

VIRGINIA'S BUSINESS CASE FOR THE SEMICONDUCTOR INDUSTRY



January 2023

VEDP

Virginia
Economic
Development
Partnership
VEDP.org

WHY VIRGINIA?

America's top state for talent

Thriving ecosystem and dynamic center of innovation

Attractive, stable, and predictable operating environment

Exceptional quality of life

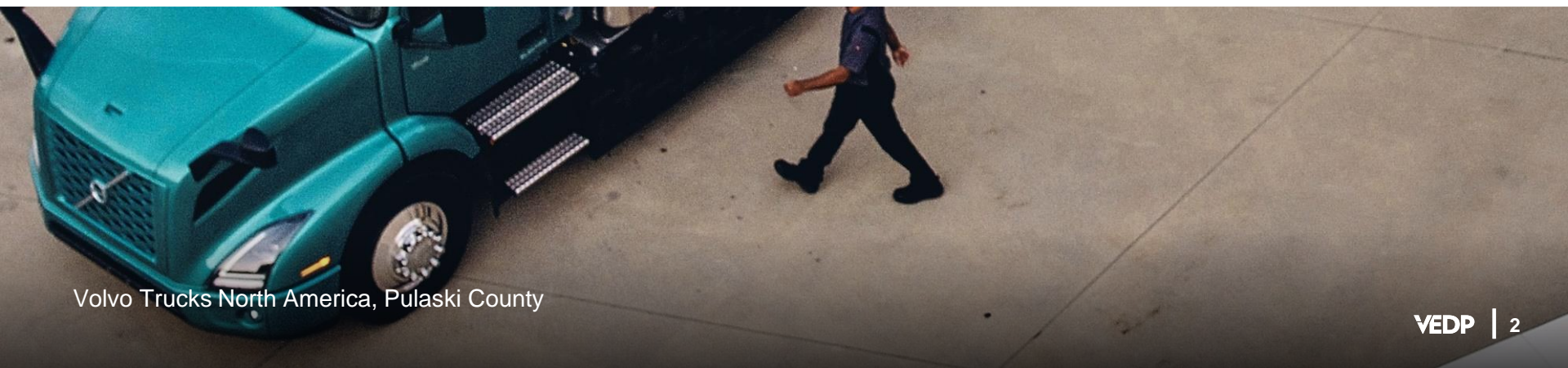
Robust portfolio of project-ready sites





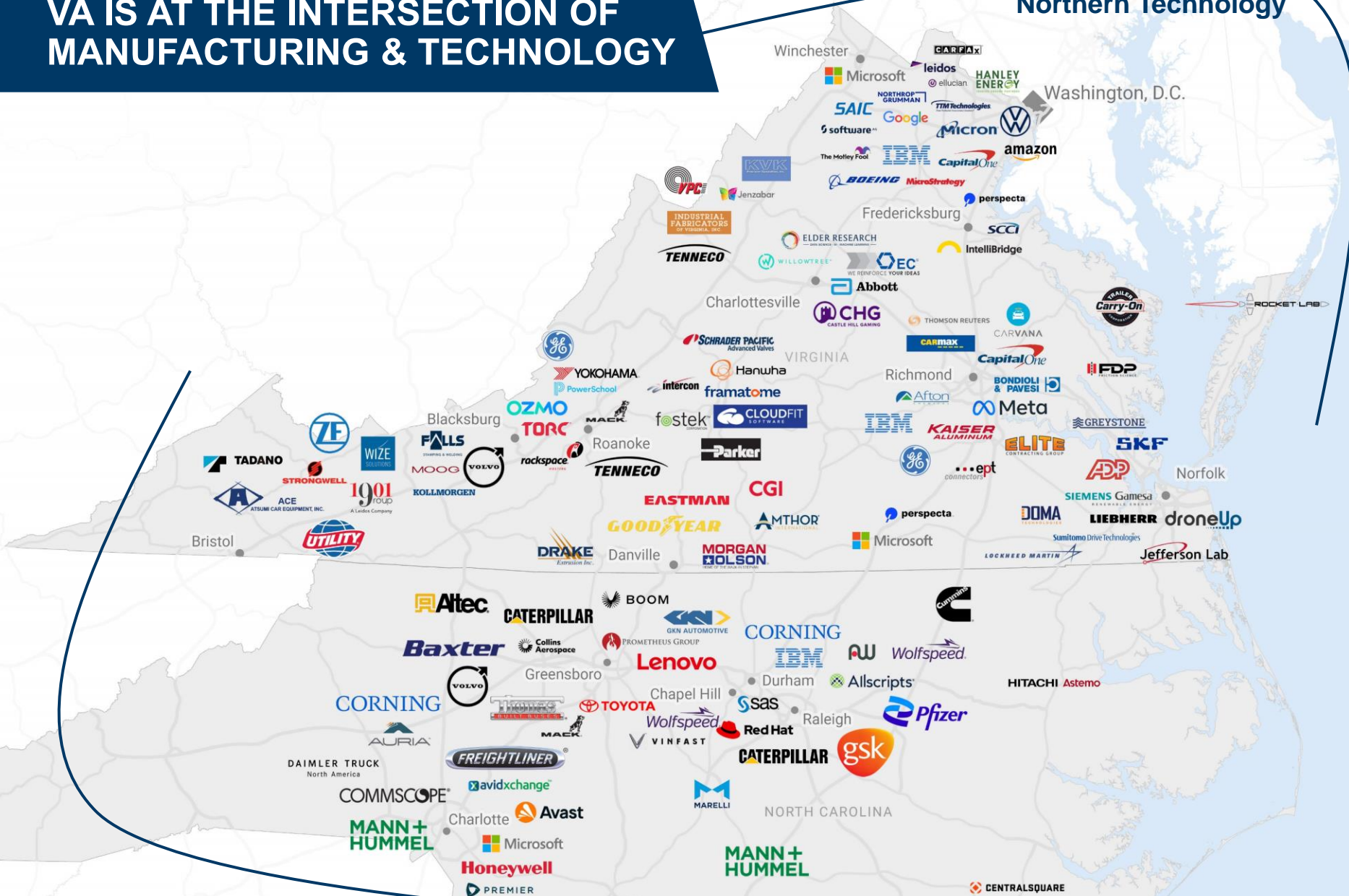
 Emsi 2020

Virginia is home to almost 350,000 workers in advanced materials and related occupations



VA IS AT THE INTERSECTION OF MANUFACTURING & TECHNOLOGY

Northern Technology



Southern Manufacturing

ncino

VIRGINIA HAS EXPERIENCE ASSISTING SEMICONDUCTOR MANUFACTURERS LIKE MICRON

- Micron, who has been in Manassas since 2002, announced they were seeking an expanded facility for manufacturing memory chips, including those used in self-driving vehicles
- Virginia took a collaborative approach involving local and state leaders, utility partners, and Micron itself
- Northern Virginia Community College added mechatronics and engineering technology degree programs and opened a fabrication laboratory (Fab Lab) on the Manassas campus
- The City of Manassas procured a new storage tank and began the cutting-edge practice of retaining and jettisoning waste so that Micron did not disturb its fixed sewage capacity



Micron, Manassas

VIRGINIA HAS EXPERIENCE ASSISTING SEMICONDUCTOR MANUFACTURERS LIKE MICRON (CONTINUED)

- Dominion Power, the utility provider for the two sites, provided a contractual agreement to Micron that would ensure reliability and redundancy while keeping costs affordable
- The Commonwealth of Virginia prepared a custom performance grant of \$70M which would be paid over two years
- Micron chose the City of Manassas due to this collaborative approach and will be creating 1,100 net, new jobs and investing \$3B
- The Micron Foundation also donated \$1M to support STEM and STEM-related diversity programs



Micron, Manassas



Micron, Manassas

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Micron’s Manassas site manufactures our long-lifecycle products that are built using our mature process technologies, and primarily sold into the automotive, networking, and industrial markets. Micron is grateful for the extensive engagement of state and local officials since early this year to help bring our Manassas expansion to fruition. We are excited to increase our commitment to the community through the creation of new highly skilled jobs, expanded facilities, and education initiatives.

Sanjay Mehrotra
Micron Technology
August 29, 2018

VIRGINIA TECH IS BRINGING THE FUTURE OF INNOVATION TO THE COMMONWEALTH

Virginia Tech prepares students for development in the semiconductor industry through new coursework

- Virginia Tech offers a B.S. in electrical and computer engineering with a major in Chip-Scale Integration. The major prepares students with courses such as Digital Design, VLSI Circuit Design, and Semiconductor Device Fundamentals. Students also complete real world research experience with leading semiconductor customers like Texas Instruments and Lockheed Martin
- The VT MEMS Lab pursues research in MEMS, nanotechnology, and microfluidics
- The Center for Power Electronics Systems (CPES) partners with industry leaders to transform electronics, resulting in technology incorporated in virtually every device, including voltage regulators in microprocessors and mobile electronics
- Virginia Tech is at the industry forefront with its proposed Center for Advanced Semiconductor Education and Research which would bring together industry partners and the university to deliver bleeding-edge research, innovation, and collaboration
- Virginia Tech's Electrical and Computer Engineering (ECE) Department at VA Tech is ranked top in the world, and the computer science engineering program is ranked #4 nationally (American Society of Engineering Education)



Virginia Tech

The Virginia Microelectronics Consortium (VMEC) facilitates university industry research partnerships across the Commonwealth.

- Founded in 1997, VMEC addresses the educational, training, and research needs of the Commonwealth's microelectronics industry and contributes to the development of Virginia as a location of choice for the microelectronics industry
- Since its foundation, VMEC has supported 327 VMEC scholars, at least half of whom have pursued microelectronics careers in the Commonwealth
- During the same period, VMEC has funded over 75 seed projects with grants totaling \$1 million



A Top State for Business

Virginia has been consistently ranked as a top state nationally to do business, with friendly tax and regulatory policies

 **#1** Top State
Business
Climate

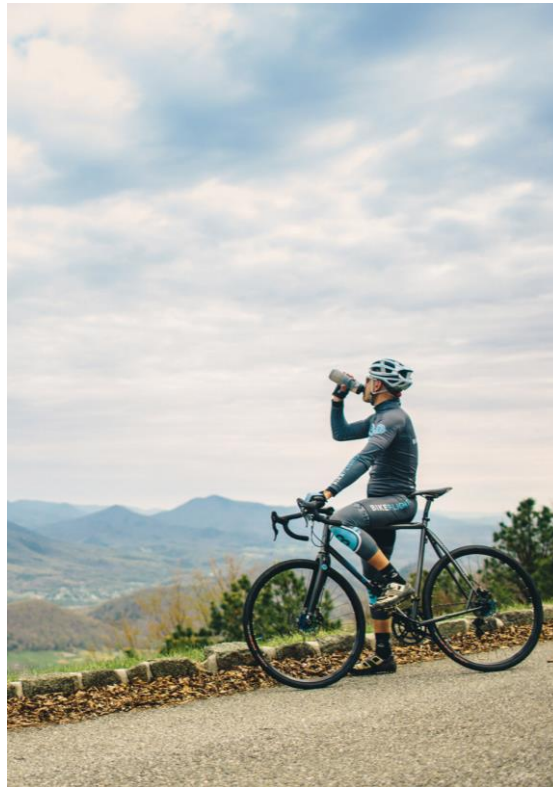
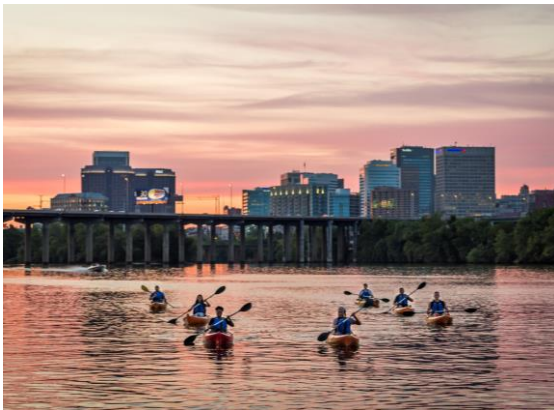
 **#3** Top State
for Business

#3 **Forbes**
Best States
for Business –
Regulatory
Environment

VIRGINIA OFFERS AN EXCEPTIONAL QUALITY OF LIFE

Virginia offers a diverse range of lifestyle options, a mild, four-season climate, and a competitive cost of living. Vibrant urban centers and picturesque small towns are alive with arts and culture and stunning landscapes. Outdoor enthusiasts can take advantage of a wide variety of beautiful outdoor settings, from mountains and hiking trails to beaches and rivers.

#1 Forbes
Best States
for Business –
Quality of Life

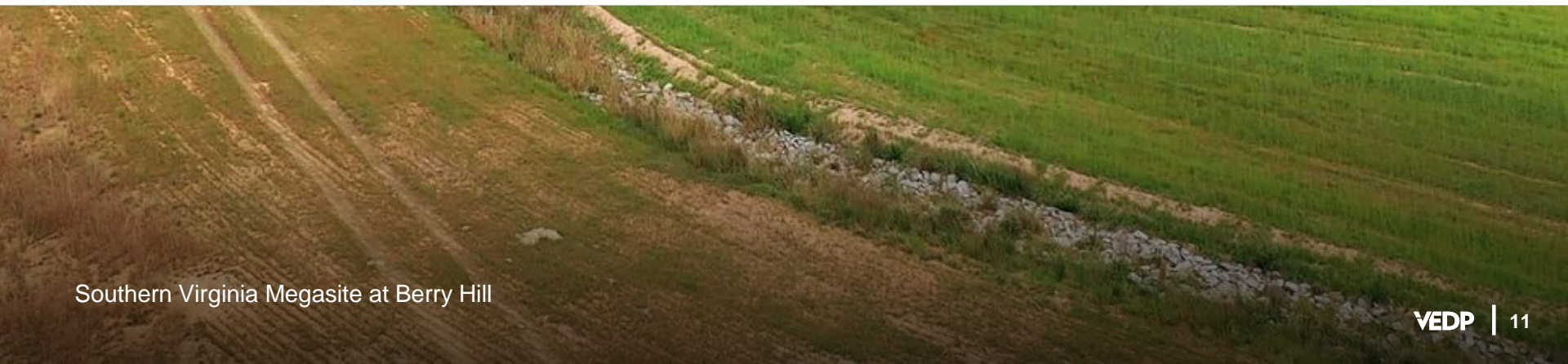


(From Left) Skyline kayaking, Richmond; Biking, Botetourt County; Sandbridge, Virginia Beach; Lewis Ginter Botanical Garden, Henrico County

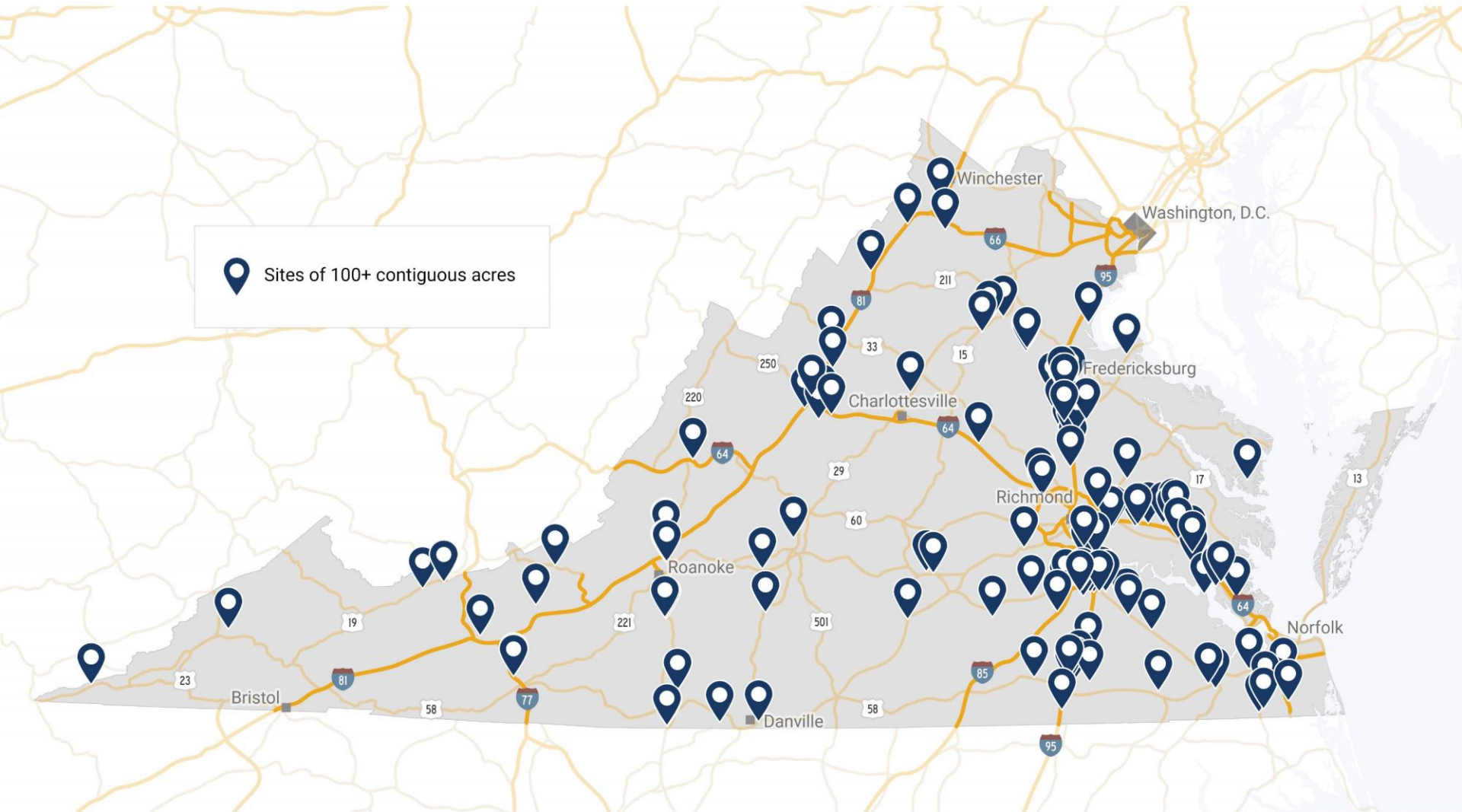
We will want to get BI's input on which sample sites to include in following slides



Shovel-ready industrial sites accommodate aggressive production timelines and infrastructure needs



VIRGINIA'S SITE INVENTORY INCLUDES OVER 100 SITES OF 100 ACRES OR LARGER SPANNING THE COMMONWEALTH



VIRGINIA OFFERS AN ARRAY OF INCENTIVE PROGRAMS TO SUPPORT NEW AND EXPANDING BUSINESSES

Virginia's incentive programs reduce the costs of opening or expanding a business facility, and we work enthusiastically to assist employers who choose to put down roots and grow in the Commonwealth.

Dependent upon specific project needs as well as investment and job creation, incentive packages may include:

- Cash performance grants
- Site and infrastructure improvement cost offsets
- World-class and comprehensive workforce solution
- Services and funding to offset human resource development costs
- Various other state and local tax exemptions and abatements



Virginia State Capitol

VEDP OFFERS CUSTOMIZED SERVICES AND SOLUTIONS TO SUPPORT A COMPANY'S GROWTH

VEDP provides:

- ✓ A single point of contact in Virginia
- ✓ Site selection assistance
- ✓ Coordination of site visits with local stakeholders
- ✓ Tailored research (e.g., cost of doing business comparisons, state benchmarking)
- ✓ Customized incentive proposals
- ✓ International trade services
- ✓ Talent solutions

THANK YOU

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