NSR Bottom Line
Satellite Backhaul
"Crossing the Chasm"

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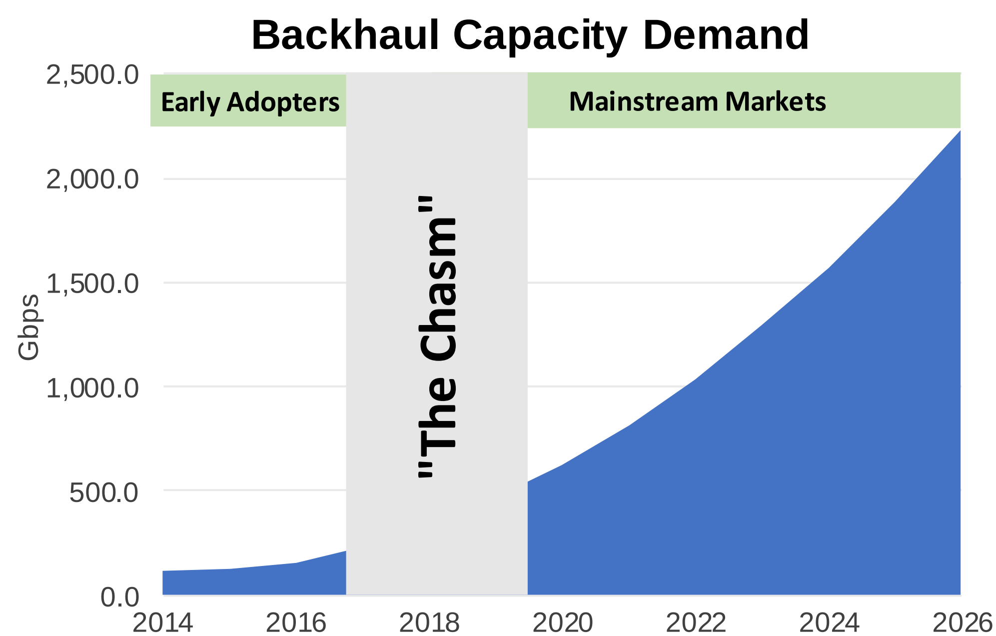
NSR
NORTHERN SKY RESEARCH

The Bottom Line
Satellite Backhaul “Crossing the Chasm”

Backhaul is sure to be a key protagonist for reactivating satellite industry growth. The prospects are auspicious but to materialize the opportunity, satcom needs to attract the “mainstream” customer beyond the early adopters. In Geoffrey Moore’s words, how can satellite backhaul cross the chasm?

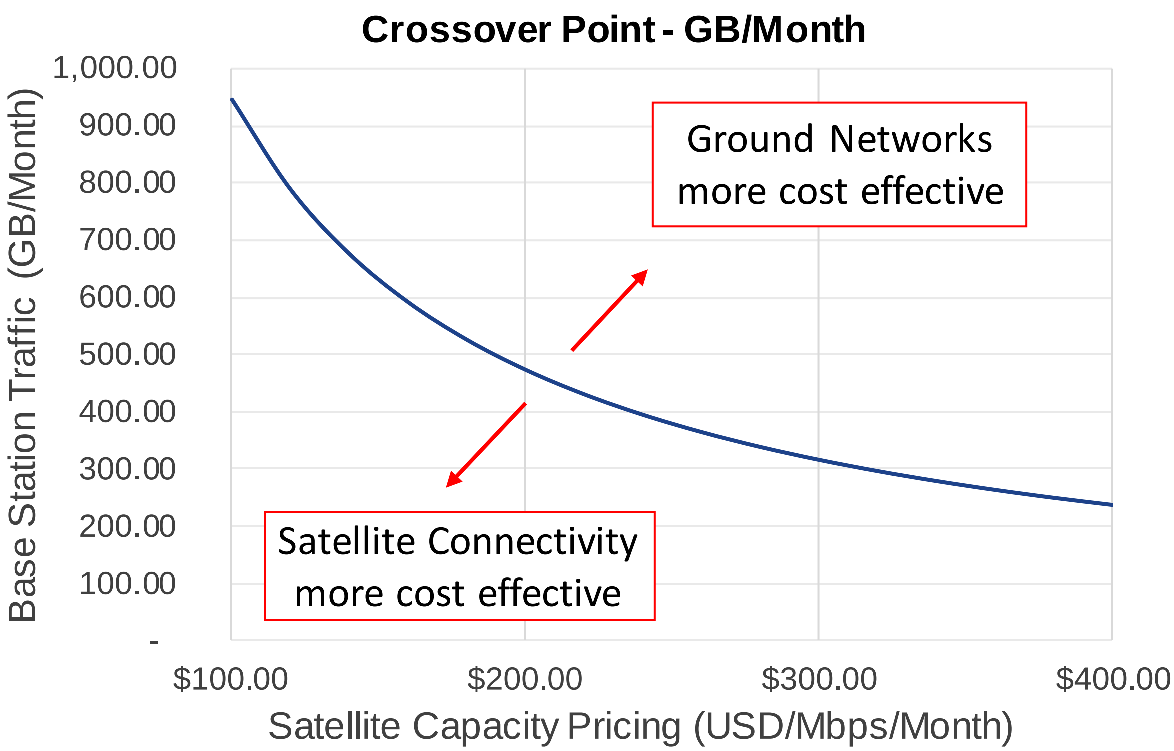


Source: NSR

Satellite backhaul will generate tremendous opportunities for all actors in the value chain. According to NSR’S Wireless Backhaul via Satellite, 11th Edition report, capacity revenues will grow at 11.9% over the next ten years, generating cumulative of $25.1 billion. 2016 was an inflection year for the vertical with large projects being deployed by the likes of Softbank-Sprint and EE. However, **to unlock the full potential, satcom needs to leapfrog from the current tech-savvy early adopters to mainstream customers**. Perceptions are still a major barrier, and satcom needs to educate prospective customers on the specific benefits it can offer.

Lower Price Points Unlocking a Massive Opportunity

Satellite has long been regarded as a costly solution. However, with the recent drop in satellite capacity pricing, it can compete with ground alternatives quite effectively in a wide variety of use cases. In a pure $/Mbps/Month basis, it is difficult for satellite to compete with ground networks; however, when factoring in other elements like infrastructure build-up and network utilization, the satellite solution then becomes competitive for a large number of sites. With very low set-up costs, even in remote locations, satcom is a cost-effective solution for **high-speed, low-volume sites**.



Source: NSR

Traffic is highly concentrated; 15% of the sites generate 50% of the traffic. Satellite is certainly not the most appropriate solution for those sites, but there are many base stations consuming low data volumes that could be served by satellite very efficiently. This opens a long list of new use cases beyond traditional rural coverage like network resiliency, traffic offload or serving sporadic-traffic sites. In a time when Mobile Operators are more risk aware, satellite is a great solution to extend broadband coverage with low initial investment before committing to the large investments required for network backbone expansion.

Cheap Capacity Is Not Enough – Ground Segment Key Enabler

Speed and overall performance and Quality of Experience have been traditional pain points for satellite backhaul. With the arrival of HTS together with smarter ground terminals, this should no longer be a barrier. Multiple satellite vendors now offer modems with throughputs surpassing 100 Mbps for LTE networks. One key advantage of satellite with respect to ground alternatives is the capacity to **flexibly allocate bandwidth among multiple sites**. Given the new bursty traffic patterns, the same bandwidth pool can be statistically shared and used by multiple base stations, **boosting network utilization** and effectively minimizing capacity costs. New advanced terminals are also capable of optimizing traffic, minimizing satellite bandwidth requirements. Compression, local cache and protocol deconstruction are typical operations carried out by smart terminals that boost Quality of Experience and optimize costs.

Getting Beyond the Tech Savvy Visionaries

Satellite backhaul has many times been viewed as cumbersome and difficult to implement. Historically, Mobile Operators using satcom had their own internal skills. Very recently this trend is changing and MNOs are more open to outsourcing network management. This unlocks prominent opportunities for system integrators that can offer end-to-end solutions, even including risk sharing schemes or some marketing efforts.

In order to reach the mainstream Mobile Operator, satcom needs to articulate an offer that highlights the productivity benefits of using satellite backhaul in the right use cases. Satellite operators, ground vendors and integrators need to elaborate on an integral solution to facilitate the adoption of satellite services by those inexperienced in satellite technologies in the Mobile Operator target segment.

Bottom Line

Satellite backhaul saw unprecedented levels of demand in 2016, and the prospects for this vertical are promising. However, the industry needs to be able to attract not only the tech-savvy early adopters but also mainstream mobile operators to truly realize demand growth.

The market and technological conditions favor rapid development of the satellite backhaul vertical. Once a low performing, expensive and cumbersome solution, new capacity pricing together with smart terminals make satcom competitive in a wider range of use cases.

Cheap capacity and technology per se won't make this market thrive. All the actors in the value chain need to **closely work together** to articulate a service that minimizes the skillset requirements by MNOs and facilitates the adoption of satellite backhaul.

NSR supports equipment vendors, service providers, satellite operators, end-users and financial institutions in their technology and business strategy assessment and planning. Please contact cbaugh@nsr.com *for more information*.