Testimony of Steven Partridge

Before the
House Subcommittee of Higher Education and Workforce Development

On
"Closing the Skills Gap: Private Sector Solutions for America's Workforce"

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Chairman Guthrie, ranking member Davis and members of the subcommittee, thank you for the opportunity to testify today on addressing our nation's skills gap.

My name is Steve Partridge, Vice President of Workforce and Economic Development at Northern Virginia Community College. Northern Virginia Community College (NOVA) is the largest public educational institution in Virginia and the second largest community college in the United States, with more than 75,000 students.

The greater Washington region, like much of the nation, is currently facing a dramatic skills shortage, specifically in the fields of information technology (IT) and cybersecurity. If left unaddressed, our region risks losing thousands of high-paying jobs as this skills shortage accelerates.

The Interest Gap
Before I highlight the steps we have taken to address the shortage, let's look at its root cause. In Northern Virginia and the surrounding region, demand for skilled IT and cyber workers continues to outpace supply. In fact, in this year alone, the region will need approximately 20,000 new workers just to keep up with current demand, based on new job growth and replacement demand (BLS, IPEDS).

The latest available data shows the greater Washington region awarded approximately 10,851 degrees and certificates in IT-related fields. This number has doubled over the past five years; however, even with this growth—and assuming every graduate stayed in the greater Washington region upon graduation (and the data suggests only about one-third remain in market)—we would still only be able to fill 53 percent of the available jobs. This leaves employers with few options but to import or "steal" the remaining 47 percent from competitors or other markets.

This tells us that we have a breakdown in the labor market signals conveyed to students, parents, and educators. How do we build a career awareness system that is adaptable and linked to existing resources? How do we visualize pathways into these high-demand careers? Do we offer stackable credentials and prior-learning credit, and ensure classes at community colleges transfer seamlessly to four-year institutions?

There is no doubt that the Washington, D.C. metro region is full of employers seeking skilled and qualified talent. As a region, it is in our best interest to ensure that the pipeline for these jobs is being filled. In order to attract and retain our region's employers and enhance economic growth, we must commit to addressing the skills gap.

Building a Pipeline

Most IT and cybersecurity job openings require some sort of post-secondary credential or degree. As a result, it takes more time for qualified workers to get into the job market, since they often must first earn degrees. And to earn degrees, students can face many roadblocks: lack of career advising, loss of college credit as students transfer between institutions, and a lack of credit for prior learning (for military or experienced professionals).

For many students and career-switchers, the path toward high-demand careers is not always clearly understood. A program to improve this problem is taking shape in northern Virginia under the *Tech Talent Pipeline* initiative. This ambitious effort unites our public school systems, post-secondary institutions, nonprofit and public workforce partners, and economic developers to create a system to triple the number of students pursuing technology-related fields of study, such as cyber security or machine learning, over the next decade.

Building a talent pipeline requires that we align various federal, state, and local programs to ensure we are all working together. The *Tech Talent Pipeline* will increase the number of technology workers—but for it to do so, we must align our local and state metrics and funding to collectively focus efforts and achieve common goals. An example of this new focus is NOVA's use of our federal Perkins funding to increase the number of women that move into IT pathways. Prior to this effort, our annual funding, which is only around $400,000, was split among various college and community initiatives, limiting its impact. Now, by combining our local and state funding, the impact is magnified as entities work together to close our skills gap.

Employer-Centered Design

One of the factors contributing to the skills gap is that students are often focused on theory-based learning in the classroom. Theory-based learning creates challenges for transitioning into the workforce, unless accompanied by hands-on experience. Work-based learning opportunities seek to address this gap by providing hands-on experience for students before they formally enter the workforce. Two local partners of NOVA for work-based learning include:

- **Lockheed Martin** – Lockheed Martin recently announced the Software Development Associate Program (SWAP) designed to attract, develop, and retain early-career professionals who aspire to jumpstart their professional technical careers. The program is shaped in an intensive three-year format. It allows students to begin the security clearance process and provides tuition reimbursement toward a four-year degree. NOVA was designated as one of the first community college partners in the nation for the program. Students who are selected for SWAP gain work experience while earning an education. The purpose of this partnership is to move students into the talent pipeline faster by aligning them with the needs of Lockheed. By gaining

job skills and an educational degree at the same time, students move into the workforce faster and more efficiently.

- **Amazon** – NOVA has partnered with Amazon to pilot a new educational model for individuals, both with and without college degrees, to help them concurrently earn a certification and gain on-the-job experience. Amazon's apprenticeship program focuses specifically on the veteran population, since many veterans possess the skills and cultural fit desired by the company.

  So far, the results of the program are impressive. Approximately 70 students are making their way through classroom or on-the-job activities. The program uses credentials as milestones of success throughout the process, requiring that students pass credentialing exams. The pass rate of the credentialing exams is close to 100 percent. NOVA is the east coast provider for Amazon's apprenticeship instruction and expects the apprenticeship program to continue to scale. NOVA is also exploring implementing this model with other technology partners.

Building Awareness

At the heart of our entire effort is a focus on data. To ensure that the new *Tech Talent Pipeline* is successful, we must have access to good data. Accurate data allows us to understand the job market and align initiatives to the needs of the business community. From a curriculum standpoint, educational institutions can align materials to workforce needs. From a teaching standpoint, accurate data allows instructors to focus on the appropriate skills for their students. And from a career services perspective, quality data helps students pursue and earn jobs based on hiring trends.

Demand is only one side of the equation; the other side is obtaining better information about our region's talent supply. Accurate supply data is difficult to obtain, and one of the major goals of our regional effort is to gain more detailed insight into our most valuable resources: our students.

It is essential that we better understand the interests and skills of our students as they make their way through the pipeline. Access to data will allow our region to pinpoint appropriate opportunities such as job shadowing, internships, or class offerings and match them with the students who would most benefit. It also has the potential to create a seamless process between businesses and students, connecting job seekers with workforce needs.

Conclusion

In conclusion, the Washington, D.C. metro area, like much of the U.S., faces incredible challenges and opportunities in developing our current and future workforces. By implementing the initiatives described above, our region has a powerful path toward its goal of serving as the global epicenter of IT and cyber innovation.