



## DIGITAL GOVERNANCE SERIES

### Rural Broadband and 4 Ways Counties Can Move Forward Now

Recent legislation at the State and Federal level has allocated billions in funding for rural broadband deployment. To take advantage of upcoming funding opportunities, it is critical that county leaders have a clear understanding of broadband concepts and prepare their counties accordingly.

Fundamentally, it costs much more to build broadband infrastructure in rural areas than in densely populated urban and suburban neighborhoods. Challenging topography and smaller populations make it difficult to achieve economies of scale and a return on investment for traditional broadband providers. Targeted public funding is anticipated to change this. In July 2021, Governor Gavin Newsom signed Senate Bill 156, allocating \$1 billion for last-mile rural broadband infrastructure. This bill also included explicit authority for county entities to operate broadband systems, the creation of a state-owned, open-access middle mile network, and the establishment of innovative programs to fund broadband deployment in unserved and underserved areas of the state. Coupled with billions in funding allocated through the Federal infrastructure funding measures, an unprecedented amount of broadband investment will be available to local governments.

#### Key Concepts

There are two main concepts county leaders will hear about in delivering broadband and the associated funding programs: middle mile and last mile.

- **Middle Mile** is what brings the “wholesale” internet service and overall capacity to your community for local Internet Services Providers (ISPs) to utilize. This is like the State highway system.
- **Last Mile** is how the ISPs connect individual homes and businesses and provides the “retail” Internet service to the consumer. This is like our county roads, which connect the state highway to homes.

There are three main methods for implementing last mile service:

- **Wireline** is a physical cable that connects to the home, most commonly a fiber optic cable referred to as Fiber to the Home (FTTH). Fiber is commonly called “future proof” in that as technology capability advances over time, it drives increasingly higher data capacity over the same installed fiber cable. As such, FTTH projects can be categorized as 50 to 100-year infrastructure and why it is considered the preferred approach by RCRC and many organizations. FTTH can be built out on existing power poles, placed underground, or using a combination of both.
- **Fixed Wireless** is the most common form of residential wireless techniques. This is comprised of a tower that then beams a “fixed” wireless signal to homes. Wireless solutions, and thus investments, have a shorter life as technology advances require that both the tower and home

technology equipment be completely replaced for upgrades. Towers typically need a fiber cable connection to bring the internet service from the middle mile to the tower.

- **Satellite** service also plays a role for very rural locations. The new players, such as Starlink, are what is called low-Earth orbit providers. Being in a low-Earth orbit solves the problem most consumers have with traditional satellite providers with the delay effect called latency. Latency is the delay time it takes for the wireless signal to go from earth up to the satellite and back down (which could be up to a second), causing a time delay in performance. These services share the same longevity challenge as fixed wireless, as well as scalability and long-term business model uncertainties. While a game changer for some remote residents, satellite systems are, unfortunately, not the silver bullet to all our rural broadband challenges.

There have been a lot of advances in broadband infrastructure service delivery models, and all the buzz now is around the “Open Access” model.

- **Open Access** fundamentally removes the proprietary and “monopoly” nature of traditional providers where they may utilize their own private technology and deliver the entire solution exclusively themselves to the consumer. Open Access uses openly available technology so that multiple ISPs can provide service. Consumers then have the choice to pick from multiple ISP’s, which drives competition and lowers retail prices. This is a model that works well for municipally owned fiber infrastructure.

### Preparation

The State of California is currently working on the formula to allocate \$1 billion in rural broadband funding through the California Advanced Services Fund (CSAF) grant program to both private and public sector providers who will deliver broadband to unserved areas, defined as those areas without connection speeds of at least 25 megabits per second downstream and two megabits per second upstream. It is expected that this funding will become available later this year. The *Infrastructure Investment & Jobs Act* (IIJA) passed by Congress in late 2021 also contains \$65 billion for expanding broadband access nationwide. With \$100 million going to each state from IIJA, the method for how this funding will be allocated is also pending. With the funding most likely still a year out before distribution, counties have a lot of work they can do now to best position themselves for these grant opportunities.

A top priority for county leaders while we are waiting should be to make counties as ready and competitive as possible using the following four steps:

1. **Create a County broadband team now.** Addressing our rural broadband challenge requires a diverse set of specialized skills. A cross-discipline team will move your broadband initiative forward more than any other approach. The team should contain senior directors, managers and analysts from Planning, Public Works, Information Technology, Community Development, County Administration, Economic Development, Public Information, Grant Writing, Legal, and your Board office. Smaller counties may not have dedicated people for each specialty area, but we all have people who cover these areas, and they should be at the table contributing to this effort.
2. **Develop a County Broadband Strategic Plan.** This will help identify your county’s specific broadband needs, challenges, and strategies to address them. There are many ways to approach

rural broadband implementation and no one way is the “best.” These strategies should be developed now before you are on a tight timeline to apply for grant funding. A strategy example could be if your County is going to directly apply for funding, develop private-public partnerships, or will advocate for and support private sector projects.

3. **Make your County as attractive as possible to broadband providers.** Broadband providers and the finance entities that fund their projects want to know they are doing a project in a community that really wants it and will be easy and efficient to work with. They are looking to minimize risk and uncertainty in the projects that they pursue and invest in. Take a hard and honest look at your internal county processes for environmental review, project approvals, and permitting. Make sure they all are as efficient, quick, and hassle free as possible for broadband construction projects. Identify ways you can add value to broadband providers, so they want to come to your community and build projects. Being a good partner is key.
4. **Stay involved and informed.** The Rural County Representatives of California (RCRC), the California State Association of Counties (CSAC), and the National Association of Counties (NACo) all have staff and committees working on broadband issues and initiatives. RCRC has even established a Joint Powers Authority, Golden State Connect Authority (GSCA), made up of 36 California counties dedicated to increasing access to reliable, affordable high-speed broadband for all rural Californians. This is a very fast-moving landscape, and you need to stay current with the information and resources provided by these and other agencies to best maximize your county’s opportunities. An overview of various Federal and State funding programs for broadband is available through GSCA [here](#) and will be updated periodically.

The opportunity to reduce the rural digital divide is finally on the horizon. Careful planning and preparation for our communities is the most important action for county leaders to take at this time.

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