Virginia Tech’s Center for Economic and Community Engagement, formerly the Office of Economic Development, completed its first full year as a university-level center in 2022. Under its new name, CECE expands the range of issues addressed and increases the returns delivered across Virginia. Part of Virginia Tech’s Outreach and International Affairs, the center works to advance Virginia Tech’s role as a national, state, and university-recognized champion and exemplar for economic and community engagement, applied economic and policy research, and community problem-solving.

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The center aims to boost Virginia Tech’s regional, national, and global impact, which is one of the university’s Beyond Boundaries goals. The center works to elevate the Ut Prosim difference by tackling critical societal needs such as the current economic crisis and post-COVID economic restructuring, long-standing social challenges around diversity and inclusion in the economy, and the looming economic and social impacts of environmental change. The center also brings a uniquely transdisciplinary, high-impact approach to engagement, discovery, and learning, connecting teams of faculty to new opportunities around Virginia. Further, the center builds on the university’s unique position to respond to the state’s challenging urban-rural divide, enhancing connections between and within communities.
CECE’s projects and partnerships were supported by more than $1.3 million in new funding this fiscal year. Combined with last year, the center has secured almost $6 million in new funding to address challenges and opportunities following the ongoing economic and social disruptions experienced since the emergence of COVID-19.
According to the State Council of Higher Education for Virginia, 165,613 undergraduate, graduate, and professional students enrolled at colleges and universities in GO Virginia Region 2 for Fall 2021. Another survey by SCHEV said only 47% of students take advantage of work-based learning opportunities.

Through programs such as GO Virginia and the Regional Internship Collaborative, the center seeks to support work-based learning opportunities for students that prepare them for the workforce and connect them to the region.
Welcoming Quina Weber-Shirk

October 4, 2021

Quina Weber-Shirk will lead the Regional Internship Collaborative, an initiative that aims to connect students and young professionals to work-based learning opportunities in the region.
The region that stretches from the New River Valley to Lynchburg and north to the Alleghany Highlands has more college students per capita than any other part of the commonwealth. But most of those students seek work elsewhere, and the region struggles to fill jobs.

The Center for Economic and Community Engagement is working to slow that exodus with a new program designed to connect students and young professionals to work-based learning opportunities in the region. Work-based learning can include internships, apprenticeships, job shadowing, mentorships, training programs, and career expos.

“Work-based learning is essential for students today, helping to develop more confident and competitive college graduates who are ready for post-college work,” said John Provo, director of the center. “The goal of this program is to raise awareness of the opportunities students have right here in the region.”

Tasked to lead the new Regional Internship Collaborative is Quina Weber-Shirk, who is joining the center from the North Carolina Cooperative Extension, where she was a county extension agent for community and school gardens. For years, Weber-Shirk enjoyed tending to plants and ensuring they thrive. Now, she is helping talent grow and take root here.

“There are incredible initiatives around work-based learning that are happening all around this area, but there is the potential to take these projects even further,” Weber-Shirk said. “This new program will allow us to reach even more students and employers by building stronger partnerships.”

In her early career, Weber-Shirk’s work-based learning experiences guided her. An AmeriCorps teaching position she held for two years after college helped her discover a passion for supporting lifelong learning. “It is important for people to have access to work-based learning opportunities and for them to be compensated, so employees’ time and value are honored,” she said.

The Regional Internship Collaborative will focus on the GO Virginia Region 2 footprint, which covers 13 counties and five cities. The $250,000 project, funded by the State Council of Higher Education for Virginia, will strengthen existing GO Virginia Region 2 projects as well as other work-based learning opportunities in the area.

GO Virginia is a statewide initiative dedicated to creating higher-wage jobs in the commonwealth. The Center for Economic and Community Engagement is the support organization for GO Virginia’s Region 2.

“Work-based learning provides an opportunity to brand our companies and region as a great option after college,” said John Hull, executive director of the Roanoke Regional Partnership and a steering committee member for the Regional Internship Collaborative. “The GO Virginia Region 2 Stopping the Brain Drain project revealed that students on our regional campuses didn’t have a strong perception of professional opportunities in the area. By mixing students and companies, our region has a better chance of keeping students on graduation day.”

The Regional Internship Collaborative team is composed of representatives from across the area — including higher education institutions, economic development organizations, workforce development boards, nonprofit groups, and chambers of commerce. Weber-Shirk will also work with Career and Professional Development at Virginia Tech to pull together career practitioners from other institutions in the region, including Radford University, Central Virginia Community College, the University of Lynchburg, and Sweet Briar College.

“I’m actively seeking input and hoping to learn from people,” Weber-Shirk said, “so I would love to meet with anyone who has insights about developing our work-based learning ecosystem.”

This fall, Weber-Shirk and her team are putting together an inventory of existing work-based learning opportunities. They will then look at how programs could be replicated or expanded in other places in the region.

“I look forward to meeting with others in the region to develop a way to build bridges between students and quality, paid work-based learning experiences that make a significant difference for both the students and the employers,” Weber-Shirk said.

Written by Julia Kell

Welcoming Quina Weber-Shirk 9
During 2021, GO Virginia Region 2 updated their Growth and Diversification Plan. Staff began work on the plan in April 2021, reviewing regional data and identifying the following target industry clusters: transportation and autonomy; materials and machinery manufacturing; life sciences and healthcare; and IT and emerging tech.

The plan focuses on four strategic areas: innovation cluster scale-up; entrepreneurship and business development; talent development, attraction and retention; and collaborative sites and infrastructure development.

Working groups for each strategic area met in-person and online to develop and prioritize strategies. Each working group was led by two council members and facilitated by one staff member.

In October 2021, the draft plan was shared online and through three regional public sessions in Roanoke, Lynchburg, and the New River Valley to gain even more input and feedback from residents, businesses, local governments, and other organizations in the area.

“The Growth and Diversification Plan will guide our allocation of funds for the next two years,” said GO Virginia Region 2 chair Ray Smoot. “We live in a world where change is always amongst us. It’s important that our plan is updated to reflect the current situation.”

“You’re here today to help us write our next chapter,” said GO Virginia Region 2 vice-chair Eddie Amos Growth during the Growth and Diversification Plan kick-off meeting. “Let’s think about where we’ve been, what’s worked, what’s not worked, and what areas we can improve.”

37 GO Virginia Region 2 projects have been approved by the state, which is the highest number of any of the nine regional councils across the commonwealth. This has resulted in about $14 million dollars of investment in the region, from GO Virginia and local sources.

However, even before the effects of the pandemic, the growth in the region lagged behind the state and the nation. The population growth in the last five years has risen by just 1% and jobs in the region have declined by 2.8%.

“We want to hear as much feedback as possible to make sure this plan aligns as well as it can with what people are doing so we can have more great projects in the region,” said Lyon-Hill during one of the regional meetings.

“Since the 2017 Growth and Diversification plan, our region has experienced a lot of changes. We have a labor force shortage due to both an aging population and slow population growth. With this plan, we need to think about what strategies will help us make progress in our region and increase investment in higher than median wage jobs.”

Sara Dunnigan, deputy director of GO Virginia and Economic Development at the Virginia Department of Community Housing and Development, spoke on the innovative partnerships between universities and entrepreneurs that have the potential to form the foundation of future efforts.

“Region 2 is so blessed to have a large number of universities,” Dunnigan said. “The ability to access university or college assets and pull them into this kind of work is significant.”

“We’re off to a great start, but we need to make some adjustments and embrace the circumstances in which we find ourselves to revise our plan,” Smoot said.

Written by Julia Kell
38 total projects funded by GO Virginia Region 2 Council (17 projects completed)

Total funds allocated: $7,659,068

Jobs Committed to Date: 991

External Investment Generated: $7,816,844
This year, the center’s workforce initiatives included addressing the workforce needs of specific regions of Virginia and helping departments at Virginia Tech to develop experiential learning opportunities. The center facilitated community conversations related to workforce and talent development for GO Virginia Region 6, the Fredericksburg, Middle Peninsula, and Northern Neck areas in Virginia, that highlighted the importance of K-12 career preparation and soft skills training.

Senior year capstone or major design experience programs enable students to solve problems for companies while developing the skills they need to succeed in the workplace, and companies gain access to student talent for future recruiting needs. Afroze Mohammed, associate director for strategic alliances, highlights strong collaboration with The Aerospace Corporation and SSAI, two companies with Virginia offices that sponsor major design projects in several disciplines and involve governmental partners like NASA. A strong internal collaboration between CECE and the Virginia Tech Center for Space Science and Engineering Research (Space@VT) further helps to build workforce in aerospace, an important industry in Virginia.
The Mechanical Engineering senior team visits Aerospace labs during their spring break to put their prototype design through environmental testing.

Electrical and Computer Engineering students participate in the Major Design Experience Expo in April 2022.
The Future Workforce of Region 6

September 23, 2021

In a series of discussions with stakeholders from a variety of organizations including business, education, workforce development, and local and state government, staff with the Center for Economic and Community Engagement aimed to identify workforce and talent-specific goals, objectives, and actions to incorporate into GO Virginia Region 6’s Growth and Diversification Plan.

The facilitation was led by Afroze Mohammed, the associate director for Strategic Alliances, Mallory Tuttle, the associate director of the Newport News Center, and Jennifer Morgan, the economic coordinator for the George Washington Regional Commission, GO Virginia Region 6’s support organization.

“We wanted to do this facilitation with Virginia Tech’s Center for Economic and Community Engagement because they are good at looking at things from a policy perspective, and they have strong experience with building programs and assisting communities. As the support organization for GO Virginia’s Region 2, they also have familiarity with the GO Virginia program,” said Morgan.

GO Virginia’s Region 6 includes the George Washington Region, Northern Neck, and the Middle Peninsula localities. The region has a total population of 508,626 and has many high-performing industries including aquaculture, seafood processing, and information technology.

“The region is very diverse in geography and resources, with water-based assets, large military operations, as well as close ties to greater Washington, DC and Hampton Roads. This variation caused stakeholders to consider common challenges across the region as well as unique workforce needs in each area,” noted Mohammed.

The region is also home to a number of higher education institutions including the University of Mary Washington, Germanna Community College, and Rappahannock Community College as well as major employers and facilities such as WestRock and the Virginia Institute of Marine Science.

Participants in the discussions expressed a need for more work-based learning and internships, K-12 career preparation, and soft skills training.

“Those participating in the sessions clearly wanted to make an impact in their localities and had a lot of ideas that could be implemented quickly,” said Tuttle.

Several potential projects ideas were brainstormed during the sessions, including a middle school career exploration that would plan for schools to have a certain number of in-person field trips or video tours of multiple regional employers, as well as a “Dress for Success Day” where students would be able to hone their soft skills through mock interviews and workshops on professional attire and resume writing. Other ideas discussed during the sessions included a high school internship requirement, chamber of commerce-led initiatives, and workforce academies.

Keeping connections between industry and schools strong was also a subject of conversation. Packaging company WestRock, for example, has programs in the school system that let students know about career opportunities, which will help them recruit future employees.

“There is a lot of community spirit in Region 6,” said Mohammed. “They are civic-minded, friendly, and are pulling together for the common good.”

“The meeting brought together people in a meaningful way. It got more people engaged in GO Virginia and made them aware of what the program can do. We want to drive home that it’s not the last time we’re having this conversation and want to keep the momentum going,” said Morgan.

Written by Julia Kell
The Rappahannock River at the Fall Line along the border of Falmouth, Stafford County, Virginia and Fredericksburg.
The center has shaped responses to continuing economic challenges from COVID-19. One of these efforts included a student-led project supported by the U.S. Economic Development Administration. Students developed a toolkit with resources for community leaders in Virginia, and beyond, to help them chart a path toward recovery.

Another award from the US Economic Development Administration (EDA) helped build capacity around Virginia’s Automated-Connected-Electrified (ACE) Vehicle Cluster. The ACE Cluster was a finalist for an additional $75 million award from U.S. EDA and is competing for other national and state grants.
Emphasizing support for small businesses and access to broadband for all communities is key to the commonwealth’s economic recovery, according to graduate students in the Center for Economic and Community Engagement’s 2021 studio class.

During the 2021 spring semester, students in the Urban Affairs and Planning program in the School of Public and International Affairs created a recovery toolbox to help Virginians emerge from the pandemic.

The class, led by director John Provo and associate director for research development Sarah Lyon-Hill, was supported by U.S. Economic Development Administration CARES Act funding and was focused on developing a resource for economic recovery leaders in communities in Virginia, and beyond.

“The coronavirus crisis brings challenges and setbacks, but also new opportunities,” said Associate Director Scott Tate, who revised the toolkit and helped secure the CARES Act funding. “Our hope is this toolkit will give communities a starting point, raise awareness of what resources are available, and help them find what they need to recover from the effects of the pandemic.”

The toolkit draws on a wide variety of information and cases that demonstrate progress in the face of shocks such as natural disasters, economic downturns, and public health crises.

The interactive toolkit includes links to resources and can be viewed online.

Anna Nagorniuk, who earned her Master’s in Urban and Regional Planning and now works as an economic development specialist for the center, said one of her favorite parts of the class was getting to work with people from different backgrounds and hearing their perspectives.

“I learned a lot about groupwork. It’s important to make sure everyone’s voice is heard yet also create a cohesive project. I hope that our toolkit will be helpful to many economic development practitioners,” she said.

A focus of the toolkit is small business support, as the number of open small businesses in Virginia decreased by almost 30% at the peak of the pandemic shutdown, and existing disparities worsened for minority-owned businesses.

“The students worked on solving real-world problems affecting the commonwealth and created a product that will assist Virginians with economic recovery and provide them with a path forward.”

One of the toolkit’s recommendations for community leaders and planners is to take measures to ensure that local small businesses and entrepreneurs are given the opportunity to share their thoughts on current conditions, trends, opportunities, and challenges through thoughtfully designed surveys, interviews, or other outreach methods.

Students also looked at ways that communities can help to close the broadband gap. One case study included in the toolkit is the Equitable Internet Initiative (EII), run by the Detroit Community Technology Project (DCTP), which is an affiliate of the nonprofit, Allied Media.

DCTP works with community organizations including Grace in Action, Church of the Messiah, and North End Woodward Community Coalition (NEWCC), to invite members of the neighborhood to join the Digital Stewards program. Participants in the program take a free training course on computer skills, network installation, hardware installation, and digital literacy. After completing this course, they work with DCTP to set up wireless networks for residents without Internet access.
“DCTP started the Equitable Internet Initiative because 38% of Detroit homes lacked Internet access and 63% of low-income homes had no in-home Internet,” said Nagorniuk. “This project was grassroots-funded and the people involved have made such a difference. They’ve put internet in about a hundred homes in three neighborhoods, free of charge. Also, members of the neighborhood were able to become certifiably skilled in network developing and coding. So, it not only involved some very creative funding but also skills building.”

“The community was very tight knit with strong social bonds, which really helped build momentum. If there is that kind of social capital in Virginia communities, then I definitely think something like this could be replicated,” she said.

Midway through the semester, the students presented their draft project to economic developers in the region to receive suggestions.

“What stuck out to me from the audience’s feedback is some of the answers require systemic changes. However, we shouldn’t get discouraged by that while looking for local solutions,” said Cat Woodson, a Master’s student in the Urban and Regional Planning program. “It’s important also to use university resources and lean on them more than has been done historically, building those university and community partnerships.”

Josh Lewis, executive director at Virginia’s Industrial Advancement Alliance, advised the students to come up with solutions that can serve multiple issues. “Focus on how you can do the most good with the resources that you have and how you can address problems happening in multiple areas,” he said.

“The students worked on solving real-world problems affecting the commonwealth and created a product that will assist Virginians with economic recovery and provide them with a path forward,” Provo said.

Written by Julia Kell
The Center for Economic and Community Engagement led a coalition of over 150 partners across the state to compete for a $75 million dollar grant from the U.S. Economic Development Administration.
Members of the ACE Cluster Coalition stand with U.S. Sen. Tim Kaine at his visit to the Virginia Tech Transportation Institute.
Sen. Tim Kaine visited the Virginia Tech Transportation Institute to learn more about a university-led effort to establish Southwest and Southern Virginia as a global leader in next-generation transportation by creating the most advanced real-world test environments for automated vehicles and delivery technologies.

The university’s proposal, which includes a coalition of more than 150 public, private, and nonprofit partners from across the region, is among 60 finalists out of an initial pool of 529 applications that advanced to Phase 2 of the federal Economic Development Administration’s Regional Challenge. Twenty to 30 of the bids are expected to be awarded implementation funding of up to $100 million each.

“I’m excited so many experts across the region have come together to find innovative solutions to improve transportation and logistics, especially around delivery by autonomous vehicles, electric vehicles, and drones,” Kaine said. “Their work will be path-breaking for Virginia and the nation as we continue to strengthen our economy.”

The proposal is seeking $75 million in federal funds. John Provo, director of the Virginia Tech Center for Economic and Community Engagement, which is leading the coalition, said that investment could generate more than $5 billion in economic impact and 5,000 local jobs.

“This grant would elevate Southwest and Southern Virginia as an emerging global tech hub while also establishing a resilient economy across the region by training the future workforce to adapt to the changing manufacturing environment,” Provo said.

An established EDA University Center, the Center for Economic and Community Engagement is part of Outreach and International Affairs. It provides research and university connections to help organizations and communities identify and tackle challenges in the urban-rural continuum across the commonwealth.

“This project is a prime example of the good that can happen when you convene such a remarkable group of partners from so many different sectors,” said Guru Ghosh, vice president for Outreach and International Affairs. “It also catalyzes the engagement of historically marginalized institutions and economically distressed communities across our region of Virginia in order to equitably develop a diverse and technically ready workforce.”

Dan Sui, senior vice president for research and innovation, said the proposal builds on Virginia Tech’s strengths in autonomous systems, power systems, vehicle dynamics and safety, additive manufacturing, and building materials, as well as wireless connectivity and cyber-physical security, sensing, and data analytics.

“This project brings together diverse expertise that transcends traditional discipline boundaries,” Sui said. “It also demonstrates Virginia Tech’s commitment as a land-grant
university to meet the technology workforce needs of the commonwealth and beyond.”

During his stop, Kaine saw examples of the proposal’s three major components.

The first features an initiative to develop an autonomous-electric testbed along Interstate 81. Zac Doerzaph, executive director of the transportation institute, as well as representatives from Volvo Trucks and Torc Robotics, explained how a segment of connected highways around Blacksburg would be developed as a heavy-vehicle automated driving systems test corridor that extends 40 miles from Dublin to Salem. This would enable new industry partnerships across the region and also address some of the logistics challenges currently impacting the country.

The second component would develop a similar corridor for unmanned aircraft systems. Tombo Jones, director of the Virginia Tech Mid-Atlantic Aviation Partnership, explained how this 130-square-mile testbed would allow drone operators to test and conduct flights beyond an operator’s visual line of sight. Two local companies, Cowden Technologies and NAVOS Air, shared how advancement in this field would support the UAS industry. The project would build on MAAP’s record of leading research and development efforts that transition to commercial operations.

“Our drones are part of a constellation of autonomous technologies that will introduce tremendous efficiencies into the way businesses currently operate,” Jones said. “We’ve seen that firsthand through our work as an FAA-designated test site. As we move toward what the industry calls ‘advanced air mobility,’ where uncrewed aircraft will efficiently and safely transport a wide variety of cargo, those economic benefits will scale dramatically. This grant will help establish the initial infrastructure to move Virginia toward that future.”

The third initiative would create an industry network for training, talent, technology, and entrepreneurial development. Representatives from the Virginia Tech Corporate Research Center, the College of Engineering, Virginia State University, and New River Community College showed how the project would build a critical training and entrepreneur resource facility to fill the void of talent needs for advanced vehicle technologies.

Pamela VandeVord, associate dean of research and innovation in the College of Engineering, offered a high-level overview Thursday of the education and workforce component.

“This region of Virginia is already poised for the technological changes necessary to adapt to global demands. The training and outreach part of this proposal will allow us to build inclusive transformation of the regional cluster through technical assistance and workforce development,” she said.

Brett Malone, president and CEO of the Corporate Research Center, said the CRC would house the Virginia Tech Manufacturing Technologies Training Studio, a hub for training industry workers, promoting job growth within regional companies, and attracting companies to the region.

“We see this as a facility to de-risk technologies, promote faster and cheaper industry adoption, and further support technology-based economic development in the region,” he said.

Written by Rich Mathieson
The center advances the university’s diversity and inclusion goals through partnerships with educational and business groups around the state. The center continues its partnership with Urban Alliance, a nonprofit that organizes paid internships and college readiness assistance to youth from under-resourced backgrounds. Afroze Mohammed initiated this partnership in 2014 and continues to grow its impact in Virginia Tech locations in the greater Washington, D.C., metro area. This year, four interns were placed within Virginia Tech at the Center for Power Electronics Systems and the Thinkabit Lab in Falls Church.

The center collaborated with nonprofit Black BRAND to build a data dashboard that will help to understand the factors that affect the economic and social progress of Black residents in Hampton Roads. The center also conducted a cost-benefit analysis of the AbilityOne program at Melwood, a non-profit that is a major employer of people with disabilities.
After completing the activities, students are encouraged to create their own inventions using supplies on a craft wall in the lab.

Kristian Alleyne, an Urban Alliance intern at Thinkabit Lab, walks students through activities to teach them about coding and circuits.

Jimmy Bastos, an intern at the Virginia Tech Center for Power Electronics Systems, collaborated with fellow intern and classmate Hermon Gebreezgi to develop a water-cooled resistor for electric currents.
Analyzing the Impact of Melwood

February 24, 2022

Melwood employee maintains grounds.
The Center for Economic and Community Engagement is partnering with Virginia Tech's Institute for Policy and Governance to conduct an impact analysis and program assessment of the non-profit Melwood's AbilityOne Program activities. The AbilityOne Program is the United States' largest provider of jobs for people who are blind or have significant disabilities, providing employment opportunities to more than 42,000 individuals.

Melwood began in 1963 as a way to help individuals with disabilities gain job skills and an income. The first participants learned how to cultivate plants through a horticulture rehabilitative therapy program and sold the plants at sites around the Washington D.C. area.

In the 1970s, Melwood purchased a 108-acre property in Nanjemoy, Maryland where individuals with disabilities learned skills in agriculture, farming, landscaping, and horticulture.

Now, Melwood provides employment, career exploration, job training, life skill improvement, supportive and recreational services to more than 2,000 people with disabilities each year in the District of Columbia, Virginia, and Maryland.

“I have personally known about Melwood for many years,” Afroze Mohammed, associate director for strategic alliances at the center said. “My sister, Mini, has Down’s Syndrome. As a lifelong advocate for her and now her legal guardian, I’m interested in organizations that help people with developmental disabilities. Something that’s been an aspiration of mine since I joined the center was finding partnership and project work that would relate to creating better lives and job opportunities for people with developmental disabilities.”

In addition to Mohammed’s background in developmental disabilities, this study leverages Associate Director for Research Development Sarah Lyon-Hill’s expertise in economic impact and cost-benefit analysis. Graduate assistants Hye-jeong Seo and Allison Ulaky are also contributing to the study.

“In conducting research for this project, we’ve delved into the policy of workforce development strategies for individuals with disabilities and how they continue to evolve to support the needs and capacities of these individuals,” said Lara Nagle, the community-based learning projects manager at the Institute for Policy and Governance.

“Melwood and its peers within the AbilityOne program are leading the way in providing comprehensive job support tailored to the individual in integrated work environments. Calls to reform AbilityOne must look honestly at the true cost to engage this population in meaningful employment, consider government-wide savings of programs like AbilityOne, and learn from leaders in the field, like Melwood, how to best support individuals with significant disabilities in their pursuit of employment,” she said.

The center has interviewed other AbilityOne non-profits, including ServiceSource, Didlake, and Goodwill to gain a sense of how the organizations run their programs and what additional benefits they may provide their employees.

“When we do the cost-benefit analysis, we want to include not only the employment opportunities they are providing to people but also the additional benefits, such as intensive support on the job, if needed,” said Mohammed.

The team also interviewed vocational rehabilitation agencies, advocates and critics of the AbilityOne program, and government agencies, particularly those who obtain services under AbilityOne and other procurement programs, to understand their policies on hiring people with disabilities.

“During our interviews with Melwood clients, it has been gratifying to hear how much they value and appreciate the Melwood workforce at their facility. They often relate how dedicated and reliable those with disabilities are and that their work is as good or better than many other service contractors,” said David Moore, senior research faculty at the Virginia Tech Institute for Policy and Governance.

“What inspires me the most about Melwood’s mission is their intense commitment to providing job opportunities for people with disabilities, because I have seen firsthand the importance and the value of having a job for my sister. It makes a big difference in somebody’s life and raises their self-esteem. The fact that Melwood is providing those opportunities is a huge contribution to society,” said Mohammed.

Written by Julia Kell
Collaborating with Black BRAND

June 24, 2022
Virginia Tech computational modeling and data analytics students (from left) Emily Mahr, Zhenming Wang, and Allison Woods spent the spring semester studying three factors that affect economic growth for Black residents in Hampton Roads.
A community’s economic and social growth can be difficult to measure, but for the Black community in Hampton Roads, a collaboration with Virginia Tech students and the Center for Economic and Community Engagement is laying a foundation to make calculating progress easier.

Local nonprofit Black BRAND has been working to increase Black wealth in the region by promoting professional development and community empowerment.

“We decided to take a long-range view to have generational impact, and we came up with an idea of a 150-year plan,” said Blair Durham, the group’s co-founder and president. She said the 150-year plan is a shared vision for a thriving community that focuses on narrowing the wealth gap.

Durham, a 2005 Virginia Tech graduate with a bachelor’s degree in psychology, said although it was popular to support Black businesses on social media through the #BuyingBlack hashtag, the needle was not moving in regard to Black wealth.

“We wanted to gather data and have conversations with subject matter experts to strategize and improve conditions for the Black community. There are systemic and institutional challenges that exist, but there is a lot of resilience and talent in the Black community that can help us take the steps needed to resolve economic issues we currently experience,” Durham said.

She approached Mallory Tuttle, who as associate director of the Virginia Tech Newport News Center promotes partnerships throughout the Hampton Roads region, about a possible collaboration.

Tuttle and her colleague Afroze Mohammed, associate director of strategic alliances for the Center for Economic and Community Engagement, turned to the Data Science for the Public Good Summer Program, which allows undergraduate and graduate students to address current social issues locally and nationally.

The program is offered by the Department of Agricultural and Applied Economics and developed in partnership with Virginia Cooperative Extension and Virginia State University under the leadership of the University of Virginia’s Biocomplexity Institute.

During the summer of 2021, students in the program built a data dashboard that shows “the state of the Black community in the Hampton Roads region” and enables Black BRAND to better understand the factors that affect the economic and social progress of Black residents in the area.

Black BRAND’s long-range plan was adapted from Claud Anderson’s book “PowerNomics,” which identifies five institutions that underlay community development. Black BRAND’s adaptation includes economics, media, people and values, education, and policy and justice. These areas form the basis of the data dashboard.

The team included graduate student Avi Seth and undergraduates Matthew Burkholder, Victor Mukora, and Christina Prisbe as well as Virginia State University undergraduate Kwabe Boateng.

“We wanted to make sure that the information was presented in a visually appealing way that our stakeholders would be able to understand,” said Mukora, who is studying computational modeling and data analytics and is set to graduate in 2023.

“We’re creating a baseline of metrics that Black BRAND will be able to compare their progress to over the next 150 years. The dashboard’s purpose is not to have you look at the state of the Black community and accept it as it is. Its purpose is to encourage and create action.”
Chanit’a Holmes, assistant research professor in the Department of Agricultural and Applied Economics, and Isabel Bradburn, research director for the Child Development Center for Learning and Research, served as faculty advisors for the project.

The students’ work was followed by two collaborations with seniors in the computational modeling and data analytics program in the College of Science’s Academy of Data Science.

Students Emily Mahr, Zhenming Wang, and Allison Woods spent the spring semester studying three factors that affect economic growth for Black residents in Hampton Roads: internet coverage, home ownership, and financial literacy.

“It’s necessary to perform this race-specific analysis when considering how historically Black Americans have been prevented from building wealth. This project enabled us to pinpoint some of the residual effects of that discrimination,” Mahr said.

The students found that redlining in the 1940s — the practice of refusing to offer mortgages in or near minority neighborhoods — continues to affect Black residents in Hampton Roads today, with those neighborhoods still experiencing lower home values. While these neighborhoods saw an increase in the number of high-quality internet providers from 2015-20, the numbers are still lower than those in surrounding regions.

“We’re creating a baseline of metrics that Black BRAND will be able to compare their progress to over the next 150 years. The dashboard will identify action items for Black BRAND as well as for the different organizations that view this dashboard,” Woods said. “The dashboard’s purpose is not to have you look at the state of the Black community and accept it as it is. Its purpose is to encourage and create action.”

The Center for Economic and Community Engagement, part of Outreach and International Affairs, has long had ties with the computational modeling and data analytics major, said Mohammed.

“Since the degree started, the center has been a vital supporter of our program, providing guidance to students, assisting with CMDA Club activities, and making important industry connections to the Aerospace Corporation, General Dynamics, and NTT Data,” Mark Embree, Hamlett Professor of the College of Science, said.

Black BRAND and the Center for Economic and Community Engagement plan to continue work on the project in the fall.

“We will work on aggregating the data that has been collected, present the findings to our legacy council members, and think through how we can implement strategies for a better future,” Durham said. “Over the course of our 150-year plan, we will reconvene every few years to discuss progress and update the data dashboard as we discover new questions and new answers. We view the data dashboard as a living document and plan for this to be an iterative process.”

Written by Julia Kell

Collaborating with Black BRAND
The center serves as a trusted source of research, providing strategic planning and analysis, economic impact and market analysis, feasibility studies and business plans for community and university partners working at the national, state, regional, and local level, helping partners and clients to succeed. Through the Vibrant Virginia program, the center builds connections across urban and rural Virginia. The center’s book *Vibrant Virginia: Engaging the Commonwealth to Expand Economic Vitality*, published in early 2022, examines Virginia’s urban-rural continuum and offers practical guidance for communities striving for a more resilient and prosperous future.
The Center for Economic and Community Engagement developed a five-year strategic plan for Roanoke County’s Economic Development Department, providing recommendations to advance the county’s economy and help them recover post-pandemic.

Center staff completed secondary and primary data collection, conducted focus group sessions and interviews, and distributed surveys to gain an understanding of community needs.

“I love doing the interview portion of any project because it gives me the opportunity to learn about a community from someone else’s eyes and hear their perspective and opinions,” said economic development specialist Ashley Posthumus, who co-led the project with associate director Scott Tate. “Even if you’re familiar with an area, you never really know the ins and outs of everything. We had twelve interviews from a variety of stakeholders. They gave some great feedback and ideas on how Roanoke County can develop in the future.”

Some of Roanoke County’s strengths discussed in the interviews include its outdoor recreation opportunities, such as Explore Park, the Blue Ridge Parkway, and the Appalachian Trail. Roanoke County also has thriving medical and research facilities and a high quality of life with a vibrant downtown, close-knit communities, a strong school system, and low cost of labor and living.

“The CECE team was great to work with throughout Roanoke County’s strategic planning process,” said Jill Loope, the director of Roanoke County’s Department of Economic Development. “Their professionalism and guidance was invaluable in analyzing demographic data, communicating the county’s economic position, facilitating public input and identifying relevant strategies that will help guide the county’s actions and investments to yield future results.”

Roanoke County’s business retention and expansion program has also been a highly praised asset.

“I am grateful for the opportunity I had to support our team and Roanoke County in their efforts to plan and foster future economic progress with intentionality,” said Anna Nagorniuk, project specialist for the center. “Stakeholders throughout the process agreed resoundingly that the county enjoys a high quality of life. It’s great to be able to support the county and Jill Loope in matching those strengths with actionable ways to address changing workforce trends, business needs, and talent retention issues.”

Some of the challenges Roanoke County faces in the future include a lack of large developable property, limited housing stock, and young people leaving the region in search of other opportunities.

“It’s important that the Roanoke County Economic Development Department coordinates with the Roanoke Regional Partnership and higher education institutions to make sure they’re working together to retain talent because that’s what will help boost their population,” said Posthumus.

“One of the strategies in the plan is understanding what young professionals, and just people in general, love about the area, such as the natural amenities. By lifting up those assets in marketing materials they can raise awareness of what the region offers, encouraging people to stay in the region or attracting people outside of the county,” she said.

Roanoke County’s Department of Economic Development will present the strategic plan to their board of supervisors, who will then decide when they would like to adopt the plan.

Written by Julia Kell
**The Vibrant Virginia Book Launch**

*February 16, 2022*

A new book from the Center for Economic and Community Engagement and Virginia Tech Publishing, housed in University Libraries, examines Virginia’s urban-rural continuum and offers practical guidance for communities striving for a more resilient and prosperous future.

“Vibrant Virginia: Engaging the Commonwealth to Expand Economic Vitality” presents a multifaceted glimpse into the many ways that regions across the commonwealth are working to cultivate strong, robust, and inclusive economies and how seemingly dissimilar localities may be experiencing very similar challenges.

“It may seem easier to focus on the chasms that exist in the wonderfully diverse combination of counties, towns, and cities across Virginia, but doing so would mean we miss an opportunity to collectively think about, work on, and create solutions with far-reaching benefits,” co-editors Margaret Cowell and Sarah Lyon-Hill say.

Cowell is associate professor of urban affairs and planning in the School of Public and International Affairs, teaching courses on economic development, community resilience, urban economics, and public policy. Lyon-Hill is associate director for research development at the Center for Economic and Community Engagement, part of Outreach and International Affairs.

The book includes 15 chapters by scholars and practitioners with deep knowledge of the issues affecting the commonwealth today. They explore urgent topics such as expanding K–12 education reform, encouraging entrepreneurial ecosystems, supporting refugees and immigrants, and expanding broadband access.

“Recent elections show that we are living in a highly contested moment. Of course, we have lots of reasons to be concerned about political divisions and also the inequalities that have become so very visible during the pandemic,” Cowell said. “But I also think this moment provides a unique opportunity and the chance to rethink whether these divisions serve us well. What are the ties that bind us and what might be possible if we think more holistically about how Virginians connect and complement one another?”

The book grew from the center’s Vibrant Virginia initiative, a university-level program started in 2017 to help higher
education be a better partner around the commonwealth and promote scholarship across its urban-rural spectrum.

The initiative supports faculty members in conducting projects with community partners in both urban and rural regions, strengthens strategic relationships between the university and regional stakeholders, and develops scholarly products about development policy — a strategic expansion area for the university.

“We see our work as part of the university’s ability to impact positive change in communities everywhere,” said John Provo, director of the Center for Economic and Community Engagement. “What has come into focus with the Vibrant Virginia project is we are uniquely situated to help tackle and identify challenges and solutions in the urban-rural continuum across Virginia.”

Over the course of two years, the Vibrant Virginia team held 15 community conversations and three campus conversations and provided funding for seven seed grants. The book will close out the initiative’s first phase, representing the culmination of Vibrant Virginia’s early efforts.

“Our goal was to curate a collection of writings that would include both practical experiences and scholarly contributions related to Vibrant Virginia; seek to ‘connect the dots’ between learning, discovery, and engagement; advance the important work being done at Virginia Tech and other colleges and universities in Virginia; and celebrate the communities, stakeholders, and government officials with which we regularly collaborate,” Cowell and Lyon-Hill wrote. To ensure the widest possible readership, “Vibrant Virginia” is being published in both digital and print editions. The eBook (PDF and ePub) can be downloaded for free from the Virginia Tech Publishing website. An affordable paperback can be purchased from Amazon.

“It was important that this book be read as widely as possible, so we decided early on that cost would not be a barrier to access,” said Peter Potter, University Libraries’ director of publishing services. “We want to continue the conversations started in those earlier community and campus conversations, in order to make a difference in communities throughout the commonwealth.”

Written by Julia Kell

With authors from across the state and more than 3,000 copies in circulation so far, the book offers practical guidance for communities striving for a more resilient and prosperous future.
A roundtable consisting of Virginia Tech faculty, local business owners along the hemp supply chain, and members of the Virginia Cannabis Control Authority met to discuss challenges and opportunities surrounding cannabis in Virginia.

The roundtable was part of the Vibrant Virginia program, a statewide initiative that focuses on connecting urban and rural, improving collaborations between universities and communities, and creating a Virginia full of economic vitality.

Elli Travis, economic development specialist for the Center for Economic and Community Engagement, facilitated the session.

Participants focused on the importance of testing cannabis products to make sure they are safe for public consumption.

“To address the under-regulation of products, Virginia could require all products to be certified by a limited amount of regulated test labs in the state,” said Sarah Vogl, co-owner of Bear Dance Market, a smoothie café and cannabis store in Christiansburg. “This would keep things safe but would not be overly prohibitive.”

Challenges regarding medical marijuana also affect consumers around the state. The Virginia Board of Pharmacy originally viewed medical marijuana as a remedy that would be used by a small minority. However, the demand for medical marijuana has turned out to be much larger, with over 50,000 patients currently in Virginia.

“It’s clear the medical program in Virginia is not a highly competitive one, and it’s not operating as well as it should,” said Jeremy Preiss, acting head of the Virginia Cannabis Control Authority. “First, we have to assume regulatory oversight, but we’re very
interested in adopting improvements that increase the number of retailers and cultivators participating.”

Medical corporations have set high prices for medical marijuana, making it inaccessible for some of the people who need it most. “Until you have that competition, people aren’t going to get what they need at a price that actually makes sense,” said Vogl.

Roundtable participants also explored the challenges facing industrial hemp. Hemp became legal to grow in 2018, which led to a large amount of people applying for licenses and starting hemp farms. Today, many growers have not been able to stay in business due to lack of consumer demand.

One solution is incentivizing the reduction of plastics, replacing them with hemp.

“The government has promoted clean, sustainable energy by incentivizing people to buy electric cars and install solar panels. Hemp is far more sustainable than the plastics we’re using now. I can see the hemp industry taking off if we incentivize the use of hemp through tax breaks or grants,” said Chris Reese, who co-owns Bear Dance Market with Vogl.

David Rash, owner and operator of Groundworks, a garden center in Christiansburg, said that a lot of the economic impact from the cannabis industry would come from industrial hemp farming, due to the rural nature of Southwest Virginia.

“There is some potential at Virginia Tech for us to do some research into the feasibility of a market for industrial hemp products. The research could look at the industrial hemp value chain to better understand linkages and how to address supply chain challenges,” said Travis.

Written by Julia Kell


Roanoke Valley Television. *Aerial View of Route 419 in Roanoke County*. Digital Image. n.d.