

# Can You Trust Your Business Case for Broadband Expansion?

Access to quality data will make or break service providers financially as they work to provide high-performance broadband to communities in the post-pandemic world.

By Raj Singh / *VCTI*

**T**he past year spotlighted the social, economic and educational impacts of the digital divide. In response, there's been a flurry of activity from all levels of government and an increasingly diverse population of broadband service providers.

The telecom industry can look at the intensity of the FCC's Rural Digital Opportunity Fund (RDOF) bidding, which attracted 386 qualified bidders for \$16 billion in potential funding. In the end, 180 service providers were awarded a total of \$9.2 billion to serve 5.2 million locations in 49 states and the commonwealth of the Northern Mariana Islands. A slew of younger companies with new technology solutions were among the winners, but they received lower subsidy levels than initially anticipated.

Another example is changes to the FCC E-Rate program included in the most recent

COVID-19 relief bill, which significantly expanded the categories of subsidized expenses. The expansion included the ability to provide connectivity off-campus to help bridge the at-home digital divide, enabling communities to leverage this program more broadly to upgrade services to schools and surrounding households.

With a passel of government subsidies coming available and the emergence of new competitors, the question becomes: How will service providers optimize their funding to fulfill community needs most quickly for high-performance broadband and drive the highest possible return of investment (ROI) to deliver, and even exceed, their business case expectations?

Providers will need to prioritize their buildout plans quickly with high accuracy, incorporating analytics on eligible locations, comparative costs to deploy, revenue potential and competitive threats. The quality of this data will make or break their financial success.

## IS LOCATION DATA TRUSTWORTHY?

The "serviceable location" count from the FCC is notoriously inaccurate. Carriers that participated in RDOF's predecessor, the Connect America Fund (CAF) programs, were required to file broadband deployment data with the Universal Service Administrative Co.'s High-Cost Universal Broadband (HUBB) portal to show where they built out mass-market, high-speed internet services using CAF

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support. This information includes latitude and longitude coordinates for every location where service is available.

However, there have been challenges with the HUBB. VCTI found that the FCC's data has an average error rate of 30 percent, and the implications are significant. That error rate can result in either underestimating or overestimating revenue by 30 percent. It also can dramatically impact deployment cost estimates.

Here are suggestions to strengthen confidence in the location data:

- Vet the sources informing location data. Does the data include land-use insight from property tax records? Can it reasonably distinguish physical buildings' differences on a property, recognizing a shed versus a house? Is the process manual, or does it use artificial intelligence?
- Identify E-Rate–eligible schools in the target market and the number of households they serve. Statistics on school lunch program enrollment rates can provide an indication of a market in which students have insufficient access to broadband at home.
- Undertake manual spot-checking using online satellite tools to inspect samples of data visually.
- Tap into publicly available databases to check for any new construction plans.
- Ensure data distinguishes residential from commercial properties.

### CAN CASH FLOW BE MAXIMIZED?

To maximize cash flow, it's imperative that service providers know where to build first for the fastest ROI. Decisions should be made not just on the lowest cost or the highest potential for revenue but also on the holistic ROI in which cost and revenue are assessed together. Only when algorithms are capable of modeling data for every option is it possible to plan network deployment well.

- Analyze the cost to extend the existing network or build a new network for each target market

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based on potential revenue. These comparative analytics will identify the most immediately profitable opportunities. Analysis should include several factors: cost per household, cost per node, first cost to build and average revenue per household.

In addition, analysis should include the ability to leverage the RDOF or other subsidy deployment into tangential areas to expand the addressable market. For example, a tangential market may have only one or two houses with higher service while the remaining underserved houses are eager for better broadband but were excluded from the earlier FCC programs.

- Understand your competition, including inroads by program winners in their own markets and the surrounding areas.

### CAN CAPITAL SPEND BE OPTIMIZED?

It's necessary to model and compare deployment options, including identification of minute but material cost drivers, so that deployment is as cost-effective as possible.

- Ask where and how you can expand your service footprint to the most houses at the least cost. Analyze upload speed and download speed. Households now routinely need to be able to support multiple videoconference sessions simultaneously in addition to online gaming and shared video streaming.
- Identify capital cost and performance of the viable options for the last mile. Determine potential technologies to deploy. An all fixed wireless or an all fiber

build may not give the optimized result. An integration of multiple technologies for best performance at the least capital cost is critical in the post-COVID-19 environment. Terrain and subscriber density are the most important filters to apply first when determining what technologies can realistically be considered. Point-to-point or point-to-multipoint architectures ensure the highest symmetrical bandwidth in fiber builds, but recent bandwidth innovations in the Citizens Broadband Radio Service and millimeter OEM module demand attention.

- Ask whether pockets where fiber is an economical alternative can be identified to better future-proof the investment, even if the bid or standard architecture is fixed wireless.

More people working and learning from home means the broadband customer landscape and requirements have dramatically changed. Service providers need to adapt their traditional broadband expansion plans to enable a data-driven approach to market buildout planning and ensure they can achieve their financial goals. ❖

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