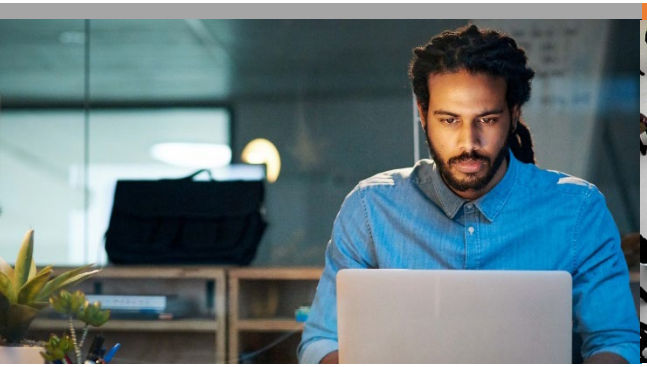
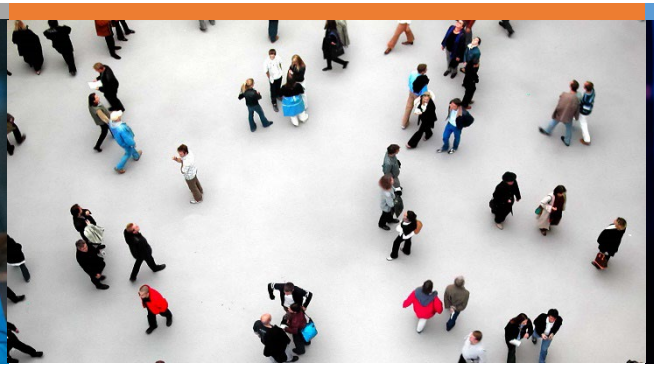
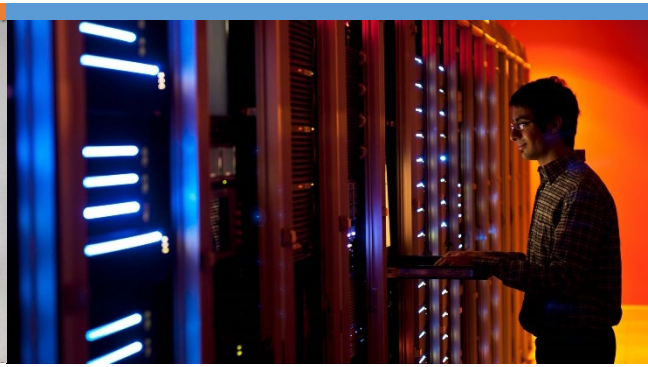
CAPITAL CoLAB

VCU College of Engineering

VCU Office of Continuing and Professional Education

Michael Huffman, Ph.D., Director
Office of Continuing and Professional Education

Digital Tech Talent Needs

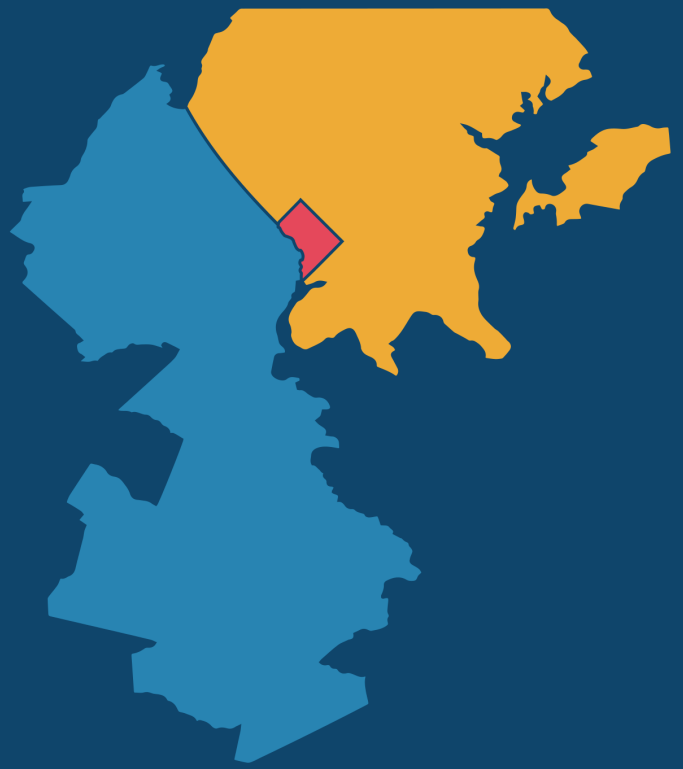
Problem Statement

Despite the Greater Washington region's strengths in education and number of graduates, our region has a substantial number of unfilled digital tech jobs and evidence indicates it takes employers longer to fill them than in comparable regions. The Capital CoLAB emerged out of the need for unique region-wide credentials, recognized by regional businesses as a differentiator in hiring/deploying talent.

VCU

THE CAPITAL REGION FROM BALTIMORE TO RICHMOND

Our region has great diversity, tremendous assets and immense potential.



We've changed the narrative on the region.
We're thinking big about our future.

OUR REGION

The super-region—Maryland, Virginia, and the District—stretching from Baltimore to Richmond has an intertwined economic future.

Our region has the **3rd** largest economy in the United States and the **7th** largest in the Global Economy.

115

federal labs and federally-funded research and development centers

45%

of the population 25 years+ hold Bachelor's degree or higher

184

languages spoken; 175 international embassies

FORTUNE 1000

53

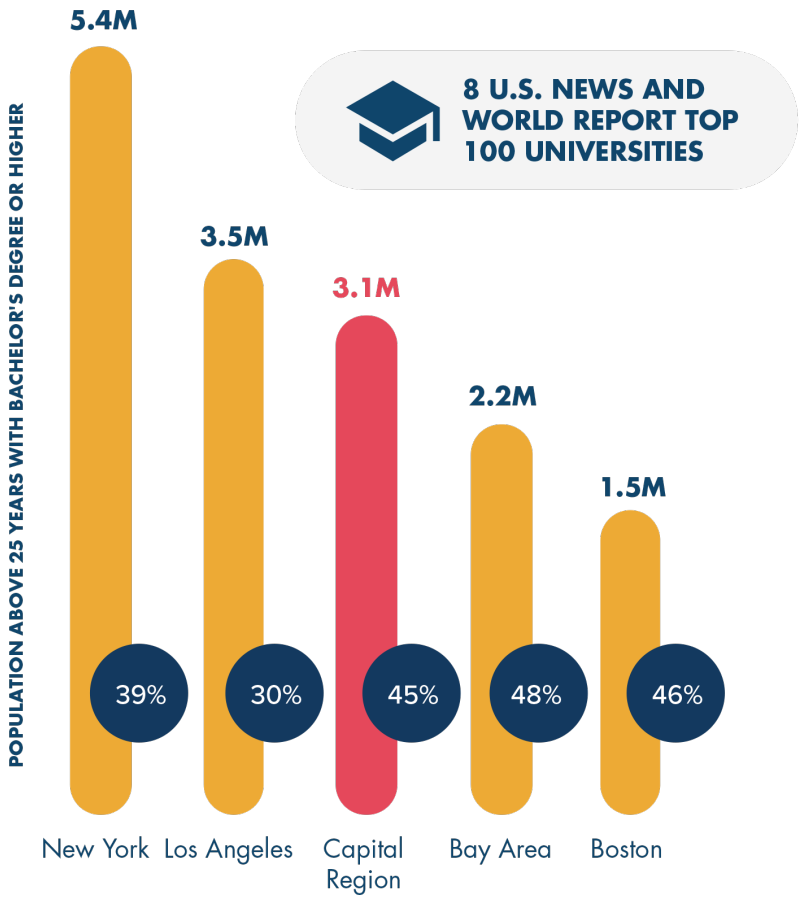
Fortune 1000 companies headquartered in MD, DC, VA

4

significant airports, two major shipping ports

WHILE THE CAPITAL REGION BOASTS ONE OF THE MOST TECH-ORIENTED WORKFORCES IN THE COUNTRY, THERE IS STRONG COMPETITION FOR THE BEST TECH TALENT

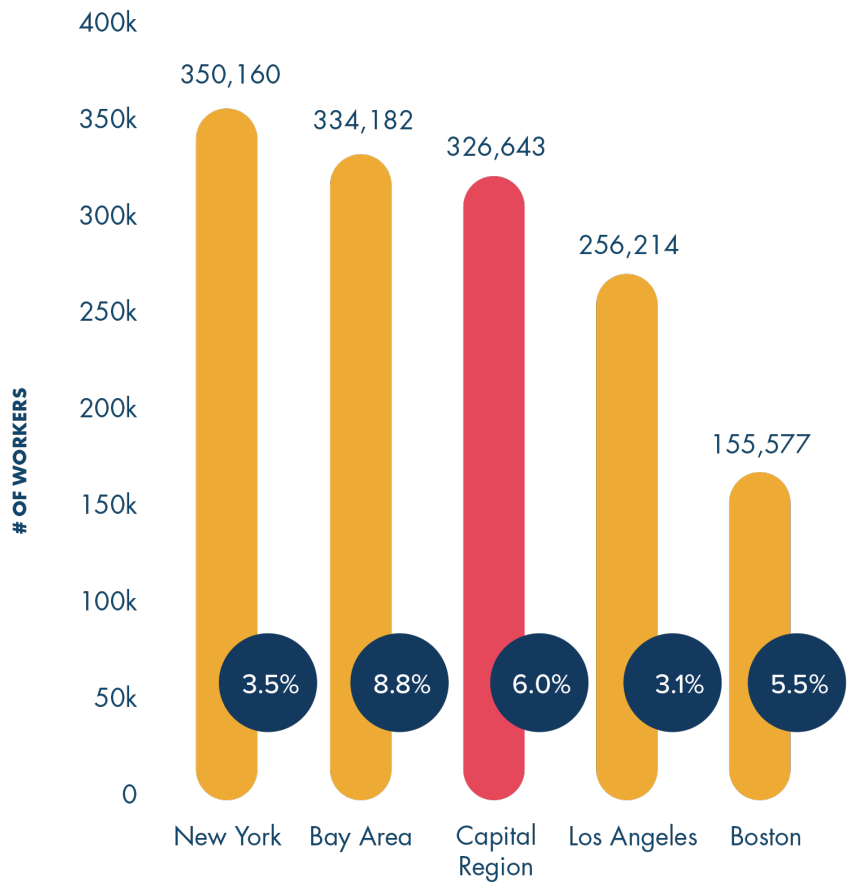
Population Above 25 Years Old With Bachelor's Degree Or Higher



% SHARE OF POPULATION ABOVE 25 YEARS OLD WITH BACHELOR'S DEGREE OR HIGHER

Source: U.S. Census Bureau, Los Angeles includes Riverside MSA, Bay Area includes San Jose MSA

Number of Digital Tech Workers in U.S. Tech Hubs



% SHARE OF TOTAL IN TOP DIGITAL TECH EMPLOYMENT REGIONS

Source: Greater Washington Partnership Analysis of Chmura Analytics JobsEQ (Q2 2019).

CAPITAL COLAB VISION

The Capital CoLAB is an action-oriented partnership of businesses and educators that launches and executes initiatives to develop the talent needed for the jobs of today and tomorrow requiring digital skills to build a future in which…

…learners of all backgrounds have access to the education needed to work in an increasingly digital world

…companies in the Capital Region can find the talent locally needed to compete globally

…educators have access to employer insights and resources

…the Capital Region is the destination for the nation's best and most diverse digital and technology talent.

Program Implementation

- ✓ A task force of major employers representing a cross sector of industries identified common, priority areas of need
- ✓ Major employers confirmed the priorities through a survey
- ✓ Teams of subject matter experts then identified the knowledge, skills, and abilities needed for the generalist and specialist credentials
- ✓ Multiple universities mapped the business-identified competencies against existing curriculum
- ✓ Businesses identified potential ways they would support students and universities to facilitate smooth execution and make the credential a win for all
- ✓ Businesses and universities jointly developed learning outcomes from the initial KSAs

VCU

DIGITAL TECH CREDENTIAL EMPLOYER PARTNERS

The CoLAB employers are the cornerstone feature of the Digital Tech Credential. The Partnership worked with Board member companies to develop a set of Knowledge, Skills, and Abilities (KSAs) that employers would like students to have before they join the workforce.

In exchange, CoLAB employers have agreed to offer a range of benefits to CoLAB students, including:

- **MENTORING/ COACHING**
- **JOB SHADOWING**
- **EXPERIENCE CREDIT**
- **CAPSTONE PROJECTS**
- **RESUME REVIEW**
- **PRIORITY INTERVIEWS FOR INTERNSHIPS AND JOBS**
- **RECEPTIONS WITH SENIOR EXECUTIVES**
- **FINANCIAL INCENTIVES FOR NEW HIRES**

amazon
Capital One
T. Rowe Price
Exelon
ASGN Incorporated
JPMorgan Chase & Co.
McKinsey&Company
Northrop Grumman
Stanley Black&Decker
AstraZeneca
INOVA
EY
MedStar Health
Under Armour
Booz | Allen | Hamilton
General Dynamics
Monumental Sports & Entertainment
Washington Gas

DIGITAL TECH CREDENTIAL UNIVERSITY PARTNERS

The Generalist Digital Credential is earned by undergraduate students pursuing a bachelor's degree outside of technology fields who complete a set of courses teaching them digital literacy skills such as probability and data visualization.

SIX UNIVERSITIES IN THE REGION ARE OFFERING THE "GENERALIST" CREDENTIAL TO STUDENTS THIS FALL WITH MORE IN THE PIPELINE TO LAUNCH IN FUTURE SEMESTERS:

- American University Washington, DC
- University of Maryland
- The George Washington University Washington, DC
- University of Richmond
- George Mason University
- Georgetown University
- University of Virginia
- Howard University
- University System of Maryland
- Johns Hopkins University
- VCU
- UMBC
- Virginia Tech

DIGITAL TECH CREDENTIALING PROGRAMS

GENERALIST CREDENTIAL

SPECIALIST CREDENTIAL (LAUNCHING SPRING 2020)

Data Analysis, Visualization & Security

Cybersecurity

Machine Learning

Data Analytics

Cloud Computing

For undergraduate students pursuing degrees in non-technical fields such as HR, logistics, and finance

Incorporates knowledge, skills, and abilities needed by industry for entry-level positions in a wide variety of occupations

For undergraduate students pursuing 4-year degrees in technical fields such as computer science, statistics, and engineering

Baseline knowledge, skills, and abilities needed by industry for entry-level technical careers

UNIVERSITY COURSES FOR GENERALIST CREDENTIAL

UNIVERSITY	PATHWAY	COURSES	
AMERICAN UNIVERSITY WASHINGTON, DC	Set of classes through the undergraduate business school	ITEC-200	The Edge of Information Technology
		ITEC-320	Business Analytics
		ITEC-466	Cybersecurity Risk Management
		KSB-101	Business Professionalism
		STAT-204	Intro to Business Statistics
		ITEC-210	Data Analysis for Business
		STAT-202	Basic Statistics — one of these two courses
		STAT-203	Basic Statistics with Calculus — one of these two courses
GEORGE MASON UNIVERSITY	Data Analytics Minor	STAT 250	Introduction to Statistics I
		STAT 320	Introduction to Statistics II
		CDS 301	Scientific Information and Data Visualization
		STAT 463	Introduction to Exploratory Data Analysis
		CYSE 101	Introduction to Cyber Security Engineering
		Elective	Quantitative Elective from Data Analytics Minor
VIRGINIA TECH	Data and Decisions Minor	CMDA 2014	Data Matter
		BDS 2005	Fundamentals of Behavioral Decision Science
		BIT 4604	Data Governance, Privacy, and Ethics
		BIT/MGT 4854	Capstone: Analytics in Action
VCU	Fundamentals of Computing Certificate	CMSC 191 C99	Intro to Computing
		CMSC 191 C90	Data Science Skills
		CMSC 191 C92	Cybersecurity Skills
UNIVERSITY OF RICHMOND	A Business Analytics concentration through the Robins School of Business	INFO 201	Data Analysis Software
		INFO 301	Advanced Applied Statistics
		INFO 302	Business Process Optimization
		INFO 303	Machine Learning for the Business Analyst
GEORGETOWN UNIVERSITY	Business & Entrepreneurship Concentration in Bachelors of Arts in Liberal Studies program	BLHV 231-01	Ethical Leadership
		BLHV 232-01	Intro to Business
		BLHS 299	Intro to Marketing
		BLHS 227	Business Statistics
		BLHS 228	Financial Management
		BLHS 229	Principles of Accounting

WHAT ARE THE ADVANTAGES OF HIRING A GENERALIST CREDENTIAL STUDENT?

Students have a liberal arts or other non-tech degree with a digital literacy skillset

Students have competencies in very specific skill areas (outlined in the KSAs), no matter which undergraduate institution they attended

The credential serves as a signal to let your hiring teams know students have this skillset, providing the team with a clear subset of candidates who fit certain skillset requirements

Students coming in with these skills will require less training than other candidates would across these dimensions

CREDENTIAL BADGING SYSTEM

CAPITAL CoLAB
DIGITAL TECH CREDENTIAL

CHALLENGE

CoLAB universities are unable to uniformly mark completion of the Credential learning outcomes. Administrative and programmatic barriers prevent each university from creating a transcriptable mark or award (e.g. minor, certificate, etc.).

SOLUTION

- To uniformly mark completers of the program, the Partnership invested in a digital badge. Each student—no matter which school—will be awarded the same badge. The badge signifies that that student has mastered the learning outcomes of the Credential and will be recognized by CoLAB employers as a value-add in hiring.

- The badge can be posted on resumes and added to popular career sites, such as LinkedIn.

- Additionally, HR leaders can configure ATS systems to flag candidates that apply with a digital badge. This last capability will help the Partnership execute on portions of the business commitments for the Credential program.

Key Takeaways

- ✓Tech talent pipelines are critical for regional workforce and economic development growth
- ✓University/Private sector partnerships will continue to emerge and grow
- ✓Universities need to be nimble and address market driven forces
- ✓University/Private sector partnerships must demonstrate clear benefits to learners and employers
- ✓Badging provides a common recognized digital credential across University/Private sector partners
- ✓A culture of trust must be present in these partnerships


VCU
College of Engineering
VCU
Office of Continuing and
Professional Education
THANK
YOU.
GREATER WASHINGTON
PARTNERSHIP
FROM BALTIMORE TO RICHMOND
FOSTERING UNITY
ADVANCING GROWTH