



UAM Geomatics, Inc.
A NEXA Capital Company

Passenger Demand and Economic Impact

*The Business Case for AAM Investment
- Phillip Dymont, Vice President*

Winter 2023-24

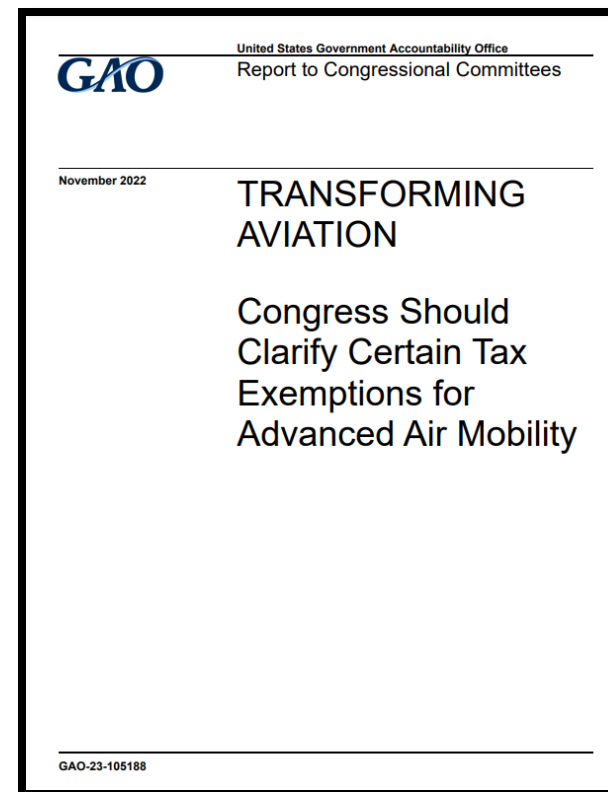
 **NEXA** Capital Partners, LLC
NEXA Capital powers the industry

The GAO Report

The U.S. for the Government Accountability Office (GAO) has made exclusive use of UAM Geomatics forecasts throughout its latest report on Advanced Air Mobility.

<https://www.gao.gov/products/gao-23-105188>

“UAM Geomatics was the only source we identified that could provide cumulative cost estimates across a broad time period.”



UAM Geomatics Portal and Gateway



UAM Geomatics
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For eVTOL Vehicle Developers For Helicopter Operators For UAM Developers For Vertipod Designers For City Planners For Investors Press Releases

Urban Air Mobility
Infrastructure and Global Markets
2020 - 2045 UAM Geomatics, Inc.

Is Your City Ready to Design Tunnels in the Sky?

UAM Geomatics, Inc.
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Urban Air Mobility
Infrastructure and Global Markets
Forecasts for 84 Metropolitan Areas: 2021 - 2045
ANALYSIS FOR CORPORATE DECISION-MAKERS AND INFRASTRUCTURE INVESTORS

Release Date: June 2021

CITY REPORTS

Abu Dhabi, UAE View Report
Amsterdam, NLD View Report
Atlanta, GA View Report
Baltimore, MD View Report

GLOBAL ANALYSIS DOWNLOAD REPORT

UAM Geomatics Dashboard
Revenue Forecasts
Phase 1 (2020-2045)
Airports: 23
Hospitals: 39
Ticket Prices: 2020-2045

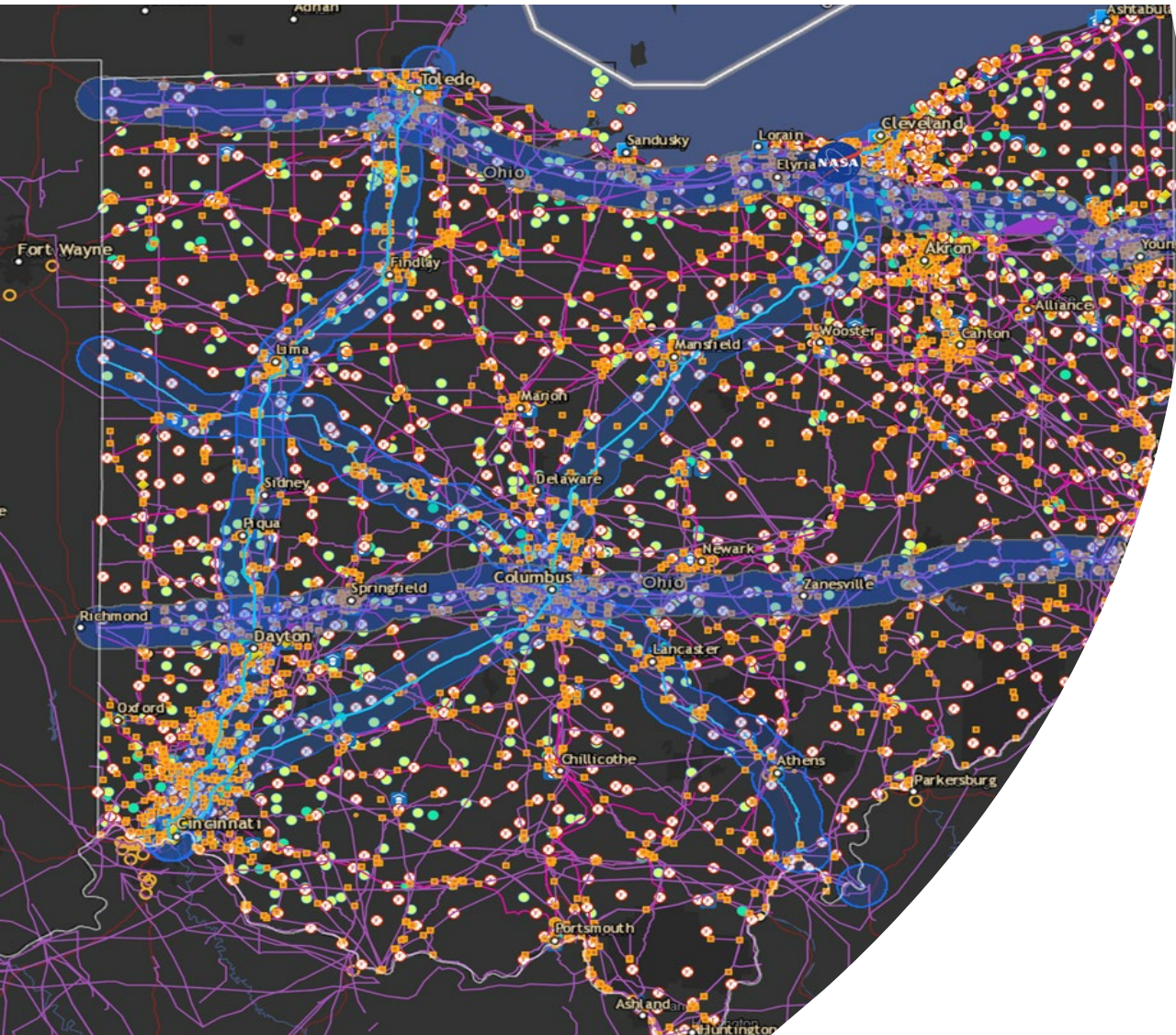
New York City UAM Powered by ArcGIS

<https://www.nexa-uam.com/>

Geospatial Mapping



UAM Geomatics
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- Geographic Boundaries
- Waterways
- Bridges
- **Property Boundaries**
- **Roads**
- Major Transportation Corridors
- Surface Logistics Centers
- Water Ports
- Public Lands
- Hospitals
- **Blood Banks**
- **Clinics**
- Airports
- High Resolution Airport Facilities Maps
- Heliports
- Military Bases
- Government Buildings
- Transmission Lines
- **Electrical Sub Stations**
- **Traffic Congestion**
- NASA Facilities
- Sports Venues
- **F1000 Corporations**
- Major Manufacturing Facilities
- **Part 91 Facilities and Aircraft**
- **Part 135 Facilities and Aircraft**
- Universities and Colleges
- Shopping Centers
- Music Venues
- **Zoning Districts (Limited)**
- Etc.

Case Study

The AAM Opportunity in Virginia



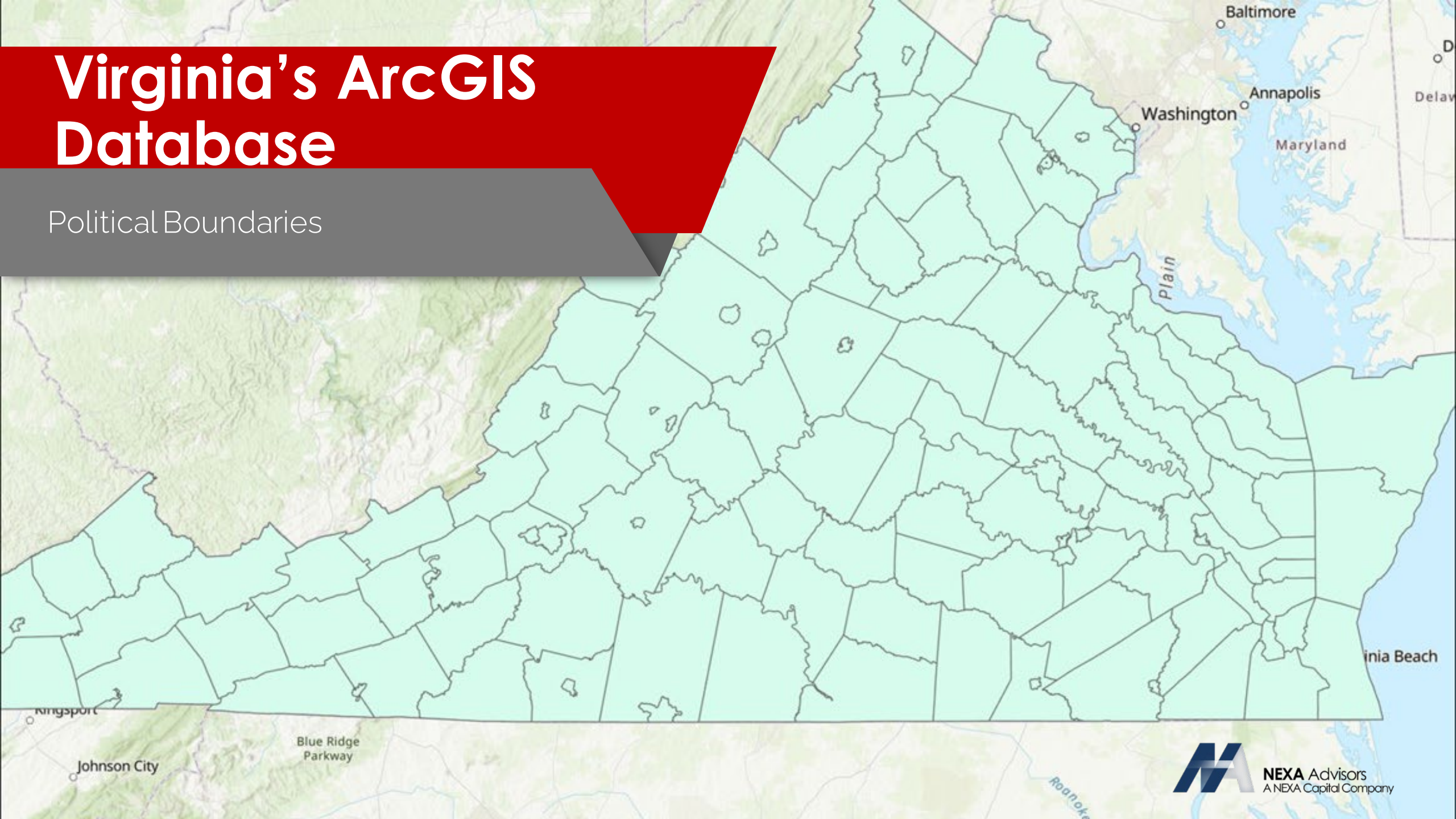
UAM Geomatics, Inc.
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NEXA Advisors
A NEXA Capital Company

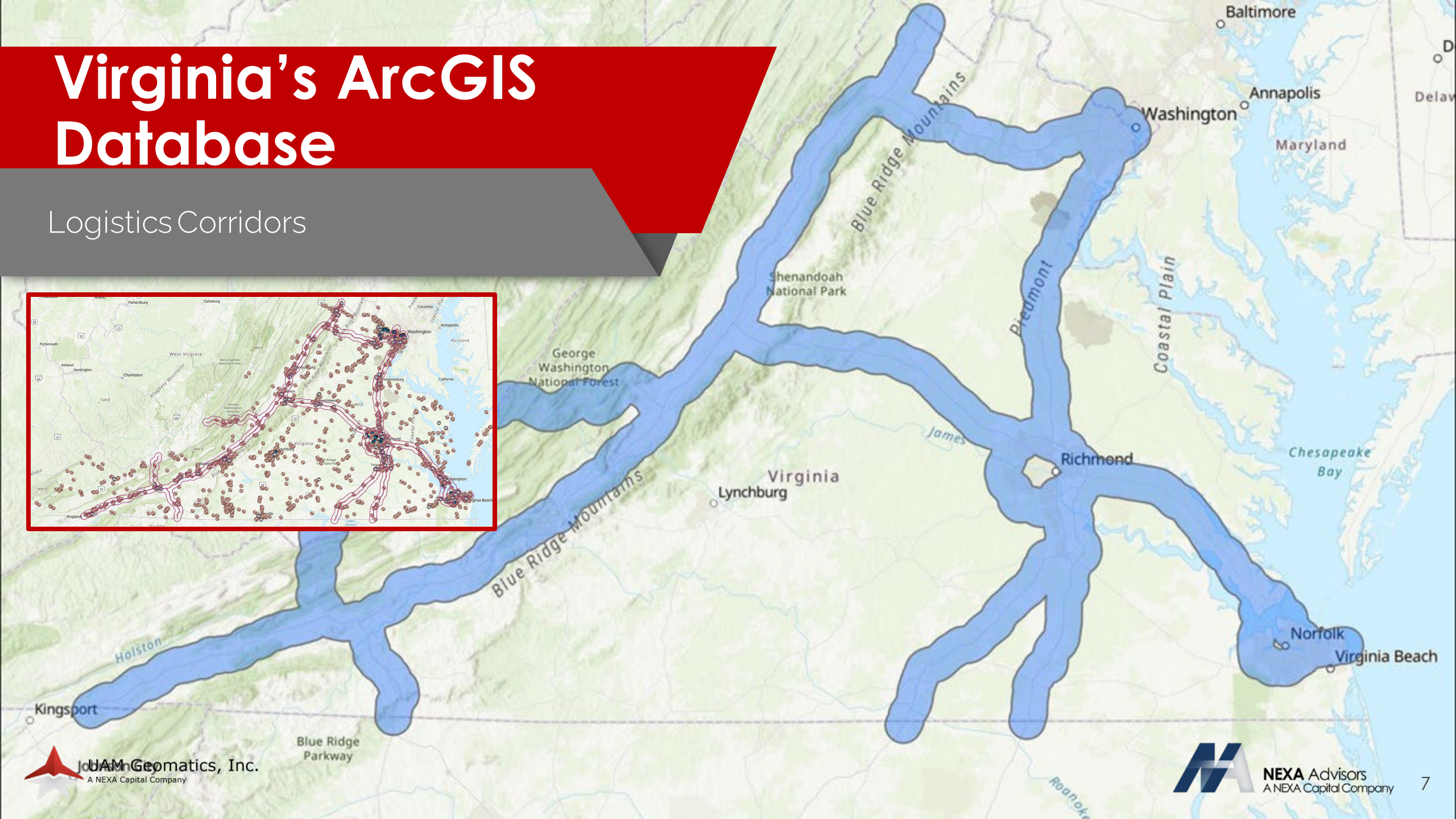
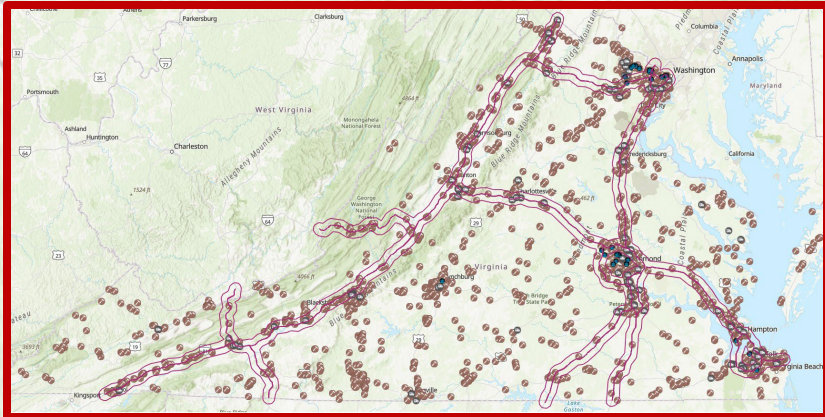
Virginia's ArcGIS Database

Political Boundaries



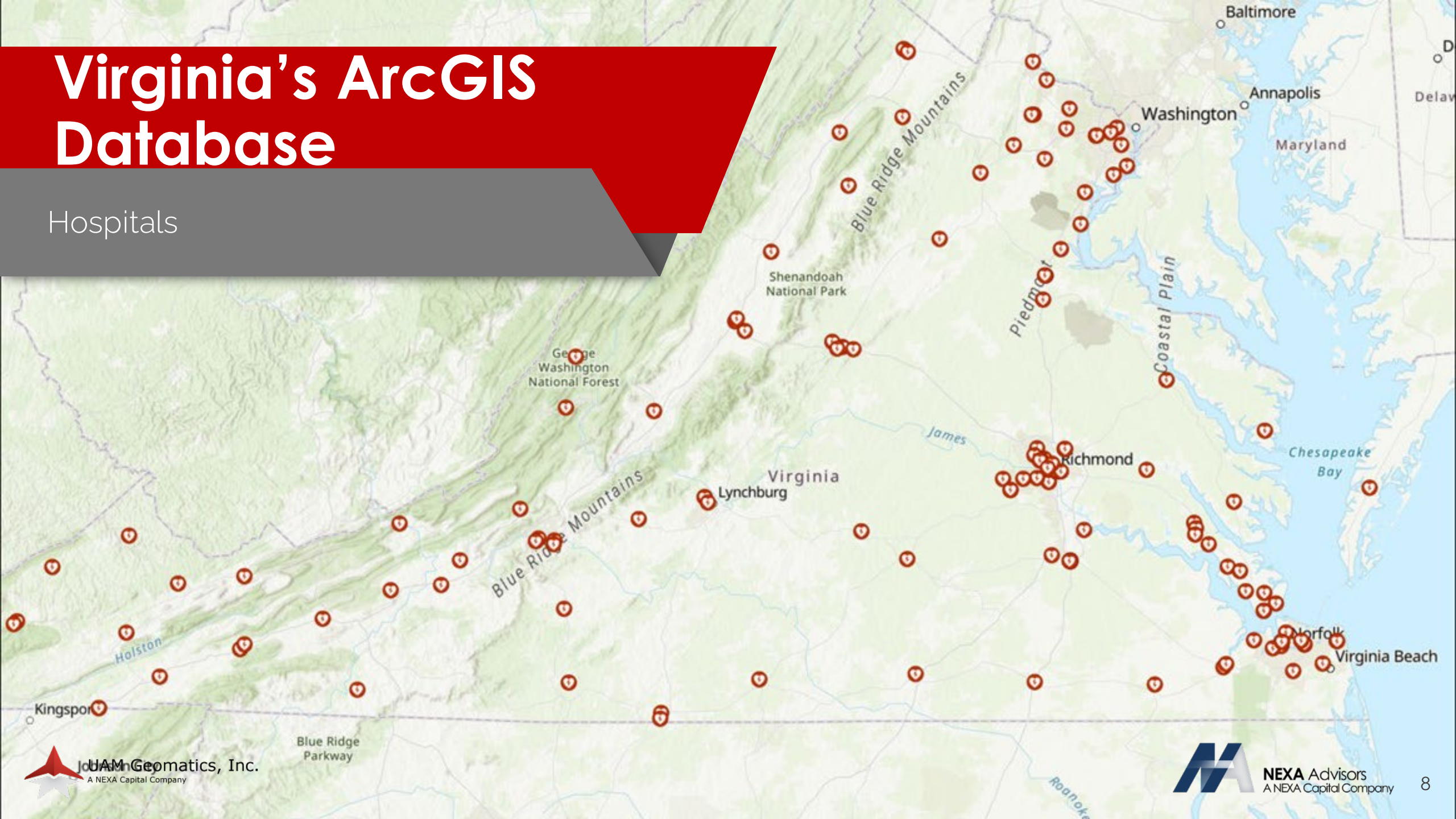
Virginia's ArcGIS Database

Logistics Corridors



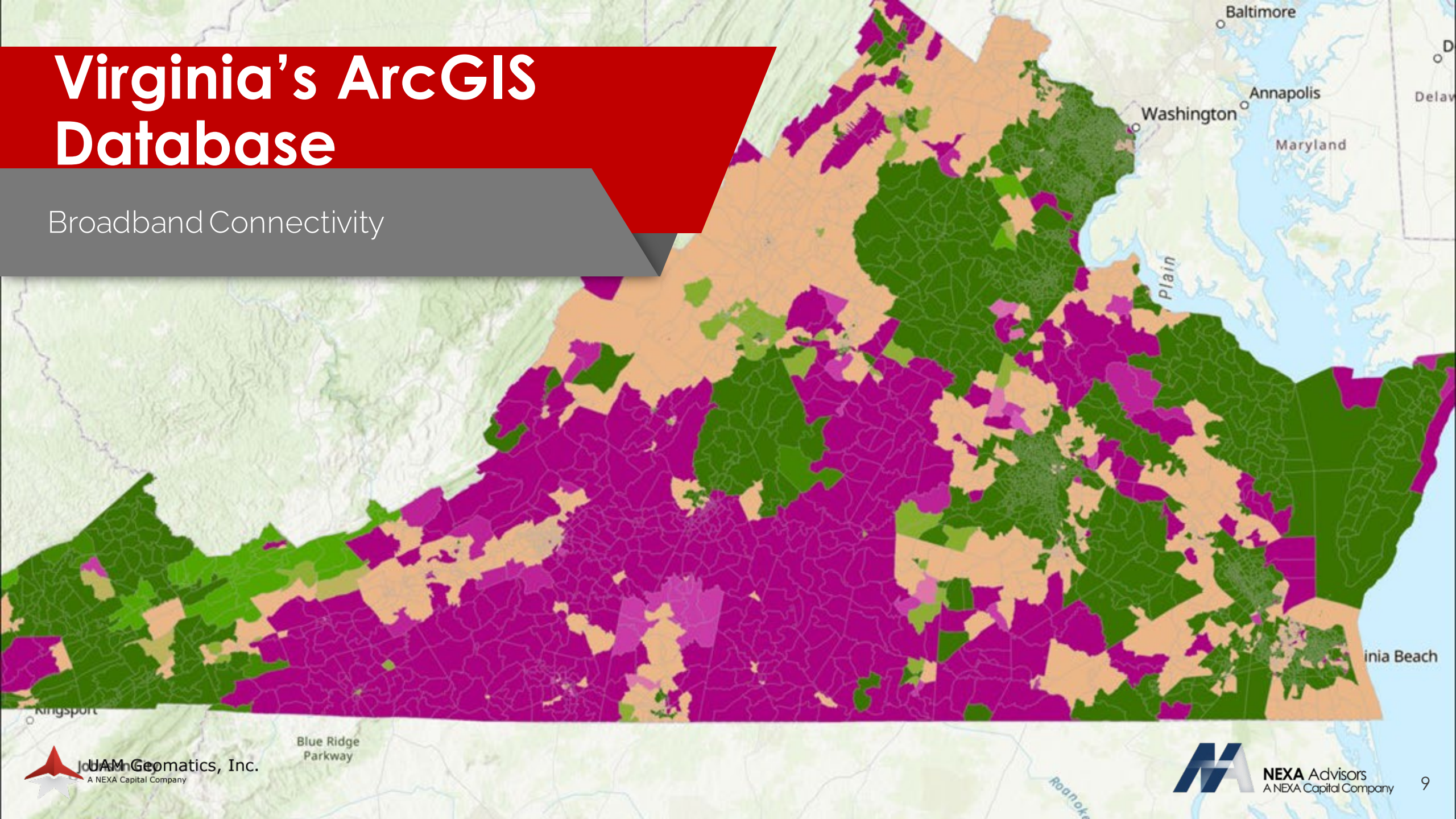
Virginia's ArcGIS Database

Hospitals



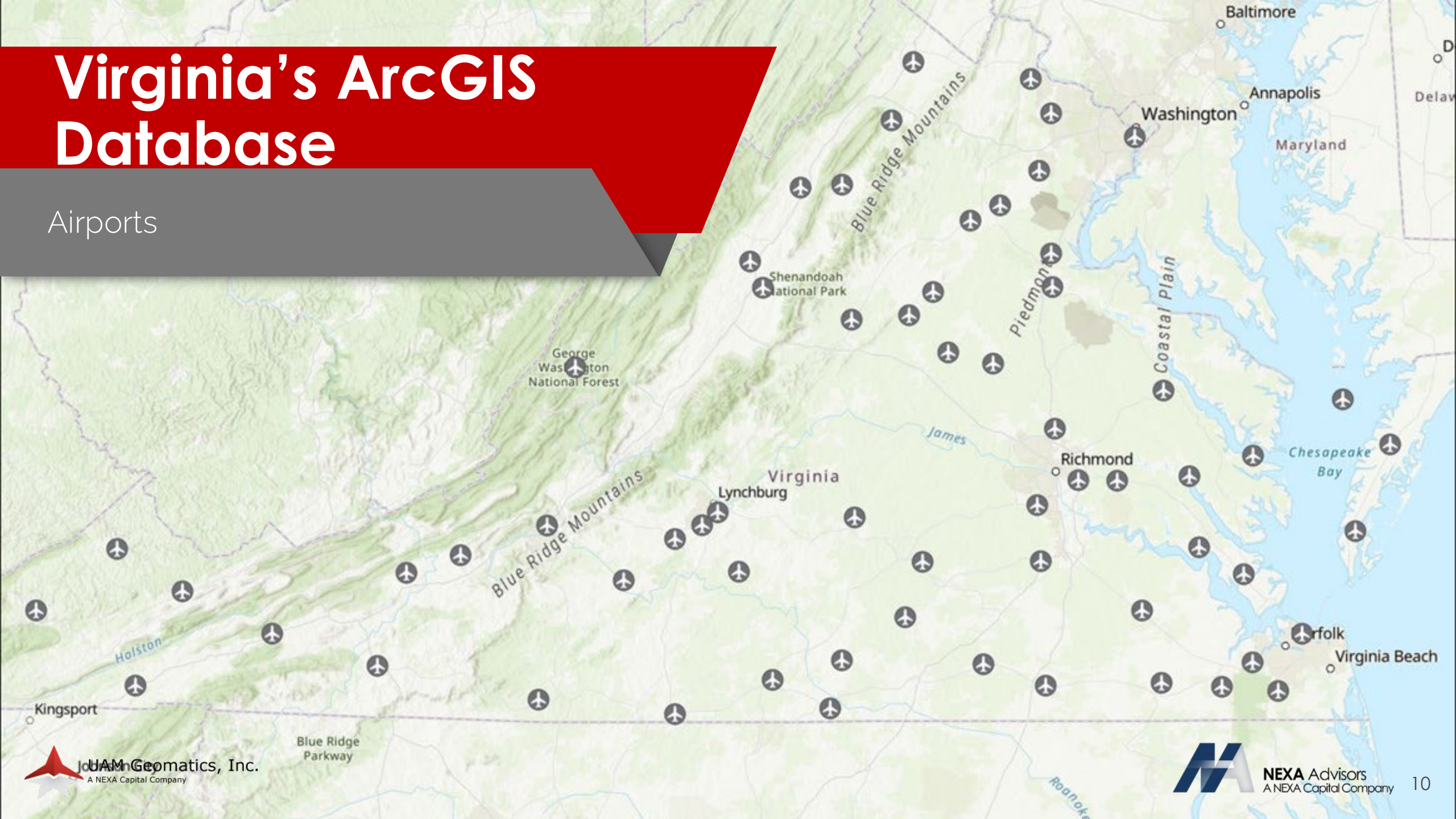
Virginia's ArcGIS Database

Broadband Connectivity



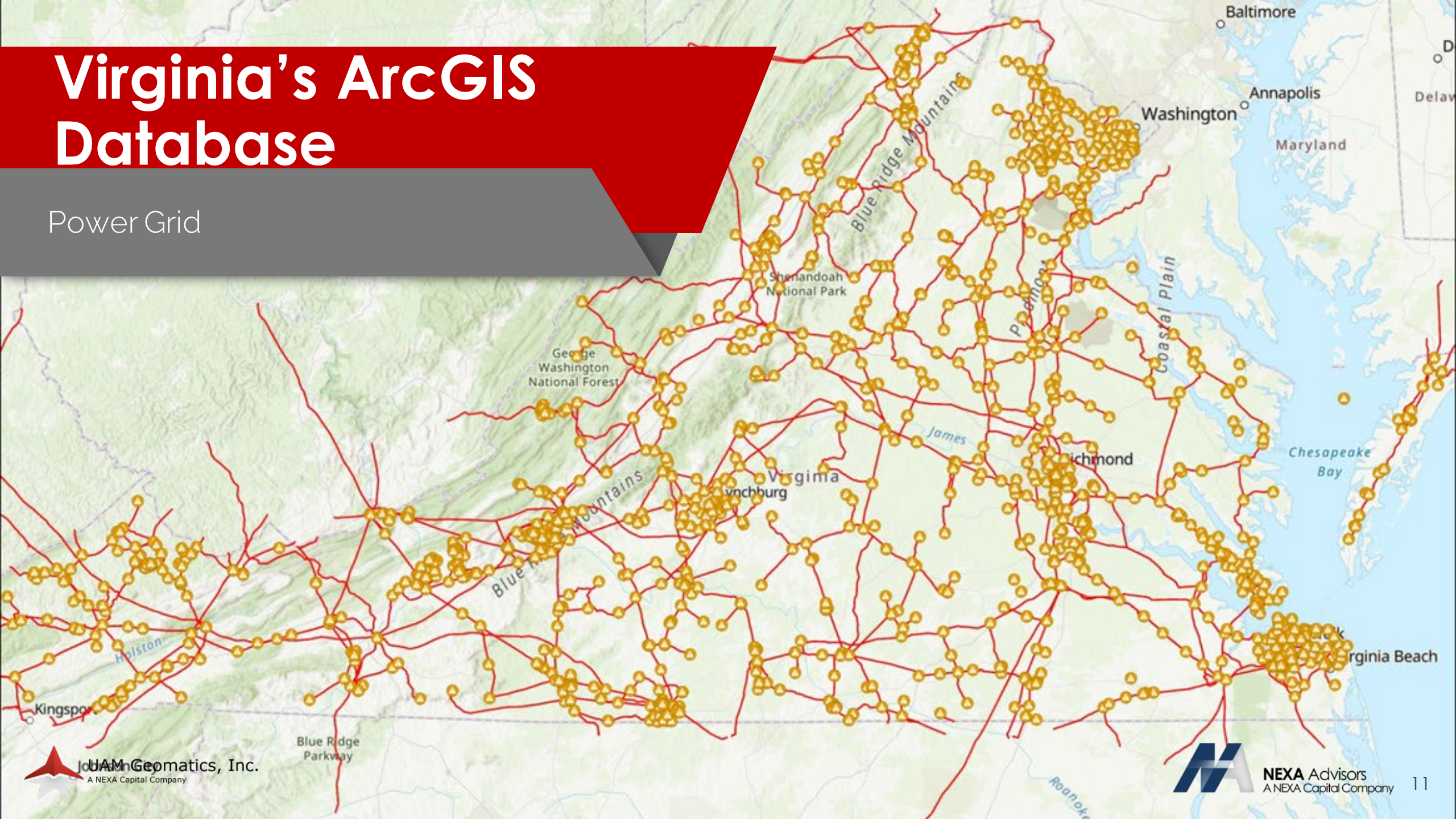
Virginia's ArcGIS Database

Airports



Virginia's ArcGIS Database

Power Grid

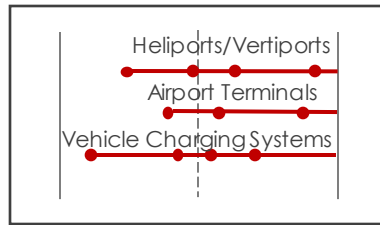


Inputs

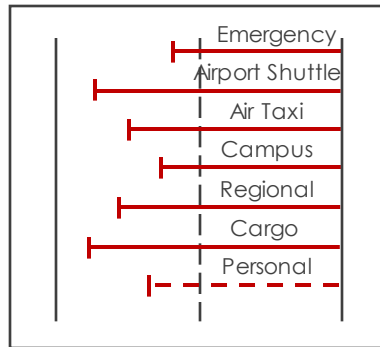
- City Demographics
 - Population and Density
 - GDP per Capita
 - Age Distribution
 - Airline Enplanements
 - Congestion
 - Taxi Fleets and On-Demand
 - Public Transport
 - Emergency Facilities
 - Airports and Heliports
 - Corporate HQs
 - Business Aviation Fleets
- Infrastructure Costs
 - Nominal Heliport or needed vertiport Facilities
 - Passenger Handling
 - UATM Systems
 - ANSP Interfaces
- Vehicle & Supply Chain
 - OEM Fleets
 - Electric/Hybrid/Hydrogen
 - Battery and Charging
 - Power Grid
 - Supply Chain and MRO
- Demand Assumptions
 - Phasing
 - Pricing
- Regulatory and Community Constraints
 - Noise
 - Safety
 - Public Perception

Assumptions/Drivers

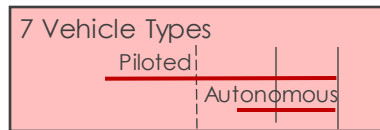
Ground Infrastructure Inputs



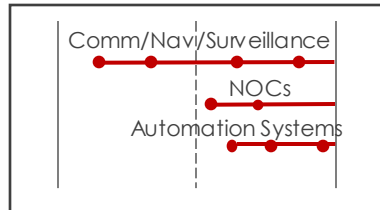
UAM Service Demand Elasticity



eVTOL Manufacturing Supply Chain

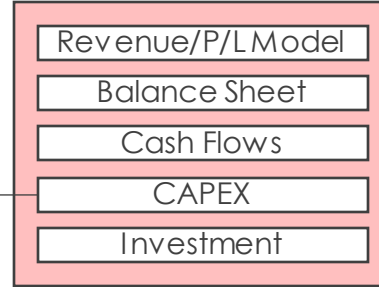


UATM Infrastructure Inputs

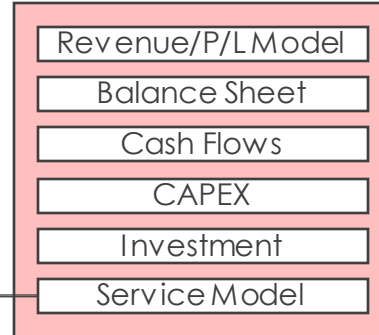


Modeling and Analysis

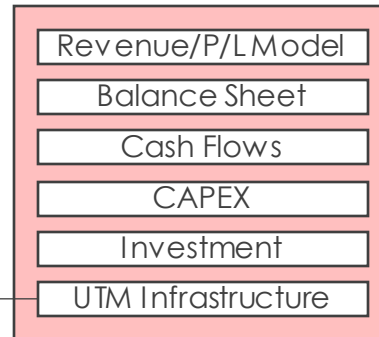
City PPP Model



UAM P135/121 Operator Model

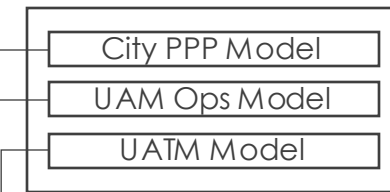


UATM Service Model



Outputs

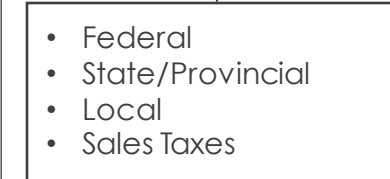
Business Case Dashboard



Economic Impact



Tax Revenues



■ Denotes Unique Supply Chain

Findings

- Business Viability
- Private Investment Likelihood
- Affordability
- Public Acceptance

What is the outlook for 84 of the most significant metropolitan areas globally, and what policy, technology, and financial issues will individually define their success? What will be the plan, and the minimum investment to move these urban areas to the tipping point of success? What is the expected size of UAM markets over the next 25 years, but especially the next 5?

Emergency Services

- Medevac
- Facility to Facility
- Search and Rescue
- Surveillance and Traffic

Business Aviation

- Mobility Configurations
- Utilization Strategies
- Benefits
- Shareholder Value



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Virginia Business Case Pillars

2023-2045

Virginia AAM Business Case
EcoSystem
2023-2045 (\$US)



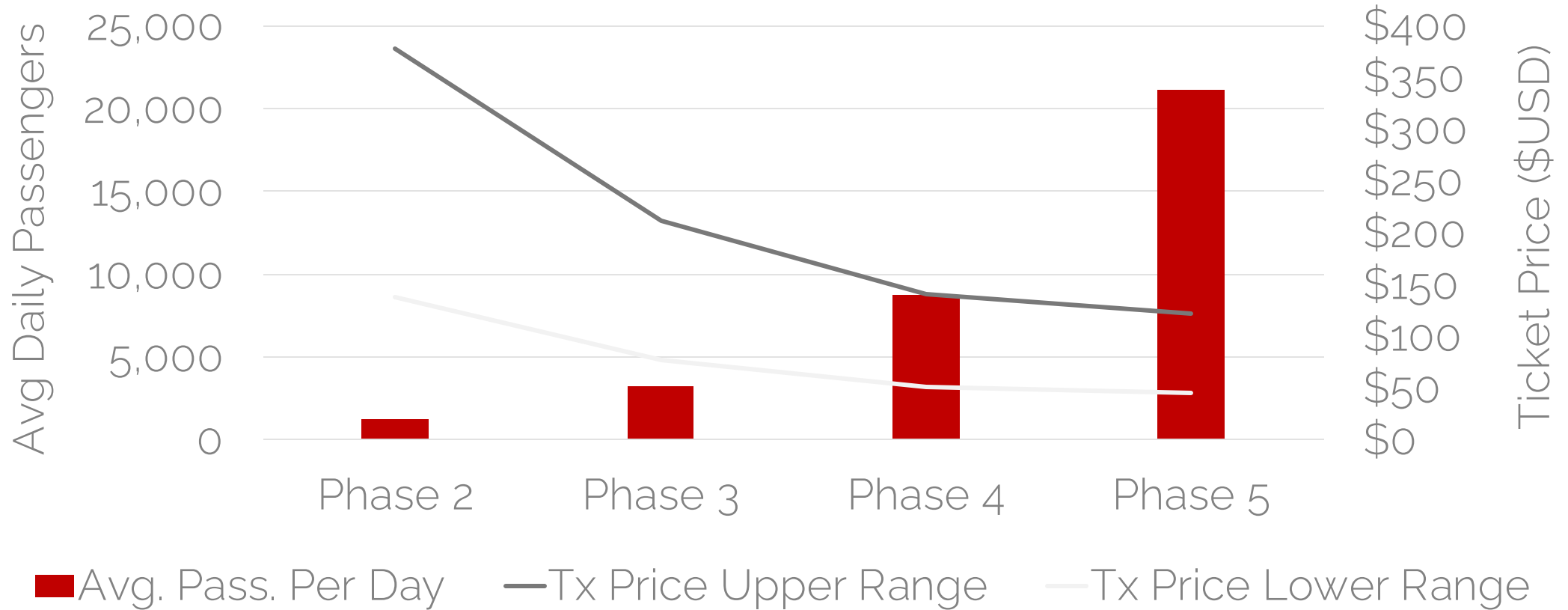
	Year	2023-2025	2026-2030	2031-2035	2036-2040	2041-2045	SUM	Pillar Totals
Demand (Passengers)		Nascent	2,287,000	5,978,000	19,253,000	38,607,000	66,125,000	
Ground Infrastructure	Ground Infrastructure OPEX	\$25,890,000	\$69,200,000	\$119,470,000	\$180,600,000	\$195,490,000	\$590,650,000	\$899,230,000
	Ground Infrastructure CAPEX	\$68,500,000	\$68,910,000	\$87,020,000	\$24,810,000	\$59,340,000	\$308,580,000	
RTM/UATM	RTM/UATM Cost OPEX	\$1,100,000	\$12,051,000	\$31,703,000	\$76,725,000	\$121,929,000	\$243,508,000	\$416,916,000
	RTM/UATM Cost CAPEX	\$20,353,000	\$59,603,000	\$30,529,000	\$34,890,000	\$28,033,000	\$173,408,000	
UAM Operators	Passenger Revenues	Nascent	\$508,099,000	\$744,083,000	\$1,603,109,000	\$2,783,255,000	\$5,638,546,000	\$8,601,009,000
	MedEvac Revenues	Nascent	\$226,263,000	\$348,794,000	\$631,595,000	\$555,910,000	\$1,762,562,000	
	Cargo Revenues	Nascent	\$99,162,000	\$170,516,000	\$321,889,000	\$608,334,000	\$1,199,901,000	
Vehicles	Vehicle Manufacturing	Nascent	\$613,022,000	\$1,052,997,000	\$1,487,250,000	\$1,725,403,000	\$4,878,672,000	\$6,511,523,000
	Vehicle Purchases	\$58,800,000	\$277,440,000	\$280,755,000	\$454,411,000	\$561,445,000	\$1,632,851,000	
Virginia Grand Total		\$174,643,000	\$1,933,750,000	\$2,865,867,000	\$4,815,279,000	\$6,639,139,000	\$16,428,678,000	\$16,428,678,000

Note: Nascent - Not Meaningful

R/I	6.53
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What We Found

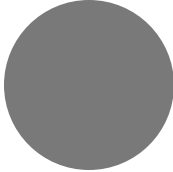
Virginia AAM Demand and Ticket Pricing




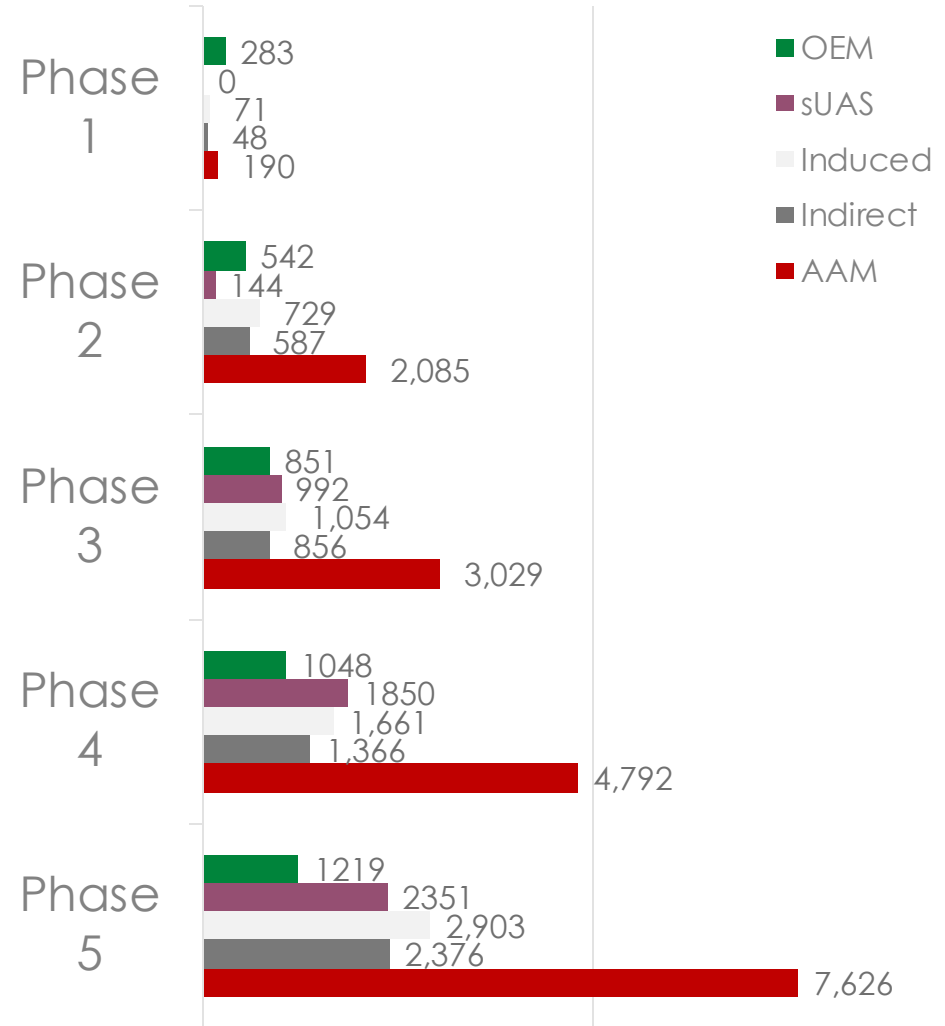
What We Found

Virginia AAM Job Creation, Permanent Full-Time

 17,400 Permanent Full-time Jobs

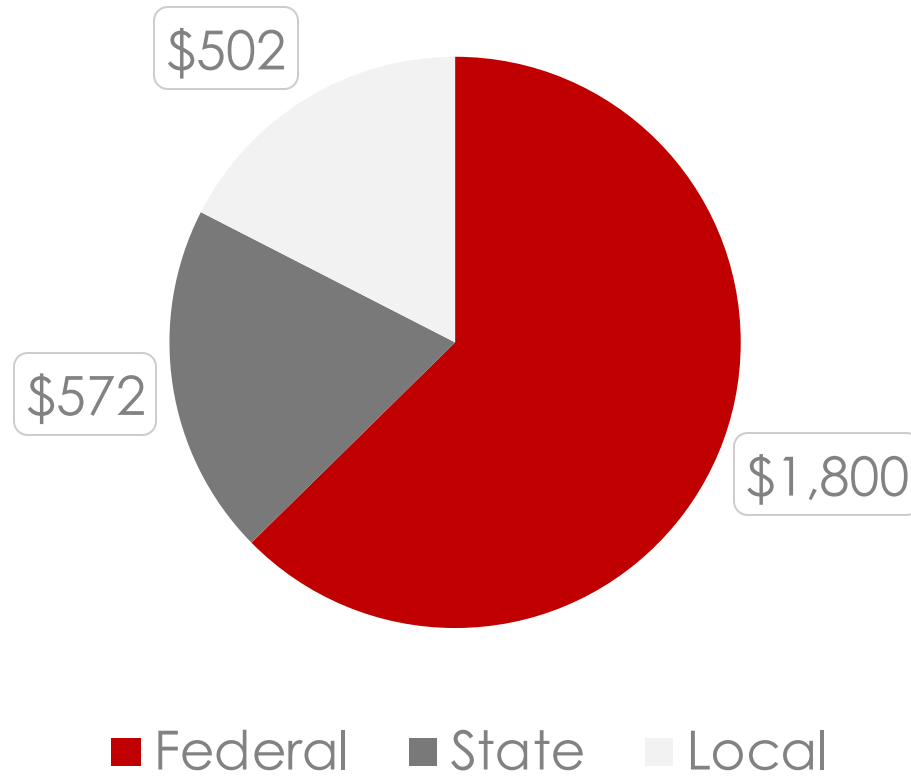
 Securing an OEM is Important

 Drones are an Efficiency Tool



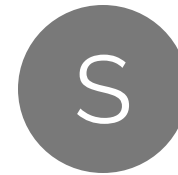
What We Found

Virginia Tax Revenues (\$M, USD) 2023-2045



Federal

\$1.8 Billion



State

\$572 Million

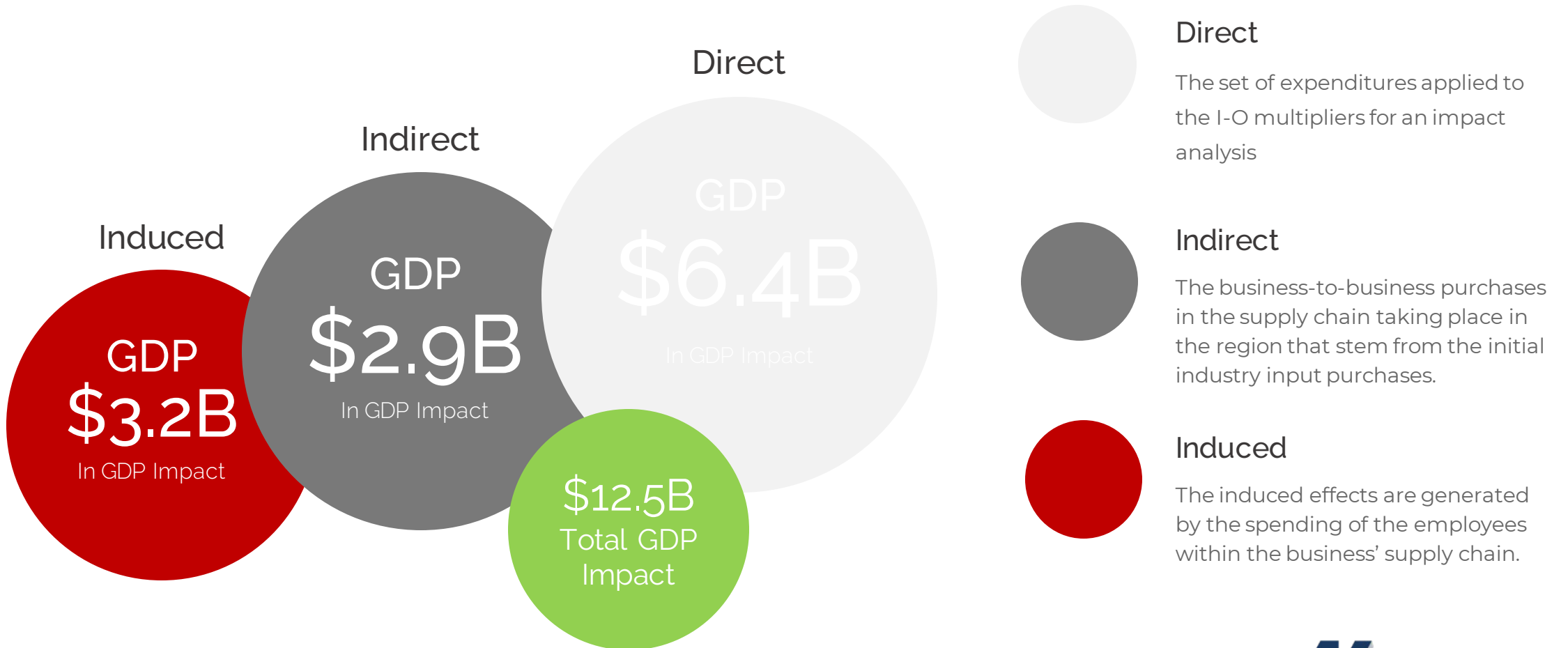


Local

\$502 Million

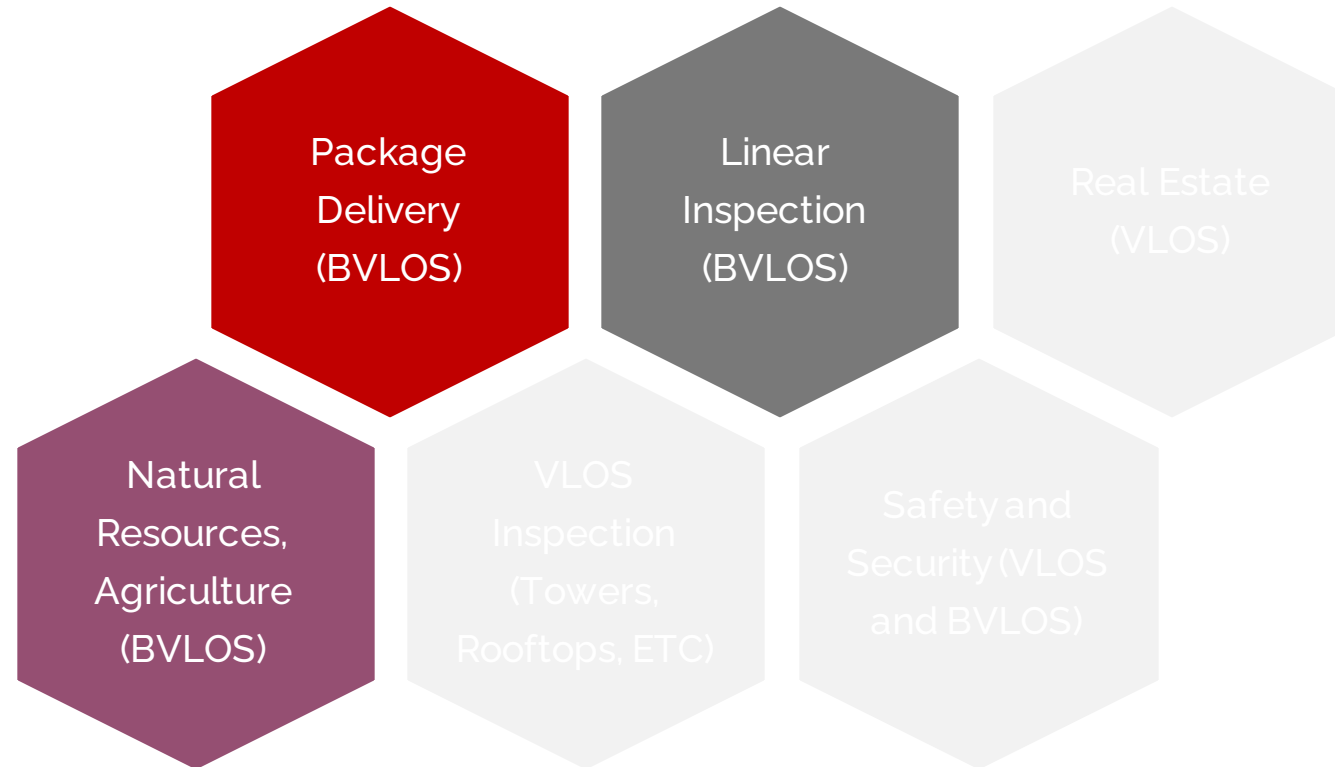
What We Found

Virginia GDP Impact



What We Found

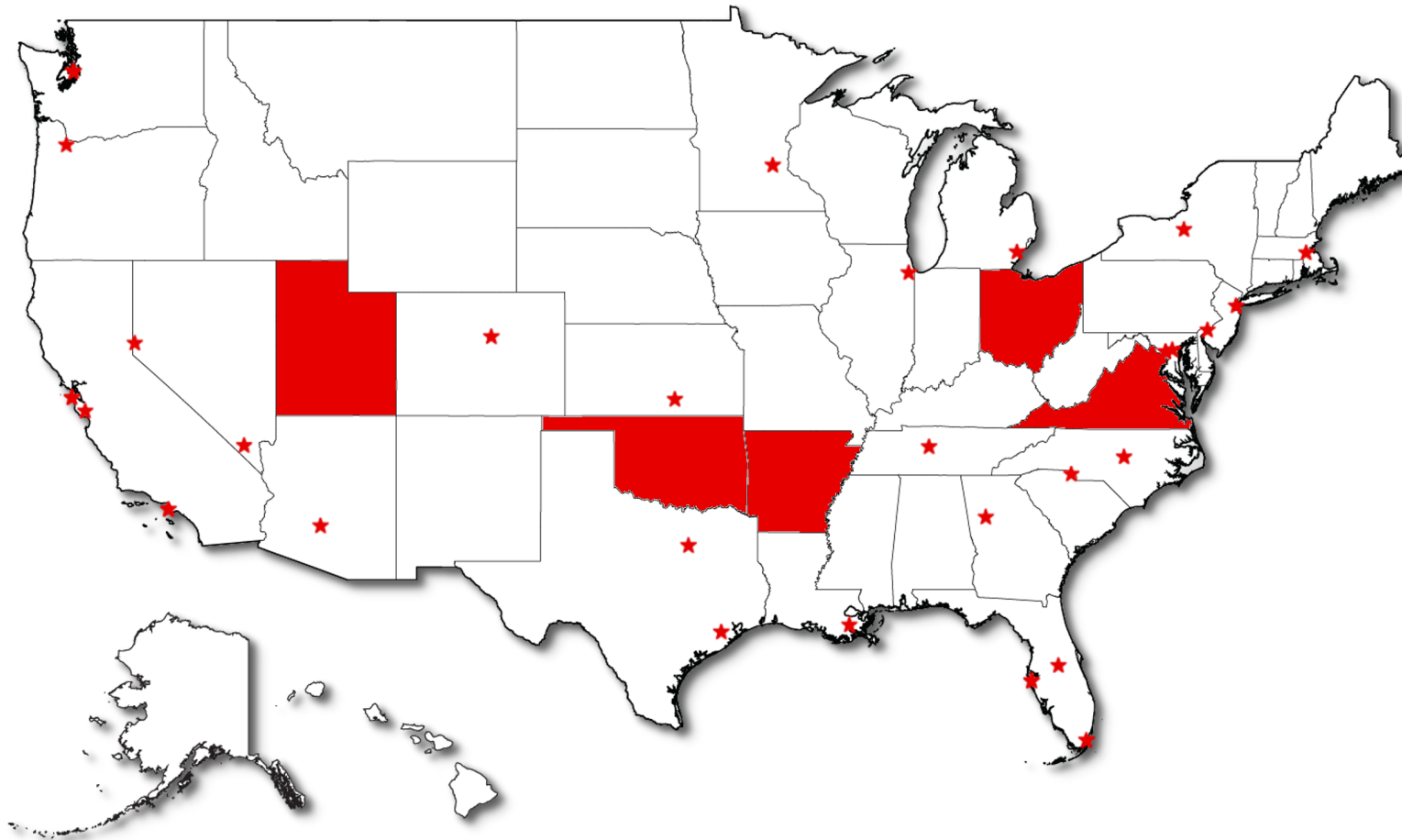
Top sUAS Use Cases in Virginia





The USA Business Case

48 MSAs Examined in the USA



55%
Of Total US
Population
Examined



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Thank You.



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