

To the chairs and members of the committees:

Thank you for the opportunity to testify this afternoon.

The road to economic recovery from the Great Recession ran through the middle of America's community colleges, and as we emerge into a new era of net job growth, community colleges are again at the forefront in addressing talent and skills gaps. We are positioned to serve students from lower income, first generation and minority backgrounds. Accordingly, we are uniquely capable of providing a gateway to economic opportunity and careers that must attract a wider population to fill job needs.

An area where these needs are keenly felt is in the field of cybersecurity. Information technology jobs are growing at a rate much faster than most other occupational areas. Faster still is the growth in jobs in cybersecurity, a field growing three times more rapidly than information technology jobs in general.

My name is Scott Ralls and I am President of Northern Virginia Community College, or NOVA as we are known in the region we serve, a region which has the highest concentration of cybersecurity jobs in the United States. In the greater Washington region, cybersecurity job postings have grown 74% since 2014. Our area has more than twice as many overall new job postings than any other area in the country.

Filling this gap and meeting this challenge is an economic opportunity for the students at our college. Last year, our college was ranked in the social mobility research of Stanford economist Raj Chetty, as having one of the highest percentages of students who grew up in the bottom 20% of income brackets as children, but emerged in the top 20% of income earners as adults. We are very fortunate to serve a region that has the economic opportunities to make that possible. We are humbled to be the institution providing the educational ladder to help our students get there.

Taking this challenge on requires more than a one-dimensional program approach. It requires that we pursue a multi-faceted strategy that include:

Scaling – Four years ago we grew a cybersecurity certificate program into a separate, applied associates degree, and have expanded the program from an initial 50 students to nearly 1,500 today. We began as one of the early Certified Academic Excellence programs with the National Security Agency. Today we share our experience with and guide other colleges as one of four national resource centers. Ours is a practical, workforce focused program that emphasizes application, acquisition of certifications, and participation in meaningful competition. To meet the challenges of growth we are hiring new faculty. To overcome the gap between top community college faculty pay and average industry pay, we announced the first-ever endowed chair in the state community college system and are pursuing other opportunities to attract top talent. To meet our capital needs we are leasing, purchasing, and renovating multiple facilities.

We **articulate**, meaning that we seamlessly connect to nine great university partners so students can complete a bachelor's degree. This is important as it is typically a minimum requirement for employment in cybersecurity with federal agencies and contractors. At two of our six campuses, students can complete their bachelor degree on-site including at our new Regional Workforce Center in Woodbridge. This center houses our cyber range and the on-site completion program with George Washington University.

We aggressively **draw** from the rich talent pool of transitioning military and Veterans at our college and within our community. Currently active duty service members and veterans make up 15% of our student body. Four years ago, we partnered with the United States Marine Corps and Marine Corps University to provide concentrated “surge” educational opportunities. We have developed a unique technology boot camp for Veterans called Uncommon Coders and worked with our state legislators to offer our courses at a discount to service members around the globe. We have made it possible for Marines with technology-related military occupational specialties to receive up to 23 credit hours upon entering our cyber program.

We **reach** into high schools, underserved communities, and untapped populations. We have a team called SySTEMic that specifically connects with local schools to provide STEM hands on STEM experiences, including experiential learning in cybersecurity. With a generous grant from Northrup Grumman, we partner with school systems to certify instructors to become NOVA adjunct faculty delivering dual enrollment cybersecurity programs directly in our high schools. We have a unique and mutually beneficial partnership with the nationally recognized workforce development organization, Year Up. Year Up recruits, develops internship opportunities, financially supports and provides supplemental education to underprivileged youth enrolled in our IT and cyber programs. And this year, we have dedicated all of our Federal CTE/Perkins funding to efforts to attract female students into information technology and cybersecurity fields. We recognize that the best opportunity to grow the cybersecurity workforce is to address the underrepresentation of minorities and women in the cyber workforce. Specifically, the cybersecurity workforce is reported to be only 11% female and 12% minority. By launching a new awareness campaign highlighting successful local women in IT and cyber and by providing new summer camps and clearer education pathways we hope to move the needle on retaining more women in the critical needs area.

In addition, we aggressively seek **apprenticeship** and internship opportunities for our cyber students. We create these opportunities through our Year Up collaboration and special partnerships we have made with multiple groups. To help meet the need for cloud security talent, judged to be the most difficult skillset for employers to find today, we recently initiated a partnership with our local Workforce Board, Apprenti, and Amazon Web Services to create Amazon Web Services’ first East Coast apprenticeship program. This consists of a Veterans Associate Cloud Consultant Apprenticeship Program and a new Incumbent Cloud Support Associate Apprentice program to assist fulfillment and data center employees moving into technology opportunities. At its core, this is a program to move current Amazon employees into higher paying positions that Amazon could not otherwise fill.

We **certify**. Recently our state launched *Virginia Fast Forward* Program, the first performance funded workforce certification program in the nation. This enables us to provide education and certifications such as COMPTIA Security+ and Certified Ethical Hacker at only a third of the market cost. This is key to job opportunity in cyber, as Cybersecurity job postings are more likely to require certifications than information technology jobs in general.

Finally, and key to supporting all of our efforts, we aggressively **learn and seek feedback** from the cybersecurity employers in our region. A vital resource for us is the Northern Virginia Technology Council, the largest employer group of its type in the nation. We are honored to be their first academic partner. Last year, we collaborated with NVTC to conduct the Greater Washington Technology Needs

Assessment. This assessment identified cybersecurity skills as the second-most in demand technical skill in our region behind only computer programming skills.

We are taking a multi-faceted strategy to address the cybersecurity workforce challenge in our region. We do so not only because it meets employer needs, but most importantly, it helps our students understand the needs of northern Virginia employers like General Dynamics, Booz Allen and CACI. But to solve this problem requires an even deeper engagement between industry, education and state and federal partners all working toward a common goal of increase awareness, making cyber pathways clear and easy to navigate and providing work-learn opportunities in greater numbers.