



ctc technology & energy

engineering & business consulting

Serving the Public Sector Since **1983**

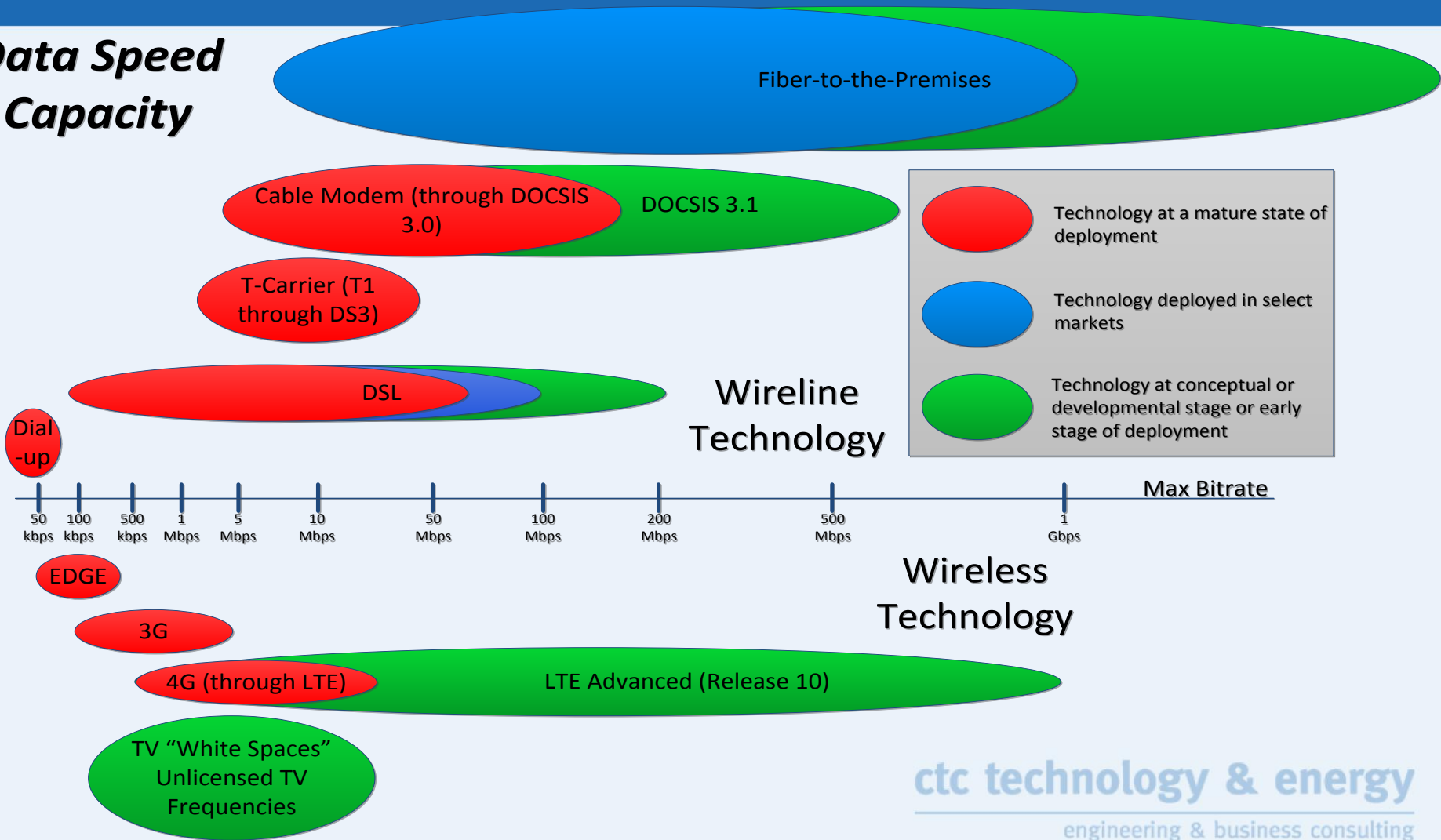
Broadband and the Future of America's Counties

Association of Minnesota Counties

May 18, 2017



Data Speed Capacity





Framework for Options

Wait for the private sector

Do it yourself

Build partnerships



Model for Partnerships

Public assets and/or financing, private operations

- Public sector opens new markets by improving economics for private partner
 - Through financing, existing assets, existing spending, economic development tools
- Operations and service provision are by the private partner(s)



Model for Partnership: public capital, private operations

- Opportunity for innovation
- Plays to strengths of both parties
- From the standpoint of a locality, risk shared but 100% of network benefit realized
 - Public benefit does not show up on financial statements
 - Private partner gets financial benefit



RS Fiber in Minnesota

Regional consortium created non-profit, private entity to build, manage, and operate

1. Deployment of fiber to the home, business, and farm over time
2. No cherry-picking (ie, build to everyone)
3. Bonding capacity of localities makes deployment possible



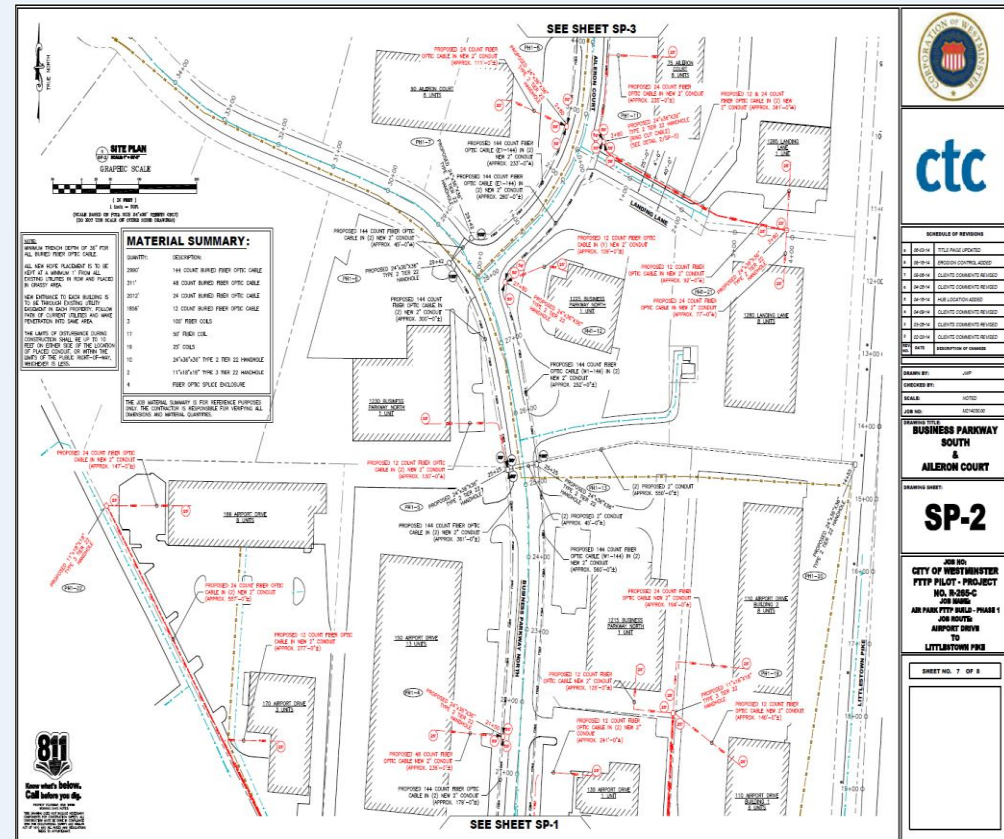
Urbana/Champaign, IL

Private partner gets long-term lease of cities' fiber in return for taking operating risk and meeting community goals:

1. Expanding fiber throughout the cities over time
2. Enabling competition--ongoing commitment to wholesale service
3. No cherry-picking (ie, build to everyone)

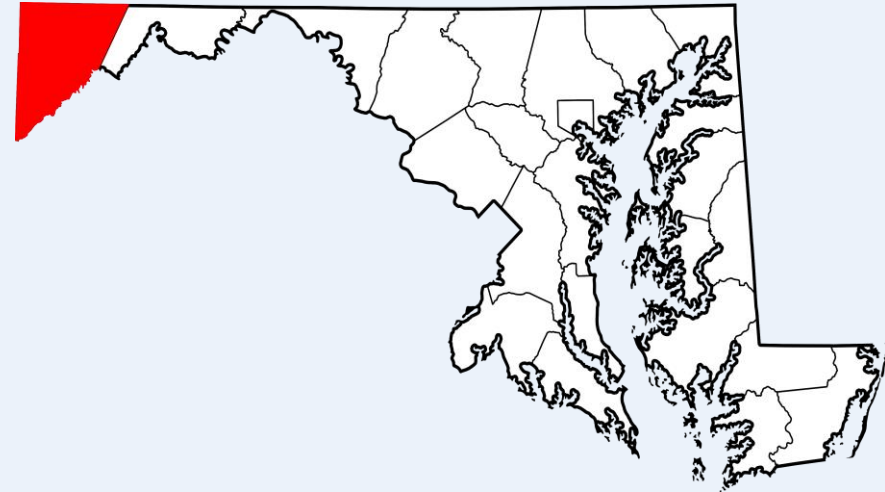
Westminster, MD

- Expansion of county fiber to the home and business
- City will own fiber only; long-term lease to partner to operate
- Ting Internet selected as partner
- Ting shares financing risk; city shares market risk



Garrett County, MD

- Underserved rural area in Alleghenies
- County selected private partner to deploy fixed wireless network in unserved areas
- Private partner builds with (partial) public funds but bears operating risk
- Public maintains ownership of publicly-funded assets in case of default
- Public risk contained



Town fiber as strategic asset: Holly Springs, NC

- Town's robust fiber rings built for internal services
- Designed strategically to enable FTTP in future
- Fiber lease agreement with Ting internet
 - Ting will lease public fiber for backbone
 - Ting will build to homes & businesses

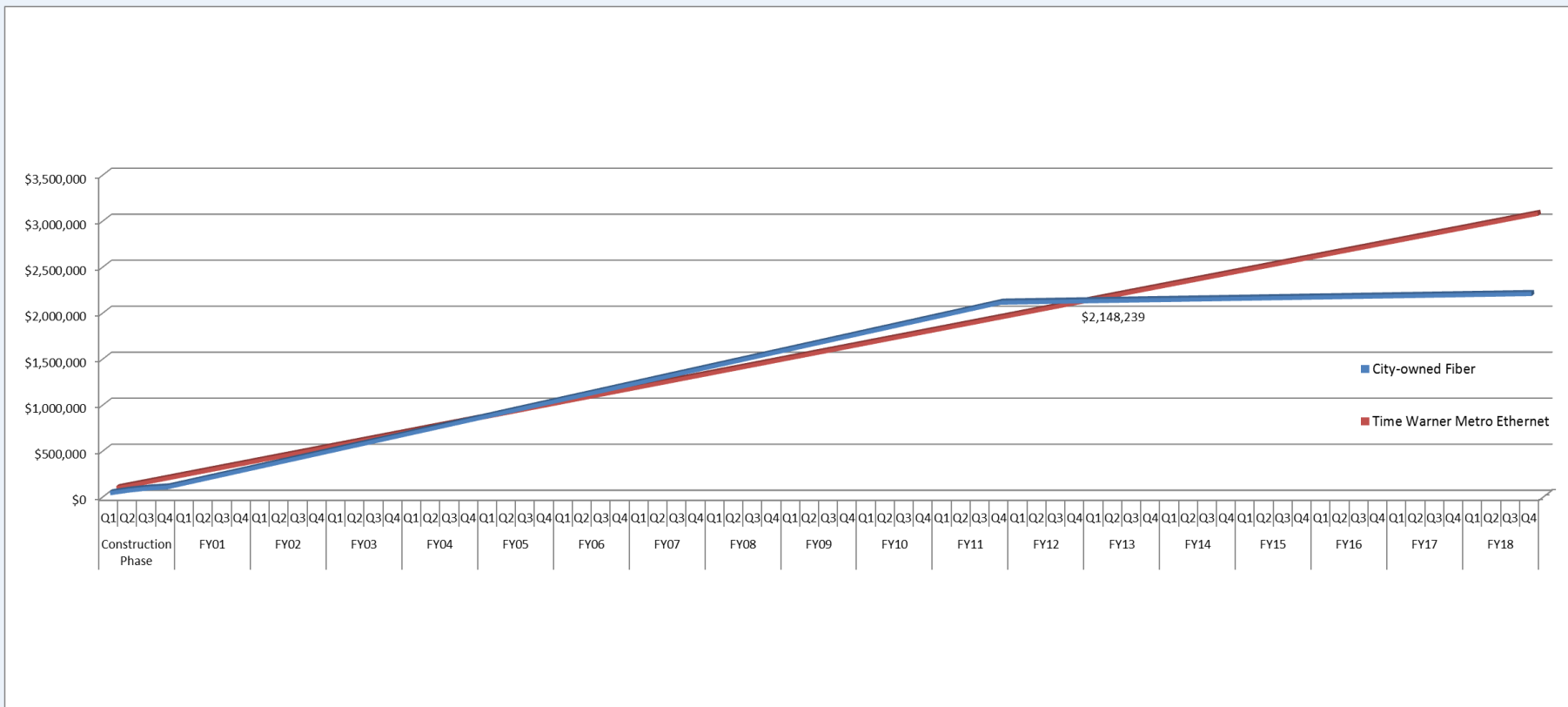




Incremental, strategic approach that leverages public spending

- Starting point for analysis is internal savings and efficiencies
 - Reduced costs from leased circuits—current and future
 - IT operational efficiencies
 - Public safety
 - K-12 and community colleges
 - Libraries
- County-use fiber serves as platform for expansion, innovation, competition

Cumulative payments, fiber build (high estimate) vs. minimal leased services



Cumulative payments, fiber build (low estimate) vs. 10 gigabit service

