

AGENDA
GROWTH AND OPPORTUNITY BOARD
Tuesday, February 13, 2018
7:30 AM
West Reading Room, Patrick Henry Building

- I. Opening Chairman
 - a. Call to order
 - b. Roll Call
 - c. Approval of Minutes: December 12, 2017 meeting

- II. PUBLIC COMMENT

- III. PER CAPITA GRANT APPLICATION REVIEW Board and Staff
 - a. Commercialization/Start up collaborations
 - b. Talent Development and Credentialing
 - c. Infrastructure

- IV. ADMINISTRATIVE APPROVAL POLICY Erik Johnston

- V. HEALTHCARE DISCUSSION Erik Johnston

- VI. VRIC STUDY Mitch Horowitz

- VII. BOARD MATTERS Staff
 - a. Regional Council membership updates
 - b. Future per capita and statewide competitive application dates

- VIII. FUTURE BOARD MEETING DATES

2018		
Tuesday, April 10	House Room 1, Capitol	1:00 PM
Tuesday, June 12	House Room 1, Capitol	1:00 PM
Tuesday, August 14	House Room 1, Capitol	1:00 PM
Tuesday, October 9	House Room 1, Capitol	1:00 PM
Tuesday, December 11	House Room 1, Capitol	1:00 PM

- IX. ADJOURNMENT Chairman

VIRGINIA GROWTH AND OPPORTUNITY BOARD MEETING
December 12, 2017
1:00 PM
Richmond, Virginia

Members Present

Jennifer Boykin
Delegate M. Kirkland “Kirk” Cox
Ben J. Davenport, Jr.
The Honorable Jim Dyke
Thomas F. Farrell II
Heywood W. Fralin
Senator Janet D. Howell
Delegate S. Chris Jones
Doug Juanarena
Delegate Terry G. Kilgore
Delegate R. Steven Landes
Senator Frank M. Ruff
Todd A. Stottlemeyer
The Honorable Dietra Y. Trent, PhD
Lucia Anna “Pia” Trigiani
Bruce Smith
Steven C. Smith
Joe Wilson
John O. “Dubby” Wynne

Members Absent

Nancy Howell Agee
The Honorable Richard D. “Ric” Brown
The Honorable Todd Haymore
Senator Thomas K. Norment
Marilyn H. West

Call to Order

Mr. John “Dubby” Wynne, Chairman of the Virginia Growth and Opportunity (GO Virginia) Board, called the meeting to order.

Roll Call

Ms. Elizabeth Rafferty, Policy and Legislative Director for the Department of Housing and Community Development (DHCD), called the roll and stated that a quorum was present.

Approval of Minutes

A motion was made to approve the minutes of the October 16, 2017, meeting of the Board. The motion was properly seconded and passed unanimously.

Public Comment

No comments were made by the public; the public comment period was then closed.

Per Capita Grant
Application Review

Mr. Wynne stated that the Board would be discussing and approving the first round of project applications for funding from the per capita pool of funds. These projects were identified by the regions as advancing the priorities of their growth and

diversification plan. Mr. Wynne added that the board would review statewide competitive grants in April of next year.

Mr. Bill Shelton, Director of DHCD then provided an overview of the applications received; stating, that four of the nine regions submitted applications with twelve proposals for consideration by the Board.

There were two applications regarding commercialization and start up collaborations: 757 Seed Fund from Region 5 and Virginia Commonwealth University (VCU) Pharmaceutical Commercialization Accelerator from Region 4. The Board discussed policy issues regarding the 757 Seed Fund, including how GO Virginia funds should be used for enhanced capacity building activities and if funds could be used toward operations versus direct investments. The Board discussed when direct investments in companies was not allowable. DHCD staff will work to provide further guidance regarding what is allowable under the state constitution. The Board recommended that the applicant get clarification on its local match and reapply in February with technical assistance from DHCD. The Board discussed the VCU Pharmaceutical Commercialization Accelerator project and requested DHCD staff provide guidance from other state programs that have developed policy regarding intellectual property. The Board recommended that the applicant reapply in February with technical assistance from DHCD to address concerns over funding and project timelines.

There were two project applications regarding infrastructure: Hampton Roads Regional Unmanned Systems Facility and Hampton Roads Regional Broadband Initiative, both from Region 5. The Board policy discussion for the Hampton Roads Regional Unmanned Systems Facility; focused on if projects should be approved when the return is not to be realized until future unfunded phases are completed and how much preliminary work should be completed before a project is funded. The Board recommended the applicant conduct a feasibility study for the project and reapply in February. The Board then discussed policy issues regarding the Hampton Roads Regional Broadband Initiative, including what type of broadband projects will be

funded, and if projects should yield tangible outcomes or have direct benefits tied to economic development, and what level of outreach must be conducted to existing providers. The Board agreed to defer this and other broadband projects until after the 2018 General Assembly session to determine if there will be further statewide policy clarity on state funded broadband initiatives.

There were eight applications regarding credentialing and talent development: Commonwealth Center for Advanced Manufacturing (CCAM) Apprentice Academy from Region 4, Virginia Digital Shipbuilding Workforce Program and Hampton Roads Cyber Collaboration (HRCyber Co-Lab) from Region 5, Strengthening Alexandria and Arlington's Technology Workforce, Northern Virginia Tech Talent Pipeline, and NOVA Fabrication Laboratory from Region 7, and Rockbridge Area Advanced Manufacturing Project (RAAMP) and Nursing Opportunities from Region 8. The Board discussed the CCAM Apprentice Academy and recommended the applicant reapply with technical assistance from DHCD to address match and duplication concerns. After discussion of the Virginia Digital Shipbuilding Workforce Program a motion was made and seconded to approve the project for funding; the motion was unanimously approved. After discussion of the HRCyber Co-Lab a motion was made and seconded to approve the project for funding; the motion was unanimously approved. After discussion of the Strengthening Alexandria and Arlington's Technology Workforce the Board pointed to the connectivity between this application and the Northern Virginia Tech Talent Pipeline. A motion was made and seconded to approve both projects for funding but required the applications be combined during contract negotiations; the motion was unanimously approved. After discussion of the NOVA Fabrication Laboratory a motion was made and seconded to approve the project for funding; the motion was unanimously approved. The Board discussed policy issues regarding RAAMP, whether GO Virginia should fund scholarship programs and the ownership of equipment when purchased with GO Virginia funds. The Board determined that due to long term sustainability it would not directly fund scholarships. The Board recommended the RAAMP project reapply with technical

assistance from DHCD to address the concerns raised by Board discussion as well as duplication of existing programs in the region. The Board then discussed policy issues regarding Nursing Opportunities, whether GO Virginia should consider funding projects in non-traded sectors and if so under what conditions. The Board determined it would not fund projects in non-traded sectors, especially when it incentivizes workforce moving from one region in Virginia to another. Future applications in non-traded sectors must demonstrate their particular need as a center of excellence or specialized/innovative model. After discussion the Board recommended the applicant reapply based on these Board decisions.

Competitive Grants
Scoring Addendum

Mr. Shelton provided an overview of an addendum to the Virginia Growth and Opportunity Fund Grant Scoring Guidelines in regards to the statewide competitive grant pool. This addendum covered further explanation and clarification regarding local participation, enhanced capacity building, alignment with Growth and Diversification plans, and supplemental questions. A motion was made and properly seconded to approve the addendum; the motion passed unanimously.

VRIC Update

Mr. Jim Dyke provided an update to the Board on the Virginia Research Investment Committee (VRIC). Mr. Dyke stated that VRIC met on November 7 and December 11 and selected the first proposals that will be funded through the Virginia Research Investment Fund (VRIF). This totaled approximately \$1.4 million for two proposals: University of Virginia for the development of an artificial pancreas and Virginia Tech for improving security of wireless communications from cyberattacks. The next meeting will be on January 8.

Board Matters

Mr. Wynne stated that the Board members were subject to the Conflict of Interest Act (COIA) and that their economic impact statements were due no later than February 1, 2018.

Mr. Shelton also stated that there was a change in Regional Council leadership for Region 9. Pace Lochte would be replacing Teresa Sullivan in the education sector due to her retirement. A motion to approve the change was made and properly seconded; motion passed.

Adjournment

Upon a motion duly made and seconded, the meeting was adjourned.

DRAFT

COMMERCIALIZATION

VCU Pharmaceutical Accelerator *(Resubmission)*

Region: 4

Strategy: Commercialization

Type of Project: Implementation

Sub-grantee(s): Virginia Commonwealth University (VCU) School of Engineering

Project Description: The proposed project will lead to the creation of an advanced manufacturing cluster in Region 4 by commercializing advanced pharmaceutical manufacturing processes and equipment developed through the Medicines for All (M4ALL) program at VCU. The M4ALL program has received significant funding for research from the Gates Foundation, with the understanding that the program must become financially independent by commercializing research with private industry partners. The process of commercialization is not funded through the Gates Foundation, thus GO Virginia funds will be utilized to develop drug-specific commercialization plans, to produce architecture and engineering plans for new FDA-approved facilities with private-industry partners, and to train new talent through the VCU Pharmaceutical Engineering Program. The ultimate goal of the project is to establish a state-of-the-art pharmaceutical cluster that will fundamentally change how drugs are manufactured and distributed worldwide. The City of Richmond and Richmond Region Planning District Commission (on behalf of Henrico County) provided the local match for this project.

Type of Funds	Totals
GO Virginia	\$ 500,000.00
Matching Funds	\$ 608,200.00
Total Project Budget	\$ 1,108,200.00
Type of Match	Totals
Matching Funds	\$ 608,200.00
At least \$1:1	YES
Local Match	\$ 108,200.00
At least \$50,000	YES
At least 20% of GO VA Request	YES
Local Match Waiver Requested?	NO

Outcomes:

- Establishment of a new Richmond facility for BrightPath, LLC, the entity that controls the flow reactor technology necessary to commercialize VCU research
- Reactivation of production units at the AMPAC Fine Chemicals, Inc. manufacturing facility in Petersburg (former Boehringer-Ingelheim facility)
- Drug-Specific Commercialization Plans for four drugs
- 125 jobs in two years (\$100,000 average salary)

VCU Pharmaceutical Accelerator *(Resubmission)*

Metrics:

- Number of new pharmaceutical businesses created or recruited
- Number of new jobs created in pharmaceutical/advanced manufacturing industries
- Increase in the number of VCU Engineering graduates retained locally
- Leveraged private investment by new pharmaceutical businesses
- Number of new drug manufacturing processes commercialized
- ROI of 412% calculated assuming the creation of 340 new jobs in three years and a total private investment of \$20 million by industry partners (\$5 million by BrightPath, LLC; \$15 million by AMPAC Fine Chemicals, Inc.)

Workgroup Discussion:

This application was first submitted to the GO Virginia Board in December 2017. The Board requested the applicant (1) clarify the relationship between BrightPath, LLC and VCU, (2) provide additional information regarding the budget-use of local, federal, and GO Virginia funds, (3) engage additional local and regional partners, and (4) clarify the project timeline. There was consensus from the workgroup that the revised application addresses the concerns raised by the Board in December. The resubmitted application demonstrates the need for GO Virginia funds to fill the commercialization gap between the Gates Foundation and VCU. This project has the potential to have a noticeable impact on the region and the Commonwealth by catalyzing the growth of a new advanced manufacturing cluster. Workgroup feedback included:

- Higher risk investment, but BrightPath already committed to a lease in Richmond
- Significant ROI potential
- Engagement of local economic development officials should be ongoing
- Strong tie between industry and higher education
- Applicant understands DHCD will place a lien on equipment purchases

Staff Recommendations:

DHCD staff recommend this application for approval.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	YES
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

COMMERCIALIZATION

757 Seed Fund *(Resubmission)*

Region: 5

Strategy: Commercialization

Type of Project: Implementation

Sub-grantee(s): 757 Angels

Project Description: This project will establish the administrative structure for a new fund to provide seed-stage investments to Virginia’s most compelling innovation-based, high-growth companies. The creation of a new seed fund to complement the work of the 757 Angels will help to build the critical mass of quality investable companies necessary to establish an innovation economy in the Hampton Roads region. GO Virginia funds will be utilized for startup and operational costs associated with establishing the fund, as well as marketing and raising sufficient capital to close the Fund. The Cities of Chesapeake, Hampton, Newport News, Norfolk, and Portsmouth provided the local match for this project.

Type of Funds	Totals
GO Virginia	\$ 140,000.00
Matching Funds	\$ 216,000.00
Total GO VA Budget	\$ 356,000.00
Type of Match	Totals
Matching Funds	\$ 216,000.00
At least \$1:1	YES
Local Match	\$ 50,000.00
At least \$50,000	YES
At least 20% of GO VA Request	YES
Local Match Waiver Requested?	NO

Outcomes:

- Establishment of the Seed Fund
- 152 jobs in five years (\$94,000 average salary)

757 Seed Fund *(Resubmission)*

Metrics:

- Total capital (\$) raised by 757 Seed Fund
- Total capital (\$) deployed by 757 Seed Fund
- Number of fund investments and average deal size
- Number of businesses in priority clusters receiving fund investments
- Number of new jobs created by fund recipients
- Increase in average employee salaries for fund recipients
- Return on Investment (ROI) and Internal Rate of Return (IRR) for deployed funds
- Number of program exits by type and timing
- Deal Funnel: Number of businesses applying, interviewed, evaluated, and funded
- State ROI of \$757,264 in increased state income tax revenue

Workgroup Discussion:

This application was first submitted to the GO Virginia Board in December 2017. The Board requested the applicant: (1) clarify local match, (2) clarify use of GO Virginia funds, and (3) consider opportunity for collaboration with George Mason University’s Innovation Commercialization Program. There was consensus from the workgroup that the revised application addresses the concerns raised by the Board in December. The resubmitted application identifies a clear gap in an ecosystem of commercialization and demonstrates that a new seed fund could serve as a catalyst to attracting venture capitalists. Workgroup feedback included:

- Low risk investing in personnel with a \$140,000 request
- Clearly demonstrates the vetting process for companies
- Companies will be required to locate in Virginia

Staff Recommendations:

DHCD staff recommend this application for approval.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	YES
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

TALENT & CREDENTIALING

Region 2 Talent Collaborative

Region: 2

Strategy: Talent Development and Credentialing

Type of Project: Implementation

Sub-grantee(s): Region 2000 Planning District Commission/Workforce Development Board

Project Description: This project addresses the skills and interest gaps in middle and high-skill occupations in manufacturing, healthcare, and information technology. The project consists of a two-pronged approach to address this gap: (1) a campaign to increase awareness and interest in these industries, (2) the creation of an existing worker-training program to upskill existing employees into higher-skilled vacant jobs. GO Virginia funds will be used for an awareness campaign and to establish the new training program.

Type of Funds	Totals
GO Virginia	\$ 300,000.00
Matching Funds	\$ 544,836.00
Total Project Budget	\$ 844,836.00
Type of Match	Totals
Matching Funds	\$ 544,836.00
At least \$1:1	YES
Local Match	\$ -
At least \$50,000	NO
At least 20% of GO VA Request	NO
Local Match Waiver Requested?	YES

Outcomes:

- Establishment of an existing worker training program
- Upskilling of 75 workers in three years (\$53,120 average salary)

Region 2 Talent Collaborative

Metrics

- Number of career expos hosted and volume of student, parent, and school participation
- Number of upskilled workers participating and credentials earned
- Number of businesses served (in target clusters)
- Increase in average salary for upskilled workers
- Reduction of job vacancies for high-demand positions
- Increase in students in CTE programs or Career Exploration Labs
- ROI calculated assuming a wage increase of 3% for upskilled workers, for a total of \$360,000 in new regional wages over three years

Workgroup Discussion:

There was consensus in the workgroup that this project was a collaborative effort across the region to fill higher-wage positions by upskilling the current workforce. This project closely aligns with the Brain Drain Strategy Development proposal and would benefit from the strategic approach to talent retention that it will develop. Workgroup feedback included:

- Local match less than 20% (\$60,000)
- Ensure connectivity of target industries between the Region 2 talent projects
- Project addresses a gap in federal funding for existing worker training programs

Staff Recommendations:

DHCD staff recommend this application for approval conditional upon merging with the “Stopping the Brain Drain Strategy Development” project. Region 2 requested the waiver of local match as the project would impact the full geographic area of Region 2. DHCD staff discussed with support organization staff the need to work with local governments toward a local financial commitment, however, none has been secured. DHCD staff recommend contract execution contingent upon receipt of local commitment.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	WAIVER REQUEST
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

TALENT & CREDENTIALING

Great Opportunities in Technology and Engineering Careers (GO-TEC)

Region: 3

Strategy: Talent Development and Credentialing

Type of Project: Implementation

Sub-grantee(s): Danville Community College

Project Description: This project will expand existing curriculum offered by six higher education partners, to build a regional training system of scale for careers in IT and focused areas of advanced manufacturing. The overall goal of the project is to build a pipeline of talent beginning with middle school students, in order to increase the number of students entering the five regional training areas of need: precision machining, welding, IT/cybersecurity, robotics/mechatronics/automation, and advanced materials. GO Virginia funds will be used for teacher training, program outreach, construction of two middle-school exploratory labs, expansion of dual-enrollment programs, and program materials. The Counties of Charlotte, Halifax, Mecklenburg, and Pittsylvania, and the City of Danville provided the local match for this project.

Type of Funds	Totals
GO Virginia	\$ 648,000.00
Matching Funds	\$ 665,438.00
Total GO VA Budget	\$ 1,313,438.00
Type of Match	Totals
Matching Funds	\$ 665,438.00
At least \$1:1	YES
Local Match	\$ 360,401.00
At least \$50,000	YES
At least 20% of GO VA Request	YES
Local Match Waiver Requested?	NO

Outcomes:

- Build-out of two middle-school exploratory lab spaces
- Launch of a GO-TEC marketing campaign
- Implementation of GO-TEC curriculum

Great Opportunities in Technology and Engineering Careers (GO-TEC)

Metrics

- Increase in middle school students participating in GO-TEC curriculum
- Increase in students enrolled in relevant dual enrollment programs
- Increase in industry credentials awarded throughout the region
- Increase in students enrolled in relevant dual enrollment programs
- SOL pass rate for GO-TEC students vs. general enrollment
- Matriculation and graduation rates for post-secondary training/education for GO-TEC students vs. general enrollment
- Job placement rates amongst GO-TEC student graduates

Workgroup Discussion:

There was consensus in the workgroup that this project was an impressive collaboration between localities, school systems, and community colleges, to address the need for stronger STEM education in middle and high schools in order to prepare the workforce for future opportunities.

Workgroup feedback included:

- Replicable across regions
- Significant local support and match from across the region
- Project may lead to a Competitive GO Virginia request to expand to other localities and regions

Staff Recommendations:

DHCD staff recommend this application for approval.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	YES
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

TALENT & CREDENTIALING

CCAM Apprentice Academy Pilot Programs *(Resubmission)*

Region: 4

Strategy: Talent Development and Credentialing

Type of Project: Implementation

Sub-grantee(s): Commonwealth Center for Advanced Manufacturing (CCAM)

Project Description: This project addresses the growing need for workforce development in Region 4 through the implementation of two pilot mechatronics training programs for the CCAM Apprentice Academy. The pilot programs include a Mechatronics Workforce Training Program and a Transitioning Military Program for Industrial Maintenance Mechanics. GO Virginia funds will be used to recruit and train instructors, to purchase mobile training equipment, and for operations during the first year of the pilot programs. The Counties of Greensville and Prince George provided the local match for this project.

Type of Funds	Totals	
GO Virginia	\$	430,000.00
Matching Funds	\$	626,023.00
Total GO VA Budget	\$	1,056,023.00
Type of Match	Totals	
Matching Funds	\$	626,023.00
At least \$1:1	YES	
Local Match	\$	206,023.00
At least \$50,000	YES	
At least 20% of GO VA Request	YES	
Local Match Waiver Requested?	NO	

Outcomes:

- Launch of a Mechatronics Workforce Training Program
- Graduation of 20 apprentices in two years (\$55,563 average salary)
- Launch of Transitioning Military Program for Industrial Maintenance Mechanics
- Graduation of 12 industrial maintenance mechanics in two years
- Completion of employer-specific trainings at the Southern Virginia Higher Ed Center
- Creation of at least 32 jobs total in two years

CCAM Apprentice Academy Pilot Programs *(Resubmission)*

Metrics

- Number of existing workers trained
- Number of new credentials earned
- Number of businesses served (in target clusters)
- Increase in the average salary for upskilled workers
- Job placement rates amongst transitioning military graduates
- ROI of \$1,069,832 calculated assuming the creation of 32 new jobs earning at least \$55,563 annually, resulting in \$998,711 to be capture in the local economy and \$71,720 in new state tax revenue

Workgroup Discussion:

This application was first submitted to the GO Virginia Board in December 2017. The Board requested the applicant: (1) address duplication with John Tyler Community College (JTCC) programs and (2) address match and leverage concerns including demonstrating need from employers and private industry. There was consensus from the workgroup that the revised application addresses the concerns raised by the Board in December. This proposal is in alignment with the Economic Growth and Diversification plan and support for transitioning military will be valuable to the region given the proximity of CCAM to Fort Lee. Workgroup feedback included:

- Mobile equipment supports additional training opportunities
- Clear differentiation between CCAM and existing programs (professional work hours, ongoing (non-semester) course terms, and employer involvement)
- Applicant understands DHCD will place a lien on equipment purchases

Staff Recommendations:

DHCD staff recommend this application for approval.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	YES
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

TALENT & CREDENTIALING

Rockbridge Area Advanced Manufacturing Program (RAAMP) *(Resubmission)*

Region: 8

Strategy: Talent Development and Credentialing

Type of Project: Implementation

Sub-grantee(s): Byers Technical Institute (BTI)

Project Description: This project aims to address the demand for welders throughout the Shenandoah Valley, by increasing enrollment and student access to training opportunities in welding. GO Virginia funds will be used to purchase additional training equipment and to hire and train new instructors, which will facilitate the introduction of additional course offerings, including nights and weekends. Byers Technical Institute (BTI) is a branch of Byers Inc., which opened the new technical training center in August 2017, in order to address the high demand for skilled welders at Byers as well as several of their local industry partners. The Cities of Lexington and Buena Vista, and Rockbridge County provided the local match for this project.

Type of Funds	Totals
GO Virginia	\$ 100,000.00
Matching Funds	\$ 100,000.00
Total Project Budget	\$ 200,000.00
Type of Match	Totals
Matching Funds	\$ 100,000.00
At least \$1:1	YES
Local Match	\$ 50,000.00
At least \$50,000	YES
At least 20% of GO VA Request	YES
Local Match Waiver Requested?	NO

Outcomes:

- Purchase and implementation of new training equipment
- Expansion of BTI course schedule
- Graduation of 72 graduates in five years (\$41,000 average salary)

Rockbridge Area Advanced Manufacturing Program (RAAMP) *(Resubmission)*

Metrics

- Increase in dual-enrollment students trained
- Increase in existing workers participating and credentials earned
- Businesses served (in target clusters)
- Average salary for upskilled workers
- Reduction in job vacancies for high-demand positions
- Success of BTI graduates in the workplace identified in employer surveys
- ROI of \$306,000 in four years based on new income tax generated from 72 new welders
- \$3,000 in Machinery & Tools Taxes for Rockbridge County over 10 years

Workgroup Discussion:

This application was first submitted to the GO Virginia Board in December 2017. The Board requested the applicant: (1) restructure the application so GO Virginia funds were not used for scholarships, and (2) discuss how this program does not duplicate programs provided at local community colleges. There was consensus from the workgroup that the revised application addresses the concerns raised by the Board in December. This project directly aligns with the region’s Economic Growth and Diversification plan, which identifies the need to fill high-demand jobs in the welding industry. Workgroup feedback included:

- Demonstrates pipeline of demand from private industry partners
- Clear differentiation between RAAMP and existing programs (location, contact hours, ongoing, non-semester course terms, flexible scheduling for employed trainees, and credentials offered)
- Applicant understands DHCD will place a lien on equipment purchases

Staff Recommendations:

DHCD staff recommend this application for approval.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	YES
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

INFRASTRUCTURE

Project Hollyleaf Site Grading

Region: 2

Strategy: Joint Site Development

Type of Project: Implementation

Sub-grantee(s): Virginia’s First Regional Industrial Facility Authority (VFRIFA)

Project Description: This project improves a 20-acre industrial parcel in the New River Valley Commerce Park in order to upgrade the site from a Tier 4 to Tier 5 Business Ready Site Certification through VEDP. The property will accommodate a 90,000 square foot manufacturing facility, which is currently the final Virginia site in consideration for an international manufacturing prospect (Project Hollyleaf). The prospect represents a direct foreign investment of \$15 million and the creation of 100 jobs within five years. GO Virginia funds will be used for hard and soft construction costs. The development of this site is critical to the region as a Tier 5 Business ready site enhances the region’s ability to market itself to potential companies. The Virginia’s First Regional Industrial Facility Authority (VRIFA) provided the local match for this project on behalf of the Cities of Roanoke and Radford, the Counties of Roanoke, Montgomery, Pulaski, and Giles, and the Counties of Bland and Craig in Region 1.

Type of Funds	Totals
GO Virginia	\$ 150,000.00
Matching Funds	\$ 727,910.00
Total Project Budget	\$ 877,910.00
Type of Match	Totals
Matching Funds	\$ 727,910.00
At least \$1:1	YES
Local Match	\$ 727,910.00
At least \$50,000	YES
At least 20% of GO VA Request	YES
Local Match Waiver Requested?	NO

Outcomes:

- Grading work for the 20-acre site in the New River Valley Commerce Park
- Tier 5 Business Ready Site Certification
- Creation of 60 jobs over three years once prospect secured
- Private investment of \$9 million over three years once prospect secured

Project Hollyleaf Site Grading

Metrics

- Number of jobs created (in target industries)
- Number of projects (active company recruitment files)
- Number of prospects (active company visits)
- Number of businesses attracted
- Total square footage of new industrial space developed
- Leveraged Private Investment
- Leveraged Public Investment
- ROI calculated assuming the creation of 100 jobs and a \$15 million private investment over five years
- Increased Real Property and Machinery and Tools (M&T) taxes of \$151,800 over a three-year period and \$337,880 over a five-year period

Workgroup Discussion:

There was consensus from the workgroup that a site development project like this would produce a great benefit to the region and the Commonwealth, especially considering the strong potential of attracting a business from overseas. DHCD staff worked with VEDP staff to clarify that the use of GO VA funds was to support the site development work and the VEDP incentive packages was in support of the company locating here. Workgroup feedback included:

- Attraction of a global prospect clearly supports the out-of-state revenue priority
- Commonwealth Opportunity Fund (COF) may be used as an incentive for the prospect
- Prospect will secure a 15 year lease for the property owned by VFRIFA

Staff Recommendations:

DHCD staff recommend this application for approval.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	YES
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

INFRASTRUCTURE

Wood Haven Road Water and Sewer Infrastructure Enhancement

Region: 2

Strategy: Joint Site Development

Type of Project: Implementation

Sub-grantee(s): Western Virginia Regional Industrial Facility Authority (WVRIFA)

Project Description: This project improves the site readiness and marketability of an industrial site near the intersection of Routes 81 and 581 that will accommodate a 52-acre pad and a 20-acre pad. The scope of work includes the necessary water and sewer utility extensions and connections to prepare the site for development. This timeline for this project is simultaneous with other due diligence activities and the development of a master plan, which will help propel the site to a Tier 4 Business Ready Site Certifications through VEDP. GO Virginia funds will be used to extend the water main infrastructure to the pad sites. The Western Virginia Regional Industrial Facility Authority (WVRIFA) provided the local match for this project on behalf of the Cities of Roanoke and Salem and Roanoke County.

Type of Funds	Totals
GO Virginia	\$ 200,150.00
Matching Funds	\$ 760,000.00
Total Project Budget	\$ 960,150.00
Type of Match	Totals
Matching Funds	\$ 760,000.00
At least \$1:1	YES
Local Match	\$ 740,000.00
At least \$50,000	YES
At least 20% of GO VA Request	YES
Local Match Waiver Requested?	NO

Outcomes:

- Two pad sites of approx. 20 and 52 acres with Tier 4 Business Ready Site Certification
- Creation of 100-150 jobs over three years (based on comparable sites and prospects)
- Private investment of up to \$100 million (based on comparable sites and prospects)

Wood Haven Road Water and Sewer Infrastructure Enhancement

Metrics

- Number of projects (active company recruitment files)
- Number of prospects (active company visits)
- Number of jobs created (in target industries)
- Number of businesses attracted
- Total square footage of new industrial space developed
- Leveraged Private Investment
- Leveraged Public Investment
- ROI of \$826,530 calculated assuming the creation of at least 158 new jobs earning at least the prevailing wage of \$42,936, over three years
- Increased local revenue of \$4 million over five years per VEDP ROI calculations

Workgroup Discussion:

There was consensus from the workgroup that that site readiness is a worthy investment to add to the state’s inventory of shovel ready sites. Workgroup feedback included:

- Project could leverage additional state funds
- Zoning issues will be resolved upon completion of a Transportation Impact Analysis

Staff Recommendations:

DHCD staff recommend this application for approval.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	YES
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

INFRASTRUCTURE

Hampton Roads Unmanned Systems Park *(Resubmission)*

Region: 5

Strategy: Joint Site Development

Type of Project: Enhanced Capacity Building

Sub-grantee(s): Hampton Roads Planning District Commission

Project Description: The proposed project facilitates the initial steps needed to establish the Hampton Roads Regional Unmanned Systems Facility (HRUSF) in York County. The new facility will provide an open area and infrastructure for use by public institutions, private companies and individuals, to develop, test, and demonstrate unmanned systems. The goal of this first phase would be to achieve the following: (1) to establish a new Regional Industrial Facility Authority (RIFA) governance structure for cost and revenue sharing; (2) to secure Federal Aviation Administration (FAA) permissions to fly commercial drones in the designated areas adjacent to the property; 3) to prepare architecture and engineering plans that will cover the scope of development. GO Virginia funds will be utilized for prerequisite activities for the engineering plans and legal fees associated with the RIFA formation. The Cities of Hampton, Newport News, Poquoson, Williamsburg, and York and James City County provided the local match for this project.

Type of Funds	Totals
GO Virginia	\$ 150,000.00
Matching Funds	\$ 150,000.00
Total Project Budget	\$ 300,000.00
Type of Match	Totals
Matching Funds	\$ 150,000.00
At least \$1:1	YES
Local Match	\$ 150,000.00
At least \$50,000	YES
At least 20% of GO VA Request	YES
Local Match Waiver Requested?	NO

Outcomes:

- Architecture and engineering plans for the Unmanned Systems Park
- Establishment of the Hampton Roads Regional Industrial Facility Authority (HRRIFA)

Hampton Roads Unmanned Systems Park *(Resubmission)*

Metrics **The proposed project is an enhanced capacity building project and therefore the metrics below may reflect long-term metrics associated with later phases involving project implementation.*

- Number of jobs created (in target industries)
- Number of jobs created in the adjacent industrial park
- Number of businesses (in target industries) attracted to the adjacent industrial park
- Number of new businesses in unmanned systems locating or starting in the region
- Leveraged Private Investment
- Leveraged Public Investment
- ROI calculated assuming the creation of 257 jobs earning at least \$86,480 annually and a private investment of \$705,910 over three years or \$3.5 million over five years

Workgroup Discussion:

This application was first submitted to the GO Virginia Board in December 2017. The Board requested the applicant: (1) conduct additional feasibility work, (2) explore partnerships with Wallops Island, and (3) reach out to the Department of General Services regarding land acquisition. There was consensus from the workgroup that the revised application addresses the concerns raised by the Board in December. There was agreement that the proposal has the potential to catalyze an unmanned systems cluster in the region. Workgroup feedback included:

- Department of General Services (DGS) is aware and supportive of the proposed redevelopment of the Land Bay I and II
- Priority development areas require no additional brownfield mitigation work
- Requirements for Federal Aviation Administration approvals are now addressed
- Potential for impact to reach beyond the region
- Project is speculative but phased approach reduces risk
- Jamestown Yorktown Foundation, which has adjoining property has no conflict with development
- Investment would encourage ongoing local collaboration

Staff Recommendations:

DHCD staff recommend this application for approval.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	YES
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

ENHANCED CAPACITY BUILDING PROJECTS UNDER \$100,000

COMMERCIALIZATION

Capital Ecosystem Development

Region: 2

Strategy: Commercialization

Type of Project: Enhanced Capacity Building

Sub-grantee(s): Valley Innovation Council (VIC)

Project Description: This enhanced capacity building project will include a two-year strategic planning process to assess weaknesses in the current capital landscape that inhibit entrepreneurship and the commercialization of regional research that would lead to greater economic prosperity in the region. The project consists of a two-pronged approach that includes an inventory of capital assets and subsequent “Innovation Blueprint,” a plan for strengthening the formal pathways to capital such as angel investors and seed funds. Completion of this initial project would better situate the applicant to secure an EDA i6 Challenge grant to accelerate cluster-focused proof-of-concept and commercialization programs throughout Region 2, as has occurred in other regions. GO Virginia funds will be used for survey work, consultant fees, and report production. The Valleys Innovation Council (VIC) provided the local match for this project on behalf of the City of Roanoke and Roanoke County.

Type of Funds	Totals
GO Virginia	\$ 77,207.00
Matching Funds	\$ 129,188.00
Total GO VA Budget	\$ 206,395.00
Type of Match	Totals
Matching Funds	\$ 146,938.00
At least \$1:1	YES
Local Match	\$ \$10,000
At least \$50,000	NO
At least 20% of GO VA Request	NO
Local Match Waiver Requested?	YES

Outcomes:

- Surveys and stakeholder engagement
- Capital landscape study & online dashboard
- *Innovation Blueprint* plan

Capital Ecosystem Development

Metrics: **The proposed project is an enhanced capacity building project and therefore the metrics below may reflect long-term metrics associated with later phases involving project implementation.*

- Increase in the frequency and total amounts (\$) of capital investments from capital pathways such as angel investors, venture capitalists, and seed funds
- Leveraged private investment
- Increase in the number of active capital funds in region over time
- Number of businesses receiving funding
- Number of businesses in priority clusters receiving funding

Workgroup Discussion:

There was consensus from the workgroup that the application demonstrates the need to develop a stronger capital ecosystem in the western part of the Commonwealth, and that this step is paramount to advancing the region to a point where they can implement commercialization projects. Workgroup feedback included:

- Local match less than 20%
- Small investment to make region more competitive for federal funds

Staff Recommendations:

DHCD staff recommend this application for approval, with contract execution contingent upon receipt of local commitment. Region 2 requested the waiver of local match as the project would impact the full geographic area of Region 2. DHCD staff discussed with support organization staff the need to work with local governments toward a local financial commitment; since application submission, they have identified \$10,000 of their existing match that originated from Roanoke City and Roanoke County.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	WAIVER REQUEST
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

TALENT & CREDENTIALING

Stopping the Brain Drain Strategy Development

Region: 2

Strategy: Talent Development and Credentialing

Type of Project: Enhanced Capacity Building

Sub-grantee(s): Roanoke Regional Partnership, Lynchburg Regional Business Alliance, and Onward New River Valley

Project Description: This enhanced capacity building project will create a talent attraction and retention plan in order to help reduce the outmigration of recent graduates from the region's 25 colleges and universities. GO Virginia funds will be used to identify the regions challenges through surveys, focus groups, and interviews, to produce an action plan for recruiting and retaining talent, and to establish a new Talent Action Coalition to implement talent-focused programming.

Type of Funds	Totals
GO Virginia	\$ 65,300.00
Matching Funds	\$ 65,800.00
Total Project Budget	\$ 131,100.00
Type of Match	Totals
Matching Funds	\$ 65,800.00
At least \$1:1	YES
Local Match	\$ -
At least \$50,000	NO
At least 20% of GO VA Request	NO
Local Match Waiver Requested?	YES

Outcomes:

- Survey, Interview, and Focus Group Research
- Establishment of the Talent Action Coalition
- Talent Recruitment and Retention Action Plan

Stopping the Brain Drain Strategy Development

Metrics: **The proposed project is an enhanced capacity building project and therefore the metrics below may reflect long-term metrics associated with later phases involving project implementation.*

- Number of businesses participating in the Talent Action Coalition
- Number of businesses contacted
- Number of interviews conducted
- Number of surveys completed
- Increase in college students retained in the region
- Increase in net regional migration
- Number of jobs retained and/or attracted for partner businesses

Workgroup Discussion:

There was consensus in the workgroup that this project would address a key regional issue of talent and graduate retention. This project closely aligns with the Region 2 Talent Collaborative and would help to inform the implementation of the outreach campaign and new training programs featured in that proposal. Workgroup feedback included:

- Local match less than \$50,000
- Ensure connectivity of target industries between the Region 2 talent projects
- Focus on an in-depth industry phase to ensure success of plan

Staff Recommendations:

DHCD staff recommend this application for approval conditional upon merging with the “Region 2 Talent Collaborative” project, with contract execution contingent upon receipt of local commitment. Region 2 requested the waiver of local match as the project would impact the full geographic area of Region 2. DHCD staff discussed with support organization staff the need to work with local governments toward a local financial commitment however, none has been secured.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	WAIVER REQUEST
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

INFRASTRUCTURE

Flexible Office Space Due Diligence

Region: 6

Strategy: Joint Site Development

Type of Project: Enhanced Capacity Building

Sub-grantee(s): Westmoreland County

Project Description: This enhanced capacity building project initiates the development of a 20,000 square foot flexible office building in the Town of Montross. The new facility will be one of the only office spaces of its size and quality in the Northern Neck according to VEDP, which fielded six prospect inquiries for this type of space in the last 12 months for which no appropriate space was available. GO Virginia funds will be utilized for due diligence activities including a Phase 1 Environmental Site Assessment, Threatened and Endangered Species Review, Archeological and Architectural Review, geographic and topographic surveys, and schematic site and building designs. Westmoreland County and the Town of Montross provided the local match for this project.

Type of Funds	Totals
GO Virginia	\$ 50,000.00
Matching Funds	\$ 50,000.00
Total Project Budget	\$ 100,000.00
Type of Match	Totals
Matching Funds	\$ 50,000.00
At least \$1:1	YES
Local Match	\$ 50,000.00
At least \$50,000	YES
At least 20% of GO VA Request	YES
Local Match Waiver Requested?	NO

Outcomes:

- Phase 1 Environmental Site Assessment
- Threatened and Endangered Species Review
- Archeological and Architectural Review
- Waters of the US Delineation and Preliminary Jurisdictional Determination
- Geotechnical Borings and Report
- Topographic Survey

Flexible Office Space Due Diligence

Outcomes Continued:

- Boundary Survey
- Schematic Site Design
- Schematic Building Design

Metrics **The proposed project is an enhanced capacity building project and therefore the metrics below may reflect long-term metrics associated with later phases involving project implementation.*

- Number of jobs created at the Flex Office Space
- Number of jobs created (in target industries)
- Number of businesses (in target industries) attracted to the Flex Office Space
- Leveraged Private Investment
- Leveraged Public Investment
- ROI of 300% (\$160,892) calculated assuming the creation of 40 new jobs in five years, taking into account both state income and sales taxes

Workgroup Discussion:

There was consensus from the workgroup that the project would address an identified need for business ready office spaces, and that expanding the inventory of available space would help the region attract businesses that currently have no alternative options. Workgroup feedback included:

- No comparable properties are currently available on the Northern Neck through VEDP
- Potential to attract contract work from D.C. due to proximity to the Dahlgren Naval Surface Warfare Center
- Small request of GO Virginia funds

Staff Recommendations:

DHCD staff recommend this application for approval.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	YES
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES

INFRASTRUCTURE

PamunkeyNet Business Plan

Region: 6

Strategy: Joint Infrastructure Development

Type of Project: Enhanced Capacity Building

Sub-grantee(s): Middle Peninsula Alliance (MPA)

Project Description: This enhanced capacity building project assists with the design and implementation of a sustainable business model for high-speed broadband delivery to underserved areas of Region 6. GO Virginia funds will be utilized for the development of a business plan and the creation of a new legal enterprise owned by the Pamunkey Tribe, which will serve as a conduit to currently untapped federal resources for broadband development. State broadband resources previously deployed in the region resulted in broadband infrastructure plans, but a business plan is still vital to the region’s ability to seek any available resources for broadband implementation. The City of Fredericksburg, the Counties of Caroline, Essex, Gloucester, King George, King Williams, Matthews, Middlesex, and Stafford, and the Towns of Tappahannock and West Point provided the local match for this project, along with the Middle Peninsula Alliance on behalf of the above stated localities.

Type of Funds	Totals
GO Virginia	\$ 50,000.00
Matching Funds	\$ 83,000.00
Total Project Budget	\$ 133,000.00
Type of Match	Totals
Matching Funds	\$ 83,000.00
At least \$1:1	YES
Local Match	\$ 50,098.03
At least \$50,000	YES
At least 20% of GO VA Request	YES
Local Match Waiver Requested?	NO

Outcomes:

- Formation of the PamunkeyNet Advisory Team
- Creation of a new legal entity registered as an Eligible Telecommunications Carrier (ETC)
- PamunkeyNet Business Plan and Operational System Model
- Agreements with public and private partners
- Development of the RiverTech Fiber Corridor
- Middle Peninsula Telework Center Business Plan

PamunkeyNet Business Plan

Metrics **The proposed project is an enhanced capacity building project and therefore the metrics below may reflect long-term metrics associated with later phases involving project implementation.*

- Number of jobs created in IT or Business and Professional Services
- Number of businesses (in target industries) attracted
- Number of businesses (in target industries) retained
- Leveraged Private Investment
- Leveraged Public Investment
- ROI of \$585,120 calculated assuming the creation of 20 IT jobs and 20 business and professional service jobs in three years following the implementation of the broadband infrastructure, taking into account both state income and sales taxes

Workgroup Discussion:

There was consensus from the workgroup that this unique project could leverage currently untapped federal resources for broadband, which is a regional and state priority. Workgroup feedback included:

- Business plan is necessary to position the region to implement any future broadband policy directives passed by the General Assembly and should be considered by the full Go Virginia Board even though regions were asked to wait until after the General Assembly to submit broadband applications
- Major provider signing on as partner: MetroCast
- Present linkage between business plan and job creation/business attraction outcomes
- Business plan should address the minimum requirements to access federal dollars
- Strong local partnership between 11 localities

Staff Recommendations:

DHCD staff recommend this application for approval.

Requirements	
\$1:1 Requirement	YES
Local Match Requirement	YES
Local Participation Requirement	YES
Alignment with G&D Plan	YES
High-Wage Job Creation Potential	YES
Grant Management Capacity	YES



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Erik C. Johnston
Director

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

Memorandum

To: GO Virginia Board members

Copy: GO Virginia Regional Councils
GO Virginia Support Organizations

From: Erik C. Johnston, DHCD Director 

Subject: Recommendation for Simplified Administrative Approval Process for Grants under \$100,000 from Regional Per Capita Grant Allocations

Date: February 1, 2018

The second round of applications for GO Virginia regional per capita funds were submitted on January 11th; and since that time DHCD staff, subject matter experts, and Board members met to review and discuss the applications received.

All 13 of the applications have merit, align with their respective regional growth and diversification plans, and were supported by their Regional Council. A summary of each project, along with the findings outlined during the review process, will be shared with all Board members ahead of the Board’s February 12 meeting.

Six of the applications submitted were for “Enhanced Capacity Building” which is defined in the Board approved scoring guidelines as projects where applicants seek funds to validate the prioritized needs and opportunities from their Growth and Diversification plans prior to seeking funds for full project development. These projects will serve to develop platforms to support various collaborative approaches, increase efficiency, provide a deeper and consistent level of support, assess and reduce risk, and provide more focus about how broad concepts outlined in the plans become actual programs.

During the working group discussions for this most recent application round, four of the six enhanced capacity building grant requests were deemed to have merit but have deliverables

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focused on initial planning. These planning deliverables were sought to ensure the regions can work toward projects that validate their ideas and lead to projects that have direct job outcomes.

Because such requests are vital to project development and likely to be only for small amounts, staff recommends the Board adopt a policy at the February 12 Board meeting that allows these projects to move forward through a streamlined administrative process. I have discussed this concept with the Board chair and vice chair, and they support consideration of this policy change.

With regard to the process for adoption of this policy change, it is our recommendation that all 13 submitted projects come before the Board on February 12 under the current project approval process. Following consideration of the 13 projects, I would then recommend the Board adopt this proposed policy for future projects from regional councils seeking funds for such planning activities. If adopted, the Regional Councils would be able to seek an administrative approval for all Enhanced Capacity Building projects under \$100,000, with a cap of \$250,000 each fiscal year, in future funding rounds.

Proposed Policy on Administrative Approval for Enhanced Capacity Building Grants

The GO Virginia Board approves the following policy to supplement the Regional Per Capita Project Funding Guidelines.

Each Regional Council will have the option to receive administrative approval for up to \$250,000 of its Regional Per Capita grant funds each fiscal year with a limit of \$100,000 per project.

To receive administrative approval, the Regional Council must submit an enhanced capacity building grant application to DHCD with a request for administrative approval. The request must include the project application approved by the Regional Council, a description of why the project is a priority for the Regional Council, and why it aligns with the Region’s Growth and Diversification Plan. The request must also demonstrate at least two participating localities and a 1:1 match. GO Virginia staff at DHCD must receive appropriate documentation and give administrative approval to the project before funding can be committed. DHCD will monitor project outcomes determined during contract negotiations. At each Board meeting, staff will present a summary of all administrative approvals granted during the interim between meetings.

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Memorandum

To: GO Virginia Board members
From: Erik Johnston, DHCD Director *Erik C. Johnston*
Subject: Healthcare Discussion
Date: February 5, 2018

During the December 2017 meeting of the GO Virginia Board the Region 8 “Nursing Opportunities: Talent Development and Credentialing” grant application was discussed. The Board did not fund the application due to several concerns with the project including: using GO Virginia funding for scholarships; investing GO Virginia funds in a non-traded sector; and the concern that the project would pull talent away from other regions that have similar shortages in nursing talent.

The Board discussed under what conditions it would consider funding projects in non-traded sectors and determined it would not fund projects in non-traded sectors, especially when it incentivizes workforce moving from one region in Virginia to another. Future applications in non-traded sectors were asked to demonstrate that the project will create higher paying jobs across the industry sector and were asked to consider other alternatives, such as creating a center of excellence based on the particularized need of the region, so that the respective industry cluster could differentiate itself and provide a platform for sustainable growth going forward.

Following the GO Virginia Board meeting there was a meeting of the Regional Council Chairs and Vice Chairs with the State Board Chair and Vice Chair. During this meeting, there was a discussion of project applications in non-traded sectors and specifically the Region 8 Nursing Opportunities application. Chairman Wynne offered the Chair of the Region 8 Council an opportunity to submit a one-page summary of Region 8’s response to the GO Virginia Board discussion in order to provide the region more guidance on future applications.

Attached to this memo you will find the one-page summary from Region 8 Chairman George Pace. The summary discusses the region’s proposal to address the use of scholarships and discusses the out of state revenue requirement. This memo and one pager are provided to facilitate a discussion by the GO Virginia Board on this topic so that Region 8 has further clarity





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on whether they have addressed the Board's concerns and can resubmit a reworked application for a future funding round.

As a result of Board policy discussions during the December meeting, staff recommend the following considerations for the discussion on GO Virginia funds use in non-traded sectors.

Is a project in a non-traded sector eligible if the applicant can demonstrate: (1) how the project will grow the regional economy by increasing out of state revenues, (2) how the project goes beyond filling a few types of positions in a service related field to increasing the number of higher paying positions across the entire industry cluster, and (3) how the project will not poach talent from other regions.

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Summary Submitted by Region 8 Council Chairman George Pace

Strategic Overview

Region 8 included the Healthcare sector as one of five focus areas in its approved Growth and Diversification Plan for several important reasons:

1. Access to quality healthcare is a core requirement for a vibrant, growing economy.
2. The Healthcare sector in Region 8 includes the 1st, 4th and 8th largest employers in the region, with an annual payroll over \$250 million and an economic multiplier effect in excess of \$1 billion. In addition, the sector invests tens of millions of dollars annually for new facilities, equipment, and technology.
3. The Healthcare sector employs thousands of medical professionals earning well over \$41,000, Region 8's target threshold.
4. The Healthcare sector will be a growth opportunity for Region 8 as the general population increases, but, more importantly, due to the aging baby boomers who will require more medical services.
5. The Healthcare sector in Region 8 derives almost 50% of its revenue from WVA patients and transfer payments from the federal government, via Medicare and Medicaid.

Nursing Tuition Assistance Proposal

1. Sector Partners, including Valley Health System, Sentara RMH, Augusta Health, JMU, EMU, Shenandoah University, Blue Ridge Community College, and the Community Foundation of the Central Blue Ridge, coupled with support from the City of Harrisonburg and Rockingham County, pay 75% of tuition, nursing students pay 25% of tuition, and GO VA matches the Sector Partners' contribution (\$515m) to support curriculum development and equipment needs (e.g. classroom materials and equipment, distance learning curriculum development and simulation laboratories).
2. Graduates would be required to work three years in Region 8
 - Helps address an acute shortage of nurses in Region 8
 - After three years, if graduating nurses decide to relocate elsewhere in the Commonwealth for higher compensation, GOVA's ROI will increase
3. Sustainability
 - Curriculum and equipment will be available for future nursing students
 - Sector Partners are willing to renew their investment assuming the initial program is successful

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General Comments

1. Healthcare sector in Region 8 currently employs 4,900 nurses and is projected to need another 600 nurses over the next five years. In addition, another 700 nurses are expected to retire in this same timeframe.
2. Proposal creates a pathway for students who cannot afford the total cost of nursing tuition, but they still have "skin in the game."
3. Nursing salaries exceed Region 8's threshold target of \$41,000
4. Proposal is all cash with no in kind contributions
5. Positive ROI for GO VA investment
6. Collaborative win, including the private sector, institutions of higher learning, non-profit organizations, and government municipalities

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January 2018



Assessment of Virginia's Research Assets:
**Strategic Directions to Advance
Innovation-Led Growth and High-
Quality Job Creation across the
Commonwealth**

Prepared by: TEconomy Partners, LLC
Prepared for: State Council of Higher Education for Virginia
on behalf of the Virginia Research Investment Committee



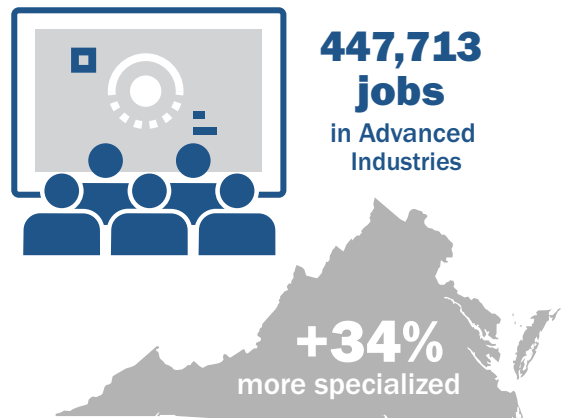
Executive Summary

The economic stakes around innovation-led development are high. It has long been understood that innovation is a key driver of economic growth, high-quality jobs, and rising standards of living—explaining not only the differences in economic growth among nations, but also at the level of state and regional economies. As the 21st century unfolds, the performance bar for innovation-led development is rising with increasing globalization, the fast pace of technological change, and the growing strength of developing nations to compete for innovation-led development. So, no state can afford to become complacent. Past success offers a research and development (R&D) base to drive future growth opportunities; but, without a high-performing innovation ecosystem able to translate that R&D base into new products for existing companies and new start-ups, future success is not guaranteed.

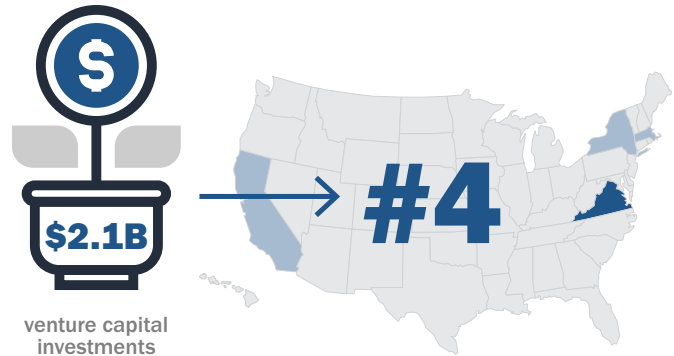
Today, Virginia stands as one of the nation's leading innovation states. A quick snapshot of the most recent annual data available suggests the depth and breadth of Virginia's activities across its innovation ecosystem:

- ***Most important from an economic development perspective is that Virginia has a high concentration of jobs in advanced industries.***

With 447,713 jobs, Virginia is 34 percent more specialized in its concentration of advanced industries than the nation. These advanced industries, including 50 specific industries that range across manufacturing industries to computer and information services to energy industries to bioscience industries to engineering and commercial research services, are characterized by a deep involvement in advancing and deploying with R&D and with an extensive use of STEM (science, technology, engineering, and math) workers. For many, this is the ultimate measure of innovation development—creating jobs in industries innovating and deploying advanced technologies to compete.

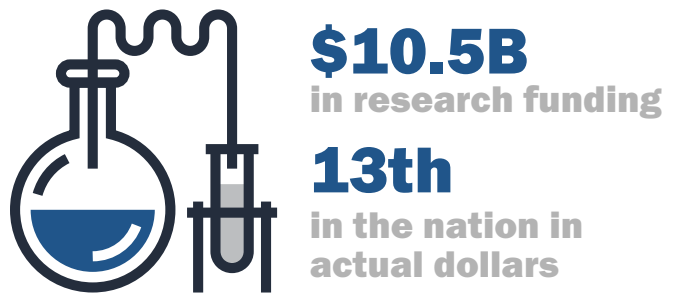


- **Virginia is also a national leader in entrepreneurial energy, with strong levels of venture capital investment and fast-growth companies that are bringing research and innovation to the market.** With \$2.1 billion in venture capital investments made in emerging companies in 2016, Virginia ranks fourth in the nation in venture capital investment per size of the state's economy. Only California, Massachusetts, and New York rank higher.¹



Venture capital investment is a hallmark of technology-based entrepreneurship in a state. Venture capital represents formal equity investment by venture capital firms in emerging technology companies that offer high growth potential to generate sizable returns on that equity investment. Plus, with 270 Virginia-based companies recognized as fast-growth privately held companies on the Inc. Magazine 5000 listing for 2016, Virginia comprises 5.4 percent of all companies, well above the 2.7 percent share of the nation's economy that Virginia represents. The Information Technology Innovation Foundation ranks Virginia first in the nation in fast-growth companies over the past two years as a share of total companies in the state based on Census data.²

- **Supporting this base of advanced industries and entrepreneurial energy is a sizable base of R&D activities in Virginia, led by federal labs and federal funding.** With \$10.5 billion in total research funding in 2015, Virginia ranks 13th in the nation in actual dollars, though slips to 21st after adjusting for the size of the economy.



Virginia, with \$4.6 billion of research funding in 2015 across its multitude of federal intramural labs and federally funded R&D centers, stands four times higher than the national level relative to the size of its economy. This base of federal labs is a key driver of technology development in the state, generating over 700 patent awards and applications from 2014 to mid-2017. This strength in federal lab research also bolsters the state's industry research base. Nearly one-third of the state's industry research funding in 2015 was paid for by federal government research awards and contracts, compared with just short of 8 percent nationally.

Given this extensive base of activity, it is not surprising that Virginia has significant strategic growth opportunities emerging from its innovation-led base of activity (see text box).

¹ See Information Technology Innovation Foundation, 2017 State New Economy Index, for full rankings of venture capital per state gross domestic product, page 50.
² Ibid., page 33.

But, Virginia's innovation ecosystem is underperforming since the current economic recovery began in 2010. A

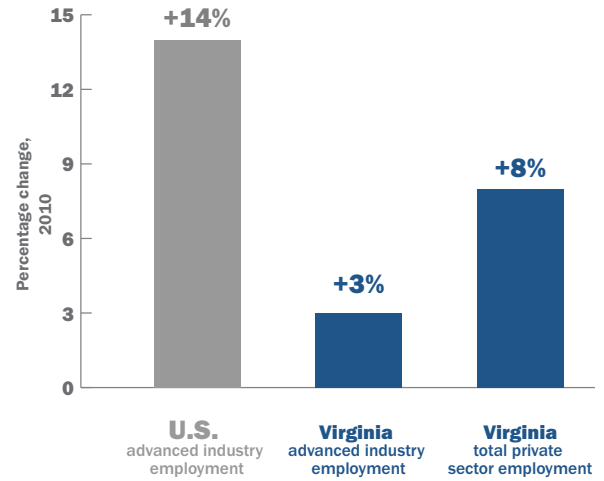
significant divergence between the overall innovation capacity found in Virginia and the trends and dynamics in innovation has emerged. The signs of lagging performance in Virginia's innovation ecosystem are unmistakable:

- **Advanced industry growth is lagging the nation.** While the nation grew by 14 percent in advanced industry employment, Virginia grew a modest 3 percent, which was even well behind the state's growth in total private sector employment of 8 percent (Figure ES-1).

This lagging growth is not centered in one or two advanced industries, but is prevalent across most of the leading advanced industries found in Virginia.

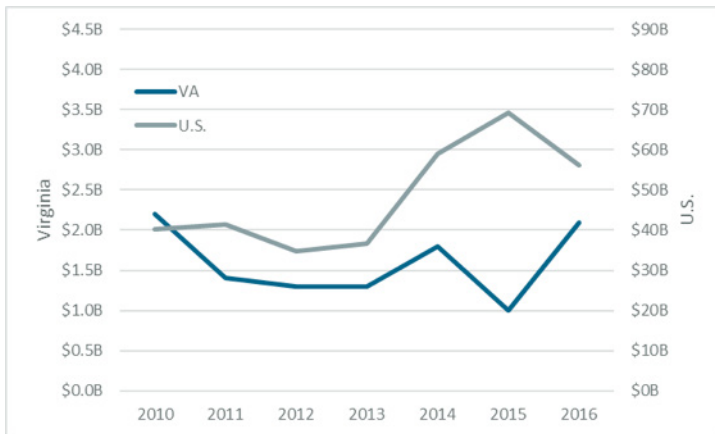
- **Over the 2010 to 2016 period, venture capital has flattened out in Virginia, while rising nationally.** Virginia has been consistently well below the \$2 billion mark, which it hit in 2010 and 2016, while the nation stands well above its 2010 level in recent years (Figure ES-4).

Figure ES-1. Employment Growth Comparisons, U.S. Advanced Industries, Virginia Advanced Industries, and Virginia Total Private Sector Industries, 2010–2016



Source: TEconomy Partners' analysis of U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages data; enhanced file from IMPLAN Group.

Figure ES-4. Trends in Venture Capital Investment, Virginia and the United States, 2010–2016



Source: TEconomy Partners' analysis of Thomson ONE database.

Identification of Strategic Growth Opportunities for Innovation-Led Development in Virginia

To assess what strategic growth opportunities are found in Virginia to lead statewide growth, an extensive and rigorous analysis of industry-led patent innovation networks and research publications clusters was undertaken. This analysis identified 14 innovation platforms where Virginia has a critical mass in its technology expertise, or core competencies, across its industries and research institutions, involving universities, federal labs, and nonprofit organizations, to position the state for future innovation-led growth in targeted markets.

A line-of-sight analysis then considered the depth, excellence, and alignment of innovation platforms across both industry and research institutional core competencies to serve as strategic growth opportunities where Virginia has the know-how and capacity to grow in the future. Figure ES-2 presents the overall approach and the specific metrics used in the line-of-sight assessment.

Consulting with industry leaders and regional technology councils and further deliberating on the mix of potential innovation platforms and their market potentials led to the identification of four strategic growth opportunities that best align research and industry innovation strengths with growing market opportunities for Virginia:

- Cyber and Cyber-Physical Security
- Integrated Networking, Communications, and Data Analytics
- System of Systems (SoSE) Engineering Solutions
- Life Sciences.

These strategic growth opportunities represent cross-cutting, multidisciplinary capacities that set out distinct areas where Virginia has the ability to leverage its collective research and industry innovation assets to drive economic growth and to focus resources and aggregate innovation activity into meaningful initiatives. Figure ES-3 shows the comprehensive way in which the strategic growth opportunities incorporate multiple innovation platforms within the scope of their applications and market opportunities. Detailed profiles and recommended development pathways for each growth opportunity are laid out in the sections below.

Figure ES-2. Line-of-Sight Approach for Identifying Strategic Growth Platforms for Virginia

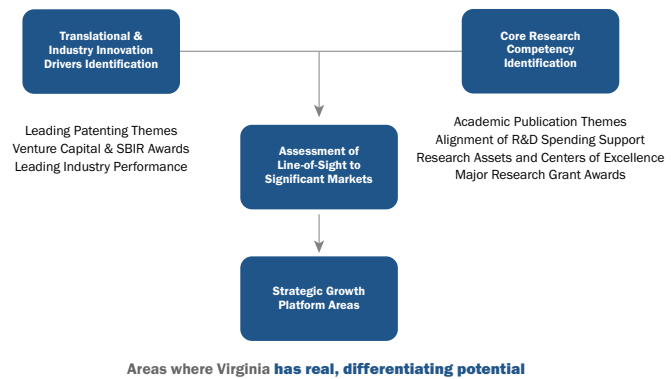
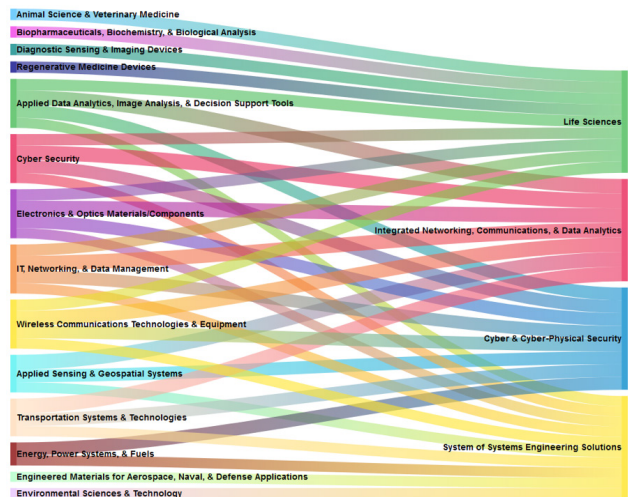


Figure ES-3. Cross-Cutting Relationships between Virginia Innovation Platforms and Virginia Strategic Growth Opportunity Areas



- **Virginia declined in overall research funding from 2010 to 2015, while the nation grew.** In overall research funding, across industry, federal labs, and universities, Virginia fell by 6.3 percent or nearly \$500 million from 2010 to 2015, while nationally total R&D activity rose a healthy 14.5 percent. Virginia was one of only 12 states and the District of Columbia that recorded declines in overall research funding. The other states recording declines in overall research funding, though, were generally small research states, with the notable exceptions of Minnesota and Missouri. Other leading states in overall research funding recorded strong growth, including California (+54 percent), Massachusetts (+42 percent), Michigan (+29 percent), Texas (+57 percent), and Maryland (+33 percent)—meaning Virginia is losing ground to top states.

Looking across the sectors of research activity, the largest decline for Virginia was found in its federal intramural lab (-20 percent) and federally funded R&D centers (-3.7 percent). But, industry R&D in Virginia also declined a significant 3.6 percent, while growing robustly nationally, due to its dependence on federal research funding contracts.

Without a doubt, Virginia's slowdown in innovation activity, impacting not only research but also advanced industry employment, can be traced to declining levels of federal research support in the state. Still, closer review reveals underlying challenges facing Virginia's innovation ecosystem that need to be addressed to unleash Virginia's potential for innovation-led development. The concern is that, even if federal research activity picks up, Virginia will still underperform in its potential growth from translating its research assets into tangible economic growth.

These underlying challenges include the following:

- **Addressing the low levels and lagging growth of industry R&D from own-company sources that focus on developing new products and services.** Overall, the level of industry R&D activity in Virginia is less than half that of the nation relative to the size of its economy. The reason for Virginia's weak level of industry R&D is its significantly lower level of own-funding by companies for R&D. Virginia is just a third of the U.S. level relative to the size of Virginia's economy in the amount its companies directly fund from their own revenues for research. Virginia has \$652,000 of own-source company funding per \$1 billion of gross domestic product, compared with \$2,028,000 nationally.

Virginia's higher federal funding of industry R&D cannot make up for this significant difference since the vast funding nationally for industry R&D is paid for by companies. More importantly, the nature of federal R&D funding is unlike company R&D funding. Federal research funding pays for contract research services to assist federal agencies in their missions, and so does not directly drive new commercial products. Company R&D funding from their own revenues pays for advancing new products and processes that go on to generate new revenues and more competitive companies that then drive job growth.

- **Strengthening university capacities in technology transfer and commercialization, while growing its research base with more team-based, translational research centers.** Virginia's top research universities

are active in university technology transfer, with policies consistent with national best practices and performance generally at or slightly above the national average and showing upward trends. Still, there are substantial opportunities for improvement. A separate assessment of university technology practices sets out 34 recommendations for improving technology transfer and commercialization, with its main areas of focus on advancing translational research and commercialization practices. The types of improvements that can strengthen Virginia's university technology transfer and commercialization include providing more technical and market expertise input into how inventions are assessed before patent decisions are made; undertaking more invention lead prospecting with proven entrepreneurs walking the halls; increasing the access to proof-of-concept projects for de-risking university technologies; creating more streamlined templates and transparency in deal-terms; and better connecting with entrepreneurs, venture investors, and other stakeholders as the commercialization process unfolds and new start-ups are formed.

However, another part of the equation on raising results from technology transfer and commercialization needs to be considered—the size of university research activities in Virginia. Virginia is 25 percent below the national level of university research relative to the size of the economy compared with the nation. In 2015, Virginia's universities generated \$2.9 million in research funding per billion GDP, compared with \$3.8 million for the nation. Virginia universities need to set their sights on being more competitive for federally funded research centers. These federally funded university research centers offer the ability to create the capacities needed for more translational research that is likely to create new IP and engage industry partners, involving team-based, multidisciplinary research able to address solutions, with large-scale shared-use laboratories able to support industry users

- ***Bridging the disconnect between university research and Virginia-based company innovation.*** This assessment of the innovation ecosystem points to the significant gaps in collaboration and engagement between Virginia universities and industry. Industry-sponsored research across Virginia universities at 4.4 percent of total university research funding is well below the national average of 5.8 percent. This lagging level of industry-university research collaborations, though, does not account for the amount of activity taking place with Virginia-based companies. A closer examination raises even greater concerns that the lower levels of industry collaboration with universities overall stem from the lack of close relationships with Virginia industry:
 - In university patents developed with industry funding (a window into who is sponsoring university research), out-of-state companies dominate, with 35 of 40 patents involving companies from out of state.
 - In citations of university patents (a measure of how closely university innovations are linked to follow-on industry innovations), 303 of 327 industry citations of Virginia university patents were by industry inventors located outside of Virginia. Similarly, for Virginia invented patents associated with federal laboratories/agencies, 417 of 466 industry citations were by industry inventors located outside of Virginia.

- In licensing of university patents, out-of-state companies drive licensing activity from Virginia universities, with 108 of 137 licenses issued in fiscal year 2017 going to out-of-state companies.

A challenge for growing strong industry-university partnerships is the geographic mismatch of anchor research institutions, located across the state, and the strong concentration of industry innovation, as measured by patents, in northern Virginia. The implications of having such a diverse geographic footprint suggest that Virginia needs to create statewide linkages to maximize its growth potentials for innovation and incorporate strategic thinking to better geographically connect university activity with industry to realize its growth potential in each area.

- ***Shoring up Virginia's entrepreneurial development system to generate more shots on goal and high-growth companies.*** Discussions with the regional technology councils and industry executives reveal distinct innovation needs within each region of Virginia as well as the need to ensure that each region has the capacity to collaborate with its anchor research institutions in advancing innovation-led development.

For Virginia, there are clear concerns about the ability to generate early-stage, high-growth companies. In terms of trends, the number of companies funded in Virginia receiving formal venture capital has remained relatively flat. For 2010–2016, Virginia had an average of 76 companies, with a high of 87 in 2012 and a low of 70 in 2013. While this is not much different than the pattern nationally, it is disconcerting against the backdrop of lagging growth in venture capital funding. And perhaps Virginia differs from the nation most critically in its low share of venture investment going into early-stage rounds of funding. An examination across the strategic growth opportunities finds that venture capital investment in Virginia is highly concentrated and not finding its way to those regions where the anchor research institutions are based.

Going forward, business as usual will not work for Virginia to address its innovation challenges. A new strategic direction is needed.

Virginia’s underperformance in its innovation ecosystem and the underlying gaps identified suggest that, despite having strengths in R&D core competencies with a line-of-sight to strategic growth opportunities, Virginia has uncertain prospects of realizing that growth. Only by addressing its underlying gaps head-on, with statewide approaches, can Virginia right the ship and regain its course toward innovation-led development.

Addressing the four underlying innovation ecosystem challenges, with a focus around the strategic growth opportunities, offers the Commonwealth of Virginia a comprehensive and reinforcing approach to address its underperforming innovation ecosystem and draws upon best practices in innovation-led development from other states to help in informing and designing effective actions to be taken (Figure ES-5).

The strategy provides a cohesive and comprehensive investment framework for the Virginia Research Investment Fund (VRIF), whose primary mandate is to focus on innovative and collaborative research, development, and commercialization projects and programs with a high potential for economic development and job creation opportunities. However, the challenges presented by Virginia’s innovation ecosystem expand beyond the mandate of VRIF. Therefore, to ensure success, the strategy also seeks to inform broader state efforts to advance innovation-led development.

Specific actions have been identified and designed for the use of VRIF in four strategic areas:

- **Strategy One:** Pursue the strategic growth opportunities through public-private collaborations in advancing translational research capacities.
- **Strategy Two:** Strength university technology transfer and commercialization capacity.
- **Strategy Three:** Bridge the disconnect between university research and Virginia-based company innovation.
- **Strategy Four:** Shore up Virginia’s regionally based innovation capacities to generate more start-ups and advance high-growth companies.

Figure ES-5. Summary of Virginia’s Situation in Innovation-Led Development

Virginia has a sizable base of innovation-led assets	But Virginia has not been performing well in innovation-led development through the recent period of economic growth	Business as usual will not work. Virginia needs a new way forward in innovation-led development.
<p>\$10.5 billion in total research funding in 2015</p> <p>3,354 patents awarded to Virginia inventors in 2016</p> <p>\$2.1 billion in venture capital expenditures for emerging companies in 2016</p> <p>447,713 jobs in advanced industries in 2016 – 34% more specialized than the nation</p>	<p>Total R&D funding lower in 2015 than 2010 – Virginia declined by 6.3% while U.S. grew by more than 17%</p> <p>Venture capital growth not keeping pace and lower share of seed and early stage capital investments</p> <p>Advanced industry growth well off the national pace, including for nearly all of Virginia’s 13 major advanced industries</p>	<p>Better position Virginia industry for commercial product –led innovation in strategic growth opportunity areas</p> <p>Strengthen university translational research and development capacity</p> <p>Bridge the disconnect between university research and Virginia-based company innovation</p> <p>Shore up Virginia’s regionally-based innovation capacities to generate more start-ups and advance high-growth companies</p>

The strategic directions in this report set out a number of specific baseline actions consistent with the current funding levels for VRIF. The 2018–2019 biennial budget recently proposed by Governor Terry McAuliffe sets an annual budget of \$8 million for VRIF.

These baseline actions cover the first three strategic areas set out above involving advancing translational research capacities in the strategic growth opportunity areas in concert with industry engagement, strengthening university technology transfer and commercialization capacity, and bridging the disconnect between university research and Virginia-based company innovation. The fourth area of activity focused on shoring up regional entrepreneurial and innovation ecosystems is beyond the reach of VRIF's baseline funding, but it is a critical complement to the ability of Virginia's regions to leverage the growth potential from their anchor research institutions.

These baseline actions also include ways, when appropriate, to better coordinate with ongoing innovation activities that Virginia supports, including the Virginia Biosciences Health Research Corporation, Commonwealth Health Research Board, and the Center for Innovative Technology. Together, these three programs provide approximately \$9 million to \$10 million across a broader range of activities than envisioned for the baseline actions for VRIF, including basic research, entrepreneurial company development/investment, and technology commercialization. What distinguishes VRIF from these other ongoing, though undersized, innovation efforts are its focus on the following:

- Raising university translational research and commercialization capacities, connecting it more systematically with market-driven processes and focusing it on value creation for economic development in the Commonwealth.
- Comprehensively bridging the disconnect between industry and university research collaborations across translational research, applied research, and technology transfer and commercialization.

Still, in setting out the specific actions for VRIF, it is evident that fully addressing the strategic needs goes beyond its current and proposed funding levels. The \$8 million recently proposed by Governor McAuliffe in the 2018–2019 biennial budget is significant in terms of Virginia's overall investment in innovation programs; however, even adding together the other ongoing innovation efforts in Virginia, the level of funding available is significantly less than in other leading innovation states, such as Massachusetts, Maryland, Pennsylvania, Colorado, and Texas.

To more fully meet the challenges facing Virginia, an enhanced set of actions are also set out as part of the strategic directions for this research asset assessment study for the Commonwealth to consider. These enhanced actions far outstrip the resources available to the Virginia Research Investment Committee (VRIC) by creating the organizational capacity to take on a greater scale of activities and involve broader public-private partnership efforts.

Table ES-1 provides a summary of the recommended action plan to address the strategic priorities set out, including baseline actions for VRIC to consider and enhanced actions for the Commonwealth's leadership and key stakeholders to consider.

Table ES-1. Recommended Action Plan: Baseline Actions for VRIC to Consider and Enhanced Actions for the Commonwealth to Consider

Strategy One: Pursue the strategic growth opportunities through public-private collaborations in advancing translational research capacities

Baseline Action for VRIC to Consider	Enhanced Action for the Commonwealth to Consider
<p>Baseline Action 1: Establish a competitive translational research project fund involving industry and university partners in strategic growth opportunities</p>	<p>Enhanced Action 1: Support the formation and sustainment of industry-led statewide translational research centers in each of the strategic growth opportunity areas</p>
<p>Baseline Action 2: Raise Virginia's competitiveness to pursue major federal research center awards to multi-university, multi-industry collaborations through planning, program coordination, and outreach grants and offering matching state funds for facility and equipment costs</p>	

Strategy Two: Strengthen University Technology Transfer and Commercialization Capacity

Baseline Action for VRIC to Consider	Enhanced Action for the Commonwealth to Consider
<p>Baseline Action 3: Seek legislation that clarifies state policy on goals of university technology transfer and commercialization and set out clear metrics for measuring value creation</p>	<p>Enhanced Action 2: Create a dedicated statewide Virginia research commercialization and new ventures development organization to advance promising university and federal lab technologies</p>
<p>Baseline Action 4: Advance a new multi-university and federal lab consortium with industry mentors to target proof-of-concept funding in the strategic growth opportunity areas, learning from the Virginia Innovation Partnership pilot</p>	
<p>Baseline Action 5: Provide programmatic funding to advance collaborative university approaches in technology transfer and commercialization</p>	

Strategy Three: Bridge the disconnect between university research and Virginia-based company innovation

Baseline Action for VRIC to Consider	Enhanced Action for the Commonwealth to Consider
<p>Baseline Action 6: Support an industry R&D portal across Virginia research universities in strategic growth opportunity areas to tap university shared-use laboratories and expertise</p>	<p>Enhanced Action 3: Broaden the dedicated university technology commercialization and new ventures development organization to create a more robust and proactive industry partnerships component</p>
<p>Baseline Action 7: Establish a statewide competitive matching grant program for applied industry-university research projects for small- to mid-sized companies with projects in strategic growth opportunity areas</p>	
<p>Baseline Action 8: Support regional showcases of university innovations in strategic growth opportunity areas</p>	

Strategy Four: Shore up Virginia’s regionally based innovation capacities to generate more start-ups and advance high-growth companies

Baseline Action for VRIC to Consider	Enhanced Action for the Commonwealth to Consider
Baseline funding resources not able to address this strategic need separately from support for statewide development	Enhanced Action 4: Create a network of Virginia Regional Innovation Partnerships

The annual level of activities generated from the baseline actions informed by best practice examples is expected to be significant, including the following:

- Increased industry-university translational and applied research collaborations in the strategic growth opportunity areas, including as follows:
 - 30 to 45 individual Virginia company applied research projects with one or more universities
 - 15 collaborative translational research projects, each involving one or more universities with multiple companies
 - Facilitation of industry engagement and high-touch customer-oriented services through a network of university site miners to work with companies

- Improved university capacity to commercialize their research discoveries, including as follows:
 - 20 proof-of-concept projects with strong industry mentorship leading to 5 to 6 new start-ups annually
 - Streamlined university technology transfer and commercialization practices that place an emphasis on value creation through new start-ups and licensing to Virginia companies
 - Increased capacity through collaborative efforts across universities to share access to market and technical experts and entrepreneurial training.

Beyond the activities generated from putting VRIF’s resources to work, several key outcome-oriented measures are suggested to track the direct contributions of the baseline actions, including the following:

- Industry R&D levels generated
- Licensing of university technologies to Virginia companies
- Milestones reached in licensing of university technologies to Virginia companies
- Number of new start-ups
- Follow-on funding to new start-ups
- Evidence of rising valuations in new start-ups
- New sales growth by existing and start-up companies assisted
- Industry rating on quality of services provided.

For the complete study please use the link below:

<http://www.schev.edu/docs/default-source/VRIC/Asset-Assessment-Study-Reports/full-report---corrected---assessment-of-virginias-research-assets.pdf>

REGION FIVE

Virginia Digital Shipbuilding Program

Old Dominion University's Virginia Modeling, Analysis, and Simulation Center (VMASC)



VIRGINIA INITIATIVE FOR
GROWTH & OPPORTUNITY
IN EACH REGION

Hampton Roads' advanced manufacturing industry leads the way through Industry 4.0; to support continues success a training program must be established locally that will generate a consistent pipeline of talent for local manufacturers to hire. This project will create a regional and statewide program to train approximately 8,500 future workers skilled craftsmen, engineers, designers, and IT professionals to work in the new digital manufacturing environment and will support Hampton Roads' existing advanced manufacturing and shipbuilding clusters. Digital manufacturing theory and skills will be provided to align directly with the high job demand in the advanced manufacturing sector regionally, statewide, and nationally.



Strategy:
Talent Development and Credentialing

Private Industry Partners:
Siemens and Newport News Shipbuilding

100% of region's population impacted

Other Partners: Virginia Ship Repair Association, Thomas Nelson Community College, Norfolk Naval Shipyard, and Purdue University

Participants:



- ✓ Hampton City
- ✓ Newport News City
- ✓ Williamsburg City
- ✓ James City County
- ✓ Isle of Wright County
- ✓ Virginia Beach City

Targeted Clusters:

- Advanced Manufacturing
- Shipbuilding
- Information Technology
- Business Services

Funding Request:

➔ \$647,540



Total Project Budget:

\$ 6,200,000 ←

Project Outcomes:

- ▶ 8,500 Jobs Created in 5 years
- ▶ \$74,000 Average Salary vs. \$46,192 Average Per Capita Income for the Region
- ▶ Return on Investment (ROI): Increase state revenues by \$6,640,805 over 5 years



REGION FIVE

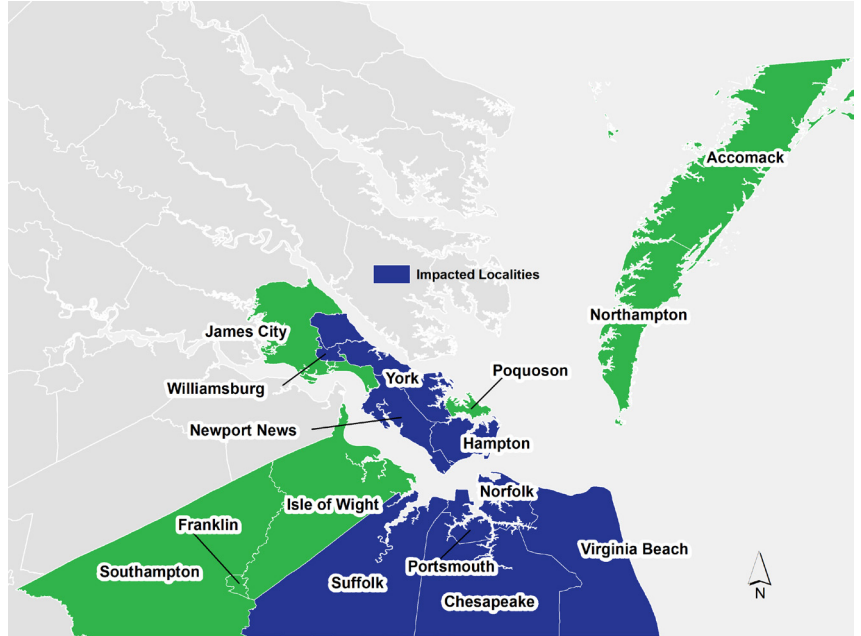
Hampton Roads Cyber Collaboration Laboratory (HRCyber Co-Lab)

Old Dominion University's Virginia Modeling, Analysis, and Simulation Center (VMASC)



VIRGINIA INITIATIVE FOR
GROWTH & OPPORTUNITY
IN EACH REGION

The Hampton Roads Cybersecurity Education, Workforce, and Economic Development Alliance (HRCyber) is a collaborative partnership among educational institutions, government agencies, nonprofits, and private employers. GO Virginia support will formalize HRCyber with an industry-led governing board and extend its scope from educational pathways to include collaboration, workforce development, jobs creation, and innovation. The HRCyber Co-Lab will be a highly advanced collaboration hub at Old Dominion University's Tri-Cities campus. HRCyber and the Virginia Modeling, Analysis, and Simulation Center (VMASC) will anchor a Tri-Cities innovation district in modeling and simulation, data analytics, and cybersecurity; and expand this regional center of innovation to include autonomous and virtual systems.



Strategy: Talent Development and Credentialing	Private Industry Partners: SimIS
89% of region's population impacted	Other Partners: The Virginia Space Grant Consortium, Virginia Community College System, NASA and Virginia Center for Innovative Technology

Participants: <ul style="list-style-type: none"> ✓ Suffolk City ✓ Virginia Beach City ✓ Newport News City ✓ Norfolk City ✓ Hampton City ✓ Williamsburg City ✓ Chesapeake City ✓ Portsmouth City ✓ York County 	Targeted Clusters: <ul style="list-style-type: none"> • Cybersecurity • Unmanned Systems • Data Analytics
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Funding Request:
\$642,713



Total Project Budget:
\$ 3,844,996

Project Outcomes:

- ▶ 54 Jobs Created in 5 years
- ▶ \$63,882 Average Salary vs. \$46,192 Average Per Capita Income for the Region
- ▶ Return on Investment (ROI): Increase state revenues by \$9,175,818 over 5 years



REGION SEVEN

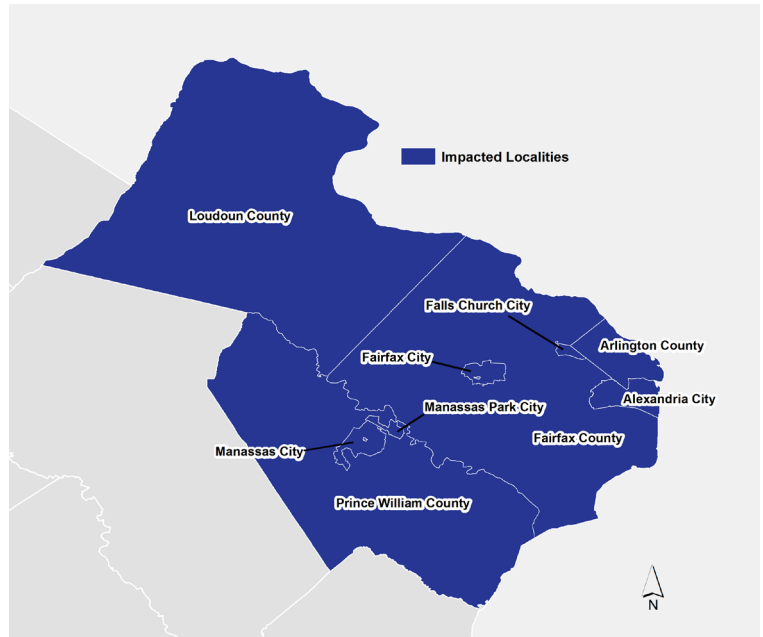
Northern Virginia Fabrication Laboratory (NOVA Fab Lab)

Northern Virginia Community College (NOVA)
Workforce Development Office



VIRGINIA INITIATIVE FOR
GROWTH & OPPORTUNITY
IN EACH REGION

The proposed Fab Lab project will create a state-of-the-art Fabrication Laboratory that NOVA will leverage, through NOVA SySTEMic and their strong relationships with regional K-12 partners, to inspire interest and encourage future generations to pursue careers in engineering technologies. Students will be able to pursue and complete an industry-aligned program of study in Engineering Technology focused on addressing the most pressing needs of industry partners. NOVA has earmarked a nearly 9,000 sq. ft. space on the NOVA-Manassas Campus as the location of the proposed Fab Lab and has begun working through the Fab Lab design and renovation process. NOVA has also begun aligning its Engineering Technology program to the needs of industry; currently Micron Technology and BAE Systems are evaluating a first draft of this curriculum.



Strategy:

Talent Development and Credentialing

Private Industry Partners:

Micron Technology and BAE Systems

100% of region's population impacted

Other Partners: U.S. Army's Night Vision and Electronic Sensors Directorate

Participants:



- ✓ Manassas City
- ✓ Loudoun County
- ✓ Prince Willams County
- ✓ Manassas Park City
- ✓ Fairfax County

Targeted Clusters:

- Engineering Services

Funding Request:

➔ \$250,000



Total Project Budget:

\$1,978,000 ←

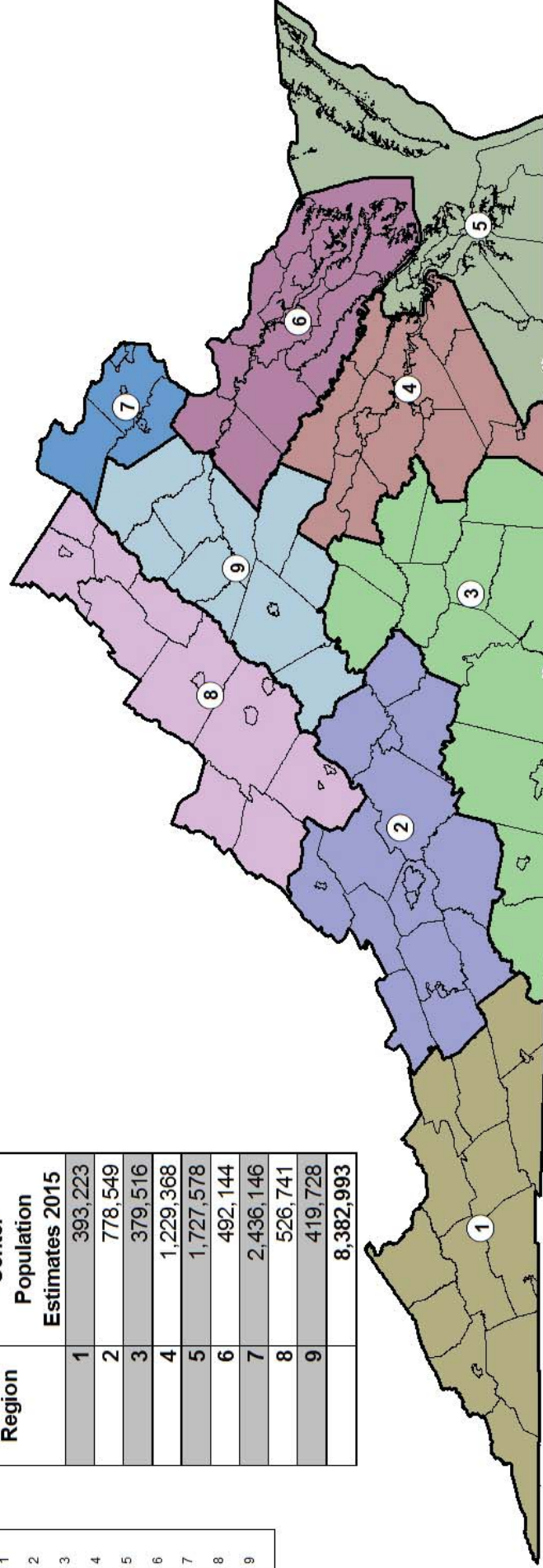
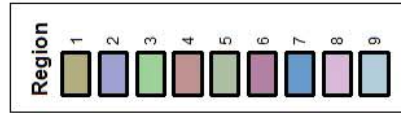
Project Outcomes:

- ▶ 75 Jobs Created in 3 years
- ▶ \$73,750 Average Salary vs. \$70,571 Average Per Capita Income for the Region
- ▶ Return on Investment (ROI): Increase state revenues by \$520,800 over 3 years.



GO Virginia Regional Boundaries

Region	Weldon Cooper Center Population Estimates 2015
1	393,223
2	778,549
3	379,516
4	1,229,368
5	1,727,578
6	492,144
7	2,436,146
8	526,741
9	419,728
	8,382,993



Source: US Census, VA PDC



12/5/2016