



GO VIRGINIA REGION 9: ECONOMIC GROWTH AND DIVERSIFICATION PLAN



In collaboration with:



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IN EACH REGION

The Project Team

The Economic Growth and Diversification Plan for Region 9 was developed collaboratively between the Region 9 Council, a body of engaged stakeholders, and a team of economic development consultants who facilitated discussion and coordinated data collection. The individual consultant teams and their project roles are listed below.

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Project Coordination; Economic Base Analysis



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Innovation Policyworks

Innovation and Entrepreneurship Inventory Analysis



Global Location Strategies

Site Location and Analysis



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Executive Summary

Introduction

This Economic Growth and Diversification Plan is the guiding document that the Region 9 Council will use to:

1. Identify economic opportunities, needs, and challenges,
2. Establish priorities among identified opportunities, and
3. Outline needed enhancements where GO Virginia funds can support collaborative programs among at least two or more localities.

The Plan is a pre-requisite for establishing regional priorities for the use of project funds as approved by the Virginia Growth & Opportunity Board.

The Plan was developed with significant data collection and analysis including an Economic Base Assessment, Innovation and Entrepreneurial Asset Inventory, a Workforce Analysis including business survey and a detailed assessment of six development sites (See Appendices I-V).

As a result, five targeted industry sectors were identified, as well as a set of framework initiatives to:

- Recruit and/or retain the talent needed in the region,
- Grow existing businesses, develop existing clusters, and to scale up small and mid-size companies,
- Establish start-ups from commercializing university-based research and supporting entrepreneurs, and
- Support potential joint economic development activities such as site development and training initiatives.

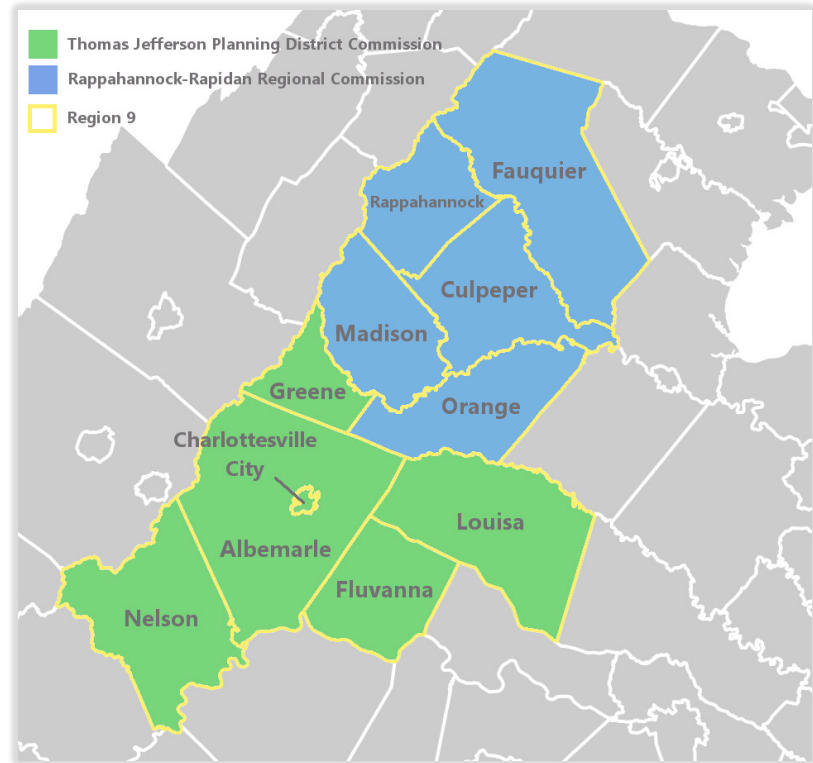
All sectors identified have the opportunity to create higher paying jobs for Region 9, bring new investment, enhance the competitiveness of the region, and diversify the economy of the region, in turn spurring the growth of Virginia's economy.

About Region 9

Region 9 incorporates eleven localities in Central Virginia, encompassing a range of diverse locales, from more rural and bucolic settings to dense downtown main streets. With this geographic diversity comes both economic and sociodemographic diversity, which are necessary to maintain a strong regional economy. The region spans a total population of 431,655 individuals and 164,571 households.

The region is already home to the Central Virginia Partnership for Economic Development, comprised of Albemarle, Culpeper, Fluvanna, Greene, Louisa, Nelson, Madison, and Orange counties, plus the City of Charlottesville. Included in Region 9, but not in the Central Virginia Partnership, are the counties of Rappahannock and Fauquier.

Region 9 is also served by two regional planning commissions: the Thomas Jefferson Planning District Commission, which is comprised of Albemarle, Fluvanna, Greene, Louisa, and Nelson counties as well as the City of Charlottesville, and the Rappahannock-Rapidan Regional Commission, which is comprised of Culpeper, Fauquier, Madison, Orange, and Rappahannock counties. These regional commissions are highlighted on the map in green and blue, respectively.



About GO Virginia



To enhance, reinforce, and complement its existing economic assets, the Commonwealth of Virginia introduced the GO Virginia Initiative to promote regional economic identity and cooperation. GO Virginia is a collaborative effort to promote private-sector economic growth and diversification across Virginia by targeting new investment and innovation in high-income and export-oriented industry sectors. The regions, established in the Spring of 2017, are tasked with assessing current gaps in economic development resources in both an intraregional and interregional capacity, and thoughtfully putting forth potential projects that can fill in these gaps with the aid of state funding.

The GO Virginia Initiative is an opportunity for economic regions around Virginia to develop a deeper understanding of their current capacities, and find innovative solutions to leverage their existing strengths to promote economic development. As described by the Virginia Department of Housing and Community Development (DHCD), the initiative "supports a voluntary, incentive-based approach as the best way to

encourage regional cooperation on private-sector growth. To fund state incentives, the coalition favors use of growth revenues, re-purposed dollars, and efficiency savings...GO Virginia proposes NO new taxes, mandates, layers of government, or changes in local authority.”

Targeted Industries

The following industry sectors were identified by the consultant team for future focus in economic development initiatives within Region 9. These sectors were chosen based on both quantitative and qualitative findings which supported their potential to align with and enhance future regional economic development. The industry sectors were chosen because they reflect the strongest assets in the region, or parts of the region, including those related to economic base, workforce, physical, infrastructure, innovation and/or entrepreneurship. In Region 9, the selected sectors pertain in most cases to sub-regions, whether the knowledge-based sectors in the Charlottesville area and in the northern parts of the region, or to the more rural counties.

Additionally, each sector was selected based on the ability to fulfill the necessary economic development qualifications outlined in the GO Virginia Initiative, including:

- Demonstration of strong employment growth.
- High earnings potential for workers.
- Export-oriented production.

These sectors are compiled as a selection of industries across multiple North American Industrial Classification System (NAICS) codes, and are intended to align a broad ecosystem of separate but interrelated industries. The Biomedical and Biotechnology industry sector, for example, covers not just research and development in the biomedical and biotechnology fields, but also diagnostic laboratory services and the manufacture of related devices and instruments.

For Region 9, the targeted industry sectors are:

- Financial and Business Services
- Food and Beverage Manufacturing
- Information Technology/Communications
- Light Manufacturing
- Biomedical and Biotechnology

Each sector is profiled briefly below.

Financial and Business Services

The Financial and Business Services industry sector is made up of 22 different 4-digit NAICS industries covering a broad range of products and services. Industries in this sector include those in Finance, Insurance, and Real Estate (FIRE), as well as accounting, consulting, and data processing services. This industry sector covers a diverse array of services related to finance and business management.

As of 2016, 16,243 workers were employed by the Financial and Business Services industry sector in Region 9, spanning 2,310 establishments. Employment within this sector increased by 15% over the last decade, adding over 2,000 new jobs. Industries that are particularly concentrated within Region 9 include **Other Investment Pools and Funds (NAICS 5259)** with

Major Products and Services:

- Insurance and wealth management
- Accounting and bookkeeping
- Real estate leasing
- Information and data processing
- Legal and consulting services

a Location Quotient (LQ) of 4.53; **Insurance and Employee Benefit Funds (NAICS 5251)** with an LQ of 3.61; and **Other Professional, Scientific, and Technical Services (NAICS 5419)** with an LQ of 1.34.

The Southeast region of the United States is an understated player in Financial and Business services. Virginia alone is home to 3.5% of all US data processing and hosting establishments, 2.3% of all portfolio management establishments, and 2.2% of all insurance brokering establishments. The ability to quickly reach and interact with a variety of Federal Government agencies gives the area an advantage over many government contracts, which has resulted in many major legal, consulting, auditing, and other business service firms choosing to headquarter close by.

Food and Beverage Manufacturing

The Food and Beverage Manufacturing industry sector is made up of 11 different 4-digit NAICS industries that are all involved in the food manufacturing process. Dominant industries within this sector in Region 9 are in **Beverage Manufacturing (NAICS 3121)**, particularly the manufacturing of beer, wine, and soft drinks. Additional manufacturing of baked goods and other food items also exists in the region.

Major Products and Services:

- Beer manufacturing
- Wine manufacturing
- Soft drinking manufacturing
- Retail bakery manufacturing

Between 2006 and 2016, the Food and Beverage Manufacturing industry sector in Region 9 tripled in employment and doubled in number of establishments, growing from 656 jobs and 50 establishments to 1,769 jobs and 99 establishments. It is estimated that roughly 1,000 of these jobs came about as a result of distinct competitive advantages within the region over the nation as a whole. A shift to a more localized food and beverage production scale has created an explosion of farm-to-table restaurants and craft breweries across the country. Craft breweries and small wineries have created new destinations in agritourism that provide a diverse set of offerings unique to their location. Currently, 89% of total demand by consumers and other industries in the region for goods produced by the Food and Beverage Manufacturing industry sector was met by imports from outside the region, amounting to nearly \$920 million in goods and services, out of a total demand of over \$1 billion. Only 11% of total demand within Region 9 was met by local industries, or nearly \$110 million. This presents a potential opportunity to leverage existing regional assets both for servicing local demand and exporting goods to other states.

Information Technology/Communications

The Information Technology/Communications sector includes 16 different 4-digit NAICS industries involved in the development, manufacturing, and usage of Information Technology (IT) and communications-related products and services. Establishments within this sector are primarily in research and development, electrical component manufacturing, or computer systems design. In addition to fiber optic cable production, manufactured products within this regional industry sector include search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing.

Major Products and Services:

- Computer system design services
- Data centers
- Engineering R&D
- Fiber optic cable manufacturing
- Navigational equipment and manufacturing
- Other component manufacturing

Employment in the Information Technology/Communications industry sector in Region 9 has decreased by less than 1% to 11,481 jobs from 11,550 over the last ten years. At the same time, the number of

establishments has increased by 12%, from 1,056 establishments to 1,184. In the past decade, Virginia has invested more than \$11.3 billion in the information technology industry, adding over 48,000 jobs. Currently there is a critical demand for Software Developers, Applications and Computer System Analysts. Meeting this demand can ensure that Virginia remains competitive in the Information Technology/Communications sector. Based on national job postings, the most relevant hard skills for jobs within the sector include: Analysis; Server (Computer Science); Management; and Programming Language (Java, JavaScript, and SQL). Relevant soft skills for Information Technology include: Leadership; Coordinating; Creativity; Leading; and Listening.

Light Manufacturing

Compared to traditional manufacturing, which is typically capital-intensive and wholesale-oriented, light manufacturing requires relatively less investment in capital and infrastructure and more often involves the final assembly steps for consumer goods, high-tech devices, medical components and other goods.

Major Products and Services:

- Wood product manufacturing
- Metal manufacturing
- Plastic manufacturing
- Aerospace, navigational, and biomedical electronics manufacturing

In 2016, Region 9 was home to 353 establishments in the Light Manufacturing industry sector, which employed 8,541 workers. Since 2006, the number of establishments has grown by 52 (17% growth) while the number of jobs has fallen by 364 (4% decline). Demand by consumers and other industries in Region 9 for goods produced by the Light Manufacturing industry sector totaled \$2.76 billion in 2016. Only 13% percent of this demand (\$364 million in goods and services) was met by establishments within the region's industry sector. The other 87% of demand was satisfied by imports from other states and elsewhere in Virginia. Encouraging investment in manufacturing within the region can help reduce its reliance on imports, and potentially provide opportunities for the region to encourage new exports.

Notable manufacturing activities in Region 9 by 2016 employment include, but are not limited to, beverage manufacturing, plastics manufacturing, wood product manufacturing, and electronics related to the aerospace and biomedical industries.

Biomedical and Biotechnology

The Biomedical and Biotechnology industry sector is comprised of eight different 4-digit NAICS industries related to the development, manufacturing, usage, and disposal of medical and pharmaceutical products. Regional establishments are mainly comprised of product manufacturers (36%), research and development (50%), and diagnostic laboratories and waste treatment (16%).

Major Products and Services:

- Biotechnology and pharmaceutical R&D
- Diagnostics laboratory services
- Irradiation device manufacturing
- Surgical appliance manufacturing
- Medical waste treatment and disposal

In 2016, 137 Region 9 establishments in the Biomedical and Biotechnology sector employed 2,534 workers. The number of workers has declined by roughly 10% (269 jobs) within the last 10 years. Job losses were focused within the **Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)** industry, which lost a net 432 jobs (a decline of 40%). Total demand by consumers and other industries in Region 9 for goods produced by the Biomedical and Biotechnology industry sector was \$885 million, of which roughly 21% (\$185 million) was met within the region and 79% (\$700 million) was satisfied by imports from elsewhere in the United States.

Region 9's Biomedical and Biotechnology industry sector has grown primarily out of major institutional funding from sources like the Federal Government, State Government, and the University of Virginia, with biotechnology-related research accounting for over 50% of academic research and development (R&D) spending in the Commonwealth of Virginia. Incentives for bioscience R&D include tax incentives, grants, and seed capital funds, and are tracked by the Richmond-based non-profit Virginia Bio.

Framework Initiatives

The following are initiatives that comprise the framework for Region 9's Economic Growth and Diversification Plan (the "Plan"). This plan is not a typical strategic plan, but rather a framework for the types of projects the Region 9 Council will consider pursuing as part of the GO Virginia initiative. Each of the initiatives is proposed as a result of a quantitative and qualitative analysis of the region's readiness in the various categories, and reflects a belief in the appropriate role of public funds to enable the development of an economic environment where individuals and firms can thrive.

The framework initiatives are divided into the following categories:

- Talent Development
- Growing Existing Businesses
- Startups/Innovation/Commercialization
- Sites
- Other Opportunities



Talent Development Opportunities

Develop Career Exploration and Awareness

The region should promote in-demand career opportunities to high school students and showcase quality industry opportunities that are available to those who want to enter the workforce, pursue technical training, or proceed to a four-year institution.

Strengthen Communication within the Talent Development System

Led by the Piedmont Workforce Network, the region should reinforce partnerships throughout the talent development ecosystem to drive collaboration and become a more strategic workforce development system.

Develop Sustainable Sector-Based Strategies to Implement Talent Solutions

The region should facilitate the creation of sector-specific workforce strategies to address talent demands through coordinated, collective solutions.

Develop and Promote Career Pathways

The region should help workers advance in their careers by promoting "Career Pathways" through the existing workforce development system.



Growing Existing Businesses Opportunities

Establish Broadband Partnerships

Communities within Region 9 should help greatly extend quality broadband to their citizens and businesses by entering into public-private partnerships to solve certain infrastructure shortcomings.

Concentrate on Innovation Corridor Branding

The Innovation Corridor Branding initiative should raise the profile of the region to be a nationally-recognized “brand” for innovation, particularly within the biotech, defense, cybersecurity and financial services fields.

Harness Regional Assets to Develop and Promote Biotech Hub

The Biotech Hub should create a large amount of new square footage in a concentrated geographic area geared towards the biomedical and biotechnology industries to attain a critical mass of businesses, talent and intellectual property, thus making the region a leading national biotech center.



Startups/Innovation/Commercialization Opportunities

Grow the Entrepreneurial Ecosystem

Region 9 should support the development and operations of strong entrepreneurial assistance programs throughout the region. It should also aim to eliminate duplication and increase collaboration, while consolidating operations to obtain critical mass.

Provide Tax Incentives for Local Investors

Region 9 should increase the capital available for locally-grown businesses by providing a local tax incentive that builds on the Commonwealth's investment tax credit.

Provide Additional Capital for Expansion

The Additional Capital for Expansion program should help high-growth companies in Region 9 accelerate and stay in the region.



Site Opportunities

Make Site Improvements to McDevitt/Crown Jewel

Improvements to the McDevitt/Crown Jewel Site in Culpeper: Phase I ESA, rezoning, wetlands delineation, geotechnical study and secure an option.

Accelerate Readiness of Vint Hill

Improvements to the Vint Hill Site in Fauquier County: geotechnical study, establishment of a site readiness fund for future development and preparation of the sites to include items such as site clearing, site grading, utility extensions, access roads, signage, signaling, etc.

Increase Preparedness of Williams/Heritage

Improvements to the Williams/Heritage site in Fluvanna County: confirmation of the viability of bringing utilities to the site, costs and time table.

Secure Data and Results for Rapidan Center

Improvements to the Rapidan Center in Greene County: secure previously commissioned studies and confirm results.

Bring Natural Gas to Ferncliff Business Park

Improvements to the Ferncliff Business Park in Louisa County: bring natural gas to the site.

Enhance Viability of Thomas E. Lee Industrial Park

Improvements to the Thomas E. Lee Industrial Park in Orange County: Phase I ESA, secure an option, and study the cost of bringing natural gas to the site.

Better Leverage UVA's Research Park

This initiative would position the UVA Research Park to be the premier office and research park in the region.

Create and Promote Other Sites

Region 9 should encourage additional site development activities beyond the six aforementioned sites and the UVA Research Park.

Other Opportunities

Realign Organizational Focus within the Central Virginia Partnership

The Central Virginia Partnership should shift resources to provide additional site readiness support to local economic development organizations (EDOs) within the region and facilitate greater coordination between regional stakeholders and the University of Virginia.

Pursue Organizational Funding and Capacity Building Mechanisms for Plan Implementation

Develop a sustainable funding mechanism that will give Region 9's support organization the financial resources needed to address emerging Region 9 challenges and opportunities and Plan execution.

Implementation and Funding

The Economic Growth and Diversification Plan will help the Region 9 Council and their localities strategically build resilient economies by leveraging existing assets, while also developing ambitious goals about possibilities for the future. A collaborative approach across the public and private sectors will be imperative to the successful implementation of this Plan. The Framework Initiatives are designed to encourage intra- and inter-regional partnerships. Additionally, Region 9 recognizes that while state funds present a starting point for acquiring resources, pursuing the initiatives in this Plan will require supplementary funds. Region 9 will dedicate \$250,000 to project work as opposed to capacity building. Therefore, matching funds will be further identified when actual projects are proposed for funding. It is anticipated that matching funds will originate from a variety of organizations, including public and private sector sources. Specific details on partners and programs that align with the Framework Initiatives are provided throughout Performance Metrics.

Performance Metrics

Performance metrics were established to guide the successful progression of each initiative listed in the Framework Initiatives. The metrics provide concrete examples and timelines for how initiatives could advance in Region 9 with the aid of GO Virginia funds. While the metrics are defined to help establish benchmarks for the initiatives, it is anticipated that timelines and goals may change as new information or funding is acquired. The metrics will be documented in an Excel file that can be changed over time to reflect the changes in each initiative.

Framework Initiatives

Introduction

This section comprises the framework under which Region 9 will prioritize projects seeking GO Virginia funding assistance. Each category below highlights how Region 9 can leverage its assets to improve upon existing networks, while also pursuing new collaborations to support inter-jurisdictional collaborative programs that will lead to job creation, economic diversification, and knowledge transfer. The foundation for this framework is based on extensive stakeholder consultation, reaching over 120 individuals involved in various aspects of Region 9's economic future.

Work Completed

The scope of work for this project was designed to collect a diverse range of information from stakeholders who represent the intersections of economic activity in Region 9. The Project Team focused their research efforts on identifying Region 9's competitive factors and exploring how to enhance opportunities for job growth in industries with high paying wages. Consideration was also given to building stronger industry clusters by creating a business environment where start-ups would thrive and have access to a skilled workforce to propel growth.

The following is a summary of the work that was completed by the Project Team as part of the Economic Growth and Diversification Plan:

- Review of existing planning and policy documents from within Region 9 localities
- A business/industry survey distributed across the region that garnered 142 responses
- Economic base analysis
- Desktop site evaluation and on-site field audits
- Workforce data analysis
- Innovation and entrepreneurial asset inventory
- Targeted industry determination and profiles
- 2.5 days of stakeholder interviews and focus groups
- Additional follow up and research
- Ongoing communication with the Region 9 Council and four site visits

The framework is broken down into the following sections:

- **Talent Development** – Communities are increasingly recognizing the importance of cultivating and encouraging a talented workforce so that current and future workers can align their skills with the skills currently in-demand by regional businesses.
- **Growing Existing Businesses** – By properly assessing and quickly responding to the needs of established businesses, Region 9 can uncover new growth potential in existing firms. Opportunities in growing existing businesses aim to build more effective outcomes by leveraging already available regional assets.
- **Startups/Innovation/Commercialization** – Fostering a business environment that pursues research, innovation, and new business startups allows the region to be more agile in responding to industry and economic changes. Opportunities in startups/innovation/commercialization look towards policies that support the resources that are most crucial to maintaining a strong entrepreneurial ecosystem.
- **Sites** – As Region 9 facilitates discussions around existing business development and new business attraction, it must ensure it has the physical capacity necessary to accommodate new industry. Site opportunities recognize what investments will be needed to better prepare sites around the region for future occupancy.
- **Other Opportunities** – Outside of the opportunity categories listed above, these opportunities speak to developing organizational capacity and funding mechanisms to ensure successful implementation of the Framework Initiatives.

Talent Development

Opportunity: Develop Career Exploration and Awareness

The region should promote in-demand career opportunities to high school students and showcase quality industry opportunities that are available to those who want to enter the workforce, pursue technical training, or proceed to a four-year institution.

Rather than replacing the retiring workforce, young workers have been leaving Region 9 for alternative employment opportunities. In part, this is fueled by the belief that students must attend a 4-year institution and relocate to a larger city to obtain a successful career. Unfortunately, this thinking has become embedded in both students and parents, limiting the potential of the region's future workforce. One stakeholder noted that up until the last year and a half, it was 'taboo' to even discuss community colleges in the high school, as the quality of education was not to be compared to that of a 4-year institution like the University of Virginia (UVA) in Charlottesville.

As one of the greatest assets in the region, the K-12 school systems should further develop career exploration and awareness programs to inform students of regional opportunities in growing fields such as healthcare and cybersecurity. Charlottesville Public Schools began instituting career exploration programs in primary and secondary schools to generate a 'buzz' among students and parents to consider career opportunities. Through these programs, students are exposed to work-based learning and mentorship opportunities, which help to pinpoint a student's unique career path. Though this example originates in Charlottesville, this approach could be adapted to fit districts that are more rural as well.

Providing the region with resources and models for career exploration and awareness will help establish a future pipeline of talent to support the regional economy. By creating initiatives that promote a better public understanding of career pathways, the region can help funnel all levels of talent into targeted industry occupations.

Opportunity: Strengthen Communication within the Talent Development System

Led by the Piedmont Workforce Network, the region should reinforce partnerships throughout the talent development ecosystem to drive collaboration and become a more strategic workforce development system.

Based upon qualitative feedback from interviews and focus groups, there is a misconception of the term 'workforce development' and how it relates to economic development. There is a disconnect in perception among partners and members of the public regarding who is responsible for convening and leading talent development within the region. The full spectrum of services and resources that are available at the Virginia Workforce Centers is not well-known to most partners, which raises the question: 'Who is responsible for coordinating all partner services and workforce development?' While the system needs to be driven by the demands of business, coordination among the entire talent development system, including workforce development, economic development, and education partners is essential.

The Piedmont Workforce Network (Workforce Development Board) should be positioned as the hub of all workforce activities and provide a platform for coordinating and, more importantly, convening partners. The Board should be focused on 'big picture' items such as developing a strong innovative strategy and vision, and fostering involvement among partners. As the convener, the Board should assist in generating community awareness of the resources provided by the talent system in addition to career coaching and employment services. The talent system supports the needs of the individuals and businesses in the community by providing services such as foreign and domestic talent attraction; talent development at all levels, including basic, technical, and professional skills; and talent retention. With a newfound awareness, individuals and businesses alike can address target industry needs through services provided by the talent development system.

Opportunity: Develop Sustainable Sector-Based Strategies to Implement Talent Solutions

Region 9 should facilitate the creation of sector-specific workforce strategies to address talent demands through coordinated, collective solutions.

Through the existing workforce system, there are opportunities to leverage available resources to address skill gaps and develop a talent pipeline. However, business and local chambers must be educated on the resources and opportunities at their disposal. Using sector strategies (and eventual sector partnerships), the following challenges can be addressed for specific industries:

- Difficulty to meet training provider minimal class sizes;
- Negative public perceptions of middle skills jobs;
- Need for talent attraction and retention;
- Underemployment for skilled workers;
- Lack of employable skills; and
- Middle skills gap.

Talent ecosystem partners should convene businesses to identify common needs within industry clusters such as Light Manufacturing and Information Technology and Communications, and to establish strategies that will generate and sustain regional talent development. For example, if the Information Technology and Communication sector employers identify gaps in specific technical skills and soft skills, the talent development system could develop a training model that consists of skills like JavaScript and basic coding, coupled with leadership and active listening training. Working with employers, these trainees could be placed into work and learn opportunities or paired with a mentor to provide additional real world experience. This strategy would require support from an array of partners – education to provide technical skills training; public workforce system to provide access to the program, employability skills training, and wrap around services; and economic development to provide the linkage to business and industry. It is essential that local industries and employers drive these conversations and eventual partnerships while being supported by system partners. The challenge, of course, will be shifting the employers' mindsets from competitive to collaborative. The workforce system's strategic focus on these target industries creates an environment suitable for the establishment of sector partnerships. These partnerships, in turn, will lead to identification of shared challenges and needs, and businesses will develop collaborative solutions that can be supported and implemented by the talent development ecosystem.

Opportunity: Develop and Promote Career Pathways

Region 9 should help workers advance in their careers by promoting "Career Pathways" through the existing workforce development system.

Career pathways aid all stages of talent development – attraction, development, and retention – by providing clear roadmaps for workers to advance their careers, thereby helping to maintain a robust talent pool. By leveraging local community colleges and K-12 systems, the region can develop career pathway programs that feed into the target industries identified through GO Virginia. Region 9 can begin this initiative by focusing efforts on two target industries such as Light Manufacturing or Financial and Business Services. Business and education partners can then align efforts to develop a program offering career advancement in these targeted industries.

The U.S. Department of Labor released a Career Pathways Toolkit in which they defined a career pathway as "a program that offers a clear sequence, or pathway, of education coursework and/or training credentials aligned with employer-validated work readiness standards and competencies."¹ Career pathways guide a skilled workforce to meet the needs of employers through filling in-demand occupations and gaining industry-recognized credentials. In

¹ https://doleta.gov/usworkforce/PDF/career_pathways_toolkit.pdf

addition, the process of developing and implementing career pathways positions employers as leaders in the development of the skilled workforce. The development of career pathways begins with an assessment of the skills and competencies needed by employers at all levels within their companies. Pathways are built based on the progression of employment opportunities within the industry, including different entry and exit points or “on and off ramps” for individuals at each skill and experience level. Once the progression has been established, the region will need to ensure that there are local education and training opportunities available for participants to improve their skills to move to the next step in the pathway. This will consist of understanding all the training assets within the region including work-based learning, technical training, employability skills training, etc. Once clear blueprints of pathways, including both employment and training are generated, the region can begin to market them to educators, parents, students, career changers, and other jobseekers to attract individuals to pathways that lead to high-wage and high-demand careers.

Region 9 should also create career pathways that harness the region’s hospitality and retail trade industry as a pipeline for soft skills development. Many workers gain their first work experiences in hospitality and retail, but do not intend to work in those positions for their whole career. Because positions in these industries develop transferrable, in-demand employability skill sets, such as customer service capabilities, teamwork, punctuality, work ethic, problem-solving skills, and the ability to learn, they are preparing workers for any number of careers. The region could leverage these industries as the foundation for multiple career pathways in the target industries, providing a talent pool that the system can develop into the skilled workers who can help to fill middle skills gap that is prevalent in the region.

Growing Existing Businesses

All of the initiatives listed in the framework help existing businesses either directly or indirectly. For example, initiatives to strengthen the workforce increase the talent base available to businesses, site development initiatives provide quality space for existing businesses to expand and innovation initiatives provide the intellectual property assets that give businesses a competitive edge. In addition to all of those initiatives, the following three initiatives are specifically to address existing businesses within the region.

Opportunity: Establish Broadband Partnerships

Communities within Region 9 should help greatly extend quality broadband to their citizens and businesses by entering into public-private partnerships to solve certain infrastructure shortcomings.

Broadband is an essential part of the modern economy and is as critical to growth as more traditional infrastructure such as water/sewer/electric service. However, there are currently large areas of the region that do not have access to quality broadband services, particularly outside of the urbanized areas like Charlottesville, Culpeper and Warrenton. This impedes business growth, talent attraction, and remote working opportunities as well as the ability to access education, training, healthcare, and our increasingly globalized economy. At the same time, the region benefits from significant dark fiber backbones that remain untapped for local use. One of the critical missing pieces is the “middle-mile” infrastructure that taps into fiber optic backbones. This is a difficult proposition for any one business or community to undertake because such connections are quite expensive and require a large customer base to amortize the upfront costs.

The region should replicate the model currently under development in Orange County, which is installing middle-mile infrastructure. To do so, Orange County has been working proactively with its school districts which themselves are under a mandate to connect schools at a 10Gbps speed threshold. The County is expanding the middle-mile capacity required by the school districts to accommodate its own municipal use for its buildings and its to-be-upgraded emergency responder communications systems. Concretely, this means the County is over-sizing the fiber optic pipeline connected into the dark fiber backbone and stretching it out to areas beyond just the school district

footprints. The County will then erect a series of towers along that pipeline that will be built to allow for: (1) emergency response communications equipment, (2) cell phone antennae, and (3) wireless broadband antennae. The latter two uses would most likely be private companies leasing tower space from the County to project service out to County residents and businesses (the “last mile”, in general best handled by the private sector). In effect, the County is taking backbone dark fiber, adding in middle-mile lines for its own use, and allowing private access to the infrastructure for private sector “last mile” solutions.

This solution could be replicated by other counties/towns across the region. As an order of magnitude cost estimate, Orange County is spending approximately \$1.6 million on just the fiber optic lines (i.e. does not include the towers or communications equipment), of which \$1 million has already been secured via state grants. Much of the investment in the towers is anticipated to be recovered in anticipated lease revenue.

We note that the Path Foundation has an endowment of over \$200 million and could be a non-profit funding co-partner in this venture due to its desire to promote telemedicine and other connectivity issues related to health.

Opportunity: Concentrate on Innovation Corridor Branding

The Innovation Corridor Branding initiative would raise the profile of the region to be a nationally-recognized “brand” for innovation, particularly within the biotech, defense, cybersecurity and financial services fields.

The region has tremendous innovation assets across a wide range of fields and yet lacks national-level brand recognition like the Research Triangle Park in North Carolina, the Route 128 Corridor around Boston, or Silicon Valley in California. As described below and elsewhere, the region could have innovation spread out all along the US 29 Corridor – starting and centered in Charlottesville, with UVA research totaling \$328 million per year, and continuing northwards to the UVA Research Park, National Ground Intelligence Center and Defense Intelligence Agency in Albemarle County, onwards to the Insurance Institute for Highway Safety in Greene County and Equinix and SWIFT data centers in Culpeper County, and yet further into Northern Virginia spillover in defense, cybersecurity and IT in Fauquier County. The region is also home to many very innovative companies such as Aerojet Rocketdyne in Orange County, Continental in Culpeper County, and Rockwell Collins in Fauquier County.

The first step is to establish a common name and vision for the corridor, such as the “US 29 Innovation Corridor” or the “Piedmont VA Innovation Corridor”. The region would use this brand in all its materials and encourage partners to do the same, including using the brand name in press releases, research articles, collateral material, website, etc. Much of the cost of this initiative is nominal or only minimally additive to existing marketing currently occurring. However, the region should also use a public relations marketing firm to design a logo, collateral material, and a marketing campaign that would place the brand in critical trade publications and media channels.

Opportunity: Harness Regional Assets to Develop and Promote Biotech Hub

The Biotech Hub would create a large amount of new square footage in a concentrated area geared towards biomedical and biotechnology industries to attain a critical mass of businesses, talent and intellectual property thus making the region a leading national biotech center.

The burgeoning biotech cluster primarily located in Charlottesville and Albemarle County is severely constrained by a lack of appropriate space in the existing biotech corridor. There are today roughly 400,000 square feet of space, which is a combination of office, collaborative space and wet labs. The need in just the mid-term could be for another 400,000 sf of such space. However, the corridor today does not have anywhere near this amount of space available, much less of a nature to fit the requirements of the biotech occupants. We note that some relief on this front may or may not be on its way with the proposed Charlottesville Technology Center at the site of the former downtown ice rink, proposed with around 140,000 sf of space.

The region needs to supply such space. Charlottesville and Albemarle County, along with other interested localities, Central Virginia Partnership for Economic Development, and private businesses, could play an active role in this initiative. It would require a champion who could pull together support from the host community, the private sector, and UVA, in addition to developing the business plan and securing assistance from GO Virginia and other sources. The hub would require office and wet lab space, and would ideally allow small-scale manufacturing with a focus on medical devices and instrumentation.

Because the hub could take many forms (retrofit, new build, combination; different mixes of space configurations, etc.), it is hard to estimate the cost. As an order of magnitude cost estimate, a hub could cost as little as \$100 per sf in a retrofit situation and as much as \$350 per sf for new build wet lab space. That would translate into between \$40 million and \$140 million in capital expenditures. Of course, all 400,000 sf need not be built immediately and could be planned and phased in as appropriate.

Startups/Innovation/Commercialization

Opportunity: Grow Entrepreneurial Ecosystem

Region 9 should support the development and operations of strong entrepreneurial assistance programs throughout the region. It should also aim to eliminate duplication and increase collaboration, while consolidating operations to obtain critical mass.

The most important characteristic of a successful entrepreneurial support program is the quality of the technical assistance available for entrepreneurs. Programs that primarily provide office space, have not been found to be particularly effective in increasing the success rate of entrepreneurs.

In addition, an important function of any program is to build its entrepreneurial community by being a convener, center of activity and connector. In some cases, Region 9 entrepreneurial activities are dispersed in too many locations. Consolidation would achieve several outcomes. First, focusing entrepreneurial energy in a single location will increase the critical mass necessary to gain momentum. Second, it would inspire diversity in the staff available to assist entrepreneurs, instead of replicating the same basic expertise in multiple locations. This would enable staff to recruit mentors and counselors with experience in tech entrepreneurship and broaden its offerings and appeal.

Currently, Region 9's entrepreneurial ecosystem is strong with regard to student and faculty innovations at UVA, but thin and fragmented elsewhere in the region. It does not adequately support new businesses or help existing businesses to scale throughout the region. Most programs are operated on limited budgets that constrain their capacity to assist entrepreneurs. Often, managers of these programs lack the background to provide meaningful assistance to quickly growing companies.

Region 9 should provide grants and technical assistance to existing incubators, accelerators and co-working spaces in the region, and fund and assist the establishment of new ones. The region should enable the sharing of personnel with targeted sector expertise (e.g., IT or value-added food and beverage production), training events, networks, and access to capital among all the partners. The goal would be to have at least a co-working space or better within 45 minutes of everyone in the region, and an active schedule of learning opportunities and support for entrepreneurs and companies looking to expand and grow.

This opportunity should include partners encompassing all existing and new programs, as well as the Small Business Development Centers (SBDCs), UVA, the Mason Enterprise Center, and economic development entities, and would be coordinated by a single organization. Approximate budget would be \$1,000,000/year, with individual grants to localities matched 1:1 from non-state sources. Region 9 could potentially work with Region 8 to expand its reach and acknowledge the existing overlaps in the ecosystems.

Opportunity: Provide Tax Incentive for Investments in Local Startups

Region 9 should increase the capital available for locally-grown businesses by providing a local tax incentive that builds on the Commonwealth's investment tax credit.

Virginia has an investment tax credit (Code of Virginia, § 58.1-339.4. Qualified equity and subordinated debt investments tax credit) that provides a credit of up to 50% of a qualified investment in a Virginia company with less than \$3 million in revenue. Unfortunately, the total credit is capped at \$5 million annually, thus limiting the effectiveness of the credit; individual investors have been actually receiving a credit of closer to 30%.

By providing a tax incentive to investors that invest locally, Region 9 would increase equity investments in its high-growth entrepreneurial companies by increasing investors' effective credit. An example is the Montgomery County Biotechnology Investor Incentive Program, a supplemental grant available to investors of biotechnology companies located in Montgomery County. Investors who are approved and receive tax credits from the Maryland Biotechnology Investment Incentive Tax Credit Program automatically receive the supplemental grant from the County. The supplemental grants are typically disbursed between March and May each year for investments made in the previous calendar year. The cost would be approximately \$1 million (the exact number would be calculated from an analysis of where companies receiving the state tax credit are located).

Since the objective of angel investment tax credits is to increase early stage investment in high-growth potential new ventures, leading to higher paying knowledge-based jobs and increased tax revenue, Bell *et. al.*, looked at the linking between the tax credits and entrepreneurial activity. This study found that in 2012, 32 states had implemented some form of angel investment tax credits and 29 states had programs that were still in operation. They found that, "of the 29 states that implemented an angel investment tax credit program between 1997 and 2011, 22 (75%) display an increase in entrepreneurial activity within the first two years of the program."²

Another recent study was conducted by the Iowa Department of Revenue. The department performed a matched study looking at 52 companies, 28 of whom received investments with angel investment tax credits. The study found that 70% of the companies were still in business, with those receiving the tax credits exhibiting slightly higher survival rates.³

Also in 2014, Minnesota's Department of Revenue commissioned a study to evaluate the Minnesota Angel Tax Credit Programs.⁴ The authors found that among the qualified investors who made an investment:

- 48% would not have made the investment without the angel tax credit,
- 34% would have made a smaller investment without the angel tax credit, and
- 18% would have made the same investment.

Further, the authors found that for each \$1.00 in angel tax credit, there was \$1.09 in new angel investment and \$1.02 in leveraged investment.

Opportunity: Provide Additional Capital for Expansion

Additional capital should help high-growth companies in Region 9 accelerate and stay in the region.

² Bell, Joseph R., Wilbanks, James E., and Hendon, John R. 2013. "Examining the Effectiveness of State Funded Angel Investor Tax Credits: Initial Empirical Analysis." *Small Business Institute Journal*. 9 (2):23-28.

³ Iowa Department of Revenue, 2014. "Iowa's Venture Capital Tax Credits, Tax Credits Program Evaluation Study." <https://tax.iowa.gov/sites/files/idr/Venture%20Capital%20Evaluation%20Study.pdf>

⁴ Economic Development Research Group, "Evaluating the Minnesota Angel Tax Credit Program: 2010-2012." http://www.revenue.state.mn.us/research_stats/research_reports/2014/evaluation_of_the_mn_angel_tax_credit_program.pdf

Region 9 companies have reasonable access to seed stage and venture capital, but obtaining Series A, B and C rounds is more difficult, often requiring companies to seek capital from outside Virginia, increasing the likelihood that companies will be required to relocate.

Two potential opportunities exist here and are not mutually exclusive. First is to attract significant venture capital investors to open an office in Charlottesville or Albemarle County, increasing their awareness of and exposure to Region 9 companies. Preference should be given to venture capital firms that primarily invest in biotechnology and currently have offices in Boston or on the West Coast.

Second, Region 9 should consider investing in a "hybrid" venture fund. Hybrid funds, where public and private dollars are co-invested into a single venture capital fund, are common in Europe and rare in the US. However, experience in the United State thus far seems to suggest that this structure can yield successful venture funds that leverage state dollars and help develop a local venture capital industry.

All of the funds studied employed asymmetrical structures to compensate the private investors for the perceived lower returns due to economic development-related restrictions placed on the funds, such as limits on a single geographic area, industry focus and/or stage of development. Both equity and debt structures were used to accomplish this leveling of risk and return, and each fund's structure was unique.

Most General Partners are chosen through a Request for Proposal process led by the government entity, and past performance was the most important criteria for choosing the fund managers. This process appears to be a successful model, as the existing US funds structured this way have deployed their capital in their states, and have experienced reasonable returns for their private investors.

Currently examples of projects include Michigan Accelerator Fund and the Ohio Rev1 Fund. Typical investments for these projects are between \$1-2 million.

Sites

Opportunity: Make Site Improvements to McDevitt/Crown Jewel

Improvements to the McDevitt/Crown Jewel Site in Culpeper County: Phase I ESA, rezoning, wetlands delineation, geotechnical study and secure an option.

The McDevitt/Crown Jewel property in Culpeper County was uniquely identified as a strong opportunity for companies related to the IT/Communications industry or Light Manufacturing industry. The site has the benefit of having existing utility and transportation infrastructure to service a variety of operations. The park along with its existing users position this location as a strong opportunity to quickly attract a prospect.

In order to increase the marketability of this location, it is highly recommended that a Phase I ESA be completed onsite. In addition to the Phase I, it is recommended that rezoning of all necessary parcels be completed. Additional task items include completing a wetlands delineation, preparing a preliminary geotechnical study, and putting an option on the sites to establish cost for the land.

Opportunity: Accelerate Readiness of Vint Hill

Improvements to the Vint Hill Site in Fauquier County: update Phase I and II ESA, wetlands delineation and geotechnical study.

The sites evaluated in Fauquier County were located within the Vint Hill business park. Due to the existing neighbors and residents, as well as the targets of the local developer and economic development group, this location presents a great opportunity for companies in the IT/Communications industry or within the Finance/Business Services industry. All major utilities are located onsite and the park has significant road access, with close proximity to Interstate 66 and the D.C. metro area.

This site will be best served by completing any outstanding due diligence studies, including updates of the Phase I and II ESA completed in 2013. A preliminary geotechnical study which, due to concern regarding a low water table, will help relieve any perceived risk with the site. Vint Hill would also benefit from a site readiness fund for future development and preparation of the sites for site clearing, site grading, utility extensions, access roads, signage, etc.

Opportunity: Increase Preparedness of Williams/Heritage

Improvements to the Williams/Heritage site in Fluvanna County: confirmation of the viability of bringing utilities to the site, costs and time table.

Of the sites considered, the Williams/Heritage site is the least developed and assessed. Other than an existing electrical line at the northern portion of the property, the site is lacking all major utilities. Prior to any due diligence studies being done onsite, or even clearance of trees, it is recommended that further study and coordination between local utilities and engineering firms be conducted in order to confirm that this site presents the best option for future industrial development. Following confirmation that this is the site to pursue for development, it is recommended that clear timelines and costs be established to provide infrastructure to site. Additionally, clearance of a portion of the property, as well as conducting a Phase I, would help increase the marketability of the site.

Opportunity: Secure Data and Results for Rapidan Center

Improvements to the Rapidan Center in Greene County: secure previously commissioned studies and confirm results.

Greene County's Rapidan Center has the benefit of being a well-characterized site due to its previous consideration for retail development. Due to its proximity to current residential areas, and with more residential planned, this site is not well-positioned for any manufacturing. Furthermore, the County Board of Supervisors is not interested in any operation that would bring significant traffic. In addition to being a good location for retail (as it was previously intended), this site is also well-suited for a business park that could provide space for companies in the Finance/Business Services industry sector.

Due to previous work conducted onsite, there should be previous studies available. If studies can be obtained by local economic developers, there is a likelihood that studies will only need to be updated rather than needing to be commissioned again. If studies cannot be obtained, then it is recommended that a new Phase I ESA be conducted.

Opportunity: Bring Natural Gas to Ferncliff Business Park

Improvements to the Ferncliff Business Park in Louisa County: bring natural gas to the site.

Ferncliff Business Park is a well-established industrial park. There are currently two users onsite, Patriot Aluminum and Cavalier Produce. Additionally, two spec buildings have been constructed. All utilities except for natural gas are

located in the park. As proven with its existing industry, the park and location are well-suited to pursue Agricultural Value Added and Light Manufacturing related companies.

With existing studies already conducted, the site would best benefit through infrastructure improvements. Natural gas being brought to the site would allow for the site to better market to industrial projects and other types of companies within Light Manufacturing. Bringing natural gas to the site might also prove beneficial to existing companies as well. Cost of natural gas infrastructure (high-level estimate of \$2-4 million to bring to site) may prove prohibitive unless a large enough natural gas user is interested in the site.

Opportunity: Enhance Viability of Thomas E. Lee Industrial Park

Improvements to the Thomas E. Lee Industrial Park in Orange County: Phase I ESA, secure an option, and study the cost of bringing natural gas to the site.

The Thomas E. Lee Industrial Park is located on Highway 15 between the towns of Gordonsville and Orange. As an established park, all utilities except for natural gas are located onsite. Current companies onsite are producing a range of products including cabinets, adhesives, and pet products. Due to the sizes of the remaining sites, available infrastructure, and existing companies in the park, the park is best positioned to primarily target small Light Industry prospects. Due to their location, these sites are not well-suited for any prospect with significant trucking requirements.

Of the remaining sites in the park, Lot 10 is currently not under control by the County. While it may not be cost-effective to purchase the site, establishing some control of the site through an option will be preferred in marketing this land. In addition to an option, there is the potential to coordinate with the current owner to conduct a Phase I ESA. Due to types of users and available sites, GLS does not recommend proactively bringing gas to the park, but it is recommended that a more detailed study be conducted to understand that actual timing, costs, and plan of bringing natural gas service onsite.

Opportunity: Better Leverage University of Virginia's Research Park

This initiative would position the UVA Research Park to be the premier office and research park in the region.

The UVA Research Park is by far the largest and most "shovel ready" site in Region 9, and yet is very underdeveloped. This is because of the current positioning of the site by UVA, which requires users of the site to be tenants (i.e. not owners) and to be tied closely to UVA's own research activities. Such restrictions have limited the opportunities the site offers, despite its 526 acres, access to critical infrastructure, proximity to Charlottesville and the airport, and excellent road frontage on US 29. UVA just completed a master plan for the Research Park that will allow for mixed-use development and could potentially become a place start-ups and small businesses will want to locate. But there is a lack of larger sites to accommodate small and light manufacturers that need affordable space when they are in a position to expand significantly.

Region 9 could serve in a facilitator role to work with UVA to set aside some of the 526 acres for Light Manufacturing and general office space, with a focus on the UVA-specific commercialization that is occurring in the immediate area. The region could also work with developers to promote site development work as well as speculative building as demand continues to ramp up.

Opportunity: Create and Promote Other Sites

Region 9 should encourage additional site development activities beyond the six aforementioned sites and the UVA Research Park.

Site development is typically a multi-year process that requires a long-term perspective on market opportunities. The six sites already mentioned above and the UVA Research Park are all priorities for immediate site development needs. However, the region needs to ensure that other sites enter into the development pipeline to serve needs into the mid- and long-term. Sites could be developed in any of the eleven localities in the region, and thereby strengthen the region's competitiveness for the retention of growing existing companies and the attraction of new companies in the targeted industries.

The two critical needs are in the northern and southern sub-regions.

As noted elsewhere, many businesses in Northern Virginia are looking to expand their operations in lower-cost locations with proximity to D.C., and Region 9 can position itself to be the recipient of such growth. Region 9 is home to a very large and highly educated talent pool that out-commutes to Northern Virginia. At the same time, those same businesses in Northern Virginia are actively seeking out lower cost options for future expansions of all types but most often related to back-office operations, support services and data centers. The northern end of the region lacks sites and needs to develop more than just the Vint Hill site as studied. These sites could accommodate cybersecurity, defense, financial services, back office, data centers and other support operations.

Towards the Charlottesville/Albemarle County area, there is a critical lack of space for the biotech sector (covered in a separate initiative) as well as a general lack of Class A office and Light Manufacturing space. Existing businesses appear to be moving out or expanding elsewhere based on this lack of space and a perception that local governments are not welcoming of new development.

An additional distinct opportunity would be to create a truly "regional" industrial park of a significant size where two or more localities would come together to both make investments and receive benefits in the form of new jobs and, potentially, a tax base sharing agreement.

This initiative would require identifying the next set of priority sites, understanding their development requirements, and forming partnerships to move those sites towards a higher level of readiness.

Other

Opportunity: Realign Organizational Focus within the Central Virginia Partnership

The Partnership should shift resources to provide additional site readiness support to municipal EDOs within the region and facilitate greater coordination between regional stakeholders and UVA.

The Central Virginia Partnership for Economic Development was established for, and has been devoted to, marketing and attraction efforts for the region. It also has responsibility for Region 9's workforce programs. While its marketing efforts have been strategic and targeted, there has been a sense of frustration for the lack of results relative to effort due a shortage of available sites and other factors hampering economic development. In addition, we heard repeatedly that local businesses had or are currently having difficulty securing space for expansion, some sharing they are now looking outside the Central Virginia Partnership region.

By focusing on product development and shifting a portion of the organization's time and funding from marketing and attraction (which serves to enhance demand), to supporting for site/space readiness throughout the region (which would serve to enhance supply), the Partnership's future marketing investments will more likely to lead to attraction success.

Opportunity: Pursue Organizational Funding & Capacity Building Mechanisms for Plan Implementation

Develop a sustainable funding mechanism that will give Region 9's support organization the financial resources needed to address emerging Region 9 challenges and opportunities and Plan execution.

The Region 9 economy is becoming increasingly complex and homogeneous. A decline in the manufacturing and construction workforce, lack of desire or ability of some communities to accommodate space for expanding manufacturers, low vacancy rates for increasing space demands of professional and technical businesses, are all creating workforce, space and economic development challenges and opportunities for the region.

Region 9's current support organization, the Central Virginia Partnership, does not have the capacity to address current and emerging challenges and opportunities. Based on research conducted by IEDC, a growing number of regional economic development organizations now have formal funding campaigns designed to support a wider array of economic development challenges and initiatives. The Partnership should explore the feasibility of developing a sustained funding campaign that would provide the financial resources for implementation of the GO Virginia Economic Growth & Diversification Plan, as well as provide new funding to leverage GO Virginia and other initiatives.

Implementation of Framework Initiatives

The Economic Growth and Diversification Plan will help the Region 9 Council and their localities strategically build resilient economies by leveraging existing assets, while also developing ambitious goals about possibilities for the future. A collaborative approach across the public and private sector will be imperative to the successful implementation of this Plan. Capitalizing on cross-jurisdictional efforts will help to maximize resources and allow initiatives to operate on a wider scale, as opposed to tackling tasks on a piecemeal basis. Each initiative was developed with potential partners in mind, along with the knowledge of other state programs that could be leveraged for additional resources for specific initiatives.

This Plan will be reassessed on an annual basis to account for variations in factors driving the economy of Region 9. Additionally, the Performance Metrics document is intended to be used frequently and can also be updated as necessary to accommodate priority shifts based on organizational or funding capacity.

Funding Mechanisms

Region 9 recognizes that, while state funds can be the catalyst to economic activity, successful implementation of the initiatives in this Plan will require additional funds. To that end, all \$250,000 of supplemental funding from GO Virginia will be dedicated for specific projects that will be required to have a local private and/or public sector match. As projects are presented and approved, the Region 9 Council will seek at least a 1:1 match from a variety of organizations, including public and private sector sources. The Council will also leverage GO Virginia grant funds with other regional stakeholder funds like private foundations and non-profit charities that suit the programs or tasks proposed by the project.

Performance Metrics

Introduction

While identifying actionable solutions is an excellent first step towards economic development, it is important to ensure that these solutions have clear, realistic, and measurable roadmaps to completion that are defined well before the project is undertaken. Establishing performance metrics at the outset of a project is essential for understanding exactly what components go into that project's successful completion, so that all stakeholders maintain the same vision of a successful outcome. **The metrics below are not definitive strategies, but instead are representations of the types of specific milestones to measure success for projects undertaken with GO Virginia assistance.**

Talent Development	
Framework Initiative	Performance Metrics
Develop Career Exploration and Awareness Moving forward, the region should promote in-demand career opportunities in healthcare and cybersecurity to high school students, and showcase quality industry opportunities that are available to those who want to enter the workforce, pursue technical training, or proceed to a four-year institution.	<ul style="list-style-type: none"> ■ Recruit at least 10 employers in targeted industries to participate in career exploration activities within first six months. ■ Make connections with at least 50% of the region's secondary schools by end of first year and expand each of the subsequent years. ■ Measure the number of regional high school graduates who have engaged in work-based learning with a local business to establish a baseline. Incrementally increase this to double the number in the next three years. ■ Measure the number of regional high school graduates who plan to pursue work in targeted industries to establish a baseline, and work to increase this over the next five years.
Strengthen Communication within the Talent Development System Led by the Piedmont Workforce Network, the region should reinforce partnerships throughout the talent development ecosystem, driving collaboration to become a more strategic workforce development system.	<ul style="list-style-type: none"> ■ Develop a Talent Development Asset Map by end of year one that identifies all ecosystem partners, their programs and services, funding and resources, and connection points by end 2018. ■ Create a regional Talent Development Vision with 3-5 corresponding strategies by end of 2019. ■ Implement a public awareness campaign that focuses on the role of the public workforce system and the importance of talent development within two years. ■ Provide board development for all Workforce Development Board members (100% of board members completing within 6 months) and create an education program for other ecosystem partners (50% of partners completing within one year).

Develop Sustainable Sector-Based Strategies to Implement Talent Solutions

The region should facilitate the creation of sector-specific workforce strategies to address talent demands through coordinated, collective solutions.

- Identify 2-3 sectors based on the GO Virginia Region 9 Target Industries to develop sector strategies by mid-2018.
- Create sector strategies workgroups within one year of sector identification.
- Develop an asset map in regards to talent development for each sector within 18 months.
- Industry Partners are convened to plan for sector partnerships by close of year two.
 - Convener of partnerships is identified.
 - Two targeted industries are chosen for partnerships.
- Long-term, measure the number of employers who participate, utilizing the number engaged at partnership initiation as a baseline.

Develop and Promote Career Pathways

Career pathways aid all stages of talent development – attraction, development, and retention – by providing clear roadmaps for workers to advance in their careers, thereby helping to maintain a robust talent pool.

- Map training programs within selected industries within one year.
- Create full career pathways, visually depicting levels of employment, education and training, and on and off ramps by end of 2019.
 - Vet career pathways with industry representative (or sector partnerships, if applicable).
- Provide education of career pathways to primary and secondary education – 50% of Region 9 schools engaged within one year of career pathway creations.

Growing Existing Businesses

Framework Initiative	Performance Metrics
Establish Broadband Partnerships Communities within Region 9 should help greatly extend quality broadband to their citizens and businesses by entering into public-private partnerships to solve certain infrastructure shortcomings.	<ul style="list-style-type: none"> ■ A baseline assessment of underserved geographies within Region 9 will be completed. Reassessments performed annually. ■ Public-Private Partnerships (PPPs) established to service one or more under- or unserved geographies with quality broadband internet access. ■ Within 3 years of PPP establishment, no less than 40% of planned broadband installations will be completed. ■ Within 5 years of PPP establishment, all broadband installations will be completed.
Concentrate on Innovation Corridor Branding The Innovation Corridor Branding initiative would raise the profile of the region to be a nationally-recognized "brand" for innovation, particularly within the IT, defense, cybersecurity, biotech and financial services fields.	<ul style="list-style-type: none"> ■ A committee comprised of 12 public and private sector leaders formed before January 2019. ■ Public input on corridor branding and marketing completed. ■ Final decisions on branding and marketing strategies, including Corridor name and logo completed.
Harness Regional Assets to Develop and Promote Biotech Hub The Biotech Hub would create a large amount of new square footage in a concentrated area geared towards the biomedical and biotechnology industries to attain a critical mass of businesses, talent and intellectual property thus making the region a leading national biotech center.	<ul style="list-style-type: none"> ■ An assessment of current space suitable for bioscience and biotech research as well as an identification of potential sites for retrofitting or new development completed. ■ Selection and approval of new development projects totaling a minimum of 400,000 SF office and lab space will be completed in phases. Space allotted between phases based on available funds and time needed to complete construction. ■ Construction for properties completed.

Startups/Innovation/Commercialization

Framework Initiative	Performance Metrics
Grow the Entrepreneurial Ecosystem Support the development and operations of strong entrepreneurial assistance programs throughout the region.	<ul style="list-style-type: none"> ■ Three collaborations will be funded serving the region by June 2018. ■ The collaborations will serve 50 entrepreneurial companies by June 2019. ■ The clients of the collaborations will create 250 jobs by June 2020.
Provide Tax Incentive for Investments in Local Startups Increase the capital available for locally-grown businesses by providing a local tax incentive that builds on the Commonwealth's investment tax credit.	<ul style="list-style-type: none"> ■ Grants matching state qualified equity and subordinated investment tax credit would be made to the maximum available. ■ New investments in Region 9 companies would increase in number and amount over the 2017 base year. ■ Incremental job creation by companies receiving investments will exceed 500 employees by 2020.
Provide Additional Capital for Expansion Additional Capital for Expansion would help high-growth companies in Region 9 accelerate and stay in the region.	<ul style="list-style-type: none"> ■ A professional venture capital firm will be hired to manage the fund and raise additional capital by December 2018. ■ Ten investments will be completed by December 2020. ■ Companies in the portfolio will have reported incremental job creation exceeding 1500 employees by December 2025.

Sites

Framework Initiative	Performance Metrics
Make Site Improvements to McDevitt/Crown Jewel Improvements to the McDevitt/Crown Jewel Site in Culpeper: Phase I ESA, rezoning, wetlands delineation, geotechnical study and secure an option.	<ul style="list-style-type: none"> ■ All four parcels to be rezoned accordingly by 2018. ■ Secure option on all four parcels by 2018. ■ Identify source of funds and complete Phase I ESA on all four properties in 2018. ■ Complete wetlands delineation and preliminary geotechnical study as needed.
Accelerate Readiness of Vint Hill Improvements to the Vint Hill Site in Fauquier County: update Phase I and II ESA, geotechnical study, development of a site readiness fund	<ul style="list-style-type: none"> ■ Due to shallow water table, complete preliminary geotechnical study in 2018. ■ Site readiness fund for future development and preparation of the sites to include items such as site clearing, site grading, utility extensions, access roads, signage, signaling, etc.
Increase Preparedness of Williams/Heritage Improvements to the Williams/Heritage site in Fluvanna County: confirmation of the viability of bringing utilities to the site, costs and time table.	<ul style="list-style-type: none"> ■ By end of Q1 2018, determine if this property is county's best suited site for industrial use and investment. Coordinate with property owners, utilities, and others to make decision. ■ Clear site in 2018 to allow for better viewing of property. ■ Complete Phase I ESA in 2018
Secure Data and Results for Rapidan Center Improvements to the Rapidan Center in Greene County: secure previously commissioned studies and confirm results.	<ul style="list-style-type: none"> ■ By end of Q1 2018, meet with two to three developers to discuss potential for business park onsite. ■ Completion of a Phase I ESA in 2018 if previous study cannot be found.
Bring Natural Gas to Ferncliff Business Park Improvements to the Ferncliff Business Park in Louisa County: bring natural gas to the site.	<ul style="list-style-type: none"> ■ Coordination with VDOT and site owners to determine needed transportation improvements by end of year. ■ If not already done, completion of due diligence studies (wetlands delineation, preliminary geotechnical) on recently purchased 40 acres.
Enhance Viability of Thomas E. Lee Industrial Park Improvements to the Thomas E. Lee Industrial Park in Orange County: Phase I ESA, secure an option, and study the cost of bringing natural gas to the site.	<ul style="list-style-type: none"> ■ Option Lot 10 to establish control and price of land by end of 2018. ■ Coordinate with owners of Lot 10 to conduct and or update Phase I ESA (if existing).

Better Leverage UVA's Research Park This initiative would position the UVA Research Park to be the premier office and research park in the region.	<ul style="list-style-type: none"> ■ Determine UVA's willingness to set aside acreage for select targeted industries, such as light manufacturing, without requiring ties to UVA's research activities. ■ Explore feasibility of UVA Research Park setting aside acreage for a regional office park/entrepreneurship center/etc. where all localities could be invited to provide funding in exchange for revenue sharing.
Create and Promote Other Sites The region should encourage additional site development activities beyond the six aforementioned sites and the UVA Research Park.	<ul style="list-style-type: none"> ■ Identify current and anticipated gaps in site inventory by end of year. If additional sites need to be identified and developed, a plan needs to be established on creating and funding site improvements. Plan should be developed in 2018.

Other Opportunities	
Framework Initiative	Performance Metrics
Realign Organizational Focus within the Central Virginia Partnership The Partnership should shift resources to provide additional site readiness support to local EDOs within the region and facilitate greater coordination between regional stakeholders and UVA.	<ul style="list-style-type: none"> ■ A review of current strategies and organizational resource allocation completed. ■ Framework for supporting site/space readiness throughout the region using the identified funds created. ■ Planned framework implemented for supporting site/space readiness.
Pursue Organizational Funding & Capacity Building Mechanisms for Plan Implementation Develop a sustainable funding mechanism that will give Region 9's support organization the financial resources needed to address emerging Region 9 challenges and opportunities and Plan execution	<ul style="list-style-type: none"> ■ By June 2018, the support organization will designate a team to generate potential new revenue streams. ■ Before January 2019, the aforementioned team will present to the Council and Board a list of 5 potential new revenue streams. Of these 5, 3 will be chosen to implement. ■ By January 2020, the Partnership will have generated significant additional funds.