

Global Internet Hub Strategic Plan

August 16, 2023





Cities around the world have learned that intentional collaboration, not competition, with nearby metro areas drives scale and the economic success of both localities.



One can view the Richmond-Hampton Roads relationship from several perspectives:

Regional Collaborators

Two neighboring regions that are collaborating to help each other thrive and grow in a global economy.

The 12th Megaregion

While relatively smaller than most megaregions, this area meets the common criteria for being a megaregion: a contiguous area with more than one major city center; a large, combined population; and significant output measured by GDP.

An Innovation Corridor

- The I-64 Innovation Corridor that runs from
- Richmond to Hampton Roads along I-64.

Given the rise of innovation corridors in the markets surrounding Richmond and Hampton Roads, RVA757 Connects is most often using the I-64 Innovation Corridor designation.



RVA757

connects

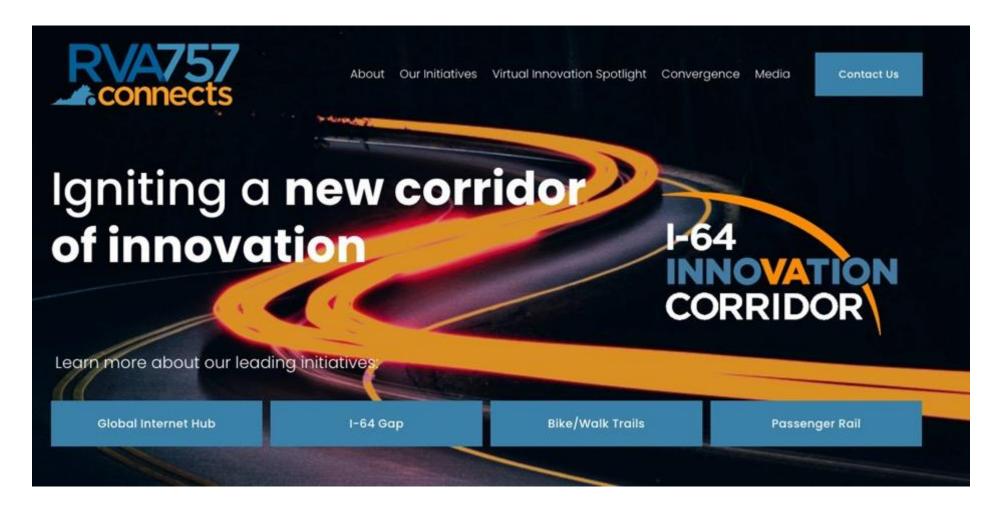
INNOVATION

CORRIDOR

I-64



www.RVA757Connects.com





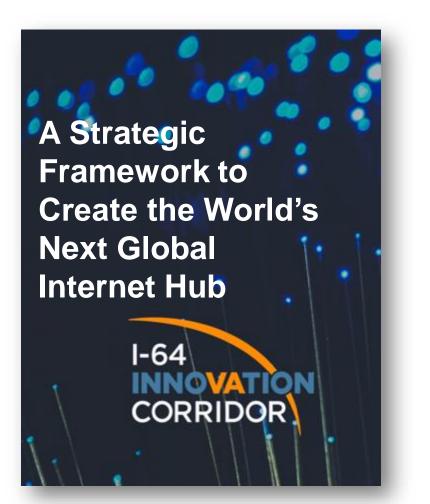
RVA757 Connects' Priorities

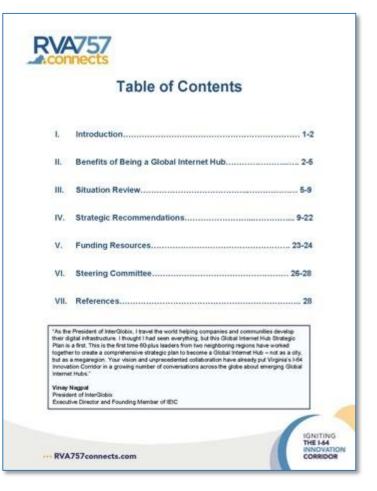
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- 1. Advocate for I-64 widening (29-mile gap from RIC to Williamsburg)
- 2. Help the I-64 Innovation Corridor become a Global Internet Hub
- 3. Support bike-walk trails in the megaregion (the Fall Line and the BoAT Trails)
- 4. Increase passenger rail service
- 5. Support directors' and members' initiatives (VNG, Dominion, Jeff Lab)
- 6. Advance our megaregion's brand I-64 Innovation Corridor



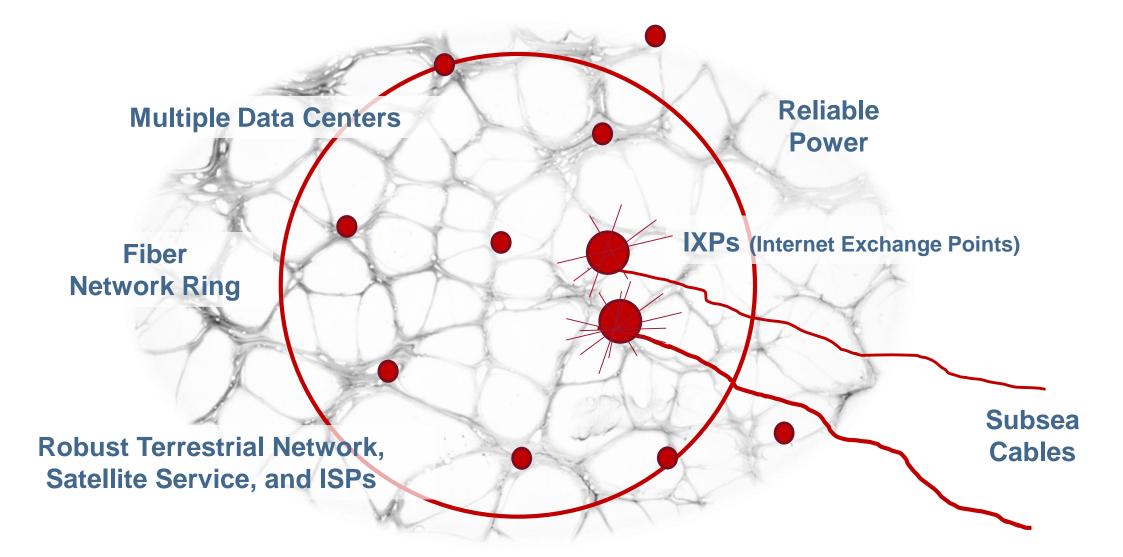
GIH Strategic Plan







Components of a Global Digital Infrastructure Hub



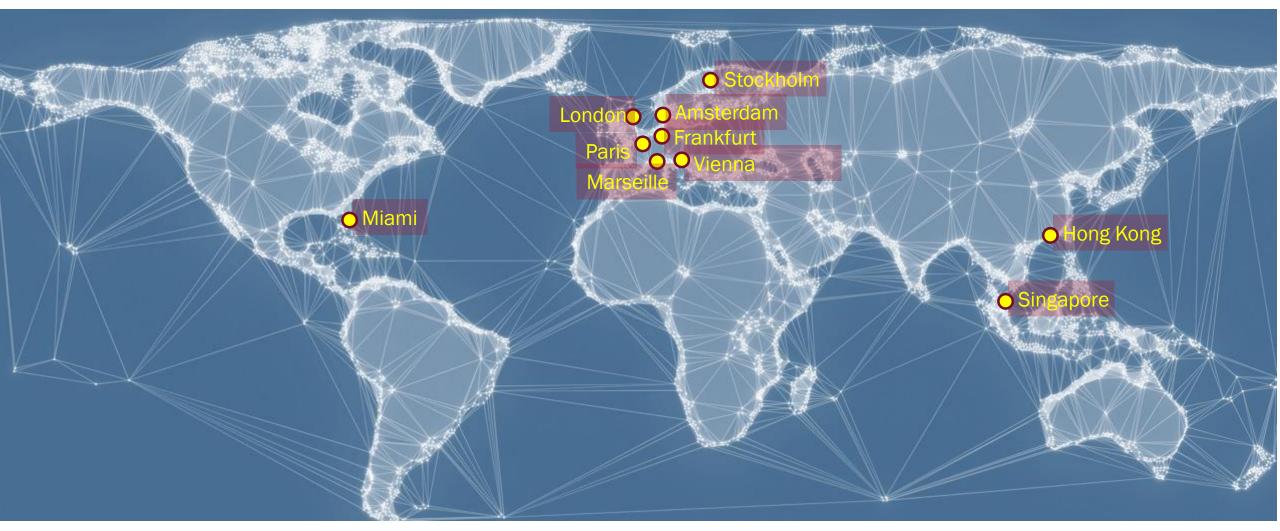




2022 Recognized Leading Global Internet Hubs

Based on Metropolitan Markets for International Internet Bandwidth

TeleGeography International Research Firm that tracks the development of global interconnection hubs







Benefits of Being A Hub

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- Attracts IT/Tech workers and industries and companies that need this type of talent.
- Provides the most advanced digital platform to support operations.
- Equity helps serve all underserved neighborhoods.
- Faster, more reliable, and potentially lower cost residential and business service.
- For those businesses that need it, faster service to Europe, South America, and South Africa.
- Supports "Smart City" development.
- Supports connected vehicles and autonomous vehicles.
- Produces additional municipal revenue.
- Supports dramatic rise in I of T devices in our lives; Supports the growth and use of AI.
- Future proofs a community

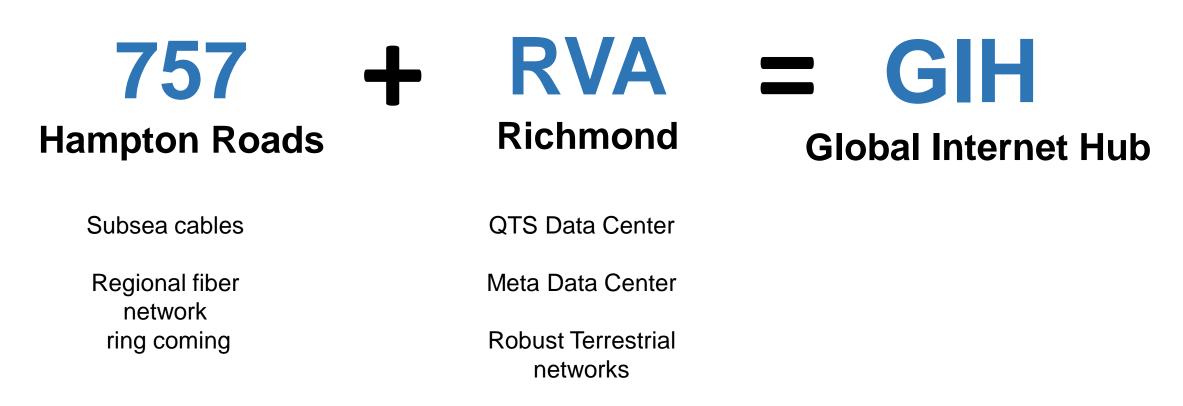


We are behind!

Metropolitan Statistical Area (MSA)	Total Tech Jobs 2022	10 Year Annual Tech Job Growth	Average 2022 Tech Job Wages	10 Year Worker Productivity Growth	10-Year GDP Growth (All Industries)
USA – Total	5,850,692	6.4%	\$111,800	31%	47.4%
Mature Digital Infrastructure MSAs*					
Seattle	176,170	9.7%	\$140,000	51%	85.1%
Denver	95,663	8.1%	\$118,800	30%	63.0%
Dallas	187,019	8.0%	\$110,100	28%	64.9%
Atlanta	129,922	6.9%	\$113,000	31%	60.7%
Jacksonville	24,111	6.7%	\$99,500	26%	56.6%
Portland	60,125	6.0%	\$116,000	35%	57.4%
		7.6% Avg.	\$116,233 Avg.	33.5% Avg.	64.6% Avg.
RVA & 757's Direct Competitors**					
Nashville	35,538	8.2%	\$93,500	30%	74.6%
Raleigh	42,056	8.2%	\$114,500	34%	72.3%
Charlotte	54,435	8.1%	\$113,100	29%	68.6%
Miami	91,494	7.9%	\$100,400	35%	62.1%
Orlando	43,097	7.9%	\$100,600	27%	57.4%
Tampa	52,474	7.5%	\$99,900	31%	60.8%
Myrtle Beach	2,873	7.4%	\$84,800	26%	53.3%
Atlanta	129,922	6.9%	\$113,000	31%	60.7%
Jacksonville	24,111	6.7%	\$99,500	26%	56.6%
Charleston	11,116	6.5%	\$99,200	40%	74.1%
New Jersey	180,936	5.1%	\$119,700	26%	35.5%
		7.3%. Avg.	\$103,473 Avg.	30.0% Avg.	56.8% Avg.
I-64 Innovation Corridor					
Richmond	24,900	4.6%	\$107,900	26%	39.9%
Virginia Beach/Norfolk	25,879	4.1%	\$103,900	23%	26.7%
		4.4% Avg.	\$105,900 Avg.	24.5 % Avg.	33.0% Avg.



The world has looked at us as separate markets. We don't show up. Together we're an emerging global hub.



IX and 3 IXPs (DE-CIX)



60-plus Leaders Created A Plan

Steering Committee

More than 60 leaders from 10 different industry and business categories are members of the Steering Committee:

Misty Allen, Vice President, Government and Regulatory Affairs, Community Impact, Comcast Dominion University - Beltway Region

Mitchel Allen, Executive Vice President, Business Hampton Roads Development, Greater Richmond Partnership

Brian Anderson, President and CEO, ChamberRVA

Shawn Avery, President and CEO, Hampton Roads Workforce Council

Glenn Ballard, President and CEO, Dragonfli Group, LLC

Serena Barry, Communications Director, GROW Capital Jobs Foundation, GO Virginia, Region 4

Capt. Lamont Bazemore, Coast Guard District Five, Chief of Planning and Force Readiness

Stan Blackwell, Director, Customer Service and Strategic Partnerships, Dominion Energy

Gerardo Bonilla, Head of Sales, Telxius

Keith Boswell, President and CEO, Virginia **Gateway Region**

Scott Brown, Owner, Pixel Factory Data Center

Lt. Luis Caquias, Coast Guard District Five, C5I

Morris Foster, Vice President of Research, Old

Nancy Grden, President and CEO, Reinvent

Tracy Gregorio, CEO, G2Ops

Graduate Affairs, College of Engineering, Virginia College Commonwealth University

William R. Hardy Jr., Director, Network Enterprise Information Officer/N6 Center, Fort Lee

David Harold, Director, Technology Operations, CarMax

Steve Harrison, Vice President, Business Intelligence and Communications, Hampton Roads Alliance

Stephen Hartka, Vice President of Research, Virginia Economic Development Partnership

Martha Heeter, Executive Director, PlanRVA

Stuart Henderson, Director, Jefferson Lab

Steve Herbert, Economic Development, City of Virginia Beach

Robert Holsworth, Managing Partner,

Kelly Newman, General Manager, PointOne

Angela Oakes, Vice President of Strategy, Greater Richmond Partnership

Joel Ogren, CEO, Assured Communications Advisors

Ram B. Gupta, Associate Dean for Research and Paula P. Pando, President, Reynolds Community

Mark Pike, Navy Region Mid-Atlantic Chief

Bernard Robinson, President and CEO, Networking Technologies + Support

Anthony Romanello, Executive Director, Henrico Economic Development Authority

Katherine Rowe, President, William and Mary

Douglas L. Smith, President and CEO, Hampton Roads Alliance

James Spore, Board of Directors, RVA757 Connects

Bryan Stephens, President and CEO, Hampton **Roads Chamber**

Gary Tarpley, CEO, Cable Associates Inc.

Jeffrey Thomas, Vice President and Chief



10 Core Strategies

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- 1. Establish a Global Internet Hub Industry Council.
- Through outreach and education, increase the awareness, familiarity, and support among local stakeholders in the I-64 innovation corridor for digital infrastructure development.
- 3. Increase international awareness of and familiarity with the I-64 Innovation Corridor among the global digital infrastructure community, in general, and digital infrastructure investors, in particular.
- 4. Support the growth of robust local internet networks and routes concerning other hub markets.
- 5. Attract additional international subsea cables.

- 6. Support the growth of data centers.
- Encourage the growth of IXs and IXPs Internet Exchanges and Internet Exchange Points.
- 8. Explore the potential of an I-64 Innovation Corridor network ring from Hampton Roads to Richmond.
- 9. Promote Dominion Energy's ability to provide reliable and inexpensive power and facilitate greater local understanding of optimal data center site considerations.
- 10. Provide a growing tech-savvy workforce.



#1. Establish a **Global Internet Hub Industry** Council

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Gary Tarpley, CEO, Coble Associates Inc.

Jeffrey Thomas, Vice President and Chief



#2. **Get I-64 Corridor's Cities** and Counties **Global Internet Hub-Ready**

How to be very strategic -- set real expectations and work with the elected officials within the community. Define the envelope where digital infrastructure would be appropriate.

Time Kills Deals

HOME > NEWS > CLOUD & HYPERSCALE

AWS data center plans in Maryland fall through due to timeline disagreements

Discussions were had last year, but Amazon walked away after officials said 'aggressive and impractical' timelines couldn't be met

February 10, 2022 By: Dan Swinhoe D Be the first to comment



Plans to locate AWS data centers in Frederick County in Maryland have fallen through.

The <u>Frederick News Post</u>, citing local officials, said the project fell through after Amazon and county government couldn't reach an agreement on the project's timeline.

Private discussions began sometime in early- to mid-2021 before officials noted the proposals in August 2021 meetings. The project was reportedly due to bring data centers to at least three communities in the southern part of the county.

Officials, however, said Amazon asked for too much, too fast. While one official said the proposal was aggressive but feasible, several referred to Amazon's terms as "close to impossible" and "impractical."



When the county tried to negotiate, Amazon walked, county officials said. One Frederick County



#3. Increase Awareness of I-64 Corridor Among Digital Infrastructure Investors



Value creation for the long term

Chirisa is a global investor active across Digital infrastructure, Communications and Real Estate in Europe and the Americas.

We seek situations where our capital, strategies, expertise and operational support help create substantial and sustainable value.

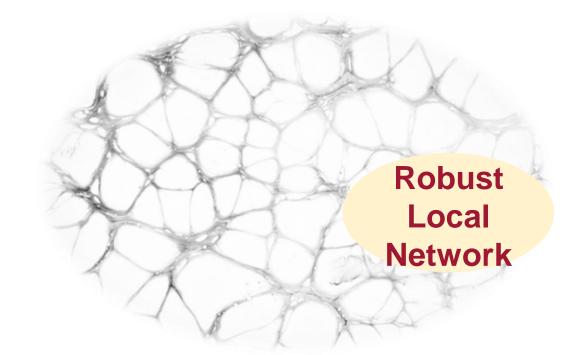
Chirisa draws on the insights and experience of an extensive network of industry professionals to originate and execute high quality investments.

Contact Chirisa



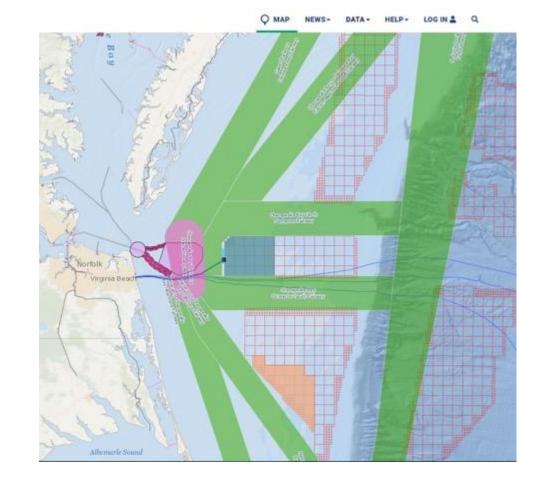


#4. Support the Growth of Robust Local Internet Networks















#6. Prepare Data Center Sites

Certified Sites



Southern Virginia Megasite at Berry Hill

Certification Type: VEDP Business Ready Sites Program Certified, Quest Site Solutions Certified Mega Site/Super Park Largest Parcel Size: 2102 Acres Locality: Pittsylvania County Site Ownership: Public Zoning: M-2, Heavy Industry Distance to Closest Interstate/Highway: 4 miles to U.S. Route 58



Mid-Atlantic Advanced Manufacturing Center

Certification Type: VEDP Business Ready Sites Program Certified, CSX Certified Megasite

- Largest Parcel Size: 1000 Acres
- Locality: Greensville County
- Site Ownership: Public

Zoning: M-1

Distance to Closest Interstate/Highway: 2.3 miles to I-95



White Oak Technology Park

Certification Type: VEDP Business Ready Sites Program Certified, Dominion Certified Data Center Site

Largest Parcel Size: 711 Acres

Locality: Henrico County

Site Ownership: Public

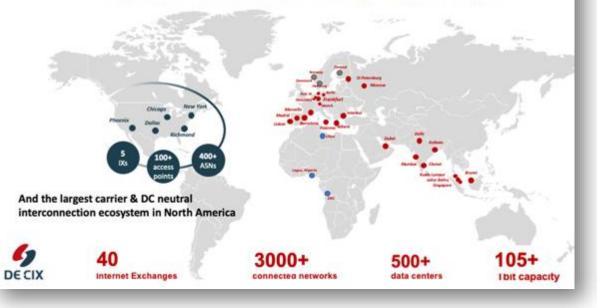
Zoning: M-2, General Industrial

Distance to Closest Interstate/Highway: 1 mile to I-295



#7. Encourage the Growth of IXs and IXPs

DE-CIX – Part of the Largest Network





RVA Major U.S. Network Access Point – IXPs



1.

1.4M sq. ft. World's 4th largest Eastern Henrico County







Atlee Commons Drive Hanover County



3.



1450 E. Parham Rd. Northern Henrico





#8. Support the Fiber Network Ring Concept

Hampton Roads Network Ring

About the Project Project Benefits Project Timeline FAQs

Building a path toward: Lower Cost. Faster Service. Enhanced Coverage.

Uniting and future-proofing the 757 region through unprecedented broadband expansion and access for all.

Learn More

Southside Network Authority



- Public-private partnership
- Five Southside cities Norfolk, Virginia Beach, Chesapeake, Portsmouth, and Suffolk - \$5M each.
- GTS will lease 96 strands of the ring when its construction is finished, as well as provide maintenance and marketing services.
- \$24.5 million contract.



Phase 2

Connects Peninsula cities and municipalities including Hampton, Newport News, York County, Williamsburg, Poquoson, James City County, Gloucester County, and military, commerce, and biomedical.

Phase 1

Connects the 5 Southside cities of Chesapeake. Portsmouth, Norfolk, Suffolk and Virginia Beach as well as close proximity fiber paths to higher education, military, commerce, biomedical, and parts as well as connectivity to the Virginia Beach undersea cables.

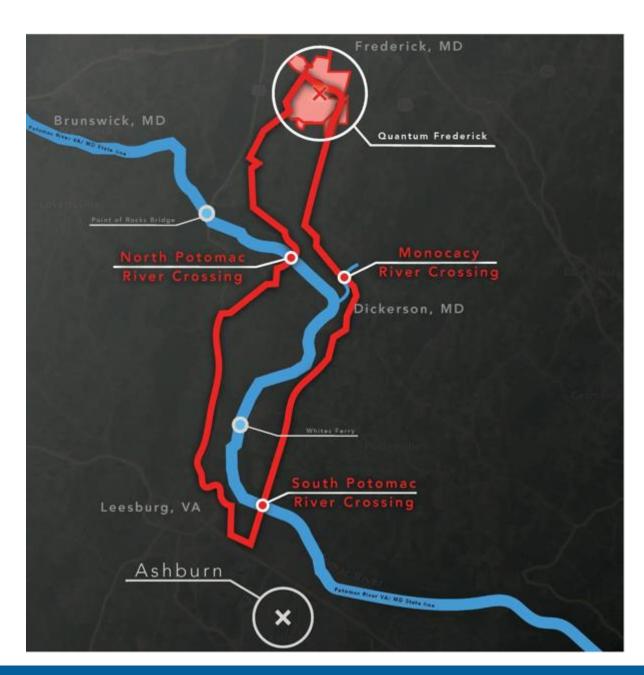




QLoop Network

A massive **40± mile** hyperscale fiber ring connecting Quantum Loophole's **2,100+ acre** Frederick data center development in Maryland, tied directly to Northern Virginia's Data Center Alley.

RVA to 757?





#9. Promote Dominion's Ability to Provide Power



SWJLA Prince William County ...



NBC4 Washington
Data Center Development Near Manassas ...





S WJLA Prince William County ...



DC News Now | Washington, DC Protesters voice frustration with data ...





InsideNoVa.com Northern Virginia lawmakers' bills

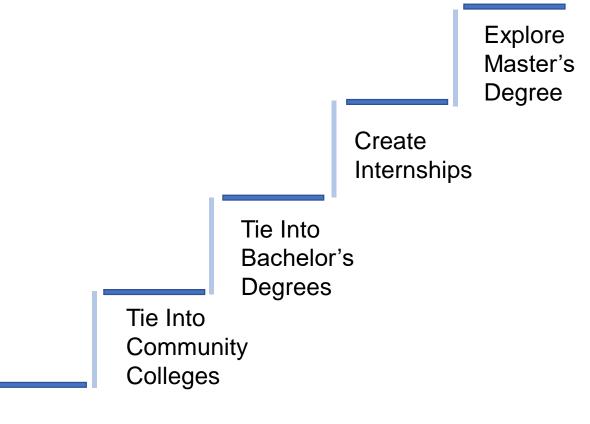


SWJLA Prince William Co board vote in favor ...









Strengthening K-12 Tech Talent – Tie Into CodeVA



The M.S. in Datacenter **Systems Engineering at Southern Methodist University's** Lyle School of Engineering located in Dallas, TX is the first program designed to create leaders in the critical field of digital infrastructure.

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NOVEMBER 22, 2022 PUBLISHED IN ISSUE TO, DATA CENTER, IC ACCESS, WHAT'S NEW

Introducing The World's First Master Of Science In Datacenter Systems Engineering

The program developed by digital infrastructure leaders that prepares professionals to be the industry leaders of tomorrow By Klyne Smith and Christian Belady







ONWARD!

