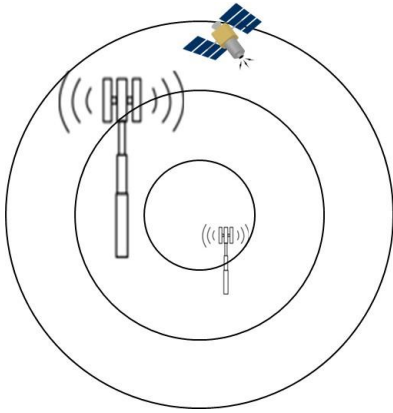


Rysavy Research Broadband Comparison

Broadband technologies are each best suited for different scenarios



- **Inherent tradeoff between coverage and capacity**
- **Capacity of broadband networks depends on the amount of spectrum deployed**
- **Fiber has far greater capacity available than fixed wireless access (FWA) or cable**
- Fiber, cable, mmWave FWA: limited coverage but highest capacity
- Mid-band FWA: greater coverage but lower capacity
- Low earth orbit (LEO) satellite: greatest coverage but lowest capacity

Urban



Suburban



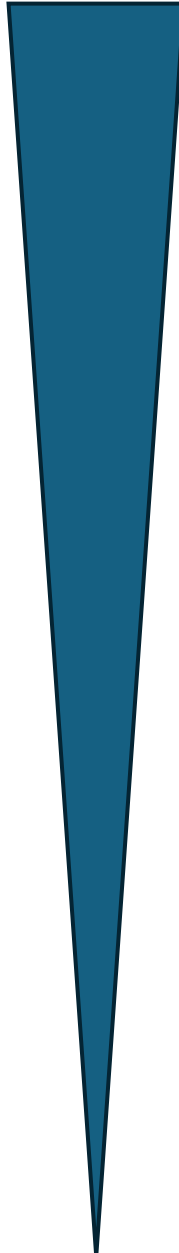
Rural



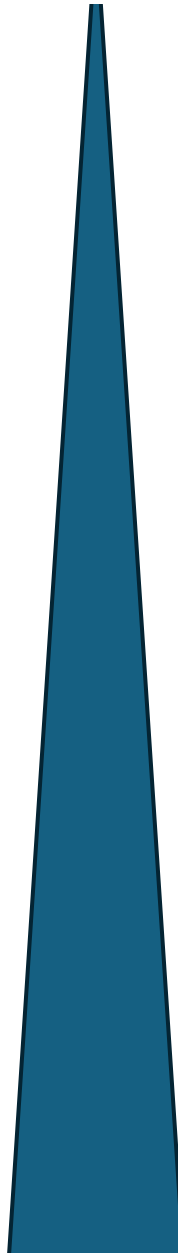
Remote



Capacity Need



Coverage Area



Technology Fit

- Fiber is the best solution with highest capacity, fastest speeds, and least maintenance
- FWA mmWave and cable effective
- FWA mid-band only available to subset of users
- Satellite unsuitable due to low capacity and line-of-sight issues
- Fiber still the best solution
- Cable and mmWave FWA also effective
- FWA mid-band can serve greater percentage of users
- Satellite can serve some users
- Fiber and cable can be expensive to deploy but is available for some users
- FWA mid-band effective solution
- Satellite effective solution
- Satellite often the only solution