

Grow Capital Jobs: Preliminary Report

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EXECUTIVE SUMMARY

1. The statewide GO Virginia Board requires each Regional Council to develop an Economic Growth and Diversification Plan. The statewide board has articulated a set of general guidelines and specific requirements that each region should follow in developing this plan.
2. In our region 4, local universities, private sector research firms, multi-jurisdictional organizations and a regional think tank, Richmond's Future, have conducted numerous studies in recent years directly related to the requirements of the Economic Growth and Diversification Plan.
3. A significant body of work has been produced that details the demographics of the region, its economic base, its infrastructure assets and challenges, the most prominent industry clusters, and the largest mismatches between available and forecasted jobs and the existing skills of the workforce. In addition, a variety of potential projects have been put forward to address the region's critical economic challenges.
4. Taken together, these studies can be the foundation of the Regional Council's Growth and Diversification Plan. It is critical, however, that the research is presented in a manner that focuses on the primary goal of GO Virginia: the creation of higher paying jobs with wages above the regional or sub-region average. In addition, the Regional Council may commission specific additional research that explores in more depth issues that will be related to eventual project selection such as the industry cluster(s) that will be highlighted or the ROI in workforce development programs.
5. The Regional Council should ensure that the Growth and Diversification Plan establishes a framework that can guide its ultimate project choices and grant proposals.

INTRODUCTION

The purpose of this report is to provide the Capital Region 4 Council with a summary of the research that has already been conducted in the region that meets the general guidelines and specific requirements of the statewide Go Virginia board. During the past decade, local universities, regional organizations and associations, private sector firms, and the regional think tank, Richmond's Future, have produced in depth studies of the issues crucial to the area's economic future.

This report summarizes the work that has been performed in six categories: demographics, economics, infrastructure, cluster analysis, workforce/skills gaps and project proposals. In each category, the report details the range of the available research, the key findings drawn from this work, and what needs to be done in terms of either a refined focus or additional work to ensure that the final Growth and Diversification Plan meets the criteria established by the Go Virginia statewide board.

GROWTH AND DIVERSIFICATION PLAN:

The statewide Go Virginia Board has articulated a set of general guidelines and specific requirements for the regional Growth and Diversification plans that will be the foundation for identifying projects for which the Regional Councils will seek funding.

General Guidelines

1. Review Existing Plans and Research

The Regional Council should review existing local and regional strategic plans to provide baseline information. (Including but not limited to Comprehensive Economic Development Strategies, Workforce Investment Board regional plans, state level industry strategic plans,

2. Analyze, Identify, Prioritize

The Regional Council should not simply endorse an existing plan or strategy, but utilize the range of information available to have a genuine dialogue about regional priorities.

Members of the Regional Council shall play an active role in reviewing and analyzing regional information; shall participate in completing a critical analysis of the region; shall participate in identifying and prioritizing issues; and shall identify key actions necessary to address issues.

3. Obtain Relevant Input and Public Participation

The Regional Council shall solicit public participation and input to help identify regional needs and opportunities for cooperation. The method of receiving input and the information gained must be documented in the plan.

4. Long and Short-Term Horizons

The regional planning process is intended to help identify strategies and formulate a plan of action for a two-year period but should consider a five-to-ten year horizon. The plan must be revisited on a biennial basis to determine if adjustments are required to better meet regional needs or take advantage of new opportunities.

The plan is a strategy/vision for the Region and will serve as the document against which project proposals will be compared. The plan should identify potential industry clusters and why they are strategic for the region. It may but does not have to address potential projects.

Specific Plan Requirements

At a minimum, and to assist with establishing baseline data for further evaluation, the plan should include the following elements:

1. Data on growth of the region- including both historical trends and comparative data to other similar regions, the state, and the nation, including:
 - a. Annual change in average personal income since 2006 (household income per Census, or BEA personal income)
 - b. Growth of key employment sectors since 2006
 - c. Job growth year by year and cumulative since 2006

- d. How changes in employment and wage patterns have impacted regional economic growth since 2006 (i.e. the multiplier effect of jobs/wages lost or gained)
 - e. Identify commuting patterns into and out of the region and the impact of such patterns on the ability to attract and or retain higher paying jobs
 - f. Change in the number of jobs supported through revenues derived from out-of-state sources
2. Identify significant drivers of the existing economy and growth trends of these drivers
 3. Identify existing efforts to diversify and grow and/or retain higher paying jobs and to enhance access to such jobs.
 4. Identify existing or potential business sectors or clusters which can lead to sustainable, scalable, future growth in the region and the process used to select those sectors or clusters including how growth in them can be achieved. The identification of such sectors or clusters must be based on empirical data and which is based on results that are realistic given the drivers of the region's economy.

For purposes of the plan, a cluster is a group of companies in a business sector with an affiliated supply chain, the relationships between and among industries in a region that support economic growth, workforce training resources, and other related assets.

5. Identify workforce gaps in the availability of immediately employable talent in both the existing significant drivers of the economy as well as the suggested sectors or clusters and prioritized opportunity areas.
 - a. If a gap exists, identify current efforts to address, being specific as to the skills/credentialing/experience/education required and whether these efforts are adequate to address the shortage. Activities to import talent from outside Virginia to address gaps should also be considered.
6. Commuting patterns (both existing and potential) for the workforce to other regions/states and whether such activity affects the region's ability to attract and or retain higher paying jobs

7. Identify intraregional economic differences and how the plan will address the goals of GO Virginia in a way that benefits all parts of the region.
8. Potential performance metrics as determined and defined by the Region based upon direction from the Board.

DEMOGRAPHIC ANALYSIS

Work Completed

Richmond's Future commissioned a major demographic study by Dr. Michaela Zonta of VCU that compared the MSA with nine other metropolitan areas of similar size across the nation ("Socio-demographic Study of Richmond and its Peer Metropolitan Areas.) The study compared demographic elements such as population growth, immigration, race and ethnicity, age distribution, household formation, educational attainment, poverty levels, housing affordability and transportation patterns and access. The 2001 census Report was the primary source for the study.

A number of the demographic items covered in Dr. Zonta's study were also covered in an economic report that Ann Battle Macheras of the Federal Reserve Bank of Richmond conducted for Richmond's Future. Macheras updated the report in 2015 and contains the most current information that we have about demographic trends.

The Crater District's Comprehensive Economic Development Strategy includes a complementary analysis of demographic trends in its region. The study examines population trends, age distribution, educational attainment and poverty indicators.

The Greater Richmond Partnership's commissioned a Cluster Analysis Study by Market Street Partners that linked economic development opportunities to the region's demography.

In addition to these specific studies, the Southeastern Institute of Research (SIR) has been a leader in linking demographic trends nationally to what is occurring in the region. In particular, SIR has produced a body of work focused on two important generational matters: the overall aging of the population and what this means for public policy; and the increased competition among metropolitan areas for talented young people.

In terms of its relationship to higher paying jobs, demographic analyses of general population shifts, educational attainment, age distribution and the attraction of the relevant communities to highly educated young people are especially relevant variables.

Key Findings:

From 2000-2015, the growth rate in the overall Richmond MSA was 14.7%, right in the middle of its nine peer regions of similar size nationwide. This growth rate was considerably higher than Buffalo (-3%), Hartford, (5.6%), Birmingham (7.2%), and Memphis (9.2%) though it lagged far behind the peer group leader, Raleigh-Cary (41.8%).

The trends in the age distribution of Richmond's MSA population reflect a "graying" phenomenon seen in other peer regions. The percentage of seniors is increasing, from 11% in 2000 to 12% in 2010. Most notable, however, the percentage of pre-seniors, 55-64 years of age, is exploding, from 9% in 2000 to 12% in 2010. While the age distribution in the Richmond MSA resembles most of its peers, Raleigh-Cary is the prominent exception, only 18% of its population is 55 or older, compared to 24% in the Richmond MSA.

In terms of educational attainment, the Richmond MSA ranked relatively high among its other peer regions. Out of the ten metro areas of similar size, the Richmond MSA ranked third in bachelor's degree attainment (31.7%), only exceeded by Hartford (34.6%) and Raleigh Cary, (31%) The one major educational negative is that the Richmond MSA ranked 9th out of 10 in terms of high school degree attainment, with relatively poor performance in the urban cities and the more rural parts of the region.

Demographic analyses have also demonstrated that there are significant differences between the two planning districts that have been combined to comprise Region 4 by the GO Virginia Board. While the Richmond Regional Planning District is predominantly (though not entirely) urban-suburban, the Crater Planning District is more rural and its demographics reflect the trends occurring across rural Virginia. It is worthwhile to highlight a few of the trends in the Crater District for members of the Regional Council.

The rate of population growth for the Crater District has been slow. From 2010-2015, the rate of population growth in the District was less than 1% while the increase in the state's population during the same period was 4.8%. Projections by the Weldon Cooper Center at UVA about future growth suggest that this trend will continue, with the Crater District's 30-year projected growth at .4% annually, well below the state's 1.1% annual projection.

The percentage of the population living in rural areas in the Crater District (42.7%) far exceeds both the statewide (24.5%) and the national (19.3%) averages.

The Crater District ranks relatively well on the Robert Wood Johnson Foundation's County Health Rankings- with the exception of Prince George County and Colonial Heights, the remaining eight localities fall into the bottom third of the Virginia rankings.

The population of the Crater District that lives in group quarters (8.1%) far exceeds the state average of 3%. The combination of Fort Lee and the numerous correctional centers in the district account for the vast majority of these residents. The high percentage of individuals living in group quarters reduces the size of the overall workforce in the region from what may be inferred by the total population numbers.

What is to Be Done:

The extent and depth of demographic information available to the regional council is substantial and generally exceeds what appears to be required by the statewide Go Virginia board. At the same time, most of the major studies utilize census data from 2010 (with the exception of the Macheras 2015 update). We are nearing the end of this census cycle and should utilize whatever updated information may be available to highlight trends that might not have been visible in 2011.

ECONOMIC ANALYSIS

Work Completed:

The report that Ann Macheras of the FRBR completed for Richmond's Future provided a basis for analyzing RVA's economy in comparison to nine (9) regions of similar size across the country. The study examined indicators such as employment growth, income growth, real GDP

growth, occupational distribution and educational attainment and assessed how RVA had performed compared to peer regions over a 20- year period. It provided an apples-to-apples comparison that is not available in comparisons to aspirational regions.

The Crater Planning District's Comprehensive Economic Development Strategy (CEDS) details the largest employers in the region and total employment over time. It summarizes a major economic impact study conducted by the Department of Defense focused on the contributions that Fort Lee has made to the regional economy. The Crater CEDS report and Virginia's Gateway Region study, "Driving Regional Growth: Embracing a Global Future Initiative," describe in depth the number of initiatives that are continuing or have the potential to contribute to economic growth in the region- these include the expansion of Fort Lee, the development of the Commonwealth Center for Advanced Manufacturing (CCAM) and the Commonwealth Center for Advanced Logistics System (CCALS). The report also details the fiscal stress felt by localities with the Crater Planning District and how these rank among the most fiscally stressed jurisdictions in the Commonwealth.

Chmura Analytics produced the Crater District's Local Workforce Development Area Plan that offers an update on economic conditions. It provides an updated trend analysis on employment and unemployment, job growth and projected employment by occupation. While the Crater District reports do not compare the region to similar ones across the country- it does offer detailed comparisons with Virginia trend lines.

The Richmond Regional Planning District Commission also produced a Comprehensive Economic Development Strategy (CEDS) for its service area. It identified the economic strengths of the region, its major challenges and a wide-ranging set of strategies for a "balanced, ongoing, long-term effort, especially in the areas of education and workforce." The Richmond CEDS also included useful appendices that identified site availability for economic development in each of the service areas nine jurisdictions.

SIR's work for Richmond's Future utilized an alternative approach to economic development that emphasized the importance of a region's perceived "brand" to its capacity to attract the human capital, startups and firms that create higher paying jobs in the contemporary economy.

In addition to the region-specific reports, the Virginia Chamber of Commerce has produced an annual State of the Commonwealth report that includes useful in-state comparisons.

Key Findings:

Overall, the Richmond Metropolitan Area compares relatively well to its peer regions economically. It ranks second in per capita income among the ten region peer group and third in total employment. The region's percentage of individuals working in business and professional service (15.4%) reflects the relatively high educational attainment of the population, ranking below only Raleigh-Cary (17.1%) and Salt Lake City (15.7%).

The one major caveat is that the region is not growing as fast as some of its competitors, especially Raleigh and Salt Lake. Yet, within Virginia, the Virginia Chamber of Commerce's State of the Commonwealth Report indicates that the Richmond Region has consistently outperformed the two largest metropolitan areas of the state, NOVA and Hampton Roads, for the last four years. Our region's diversified economy and increased national attractiveness has enabled RVA to avoid the severity of the downturn that accompanied sequestration in other parts of the Commonwealth.

Even with the extent of the accolades that the region has received for its food culture and quality of life, there is clearly work needed to be done in branding RVA as a great place to work. An SIR study for Richmond's Future noted that among young professionals, RVA was increasingly perceived as a location with a strong quality of life, but was not considered to be a great place for employment, especially when compared to cities such as Denver or Austin, or to the northern Virginia region within the Commonwealth.

Once again, there are very significant intra-regional variations when we compare the Crater District to the Richmond Regional District. In the Crater District, Chmura Analytics notes that unemployment which peaked at 10.6% in February, 2010 had fallen to 5.7% by November, 2016, yet this was still considerably higher than the 4.3% statewide rate. Chmura also forecasts that employment will grow at a rate (.3% annually) that is less than half as fast as the rest of Virginia (.7% annually).

In addition, educational attainment in the Crater District lags the state considerably. 55% of the high school population have a high school diploma or less, compared to 34% statewide. And only 22% of adults have an Associate's or Bachelor's Degree. These statistics clearly indicate the importance of workforce development matters to the future economic appeal of the Crater District.

What is to be Done:

Existing research provides a detailed and comprehensive examination of economic conditions and the challenges to future prosperity in the major parts of the region. The comprehensive nature of this work expands beyond the scope of GO Virginia, addressing crucial issues such as alleviating poverty, developing entry level job opportunities, and fixing a housing and transportation structure that constrains access to employment opportunities. The Growth and Diversification Plan should be narrowly focused on those steps that can be taken to promote more higher paying jobs.

INFRASTRUCTURE:

Work Completed:

The region's PDC's both addressed infrastructure issues in their Comprehensive Economic Development Strategies.

The Richmond Regional PDC's plan included a chapter on community infrastructure that addressed a range of issues, including housing and homelessness, air, water, rail and highway transportation, the public transit system, telecommunications and internet, and the public water and sewer infrastructure. It also provided an appendix that detailed the available sites for economic development in the region.

The cluster analysis performed by Market Street Services for the Greater Richmond Partnership also provided a general assessment of the readiness of the region's infrastructure for economic development. The report also utilized its prospect data to identify trends in building and site requests.

The logistics report of Richmond's Future focused attention on a major underused asset-the Port of Richmond (now Deepwater Marine terminal of the Virginia Port Authority)- and what might be done to enhance the contribution it makes to economic development.

The Crater District's Comprehensive Economic Development Strategy addressed the infrastructure in its part of the region in a detailed manner that was focused on the region's readiness of economic development. The report detailed the major infrastructure improvement that would need to be made in the region to be more attractive to manufacturing companies that would be interested in locating within the region.

Key Findings:

Overall, the highway transportation system in the region received high marks in the analyses. The highway transportation issues that plague NOVA and Hampton Roads have largely been avoided in our region. One caveat is that the decision not to enhance Route 460 could deprive the region of a major logistics enhancement.

While there have been significant improvements at RIC over the past decades, the issue of direct service at reasonable costs has not been permanently resolved and remains an ongoing issue for the business community.

The region is well served by rail through two Class 1 railroads, CSX and Norfolk Southern. Yet passenger rail, in terms of higher speed service, either north to D.C. or East to Norfolk/Hampton Roads, remains a long-term potential.

The lack of a regional bus transport system in RVA is a barrier to linking citizens with employment opportunities and to appealing to "car-lite" Millennials. This tends to be an issue that many mid-sized regions have not solved- peer group analysis showed that while in RVA 2% of the population used public transportation to commute to work, no peer region exceeded 4%.

The enhancement of the Deepwater Marine Terminal (formerly the Port of Richmond) could produce a major infrastructure asset- Virginia's second inland port.

Prospects considering relocating to the region are seeking buildings and sites with considerably more square footage today than they were 10-years ago.

Infrastructure needs and challenges differ significantly in urban and rural areas of the region. The inconsistency of high-speed broadband availability (which is perceived as a 21st Century utility) is a challenge far more prevalent in the rural than the urban areas of the region.

The Mid-Atlantic Advanced Manufacturing Center in Greensville, the only state certified mega-site in Virginia, has received substantial funding from the Tobacco Commission, but still has huge costs associated with the infrastructure improvements that would be necessary to meet the needs of a major employer, including extension of water/sewer services, and an interstate exchange off I-95.

What is to be Done:

Overall, the existing work on the region's infrastructure highlights its strengths and shortcomings in a coherent and consistent manner. A more focused presentation of the manner in which the region's infrastructure can support higher paying jobs and where infrastructure needs to be supplemented to attract higher paying jobs should be addressed in the Growth and Diversification Plan. This can likely be accomplished through the use of existing studies.

CLUSTER ANALYSIS:

Work Completed:

There have been a number of reports produced examining the major industry clusters in the region.

The work of the Greater Richmond Partnership (GRP) has been grounded in cluster analysis for many years. The GRP commissioned a major report identifying industry clusters in the region by Market Street Services in Atlanta in 2011.

Richmond's Future (RF) utilized cluster analysis as one among many approaches to economic development and regional prosperity. RF produced studies that focused on three important

industry clusters: logistics, advanced manufacturing and health care, indicating the steps that might be taken to advance the competitive advantages that the region has in these areas.

Chmura Analytics' work for the Crater District Planning Commission analyzed the key industry clusters in this part of the region, identifying industries such as chemical manufacturing where the location quotients were high.

New linkages that have been developed between VCU's School of Engineering and the research conducted at VCU's Medical Campus have identified promising collaborations for the creation of medical devices and the utilization of pharmacy on demand.

The Center for Urban Research and Analysis developed a report on export opportunities for businesses in the region and has convened working groups to implement the report's recommendations.

Key Findings:

The region's natural locational advantages make the development of the Commonwealth's second inland port (the first is in Front Royal) in the area around the Deepwater Marine Terminal a realistic possibility.

With the start-up of organizations such as the Commonwealth Center of Advanced Logistics Systems, the presence of the Army Logistics University at Fort Lee, and the development of academic degree programs in supply chain management and logistics processes at VCU and VSU, the region could become a leader in logistics analysis, processes and technology.

The region's skill base in Finance, Insurance and Information Technology should be utilized to encourage and promote small and medium sized financial services firms that are on the cutting edge of innovation.

The region has a major opportunity to utilize its medical, bioscience and pharmaceutical expertise to contribute to technical advances in the manufacturing of pharmaceuticals and the production of medical devices.

Rolls Royce's decision to locate a major facility in Prince George, the start-up of the Commonwealth Center for Advanced Manufacturing adjacent to Rolls Royce, the establishment of the Commonwealth Center for Advanced Manufacturing as a new model for business-university partnerships, the and potential development of an Apprentice Academy in Advanced Manufacturing could be the impetus for major progress in locating advanced manufacturing facilities in the region.

Site development, infrastructure improvements and workforce development are crucial prerequisites to achieving the region's potential in advanced manufacturing. In addition, a marketing and branding campaign should be undertaken to bring more visibility to the region's advanced manufacturing capabilities.

What is to Be Done

The Growth and Diversification Plan could enhance the existing cluster analyses in two ways. First, it should focus exclusive attention on clusters or sub-clusters that where wages exceed the region or sub-region average. Second, it should focus on clusters where educational and credential preparation exists (or can be realistically created) and where obtaining a regional competitive advantage is truly data-driven.

WORKFORCE SKILLS/GAPS

Work Completed

The two Workforce Investment Boards that cover the Go Region 4 were mandated to provide comprehensive reports that addressed workforce gaps in the region and how these could be addressed. Chmura Analytics produced both reports. A major benefit of having the same research group produce both reports is the consistency in the categories employed and the analysis produced.

Much of the research that has been conducted on workforce/skills gaps has focused on the mismatch between the jobs that are currently open or will be needed in the future and the education/skills of the available and emerging workforce.

Chmura Analytics, for example, produced a report for Richmond's Future that addressed workforce gaps in the STEM-H area for the MSA. A major benefit of this report is that it specifically addressed occupations that would meet the higher paying jobs criteria articulated in the GO Virginia legislation.

Richmond's Future commissioned a report by Kelli Parmley and Dr. Jason Smith of Bridging Richmond that examined the skills gap in STEM area occupations in the region and recommended strategies for addressing these, starting in the region's middle schools.

Research performed by John Martin's group at Southeastern Institute of Research (SIR) has focused on a different aspect of the workforce question- the competition between regions for highly educated young professionals. Richmond's Future commissioned SIR to examine the perspective that young professionals in the region and at universities across the state expressed about the attractiveness of the region in terms of employment opportunities and livability.

Key Findings

The workforce challenges in the different areas that make up Region 4 overlap in some ways and are distinctive in others.

The overlap is most visible in the mismatch between job availability and workforce preparation in the middle skills area. Studies in both the Richmond Regional and Crater Districts note that there is a substantial need for employees who have training/certification beyond high school, but may not necessarily require a four-year degree.

Recommendations for addressing this gap include:

Middle/High School- Addressing career education in middle school, supporting and more effectively branding career education, and developing specific industry sector partnerships such as health care with the schools.

Community Colleges- Expanding the focus on industry developed certifications and using the skills gaps analysis to shape new program offerings.

Apprentice Academy at CCAM- Developing an innovative Apprentice Academy at CCAM (with affiliates at community colleges and higher education centers throughout the region) that trains prospective workers on the actual advanced manufacturing machinery that will be utilized at the workplace.

As employment has shifted in the region from goods-producing to service-producing, the gap between the average regional wages in the Crater District and state and national average wages has been increasing. Higher wage industries such as wholesale trade, utilities and manufacturing have declined over the past five years as well. In addition, labor force growth has been stagnant, 0.3% over the last ten years compared to 1.0% statewide. Educational attainment lags the state and the nation- 55% of the working age population have high school diplomas or less, compared to 34% statewide. And the per cent of disconnected youth is 5.1%, compared to 2.2% statewide.

What is to be Done

The comprehensive nature of the workforce development reports provides a useful foundation for the Regional Council's discussion of occupation gaps. At the same time, these reports include strategies for aligning workers with job openings that may not meet the criteria of "higher paying jobs"-- private sector ones that pay more than the regional average wage-- that is the singular focus of GO Virginia. The Growth and Diversification Plan should provide a less comprehensive, but more in depth analysis of opportunities and skills gaps in the occupations where wages are above the regional or sub-regional average.

SUMMARY

The research that has been conducted in our region over the last decade addresses the major issue and themes outlined in the Go Virginia guidelines and requirement. The Growth and Diversification Plan will be able to utilize a substantial portion of the existing research, so long as it is tailored to Go Virginia's laser-focus on high-paying jobs. In a couple of instances, especially in terms of the clusters that may be the focus of the region's projects, it will be useful to offer a clearer presentation of those clusters and sub-clusters where there will be increased demand and where wages will clearly exceed the statewide average.