

The Virginia i3 Regional Resilience Project

Virginia Tech Center for Economic and Community Engagement
(with Virginia State University, Consortium Partner)

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Introduction and Scope

Virginia Tech’s Center for Economic and Community Engagement (VTCECE), in partnership with Virginia State University (VSU), are working to strengthen regional resilience and innovation across eastern, western, and southern Virginia, while also helping to advance regional anchor institutions. The UC project will leverage public and private investment and resources to enhance the ability of the service regions to be globally competitive, strengthen connections between regions and resources, and advance economic diversification. We will conduct applied research, technical assistance, and dissemination activities to: support Regional Commercialization Strategies (25%) that strengthen innovation clusters; enhance Regional Talent Development (25%), advance Entrepreneurship (25%); and strengthen Regional Resilience (25%).

In each of these four programmatic arenas, our think-and-do model will support regional innovation clusters and economic ecosystem development and resilience by 1.) assisting companies to identify university resources addressing business needs and opportunities, 2.) assisting university faculty in identifying private sector demand for technologies and services, 3.) facilitating and supporting collaboration between companies, university faculty, and regional economic and local economic developers, 4.) conducting applied research and analysis projects, and 5.) designing, implementing, and/or assessing collaborative programs, initiatives, and planning between private, public, and non-profit stakeholders.

Assisting companies to identify university resources addressing business needs and opportunities.

- VTCECE continued work with materials-related private sector companies in the New River Valley and Danville regions (such as MELD, Hollingsworth & Vose, Volvo, and Fastech) to connect them with faculty expertise.
- Virginia Tech Center for Community and Economic Engagement (VT CECE) continued to support Black BRAND (and black and minority-owned businesses across Hampton Roads) with data analytics and technical assistance on a regional data dashboard to better understand the factors that affect the economic and social progress of Black and minority businesses and residents in the area.
- Virginia State University (VSU) is continuing a collaboration with Raytheon around (a) controlled environment agriculture and (b) object recognition by unmanned vehicles.
- VTCECE helped VEDP respond to confidential firm inquiries about university collaboration.
- VSU is partnering with MITRE and MICRON on multiple cybersecurity related projects.
- VSU collaborated with multiple regional companies to help provide interns in engineering and business-related disciplines.

- VTCECE continued work with a private sector data analytics firm and data analytics faculty to explore proof of concept activities around new service delivery models related to public sector/local government clients.

Assisting university faculty in identifying private sector demand for technologies and services

- VTCECE worked to engage faculty in clean energy, mining and mineral engineering, chemical engineering, transportation, and manufacturing systems to hydrogen related projects in Hampton Roads.
- VTCECE continued to support Virginia Tech Fralin Life Sciences Institute in leveraging their established STEM K-12 programming to connect with Hampton Roads based companies and local public-school systems to extend programming reach into new markets.
- VTCECE worked with faculty in crop sciences and aquaculture to explore enhanced programming for Controlled Environment Agriculture.
- Virginia State University, in response to industry needs, worked with the Commonwealth Center for Advanced Manufacturing (CCAM) to launch an innovative course titled “Advanced Manufacturing Processes,” led by two faculty members at VSU. This collaborative effort between CCAM and VSU stems from industry feedback highlighting a significant shortage of skilled Industrial Internet of Things (IIoT) professionals.

Facilitating and supporting collaboration between companies, university faculty, and regional economic and local economic developers

- With the New River Valley Regional Commission, VTCECE helped develop a consortium of public and private sector partners to successfully compete for a strategy development grant of \$450,000 under the EDA’s Tech Hubs program. The project was one of just two Virginia winners among 31 tech hubs and 29 strategy development grant recipients nationwide. The project focuses on growing the advanced materials and additive manufacturing sectors in the New River Valley (Blacksburg MSA) and Danville regions.
 - VTCECE has also worked with the New River Valley Regional Commission to secure additional funding support through the state’s GO Virginia program.
 - We have developed an asset inventory, conducted industry outreach; and are supporting three working groups related to 1.) Lab-to-Market Commercialization & Entrepreneurship; 2.) Business Scale-Up & Technology Adoption; and 3.) Talent Development, Retention, & Attraction.
- VTCECE continues to work with the Virginia Tech Corporate Research Center to help lead a collaboration with private industry and community partners around clean energy. The group secured \$1.6 million in GO Virginia funds to develop a demonstration lab for the production of green hydrogen. Private sector firms and local governments are contributing \$5 million in investments. The Hampton Roads Planning District Commission is a project partner, along with VTTI, City of Newport News, Hampton Roads Alliance, Hampton Roads Transit, Dominion Energy, Virginia Natural Gas, Washington Gas, Ferguson, Cox Communications, and others. VTCECE helped organize and lead project meetings.
- Virginia State University is continuing its active partnership in the Alliance for Building Better Medicine consortium focused on the pharmaceutical manufacturing sector.

- This includes partnership in the Richmond-Petersburg consortium's successful Tech Hubs submission as one of only 31 winning Tech Hubs. Focused on advanced pharmaceuticals manufacturing, the region will *have the opportunity to compete for \$40 million to \$70 million* in implementation funding in the next phase of the Tech Hubs competition.
- VTCECE connected additional Virginia Tech faculty subject matter experts to Hampton Roads 757 Accelerate program cohort members based on industry/sector needs.
- VTCECE provided Black BRAND B-Force Accelerator cohort members connections to Virginia Tech faculty based on specific requests and needs of the cohort.
- VTCECE continues to provide leadership to the Promoting Careers In Aquaculture 2.0 project (Eastern Shore, Hampton Roads, Northern Neck, Middle Peninsula) with Virginia Seafood Agricultural Research Extension Center, Rappahannock Community College, Eastern Shore Community College, Virginia Peninsula Community College. VSU Extension faculty have participated in project meetings and continue to be engaged in the project.
- VTCECE continued to conduct and organize regional familiarization meetings in Hampton Roads with local economic development departments, chambers of commerce, entrepreneurial non-profit support organizations, accelerator programs and angel networks to assist in connecting them with Virginia Tech faculty to support their needs.
- VSU faculty continued work with UVA and the Port of Virginia for transportation research.
- VTCECE continued service on the NRV Regional Commission's CEDS committee.
- VTCECE Director continued service on Onward NRV Board & Goodwill Industries of the Valley Board, serving as a VT point of contact for multiple resource and project inquiries.
- VTCECE has continued working with VERGE Technology Alliance (Roanoke-Blacksburg) by providing grant-writing and organizational development assistance.

Conducting applied research and analysis projects

- VTCECE is providing strategic planning assistance for the Southwest Regional Recreation Authority, that oversees the Spearhead Trail network and activities in Buchanan, Dickenson, Lee, Russell, Scott, Tazewell, Wise counties, and the independent city of Norton.
- VTCECE is continuing work to develop a Controlled Environment Agriculture Hub, to accelerate and support CEA industry growth, in partnership with the Institute for Advanced Learning and Research in Danville.
- VTCECE is conducting a project for the Shenandoah Valley Battlefields Foundation to help understand the impact of local historic battlefields and heritage tourism on their regional footprint. VTCECE will conduct an economic impact analysis for battlefield sites across eight counties with a specific and more detailed focus on New Market, Virginia.
- VTCECE is working with Black BRAND to enhance their monitoring and evaluation capacity in order to guide their B-Force Accelerator (entrepreneurship) program improvement and show how the program contributes to narrowing the Black wealth gap in Hampton Roads.
- VTCECE is conducting an Economic and Community Impact report of the Thomas Jefferson National Accelerator Facility in Newport News, VA.
- VTCECE is continuing a multi-year analysis and evaluation of the existing programs and new activities for the Virginia Seafood AREC in Hampton, VA.

- VTCECE is leading an economic opportunity analysis and community capacity building project in the Alleghany Highlands region of Virginia.
- VTCECE conducted a Childcare Needs Assessment for the Partnership for Prosperity, a project of the Danville Regional Foundation.
- VTCECE is working with the Harvest Foundation to conduct a listening project and strategy development around youth well-being in Martinsville and Henry County.
- VSU is helping the Petersburg Healthy Options Partnerships on a health equity dashboard.
- VSU is working with GENEDGE on a project to build a business calculator.
- VTCECE is continuing work providing labor market information, quarterly data snapshot reports, and on-call data requests on workforce and industry for LWDA I and II in Virginia.

Designing, implementing, and/or assessing collaborative programs, initiatives, and planning between private, public, and non-profit stakeholders

- VTCECE is working with faculty from the Virginia Tech College of Engineering on an Appalachian Regional Commission-ARISE, Industry-led Innovation Engine for Production and Mass Deployment of High-Performance Affordable Buildings Using Industrialized Offsite Construction (Virginia, WV, KY, NC, Ohio, PA, MD, TN).
- VSU completed work with a VSU faculty/student team to develop and implement an iPhone and Android app to serve the Virginia Farmer's Market Associate, a statewide advocacy organization for Farmer's Markets and vendors.
- VSU collaborated with the Virginia Farmers Market Association (VAFMA) to create an internet-based food safety information hub for farmers market managers and producers.
- With the support of the Division of Research and Economic Development, VSU faculty have explored multiple partnership opportunities with the Commonwealth Center for Advanced Manufacturing (CCAM) around the development of technology for controlled environment agriculture and training programs based around the technology.
- VTCECE continues to provide staff support to the Region 2 GO Virginia Council advancing regional economic development in the Lynchburg, Roanoke, and New River Valley regions, and helping administer this state-funded initiative in this part of the state.
- VTCECE also helps lead a Regional Internship Collaborative, in the Region 2 footprint (Lynchburg, Roanoke, and New River Valley areas), a project supported by the State Council of Higher Education in Virginia to better align and enhance internship opportunities between higher education and the private sector.

Progress and Barriers

During the period, we made significant progress on this project. We continue to strengthen our partnership with Virginia State University, including a number of new collaborations. Our projects and work have led to leveraged funding and successful awards from EDA, GO Virginia, ARC, and other sources. We continue to be very involved with convening and assisting collaborative teams to explore and pursue funding for new industry opportunities. Our project-based work is also very active with new projects beginning across the state. At this time, we face no significant barriers to our progress. We do have meetings planned with VSU to discuss enhanced partnership activities and are implementing a work plan to better engage some of the DDs/PDCS that we have not worked as closely with over the project to date.