involve identifying instructors from our workforce and community college partners, coordinating and supporting curriculum development, and logistics planning for the course delivery, including organizing an industry plant visit to a manufacturing partner.

1st Quarter 2023 (Jan – March):

- Recruit participants - The target cohort of 20 participants will be recruited from across Region 2. The goal is to build a cohort that is diverse, models the audience described above, and is representative of the different communities in the region. The project team will leverage existing relationships with locality, educational institution, economic development, and industry partners from our ECB project to identify and nominate students for the pilot course. In addition, the project team will connect with localities not involved in the original ECB project to ensure participation from institutions and companies in their communities.

2nd Quarter 2023 (April-June):

- Deliver Module 1 Pilot - The pilot will be delivered in Roanoke with a site visit to a local manufacturer.
- Debrief delivery and improve Module 1 - A written evaluation assessment will be administered to cohort participants and the project team will conduct an in-person focus group debrief of the course. Results will be used by the project team to refine/revise the pilot offering as a final deliverable.

By what date do you anticipate requesting your next remittance? (If applicable).

December 31, 2022



## GO Virginia Contract Completion Date Extension Form

Please acknowledge your agreement to this amendment by signing below. This amendment to extend the contract will be attached to the original contract. The effective date of this amendment is July 1, 2022

Virginia Polytechnic Institute & State University  
Virginia Tech Roanoke Center

\_\_\_\_\_(SUBGRANTEE)

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Name: Susan Short \_\_\_\_\_

Title: Associate Vice President for Engagement \_\_\_\_\_

Virginia Polytechnic Institute & State University  
Continuing and Professional Education

\_\_\_\_\_(GRANTEE)

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Name: Shelly Jobst \_\_\_\_\_

Title: Director of Continuing & Professional Education \_\_\_\_\_

\_\_\_\_\_(REGIONAL COUNCIL)

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

\_\_\_\_\_(VIRGINIA DEPARTMENT OF HOUSING AND  
COMMUNITY DEVELOPMENT)

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_



## GO Virginia Contract Completion Date Extension Form

Please complete the information below requesting a completion date extension for a GO Virginia contract. Your request will be reviewed by the Department of Housing and Community Development, and if approved, the agency will sign the request and send it through Docusign for the appropriate parties. A copy will also be sent to you via email.

Contract Number	Number 21-GOVA-02B
GRANTEE Organization:	Virginia Tech
GRANTEE Contact	John Provo
Project name:	Regional Health Science Pipeline
SUBGRANTEE	Freedom First Enterprises
SUBGRANTEE Contact:	Paul Phillips

Please explain the reasons for needing an extension.

The primary use of GO VA grant funds is to hire contract labor to help coordinate data collection from stakeholders that will inform talent development priorities and that will accelerate the work of the regional initiative. A data framework has been established and data collection methods are being identified. We plan to collect data from stakeholder employers and educational institutions in the AY2022-23 with a goal of having a

What is the requested amended completion date?

July 31, 2023

Please provide an updated set of quarterly milestones between now and the requested amended completion date:

Quarterly milestones remain the same as conveyed in the original agreement but shifted to a later date.

October- December 2022

- Begin Situational Analysis
- Identify data that will be collected from stakeholders to evaluate progress
- Establish data reporting protocols
- Hire Project Manager
- Task Forces to prioritize deliverables by focus area

January - March 2023

- Preliminary review of situational analysis
- Review available data and revise reporting as needed

April - June 2023

- Situational Analysis complete
- Standardized and aligned curriculum presented to stakeholders with strategies and tactics identified to address gaps and barriers.

By what date do you anticipate requesting your next remittance? (If applicable).



## GO Virginia Contract Completion Date Extension Form

Please acknowledge your agreement to this amendment by signing below. This amendment to extend the contract will be attached to the original contract. The effective date of this amendment is October 1, 2022

Freedom First Enterprises (SUBGRANTEE)

BY:  DATE: 10/5/2022

Name: Paul Phillips

Title: Chairman

\_\_\_\_ (GRANTEE)

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

\_\_\_\_ (REGIONAL COUNCIL)

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT**

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_



VIRGINIA INITIATIVE FOR  
**GROWTH &  
OPPORTUNITY**  
IN EACH REGION

## GO Virginia Region 2

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October 24, 2022

Sara Dunnigan  
Deputy Director,  
GO Virginia and Economic Development  
Virginia Department of Housing  
and Community Development  
600 East Main Street #300,  
Richmond, VA 23219

Dear Sara,

Please accept this letter to confirm the withdrawal of the Dearing Ford Industrial Park award. Unfortunately, the applicant encountered a hurdle that is impediment to the start of the grant and are unable to proceed with the award of \$506,000 intended for a gas extension to the park. I have discussed this with Megan Lucas, CEO of the Lynchburg Regional Business Alliance, and am persuaded that the proposal for this funding was submitted in good faith. A verbal commitment from an anticipated natural gas customer needed to extend the line was not honored at the time the project was to proceed.

Regards,

A handwritten signature in black ink, appearing to read 'Ray D. Smoot'.

Ray Smoot, Chairman  
GO Virginia Region 2 Council



## Memorandum

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**TO:** Virginia Growth and Opportunity Board

**FROM:** Sara Dunnigan, Deputy Director, DHCD

**RE:** Updated Electronic Participation Policy

**DATE:** 09/13/2022

### Background

During the 2022 General Assembly Session, the Code of Virginia was amended to allow further flexibility as it relates to virtual participation in meetings of public bodies and provided means by which public bodies may hold all virtual public meetings. Those amendments took effect on September 1, 2022. Attached to this memorandum is an updated version of the Board Policy #2, which outlines the Board's electronic participation policy. The attached updated version is adapted to reflect changes made to Code. Substantial changes to the preexisting policy include the following:

- a) Virtual participation by a member of the Board is now allowed for (4) different reasons. For the purposes of the new policy, these reasons have been divided into two categories: personal matters and non-personal matters. Virtual participation due to a personal matter may only be used as a reason by a member of the Board twice, while participation due to non-personal matters as defined in the policy are not limited.
- b) A new section has been added to allow for the Board to conduct all-virtual meetings up to twice per year as long as such meetings are non-consecutive virtual meetings.

While the attached updated electronic participation policy strictly conforms to the minimum requirements set out by code, the Board has the liberty to make changes to the policy as long as those changes do not exceed the limits set out by code. For example, if the Board were to decide that one or less all-virtual meetings should be allowed by the policy, it may make that limitation, however it may not expand the all-virtual meeting limit past the two meeting maximum. This also applies to limitations set forth for individual member electronic participation.

In order to take advantage of new provisions pertaining to electronic participation set out by the mentioned Code changes, the Board must adopt a new electronic participation policy, whether it be the one attached or a similar such policy that would satisfy adaptations that the Board may request.



## Board Policy #2

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**TITLE:** Electronic Participation in Virginia Growth and Opportunity Board Meetings

**EFFECTIVE DATE:** 09/13/2022

**AUTHORITY:** § 2.2-3708.2 of the Code of Virginia

**POLICY STATEMENT:**

**Individual Requests for Remote Participation:**

It is the policy of the Virginia Growth and Opportunity Board that individual Board members may participate in meetings of the Board by electronic communication means as permitted by Virginia Code § 2.2-3708.3 of the Code of Virginia. This policy shall apply to the entire membership and without regard to the identity of the member requesting remote participation or the matters that will be considered or voted on at the meeting.

Whenever an individual member wishes to participate from a remote location, the law requires a quorum of the Board to be physically assembled at the primary or central meeting location.

When such individual participation is due to a personal matter, such participation is limited by law to two meetings per calendar year or 25 percent of the meetings held per calendar year rounded up to the next whole number, whichever is greater.

**Requests for Individual Remote Participation; Automatic Approval Process:**

Requests for remote participation by a member of the Board shall be conveyed to the Chair of the Board.

Individual participation from a remote location shall be approved unless such participation would violate this policy or provisions of the Virginia Freedom of Information Act (§ 2.2-3700 et seq.) of the Code of Virginia. If a member's participation from a remote location is challenged, then the Board shall vote whether to allow such participation.

The request for remote participation shall be recorded in the minutes of the meeting. If the Board votes to disapprove of the member's participation because such participation would violate this policy, such disapproval shall be recorded in the minutes with specificity. The minutes shall include other information as required by §§ 2.2-3707 and 2.2-3708.3.

**Eligible Reasons for Individual Remote Participation:**

A member of the Board may request remote participation for one of four reasons. These reasons fall into two different categories: personal matters and non-personal matters.





Requesting remote participation due to personal matters:

- a) The member is unable to attend the meeting due to a personal matter and identifies with specificity the nature of the personal matter. However, the member may not use remote participation due to personal matters more than two meetings per calendar year or 25 percent of the meetings held per calendar year rounded up to the next whole number, whichever is greater.

Requesting remote participation due to non-personal matters:

- b) The member has a temporary or permanent disability or other medical condition that prevents the member's physical attendance;
- c) A medical condition of a member of the member's family requires the member to provide care that prevents the member's physical attendance;
- d) The member's principal residence is more than 60 miles from the meeting location identified in the required notice for such meeting

The limitation to two meetings per calendar year or 25 percent of the meetings held per calendar year does not apply to non-personal matters as stated above and only applies when the member participates remotely due to a personal matter.

#### Minutes Requirements

- a) If an individual member remotely participates in a meeting, a general description of the remote location must be included in the minutes. The minutes should be described in a similar matter as the following: ["Member" participated from their home in [locality]] or that "[Member] participated from their office in [locality]." The remote location does not need to be open to the public.
- b) If a member remotely participates due to a (i) temporary or permanent disability or other medical condition that prevented the member's physical attendance or (ii) family member's medical condition that required the member to provide care for such family member, thereby preventing the member's physical attendance, that fact must be included in the minutes. While the fact that a disability or medical condition prevents the member's physical attendance must be recorded in the minutes, it is not required to identify the specific disability or medical condition.
- c) If a member remotely participates because the member's principal residence is more than 60 miles from the meeting location, the minutes must reflect that fact.
- d) If a member remotely participates due to a personal matter, the minutes must include the specific nature of the personal matter cited by the member.
- e) As stated above, if remote participation by a member is disapproved because it would violate the participation policy adopted by the Board, such disapproval must be recorded in the minutes with specificity.



### **All Virtual Public Meetings:**

It is the policy of the Virginia Growth and Opportunity Board that the Board may hold all-virtual public meetings pursuant to subsection C of §2.2-3708.3. Such all virtual public meetings are limited by law to two meetings per calendar year or 25 percent of the meetings held per calendar year rounded up to the next whole number, whichever is greater. Additionally, an all-virtual public meeting may not be held consecutively with another all-virtual public meeting.

### **Statutory Requirements for Conducting an All-Virtual Public Meeting:**

- a) An indication of whether the meeting will be an in-person or all-virtual public meeting must be included in the required meeting notice along with a statement notifying the public that the method by which the Board chooses to meet shall not be changed unless the Board provides a new meeting notice in accordance with the provisions of §2.2-3707.
- b) Public access to the all-virtual public meeting must be provided via electronic communication means.
- c) The electronic communication means used must allow the public to hear all members of the public body participating in the all-virtual public meeting and, when audio-visual technology is available, to see the members of the Board as well.
- d) A phone number or other live contact information must be provided to alert the Board if the audio or video transmission of the meeting provided by the Board fails, staff must monitor such designated means of communication during the meeting, and the Board must recess until public access is restored if the transmission fails for the public.
- e) A copy of the proposed agenda and all agenda packets and, unless exempt, all materials furnished to members of the Board for a meeting must be made available to the public in electronic format at the same time as such materials are provided to members of the Board.
- f) No more than two members of the Board are together in any one remote location unless that remote location is open to the public to physically access it.
- g) If a closed session is held during an all-virtual public meeting, transmission of the meeting to the public must resume before the public body votes to certify the closed meeting as required by subsection D of §2.2-3712.
- h) The Board shall not convene an all virtual public meeting (i) more than two times per calendar year or 25 percent of the meetings held per calendar year rounded up to the next whole number, whichever is greater, or (ii) consecutively with another all-virtual public meeting.
- i) Minutes of all-virtual public meetings held by electronic communication means are taken as required by §2.2-3707 and include the fact that the meeting was held by electronic communication means and the type of electronic communication means by which the meeting was held. If a member's participation from a remote location pursuant to this subsection is disapproved because such participation would violate the policy adopted



pursuant to subsection D, such disapproval shall be recorded in the minutes with specificity.

**APPROVAL AND REVIEW:** This Board policy was reviewed and approved on September 13, 2022.

**SUPERSESSION:** This Board policy replaces Board Policy #2 effective September 13, 2022.

**DHCD DIRECTOR:** Bryan Horn

# Life Sciences and Health Care in GO Virginia Region 2: Situation, Challenges, and Paths Forward

In this brief whitepaper, we discuss the present conditions and performance of the Life Sciences and Health Care industries in Region 2. We begin with an overview of the sector, discussing both occupations and companies. We continue by looking at how the sector is represented across our region, discussing regional variation, assets, and strengths. We then focus on three critical areas of challenge: talent availability; regional disparities and differences; and innovation ecosystem gaps. This document is meant to support the work of a Life Sciences and Health Care GO Virginia Region 2 working group in the identification of additional strategies and programs to improve high wage jobs in that sector.

## Regional Sector Overview

The Region 2 Life Sciences and Health Care sector is a prominent economic driver for this region. Region 2's Life Sciences and Health Care Sector as a whole generated \$2.6B in Gross Regional Product (GRP) in 2022<sup>1</sup>. The sector experienced substantial growth from 2015-2021, adding 3,230 jobs, a 11.9% increase. This growth rate significantly exceeded that of the state (7.8%) and the nation (6%), during the same time period. In the 2021 Region 2 Growth and Diversification Plan, the sector was projected to continue to grow in Region 2 by an additional 5.7% over the period 2021-2026. Looking at the most recent projections, that forecast is even stronger for job growth at 7% through 2026<sup>2</sup>.

We can also look at shift share or competitive effect for the industry. This analysis compares regional employment growth to national employment growth. Competitive effect values that exceed zero suggest that a regional industry is outperforming its national counterpart with respect to employment growth and that a portion of this growth is due to a factor present in the region. The competitive effect for this sector in 2021 was at 2,192, by far exceeding that of Region 2's other target sectors<sup>3</sup>. For comparison, Metals and Machinery is second in competitive effect at 476.

The region's life sciences and healthcare sector is remarkably varied and consists of three distinct sub-sectors, each with an array of industry types. The three sub-sectors include: **health care, life sciences and research and education.**

**Health care** refers to providers of medical services, such as general medical hospitals, nursing care facilities, and assisted living facilities. **Life Sciences** includes companies operating in the research, development and manufacturing of pharmaceuticals, biotechnology-based food and medicines, medical devices. **Research and education**

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<sup>1</sup> Economic Modeling Specialists Inc (EMSI). 2022.

<sup>2</sup> Economic Modeling Specialists Inc (EMSI). 2022.

<sup>3</sup> Region 2 Growth and Diversification Plan (2021), available at <https://cece.vt.edu/GOVAR2.html>

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encompasses university and scientific research that assists in development of the other two sectors.

The life sciences and healthcare cluster is the largest target industry cluster in Region 2 with respect to employment. Additionally, this cluster led its peers in contribution to the region's GRP in 2020. The life sciences and healthcare cluster saw a nearly 20% increase in employment from 2015-2021<sup>4</sup>.

### Occupations, Jobs, and Earnings,

The 2021 Region 2 Economic Growth and Diversification Plan noted that the average wage across all of the region's industry sectors was \$27 hourly or \$55,000 annually. The plan found that for Life Sciences and Health Care industry occupations, the amount was \$31 hourly or \$65,000 annually. Notably, this rate was markedly less than the state-wide average for jobs in this sector (\$33.04), as well as the nation-wide average (\$36.95).

If we look at the three sub-sectors of **health care, life sciences, and research and education**, then the cluster is even more robust in terms of jobs and wages. The annual earnings average across these sub-areas in Region 2 in 2022 is \$72,288, which is actually greater than the state average of \$64,536 but still less than the national average of \$82,430<sup>5</sup>. The total supply of regional jobs is 29,469 across these three sectors, higher than expected for a region of our size based on the national average.

The vast majority of these jobs are in the **health care sub-sector**. Health care, as a sub-area, represents \$2.0 Billion of the GRP, and boasts a supply of 27,720 jobs. Most of the workforce (24.5%) is relatively young, between the ages of 25-34. Within this sub-area, the largest number of jobs by far is in General Medical and Surgical Hospitals, with 15,411 jobs.

The health care sub-sector includes providers of medical services, such as general medical hospitals, nursing care facilities, and assisted living facilities. Below is the breakdown of industry types used to comprise the **health care** sub-sector with accompanying job and establishment numbers by industry type:

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<sup>4</sup> Region 2 Growth and Diversification Plan (2021), available at <https://cece.vt.edu/GOVAR2.html>

<sup>5</sup> Economic Modeling Specialists Inc (EMSI). 2022.

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NAICS	Description	2021 Employment	2021 Establishments
622110	General Medical and Surgical Hospitals	15,411	26
623110	Nursing Care Facilities (Skilled Nursing Facilities)	4,470	42
621610	Home Health Care Services	2,357	166
623311	Continuing Care Retirement Communities	2,009	26
623220	Residential Mental Health and Substance Abuse Facilities	910	11
623312	Assisted Living Facilities for the Elderly	825	35
622310	Specialty (except Psychiatric and Substance Abuse) Hospitals	564	4
621511	Medical Laboratories	522	67
623210	Residential Intellectual and Developmental Disability Facilities	487	32
621512	Diagnostic Imaging Centers	116	9
339116	Dental Laboratories	48	16
<b>Healthcare Total:</b>		<b>27,720</b>	<b>433</b>

**Life sciences** contributed \$123.7 million to our GRP and includes 1,326 regional jobs. The annual earnings for jobs is \$86,672. This sub-area includes companies operating in the research, development and manufacturing of pharmaceuticals, biotechnology-based food and medicines, and medical devices. Below is the breakdown of industry types used to comprise the **life sciences** sub-sector with accompanying job and establishment numbers by industry type:

NAICS	Description	2021 Employment	2021 Establishments
333314	Optical Instrument and Lens Manufacturing	412	2
339113	Surgical Appliance and Supplies Manufacturing	282	8
325412	Pharmaceutical Preparation Manufacturing	261	4
339112	Surgical and Medical Instrument Manufacturing	155	5
811219	Other Electronic and Precision Equipment Repair and Maintenance	92	8
325414	Biological Product (except Diagnosis) Manufacturing	84	2
339115	Ophthalmic Goods Manufacturing	39	4
<b>Life Sciences Total:</b>		<b>1,326</b>	<b>33</b>

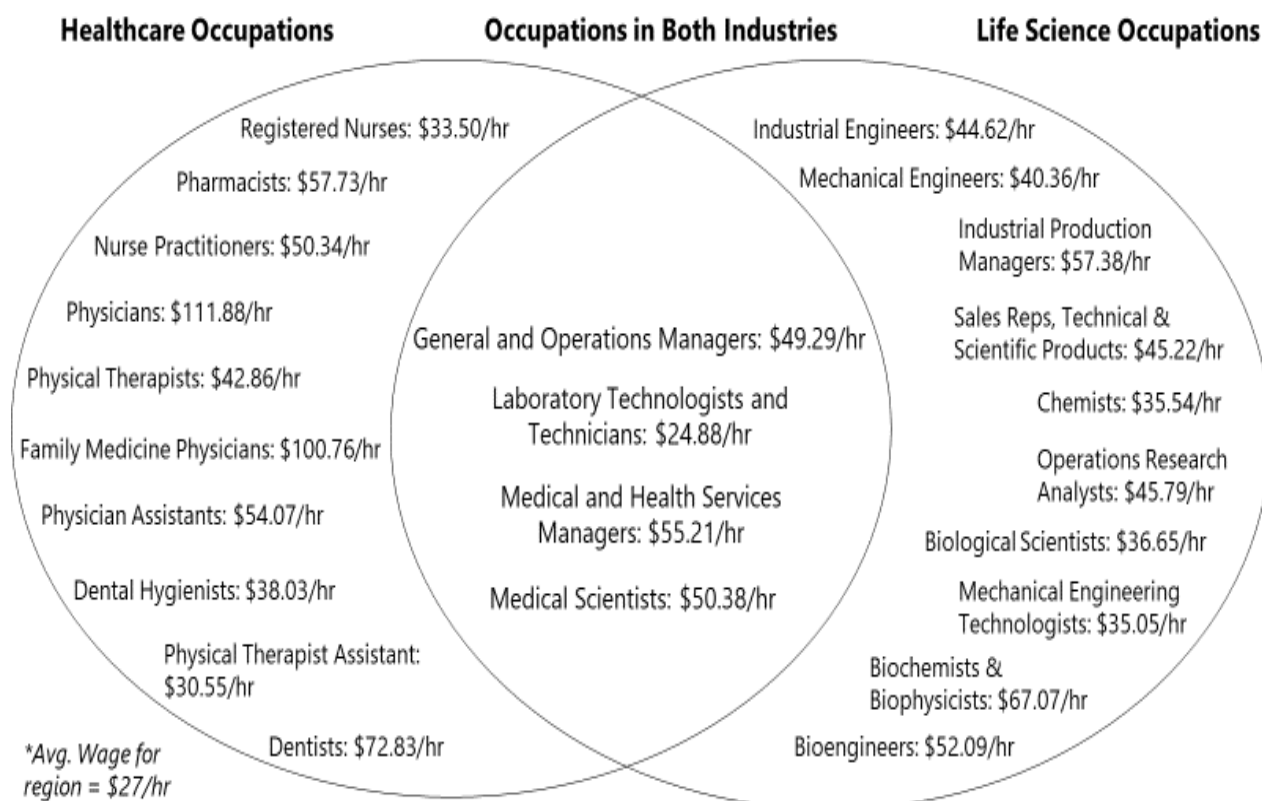
**Research and education** (related to this sector) contributed \$67.3 million to the GRP and includes 423 jobs. The annual earnings for jobs is \$144,493. This includes university and scientific research that assists in development of the other two sectors. It should be noted that the jobs and establishments for this sub-sector most likely UNDERESTIMATE the actual jobs present in the region, as some specialties, departments, and researchers engaged in life sciences related activities might be in other disciplines or entities NOT represented in the industry codes used to approximate this sub-sector. Below is the breakdown of industry types used to comprise the **research and education** sub-sector with accompanying job and establishment numbers by industry type:

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NAICS	Description	2021 Employment	2021 Establishments
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	318	21
541714	Research and Development in Biotechnology (except Nanobiotechnology)	77	7
541713	Research and Development in Nanotechnology	27	9
<b>Research and Education Total:</b>		<b>423</b>	<b>36</b>
<b>TOTAL:</b>		<b>29,469</b>	<b>502</b>

These three sub-areas include a wide and dispersed range of occupations. The figure below provides an example of occupations focusing on life sciences and health care, as well as some of the overlapping occupations between the sub-sectors:

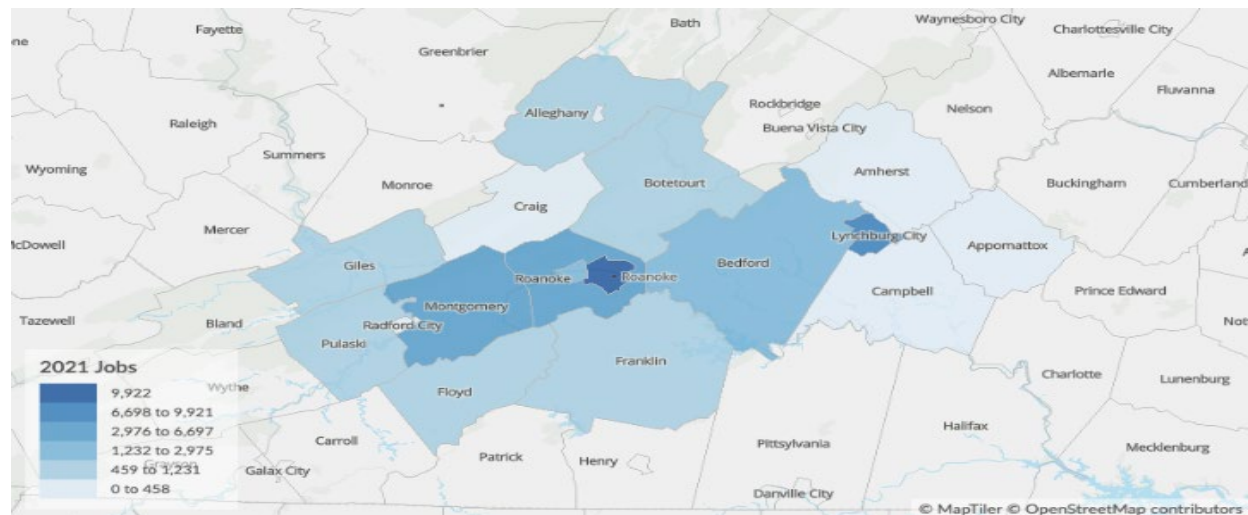
### Top Healthcare and Life Sciences Higher Wage Occupations in GOVA Region 2



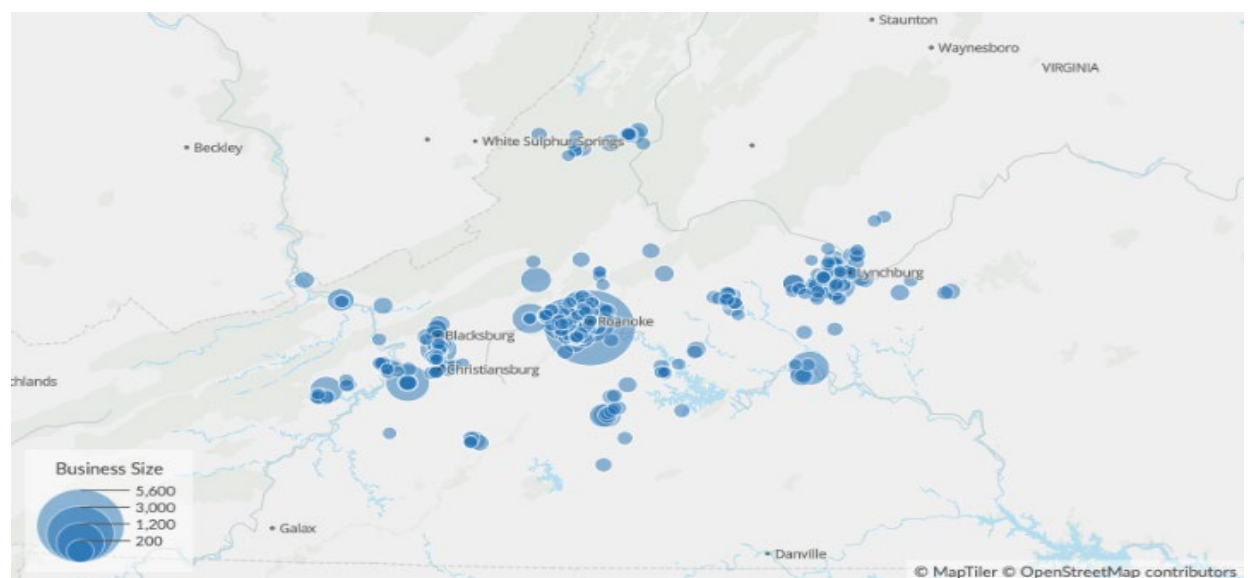


## Regional variation, major employers, assets, and strengths

Looking at total 2021 jobs in this sector, we can divide those by sub-region. The Roanoke sub-region contained the largest number of sector jobs at 16,759. The Lynchburg sub-region contained 8,364 sector jobs. The New River Valley contained 4,710 jobs. The figure below depicts the number of jobs by locality. The city of Roanoke and Lynchburg have the highest number of workers in this sector, along with the counties of Bedford, Roanoke, and Montgomery:



Referring to the depiction above of the concentration of sector jobs by locality, one could envision a Region 2 life sciences and health care corridor – a narrow band of concentrated jobs and assets running west to east across the region, roughly along the 460 corridor as it passes through Montgomery County, Roanoke County, the cities of Salem and Roanoke, Bedford County and the city of Lynchburg. The image below depicts the location of regional establishments in this sector by size:





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We include below a selected list of strengths and assets in this sector, grouped by subregion: New River Valley; Roanoke-Alleghany; and Greater Lynchburg.

### **New River Valley Sub-region:**

In the New River Valley, there are workforce, education, training and research strengths associated not only with the presence of Virginia Tech, but with Radford University as well. In addition, New River Community College offers an array of workforce and curricular programming. The Virginia Tech Corporate Research Center is also seeing a surge in life science sector company interest and growing its assets in this area. Region 2 Council funded a planning project and a subsequent per capita request that supported the development of new shared lab facilities in Blacksburg for smaller life science startups, as well as a unique partnership with Johnson & Johnson to help accelerate promising ventures.

The need for this type of small-scale, flexible wet and dry lab space was highlighted by the planning grant and is now available for short term rental, with users able to sign flexible leases for a little as a month, something not currently present in the region.

Looking across the New River Valley, some of the sector companies include:

- **Healthcare Systems:** Carilion New River Valley, LewisGale
- **Elder Care:** Lakeview Blueridge, English Meadows, Warm Hearth, Heritage Home Health, Wheatland Hills-Christiansburg
- **Life Sciences:** TechLab, Landos Biopharma, Techulon, Nanosonic Inc., Intrexon
- **Educational (and/or Research Programs):** Virginia Tech, Radford University, New River Community College

### **Roanoke-Alleghany Sub-region:**

Looking broadly at sector entities in the Roanoke-Alleghany area, we see a number of notable examples in each sub-sector:

- **Healthcare Systems:** Carilion Roanoke, Salem Veterans Affairs Medical Center, LewisGale
- **Elder Care:** Brandon Oaks, Richfield, Medical Facilities of America, Rocky Mount Rehabilitation & Healthcare Center
- **Life Sciences:** Luna Innovations, Novozymes Biological, Tiny Cargo (ex. of RAMP Cohort companies), Arcpoint Labs, Solstas Lab Partners, Plastics One

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- **Educational Programs:** VT Carilion School of Medicine & Fralin Biomedical Research Institute, Virginia Western Community College, Radford Carilion

The above is just a sampling. The Roanoke Regional Partnership focuses on Life Sciences as a Target sector. They provide web-links to 29 private-sector Life Sciences companies as regional examples and find nearly 300 total firms in the overall sector.

### ***Greater Lynchburg Sub-region:***

A partial list of sector-related entities in the Lynchburg sub-region include:

- **Healthcare Systems:** Centra Health, Johnson Health Center
- **Elder Care:** Prince Charles Home Care, Westminster-Canterbury, Bedford County Nursing Home, Runk & Pratt
- **Life Sciences:** Bausch & Lomb, Abbott Laboratories, Fleet Laboratories, Barr Laboratories, NanoTouch Materials, Teva Pharmaceuticals, Tri Tech Laboratories, BlueRidge Optics
- **Educational Programs:** University of Lynchburg, Liberty University, Central Virginia Community College

This area has a number of educational programs, including a K-12 focus through the XLR8 Academy as well as community college/four year programs in biotechnology at Central Virginia Community College and Liberty University and workforce partnerships and programs supported by CentraHealth.

The presence of companies like Bausch and Lomb in Lynchburg, Virginia help give the region particular strengths in optical instrument and lens manufacturing. This region also has some prominent firms that may not be categorized as life sciences but that manufacture non-medical production equipment used by life science industry firms. An example is Simplimatic Automation in Bedford County which assembles robots and automated conveyor systems used in pharmaceutical factories.

## Other assets and strengths

We have a range of **high-quality assets**. The Virginia Tech Carilion School of Medicine, Edward Via Virginia College of Osteopathic Medicine, and other universities and colleges offer medical training and pre-med degrees to thousands of students annually. The Fralin Biomedical Research Institute conducts transformative medical and life sciences research as well as supports the training and development of individual scientists and entrepreneurs in the field. The Liberty University School of Nursing recently launched a new fast-track BSN program catered to college graduates and military veterans, to enable them to earn a credential in as little as one year.

**Elderly and residential care** facilities are an area of strength and significant regional employment. Retirement communities and elderly care facilities are drawing people from outside of the immediate region. The quality of the region's hospital systems also draw people from outside the region. The assets of this region, including the atmosphere and livability of the region as well as the gerontological research and human capital assets, indicate potential for this region to attract and retain some part of this population. The region includes retirement communities like Richfield in Salem, Brandon Oaks in Roanoke, Westminster-Canterbury in Lynchburg, and English Meadows in Blacksburg.

Region 2 is also a part of the state-wide **Virginia BioConnect Initiative**. This is an inter-regional program supported by statewide competitive GO Virginia funding. The program is designed to build the infrastructure needed to connect and sustain the state's broader biotechnology network, while at the same time, strengthening each regional life science cluster and the bioeconomy of the Commonwealth of Virginia.

Regional leaders in this initiative from Carilion Clinic and Fralin Biomedical Research Institute have described how participation in this project has helped the region access expertise from other parts of the state and nation, learn about other models and initiatives, and provide affirmation of the region's efforts to nurture this critical industry segment.

The 2022 *Virginia Economic Review* highlighted the Virginia Tech, Carilion collaborations in Region 2 in its issue on life sciences in Virginia, noting how the VT and Carilion collaborations are driving research into innovative medical technologies. The article highlights area spinoff companies like Tiny Cargo. Fralin Biomedical Research Institute at VTC (FBRI) in Roanoke continues its rapid growth and globally relevant work. In 2021, the Institute's researchers were awarded \$140 million in active research grants and contracts. **FBRI has plans to double in size by 2027<sup>6</sup>.**

According to an October 2019 study by the Weldon-Cooper Center for Public Services at UVA on the economic contribution by Carilion Clinic to the state and service region, Carilion Clinic is responsible for a total direct and indirect economic contribution of 23,719 jobs, \$3.17 billion in output, and \$1.64 billion in value-added across an approximate 20-county region in central, southwestern Virginia, and southern West Virginia.

**Access to capital** has been a long-noted gap in the region, but biomedical companies in their early stages have more options now than before. VTC Ventures is an investment firm

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<sup>6</sup> See [https://issuu.com/vedpvirginia/docs/vedp\\_q122\\_v10\\_issuu](https://issuu.com/vedpvirginia/docs/vedp_q122_v10_issuu)

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formed by Virginia Tech and Carilion Clinic almost five years ago. It provides financing to promising ventures through its VTC Seed Fund and VTC Innovation Fund.

Virginia Tech now offers more **extensive support for university spin-offs and start-ups** through its Link, License, and Launch Program <sup>7</sup>. This program helps those within or those choosing to partner with the University with commercializing intellectual property navigate contracting, property rights, and other hurdles that may otherwise complicate rollout of technology to the market<sup>8</sup>. University resources in our region can also help with developing “Proof-of-Concepts” for startups<sup>9</sup>, an important consideration for those looking to attract potentially risk-averse investors and resources like Virginia Tech’s Corporate Research Center offers access to university-affiliated business development consultation, as well as events geared toward business development<sup>10</sup>.

Other universities in the region such as Radford University are also strengthening their support for start-up and commercialization activity. We have an active SBDC network in the region, and specialized assistance for start-up companies in the life sciences and related technologies space. As one example, since 2017 the Regional Accelerator and Mentoring Program (RAMP) has been delivering on its mission to identify and support the growth of the region’s technology-based startups. RAMP has coordinated mentoring, educational programming, and increased access to capital to foster a more vibrant and diverse regional economy. From 2017-2022, RAMP has supported 33 companies in technology and life sciences. Those companies now represent 601 workers.

RAMP, VT FBRI, and Carilion are working to grow the numbers of faculty researchers with potentially commercializable products or ventures. The Fralin Health Sciences and Technology Commercialization Fellowship Program is one such example. Fellows attend the RAMP Boot Camp. They demonstrate their knowledge by identifying a commercial idea, researching it with the support of a mentor, and pitch preliminary findings about the idea’s value proposition and market potential to a panel of entrepreneurs. Applicants are not required to have a commercial idea related to their research at the time of application, but do learn the process and available resources.

Carilion Clinic and the VT Carilion School of Medicine developed the Center for Simulation, Research and Patient Safety in Roanoke. This is a state-of-the-art 11,000 square foot training and simulation center. The Center houses the Human Factors research team who are able to engage with companies to provide valuable input on care-related product design and use and useability. Virginia Tech and Carilion partner through the University’s Biomedical Engineering and Mechanics (BEAM) academic and research programs. BEAMS student interns shadow clinicians and identify needs, then design products to address the needs. BEAMS senior design students spend an entire semester on a design problem

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<sup>7</sup> Resources for Inventors. 2022.

<sup>8</sup> Resources for Inventors. 2022.

<sup>9</sup> Proof of Concept (POC) Grant Program. 2022.

<sup>10</sup> Virginia Tech Corporate Research Center.

identified by a Carilion clinician. Plans are in place for a Biodesign Graduate Program, a 2-year program that will pair a surgical resident with an engineering graduate student/postdoc to identify and address a clinical need.

## Regional Sector Challenges and Opportunities

Despite the continued growth of this sector in our region, and its increasing importance as an economic driver, there are a number of challenges related to continued growth and overall sector strength. We highlight three particular areas of challenge here: 1.) talent and workforce availability; 2.) regional disparity or variation; and 3.) innovation ecosystem gaps.

### 1.) Talent and workforce availability

This challenge is not new and is not confined to Region 2. The growth of the health care industry overall; the challenging work environments facing many health care workers; the retention of workers in stressed environments; the cost, access barriers, and difficulty levels of some training programs; and the lag in the supply of available talent with required degrees or credentials in high-need areas of specialization are all part of the nation-wide challenges related to workforce in this sector. Health care was identified as one of the five most in-demand industries in the state of Virginia.

In Region 2, the challenge is perhaps exacerbated by relatively low levels of regional immigration of working age adults, and comparatively low levels of retention of four year graduates in the region. Many in-demand sector jobs are considered “middle skill.” These jobs typically require a unique skillset acquired through a 1-2-year certification or associate’s degree program. Specifically, these jobs tend to require some sort of industry credential, license, or apprenticeship/long-term on-the-job training. Lab Technicians, Licensed Practical Nurses, and others are all examples of middle-skill occupations.

Region 2 also has an older-than-average middle-skill workforce; a growing portion of these workers are approaching, at, or above retirement age. Meanwhile, there is not an adequate supply of workers to replace retiring workers and fill newly-created middle-skill positions.

During the Region 2 Growth and Diversification Plan input sessions, stakeholders suggested that younger people are often not interested in pursuing regionally available careers, or are less aware of the nature of those careers, and the opportunities they represent in terms of earnings, advancement, and learning. A few of these occupations have become stigmatized despite higher-than-average wages and job security. Moreover, many parents and students believe a four-year degree is necessary for a livable wage. These trends constrict the region’s pipeline for middle-skill talent. Additionally, community college personnel shared that enrollments for middle-skill degree programs are falling despite high levels of unemployment. Previously, high unemployment drove community college enrollment.

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Specific to this sector, workforce stakeholders reported that the region's health care talent pipeline could not keep pace with the current and projected cluster growth. Healthcare and training providers are collaborating to address workforce gaps. However, the credential or degree-requirements for many of these healthcare occupations poses a significant barrier to jobseekers, along with the cost, time, and related barriers for degree seekers, and the time required for degree completion (often multi-year programs).

Annually, over the next five years, Region 2 projects to have over 2,000 annual openings just for nurses, nursing assistants and medical assistants not including technicians, counselors, and other in-demand occupations.

Regional employers are taking steps to address this challenge. In 2022, Centra Health in Lynchburg raised its starting wage to \$15 an hour. Two years prior, the beginning wage was \$9.50 for entry level workers. Centra also added new benefits and made wage adjustments in efforts to better fill openings and retain workers in high-need areas like nursing. In Spring of 2022, Centra had 185 nursing vacancies<sup>11</sup>.

Carilion Clinic also began a new program in 2022 aimed at helping retain and develop their existing entry-level workforce by helping workers develop new skills and credentials through scholarships for training and education<sup>12</sup>.

At the state level, initiatives like the G3 program help pay for books, tuitions and other expenses for qualifying students in health care credential-earning programs. At Virginia Western, for instance, since summer of 2021, the college has used G3 funding to provide \$1.22 million in assistance to 1,336 students (not all in health care, but some in critical health care specialties such as Pharmacy Tech, EKG Tech, and Phlebotomy).<sup>13</sup>

Region 2 GO Virginia Council has also supported projects such as the establishment of the Blue Ridge Partnership for Health Science Careers, a public-private consortium of stakeholders working to foster new models for health sciences education and workforce development. The project aims to strengthen and grow a working talent pipeline that will better meet the acute and growing need of regional employers for qualified clinical and administrative staff; support the region's emerging Health and Life Sciences ecosystem; and help make the region stronger as a magnet for attracting established companies in the health and life sciences sectors.

Region 2 has supported other projects including a critical effort led by Virginia Tech FBRI to enhance regional testing capacity during the COVID-19 pandemic. GO Virginia support

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<sup>11</sup> See <https://wset.com/news/local/centra-healthcare-raising-wages-incentives-recruitment-employment-health-workforce-retirement-benefits-bonuses-compensation-labor-shortage-lynchburg-virginia>

<sup>12</sup> See <https://www.wsls.com/news/local/2022/05/04/carilion-clinic-receives-1-million-gift-to-help-employees-advance-their-careers/>

<sup>13</sup> See <https://www.wsls.com/news/local/2022/10/03/free-community-college-in-virginia-for-in-demand-industries/>

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helped validate an initial test assay developed at the Molecular Diagnostics Lab and led to the training of new workers in our region in leading edge molecular diagnostic technology and theory, positioning them for good jobs and for furthering their education in science and technology.

Innovative efforts like this will likely need to continue, and need additional support and attention since the talent challenge is here to stay. Our region is projected to grow jobs in this sector, high-paying jobs that represent a tremendous economic growth opportunity. Yet, we may not be able to maximize on this growth if we fail to develop, attract, and retain talent since our overall population is both aging and not significantly increasing at a rate to meet these workforce needs.

### 2.) Regional disparities and differences

Earlier in this whitepaper, we discuss the regional variation of sector-related jobs and establishments and the heavy concentration in the more populated localities of Blacksburg-Christiansburg; Roanoke; and Lynchburg. There are health care industries scattered across the region, including rural localities but the bulk of the employment remains in the urban centers. In addition, the life sciences company growth and start-up activity is also predominantly found in the more urbanized core localities.

This is not *necessarily* a negative. Looking at other regions and places, we can see that having a dense corridor of clustered innovation or life sciences companies and assets can spur growth. Examples include the 16 Tech Innovation District in Indianapolis. By 2030, they project to have over 3 million square feet of office and lab space, more than 3,000 jobs, and more than \$500M invested into projects. The district will include housing to better connect people to their jobs. The area is home to the Indiana Biosciences Research Institute, the IU School of Medicine, and the Central Indiana Community Partnership. The Innovation Quarter in Winston-Salem, North Carolina is another such example with a plethora of office space, retail space, and research space in one district now with over 3,600 workers, 5 academic institutions, over 1,000 apartments, and 90 companies.

In our region, the VT Corporate Research Center was an early adopter and exemplar of this type of model, and the still-developing Innovation Corridor in Roanoke, Virginia is another. We have an interconnected labor shed in Region 2, with commuters from the urban adjacent localities frequently choosing to live and work in different localities. We have a substantial number of commuters across and between sub-regions as well (such as from Lynchburg region to Roanoke region or vice versa).

While not an area that GO Virginia funds or focuses on, transportation will be a key factor as to the region-wide access to jobs as well as to care. Reducing transportation costs for workers or providing benefits (such as free or reduced price parking, or more widely available remote work options) and alternative transportation options (car pools or direct shuttles from and between outlying hubs) may be key to being sure that workers can access jobs and employers can attract workers from across the larger region.

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Beyond transportation, we can also look for ways to support under-represented or under-resourced groups and areas in gaining entry to health care and life science occupations. In Pittsburgh, to help address the need for Health sector technologists, the community developed an 8-week training program to connect underserved communities to the Healthcare field. Trainees received \$15/hour and were connect to IT jobs in the health sector, often able to work remotely once training was completed. Atlanta developed the Careers in Healthcare Atlanta Mobility Project (CHAMP). 11 of Atlanta's 15 fastest-growing occupations are in health care, and each of these occupations can be entered with an associate's degree or lesser credential. To support individuals in accessing these growing jobs, CHAMP works with local hospitals to provide training for incumbent employees to move up, and jobseekers to move into the health care field. Several early projects have been brought together in CHAMP—which stands for Careers in Healthcare Atlanta Mobility Project. CHAMP creates a pathway for individuals to reach a critical entry point for a position with a health care employer, and then to prepare for advancement into health occupations in high demand. Incumbent training varies among employers and has included School at Work™ support, coaching, needs assessment, and onsite occupational skills training. In addition, CHAMP works with health care organizations to analyze their workforce needs and the aspirations of their current incumbents in low-wage jobs to create recommendations for programs and services that meet the needs of the organization and their workforce.

There are many other examples and small-scale efforts at work in our region and elsewhere, but ensuring that we maximize the region's existing talent and future workers (student population) by reducing barriers to health care entry occupations will be a continued challenge, and an area of opportunity.

### 3.) Innovation ecosystem gaps

Lastly, while the innovation ecosystem is growing and we have a number of significant assets and strengths, there are notable gaps. Earlier in this paper, we highlighted strengths that included the region's participation in the Virginia BioConnect Initiative; the VTC Ventures funds; the presence of RAMP; and FBRI growth and commercialization activities just to name a few.

Still, the regional ecosystem is uneven and fewer innovation activities in the life sciences space are present in the Lynchburg sub-region. In addition, geographic distance and lower levels of historic collaboration by entities across the sub-regions may make resources more difficult to access. In other words, GO Virginia funded activities have supported RAMP outreach across the Region 2 footprint, including pitch and polish clinics for area entrepreneurs. Yet, these have been somewhat episodic and it is unclear to what extent the awareness of these types of Region 2 ecosystem assets may be across the region. Due to a lack of past collaboration, the referral network may also be splintered and sporadic rather than robust and ongoing.

Shared lab space for smaller life science startups has been a prominent gap in the region. GO Virginia Region 2 is helping address that gap through funding and support for a project



## GOVA Region 2: Life Sciences and Health Care Sectors White Paper

led by the Virginia Tech Corporate Research Center to encourage life science ventures in the Roanoke and New River valleys. The project includes new shared lab facilities in Blacksburg for smaller life science startups and future development of a larger facility in Roanoke, along with a unique partnership with Johnson & Johnson, which will allow a certain number of companies using the new space to join the JLABS program. JLABS provides early-stage innovators with access to its virtual residency program. The benefits include programming, mentoring, and other resources. In year one, the goal is to have five companies participate. Participating entrepreneurs will have a concentrated focus on their success. J&J gave more than \$500 million to projects in 2020, and program participants have a nearly 80% success rate.

In addition to helping small companies grow, the Roanoke facility would aim to attract mid-sized companies to the area, while also helping to foster the research currently underway in the area and serving as one more anchor in the city's Innovation District along Jefferson Avenue. The overall project is expected to generate 125 jobs with an average salary of \$80,000 per year over five years with a \$1.42 million, \$140% return in employment-related revenue on the initial investment from GO Virginia funding. This is already coming to fruition as the General Assembly allocated more than \$15 million to help fund the new lab spaces for biotech startups in Roanoke.

This progress is substantial. Still, the overall number of spinout companies from VT and Carilion remain relatively low, when compared to research university peers across the state and nation. There is work to do in this space to provide a full spectrum for companies to grow and develop.

# GO Virginia Region 2 Annual Report



*Photo 1: The COgro Labs at Virginia Tech Corporate Research Center.*



*Photo 2: Student participants in the Developing a Destination for Talent program.*



*Photo 3: Fall foliage, seen from the Blue Ridge Parkway in Floyd County.*



*Photo 4: A student in the Women in Machining class at Vector Space in Lynchburg. Photo courtesy of [Cardinal News](#).*

## I: Introduction

Region 2 of GO Virginia spans across three metropolitan statistical areas (MSAs) and regional commissions on the western half of the state. The region is comprised of the Lynchburg, New River Valley, and Roanoke-Alleghany MSAs. In total, Region 2 contains thirteen counties and five independent cities: the counties of Alleghany, Amherst, Appomattox, Bedford, Botetourt, Campbell, Craig, Floyd, Franklin, Giles, Montgomery, Pulaski, and Roanoke; and the cities of Covington, Lynchburg, Radford, Roanoke, and Salem. The region's population of 781,531 made up 9.1% of Virginia's 2020 total population.

Each of these areas has a strong history of local cooperation, and some experience with interregional collaboration, primarily between the New River and Roanoke Valleys. Together, they all share many economic similarities: traditional industry strengths in manufacturing, transportation, and agriculture; emerging technology sectors; mixed urban and rural characteristics; and higher education and healthcare as economic and employment drivers.

The four (4) target industry clusters identified in GO Virginia Region 2 are:

Region 2 Target Sectors
Transportation & Automation
Life Science & Healthcare
IT & Emerging Tech
Materials & Machinery Manufacturing

Virginia Tech's Center for Economic and Community Engagement serves as Region 2's support organization. The support organization provides fiduciary oversight and administrative services for activities related to GO Virginia in Region 2. This annual report serves as a record and celebration of the activities, partnerships, research, outcomes, and impacts that have been a part of GO Virginia during the past year (July 2021 – June 2022).

## II: Growth & Diversification Plan

The Growth & Diversification Plan documents the socio-economic trajectory of Region 2, particularly the concentration of different industries across this footprint, their job growth rates compared to the nation, their contributions to gross regional product, the number of higher-than-average wage jobs available in these industries, and assets unique to the region that drive opportunity. The analysis of that data identifies four target "clusters"—or geographic concentrations of businesses with common markets, suppliers, technologies, and workforce needs. These four interrelated clusters offer the greatest potential for sustainable, scalable, future growth in the region.

The plan was updated this year, between June and August 2021. Data and analysis were performed by support organization staff. On August 18, 2021, leaders from across Region 2 gathered in Roanoke to discuss revisions to the 2021 GO Virginia Region 2 Growth and Diversification Plan. The meeting began with opening remarks and was followed by four workgroup sessions, focused on GO Virginia Region 2's four investment strategy areas: Talent, Entrepreneurship, Cluster Scale Up, and Sites and Infrastructure. Three regional sessions to gain feedback on the Growth and Diversification Plan took place in Roanoke (Oct. 4, 2021),



Lynchburg (Oct. 5, 2021), and Blacksburg (Oct. 7, 2021). The final plan was reviewed by the full Region 2 Council on October 27, 2021.



*Photo 5: Kick-off meeting for the Growth and Diversification Plan (Aug 18, 2021)*



*Photo 6: Blacksburg Regional meeting for the Growth and Diversification Plan (Oct 7, 2021)*



*Photo 7: Lynchburg Regional Meeting for the Growth and Diversification Plan (Oct 5, 2021)*

### III: Summary of Projects

Project	GO Virginia Funds	Locality Match	Non-Locality Match	Other Leverage
Future Workforce for Industry	\$45,360	\$5,000	\$25,000	\$0
Lynchburg Beacon of Hope	\$97,740	\$42,250	\$15,000	\$0
Health Sciences Talent Pipeline	\$100,000	\$0	\$106,355	\$0
Project Eagle+	\$599,437	\$225,000	\$278,687	\$0
Regional Talent Strategy Implementation	\$315,911	\$50,854	\$153,500	\$0
Workforce and Entrepreneurship Initiatives in a Regional Makerspace	\$324,000	\$69,000	\$93,100	\$0

**Future Workforce for Industry 4.0 | VT Grado Department of Industrial and Systems Engineering, Localities served: Counties of Botetourt and Roanoke; City of Roanoke.** Local matching funds were committed by Roanoke Regional Partnership and its member localities of Alleghany, Botetourt, Franklin, and Roanoke. Cities of Covington, Roanoke, Salem; and Town of Vinton. The Virginia Tech Grado Department of Industrial and Systems Engineering (ISE) will convene employers and stakeholders to help identify areas of Industry 4.0 technology in use, Industry 4.0 technology and skill gaps among the current and future workforce, and areas of potential Industry 4.0 collaborative projects using the Learning Factory as an initial experiential learning site to bring together students and professional learners. ECB products include an Action plan that identifies current and future 4.0 employer technology and workforce skill needs in Region 2.

**Lynchburg Beacon of Hope | Lynchburg Beacon of Hope, Localities served: Counties of Amherst and Campbell; City of Lynchburg.** Local matching funds were committed by Amherst County Public Schools and

Campbell County Public Schools. Lynchburg Beacon of Hope will develop a playbook for future centers, which will result in a programmatic guide for the operations of the high school future centers, a template for hiring directors of each future center, and a professional development and training module for effective Future Centers. The mission of the Future Centers is to help prepare and train high school students for post-secondary opportunities focused on in-demand high wage occupations in Manufacturing, Technology/IT, and Life Sciences. ECB products include a Playbook for Future Centers.

**Health Sciences Talent Pipeline | Freedom First, Carilion Clinic, Localities served:** *Counties of Roanoke, Botetourt, Craig, Franklin, Alleghany, Montgomery, Floyd, Pulaski and Giles; cities of Salem, Roanoke, Radford, and Covington.* A business led consortium: The Blue Ridge Partnership for Health Sciences Careers, will be organized through a 12-person Executive Committee comprised of educational and health and life sciences stakeholders. The partnership will advance its activities through task forces, with chairs reporting to the executive committee. This initiative will accelerate the establishment of a new model for widespread business-education collaboration, increase the number of health and life sciences graduates, and begin to formalize a health sciences talent pipeline focused on engineering, cybersecurity, mechatronics, and the broader life sciences traded sector. ECB products include a Regional Situational Assessment and Analysis, formation of The Blue Ridge Partnership for Health Sciences Careers, and the launch of their website.

**Project Eagle+ | Virginia Tech Corporate Research Center (VT CRC), Localities served:** *All of Region 2 with primary focus in Roanoke-Alleghany and New River Valley subregions.* Local matching funds were contributed by Montgomery County and City of Roanoke. The VT CRC secured a per capita grant to advance a three-prong approach to grow the region's health and life sciences cluster. A project leadership team that includes the VT Corporate Research Center, Johnson & Johnson JLABS, and other private and public sector partners will 1) build out a pilot shared lab facility in Blacksburg, 2) launch Johnson & Johnson JLABS accelerator programming in the region, and 3) conduct site design and engineering work for a scaled-up lab facility based in Roanoke. Metrics include Number of businesses served, Number of jobs created/filled, Number of existing businesses expanded, and Total capital raised. Products/outcomes include Preliminary architectural and engineering work for Roanoke site, 8-10 businesses served, 32 jobs created/filled, 3-4 existing businesses expanded, and \$7.5 million in capital raised.

**Regional Talent Strategy Implementation | Greater Roanoke Workforce Development Board, Localities served:** *Counties of Roanoke, Botetourt, Craig, Franklin; Cities of Salem, Roanoke, and Covington.* Local matching funds were contributed by the counties of Botetourt, Roanoke, and Franklin, and the cities of Covington, Roanoke, and Salem. The Workforce Development Board will implement a regional talent strategy in the Roanoke Valley and Alleghany Highlands in partnership with the Roanoke Regional Partnership focused on career awareness and career pathways, talent development, talent attraction and retention, and collaboration and leadership. Activities of the project will include attracting out-of-market workers to relocate to the Roanoke Valley and Alleghany Highlands and retaining and developing the current workforce in the region, all while fostering collaboration and partnership between economic development and workforce development partners. Some of the activities will be completed to meet the goal of the strategy will include creating a regional web-based talent portal, creating toolkits for business and industry to use for recruitment of new employees, establishing an annual talent retreat for the region's economic and workforce partners, engaging business and industry in sector strategy activities, and more. The GRWDB will work closely with the Roanoke Regional Partnership to engage business and industry through the convening of the Talent Advisory Council to create a talent attraction, retention, and development strategy to grow the current and future talent pipeline for the Roanoke Valley and the Alleghany Highlands. Metrics include Number of students trained, Number of businesses served, Number of employees upskilled, Number of jobs created/filled. Products/outcomes include a Regional Talent Portal, creation of a Talent Advisory Council, a

toolkit for employer recruitment, an annual talent retreat, 50 students trained, 100 businesses served, 20 employees upskilled, and 40 jobs created/filled through work-based learning.

**Workforce and Entrepreneurship Initiatives in a Regional Makerspace | Vector Space, Localities served:** *Counties of Bedford and Campbell; City of Lynchburg.* Local matching funds were committed by the City of Lynchburg. Women in Machining Program: Vector Space will work with 10 low-income women to support workforce development needs in the Materials and Machinery cluster and collaborate with Central Virginia Community College (CVCC) to allow participants to obtain credits towards MAC 161: Machine Shop Practices I program. Co.Starters: A 10-week program that equips aspiring entrepreneurs with insights, relationships, and the tools needed to turn businesses ideas into action. Recruitment will focus on micro-manufacturing and technology startups, with encouragement for relevant graduates to continue their business development with Regional Accelerator & Mentoring Program (RAMP). Vector Space will work with the Lynchburg Regional Business Alliance (LRBA)'s EPIC Center for Entrepreneurs to design and offer complementary services between the Center and Vector Space. Vector Space will offer a series of workshops in partnership with University of Lynchburg, Randolph College, and Sweet Briar College to encourage entrepreneurial thinking in area college students. High school students will have the ability to participate in STEM projects, from engineering to entrepreneurship, in after school and summer programs that encourage career exploration. Metrics include Number of students trained, Number of businesses served, and Number of jobs created/filled. Products/outcomes include 12 students trained, 8 businesses created, 5 businesses served, and 37 jobs created.

## IV: Regional Collaboration & Partner Support

### Industry cluster working groups:

Region 2 Council requested further examination of the region's target industry clusters. In response, working groups for each of the four industry clusters were organized to meet the following objectives:

- Improve our understanding of industry composition and business dynamics in each of the region's target clusters
- Assess Region 2 Growth and Diversification Plan strategies with industry stakeholders in each cluster
- Encourage groups to develop cluster specific proposals in response to the strategies
- Develop information from industry to improve our ability to evaluate the impact of projects on jobs and investment among firms in the target cluster

Each of the four working groups were led by two co-chairs from Council with support from a staff member. Guided by the working group co-chairs, staff conducted research on the major pain points for the industry cluster and developed a presentation and white paper to share with Council. Reports back from the industry cluster working groups started at the May 2022 Council meeting and will continue into 2023.

### Collaborations through grantees:

**VT's Destination for Talent** program participated with OnwardNRV in a recruitment event, partnered with the Roanoke Regional Partnership with a virtual professional development session, and began a VT CPD (Career and Professional Development) federal work study program.



**The CVCC CTE Academy** engaged partners through stakeholders and steering committee meetings. They also created a Hubspot business repository.

**VT Industry 4.0** hosted numerous meetings around partner discovery and workforce education. Industry, community colleges, workforce representatives, and K-12 participated in drafting, writing, reviewing, and soliciting feedback for the draft curriculum.

**Ignite Internships:** Industry participants included Celanese, CGI, and Radford Animal Hospital through business tours

**Lynchburg Beacon of Hope:** partnered with the four high schools at all future center sites for Virginia College Application Week. A collaborative evaluation session with all future center directors highlighted significant improvements in student and family engagement in events. They partnered with 12 major employers to launch the Stay Close, Go Far internship program, a first-of-its kind experiential internship program for high school juniors and seniors.

**BRHSTP- Carilion:** formation of the business-led consortium called the Blue Ridge Partnership for Health Science Careers. Additional partners included George Mason's Center for Health, Workforce development, and Virginia Tech Institute for Policy and Governance

**ELITE:** Developed agreements with Hollins University and RBTC (Roanoke Blacksburg Technology Council) members to help place students. New partners include ArchiveCore, KlarVis, and Beam Diagnostics. There is an additional partnership with a workforce development company called CivilianCyber.

**Amherst Site Readiness:** partnered with the US Army Corps of Engineers

**VT Lab Space:** Partnered with EDC, SMBW, Facility Logix, and the Roanoke Regional Partnership to develop a business plan and membership model for the future project.

**Project Eagle:** developed charter and collaborative agreements between JLABS and the VT Corporate Research Center. An additional partner is the Carilion Clinic Innovations program

**Please refer to *Appendix 1* for a bulleted list of partners.**

## V: Outcomes & Impact

The development and strengthening of regional partnerships continued in FY21, with a host of new private businesses, especially becoming engaged through the internship and experiential learning programs. The majority of the activity in this fiscal year was either in building capacity for new projects in emerging areas, such as the Blue Ridge Partnership for Health Science Careers, Beacon of Hope, and Project Eagle, or in implementing experiential learning and internship programs. For this reason, many of the most salient tangible outcomes from this fiscal year are related to talent and are explained below.

### Short-Term talent outcomes

Over half of our investments have been in the talent space. Many projects in FY21 also focused on talent, and hence our evaluation effort centered around changes in this space. Below are some highlights of the important outcomes of our talent programs.

**Interest and awareness of in-demand industry-relevant occupations was increased** through employer/faculty/student networking events, inviting new companies to career fairs, hosting multiple in-person and virtual informational sessions, and engaging events like the CTE Skills competition and VibeFest. In the Lynchburg region, 35/36 participants completed the program, all business sites invited more students for next year, and students reported changing their educational or career pathways as a result of the program.

**Pipelines to priority industry clusters were strengthened** through varied types of training at high school, college, and post-graduate level. Our internship programs (Destination for Talent, Classrooms to Careers, and ELITE), hosted over 200 internships for students. On the training side, new programs for CDL and CompTia were formed, and new programs for automotive and aircraft were explored. Numerous career coaches were hired at the community college level to help increase information about these pathways. In the emerging area of Blockchain, over 150 students participated in intensive Bootcamps, and 54 students were enrolled in the new Blockchain certification program. In total, over 365 students were trained in Blockchain, and two new businesses were created.

**Increased completions of degrees or certificates applicable to target industry clusters was furthered.** Enrollments in Montgomery County high school certification programs increased, with 55 enrollments in cybersecurity, 17 in computer science, and 69 in information systems. 48 students received a credential in Fall 2021 from the CTE academy, and a new credential from VMWare Academy is being implemented. 353 credentials were awarded with 128 of these in target industry sectors. 216 students are enrolled in dual enrollment, a strong signal of the connections between high school and community colleges along the pipeline. Finally, The VT CS (Computer Science) department hired their first Blockchain specific professor, who is seeking to increase the number of certifications completed.

**Enhanced employer engagement** was achieved as evidenced by the number of new businesses engaging in workforce and education activities, and businesses increasing their engagement through more in-depth participation. The Destination for Talent program engaged 386 businesses over the course of the project. The project found that regional target businesses found working with GOVA easier than through the existing VT platform, Handshake. Industry reports a better relationship with Virginia Tech, as a result of the program. For example, two companies, Meld and M4 submitted an additional SBIR (Small Business Innovation Research) with the AOE (Aerospace and Ocean Engineering) department. For the Blockchain project, working directly with businesses to understand their use case for the technology was critical. The team served 84 businesses in total through webinars, cultivating relationships and promoting the certificate program, which helps businesses learn more about how their operations can utilize Blockchain. Further many businesses were engaged as potential speakers at the conference. For the CVCC CTE Academy, over 100 business were served

### Summary Impact Metrics for Talent and COVID-response

Of the 33 projects contracted between FY18 and FY21, 11 projects commit to reporting jobs outcomes at the project close. So far, grantees have committed 991 jobs, and have reported creating 532 of those. In addition, projects report retaining 47,625 jobs, through the COVID-response grants.

#### COVID Response:

- Businesses engaged: 3052
- Businesses served: 1571
- Jobs retained: 47,464
- Jobs created: 51

## Talent

- Students trained: 1586
- Upskilled employees: 141
- Existing jobs retained: 141
- Jobs filled/created: 247
- Businesses served: 429
- New programs/credentials implemented: 69
- Credentials awarded: 572

## FY21 Metrics of GO Virginia Projects

### Talent

- Students trained: 205
- Students enrolled in dual enrollment: 155
- Credentials earned: 305
- Businesses served: 276
- Internships completed: 39
- Jobs created/filled: 9

### COVID Response

- Businesses served: 199
- Jobs created/filled: 49
- Employees trained/upskilled: 8

### Collaborative Sites & Infrastructure

- Students and Faculty utilizing lab equipment: 500
- Industry site visits to CERE Labs: 19
- Jobs created/filled: 14
- Revenue from lab usage: \$145,000

## VI: Communication and Outreach

**Dates of Region 2 Council Meetings:** The GO Virginia Region 2 council met on July 29, 2021, October 27, 2021, February 4, 2022, and May 5, 2022.

**Dates of updating Growth & Diversification Plan:** On August 18, 2021, leaders from across Region 2 gathered in Roanoke to discuss revisions to the 2021 GO Virginia Region 2 Growth and Diversification Plan. The meeting began with opening remarks and was followed by four workgroup sessions, focused on GO Virginia Region 2's four investment strategy areas: Talent, Entrepreneurship, Cluster Scale Up, and Sites and Infrastructure. Three regional sessions to gain feedback on the Growth and Diversification Plan took place in Roanoke (Oct. 4, 2021), Lynchburg (Oct. 5, 2021), and Blacksburg (Oct. 7, 2021).

**Project Eagle + Announcement Event:** On December 15, 2021, the Virginia Tech Corporate Research Center (VTCRC) held a press conference and reception to announce the approval of their GO Virginia project, Project Eagle+. [The Roanoke Times](#) and [WDBJ7](#) published articles about the announcement.

**GOVA Region 2 Newsletters:** Over the course of July 2021 – June 2022, six GOVA Region 2 newsletters were sent to our mailing list. Newsletters can be viewed on our [GOVA Documentation page](#).



*Photo 8: Announcement Event for Project Eagle (Dec 15, 2021)*



*Photo 9: October 2021 Region 2 Council Meeting*





*Photo 10: February 2022 Region 2 Council Meeting*



*Photo 11: May 2022 Region 2 Council Meeting*

## VII: Project Pipeline

1. Expanding Welding Training Capacity and Jobs in the Roanoke Valley | Botetourt Technical Education Center

2. Center for Entrepreneurship | Lynchburg Regional Business Alliance
3. Airport Commerce Park Regional Development | City of Lynchburg and Campbell County
4. Industry 4.0 for the ACE Workforce | Virginia Tech College of Engineering
5. Junior Achievement of Southwest Virginia
6. United Way of Roanoke Valley
7. Metal Workforce Retention | Town of Bedford
8. Radford Innovation, Certification, & Security Hub| Commonwealth Cyber Initiative (CCI) Southwest VA
9. Rocky Mount Feasibility Study| Franklin County
10. SHOW (Small Business Health and Organizational Wellbeing) | Virginia Tech College of Agriculture and Life Sciences

## VIII: Council Members

Name	Company/Agency
Dr. Ray Smoot, <i>Chair</i>	Virginia Tech Foundation (Retired)
Dr. Eddie Amos, <i>Vice Chair</i>	TORC Robotics (Retired)
Michelle Austin	Bank of Botetourt
Dr. Nathaniel Bishop	Carilion Clinic
Dr. John Capps	Central Virginia Community College
Kenneth Craig	Liberty University
Janice Crawford	Framatome, Inc.
Beverly Dalton	English Construction
Sandy Davis	BCR Property Management (Retired)
Paul Denham	Southern Air Inc.
Dr. John Dooley	Virginia Tech Foundation (Retired)
Dr. Michael Friedlander	Fralin Biomedical Research Institute
Don Halliwill	Carilion Clinic
Mike Hamlar	Hamlar-Curtis Funeral Home
Vince Hatcher	Hollingsworth & Vose Company
Dr. Pat Huber	New River Community College
Victor Iannello	Radiant Physics, Radiant Ventures (R&D)
Fourd Kemper	Woods Rogers Attorneys at Law
Floyd Merryman	Sonny Merryman Inc.
Marty Muscatello	MM Consulting
John Putney	Bedford County
Kimball Payne	The Berkley Group
Debbie Petrine	Commonwealth Care of Roanoke
Luke Towles	Pinnacle Financial Partners
Justin Yalung	Inorganic Ventures

## IX: Support Organization

### Support staff, CECE and CPE:

<b>John Provo</b> , Director	Program manager	<a href="mailto:jprovo@vt.edu">jprovo@vt.edu</a>
<b>Quina Weber-Shirk</b> , Project Coordinator	Program management, marketing, and outreach	<a href="mailto:quina@vt.edu">quina@vt.edu</a>
<b>Rachel Jones</b> , Program Coordinator	General administration and planning, council support	<a href="mailto:rachelcj@vt.edu">rachelcj@vt.edu</a>
<b>Alyssa McKenney</b> , Contracts Program Specialist	Contracts management	<a href="mailto:alyssa1@vt.edu">alyssa1@vt.edu</a>
<b>Tracie Smith</b> , Fiscal Specialist	Accounting	<a href="mailto:sweeneyt@vt.edu">sweeneyt@vt.edu</a>
<b>Scott Tate</b> , Associate Director for Community Innovation	Applicant technical assistance	<a href="mailto:atate1@vt.edu">atate1@vt.edu</a>
<b>Elli Travis</b> , Economic Development Specialist	Project and program evaluation	<a href="mailto:emtravis@vt.edu">emtravis@vt.edu</a>
<b>Sarah Lyon-Hill</b> , Associate Director for Research Development	Planning and research	<a href="mailto:sarahlh@vt.edu">sarahlh@vt.edu</a>

- GO Virginia Region 2 website: <https://cece.vt.edu/GOVAR2.html>
- Virginia Tech Center for Economic and Community Engagement website: <https://cece.vt.edu/>

## Appendix 1: Partner List

Note: Grantees report each partner with whom they have directly engaged in the previous quarter. Partners are categorized by type (education, economic development, workforce, etc.) and then asked to rate on a scale of 1-5 how often they engaged with that partner. The list below represents that grantee data

### Education Partners

- Lynchburg City Public Schools
- Amherst County Schools
- Appomattox County Public Schools
- Campbell County Schools
- Lynchburg City Schools
- Central Virginia Community College
- Montgomery County Schools
- Floyd County Schools
- Radford City Schools
- Virginia Tech Continuing and Professional Education
- LINK
- VT Corporate Research Center
- Old Dominion Job Corps
- Center for Advanced Innovation in Agricultural (Virginia Tech)

### Business Workforce Partners (includes companies engaged in workforce activities)

- Virginia Bio Connect Association
- Jubilee Center
- CB Fleet/Prestige Brands
- Southern Air
- Delta Star
- US Pipe
- Moore and Giles Inc
- City of Lynchburg Public Works
- Centra
- Framatome
- Jamerson Lewis
- Banker Steel
- Freedom School/The Listening
- Bank of the James
- Select Bank
- Academy Center of the Arts
- Smart Contract Research Association
- Protask Incorporated
- VT Blockchain Club
- TORC Robotics



- Bill Trifolo
- PMI Commonwealth
- Jason Nichols
- Audius
- CipherTrace
- APEX
- Sheppard Mullin
- Next Up Solutions LLC
- Maxx Potential Inc.
- Civilian Cyber
- ArchiveCore
- Klarivis
- JLABS
- MCPS Technology Department
- ACI Webs
- Ozmo
- Citizen Broadband
- 1901 Group
- Modea
- Fluxtec
- Automation Creations
- Fontaine Modifications
- Trova

### Economic Development and Planning

- Central Virginia Regional Business Alliance
- OnwardNRV
- Valleys Innovation Council/RBTC/Verge
- Roanoke Regional Partnership
- Amherst County EDA
- Lynchburg EDA
- Lynchburg Regional Business Alliance
- Virginia Economic Development Partnership
- Virginia Career Works Roanoke Center

### Government

- Town of Amherst
- City of Roanoke
- Roanoke County
- City of Salem
- Franklin County
- Botetourt County
- City of Covington

- Amherst County

#### Other Businesses

- Draper Aden Associates
- Accupoint Surveying & Design
- TRC
- Deloitte
- ArchiveCore
- Octo
- Amazon Web Services
- Value Technology Foundation
- Seednet
- Carilion
- The Giving Block
- Matchinator
- Flewid Capital
- Vibrent Health
- Rewired.one
- SAIC
- Blockframe
- Capital One
- Moog
- NFT42
- EDC
- SMBW
- Facility Logix
- Leadpoint Digital
- AEP
- VDOT
- Fralin Biomedical Research Institute
- NRV Task Force
- United Way of Southwest VA
- Uncork-it
- Card Isle

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