



# CONVERGENCE

Thursday, October 13, 2022 | 10 a.m. to 8:30 p.m.

2022  
**CONVERGENCE**



**WELCOMING AND OPENING REMARKS**



**Theodore L. Chandler, Jr.,**  
Co-Chair RVA757 Connects

Presenting



Speaker



Luncheon



Dinner



Supporting

Gather | Guernsey Tingle



2022  
**CONVERGENCE**



**757 FACILITATOR**



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

Presenting



Speaker



Luncheon



Dinner



Supporting

Gather | Guernsey Tingle





## TRANSPORTATION, BROADBAND, VIRGINIA CAPITAL TRAIL, AND SUBSEA CABLES



**Bob Crum,**  
Executive Director of the Hampton Roads Planning District  
Commission  
and the Hampton Roads Transportation Planning Organization

# Hampton Roads Transportation Projects Update



# Hampton Roads Transportation Accountability Commission

Sales and Use Tax: 0.7%

Gas Tax: 2.8%

Per the Code of Virginia, monies must be used for transportation projects in our region that provide the highest level of congestion relief for our residents





# ROLES IN TRANSPORTATION PROCESS

**HRTPO:** Identifies, evaluates and ranks regional transportation projects

**HRTAC:** Uses monies from the Hampton Roads Transportation Fund to finance projects

**VDOT:** Project construction/delivery



## KEY TAKEAWAYS

The Hampton Roads region has one of the largest interstate highway construction programs underway in the country

93% of the funding for these projects was generated by the Hampton Roads region through HRTAC

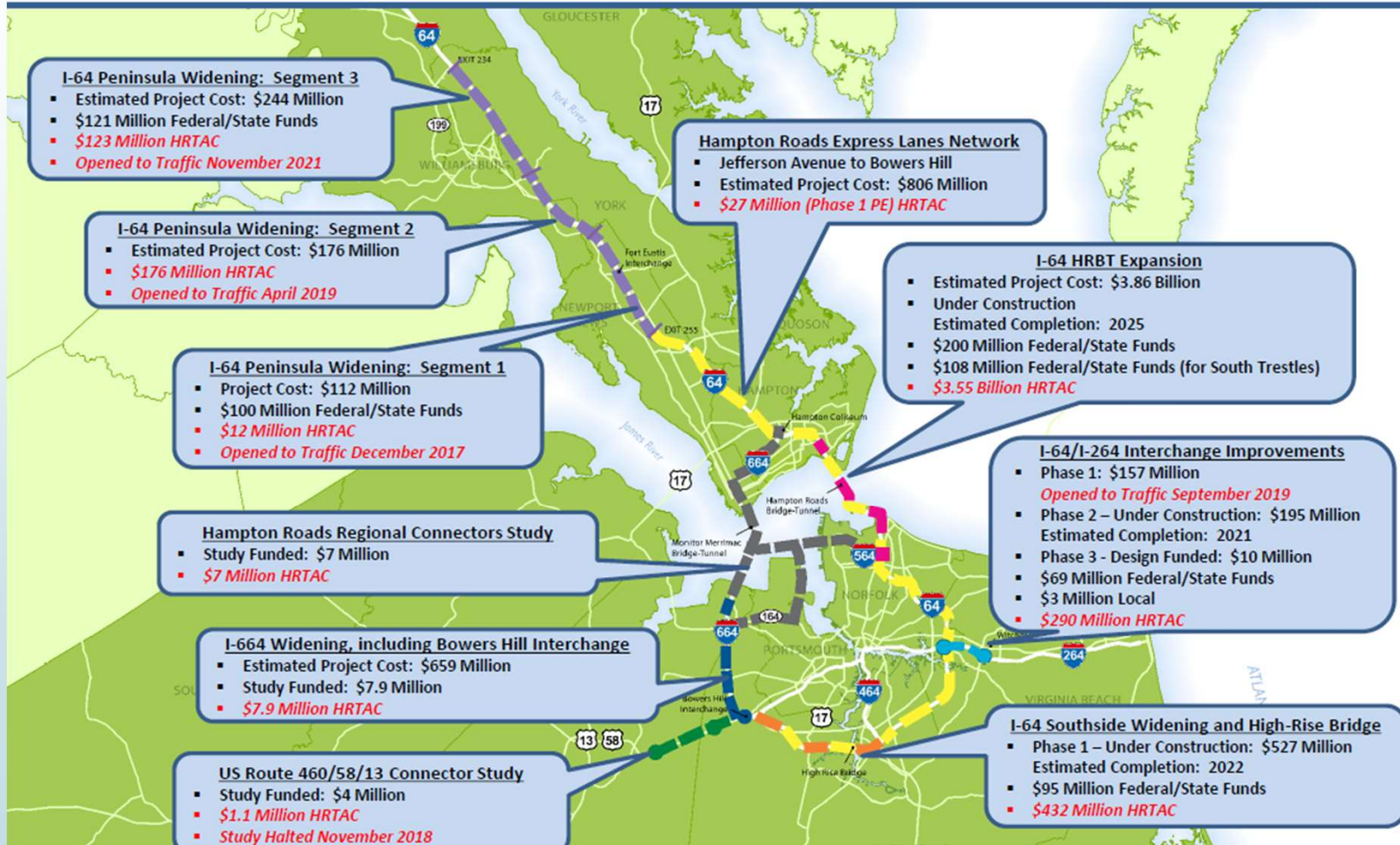
These projects include nearly 200 lane miles of I-64 improvements: the I-64/HRBT, I-64 Peninsula Widening, I-64/264 Interchange and I-64 Southside/High Rise Bridge

Currently, there are federal loans but no federal monies to HRTAC supporting these projects



# Hampton Roads Regional Transportation Priority Projects

## \$5.5 Billion Total Value, \$4.7 Billion HRTAC Funded



# I-64 Peninsula Widening

Segment 1  
Complete



# I-64 Peninsula Widening Segment 2 Complete



# I-64 Peninsula Widening

Segment 3  
Open to Traffic  
December 2021





**Widening of I-64 to six lanes Exit 234 west of Williamsburg eastward**

***The 29 mile 'GAP' lanes remain westward to Bottoms Bridge***





# I-64 Gap

First 3 phases of I-64 improvements on Peninsula  
HRTAC contributed \$311 M

29 mile gap from Exit 234 to Exit 205 (9 miles in Hampton Roads)  
Total Cost of 29-mile gap estimated at \$750 M

State Budget Year 1: \$300 M

State Budget Year 2: \$150 M

\$450 M

Federal Funding Request: \$150 M

\$600 M

CVTA \$100 M

\$700 M



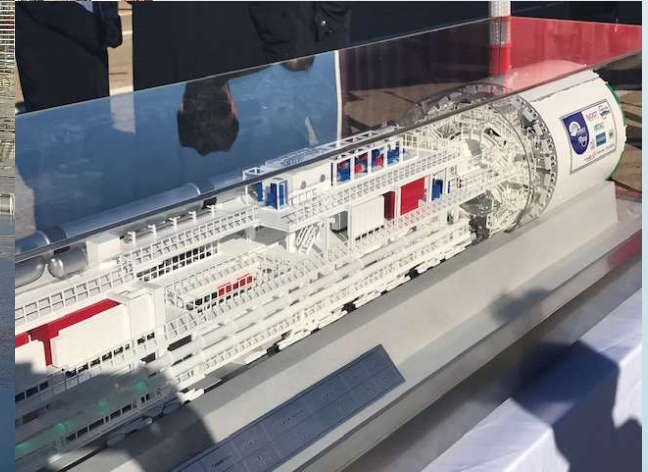
## Hampton Roads Bridge Tunnel (HRBT) Expansion





# Hampton Roads Bridge Tunnel (HRBT) Expansion





# HRBT Expansion Project

Largest Single Roadway Project Value in History of Virginia at \$ 3.8 Billion



# I-64/I-264 Interchange Phase 1 Completion Fall 2021



# I-64/I-264 Interchange Phase II– Eastbound Interchange Improvements and Widening to Witchduck Road



# I-64/I-264 Interchange/Greenwich Road Flyover





# I-64/I-264 Interchange





## High-Rise Bridge/I-64 Southside Widening



# High-Rise Bridge I-64 South Side



# High-Rise Bridge/I-64 South Side Late 2022 Completion



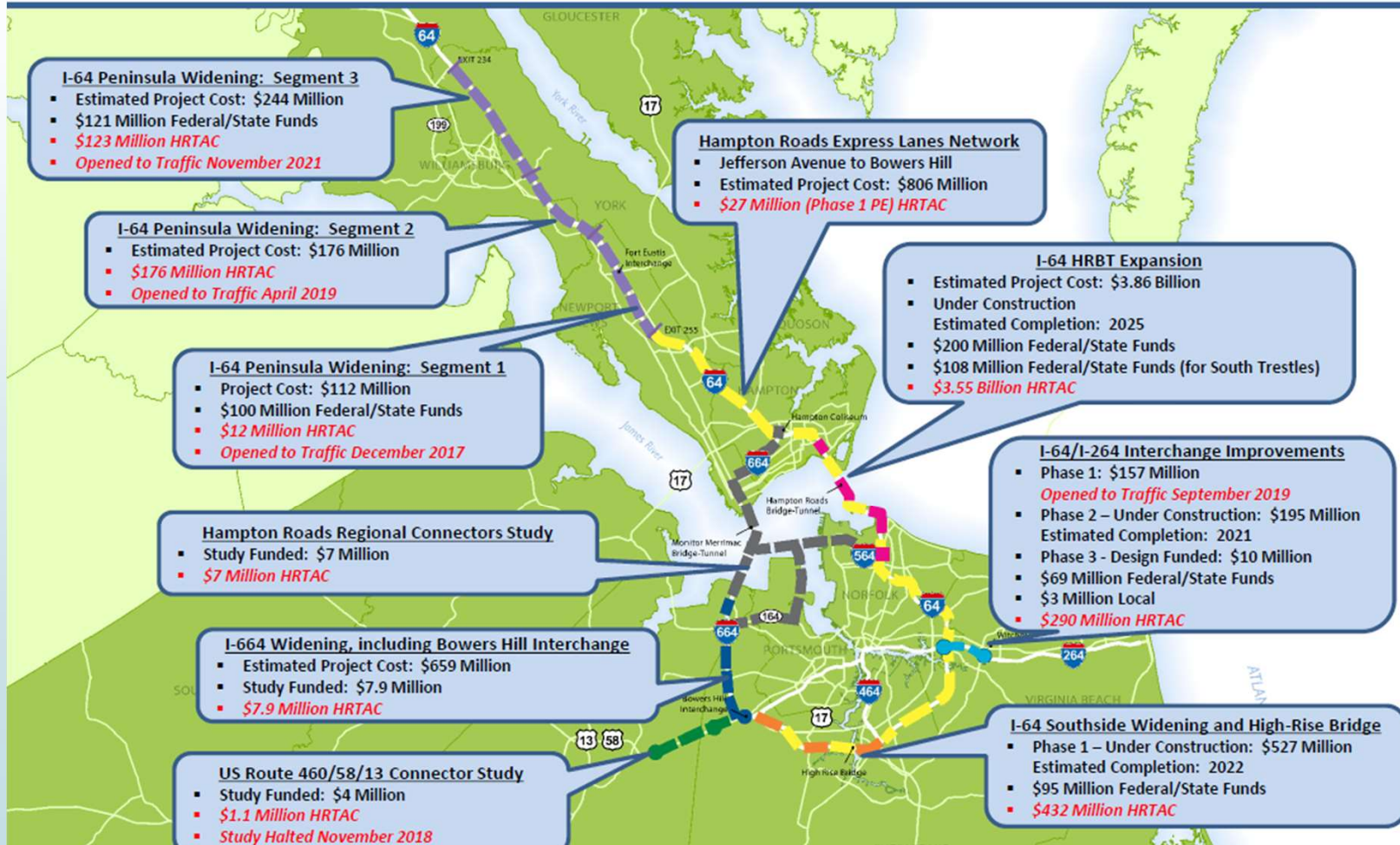
# High-Rise/I-64 Widening Southside

Widening of I-64  
south side from  
Greenbrier to  
Bowers Hill  
Interchange with  
new parallel bridge



# Hampton Roads Regional Transportation Priority Projects

## \$5.5 Billion Total Value, \$4.7 Billion HRTAC Funded





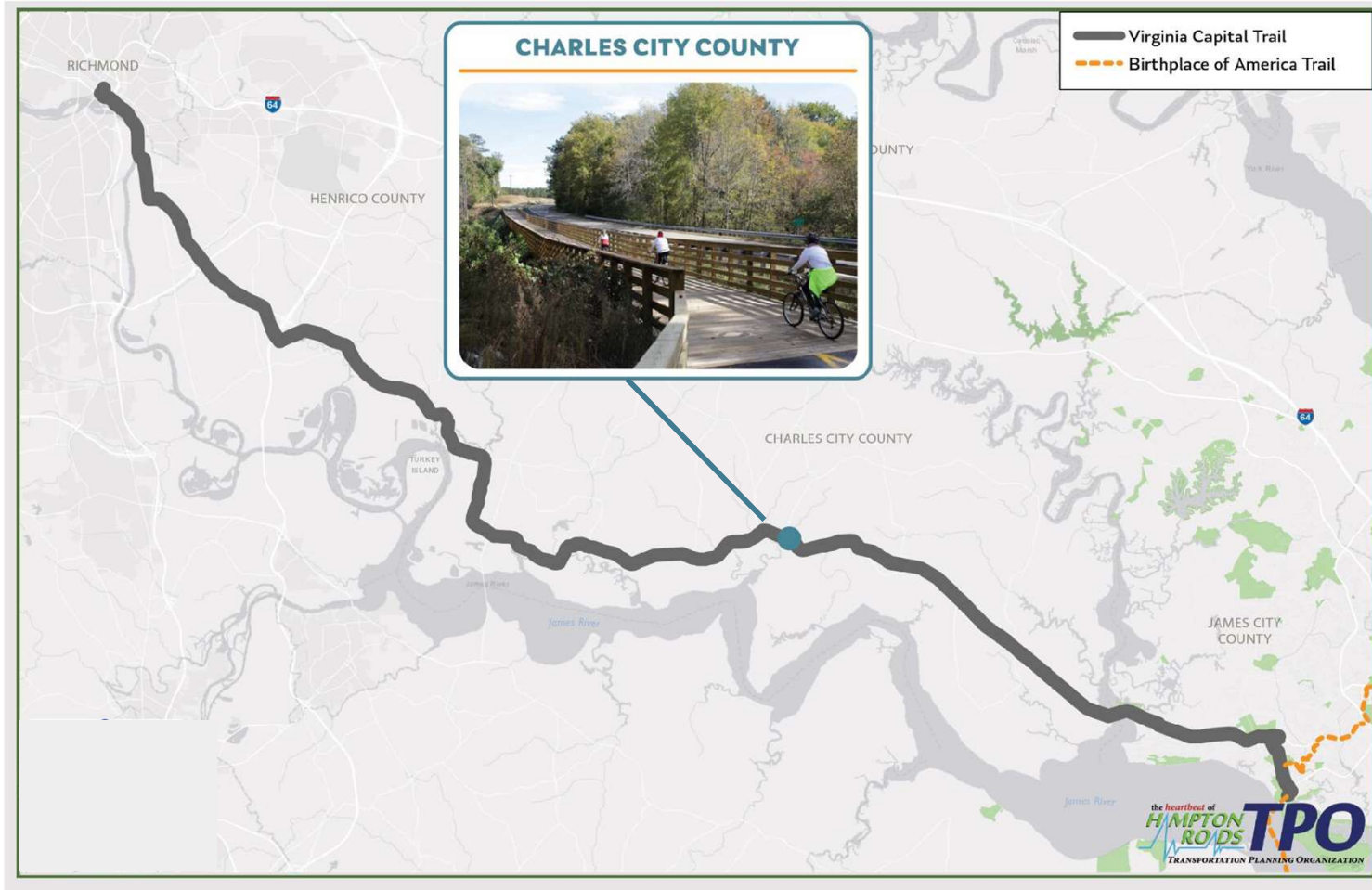
**Existing - Eastbound**

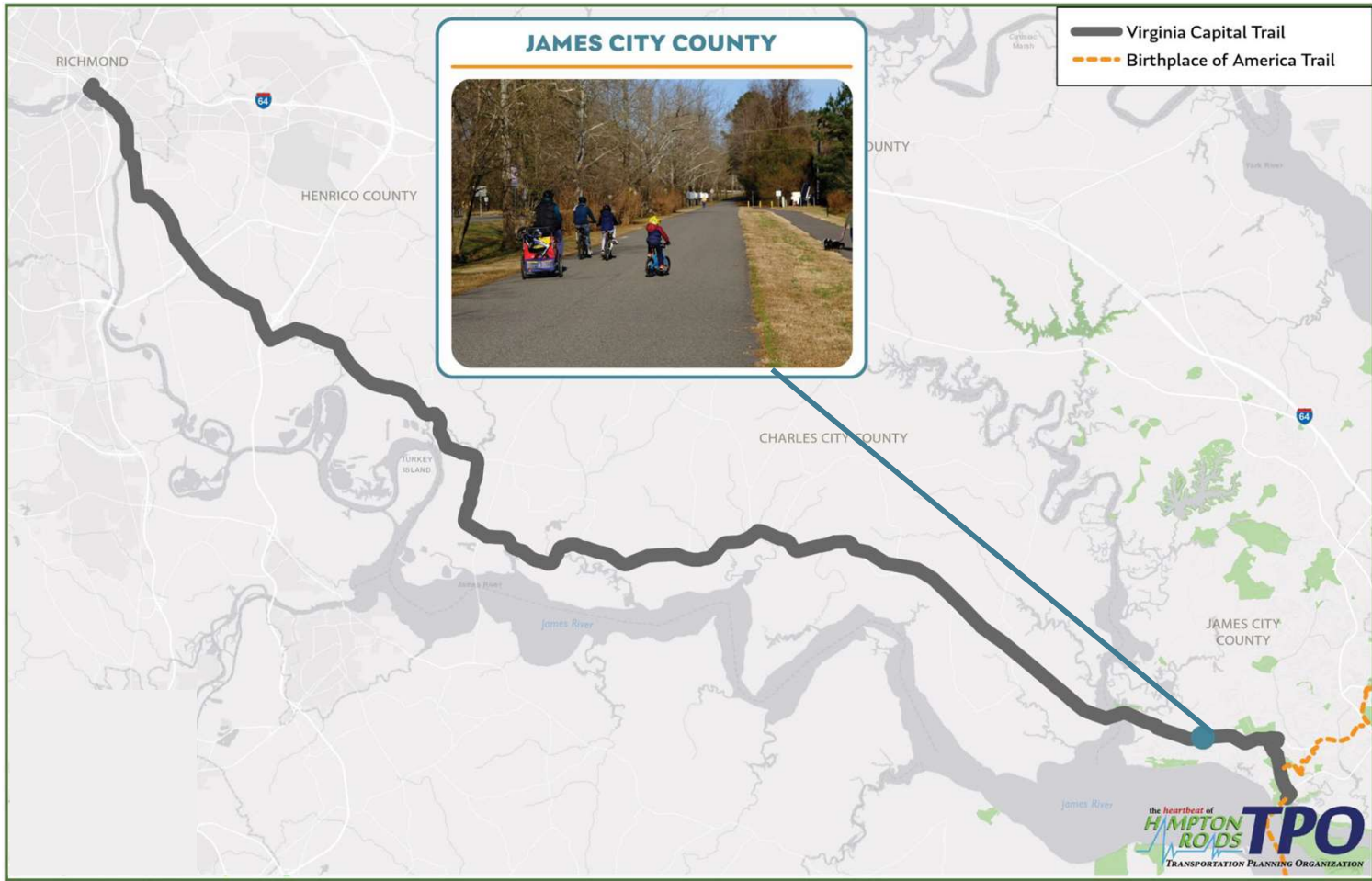


**Future : Willoughby Bay Bridge Widening**

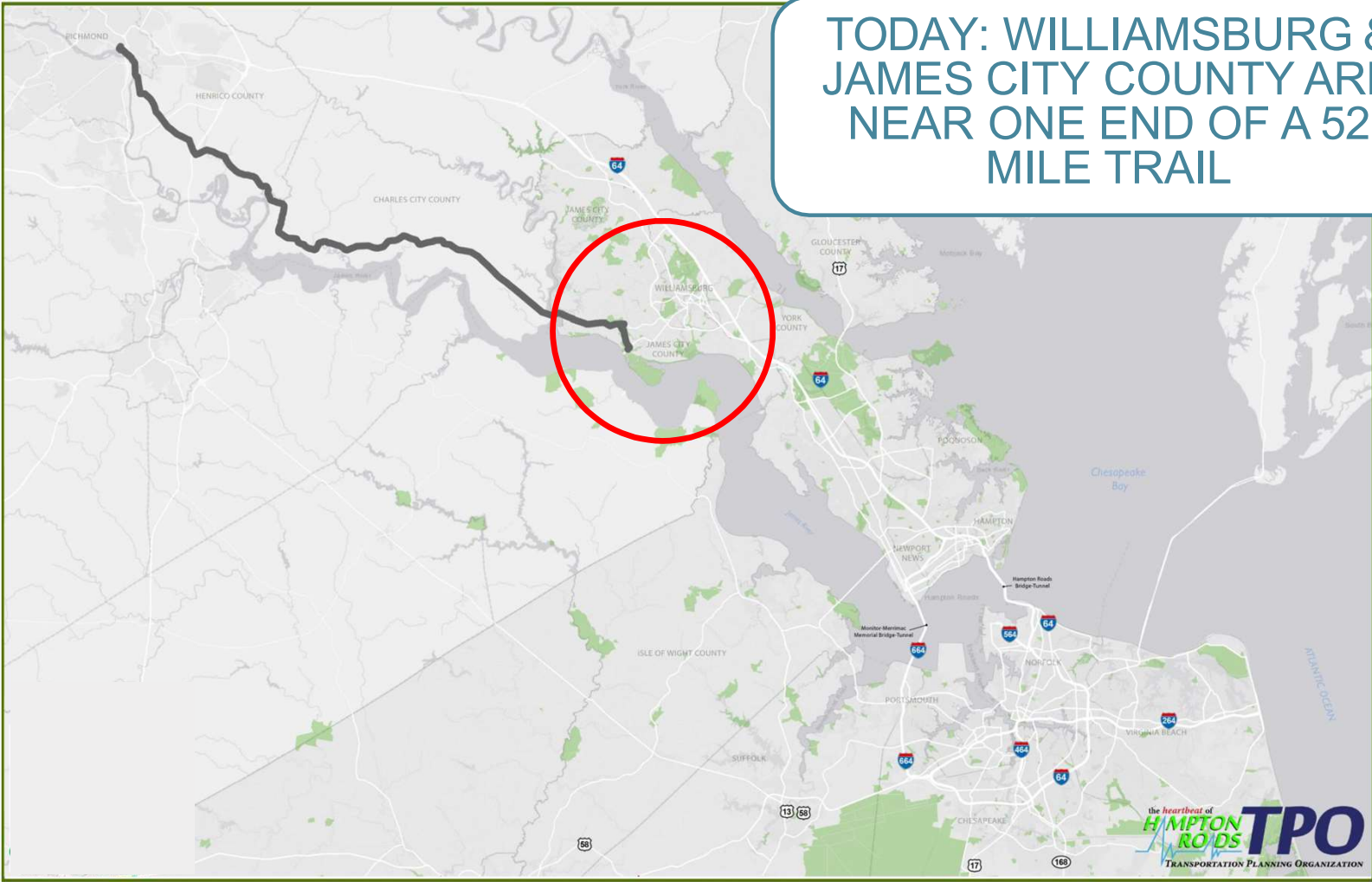
# Birthplace of America Trail/ Capital Trail Extension Overview



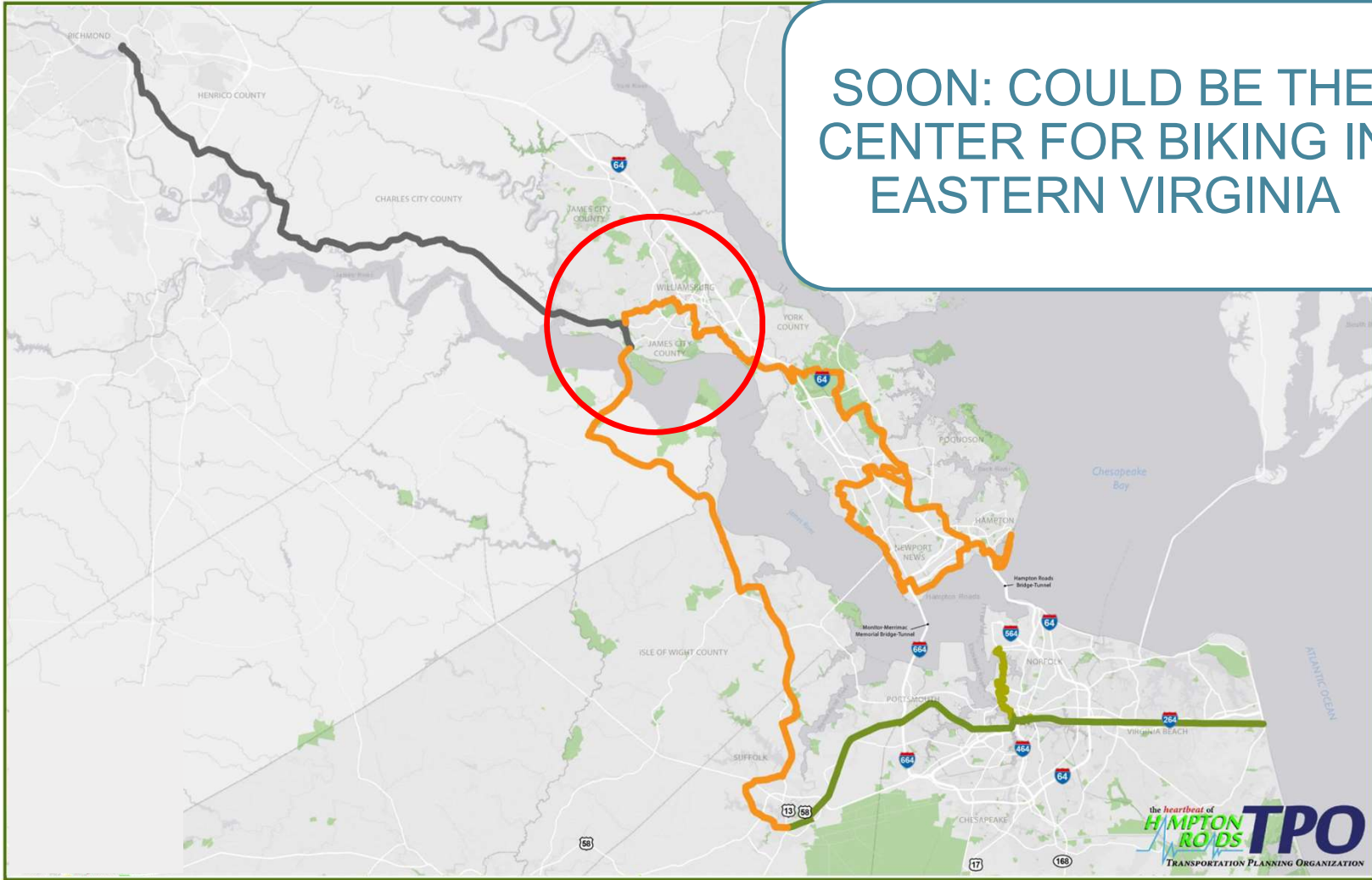




TODAY: WILLIAMSBURG &  
JAMES CITY COUNTY ARE  
NEAR ONE END OF A 52  
MILE TRAIL



SOON: COULD BE THE  
CENTER FOR BIKING IN  
EASTERN VIRGINIA

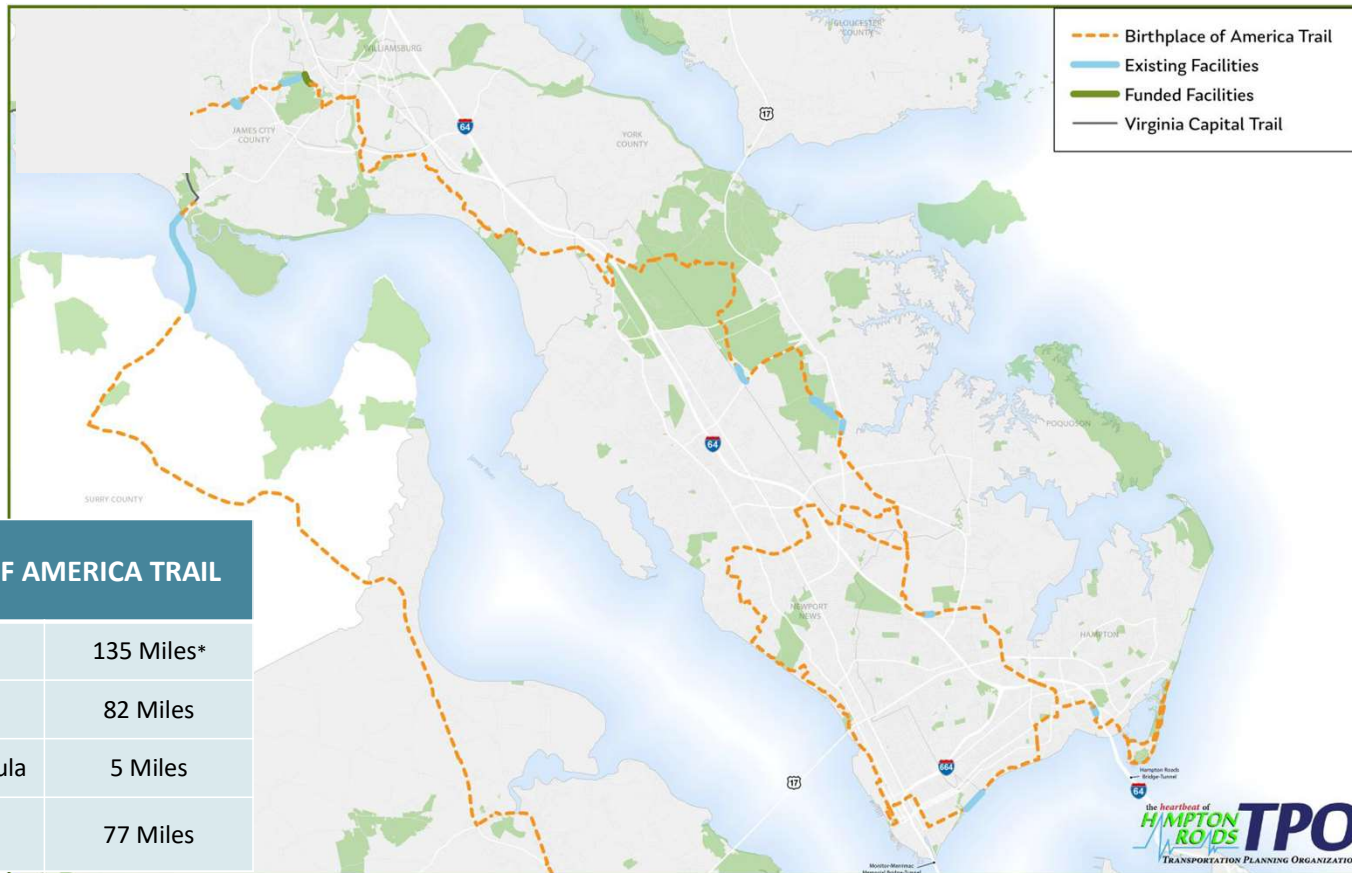




## The HRTPO conducted a high-level planning study and identified two potential routes for extending the Virginia Capital Trail into the Hampton Roads region

- One route was identified on the Peninsula to Fort Monroe
- The other crossed the James River at the Surry Ferry, and proceeded south to the railroad right of way and connected to the Virginia Beach Oceanfront
- The region's local governments have unanimously endorsed this vision/plan

# The current focus is on the Peninsula – extending the trail from the Williamsburg area to Fort Monroe in the City of Hampton

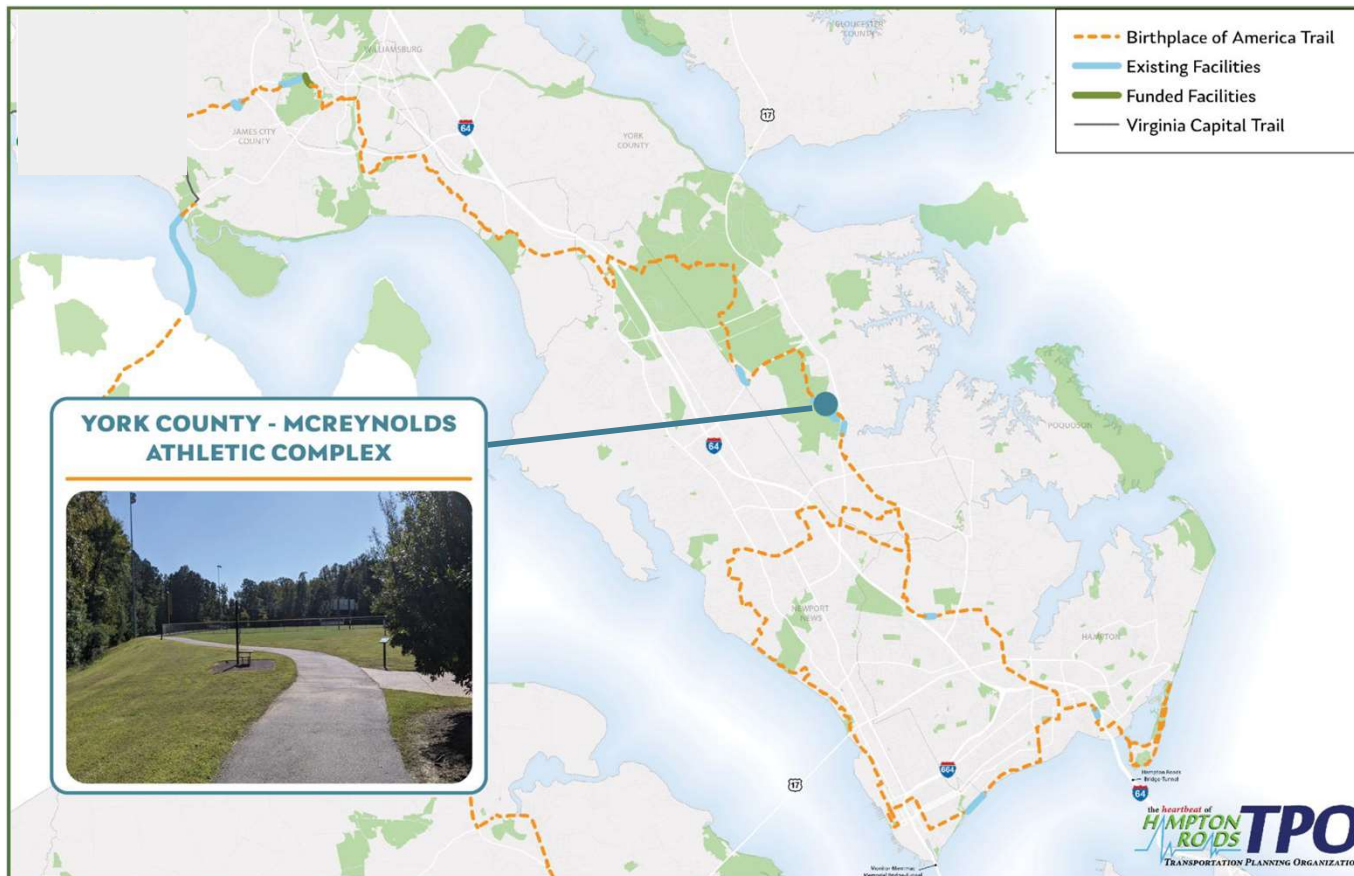


BIRTHPLACE OF AMERICA TRAIL	
Total	135 Miles*
Peninsula	82 Miles
Existing - Peninsula	5 Miles
Remaining - Peninsula	77 Miles

**EXISTING FACILITIES: Some segments of the trail are in place and are being used**

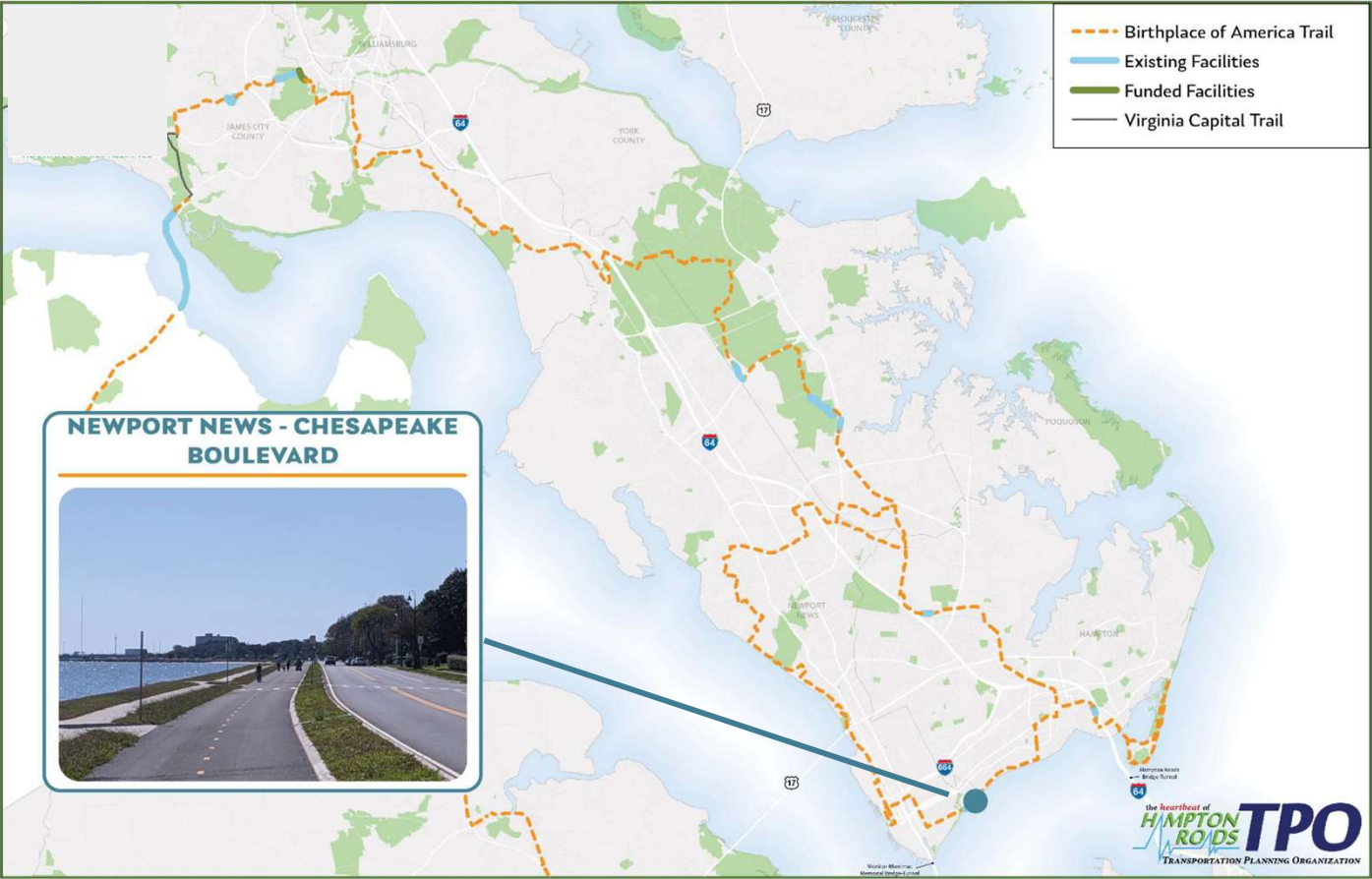


## EXISTING FACILITIES: CONTINUED





# EXISTING FACILITIES: CONTINUED



# BoAT Cost

But most of the trail on the Peninsula must be designed, funded and built. The estimate to complete the entire trail network on the Peninsula is approximately:

**\$125 Million**

# Complexity



- While most of the Virginia Capital Trail traverses rural areas along Route 5, the trail extension in Hampton Roads will proceed through suburban and urban areas.
- This complex environment can create challenges regarding alignments, property ownership, on-street/off-street, available right of way, etc.

# The Good News

- The good news is that the proximity of the proposed trail to residential and employment areas creates incredible potential to serve residents, businesses, education, etc.
- Residents could use this trail as a transportation choice in their daily trips to work, school and play.
- The trail would provide access to underserved populations.
- While also connecting significant tourism destinations which will be attractive to visitors.

# Unanimous Regional Support

- Through the HRTPO/HRPDC, the region's 17 local governments have unanimously supported the BoAT in Hampton Roads
- CAOs from James City County, Williamsburg, York County, Newport News, Hampton and Poquoson have all committed to advancing the trail in their localities
- Some of these localities have committed local match for portions of the trail that are outside of their localities

# We are Starting to Build Momentum



Summer 2018 – The City of Hampton was awarded funding for the Mellen Street Bicycle and Pedestrian Project – Segment I (South Mallory Street to South Willard Avenue) via the VDOT Transportation Alternatives Set-aside Program

Summer 2018 – The City of Hampton was awarded funding for the Mercury Boulevard Road Diet Project – Segment II (North Willard Avenue to Fort Monroe) via the VDOT Transportation Alternatives Set-aside Program

Summer 2019 – York County was awarded funding for the Victory Boulevard (Route 171) Capacity (multi-modal) Enhancements Project (Yorktown Road to Poquoson City Line) through the VDOT SMART SCALE program

Fall 2019 – The City of Williamsburg was awarded funding for the Compton Drive Shared-use Path (Monticello Avenue to Brooks Street) via the VDOT Transportation Alternatives Set-aside Program

Summer 2020 – The City of Poquoson was awarded funding for the Victory Boulevard (Route 171) Enhancement Project (York County Line to Poquoson Avenue) through the VDOT SMART SCALE program

# Future Segments are Planned for Construction



Spring 2023 – Planned completion of the Compton Drive Shared-use Path (Monticello Avenue to Brooks Street), located in the City of Williamsburg

Spring 2023 – Planned completion of the Mellen Street Bicycle and Pedestrian Project – Segment 1 (South Mallory Street to South Willard Avenue, located in the City of Hampton

Spring 2023 – Planned completion of the Mercury Boulevard Road Diet Project – Segment II (North Willard Avenue to Fort Monroe), located in the City of Hampton

2026 – Planned completion of the Victory Boulevard (Route 171) Enhancement Project (York County Line to Poquoson Avenue), located in the City of Poquoson

2027 – Planned completion of the Pocahontas Trail Multimodal Corridor project (Ron Springs Road to Plantation Road), located in James City County

2028 – Planned completion of the Victory Boulevard (Route 171) Capacity (multi-modal) Enhancements Project (Yorktown Road to Poquoson City Line), located in York County

# Next Steps for Key Segments of the Trail



Right of Way Issues

Property Ownership

Routing and Design and funding  
for strategic segments of the trail

Identify Funding



# Birthplace of America Trail



- VDOT has agreed to provide On-Call Consultant – Michael Baker International
- \$200,000 of resources to support On-Call Consultant Work
- Not enough funding for design work, but resources to further address planning level issues, including refinement of route locations
- Goal is to advance project segments to be candidates for grant applications

# Funding



- HRTPO continues to explore State and Federal funding opportunities.
- As an example, a SMART SCALE Application for 5-miles of the trail in Newport News was submitted in early August.

# Potential Funding Sources

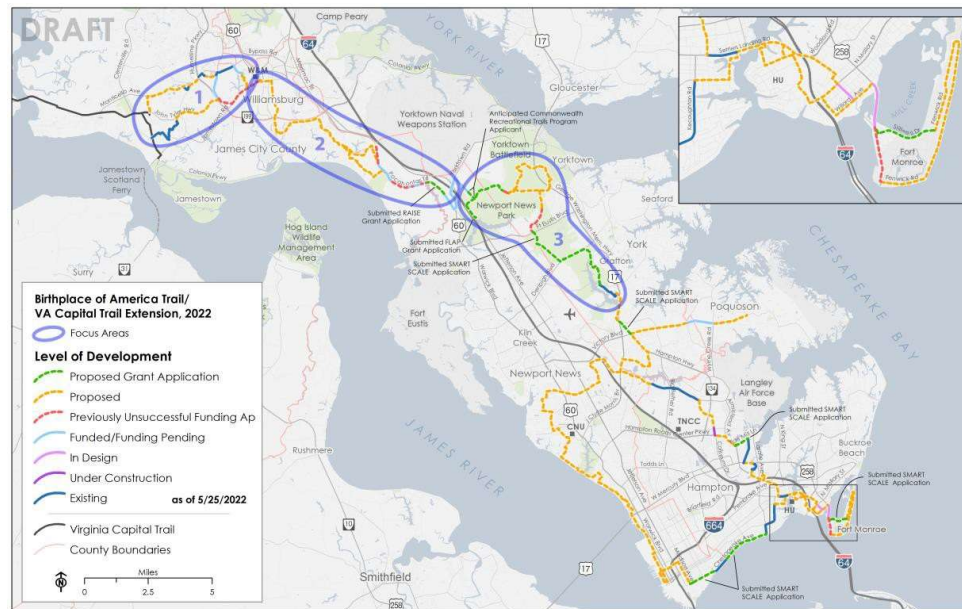


- SMART SCALE
- Working with Commonwealth Transportation Board Members
- State Trail Funding
- Federal Infrastructure Package Funding
- Locality Capital Improvement Programs
- Coordination with Developers

# Pathway Forward



Proceed in a Strategic Inter-connected Approach



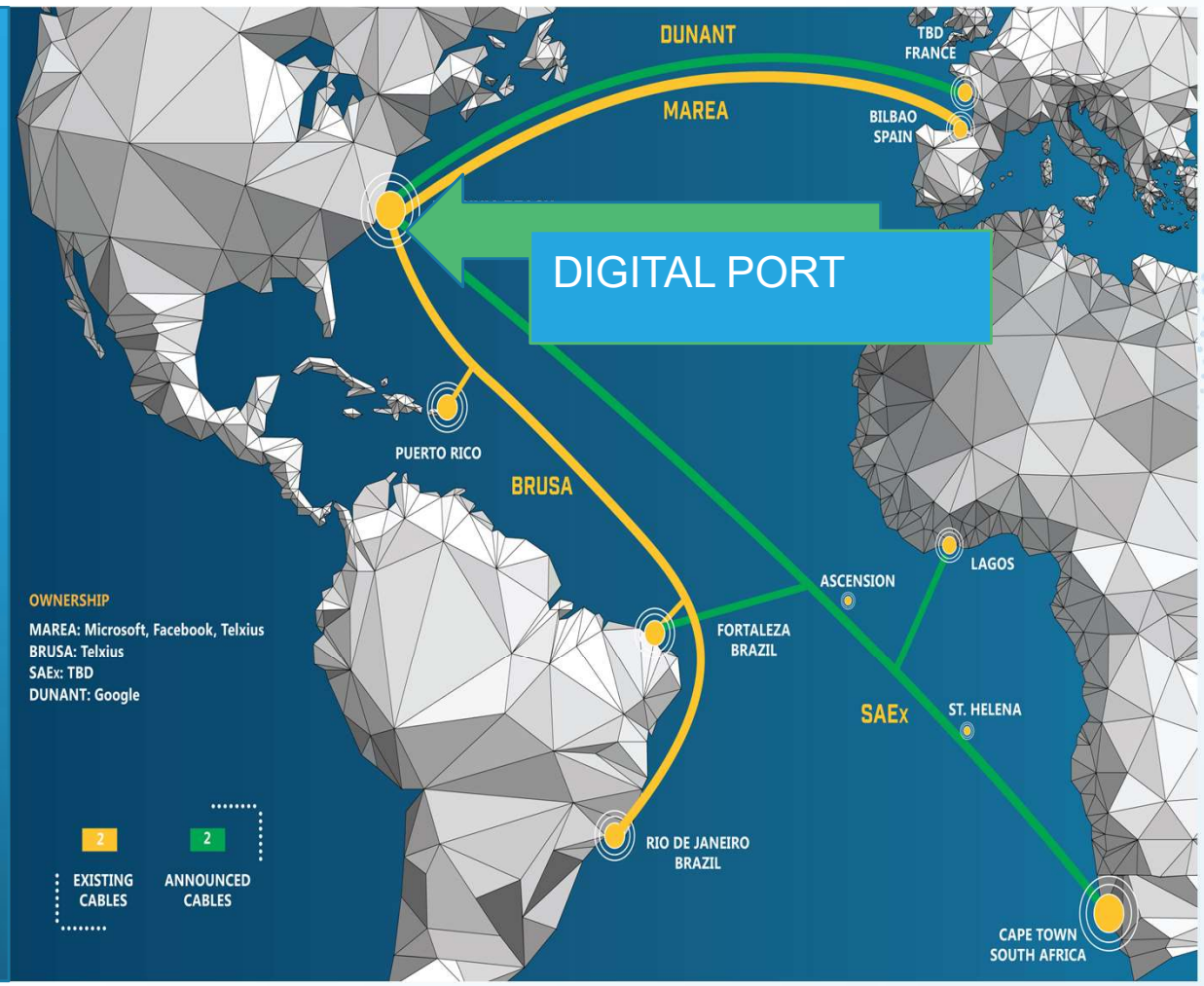
Funding Will Be Key to Our Success  
\$125 Million for full Peninsula Segment

# **Regional Fiber Network Hampton Roads/757 Region**

**October 13, 2022**

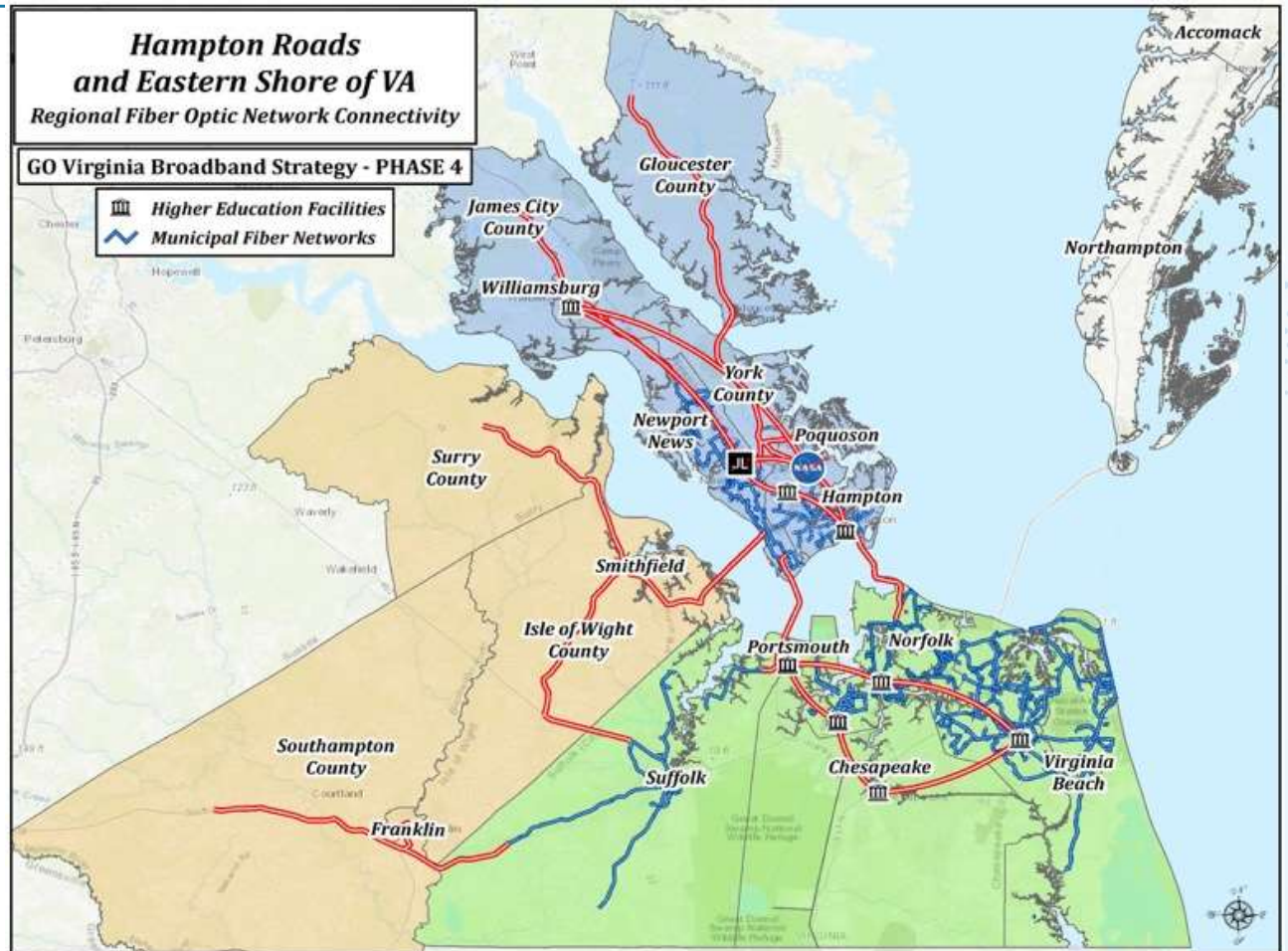
A decorative graphic consisting of a series of blue dots arranged in a wavy pattern, spanning the width of the slide and positioned below the main title and date.

# The Network Ring will connect to the Trans-Atlantic Subsea Cables



# Our Vision

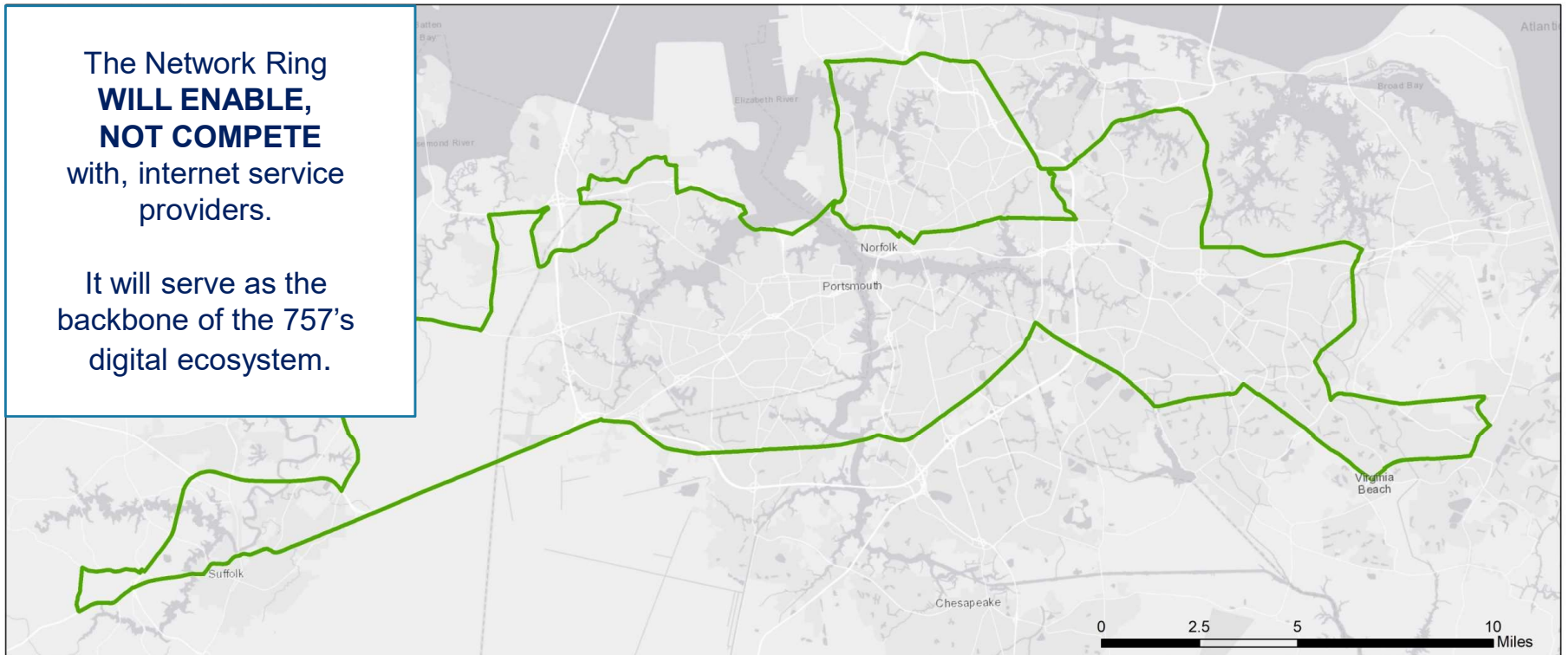
Ultimately,  
this will be a  
**Fiber Optic Network  
Ring**  
that will connect our  
entire 757 Region.



# Updated Regional Fiber Ring Southside Phase I

The Network Ring  
**WILL ENABLE,  
NOT COMPETE**  
with, internet service  
providers.

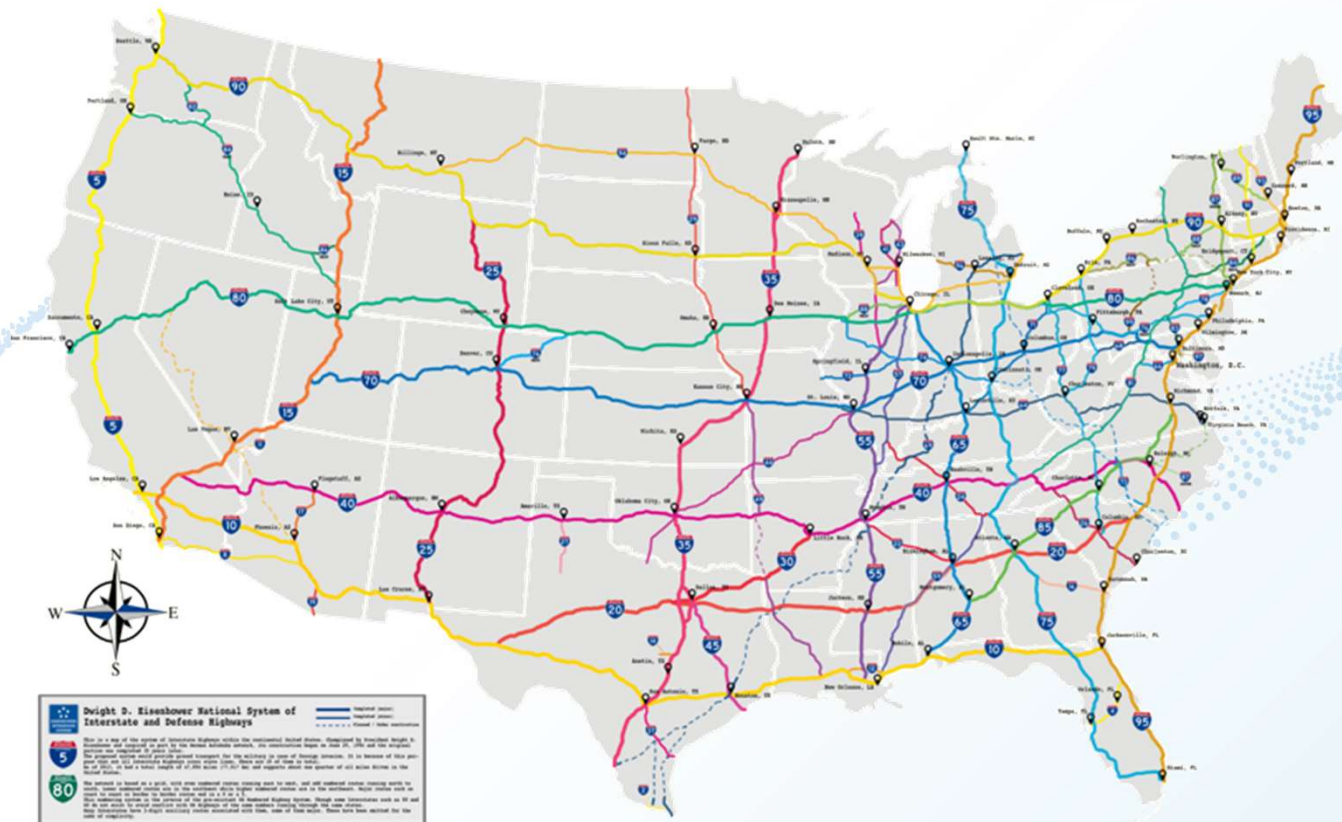
It will serve as the  
backbone of the 757's  
digital ecosystem.





# Think National Highway System Without Any Secondary Roads

*Our Interstates are the Backbone of the Entire U.S. Roadway System*



## Fiber Ring Project Participation Agreement



**Spring/Summer  
2022**

**3 Groundbreakings  
Over 3,000 Linear Miles  
Of Fiber Under Construction**

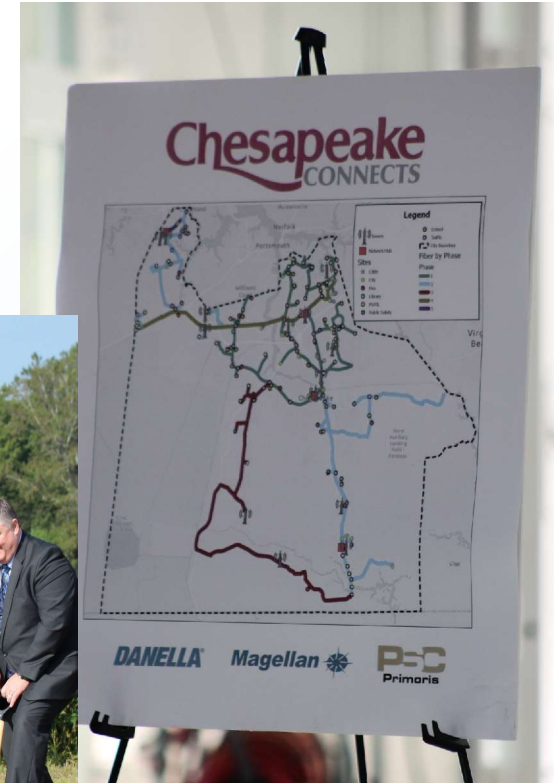
# Fiber Ring Groundbreaking April 6, 2022



# Suffolk, Isle of Wight, Southampton July 14, 2022



# Chesapeake Connects September 15, 2022



# Our Digital Highway Consists of 288 Digital Strands

Fiber optics (optical fibers) are long, thin strands of very pure glass about the diameter of a human hair.

*\*Every city has come with their requirements.*

A background image of fiber optic strands glowing with blue light. Three blue hexagonal callouts are overlaid on the image, each containing text. The top callout is on the left, the middle one is on the right, and the bottom one is on the left.

8 Strands Reserved for Cities in the Network\*

Some Strands Reserved for Education

Other Strands Reserved for Public Safety

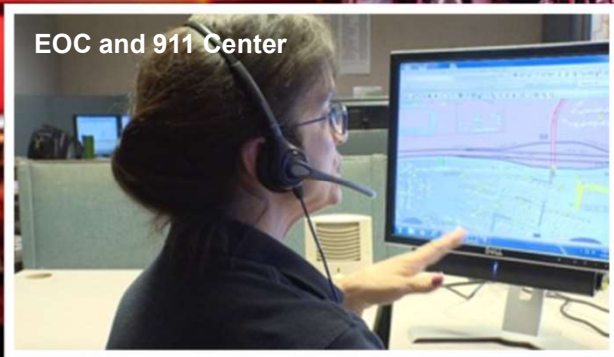
# **Our Goal - Smart Region Use Technology to Address Our Challenges and Opportunities**

- Sea Level Rise/Recurrent Flooding
- Emergency Communications
- Transportation – Managed Lanes
- Autonomous Vehicles
- Remote Learning
- Teleworking
- Job Creation
- Public Safety
- College/University Research
- Center for Innovation
- High Tech Companies
- Technology Ecosystem



The Regional Network Ring Will

# Improve the Interoperability of Our Region's Emergency Response System





The Regional Network Ring Will

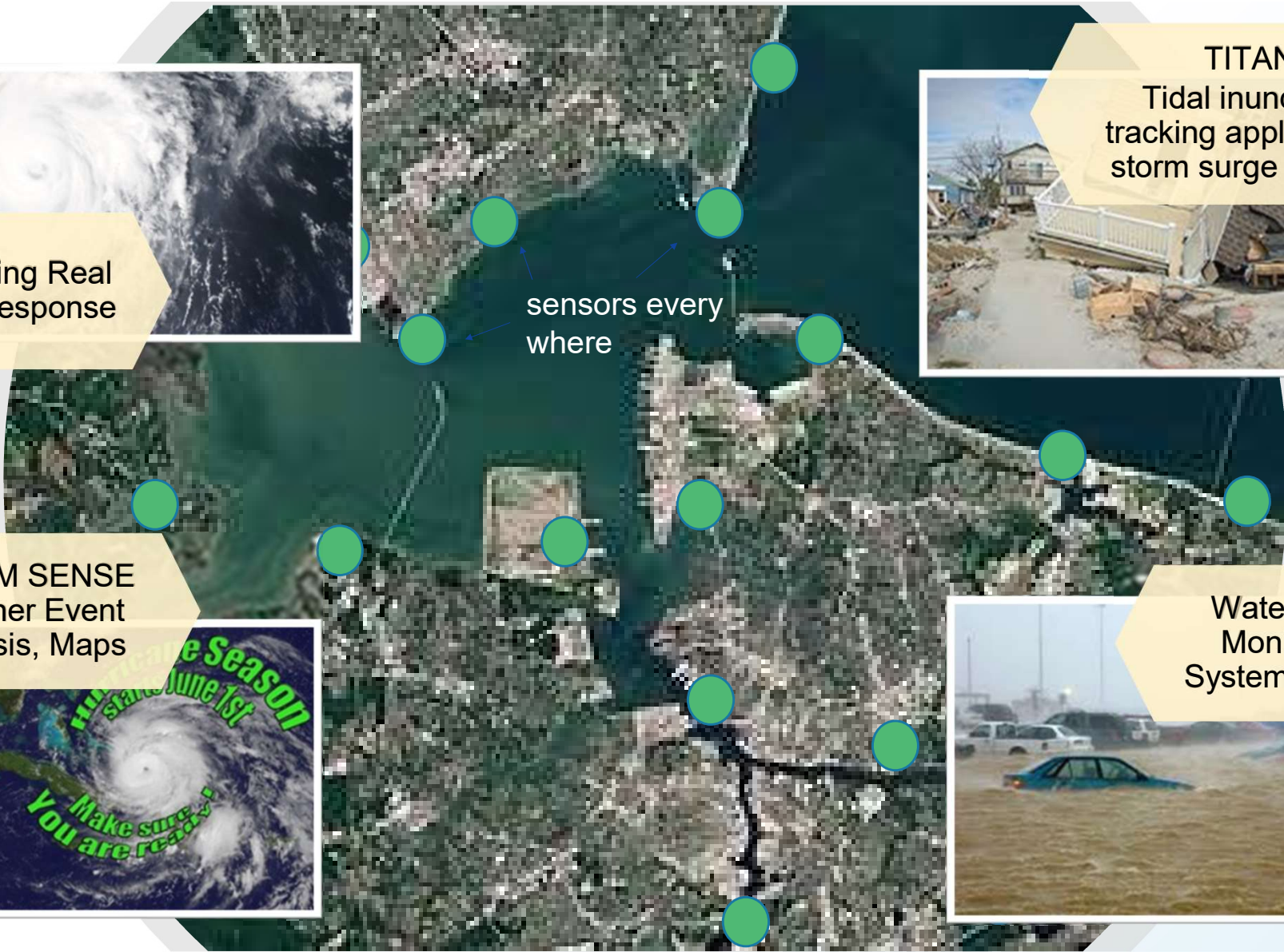
# Help The Region Navigate Flooding and Sea Level Rise



Improving Real Time Response



TITAN:  
Tidal inundation tracking application – storm surge tracking



sensors every where

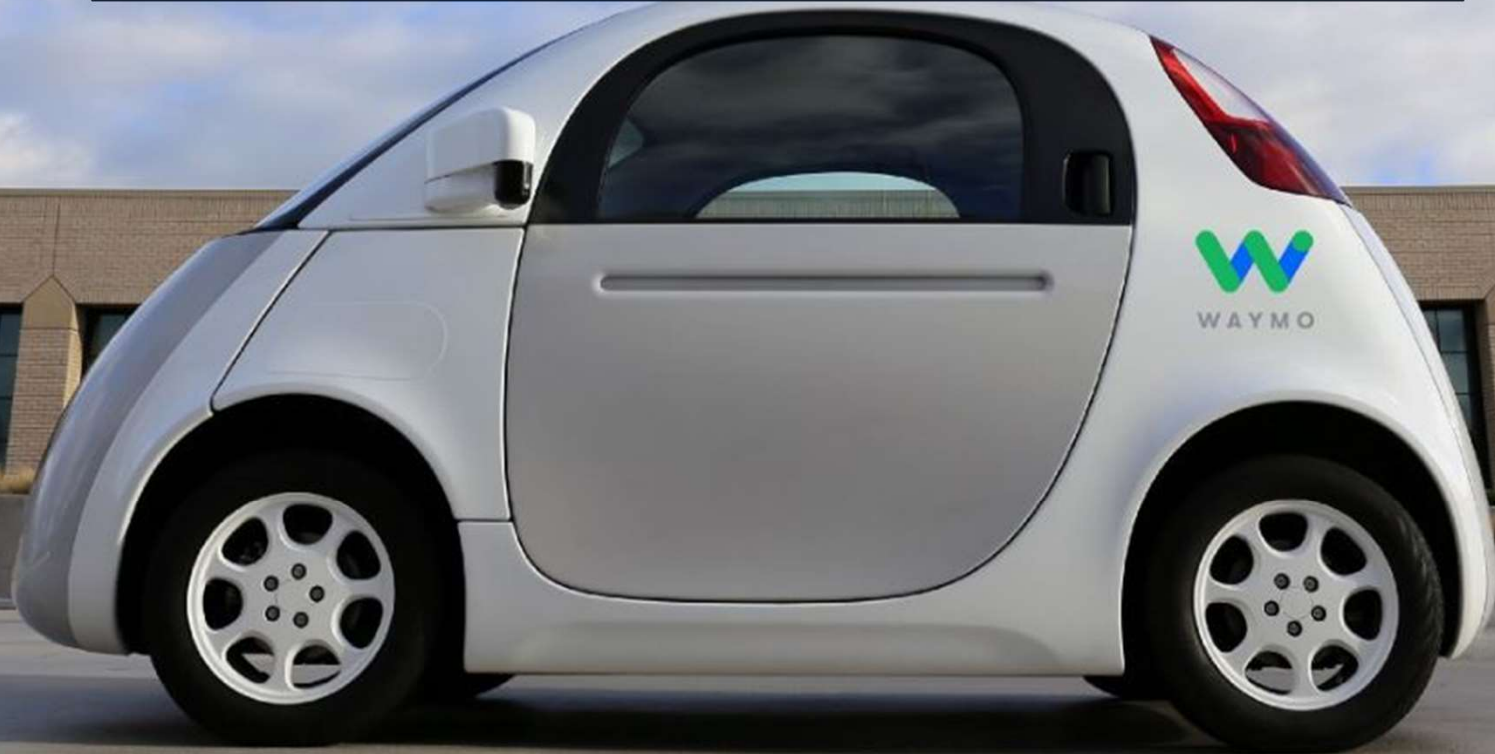
STORM SENSE  
Weather Event Analysis, Maps



Water Level Monitoring System(WLMS)

The Regional Network Ring Will

# Help Support the Future of Autonomous Vehicles





The Regional Network Ring Will

# Help Make a Case For BRAC.

BRAC will return in three to four years. The Navy wants 30% of their local workforce to telework. Regions that can support this goal will have a stronger case to make when BRAC reappears.

An aerial photograph of a city, likely New York City, showing a dense urban landscape with various buildings, streets, and a waterfront area. A large blue banner is overlaid on the top half of the image, containing text. Another smaller blue banner is overlaid on the bottom half, also containing text. The background shows a mix of residential and commercial buildings, with a prominent skyscraper on the right side. The water of a harbor or bay is visible on the right edge.

The Regional Network Ring Will

# Help Each Jurisdiction Achieve Its Vision

Every jurisdiction can use the Network Ring in a way that helps them advance their own priorities, initiatives and vision.

The Regional Network Ring Will

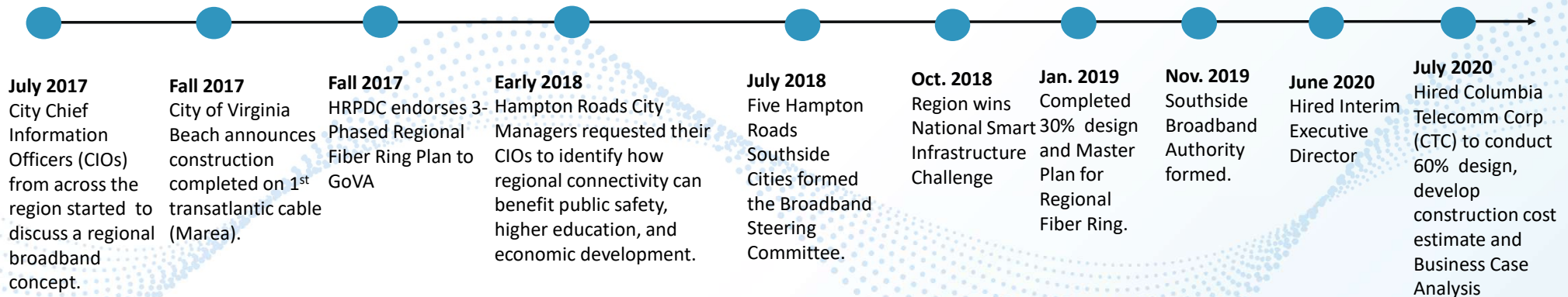
## Support Growing Industries in the 757

- Financial Services: High Frequency Trading
- Data Transfer & Storage: Microsoft / Facebook / Amazon
- Cybersecurity Industry: An immediate need for 17,000 more cyber security professionals in Virginia alone
- Medical/Bioscience & Health Industries: Data analytics are key to driving down cost while improving care
- Ecosystem for Business Investment and Entrepreneurs: Backbone connectivity at speeds of 10Gbps and beyond

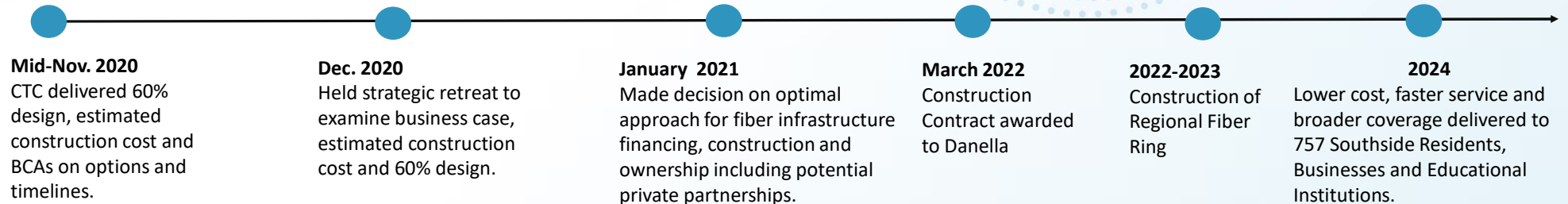


# Our 5-Year Pathway to Lower Cost, Faster Service and Expanded Broadband Coverage for 757 Southside Residents, Businesses and Educational Institutions

## Major Milestones



## Major Milestones





## **Construction: Current and Planned Action**

- CTC has completed final field survey action for the entire 119 miles of the planned fiber route
- All cities have approved the individual Master Lease Agreements (right-of-way)
- Conduit is “on-hand”; fiber delivery scheduled 1<sup>st</sup> Qtr CY23
- Staff has conducted initial conversations with the appropriate environmental regulatory agencies
- Danella begins Construction early October 2022

# PPEA/P3 Negotiations: Current and Planned Actions

- SNA continues to negotiate with Global Technical Systems (GTS) as a potential P3 partner
- Key issues captured in a Term Sheet and a preliminary draft interim agreement completed

# Next Steps

- Grant Opportunity: National Telecommunications and Information Administration (NTIA), U.S. Department of Commerce (Grant Application submitted September 30, 2022)
  - Peninsula cities (Newport News and Hampton) similar model as Southside
  - Connects Southside and Peninsula
- Continue to work with DHCD
  - VATI grants
  - Align our efforts where appropriate

**Our Region's  
Quality of Life Will  
Attract Remote  
Workers...**

**Our Regional  
Network Ring Will  
Support Them.**



# Pre-COVID-19, the Distributed Workforce Was Growing and Projected to Be 50% By 2030



Source: SIR

# COVID-19 Impact: The Distributed Workforce Is Projected to Reach 50% By 2025

*\*In the middle of COVID-19, Hampton Roads Business Leaders report that over 50% of their workforce currently works remotely.  
Source: Alliance Wave 3 Survey*



Source: SIR

In summary, our regional broadband ring is arriving just in time to

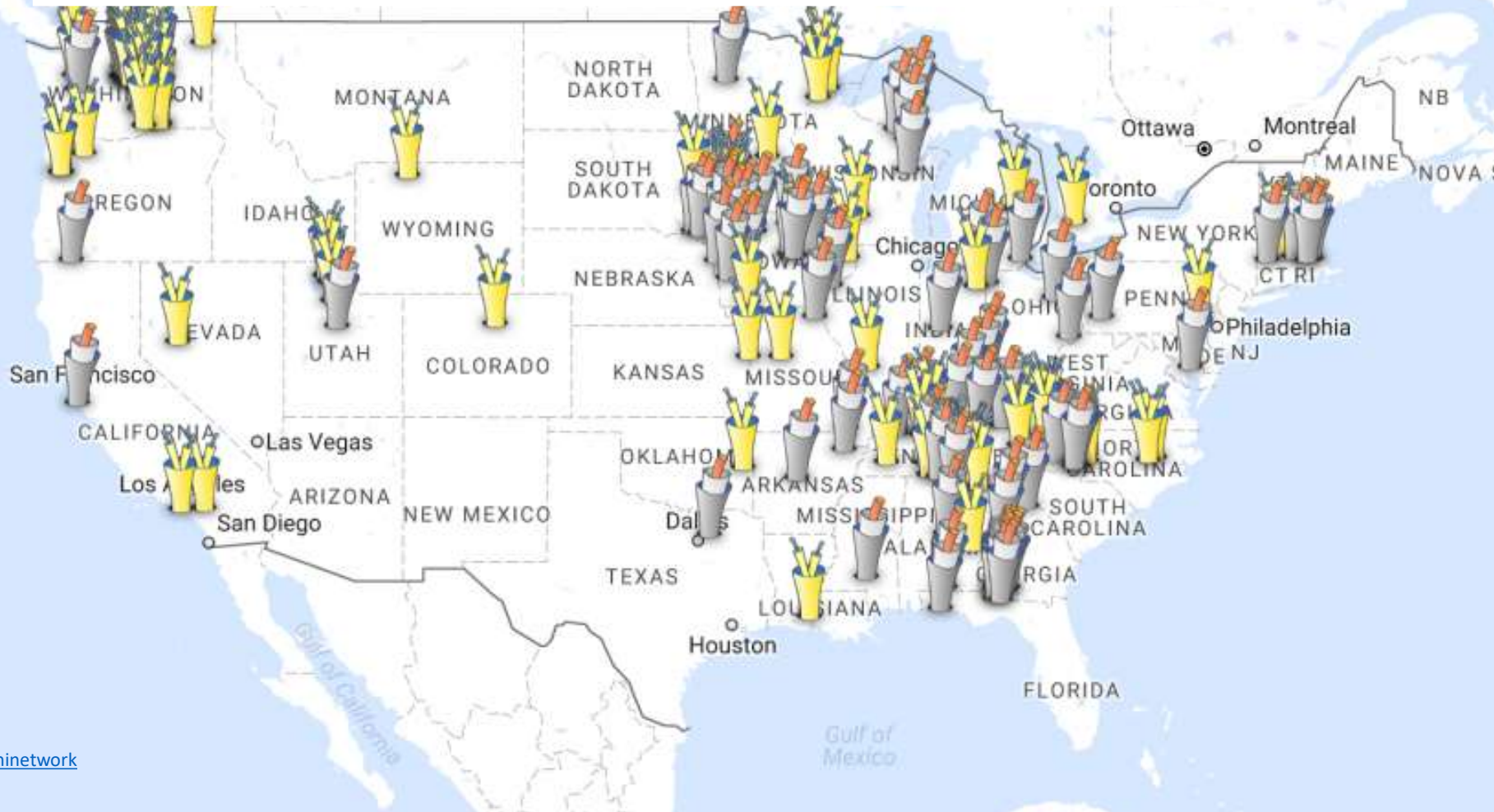
**Future-Proof the 757**

# Our Network Ring has the Unanimous Support of 17 Local Jurisdictions that make up the 757 Region





# There Are Now Over 500 Community Broadband Networks Across The US



Source: Image via [Muninetwork](https://www.muninetwork.com)

# Our Network Ring Concept has been Recognized Nationally.

**Grand Prize Winner:**

**Hampton Roads Regional Connectivity Ring**

- 69 Regional Response Teams
- 80+ Project Plans
- 250+ Collaborating Governments and Universities
- 500+ participating organizations
- \$3+ billion in project financing available for projects to scale



# Other 757 Regional Efforts

- Regional Legislative Agenda
- Violence/Crime Prevention Mayor/CAO Roundtable
- ERC Task Force (toll relief)
- Regional Economic Development Sites
- Coastal Resiliency Coordination
- Regional Housing Assessment
- Chesapeake Bay Program
- Offshore Wind
- Regional Transit Advisory Panel
- Emergency Management
- Regional Environmental Education Program
- Revenue Sharing
- Joint Land Use Studies

# Thank You!!!



Presenting



Speaker



Luncheon



Dinner



Supporting

Gather | Guernsey Tingle





## OFFSHORE ENERGY AND SUPPLY CHAIN DEVELOPMENT



**Raymond White,**  
Business Development Coordinator,  
Virginia Beach Economic Development

# Offshore Energy and Supply Chain Development

Raymond K. White  
Coordinator, Business Development  
Va. Beach Economic Development  
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Matt Smith  
Director of Energy and Water Technology  
Hampton Roads Alliance  
msmith@757alliance.com  
757-355-1136

# Topics

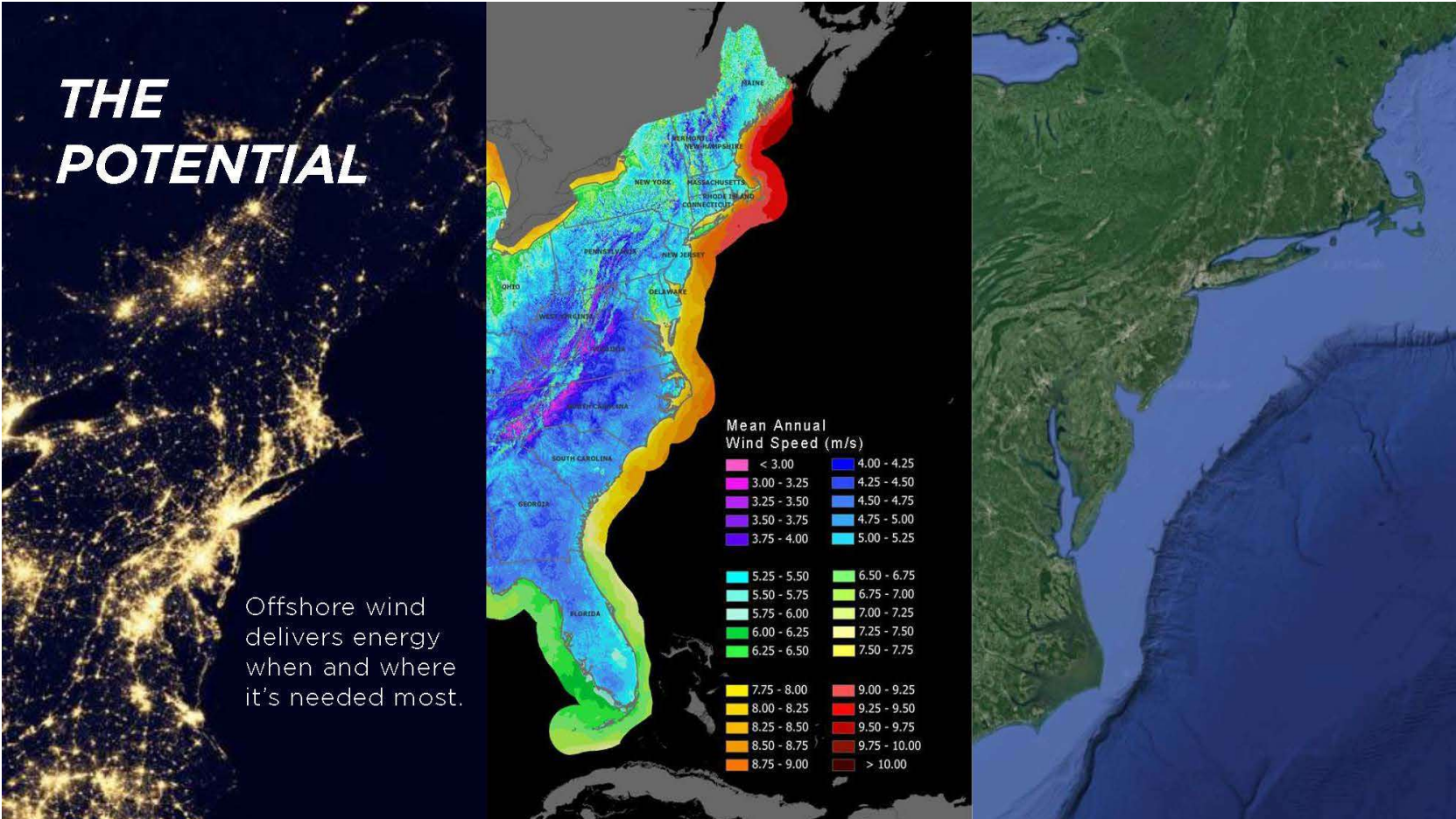
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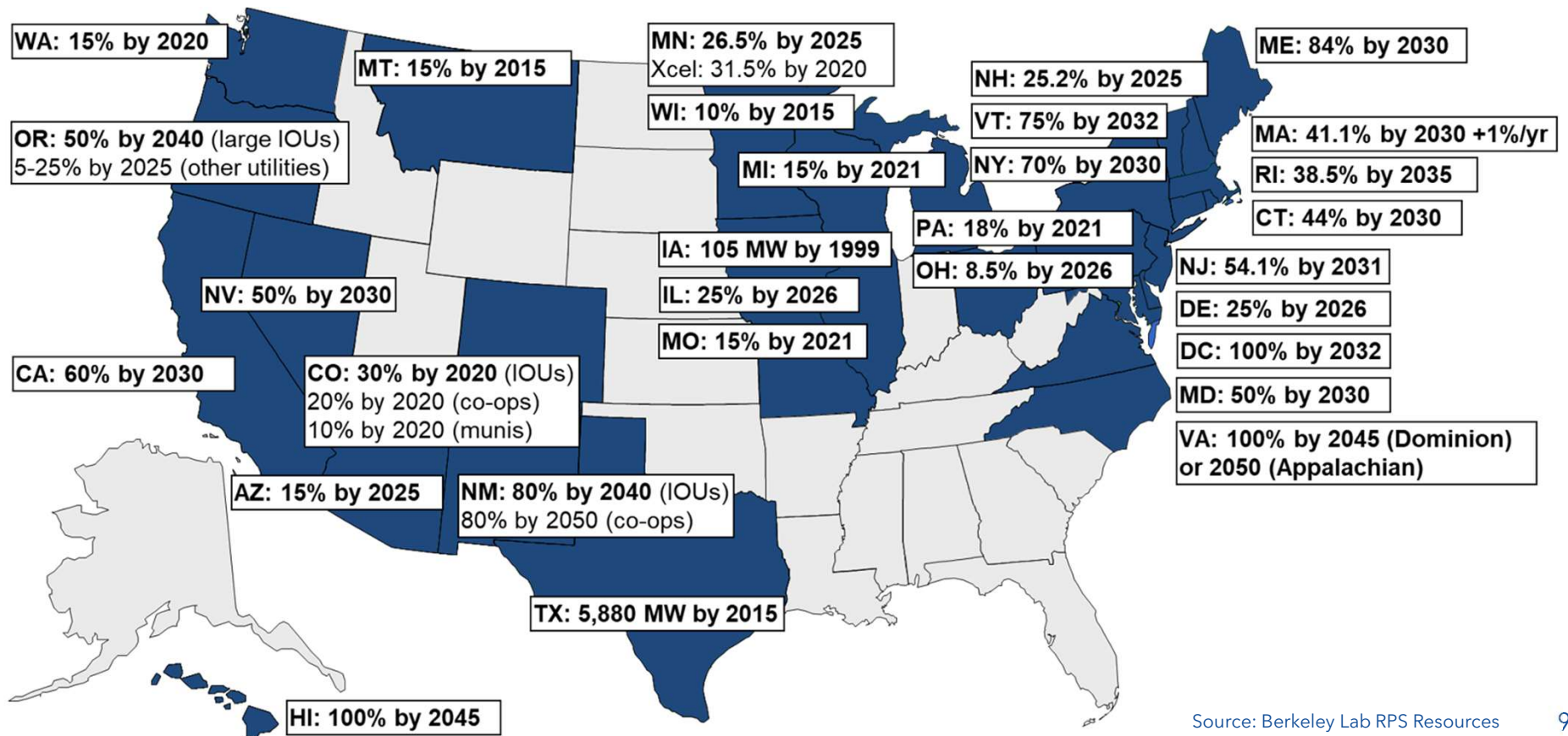
- **Offshore wind opportunity**
- **Market drivers**
- **East Coast project pipeline**
- **“Virginia’s Projects”**
- **Virginia’s offshore wind advantages**
- **Alliance offshore wind activities**



# Offshore Wind Opportunity

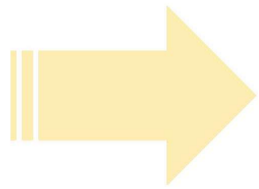


# State Policy Driving Offshore Wind



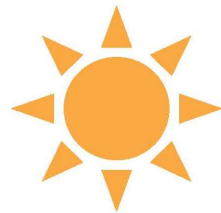
Source: Berkeley Lab RPS Resources

# Virginia Clean Economy Act



## 40% by 2030

Produce 40 percent of Virginia's electricity from renewable energy sources by 2030



## 100% by 2050

Produce 100 percent of Virginia's electricity from carbon-free sources by 2050



## Energy Equity

Achieve energy goals in a just manner that advance social, energy, and environmental equity

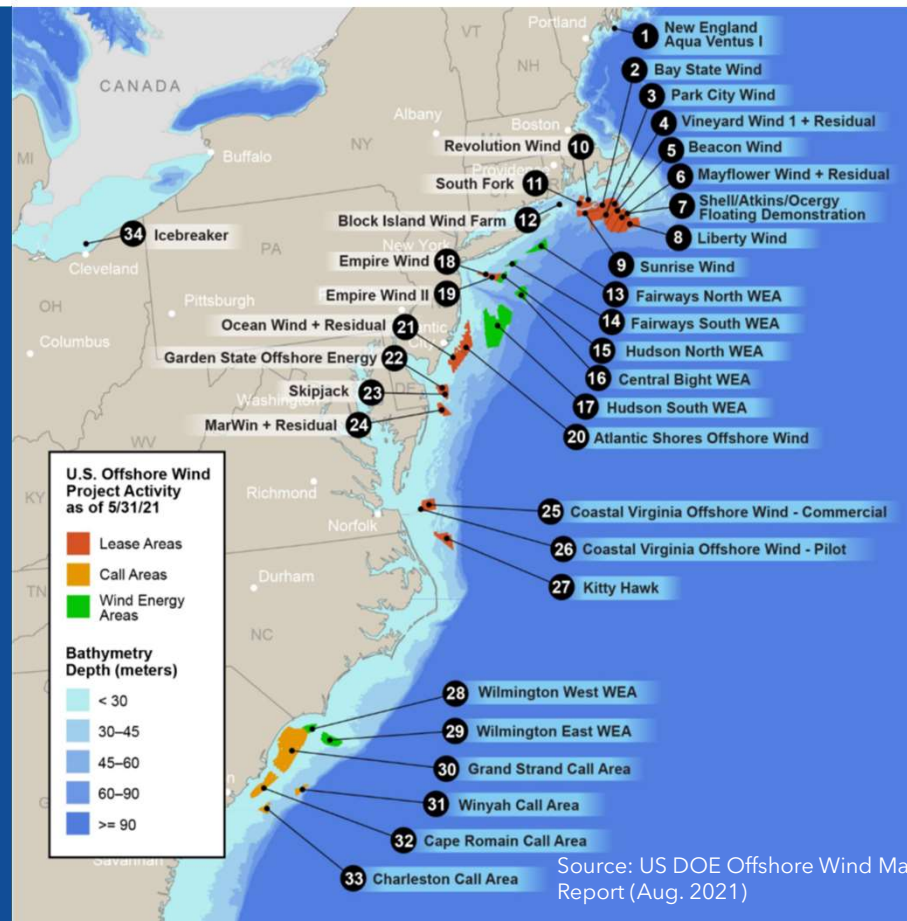


# Offshore Wind Projects



## OSW Project Pipeline

- 40,083MW US project pipeline
- More than a dozen states with offshore wind development targets
- 42MW operating in RI and VA
- 18,581MW in permitting phase
- Coastal Virginia Offshore Wind (2,640MW) and Kitty Hawk Offshore Wind (800MW) moved to permitting phase in Dec. 2020



# What Has Changed?

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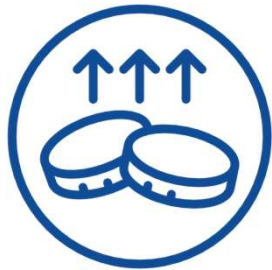
- **The industry is finally “real”**
- 2 projects have broken ground
- BOEM preparing EIS for multiple projects
- More certain and timely federal regulatory process
- Federal target to deploy 30GW by 2030
- Almost two dozen project with off-take pathway
- NY lease areas recently sold for over \$4B



- Confidence in the market and a willingness by the industry to make investment in the U.S.

## Scale of Opportunity

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**\$100B in Capital Investment**



**80,000 Workers**

# "Virginia's Projects"

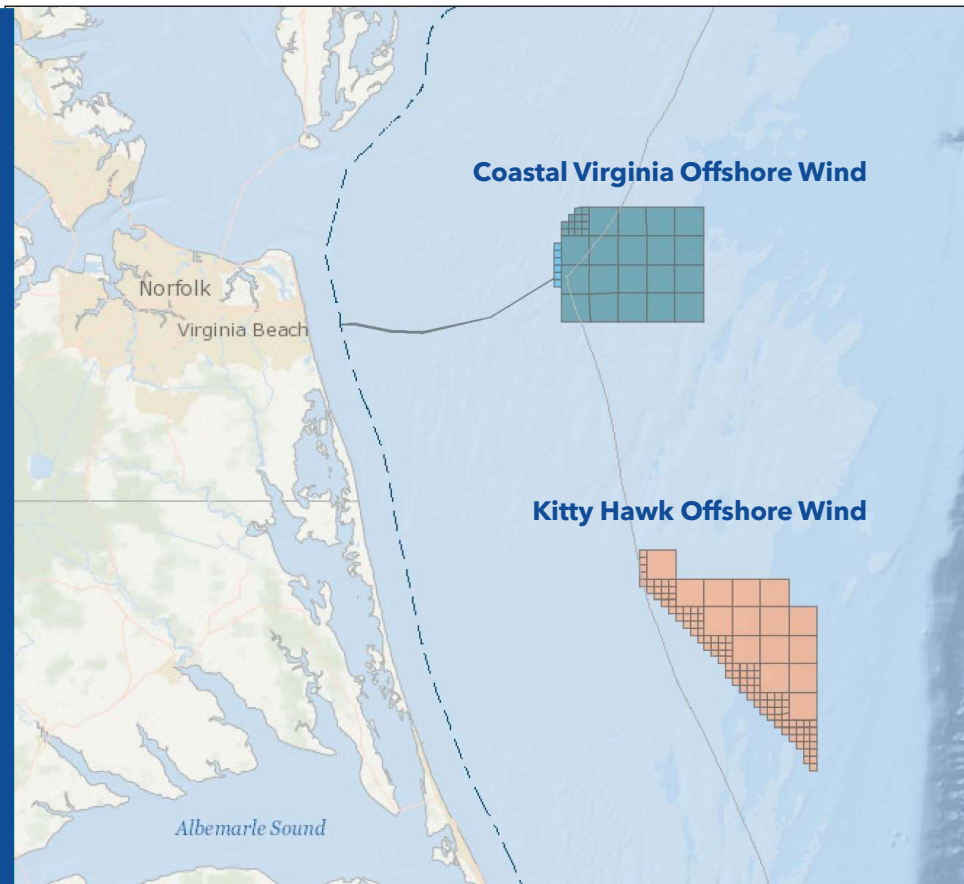


## Coastal Virginia Offshore Wind

- Dominion Energy
- 2,640 MW
- 27 miles off the coast of Virginia Beach

## Kitty Hawk Offshore Wind

- Avangrid Renewables
- 2,500 MW
- 36 miles off the coast of Virginia Beach



# Dominion Energy CVOW Suppliers

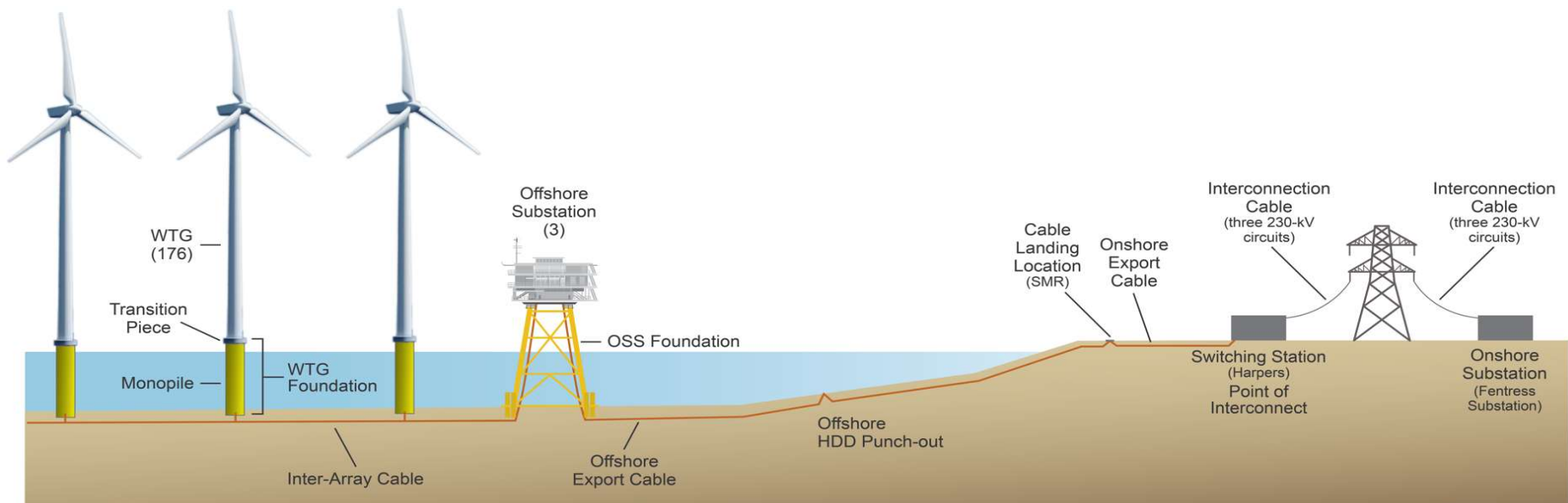


Wind Turbine Generators	Monopiles	Transition Pieces	Offshore Substations	Transport & Install
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**SIEMENS Gamesa**  
RENEWABLE ENERGY



**Prysmian Group**





# Economic Impacts



	Coastal Virginia Offshore Wind	Kitty Hawk Offshore Wind
<b>Total Annual Construction Jobs</b>	909	809
<b>Total Annual O&amp;M Jobs</b>	1,110	929
<b>Direct Construction Expenditures in VA</b>	\$552.6M	\$880.1M

## Hampton Roads Potential as Supply Chain Hub

- **5,200 direct and indirect Virginia jobs annually (almost all in Hampton Roads)**
- \$270 million in pay and benefits
- \$740 million in economic output
- \$21 million in revenues for local governments in the Hampton Roads area
- \$18 million in Virginia state tax revenues

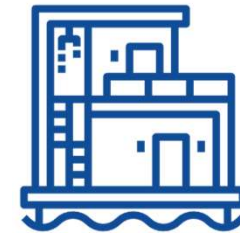
# Virginia's Advantages



**Unmatched Port Infrastructure**



**Large & Skilled Maritime Workforce**



**Terminal Facilities & Waterfront Sites**



**America's Largest Shipbuilding Industry**



**Pro-Business Climate**



**Strategic Location**

# Port of Virginia



## Portsmouth Marine Terminal

- 270 acres
- Mostly ready site
- Fast access to open ocean
- No overhead obstructions
- Deep water
- Dedicated offshore wind port

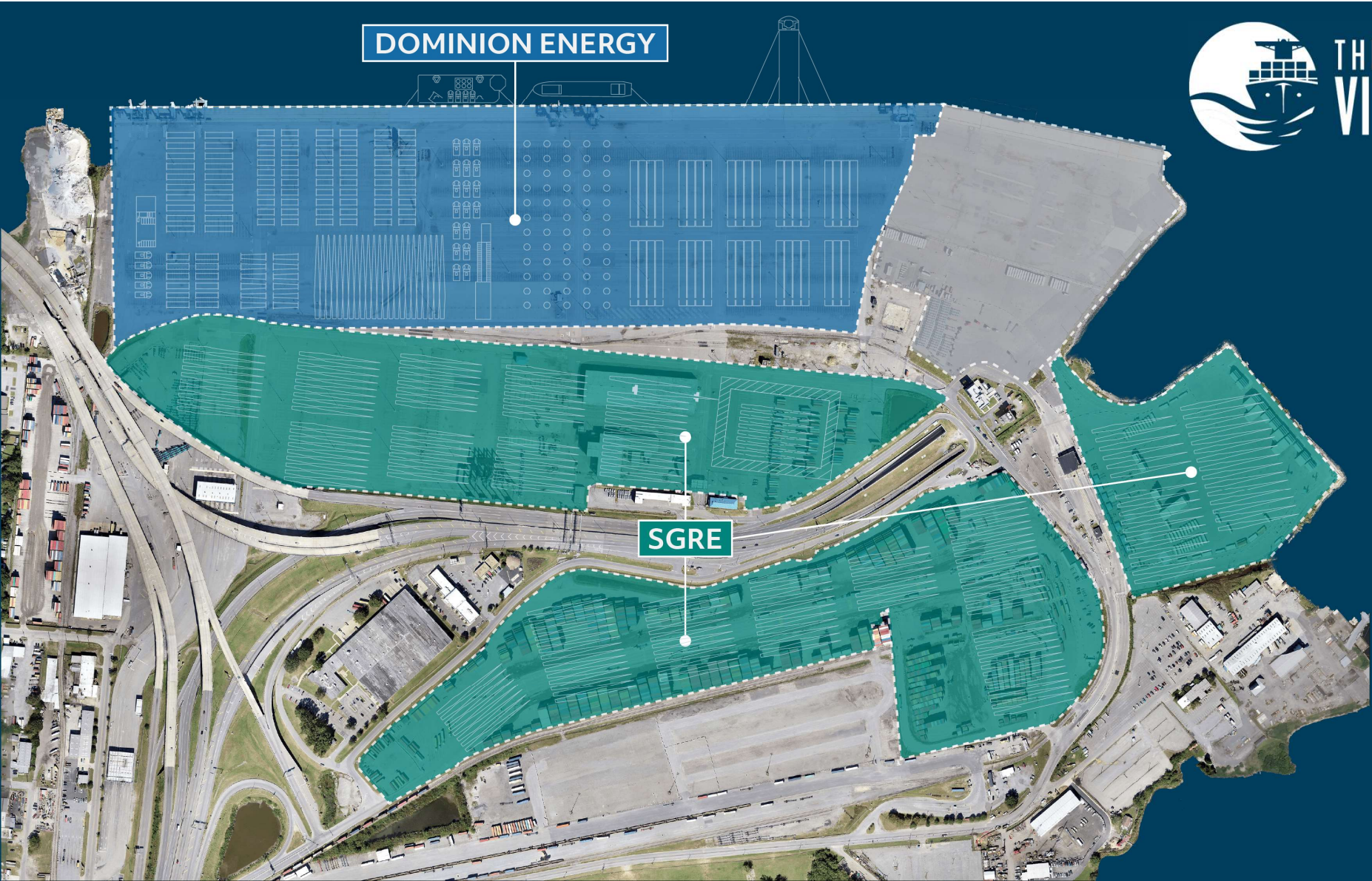


**DOMINION ENERGY**



**THE PORT OF VIRGINIA**

**SGRE**

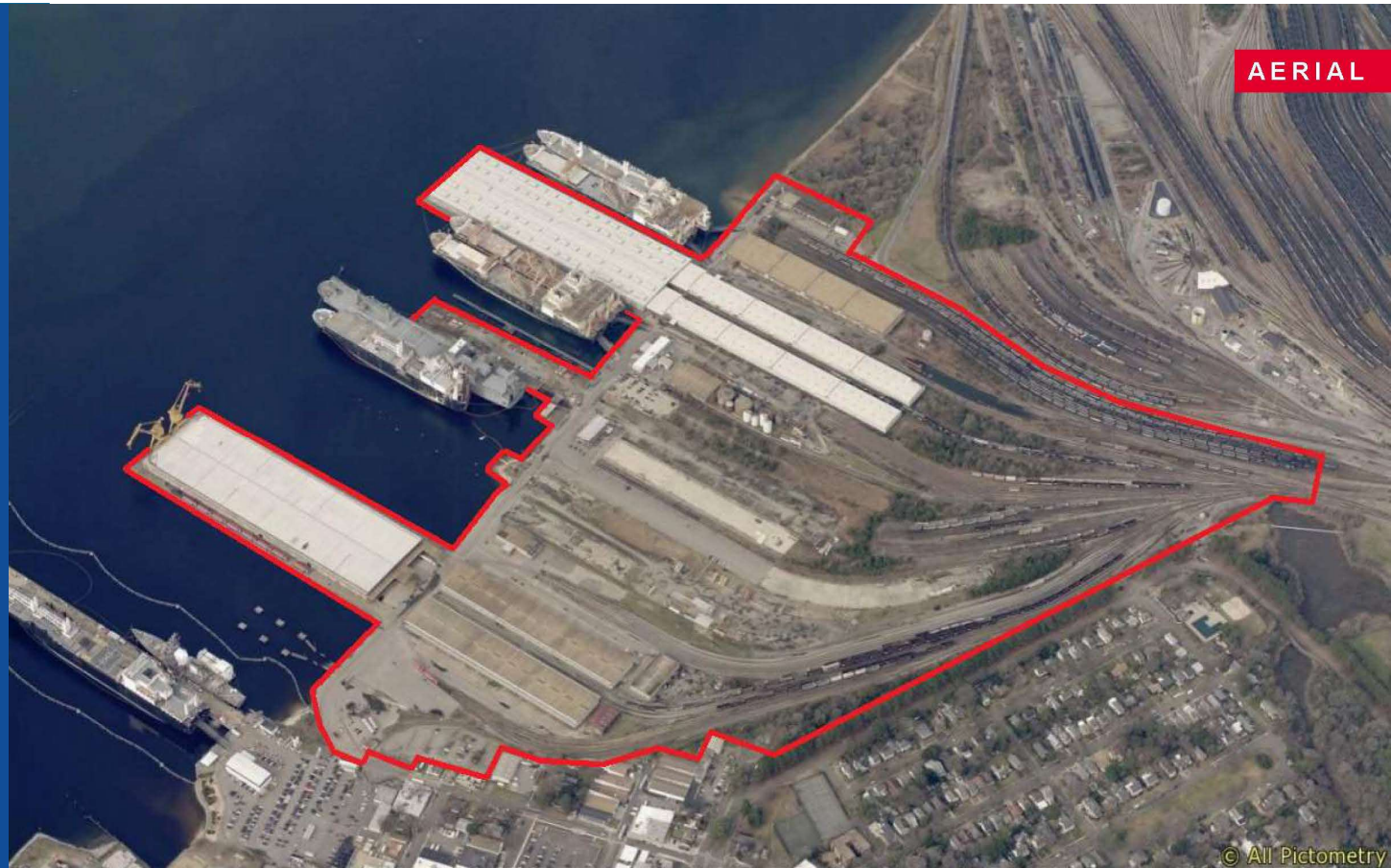


# Marine Terminals and Real Estate



AERIAL

- Over 50 private terminals
- Variety of sites for development or redevelopment
- Ability to support multiple tiers of the supply chain

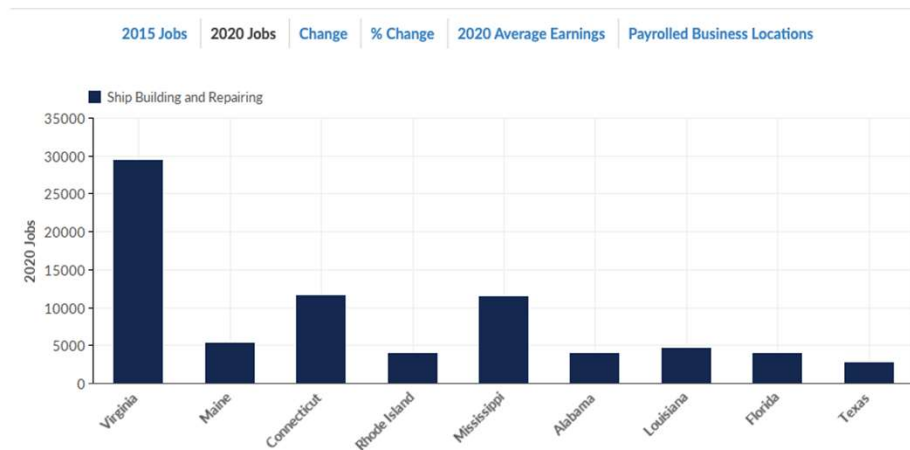


© All Pictometry

# Building on a Strength of Virginia's Economy



Industry Breakdown



Industry	Description	Virginia	Maine	Connecticut	Rhode Island	Mississippi	Alabama	Louisiana	Florida	Texas
336611	Ship Building and Repairing	29,602	5,381	11,746	4,040	11,539	4,096	4,746	4,063	2,920
	Total	29,602	5,381	11,746	4,040	11,539	4,096	4,746	4,063	2,920

Source: EMSI; Q2 2021

Private employment of workers directly involved in ship building and ship repair activities

- Virginia accounts for **over a quarter of all employment** in the U.S. shipbuilding and repair industry, more than all East Coast competitors combined.
- Additionally, over 4,500 workers are employed in non-shipbuilding maritime industries.
- 15,000 transitioning service members

## Selection of major regional employers:



Newport News Shipbuilding



COLONNA'S SHIPYARD, INC.

GENERAL DYNAMICS  
NASSCO

BAE SYSTEMS

# A New Pillar of Virginia's Maritime Industrial Base



## Maritime Industrial Base

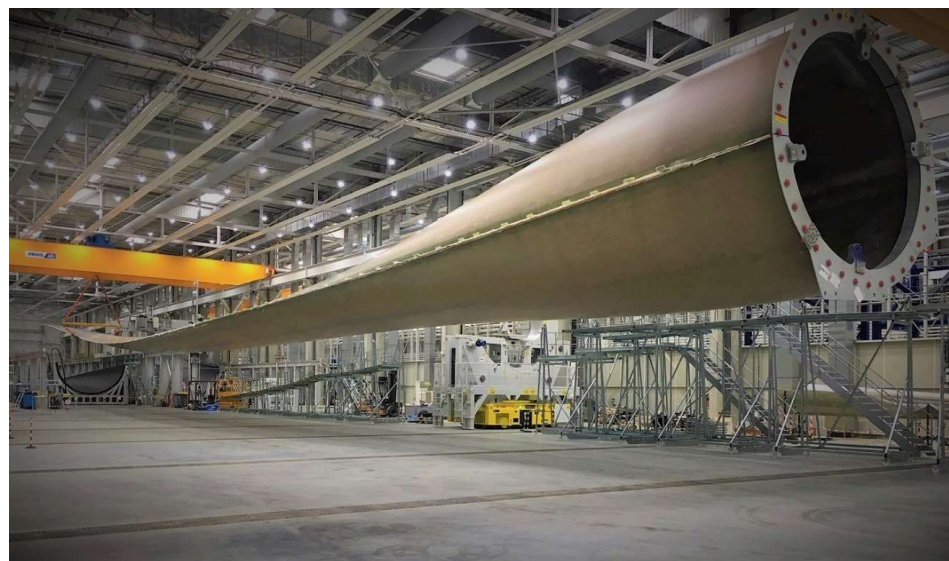


# Alliance Supply Chain Development Initiative



***Supported by a \$529,788  
GO Virginia grant***

- Build a regional offshore wind hub
- Attract new investment to the Commonwealth
- Grow Virginia businesses
- Create long-term, high-wage jobs





# Virginia Partners



# Awareness and Readiness Activities



**Dominion Energy**  
Actions Speak Louder

Coastal Virginia  
**Offshore Wind**

**Offshore  
Wind  
Local  
Business  
Expo**

## Join Us!

Dominion Energy is developing the largest offshore wind project in the United States, 27 miles off the coast of Virginia Beach, and is looking for local business partners to help support the construction, operation and maintenance of this important renewable energy project.

If you would like to get your business involved in the offshore wind industry or want to learn more about the business / supply chain needs for the Coastal Virginia Offshore Wind (CVOW) project, please join the Hampton Roads Alliance, Dominion Energy and CVOW's primary contractors at an offshore wind local business expo.



**June 29, 2022**  
10:00 am - 1:00 pm

Hilton Norfolk The Main, 2nd Floor  
100 E Main Street  
Norfolk, VA 23510

**SIEMENS** Gamesa  
RENEWABLE ENERGY

**Prysmian**  
Group

**DEME**  
OFFSHORE

**seafacs**

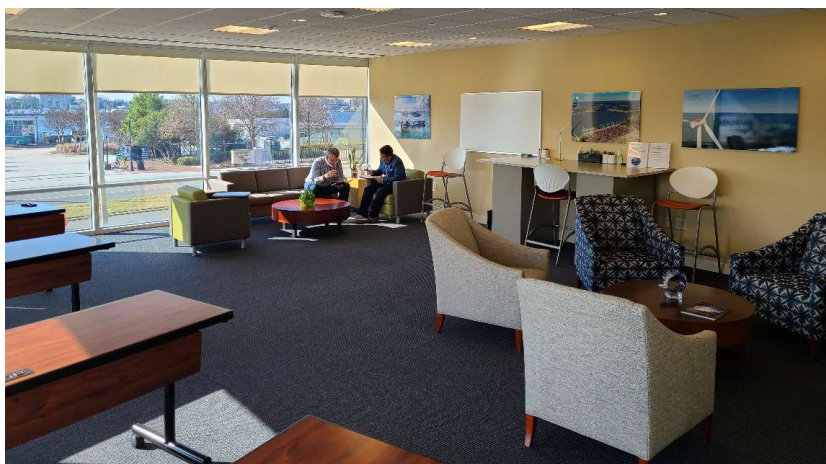
HAMPTON ROADS  
**ALLIANCE**

**Dominion Energy**



To RSVP, please visit [coastalvawind.com/business](https://coastalvawind.com/business).  
If you have any questions, please contact us at [info@coastalvawind.com](mailto:info@coastalvawind.com).

# Virginia Offshore Wind Landing



- Office and meeting space
- Collaborative programming
- Connections to regional and state resources
- Growing membership



# Virginia Offshore Wind Landing



# Virginia Offshore Wind at VB



- Business Startup Center - Gather
- Office and Co-working space
- Connections to regional and state resources at the Hive. Va. Beach Economic Development is nearby
- Companies include: Avangrid Renewables, Seajacks & Nearshore Networks



# Conferences and Trade Shows



HAMPTON ROADS  
HOST SPONSORS **ALLIANCE** VIRGINIA MARITIME ASSOCIATION

Hosted by the Business Network for Offshore Wind. Visit our [main webpage](#).

BUSINESS NETWORK FOR OFFSHORE WIND  
**OSW PORT & VESSEL**  
SUMMIT

Tickets Agenda Hotel & Venue Sponsors Sponsorship Covid-19 Guidelines

BUSINESS NETWORK FOR OFFSHORE WIND  
**OSW PORT & VESSEL**  
SUMMIT  
SEPTEMBER 27-28, 2022  
NORFOLK, VA  
[REGISTER](#)

# 2022 Business Development Calendar

---



- April: Wind Europe Trade show in Bilbao, Spain
- April: Business Network for Offshore Wind IPF trade show
- June: Trade mission to Europe
- July: Trade mission to Quebec, Canada
- September: Trade mission to Europe
- October: ACP Offshore WINDPOWER Conference and Exhibition
- December: International Workboat Show

# Major Announcements

---



- Redevelopment of Portsmouth Marine Terminal as the nation's premier offshore wind terminal
- Siemens Gamesa Renewable Energy will locate first U.S. rotor blade facility in Hampton Roads
- SCC approval of Dominion Energy's Coastal Virginia Offshore Wind project



# Additional Information



## Coastal Virginia Offshore Wind

[www.coastalvawind.com](http://www.coastalvawind.com)

## Kitty Hawk Offshore Wind

[www.kittyhawkoffshore.com](http://www.kittyhawkoffshore.com)

## Virginia Beach Offshore Wind

[www.yesvirginiabeach.com/key-industries/offshore-wind](http://www.yesvirginiabeach.com/key-industries/offshore-wind)

## Virginia Offshore Wind

[www.vedp.org/industry/offshore-wind](http://www.vedp.org/industry/offshore-wind)

## Matt Smith

Director of Energy and Water Technology

### Email:

[msmith@757alliance.com](mailto:msmith@757alliance.com)

### Phone:

757.355.1136

Follow us on LinkedIn, Facebook, and Twitter

[www.HamptonRoadsAlliance.com/offshorewind](http://www.HamptonRoadsAlliance.com/offshorewind)

Presenting



Speaker



Luncheon



Dinner



Supporting

Gather | Guernsey Tingle



2022  
**CONVERGENCE**



**THE PORT OF VIRGINIA**



**Stephen Edwards,**  
CEO and Executive Director of the Virginia Port Authority



# Strategic Overview

Prepared for Convergence 2022

**Stephen Edwards**

*CEO & Executive Director*

October 13, 2022





**Sustainability**



**Supply Chain Gateway**



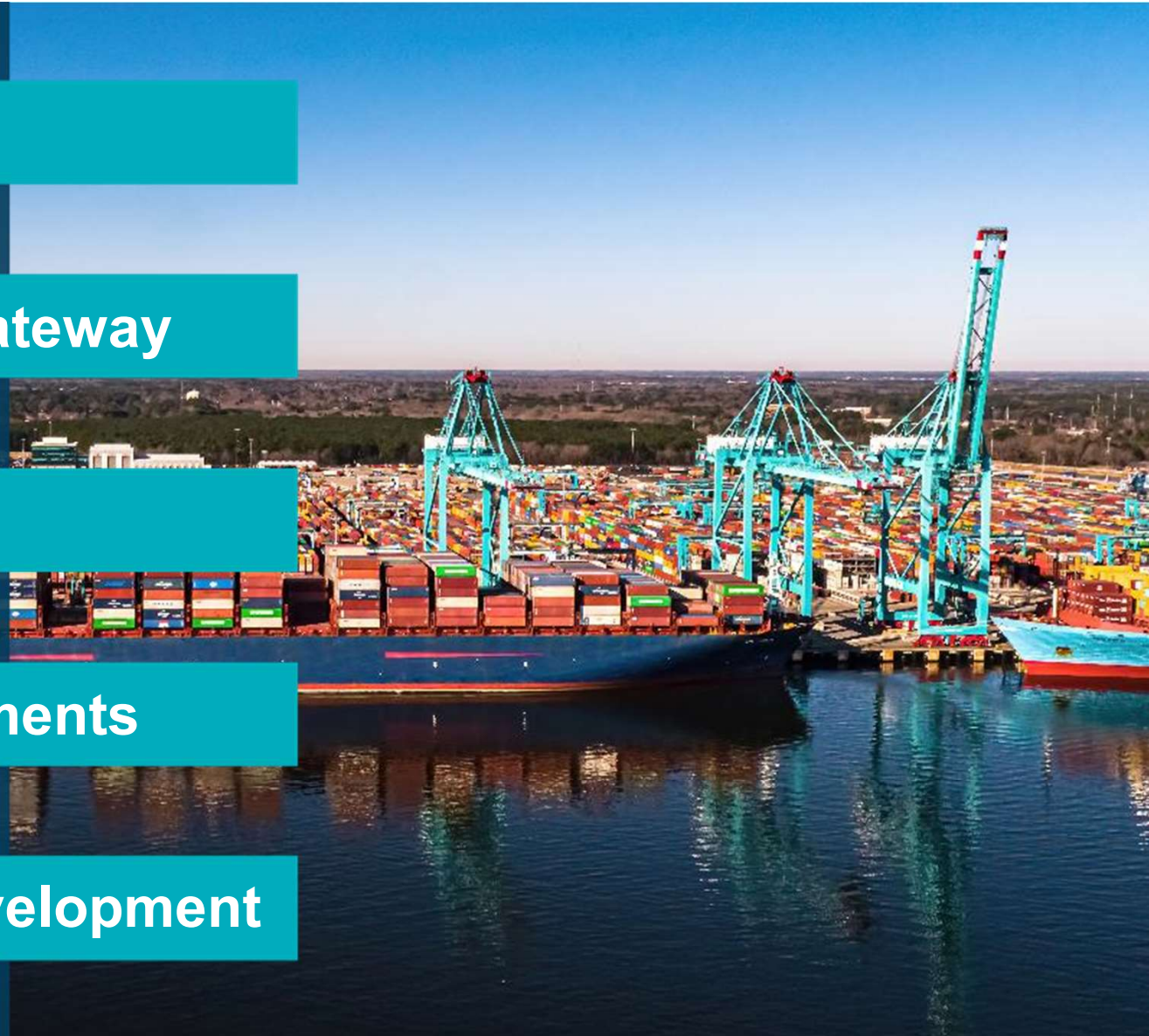
**Strong Volumes**



**Gateway Investments**

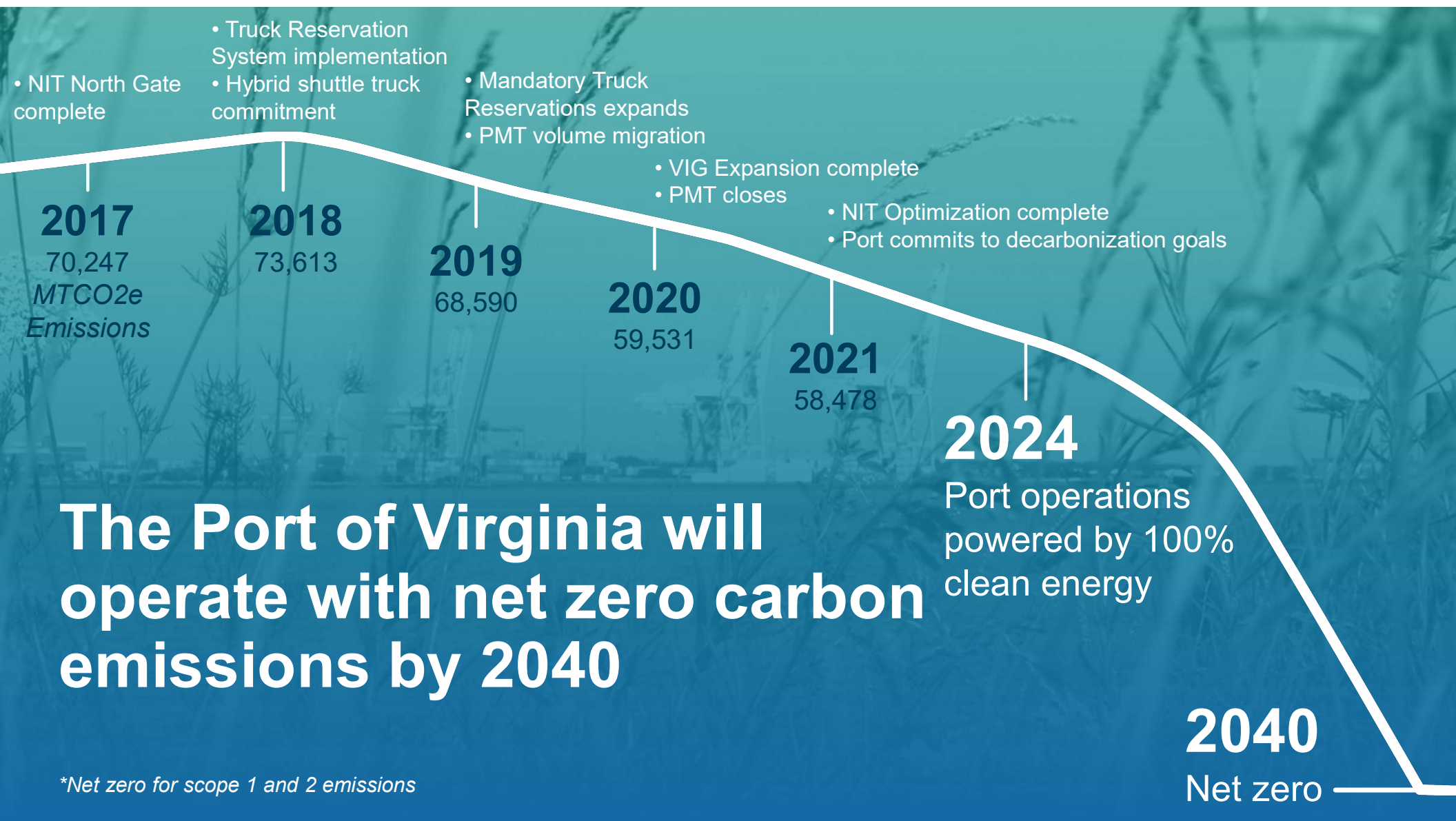


**Port-Centric Development**





# Sustainability



# The Port of Virginia will operate with net zero carbon emissions by 2040

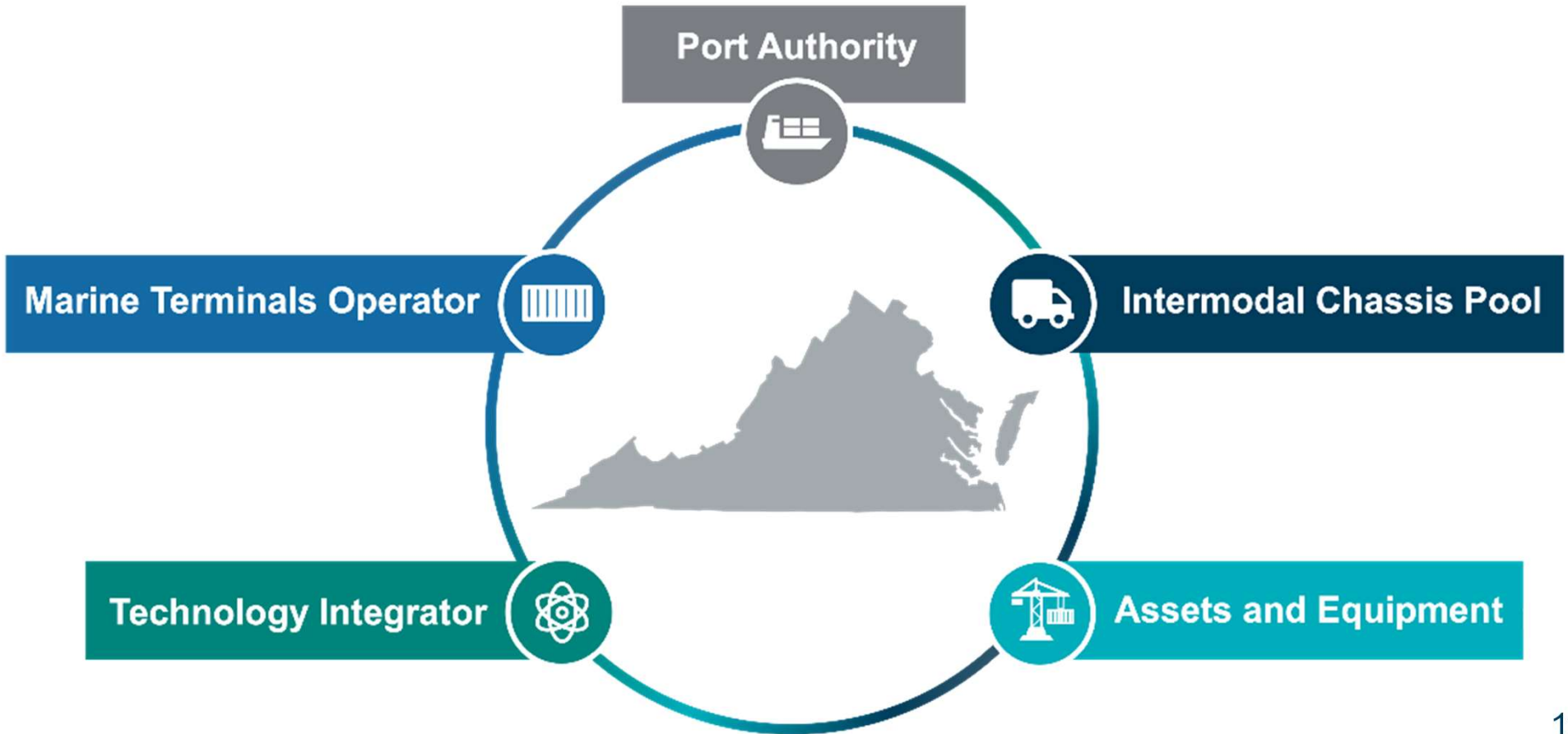
*\*Net zero for scope 1 and 2 emissions*



# USEC Supply Chain Gateway



# The “Virginia Model”





# The Port of Virginia Terminals



# Virginia International Gateway (VIG)



**4,000' Wharf  
(1,219M)**  
Aggregate Length

**50' (15.24m)**  
Berth & Channel  
Access

**30**  
Truck Gate  
Lanes

**56**  
RMG  
Cranes

**1,212**  
Reefer  
Plugs

**28**  
Semi-Automated  
Stacks

**12 STS Cranes**  
Super Post  
Panamax

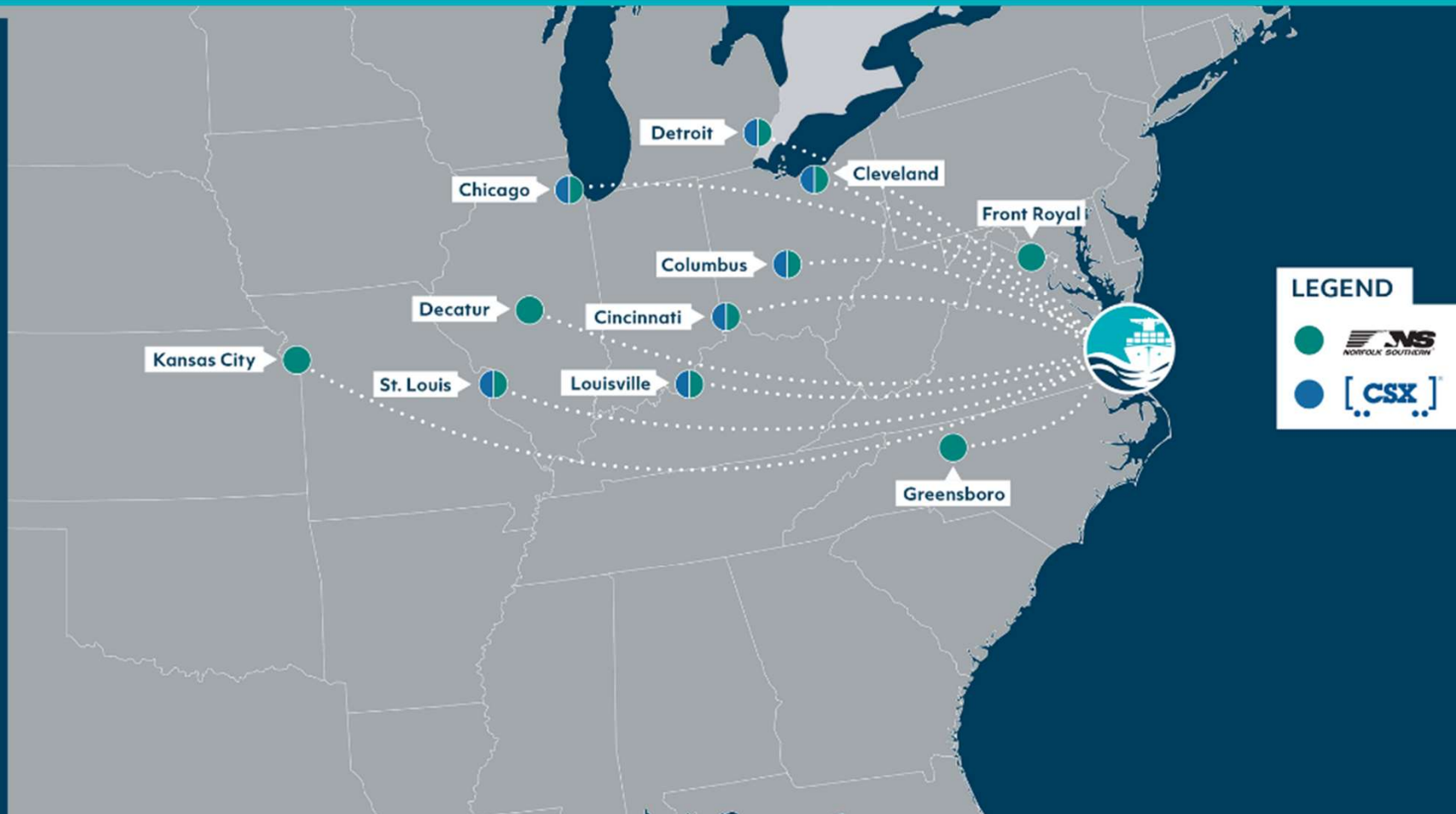
**19,000'**  
Rail Track  
Servicing  
CSX & NS



# Norfolk International Terminals (NIT)



# Expansive Rail Capacity





# Strong Volumes

# Volumes: Calendar Year-to-Date Jan - Sept 2022



	CY 2022	CY 2021	Change	% Change
<b>Total TEUs</b>	<b>2,824,870</b>	<b>2,588,066</b>	<b>236,803</b>	<b>9.1%</b>
Loaded Export TEUs	802,746	788,209	14,537	1.8%
Loaded Import TEUs	1,335,965	1,232,110	103,855	8.4%
Total Rail Containers	504,504	481,438	23,066	4.8%
Total Barge Containers	68,947	57,065	11,882	20.8%
Total Truck Containers	992,906	902,006	90,900	10.1%
<b>Total Containers</b>	<b>1,566,357</b>	<b>1,440,509</b>	<b>125,848</b>	<b>8.7%</b>

# USEC Ports Market Comparison



	FY 2022	FY 2021	Change	% Change
New York / New Jersey	6,145,063	5,781,438	363,625	6.3%
Savannah	4,125,934	4,022,682	103,252	2.6%
<b>The Port of Virginia</b>	<b>2,643,349</b>	<b>2,401,495</b>	<b>241,854</b>	<b>10.1%</b>
Charleston	2,094,592	1,938,981	155,611	8.0%
Baltimore	690,827	752,064	(61,237)	(8.1%)
Wilmington, NC	229,304	245,568	(16,264)	(6.6%)
<b>Total East Coast Ports</b>	<b>19,131,394</b>	<b>18,277,115</b>	<b>854,280</b>	<b>4.7%</b>

\*Source PIERS - Loaded TEUs

\*Total East Coasts Ports includes: NY/NJ, Philadelphia, Wilmington,DE, Baltimore, Port of Virginia, Wilmington,NC, Charleston, Savannah, Jacksonville, Port Everglades and Miami





# Gateway Investments

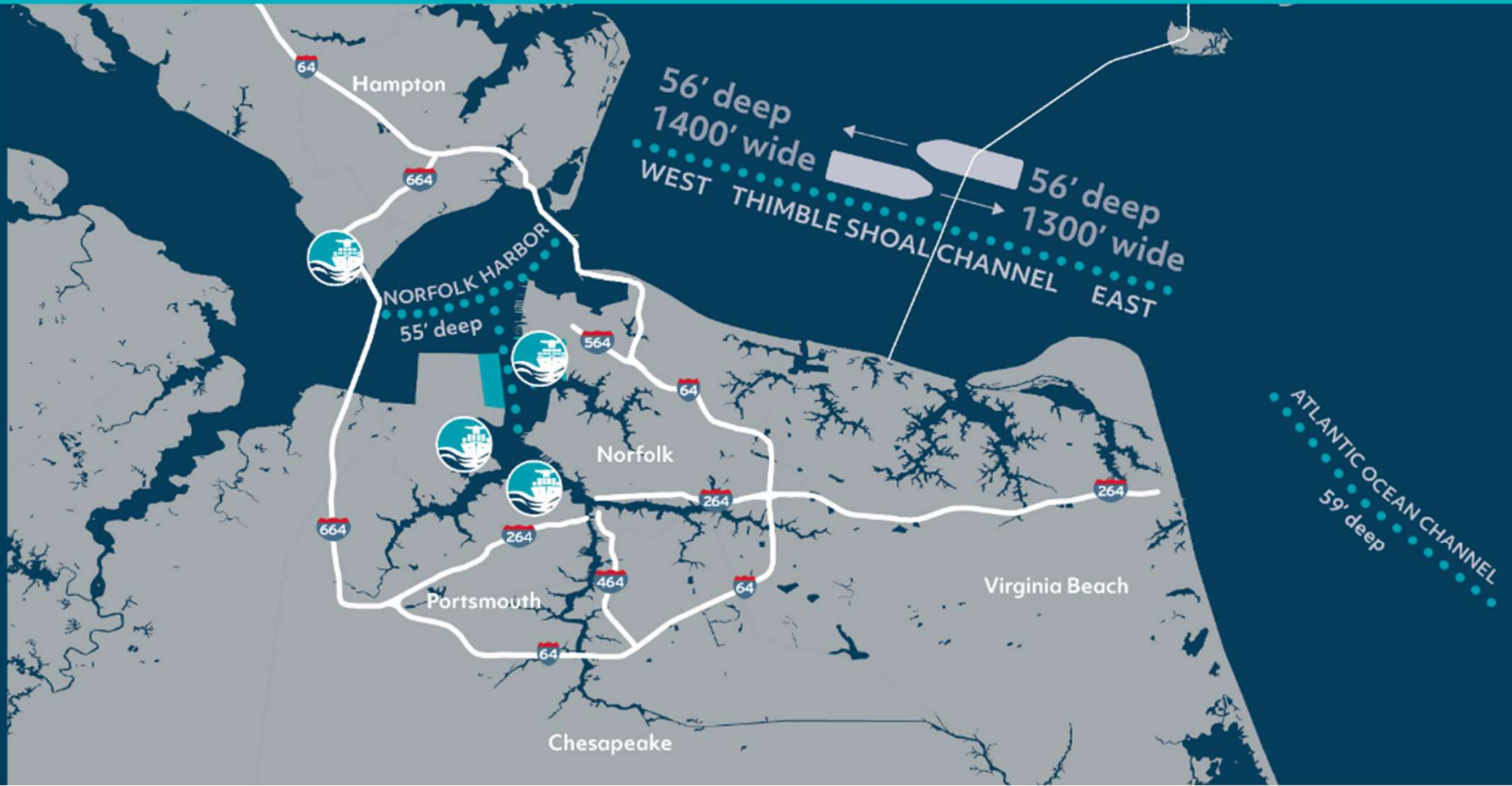
# Gateway Investments



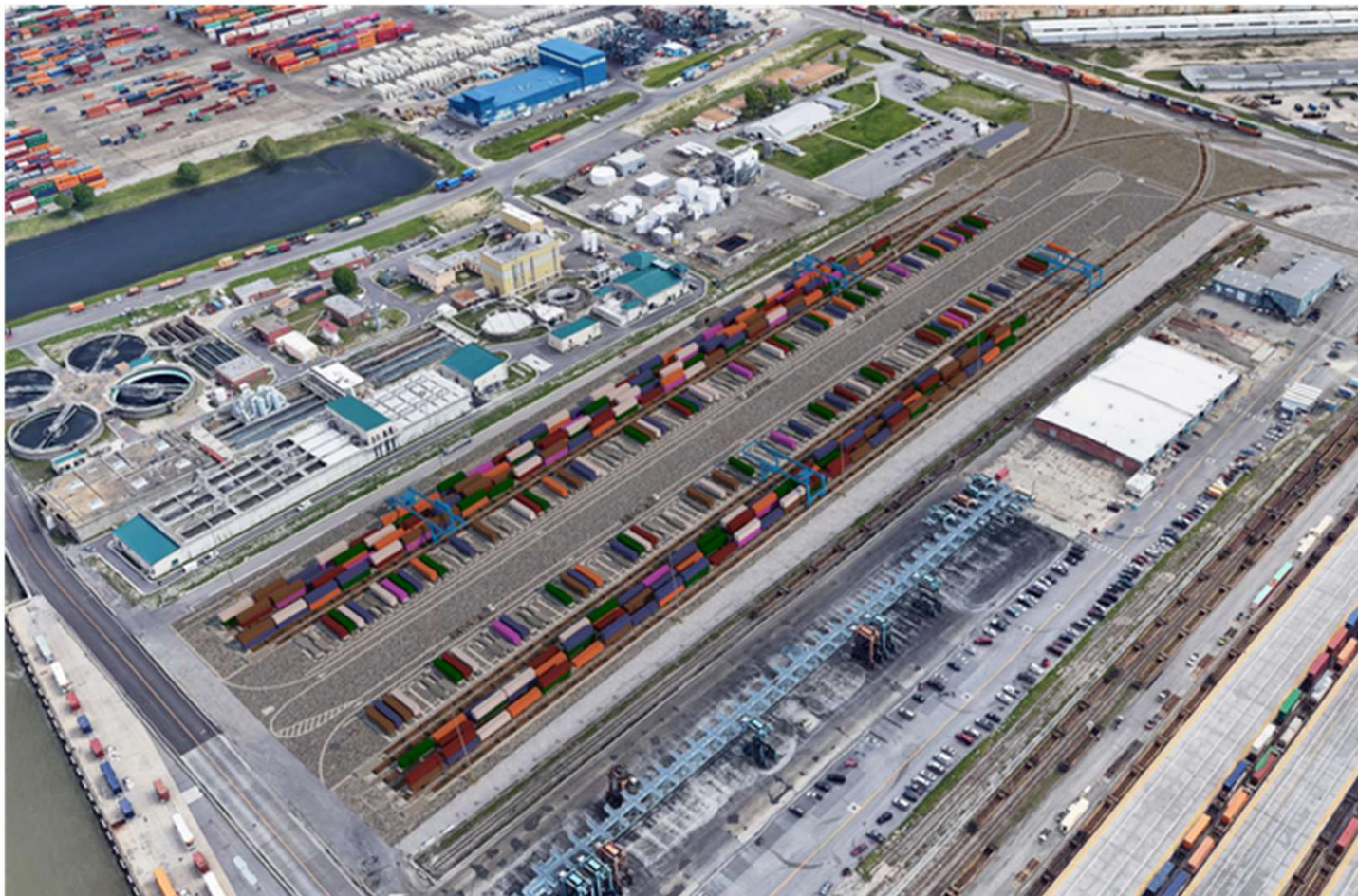
**\$1.4 Billion**



# Dredging Complete End of 2024



# Central Rail Yard



**NIT rail capacity will go from 350,000 to 610,000 annual container lifts**



**\$90 Million Investment**

**Complete for 2024**

# North NIT

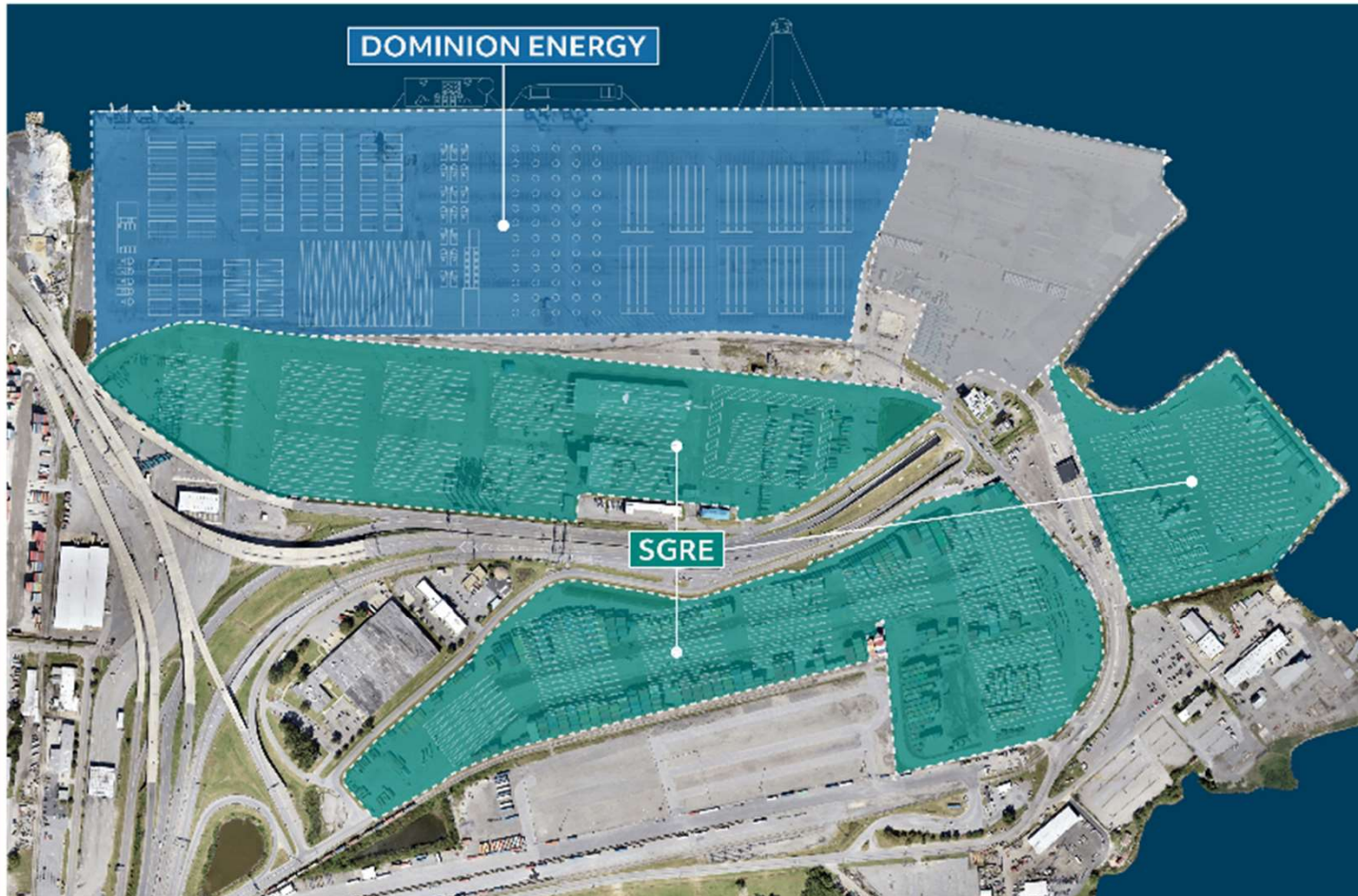


**800,000  
Lift Capacity**



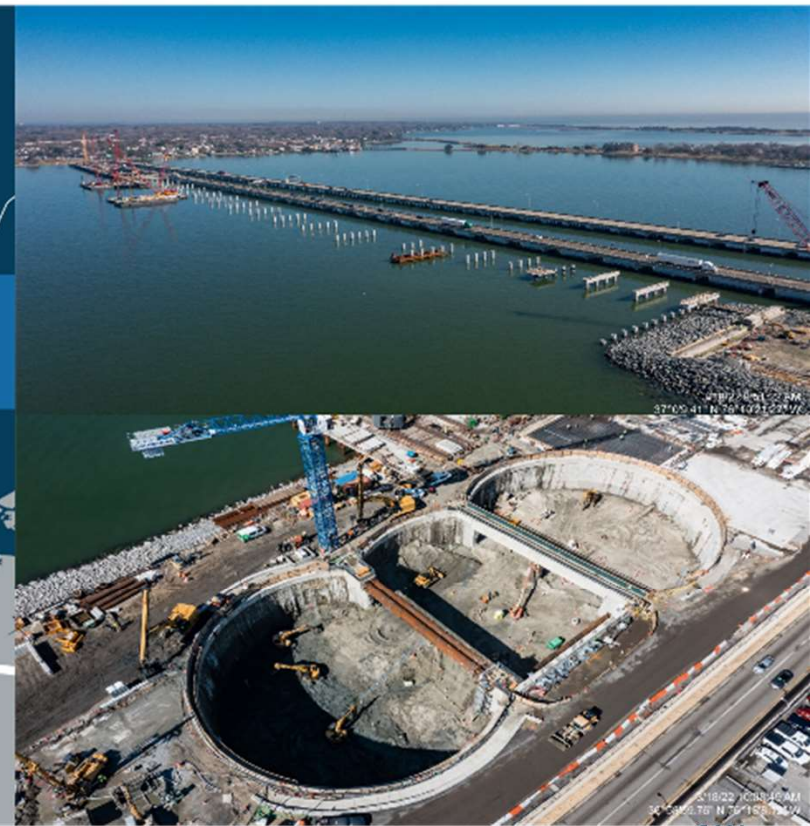
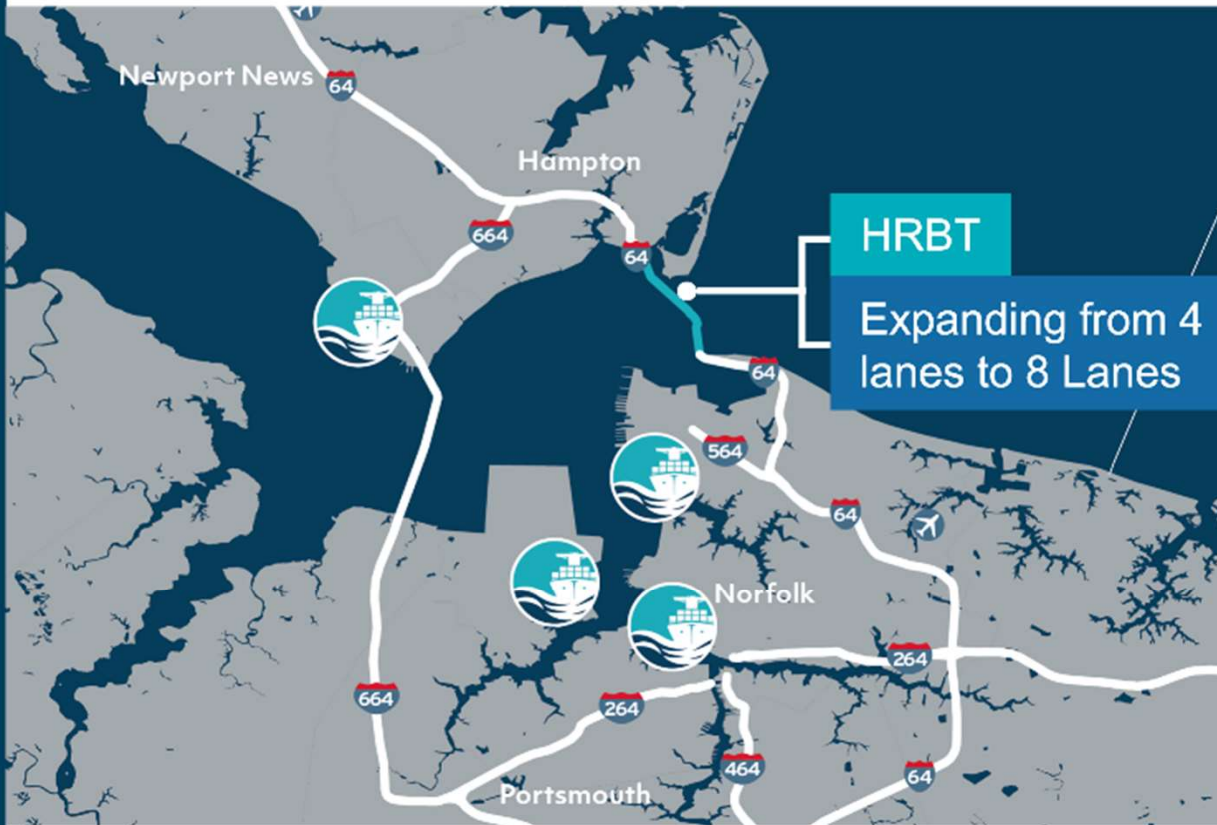
**\$650 Million  
Investment**

# Offshore Wind Hub at PMT



**\$200 Million  
Investment**

# Hampton Roads Bridge Tunnel (HRBT)





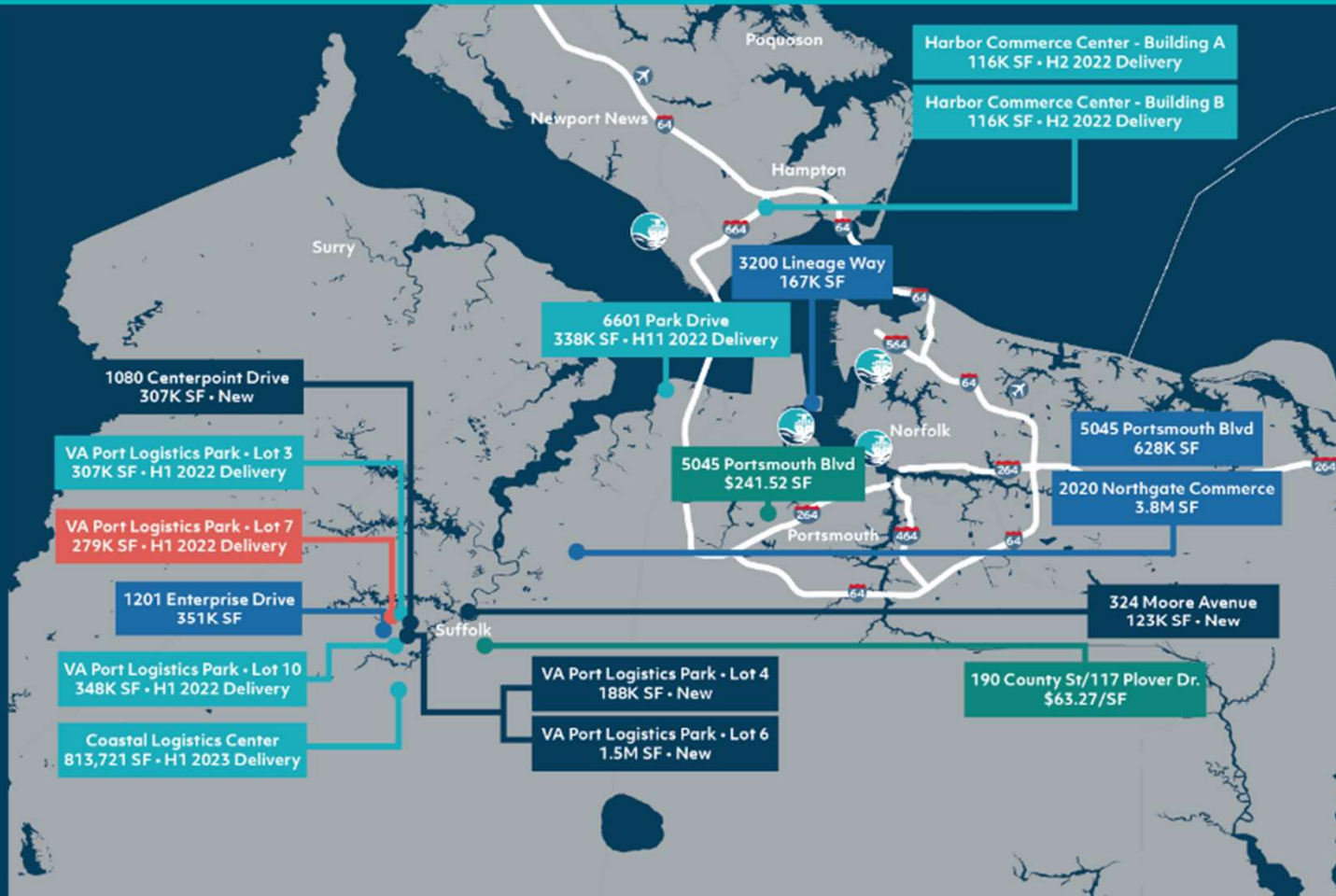
# Port-Centric Development



# Market Reach within 48 Hours



# Active Developments in Hampton Roads



- LEGEND**
- SPEC DEVELOPMENT • PRE LEASED
  - DELIVERIES
  - LEASE
  - SALE
  - BTS DEVELOPMENT

## HISTORIC COMPARISON

	20H2	21H1	21H2
Total Inventory (In Millions of SF)	134.76	135.14	140.23
New Supply (In Thousands of SF)	1,684.2	642.9	5,383.2
Net Absorption (In Thousands of SF)	1,683.6	321.9	5,532.7
Overall Vacancy	2.6%	2.8%	2.5%
Under Construction (In Thousands of SF)	6,447.6	9,458.2	10,191.4
Overall Asking Lease Rates (NNN)	\$4.52	\$4.89	\$5.00

Basic Inventory of Buildings ≥ 100,000 sq. ft.

Source: Colliers: Virginia Industrial Report Year End 2021

# Summary



Committed to Net-Zero Carbon Emissions by 2040



Operates the Most Modern Gateway in North America



Fastest Growing US Port



\$1.3Bn in Gateway Investments



Significant Port-Centric Investments



Thank you



Presenting



Speaker



Luncheon



Dinner



Supporting

Gather | Guernsey Tingle





## NASA LANGLEY RESEARCH CENTER



**Lena Little,**  
Regional Partnerships Lead, NASA Langley Research  
Center

National Aeronautics and  
Space Administration



# Together, We Discover

## NASA'S LANGLEY RESEARCH CENTER



LANGLEY RESEARCH CENTER

# NASA's Langley Research Center

*HAMPTON, VIRGINIA*

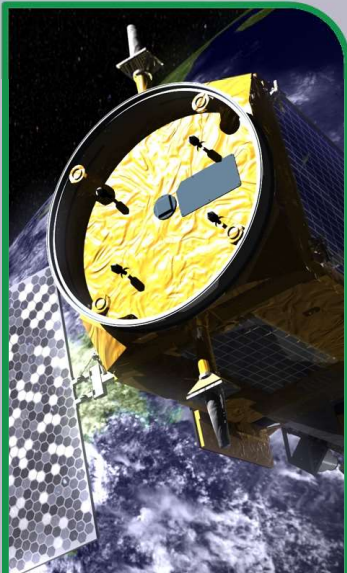
National Aeronautics and  
Space Administration





# Langley Research Center *Our Role in NASA*

## SCIENCE



Studying Earth and worlds beyond

## SPACE EXPLORATION



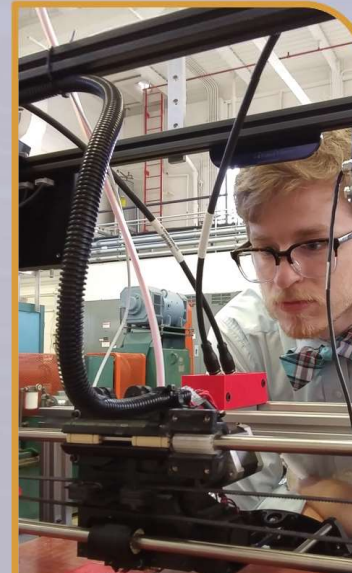
Tools to take us from Moon to Mars

## AERONAUTICS



Cleaner, faster, safer air transport

## TRANSFORMATION



Future of Langley's work and workforce

## STEM ENGAGEMENT



A new generation of explorers



# Science

## Understand Earth and Beyond

### Develop

Create technologies that monitor Earth's vital signs and aid the search for extraterrestrial life

### Measure

Gather and analyze data about atmospheric and energy systems on Earth and other planets

### Understand

Expand knowledge of air quality, weather, climate and energy — keys to life on Earth



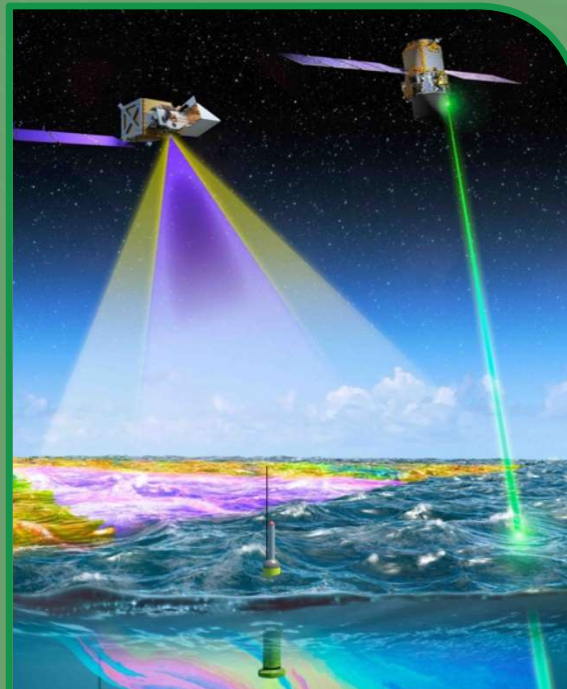


# Science

## Understand Earth and Beyond



**DEVELOP**



**MEASURE**



**UNDERSTAND**



## Reach to Deep Space

# Space Exploration

### Build

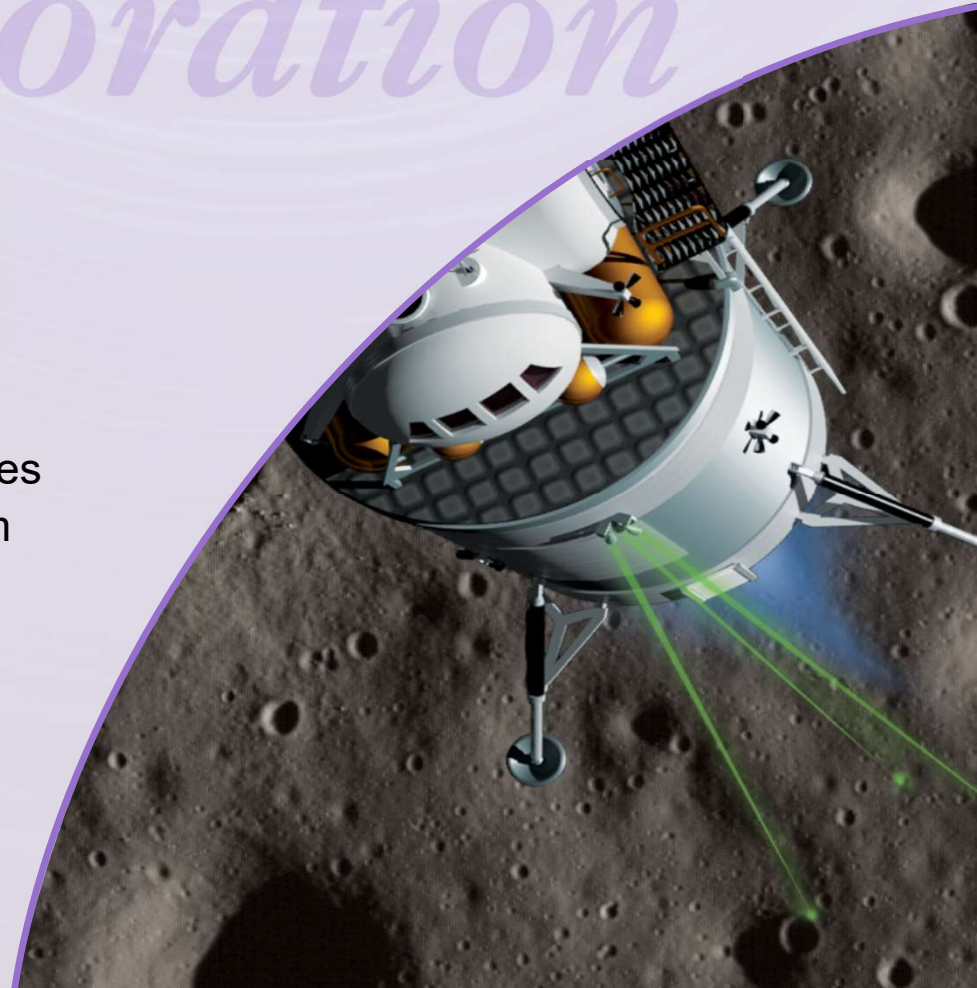
Create building blocks of Moon and Mars exploration

### Fly

Envision and develop missions, vehicles and structures needed for tomorrow's exploration of the solar system

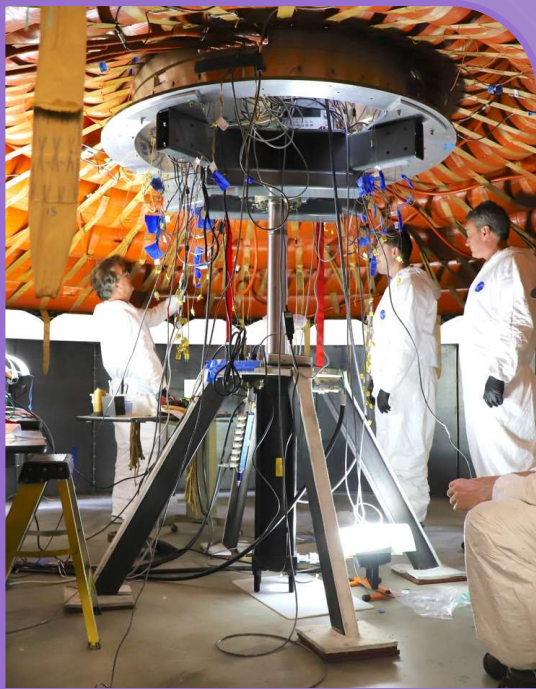
### Land

Enable people and cargo to arrive safely on other worlds through mastery of entry, descent and landing





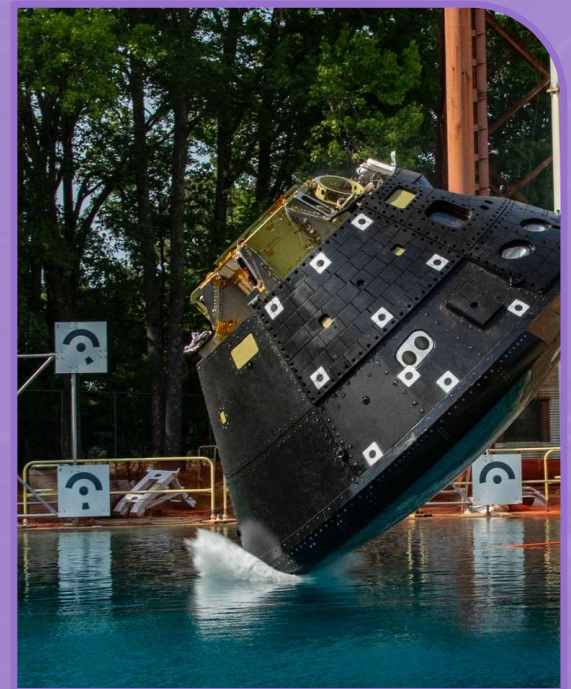
# Reach to Deep Space *Exploration*



**BUILD**



**FLY**



**LAND**



# Fly Everywhere

# Aeronautics

## Improve

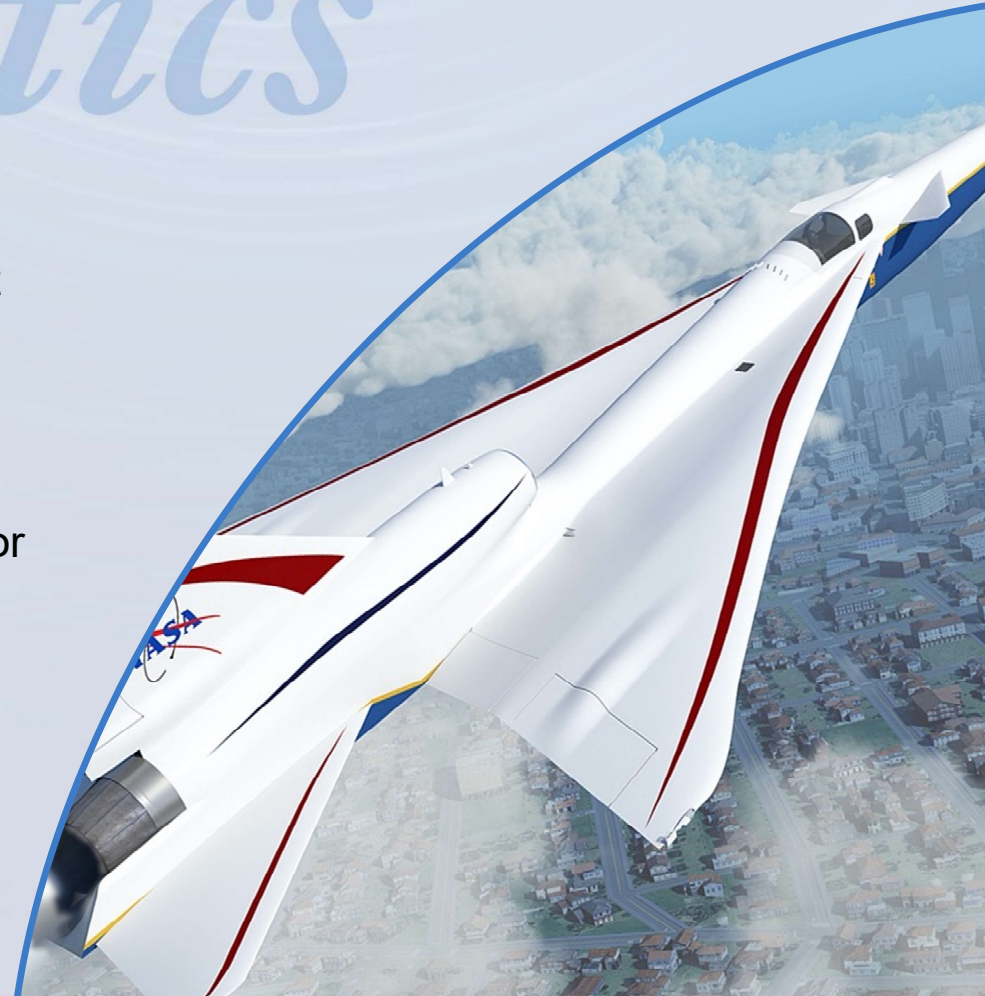
Boost sustainable aviation by imagining airliners that are faster, safer, and better for the environment

## Invent

Create advanced, safe, and efficient flight systems for both drones and passenger aircraft

## Trailblaze

Expand horizons of transit and feed economic growth through Advanced Air Mobility





# Fly Everywhere

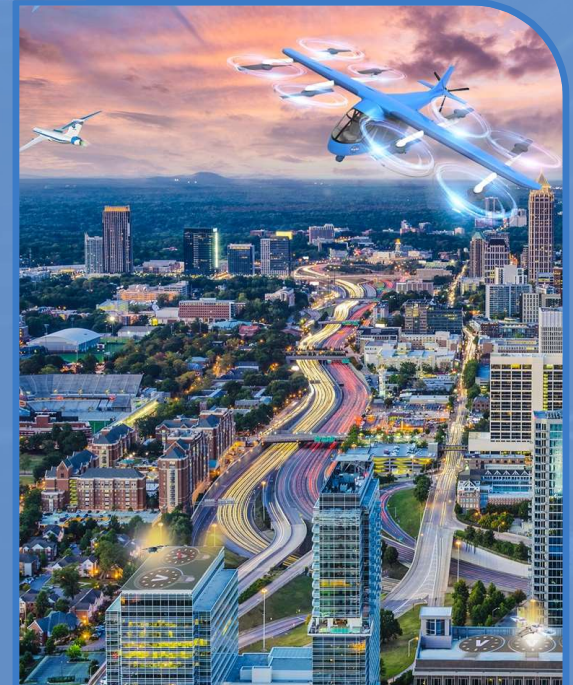
# Aeronautics



**IMPROVE**



**INVENT**



**TRAILBLAZE**



# Revolutionize How We Work

# Transformation

## Connect

Grow ideas and alliances that strengthen Langley's impact on missions, markets and the economy

## Energize

Boost NASA discoveries by teaming with those who bring new concepts and methods to our research

## Accelerate

Deploy innovative digital tools that bring new capabilities to NASA and the American people







# Revolutionize How We Work

# Transformation



**CONNECT**



**ENERGIZE**

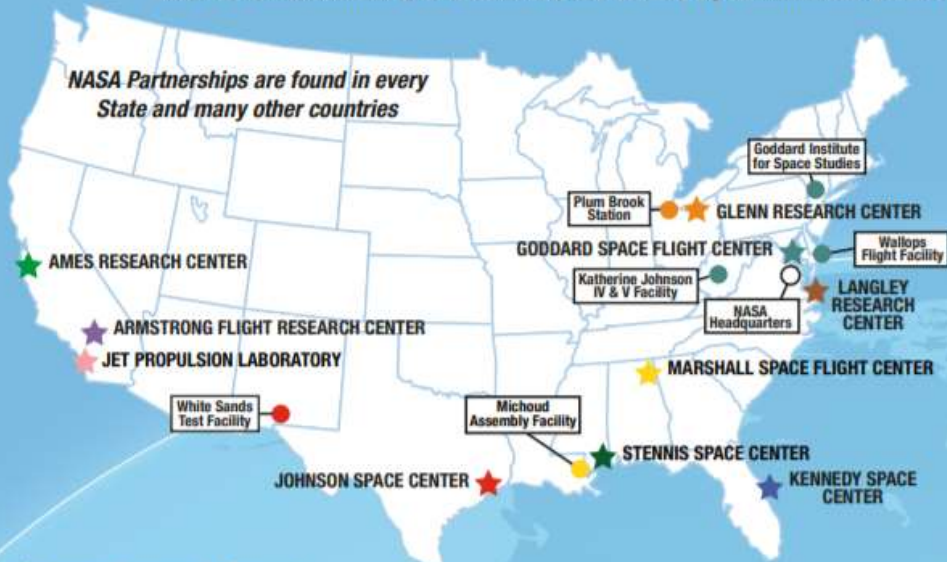


**ACCELERATE**

# EXPLORE NASA Partnerships

NASA offers 60 years of experience in advanced engineering and testing capabilities, cutting-edge research, and technology development, as well as unique assets such as land, facilities, and laboratories for use by commercial industry, academic institutions, U.S. Government agencies, and international entities.

NASA Partnerships are found in every State and many other countries



## ★ Ames Research Center

- Air Traffic Management • Entry Systems • Advanced Computing and IT Systems
- Intelligent/Adaptive Systems • Small Spacecraft Technology and Missions • Aero-Sciences
- Astrobiology and Life Science • Space and Earth Sciences

## ★ Armstrong Flight Research Center

- Spacecraft/Aircraft Loads, Instrumentation and Systems Integration • Thermal and Ground Testing
- Thermal Analysis and Systems Development • Flight Testing of Unique Research Vehicles and Space Systems • Enabling of Low-cost Access on Commercial Suborbital Space Platforms
- Global Atmospheric Research

## ★ Glenn Research Center, Including Plum Brook Station

- Air-Breathing Propulsion • Electric Propulsion • Power Systems • Communications • Materials
- Physical Sciences • Major Test Facilities, Including Aero-Propulsion Wind Tunnels and Engine Test Cells • R&D Labs, Including the World's Largest Vacuum Facility

## ★ Goddard Space Flight Center, Including Wallops Flight Facility, Goddard Institute for Space Studies, and Katherine Johnson IV & V Facility

- Earth System Observation and Modeling • Instrument Development, Miniaturization and Characterization • Distributed Sensing • Space Weather • Spacecraft Development and Integration • Robotic Acquisition, Servicing, and Assembly • Space Communications
- Launch Range and Suborbital Services

## ★ Jet Propulsion Laboratory

- Remote Sensing Systems • Advanced Optics • Robotics and Autonomy • Communication and Navigation Systems • Avionics • Mission Design and Concurrent Engineering • Earth Science Research and Applications Development • Data Analytics

## ★ Johnson Space Center, Including White Sands Test Facility

- Human Spaceflight Design, Development, Systems Integration and Mission Operations
- ISS Coordination and Access • Crew Training and Mission Planning • Life-Support Systems
- Spacesuits • Human Health and Safety in Space • Orbital Debris • Facility Available for High-Pressure Oxygen Systems, Materials, and Rocket Propellant Testing

## ★ Kennedy Space Center

- Launch and Landing Capabilities and Technologies • Available Land • Vehicle, Payload, Spacecraft, and Small Satellite Processing • Integration and Testing • Plant Research and Production

## ★ Langley Research Center

- Entry, Descent, and Landing • Aerosciences • Atmospheric Characterization • Systems Analysis and Concepts • Advanced Materials and Structural Systems • Autonomous In-Space Assembly

## ★ Marshall Space Flight Center, Including Michoud Assembly Facility

- Chemical Propulsion Development, Testing, and Technology • Habitat and Environmental Control
- Life-Support Systems Development, Testing, and Technology • Facility Available for Large Scale Manufacturing and Equipment

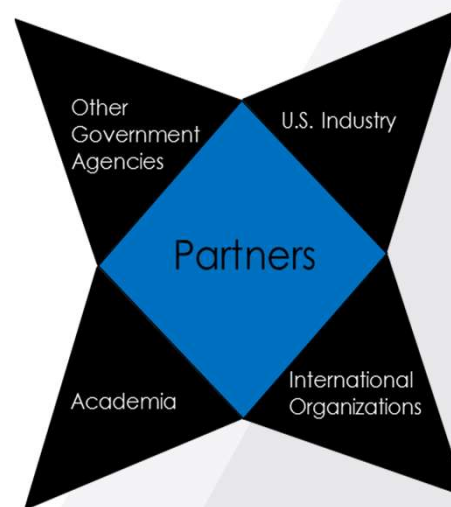
## ★ Stennis Space Center

- Propulsion and Launch Systems Test and Technology • Test Operations and Engineering Consulting
- Lease Opportunities for Commercial Space Activities • Small UAV and Lander Test Sites

# The Importance of Partnerships

NASA's partnerships are instrumental in supporting our strategic plan and agency objectives, including:

- Expanding human knowledge
- Advancing U.S. competitiveness
- Encouraging mutual beneficial cooperation with other nations
- Disseminating the results of NASA's activities to educate and inspire
- Facilitating the efficient use and management of agency infrastructure and capabilities



# Potential Benefits of Partnering

- Access to **unique NASA assets** (e.g., specialized clean room, testing facilities/equipment) without having to incur a large capital expenditure
- Access to unique NASA **technical expertise** (e.g., specialized consulting and analyses), software, and licensing opportunities
- Opportunity to leverage **resources** by co-funding technology development of mutual interest, while retaining commercial IP rights to partner-developed technologies
- NASA **brand recognition** (although NASA does not endorse commercial products or services)



# Legal Instruments for Partnerships

- **Space Act Agreement (may be called MOU, MOA)**
- **Procurement Contract**
- **SBIR**
- **Licenses for Intellectual Property (ie Technology Transfer/Licensing)**
- Cooperative Agreement
- Economy Act Agreement
- Commercial Space Launch Act Agreement
- Commercial Space Competitiveness Act Agreement
- Cooperative Research and Development Agreement (CRADA)
- Personal Property Loan
- Use Permit
- Real Property Lease
- Enhanced Use Lease
- Employee Training And Development Agreements
- International Agreement



# What are Space Act Agreements (SAA)?

- NASA SAAs are typically one of the following types:
  - **Reimbursable** (partner reimburses NASA, in full or in part, for access to unique NASA resources)
  - **Non-reimbursable** (no exchange of funds collaborations) to help advance a technology or area of interest relevant to NASA's missions
- Partnership agreements such as SAAs are not procurement instruments; NASA does not procure goods or services for the benefit of the Agency through partnership agreements. They are not publicly announced but many are available for review here:  
<https://www.nasa.gov/partnerships/about.html>

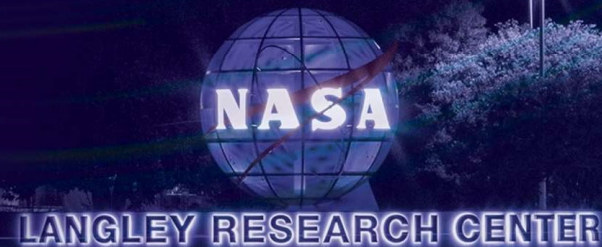




National Aeronautics and  
Space Administration



Learn more at  
[www.nasa.gov/langley](http://www.nasa.gov/langley)





Presenting



Speaker



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Dinner



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