



# Board of Directors & MIC Meeting

•••

*Sept. 15, 2021*




1

•••

# Welcome


Theodore L. Chandler, Jr.

*5 Minutes*



2

## RVA757 Connects Governance Structure



**Megaregion Institutional Council (MIC)**

RVA757 connects

### Board of Directors


Co-Chair RVA    Co-Chair 757

60+ Directors

- Executive Committee
- Nomination Committee
- Development Committee

RVA MIC Members	757 MIC Members
PlanRVA	HRPDC
Community Foundation for a greater Richmond	Hampton Roads Community Foundation
ChamberRVA	Chamber Hampton Roads
	Virginia Peninsula Chamber
	Greater Williamsburg Chamber Business Council
Greater Richmond Partnership	Hampton Roads Alliance
GOVirginia (Region 4)	GOVirginia (Region 5)
Capital Region Workforce Partnership	Hampton Roads Workforce Council
	CIVIC Leadership Institute
Grow Capital Jobs Foundation	Reinvent Hampton Roads
Management Round Table (MRT)	Hampton Roads Business Roundtable

*In addition, the Virginia Hispanic Chamber and Asian Chamber are on the MIC.*



3

## Recall Our New Arrivals: June 2021 New Board Members



**Monique Adams, Executive Director, 757 Angels**



**Glenn DuBois, Chancellor, Virginia's Community Colleges (VCCS)**



**Javaune Adams-Gaston, President, Norfolk State University**



**Stephen A. Edwards, CEO & Executive Director, The Port of Virginia**



**Robby Demeria, Chief of Staff, Phlow Corporation**



4



## Now Let's Welcome Our Newest Directors and MIC Members



5

## Welcome New MIC Member



Makola M. Abdullah  
President  
Virginia State University



6

## Welcome New Director



Calvin W. "Woody" Fowler, Jr.  
Partner  
Williams Mullen



7

## Welcome New Director



Greg Garrett  
Senior Partner/CEO  
Garrett Realty Partners



8



## Welcome New Director



William R. Harvey  
President  
Hampton University



9

## Welcome New Director



Todd P. Haymore  
Managing Director  
Hunton Andrews Kurth



10

## Welcome New Director



Brian O. Hemphill  
President  
Old Dominion University



11

## Welcome New MIC Member



Maurice A. Jones  
Chief Executive Officer  
OneTen



12

## Welcome New Director



Alan Witt

Dean

Luter School of Business

Silas O. and Myrtle S.  
Jennings Professor of  
Business



13

## Welcome Aboard & Thank You

Nominating Committee  
Executive Committee



14

## How We Can Fuel Our Early Momentum

1. Continue your commitment
2. Continue your intellectual and financial support
3. Engage in your area of interest

15

### Participate in very short (1 Min.) follow-up survey after this meeting:



*What areas would you like more information on  
and be part of as we move forward?*

#### 2021 Priorities

**Advance** Innovation Corridor positioning

**Implement** Talent Pipeline Study

**Accelerate** understanding of digital connections

**Showcase** member initiatives

**Increase** research and development collaboration

**Support** Virginia Capital Trail completion

**Remove** passenger barriers on rail services

**Advocate** for widening of I-64

#### Initiatives

Advance RVA757 Connects' communications efforts

Advance new wave of Grant Applications:

- Apprenticeships
- Industry Clusters
- Global Internet Hub

16



● ● ●

# Today's Agenda

John Martin

*1 Minute*

**RVA757**  
connects

**I-64**  
**INNOVATION**  
**CORRIDOR**

17

## Our Agenda

● ● ●

<b>Welcome</b> – Theodore L. Chandler, Jr.	5 Minutes
<b>Development Committee Report</b> – Jim Kibler and Mitch Haddon	5 Minutes
<b>Quick Updates</b> – John Martin	10 Minutes
<b>Becoming a Global Internet Hub</b> – Invited Experts	45 Minutes
<b>Breakout Session</b> – Small Groups	40 Minutes
<b>Group Report Outs and Next Steps</b> – Thomas R. Frantz	15 Minutes

**RVA757**  
connects

18



● ● ●

## Development Committee Report

Jim Kibler and  
Mitch Haddon

*5 Minutes*

RVA757 connects

I-64 INNOVATION CORRIDOR

19

### Our Goal

● ● ●

# \$500K

Annual goal to become self-sustaining\*

*\*Community Foundations' support is start-up related*

RVA757 connects

20

## Our Development Committee



Jim Kibler (Next Paradigm Advisors, LLC) – Co-Chair (757)

Mitch Haddon (ColonialWebb Contractors Company) – Co-Chair (RVA)

Shawn Avery – Hampton Roads Workforce Council

Anne Conner – TowneBank

Dawna Ellis - Harvey Lindsay Commercial Real Estate

Ross Grogg – Kemper Consulting

Brad Hulse – Hourigan

Martin Joseph – 360 IT Partners

Brian Rountree – Bank of America



21

## 2021 Fundraising Success (so far)



Dominion: \$75K

Bank America: \$10K

ColonialWebb: \$10K

HRCF: \$100K

Stihl: \$10K

Hourigan: \$5K

CFgR: \$50K

Virginia Port Authority: \$25K

Harvey Lindsay: \$2.5K

VNG: \$25K

Franklin Johnston Group: \$10K

Individuals: \$12.5K

LifeNet: \$10K

# \$345K



22

22

## Immediate Next Steps



- Continue to approach and engage board and MIC members.
- Add new members to our outreach.
- Lock in 2022-2023 funding – recall all gifts are annual commitments for 3 years.
- Formulate plans to go beyond board and MIC.
  - Corporate
  - Foundational



23

## Quick Updates

John Martin

*10 Minutes*



I-64  
INNOVATION  
CORRIDOR

24



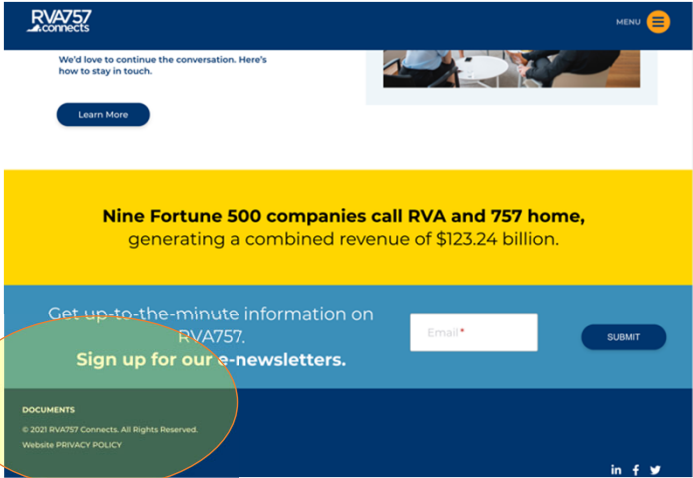
**1**

**We continue  
to keep everyone  
informed**



25


## Homepage of RVA757Connects.com



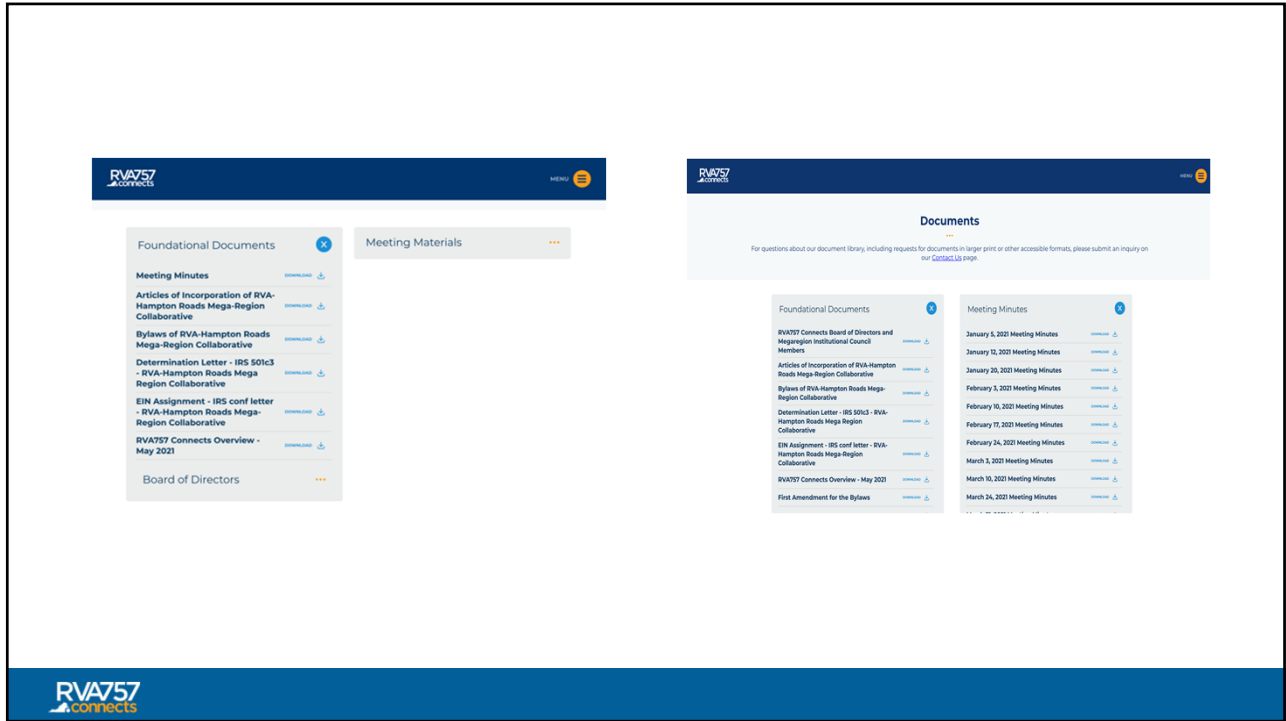
**Nine Fortune 500 companies call RVA and 757 home,**  
generating a combined revenue of \$123.24 billion.

Get up-to-the-minute information on  
RVA757.  
**Sign up for our e-newsletters.**

DOCUMENTS  
© 2021 RVA757 Connects. All Rights Reserved.  
Website [PRIVACY POLICY](#)



26



27



28

# Launched Our Communications Effort



<https://www.youtube.com/watch?v=8IAPr1QFPCY>



29

3

# We're Now On the Map



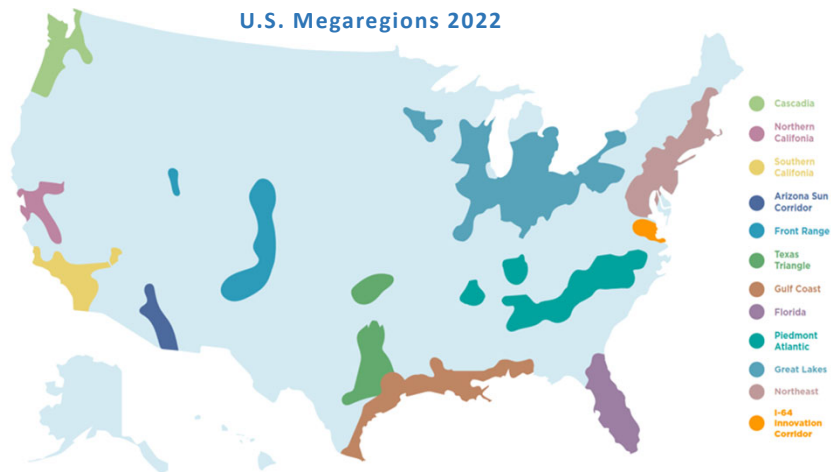
30

## Google Megaregions.... We're Not on the Map



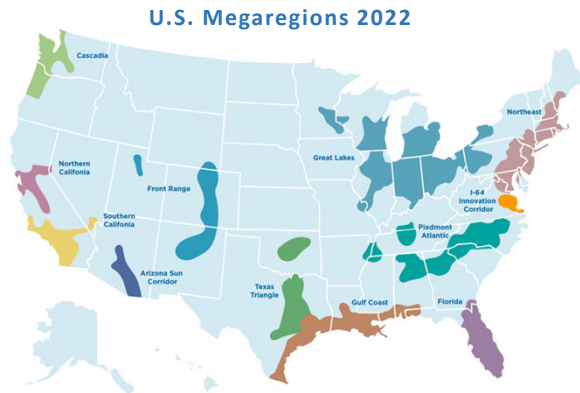
31

## Now We're on the Map!



32

## Now We're on the Map!



### How We Will Use This Map

- Place on our website
- Send to economic development agencies
- Share with all partners



33

4

## I-64 Talent & Industry Study: Today & Tomorrow



34

## I-64 Talent Pipeline Study: Today & Tomorrow



- Profile the RVA757 Connects megaregion’s industries and occupations today. (Report #1)
  - Total megaregion talent profile
  - Understand where talent comes from and goes to
  - Current gaps
  - Support areas that need greater attention
- Identify the megaregion’s industries and occupations of tomorrow. (Report #2)
  - COVID-19 lasting trends and related impacts
  - Impact of distributed workforce
  - Talent needs of the future
  - Support areas that need greater attention
- Identify way to make the RVA and 757 regions even more competitive in the war for talent and targeted industry growth.

35

## Process – Timeline



### 1st Quarter 2021 (JAN – MARCH 2021)

Establish Project’s Research Council  
 Finalize the Work Plan and Detailed Calendar  
 Identify Project’s Key Stakeholders & Audiences for the Final Reports (e.g., Workforce Industry, Economic Development Partners, Educational Institutions, and RVA-757 Connects’ Audiences)  
 Identify and Inventory Relevant Pre-existing Studies and Reports  
 Identify and Inventory Relevant Third-party Active Research Projects (For example: the Virginia Bio-tech Initiative)

### 2nd Quarter 2021 (April – June 2021)

Mine Pre-existing Studies, Reports and Active Third-party Research  
 Conduct Primary Research (If Research Council Feels This Is Needed)  
 Identify Major Insights and Implications

### 3rd Quarter (July – Sept 2021)

Prepare Initial Drafts of Report 1: Current Talent Pipeline  
 Prepare Initial Drafts of Report 2: Future Talent Pipeline Trends and Needs  
 Share Draft Reports and Get Feedback From a Sample of Representatives from Project’s Key Stakeholders & Audiences

### 4th Quarter (Oct – Dec 2021)

Finalize and Package Reports 1 and 2 with RVA-757 Connects’ branding  
 Share Final Reports with all of the Project’s Key Stakeholders & Audiences  
 Submit to GO Virginia RVA-757 Connects’ Recommendations on the Future Strategy for the I-64 Innovation Corridor Talent Pipeline (not part of this grant request)  
 Finish all GO Virginia’s Grant Obligations

We are here in this overall process

We will present findings at the Oct. 27 Chambers’ CONVERGENCE 2021 event.

36

## National Security/Cyber Security

	I-64 Innovation Corridor	Richmond	Hampton Roads	Philadelphia	Charlotte	Atlanta	Jacksonville	Washington, DC	Denver	Pittsburgh	Nashville	Columbus	Orlando-Tampa	Raleigh
Current Cluster Empl	37,895	9,516	28,202	20,620	5,908	12,691	9,673	100,126	11,815	4,953	3,893	10,839	13,683	3,859
Current LQ	3.63	2.02	5.04	1.02	0.64	0.63	1.85	4.28	1.05	0.62	0.52	1.39	0.72	0.81
LQ 2030	3.43	2.02	4.73	0.98	0.69	0.66	1.77	4.20	1.09	0.63	0.55	1.35	0.73	0.87

5

*RVA757 Connects Priority Area*  
**Accelerate the understanding of digital connections between RVA and 757**

RVA757 Connects' Draft Concept Paper:

# Becoming a Global Internet Hub

5 Things to Know



**BECOMING A GLOBAL INTERNET HUB**  
September 13, 2021

The I-64 Innovation Corridor – an 8,000-square-mile megaregion that runs from Richmond to Hampton Roads – is set on its way to becoming a full-fledged global internet hub.

This white paper details what a global internet hub is, why the distinction is important, the factors that make a region a global hub, how the I-64 Innovation Corridor is becoming one, the benefits a global internet hub offers businesses and entire communities, and why time is of the essence in realizing this promise for the I-64 Innovation Corridor.

This paper is made possible through RVA757 Connects, a 501(c)(3) organization dedicated to improving the economic success and quality of life for everyone in the Richmond (RVA) and Hampton Roads (757) regions. We are an inclusive, mutually supportive network of leaders representing business, higher education, and community stakeholders. We identify, support, and advance major opportunities, initiatives, and projects that will benefit both the RVA and 757 regions for generations to come. Advancing the awareness of and support for the I-64 Innovation Corridor in becoming a global internet hub is one of our organization's priorities. In fact, we believe this cause has the potential to transform our megaregion.

**Global Internet Hubs**

The best way to understand global internet hubs, or any internet hub city for that matter, is to see them as the concentrated hot spots, or nodes, on a world map of the internet.

The internet ecosystem is a collaborative "business model," a hyper-competitive set of interlocking partnerships that create and support a global network. These partnerships operate on local, country, and international levels. Continual rapid innovation, security, trust, and ability to scale are essential competencies to successfully operate in this system. While there are regulatory issues that come into play, in general, technology deployment and associated growth capabilities much more than regulations.


The notion of supply and demand is abstract, as much of the industry fills the growing network capacity as fast as it is built. With the ecosystem in a perpetual state of expansion, the concept of creative replacement is everywhere, and COVID-19 has increased the slope of the growth curve even more. In this industry, one doesn't compete, but rather collaborates and grows with the system.

Internet hubs are physical locations where carrier networks, content delivery networks (CDNs), social networks, cloud services, hosting, gaming, and IT service providers choose to co-locate and interconnect usually within a massive data center (called internet exchange point or IXP) or within several data centers in the same metropolitan region via a cross connection.




39

## 1. There are many internet hubs.



map data © OpenStreetMap contributors - Cable data from <http://cablemaps.info/> / Grey's Cable Map

Internet hubs are physical locations where carrier networks, content delivery networks (CDNs), social networks, cloud services, hosting, gaming, and IT service providers choose to co-locate and interconnect, usually within a massive data center (called internet exchange point or IXP) or within several data centers in the same metropolitan region via a cross connection.



40



## 2. Internet hubs deliver many advantages.

### Business Advantages:

- Lower internet costs
- Enhanced communication ability
- Competitive advantage to conduct business at the speed of light
- Edge Computing
- Larger tech talent pool

### Community Advantages:

- Municipal / County budget funding
- Increased access to high-speed internet
- Improved public safety and transportation infrastructure
- Enhanced educational opportunities
- Improved healthcare
- Increased work-from-home opportunities
- Enhanced locational appeal for remote workers
- Growing economic development advantages
- Growing economy

### Future-proofing the Community:

Help a community remain relevant in the future with next gen capabilities.

Every "next generation" of technology adds new functionality, capacity, and performance, often by an order of magnitude.

In this industry, a generation is one to three years. The leading-edge hubs and users will have digital resources, tools, and capabilities that are not widely accessed to others - real-time massive data acquisition / analytics, use of augmented intelligence and creation of new, highly beneficial knowledge.

All of this will drive the winning companies and organizations of tomorrow... and future economic growth and prosperity.



41

## 3. Super large hubs become known as and are officially designated as a *global internet hub*.

Currently, the top ten global internet hubs (as ranked by TeleGeography), based on international capacity, are:

- |                           |                             |
|---------------------------|-----------------------------|
| 1. Frankfurt, Germany     | 6. Hong Kong, China         |
| 2. London, United Kingdom | 7. Stockholm, Sweden        |
| 3. Amsterdam, Netherlands | 8. Miami, United States     |
| 4. Paris, France          | 9. Marseille, France        |
| 5. Singapore, Singapore   | 10. Los Angeles, California |

Notably, eight out of the top ten global hubs have direct access to subsea cables.



42

#### 4. Becoming a global internet hub doesn't happen by accident. The industry has identified ten key factors of success.



- Access to international deep-sea cables
- Data centers
- Robust network of local fiber optic cables
- Relatively Inexpensive land
- Inexpensive power and/or access to renewable sources of energy
- Proximity to large populations
- Low risk of natural disaster
- Tech-savvy workforce
- Economic incentives
- Committed Regional Business and Governmental Leaders



43


#### 5. This is our transformational opportunity to build the backbone of our sustainable 21st century economy.



- **Phase 1: Networks, like deep sea cables, attract data centers.** As the data center hub grows and increases in importance, more networks establish themselves in the area. This growth leads to even more inter-connected networks – an internet ecosystem.
- **Phase 2: A vibrant, growing internet ecosystem attracts tech talent,** particularly related to applications development and commercialization.
- **Phase 3: Companies are attracted to the growing pool of tech talent and major “exchange point” hubs,** realizing the benefits of hyper-connectivity, digital speed, massive real-time data acquisition, and access to computing capabilities such as ML (machine learning) and AI (artificial intelligence).
- **Phase 4: Success fuels momentum.** More talent and companies are attracted to the region. Existing companies expand. New companies are started - all supporting the companies and jobs of tomorrow.



44



**BECOMING A GLOBAL INTERNET HUB**  
September 13, 2021

The I-64 Innovation Corridor – an 8,000-square-mile megaregion that runs from Richmond to Hampton Roads – is well on its way to becoming a full-fledged global internet hub.

This white paper details what a global internet hub is, why the distinction is important, the factors that make a region a global hub, how the I-64 Innovation Corridor is becoming one, the benefits a global internet hub offers businesses and entire communities, and why time is of the essence in realizing this promise for the I-64 Innovation Corridor.

This paper is made possible through RVA757 Connects, a 501(c)(3) organization dedicated to improving the economic success and quality of life for everyone in the Richmond (RVA) and Hampton Roads (HR) regions. We are an inclusive, mutually supportive network of leaders representing business, higher education, and community stakeholders. We identify, support, and advance major opportunities, initiatives, and projects that will benefit both the RVA and HR regions for generations to come. Advancing the awareness of and support for the I-64 Innovation Corridor in becoming a global internet hub is one of our organization's priorities. In fact, we believe this cause has the potential to transform our megaregion.

**Global Internet Hubs**


The best way to understand global internet hubs, or any internet hub city for that matter, is to see them as the concentrated hot spots, or nodes, on a world map of the internet.

The internet ecosystem is a collaborative "business model," a hyper-competitive set of intersecting partnerships that create and support a global network. These partnerships operate on local, country, and international levels. Continual rapid innovation, security, trust, and ability to scale are essential competencies to successfully operate in this system. While there are regulatory issues that come into play, in general, technology deployment and associated growth is limited by talent and adjacent enabling capabilities much more than regulations.

The notion of supply and demand is abstract, as much of the industry fills the growing network capacity as fast as it is built. With the ecosystem in a perpetual state of expansion, the concept of creative replacement is everywhere, and COVID-19 has increased the slope of the growth curve even more. In this industry, one doesn't compete, but rather collaborates and grows with the system.

Internet hubs are physical locations where carrier networks, content delivery networks (CDNs), social networks, cloud services, hosting, gaming, and IT service providers choose to ~~go~~ ~~and~~ ~~disappear~~, usually within a massive data center (called internet exchange point or IXP) or within several data centers in the same metropolitan region via a cross connection.

The remainder of  
this meeting is  
dedicated to this  
RVA757 Connects  
priority.



45

● ● ●

# Becoming a Global Internet Hub

45 Minutes





46

## Our Speakers



**Anthony Romanello, Executive Director, Henrico County Economic Development Authority**

**Vinay Nagpal, President, InterGlobix (consultant to Henrico County)**

**Taylor Adams, Deputy City Manager / Director of Economic Development, Virginia Beach**


**Stan Blackwell, Director, Customer Solutions & Strategic Partnerships, Dominion Energy**




47

The banner features a background image of a long, dark fiber optic cable stretching across a sandy beach towards the ocean. At the top left is the Henrico EDA logo, which includes a stylized map of Henrico County and the text "HENRICO EDA VIRGINIA • USA". At the top right is the InterGlobix logo, with the text "interGlobix" in a green and blue font and "DATA CENTER & CONNECTIVITY SOLUTIONS" below it. The main title "HENRICO INTERNET INFRASTRUCTURE" is centered in large white letters, with the date "15 September 2021" below it. In the center, the text "RVA757 Connects' Board & Megaregion Institutional Council (MIC) Meeting" is displayed. On the left side, there is a circular portrait of Anthony Romanello, with his name and title "ANTHONY ROMANELLO, Executive Director, Henrico EDA, Founding Member, IEIC" below it. On the right side, there is a circular portrait of Vinay Nagpal, with his name and title "VINAY NAGPAL, President, InterGlobix LLC, Secretary & Executive Director, IEIC, Co-Founder & Member, QTS Richmond NAP" below it.


48



## The Data Explosion



- Data Explosion: 90% of all data that exists today, created in last 2 years
- 99.7% of all data on subsea
- 2016-2020: \$13.8B value-creation, 107 new cables
- 2021-2023: \$8B in new development
- \$10 Trillion daily transactions
- Industry shift towards Hyperscalers in subsea







**By 2022**

- 4.1 Billion people
- 20-30 Billion devices


**By 2023**


- Global Data Center \$174 Billion

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

49

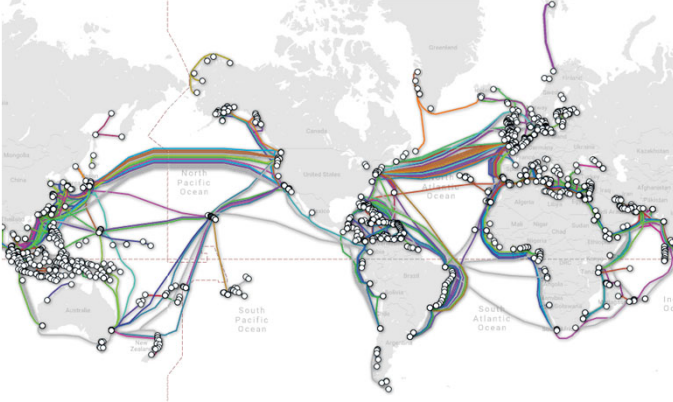




## Subsea Industry Key Trends

### The Resurgence

- Several Subsea systems are nearing EOL (25 yrs.)
- Shift from stand-alone CLS to connectivity-rich / carrier-neutral colocation sites
- Modular “open” systems / Edge facilities
- Strong partnership between Data Center & Subsea industry
- Hyperscalers / Cloud providers Microsoft, Facebook, Google, Amazon in Subsea



**163 years | 1.2M+ kms**

**464 cables | 1,245 Cable Landing Stations**

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

50



## Subsea Industry Key Trends

### Hyperscalers in Subsea

- Google Microsoft, Facebook and Amazon are investing heavily in subsea cables
- High demand for high bandwidth capacity
- Enterprise adoption of Cloud
- Paradigm shift: Consortium-owned to Cloud provider owned
- 60%+ bandwidth trans-Atlantic is private-networks owned
- 34 subsea cable investments by Hyperscalers

Kms of subsea cables owned (Source: BROADBANDNOW)

- Curie (sole)
- Dunant (part)
- Equiano (sole)
- FASTER (part)
- Havfrue (part)
- Hong Kong-Guam (part)
- INDIGO-Central (part)
- INDIGO-West (part)
- JSA South (part)
- Junior (sole)
- Monet (part)
- PLCN (part)
- SJC (part)
- Tannat (part)
- Unity (part)

- AEC-1 (major capacity)
- Asia Pacific Gateway (part)
- BtoBE Cable System (part)
- Havfrue (part)
- Hong Kong-Americas (part)
- JUPITER (part)
- Malbec (part)
- MAREA (part)
- PLCN (part)
- SJC2 (part)

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

51

## Data Center Industry Key Trends

### Sustainability

- Global Data Centers** 2019: 416 terawatts or 3% of world's electricity, nearly 40% more than UK
- Carbon Neutral:** Net zero carbon dioxide emissions
- Carbon Negative:** Reduction of carbon footprint to less than neutral
- EU data centers** to be carbon neutral by 2030
- Dominion:** 2.6 GW off-shore wind (660K homes), 16 GW solar project (4M homes); **NetZero by 2050**
- Multi-Story Data Centers** maximizing FAR

**DIGITAL REALTY**  
2016: 100% renewable in US  
2018: 100% renewable in EMEA

**Google Cloud**  
2017: 100% Renewable Energy  
2030: 24/7 Carbon-free Energy

**CyrusOne**  
Carbon Neutral by 2040

**amazon**  
Carbon Neutral by 2040

**QTS**  
100% Renewable by 2025

**Microsoft**  
Carbon Negative by 2030


**FLEXENTIAL**  
Hillsboro 3: 100% renewable

**FACEBOOK**  
Net Zero for Value Chain by 2030

**EQUINIX**  
Renewables:  
Americas 93%, AsiaPac 75%, EMEA 99%


InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

52




## Henrico Internet Infrastructure FB Phase-I Live


- **Facebook:** Phase-I data center development completed, \$1.25 Billion commitment
- **2 Million+ sq ft** data center development underway
- **Tax Rate** down by 90%; **Tax Revenue** up by 300% from 2017-2021
- **Facebook:** active participant in MAREA and BRUSA subsea cables




**200**  
Long-term jobs



**1500**  
Construction workers



**100%**  
Solar energy



InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

53



## Henrico Internet Infrastructure Data Center Ecosystem Development



World's 4<sup>th</sup> Largest Data Center  
1.4M sq. ft.




QTS Acquired by Blackstone for \$10 Billion




Facebook Data Center Campus

**2M+ sq. ft.**

**100% Renewable Energy**










InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

54






**Virginia Subsea Cables**  
**Google Subsea to France**



- **Google DUNANT:** new subsea cable from France to Virginia **250 Tbps maximum capacity in the world**
- **MAREA (Microsoft, Facebook, Telxius):** Upgraded capacity with Infinera to **30 Tbps per fiber pair** for total capacity
  - Third upgrade: **160 Tbps → 209.6 Tbps → 240 Tbps**
- **Telxius Network PoP** enable trans-Atlantic subsea loop

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)


55



**World-Leading Internet Speed**  
**Latency @ Speed of Light**

From Henrico To:	Latency (milliseconds)
Ashburn, VA	3.80
VA Beach	2.74
Madrid, Spain	72.74
Frankfurt, Germany	82.74
Marseille, France	79.27
London, UK	85.49
Rio de Janeiro, Brazil	102.74
Sao Paulo, Brazil	108.24

**Low Latency is VITAL to fast delivery of DATA**



In blink of an eye, you can transmit data back and forth **twice** from Henrico to Spain.

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

56



## Virginia: International Connectivity Hub

18% of all East Coast Subsea

- **Digital Connectivity Gateway between U.S., Europe, South America, Africa & Asia**
- 6 Subsea Cables
- 9 Countries
- 30+ Networks
- 30+ Backhaul Providers
- 2 Internet Exchanges
- Europe Diversity
- South America Diversity
- Ashburn Diversity

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

57

## Henrico Internet Infrastructure

December 16th, 2020

**Major milestone in evolution of Henrico Internet Infrastructure**

**Richmond/Henrico became part of:**

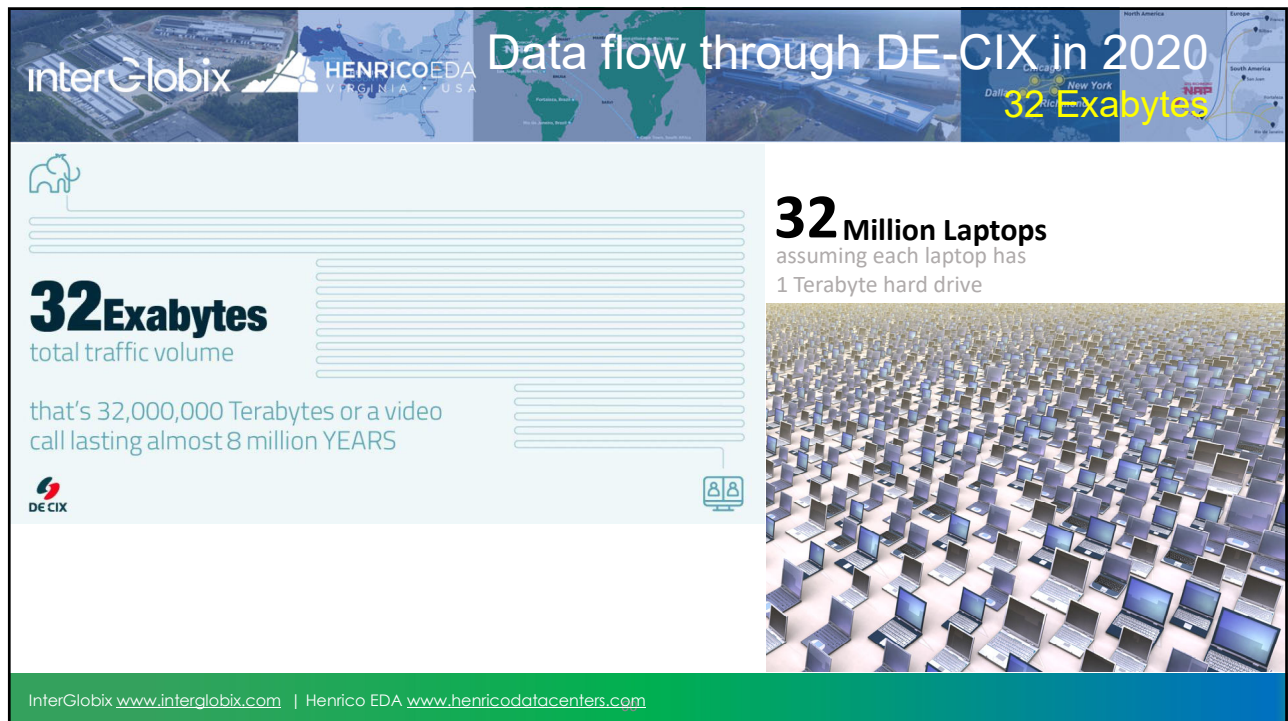
- ✓ *Largest neutral ecosystem in the WORLD*
- ✓ *Largest data center neutral ecosystem in NORTH AMERICA*

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

58



59



60

**Internet Infrastructure DE-CIX Richmond**

- **DE-CIX:** started 25 yrs. ago as a neutral Internet Exchange platform in Germany
- Grown to **29 locations** around the world in **14 countries** **[RICHMOND/HENRICO IS #27]**
- An Internet Exchange enables data exchange between multiple networks such as **Google, Facebook, Microsoft, Amazon** and Internet Access Networks

1 access in North America reaches...

<b>29</b> DE-CIX IXs	<b>2400+</b> Networks	<b>500+</b> Data centers	<b>Multiple services</b> Cloud, direct & remote interconnection
<b>100+</b> Access Points	<b>80%</b> Of US population within ~15ms		

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

61

**Internet Infrastructure DE-CIX Richmond**

- North America's largest data center neutral ecosystem
- World's largest data center- and carrier-neutral ecosystem


5 IXs, 100+ access points, 400+ ASNs

<b>29</b> Internet Exchanges	<b>2,400+</b> connected networks	<b>500+</b> data centers	<b>83+</b> Tbit capacity
---------------------------------	-------------------------------------	-----------------------------	-----------------------------

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

62





# Network Access Point Strategic Mid-Atlantic Location


## QTS RICHMOND NAP In Henrico

www.qtsrichmondnap.net


InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

**Where data center, subsea fiber and terrestrial networks converge**

*"The subsea cables that terminate in Richmond have opened an amazing opportunity for Henrico County to become a LOCUS for both domestic and international applications. That gives good reason for the creation of the QTS Richmond NAP, a place where multiple providers and Internet services can meet, connect and reach the international cables that link Virginia to other parts of the world."*



**- DR. VINT CERF**  
Chief Evangelist for Google  
Father Of the Internet  
Internet Hall of Fame Pioneer



63



# IEIC Global Committee Internet Ecosystem Innovation Committee

- Internet Ecosystem Innovation Committee (IEIC) [www.ieicco.com](http://www.ieicco.com)**
  - Internet Diversity
  - New Interconnection hubs globally
- Mission:** collaborate with communities globally to create new internet nexus points through partnership with local municipalities, academia and businesses.

## Founding Members



Dr. Vint Cerf  
Father of the Internet  
Internet Hall of Fame Pioneer  
Google Chief Internet Evangelist  
IEIC Chairman



 Clint Heiden IEIC Founder	 Vinay Nagpal IEIC Executive Director	 Rafael Arranz COO, Telixius	 Staffan Gøjerdy CEO, Telia Carrier	 Steve Alexander CTO, Ciena	 Howard Boville CTO, Bank of America	 Dr. Mark Boxer CIO, Cigna	 Ivo Ivanov CEO, DE-CIX International	 Dr. Jason Black Director of Network Development, NVIDIA	 Sarah Keller Head of Global Technology Sourcing & Supply Chain, Uber
 Frank Nazzaro CTO, Freddie Mac	 Asher Kagan CEO, Blade Group	 Jon Greaves CTO, QTS Data Centers	 Michael Leidinger CTO, Hilton	 Andrew Dugan CTO, CenturyLink	 Dr. Ken Washington CTO, Ford Motor Company	 Anthony Romanello Executive Director, Henrico EDA	 Dr. Barbara Boyan Dean, College of Engineering	 Vinay Kanitkar CTO, Akamai	 Krishna Narayanaswamy Co-Founder & Chief Scientist



InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

64

**interGlobix** DATA CENTER & CONNECTIVITY SOLUTIONS

**GreenCity \$2.3 billion project**

**HENRICOEDA** VIRGINIA • USA

**POTENTIAL ECONOMIC IMPACT**

- The project is privately financed with no risk to Henrico taxpayers
- 7,000 – 8,000 jobs
- \$1.3B - \$1.4B economic impact
- Once CDA debt is retired, all revenues come to the County's General Fund



© GreenCity Partners LLC

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

65

**interGlobix** DATA CENTER & CONNECTIVITY SOLUTIONS

**Summary**

**HENRICOEDA** VIRGINIA • USA

- Data Centers and Connectivity services will continue to experience exponential growth over next 3-5 years
- 3 Subsea cables live in Henrico connecting 3 continents
- QTS Richmond NAP globally recognized
- World's largest carrier-neutral and North America's largest data center-neutral Interconnection platform in Henrico
- GreenCity Project Connectivity

InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

66








**Anthony Romanello**  
+1.804.501.7521  
[Anthony@henrico.com](mailto:Anthony@henrico.com)  
[www.henricodatacenters.com](http://www.henricodatacenters.com)



**Vinay Naggal**  
+1.703.899.4183  
[Vinay@interglobix.com](mailto:Vinay@interglobix.com)  
[www.interglobix.com](http://www.interglobix.com)



InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

67



## About InterGlobix LLC



- Global solutions company focused on the **convergence of Data Centers, Subsea & Terrestrial Fiber**
- Data Center Product Management & Marketing services
- 41+ years global experience with deep industry relationships
- **InterGlobix Magazine:** Premier Global Data Center & Connectivity publication



### MEMBERSHIPS & AFFILIATIONS











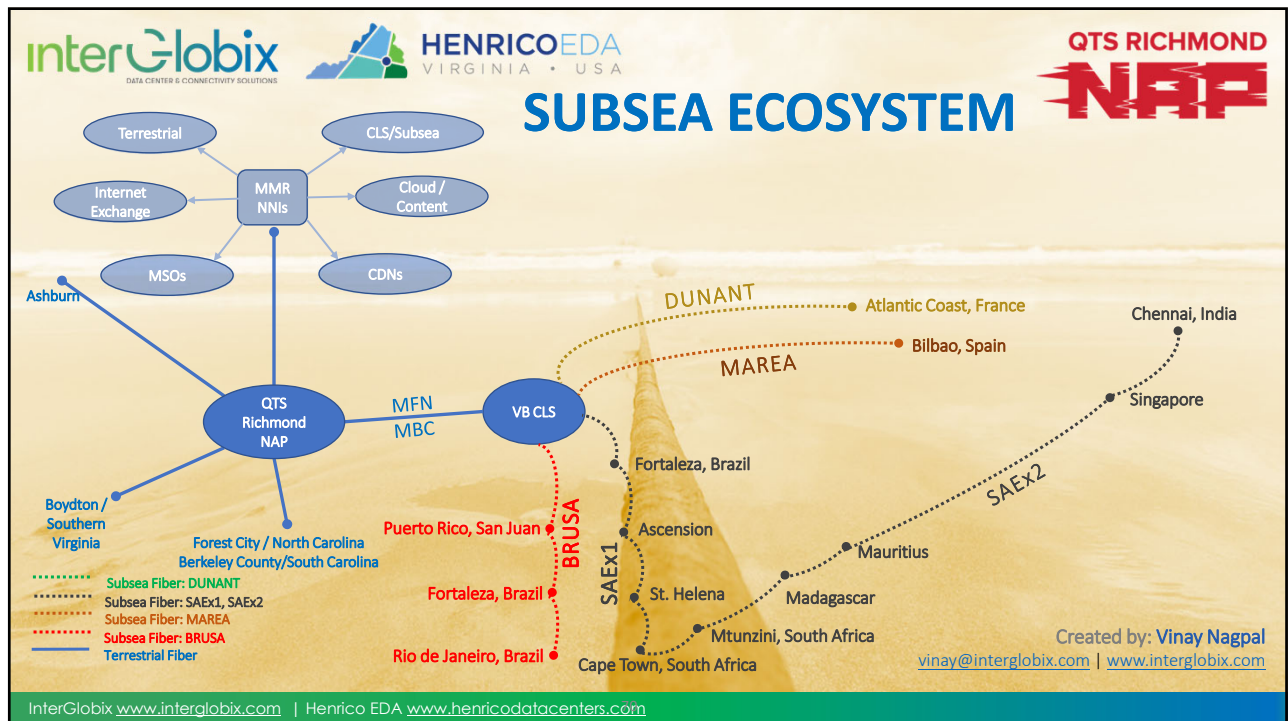


InterGlobix [www.interglobix.com](http://www.interglobix.com) | Henrico EDA [www.henricodatacenters.com](http://www.henricodatacenters.com)

68



69



70

## Let's Hear From Our Other Speakers



**Anthony Romanello, Executive Director, Henrico County Economic Development Authority**

**Vinay Nagpal, President, InterGlobix (consultant to Henrico County)**

**Taylor Adams, Deputy City Manager / Director of Economic Development, Virginia Beach**

**Stan Blackwell, Director, Customer Solutions & Strategic Partnerships, Dominion Energy**



71

## Taylor Adams



**Deputy City Manager /  
Director of Economic  
Development**

**Virginia Beach**



72



## Stan Blackwell



**Director, Customer  
Solutions & Strategic  
Partnerships**

**Dominion Energy**



73

## RVA757 Connects' Next Steps



- Finalize and share this white paper with our stakeholders.
- Hold a webinar on this topic for RVA757 Connects' stakeholders: October 1 (with Civic Leadership Institute).
- Feature the global internet hub concept at the Convergence 2021 event: October 27 - ChamberRVA and the Hampton Roads Chamber.
- Create a plan to drive our hub status faster: Apply for a 2022 GO Virginia planning grant to assess the 15 other global internet hubs and learn how they became a global internet hub. Use the insights gained to formulate a strategic plan.
- Continue outreach: Continue to build awareness of, familiarity with, and support for becoming a global internet hub. Showcase this cause through RVA757 Connects' marketing communications efforts.
- Build this topic into future scope of work: Identify ways to help advance the global internet hub concept throughout 2022.



74



● ● ●

# Breakout Session

40 Minutes

RVA757 connects

I-64 INNOVATION CORRIDOR

75

## Small Group Discussion 3 Topic Areas – 40 Minutes

● ● ●

- 1. GHI:**

Question #1: What are your **biggest take-aways from today** – *The I-64 Innovation Corridor Becoming a Global Internet Hub?*

Question #2: **How should RVA757 Connects (our organization) help advance this cause** – *Making the I-64 Innovation Corridor a Global Internet Hub?*

Question #3: What **additional information** do we need on *Making the I-64 Innovation Corridor a Global Internet Hub?* **What would make our story even more compelling** as we spread the word?
- 2. Comments / suggestions on this meeting.**
- 3. Format of future meetings.**

RVA757 connects

76

...

# Group Report Out & Next Steps

Tom Frantz

*15 Minutes*



77

## 1. Make plans to attend this Webinar:



**October 1<sup>st</sup> 11:30 am – 12:30 pm**  
**Virtual Forum**  
*How Collaboration Along I-64 Innovation  
Corridor Making Us a Global Internet Hub  
and How This Will Impact Every Business*



78

2. Make plans to attend the ChamberRVA's and Hampton Roads Chamber's CONVERGENCE 2021 event:



**October 27<sup>th</sup> 10:00 am – 4:00 pm**  
**In Person and Virtual**

*Showcasing RVA757 Connects*  
*Featuring International Speaker on*  
*Global Internet Hubs*



79

3. Participate in a very short (1 minute.) follow-up survey after this meeting:



*What areas would you like more information on  
and be part of as we move forward?*

**2021 Priorities**

**Advance** Innovation Corridor positioning

**Implement** Talent Pipeline Study

**Accelerate** understanding of digital connections

**Showcase** member initiatives

**Increase** research and development collaboration

**Support** Virginia Capital Trail completion

**Remove** passenger barriers on rail services

**Advocate** for widening of I-64

**Initiatives**

Advance RVA757 Connects' communications efforts

Advance new wave of Grant Applications:

- Apprentices
- Industry Clusters
- Global Internet Hub



80

## 4. Support our communications efforts



- Provide names for potential board directors.
- Provide “*innovation*” stories to Laura – at least one per director and MIC member.
- Invite people to follow us – your key employees and colleagues.
- Link to our social media.



81

## 5. Join others in supporting RVA757 Connects



82



## 5. Join others in supporting RVA757 Connects



- Theodore L. Chandler, Jr.
- Wilson H. Flohr, Jr.
- Thomas R. Frantz
- Moses Foster
- Robbyn Gayer
- Mitch Haddon
- Bob Holsworth
- Martin A. Joseph
- Sarah Jane Kirkland
- John W. Martin
- John Reinhart
- Bernard Robinson, Sr.
- Douglas L. Smith
- James Spore
- Jim Ukrop

Thank You!



We are Adjourned.