FACILITATED SESSION FOR WORKFORCE DEVELOPMENT

March 29, 2023

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Office of Statewide Broadband

CONNECT Maryland
High Speed Internet For A Better Future.

AGENDA

I. IIJA/BIL Overview
II. Broadband overview
III. Workforce development considerations
IV. Next steps and questions

Bipartisan Infrastructure Law (BIL/IIJA)
Broadband, Equity, Access, & Deployment (BEAD)

National Telecommunications Information Administration (NTIA) grant program

- $42.45 billion in broadband funding - $100 million guaranteed to each state
- Funding for states to connect unserved addresses, then underserved addresses, then ensure community anchors institutions can get gigabit internet connection.
- Prioritizes fiber direct to end user for deployment of last-mile infrastructure, requires funded projects to offer low-cost options to eligible subscribers.
- At least $100M to state plus allocation based on number of unserved addresses per FCC maps. States have challenged FCC maps with additional data.
- State must submit a broadband Five-Year Action Plan, an Initial Proposal for deployment projects (20% funding upon NTIA approval), and a Final Proposal to complete deployment (remaining allocation upon approval).

Bipartisan Infrastructure Law (BIL/IIJA)
Digital Equity Act (DEA)

National Telecommunications Information Administration (NTIA) grant program

- $2.75 billion in funding – establishes 3 programs
  - State Planning Grants: for states to develop DE plans
  - State Capacity Grants: for states to implement their plans (funding available over 5 years)
  - Competitive Grants: other entities, including states, can apply for funding for DE projects
- Prioritizes covered populations including
  - Low income
  - Disabled
  - Racial and ethnic minorities
  - Rural
  - Aging
  - Incarcerated
  - Veterans
  - People with disibilities

WHAT IS “DIGITAL OPPORTUNITY AND EQUITY”?

Components to digital connectivity and participation

Broadband Access:

Affordable, accessible, and reliable high-speed home internet service is available for all individuals

Accessible and Inclusive Content:

Public online content is inclusive and accessible by all individuals

Devices and Tech Support:

Individuals have access to a computer or tablet and technical support

Privacy and Security:

Individuals can protect their data privacy and online security

Digital Literacy and Skills:

Individuals have digital skills to support their ability to meaningfully use the internet in their daily lives

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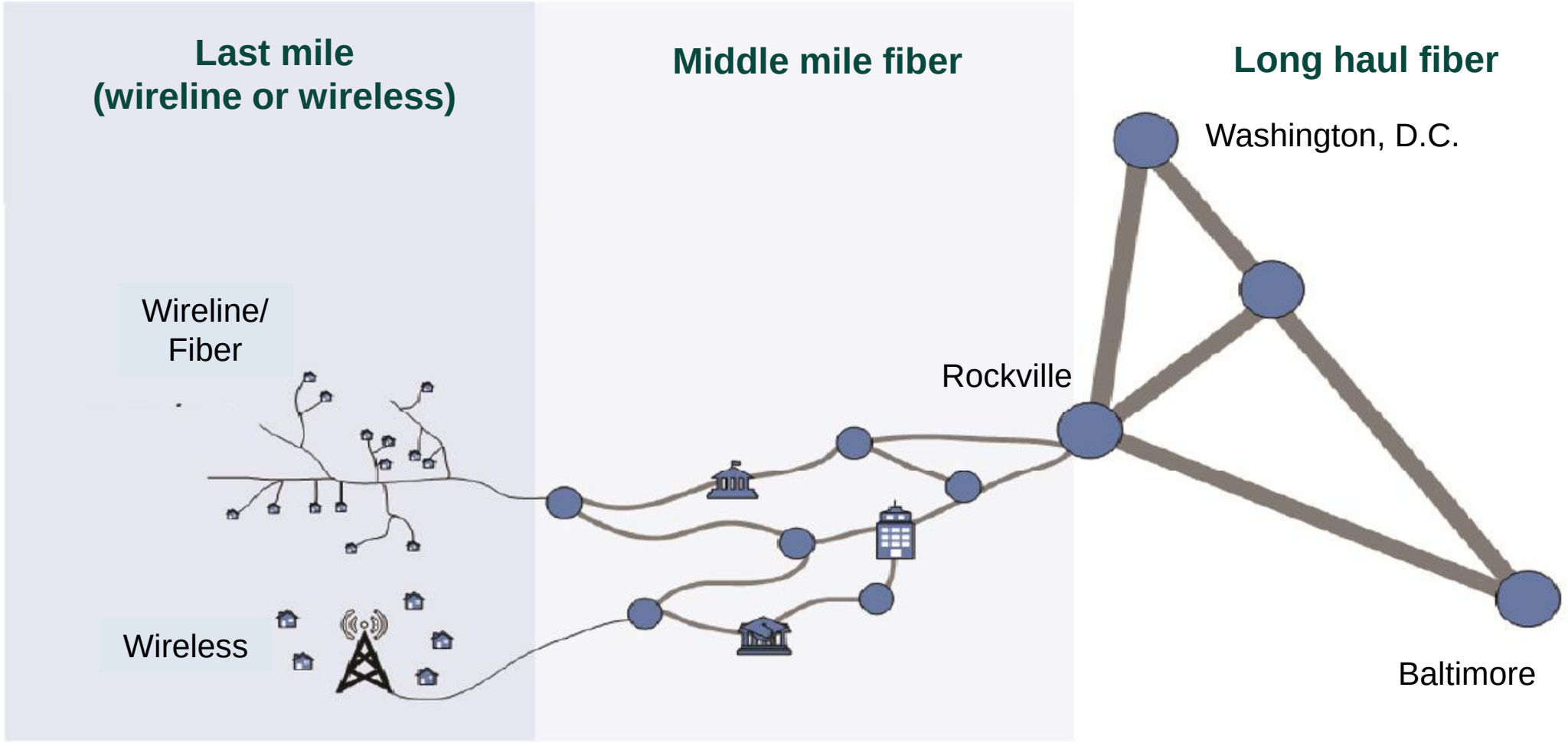
BROADBAND TECHNOLOGY OVERVIEW

An introduction to broadband infrastructure and technologies for communities and local policymakers.

Maryland
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

Jacob R. Day, Secretary
Owen McEvoy, Deputy Secretary

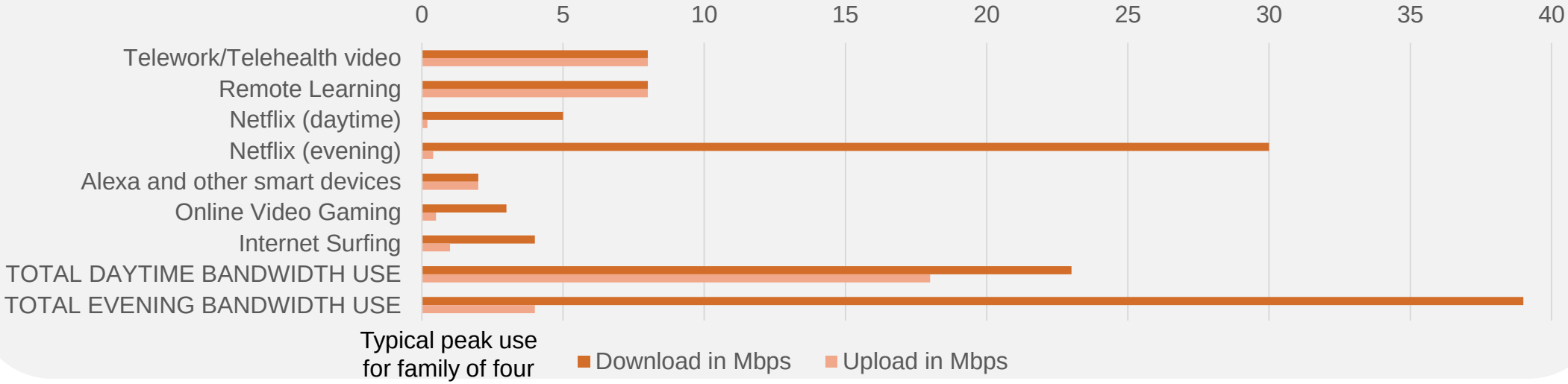
THE ELEMENTS OF A BROADBAND NETWORK



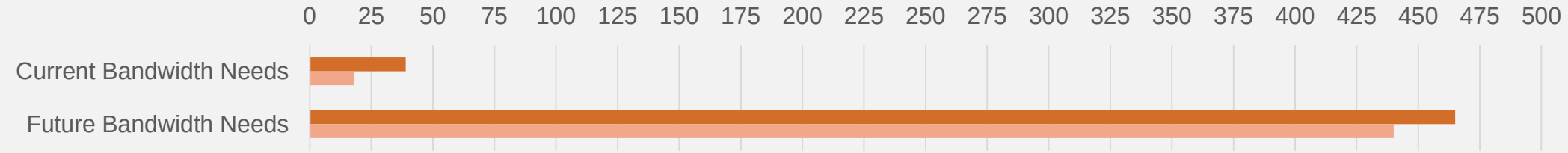
A broadband network connection from the backbone (long-haul fiber) to the home (last mile)

HOW MUCH BANDWIDTH DO WE NEED?

Today, we need more bandwidth than minimum 25/3 Mbps broadband speeds defined by FCC.



With augmented reality, other anticipated applications, and increased usage, we will soon need much higher speeds.



FEDERAL AND STATE BROADBAND SPEED THRESHOLDS

25/3 Mbps

The FCC's definition or broadband is 25 megabits per second down and 3 megabits per second up (25/3 Mbps)

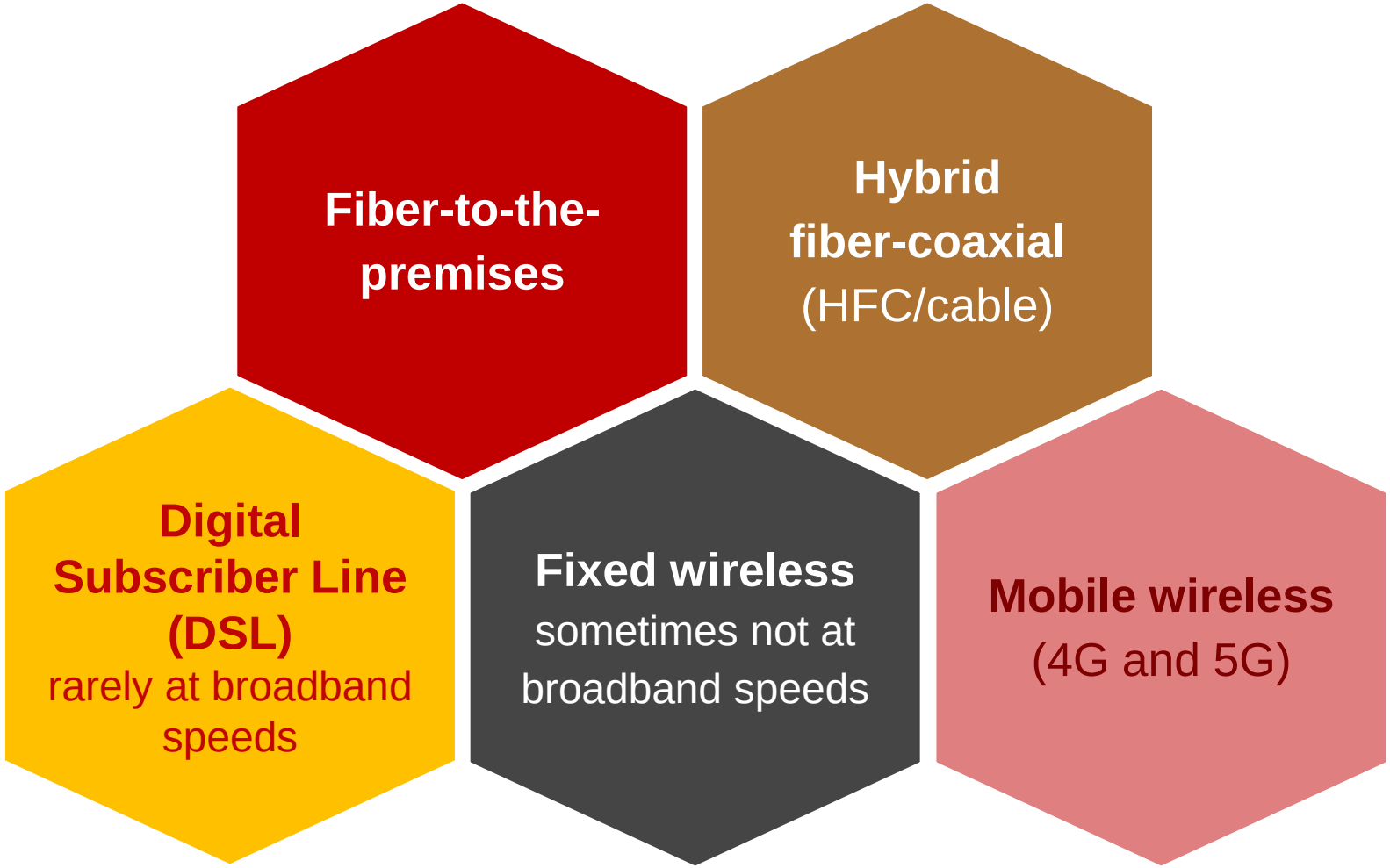
100/20 Mbps

Congress set a new 100/20 Mbps standard in the American Rescue Plan Act and Infrastructure Investment & Jobs Act

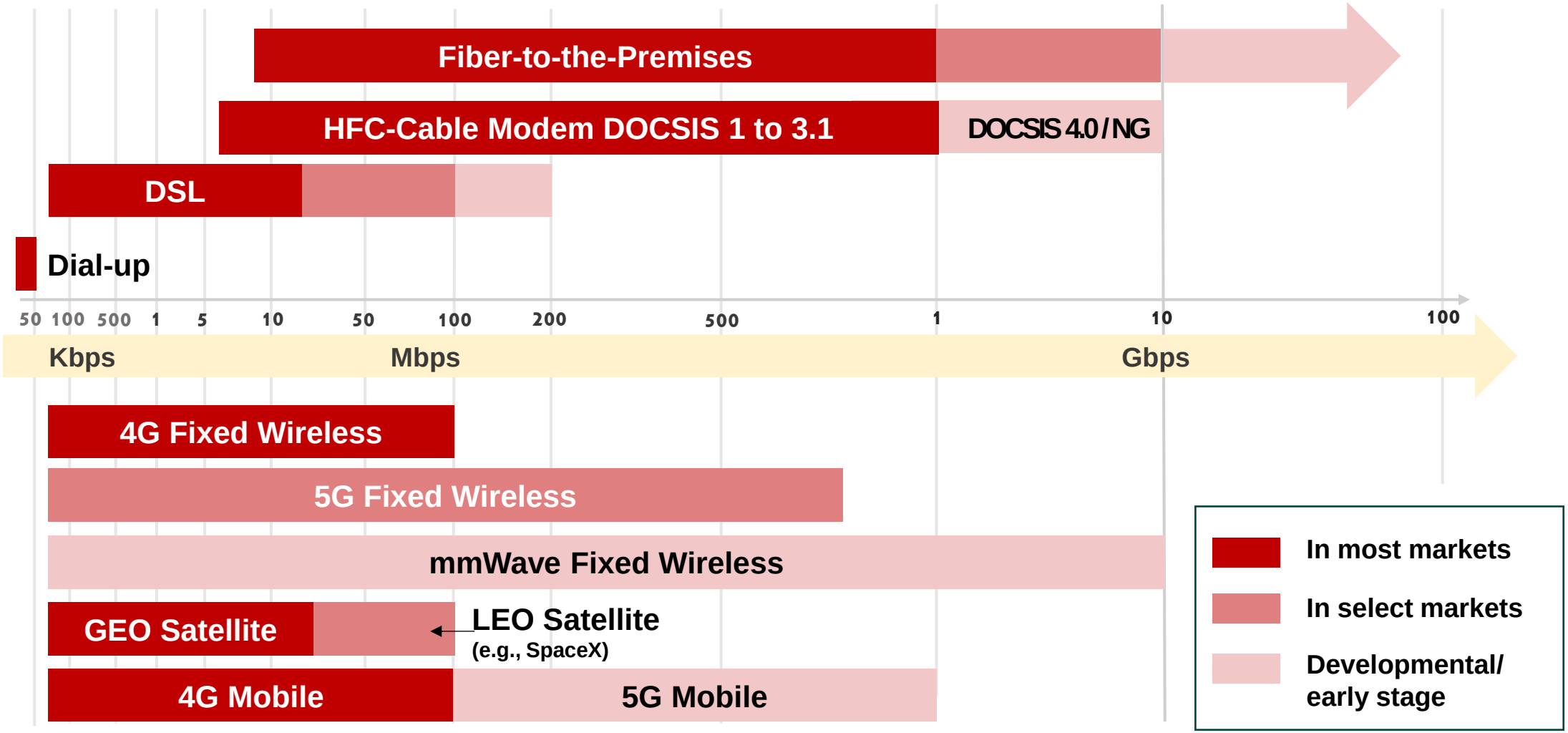
100/100 Mbps

Current state threshold for adequate broadband 100/100 Mbps

TYPES OF BROADBAND INFRASTRUCTURE



TYPICAL SPEEDS: WIRELINE AND WIRELESS TECHNOLOGIES



QUESTIONS FOR PARTICIPANTS

What are the gaps/challenges towards achieving connectivity for your organizations as well as the residents and communities that you serve?

What are some barriers preventing the closing of those gaps?

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FUNDING AND PROGRAMMATIC OPPORTUNITIES

Funding overview and timeline

BROADBAND FUNDING PRIORITIES AND TIMELINE

Maryland will develop a statewide plan for expanding broadband to all in-state locations including through upcoming federal funds of at least $100 million

Funding priorities for last mile deployment

1. Unserved locations: those that cannot get internet service at least 25/3
2. Underserved locations: those that get internet service between 25/3 and 100/20 Mbps
3. Community Anchor Institutions (schools, libraries, hospitals, public safety): locations that cannot get 1Gbps internet
4. Low income and affordable housing

BROADBAND SERVICE DEPLOYMENT UNDER BEAD

- State issues subgrants to deploy broadband infrastructure and deliver service
- Projects comply with fair labor standards
- State workforce development plan ensures readiness and new jobs to underrepresented groups
- Low-cost service options available to Eligible Subscribers – any household qualifying for the Affordable Connectivity Program (ACP)
- Low-cost service parameters based on provider participation in ACP or other subsidies, cost to subscribers after subsidies, and plan speed

OPPORTUNITIES TO PROVIDE INPUT

- The state has conducted a series of virtual facilitated sessions with stakeholders including county and local government, community anchor institutions and covered populations, and internet service providers. Records of these past sessions are on our website. There is a short survey for each session that we ask you to complete.

- The state is conducting inventories of broadband infrastructure assets and digital connectivity programs. Please fill out the questionnaires and help us by sending them to additional people and organizations that you know have relevant information.

www.dhcd.maryland.gov/Broadband

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WORKFORCE DEVELOPMENT CONSIDERATIONS

MASSIVE CONSTRUCTION COULD ENTAIL BOTTLENECKS

Physical Assets
Fiber optic cable, Splitters, Cabinets, Handholes, Conduits, Multiport terminals, Network Equipment

Distribution and Logistics
Supplier stocks, warehousing, and storage

Workforce
Design, Field, Construction, Project Management, Quality Assurance

QUESTION:

What are the most realistic and sustainable career paths for fiber optic technicians?

- Electrical Line Work
- Smart grid technology
- Information technology
- Cyber-Security
- Fiber network design
- Supervisory and Management
- Customer support
- GIS services
- Project Management
- Electrical engineering

WORKFORCE DEVELOPMENT STAKEHOLDERS

telecommunication providers	construction companies	industry associations
trade groups	rural cooperatives	municipal associations
vocational non-profits	communications/electric trade unions	community colleges with technical programs

STATE WORKFORCE PLAN

Plan to achieve a diverse, skilled, and sufficient workforce for building and maintaining high-speed Internet infrastructure, including specialized telecommunications and construction jobs

Must address:

- Compliance with federal labor and employment laws – i.e.,
- fair labor practices, civil rights and nondiscrimination
- Skilled workforce activities – developing a highly skilled workforce
- and ensuring state subgrantees do the same
- Equitable training and workforce development activities – ensuring
- fairness and diversity
- Contracting requirements

INCORPORATION OF THE PLAN

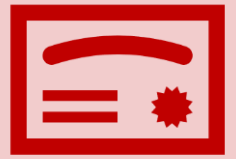
Workforce Development Mitigation can be incorporated into the state plan in multiple ways

Strategies for Intervention

- Requirements for workforce labor standards and activities in grant eligibility
- Additional points in grant proposal scoring for compliance with pay and labor standards, apprenticeship programs and other workforce development priorities
- State, industry, education, non-profit and other develop, engage in, and promote activities to mitigate bottlenecks

WORKFORCE DEVELOPMENT SURVEY

- Profile of workforce development programs your organization provides or uses, including:
  - Programs for job placement in the communications industry or transferable skill sets
  - Programs addressing any specific populations or communities (such as rural)
  - Current capacity for developing and offering trainings to meet workforce demands in the communications industry
  - Plans for developing and offering additional programs to meet future demands
  - Funding sources for training programs
- Barriers and obstacles to developing a diverse, skilled workforce and how these can be mitigated
- ISP workforce related questions



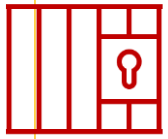
EXAMPLE ACTIVITIES

Develop core curriculum

Define and adopt unified fiber optic technician certification

Develop career path partnerships and apprenticeship best practices with industry partners

Develop incentives for train-the-trainer opportunities



Develop prison technical program

Publicize training opportunities to diverse populations and connect them to apprenticeship programs

Establish career technical education programs

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Questions?

LINKS FOR FOLLOW-UP SURVEYS

Workforce Development Survey

Internet Service Provider Survey

www.dhcd.maryland.gov/Broadband

CONTACTS

- Email: OSB@maryland.gov
- Website: https://dhcd.maryland.gov/Broadband
- Link to the workforce development survey:
- https://www.surveymonkey.com/r/MD_Workforce01
- Link to providing feedback and public comment:

  OSB.BEAD@maryland.gov BEAD comments

  OSB.DE@maryland.gov DE comments