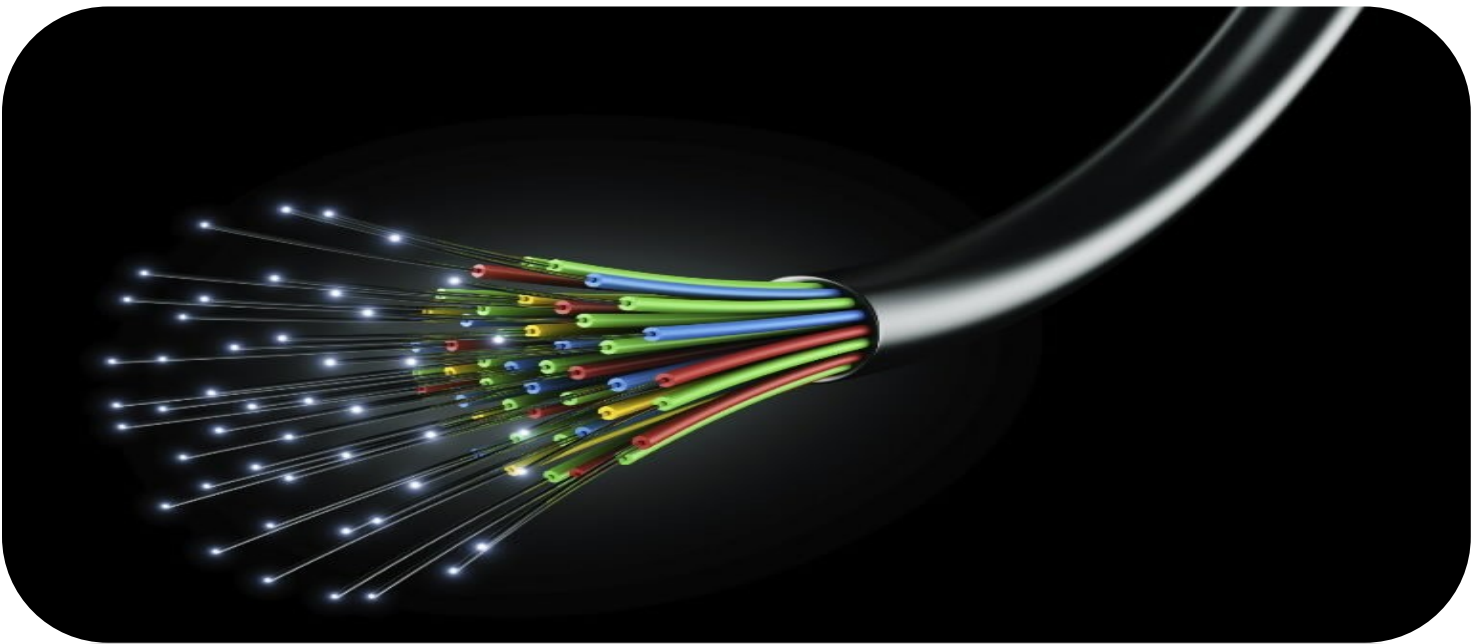




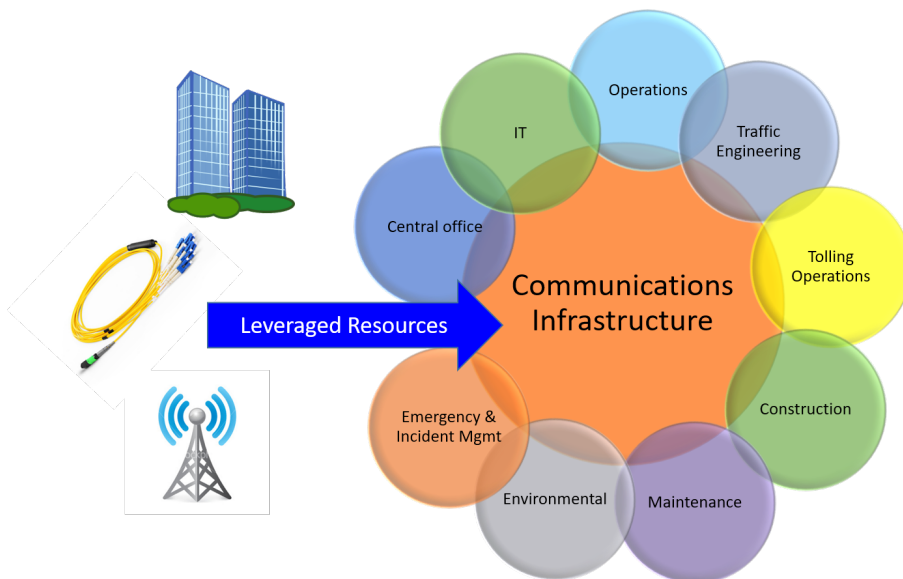
2019/22 VDOT FIBER UTILIZATION & EXPANSION PLAN



Overview

The Virginia Department of Transportation owns and has direct access to certain fiber optic resources that can be further leveraged to enhance telecommunication needs for operations, traffic engineering, tolling operations, emergency and incident management, construction, maintenance, environmental, and other agency business functions.

VDOT will develop a strategic approach to expanding its fiber optic asset utilization, and explore opportunities for collaboration with other entities to maximize and deliver self-sustaining communications backbone for the agency, and support the Governor's broadband objectives.



VDOT Objectives

VDOT's objective for the 2019/22 Fiber Utilization and Expansion Plan is to leverage VDOT's existing fiber network and other assets to provide enhanced telecommunications for transportation needs, and support the Commonwealth goal of universal connectivity through broadband access.

To achieve this objective VDOT will:

⇒ Expand utilization of fiber for transportation needs:

- ◇ Facilitate a unified, statewide fiber assets management plan*
- ◇ Identify new resource sharing opportunities*
- ◇ Evaluate existing agreements*
- ◇ Prioritize investment strategies and projects to expand fiber utilization for transportation and innovation projects*

⇒ Provide an automated online map based tool to display current fiber assets and planned projects/initiatives to expand the fiber backbone

⇒ Communicate progress with stakeholders



VDOT Telecommunications Related needs

Legislation, Policy, Organizational Ownership

- 1. Review current code and legislation related to fiber and communications related assets, and develop practical implementation guidelines*
- 2. Develop policy statements on ROW and Land Asset valuation process as it relates to fiber resource sharing agreements, include fiber utilization objectives*
- 3. Establish criteria to include fiber in construction and maintenance projects (with the pending Dig Once policy)*
- 4. Develop an Organizational Accountability Matrix, and designate an agency owner/liaison for the fiber program*
- 5. Develop policy statements on fiber related assets utilization objectives*
- 6. Ensure Governor's connectivity and broadband objectives are considered*

Inventory of Current Activities:

- 1. Inventory of VDOT owned fiber and related asset inventory*
- 2. Inventory of Fiber Resource Sharing (RSA) program agreements*
- 3. Inventory of existing agreements with local governments*
- 4. Inventory of leased lines*
- 5. Inventory of planned and active projects related to fiber and communications*
- 6. Inventory of small cell towers and artifacts (as a result of the 5G legislation)*
- 7. Inventory of current/planned funding for VDOT fiber and communications*
- 8. Inventory of VDOT other assets (rest areas, tunnels, special facilities, etc.) requiring fiber connectivity*

Needs and Opportunities:

- 1. Transition leased lines to VDOT owned and managed fiber backbone*
- 2. Create a list of prioritized assets requiring high speed communications*
- 3. Connect VDOT unserved assets*
- 4. Identify high value resource sharing opportunities*
- 5. Close network gaps using fiber and short range above ground circuits*
- 6. Identify technology opportunities to increase capacity of current and future fiber physical assets*
- 7. Implement an online interactive tool of fiber resources and projects*
- 8. Close network gaps to enhance communications*
- 9. Establish criteria to include fiber in construction/maintenance activities (in conjunction with Dig Once policy)*
- 10. Leverage VDOT poles and other structures to enable connections*
- 11. Define a common mapping platform (ArcGIS Online, Google maps, etc.)*
- 12. Provide collaboration, coordination, oversight and management of other initiatives and activities that impact the fiber utilization and expansion plan*

Tools, resources and artifacts to be leveraged

- ⇒ 2018 Operations Communications Master Plan
- ⇒ VDOT and RSA fiber maps with metadata
- ⇒ Virginia plans related to fiber expansion
- ⇒ Existing VDOT tools for assessing land value and ROW locations
- ⇒ CIT (locality fiber maps)
- ⇒ More as discovered

Timelines and Targets

