

Broadband Infrastructure Development Issues

Community Development Through Telecommunications

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Telecommunications and DHCD

What does DHCD know about high-speed telecommunications?

Not much, or at least, not as much as we would like

So why are we here?

Because we do know a little about what it takes to be a competitive, sustainable community

DHCD Philosophy

- ❑ Affordable, broadband telecommunications is a key element of DHCD's rural community development strategy
- ❑ Economic restructuring for rural communities
 - ❑ Improve quality of life
 - ❑ Create entrepreneurial opportunities
 - ❑ Promote highest speed telecom at competitive price
- ❑ Technology is an asset to strengthen communities
- ❑ Communities need to be **SUSTAINABLE** and **COMPETITIVE**

Sustainable Community

- ❑ Healthcare
 - ❑ Accessible
 - ❑ Affordable
 - ❑ Telemedicine options
- ❑ Education
 - ❑ Distance learning
 - ❑ Streaming video
 - ❑ Trained workforce
 - ❑ Learn at home

Sustainable Community

- ❑ Community Serving Businesses
 - ❑ Banks
 - ❑ Insurance
 - ❑ Grocery
 - ❑ Government

- ❑ Quality Jobs
 - ❑ Support entrepreneurs
 - ❑ Opportunities for kids

Competitive Community

Excellent Quality of Life

- ❑ Attractive
- ❑ Sense of Place
- ❑ Cultural Amenities
- ❑ Entertainment
- ❑ CONNECTED
 - ❑ Level playing field with urban areas
 - ❑ Highest speed of connectivity
 - ❑ Affordable / Competitive rates
 - ❑ Multiple providers / All services

Regional Visioning

- *Places of Learning*
 - Supporting the school system
 - Skilled workforce

- *Places of Opportunity*
 - Attract high-paying jobs
 - Clean industries
 - Tourism
 - Entrepreneurs

Regional Visioning

- *Places of Service*
 - Readily available telecommunications to enable businesses

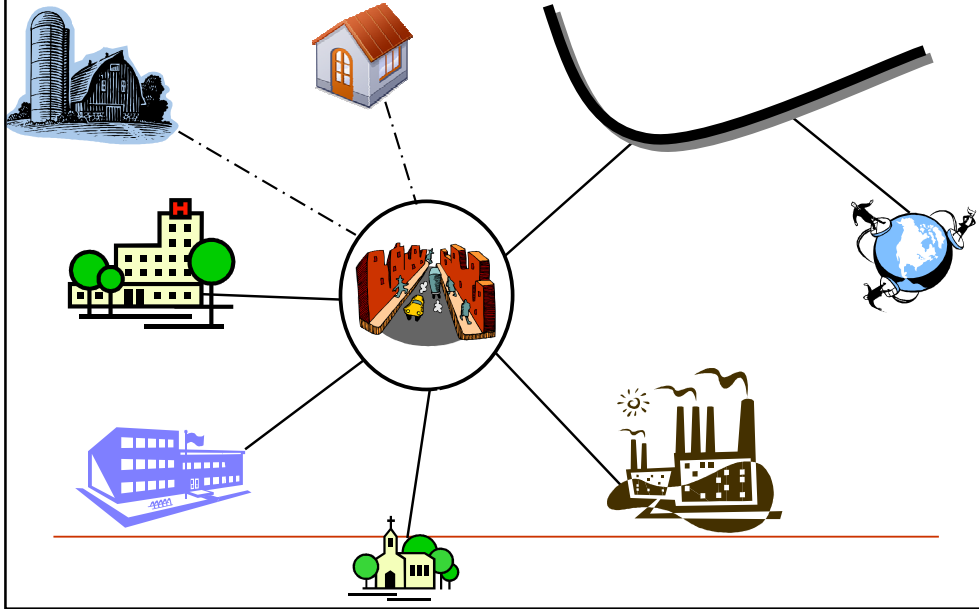
What is Broadband

- ❑ Broadband is fast, digital communication
- ❑ Always on (no dial-up modems)
- ❑ Fiber-optic cable is most “robust” media
 - ❑ Upload speeds are nearly as fast as download
 - ❑ Minimal security issues
 - ❑ Future capacity is unlimited

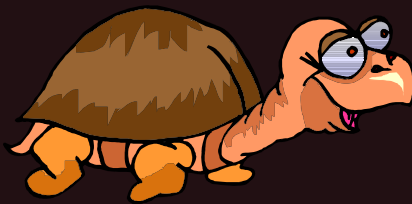
Speed Alone is not Enough

- ❑ Quality of Service
- ❑ Reliability
- ❑ Affordability
- ❑ Redundancy

Model Broadband Network



How Fast is FAST?



Dial-up



Broadband

Application

DHCD's Telecomm Efforts

- ❑ Starts with quality planning
- ❑ Emphasizes collaboration and partnership
- ❑ Integrates broadband into a community development strategy
- ❑ We fund LAST MILE projects

DHCD's Telecomm Efforts

- ❑ Planning efforts – it all starts with planning
- ❑ Installation projects
 - ❑ Telemedicine
 - ❑ Community networks
 - ❑ Education
 - ❑ Job training

Community Telecomm Plans

- Previously Completed
 - Blackstone
 - Halifax
 - Chase City
 - South Boston
 - South Hill
 - Eastern Shore
 - Accomack County – Onley, Onancock, Accomac
 - Exmore / Nassawaddox
 - Wallops / Chincoteague
- Requests Pending
 - Lunenburg
 - Charles City County
 - Isle of Wight
 - Northern Neck
 - West Point
- In Progress
 - Page County
 - Prince George County
 - Charlotte County
 - Nelson County
 - Pennington Gap
 - Surry County
 - Carroll / Grayson / Galax
 - Danville
 - Greenville / Emporia
 - Alleghany
 - Covington
 - Madison
 - Pound
 - Smyth County / Saltville / Chilhowie
 - Tazewell (Town)
 - Lunenburg

Virginia's Community Telecommunications Planning Initiative

Objectives

- Primary
 - Sustainable and Competitive Communities
- Secondary
 - Facilitate Universal High Speed Access

Community Telecommunications Plan

- Key elements
 - Management team
 - Asset inventory and demand aggregation
 - Community education and training
 - Broadband infrastructure
 - Network organization and operation
 - Funding strategies
 - Marketing the network

Management Team

- Public schools
- Higher education institutions
- Workforce development
- Health care
- Small business / entrepreneur
- Local telephone and internet service providers
- Professional (legal, engineering, accounting)
- Police department and emergency services
- Service sector (banking, insurance)
- Local government
- Economic development professional
- Industry / manufacturing
- Retail/commercial business
- *Telecommunications expert*

Expectations at the End of the Process

- ❑ Consideration of installing a community-owned open access network
 - ❑ Available to all service providers
 - ❑ Allows maximum competition (multiple providers for multiple services)
 - ❑ Based on service delivery instead of duplicative infrastructure

- ❑ Plan required for implementation funding

Requirements for Success

- ❑ Technology neutral approach

- ❑ Community will consider economic benefits of installing fiber
 - ❑ Effect on competitive recruitment of businesses
 - ❑ Ability to utilize future applications

The first step is the last mile

Questions / More Information

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