

Satellite Markets and Technology Trends

- High Throughput Satellites -



ViaSat Products and Services

» Commercial Networks



Broadband
Infrastructure



Broadband
Enterprise Services



Microwave
Products



Antenna
Products



Satcom



Earth Observation
and Surveillance

» Government Systems



Global Mobile
Broadband



Command & Control /
Situational Awareness



Secure Network
Systems



Tactical Data
Links



Tactical Satellite
Networks

» Satellite Services



Network
Operations



Sales and
Marketing



Customer
Care



Satellite
Operations

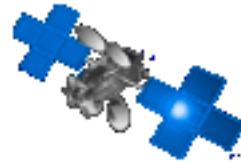
Ka-band Fleet



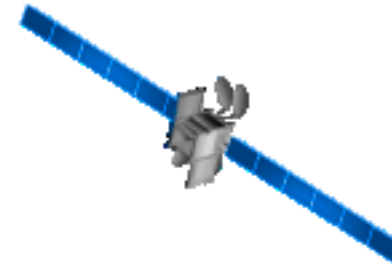
US Ka Beams
~2 Gbit/s
~5900 kg



~7 Gbit/s
~4700 kg



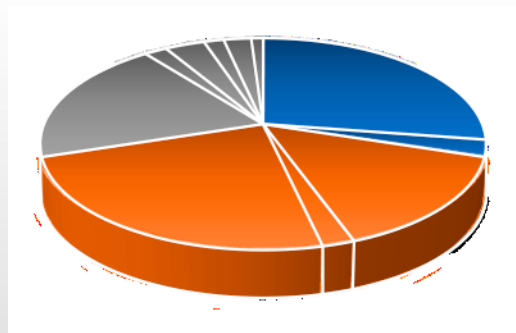
~140+ Gbit/s
~6700 kg



ViaSat-2 Launching in 2017 –

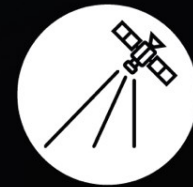
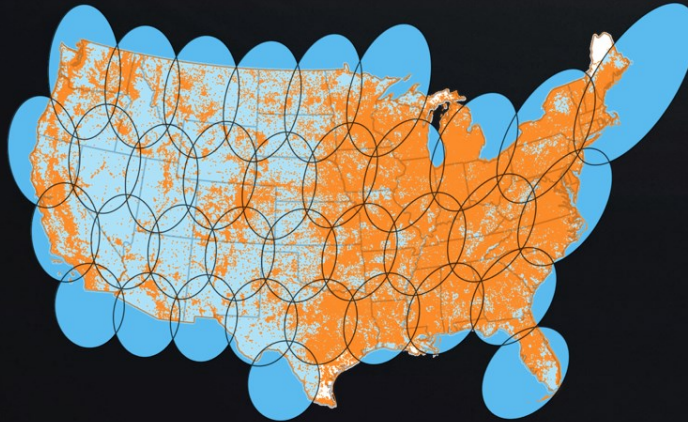
Another Performance Breakthrough

- » 7x the coverage of ViaSat-1
- » 2x the bandwidth economics advantage

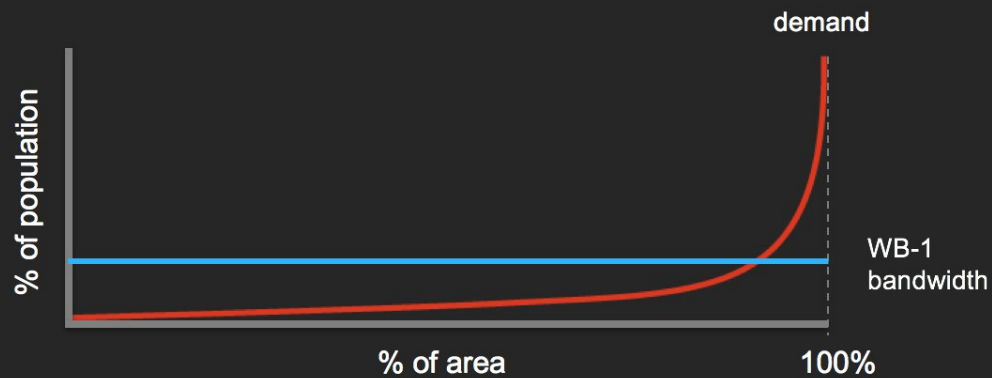


- ViaSat
- ViaSat Ka Customers
- Rest of Industry

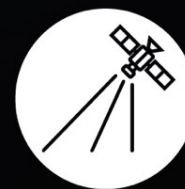
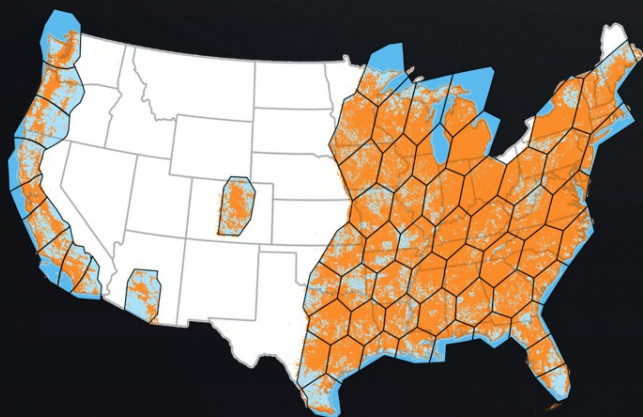
WildBlue-1 Coverage / Bandwidth



WildBlue

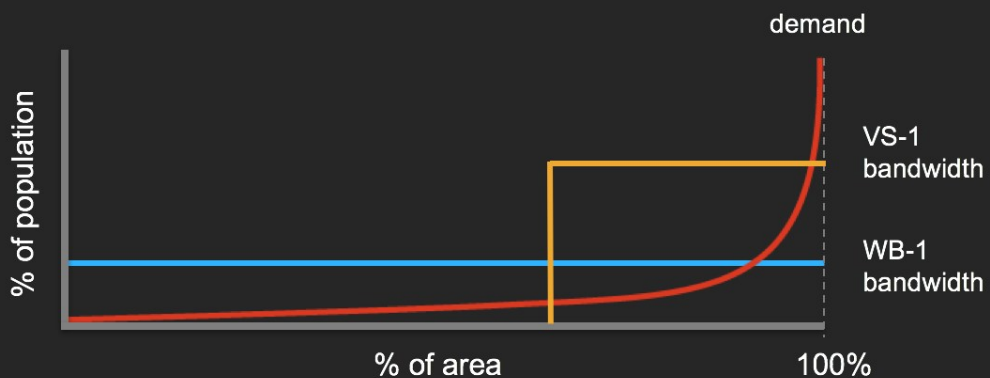


ViaSat-1 Coverage / Bandwidth

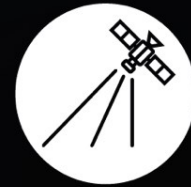
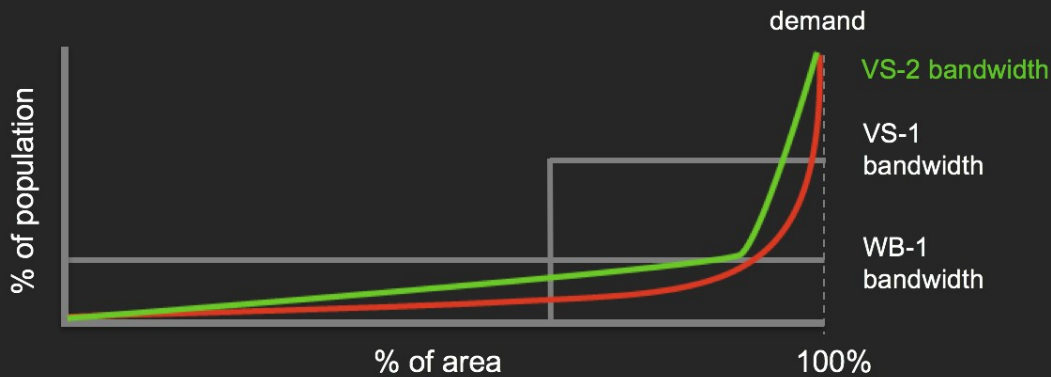


ViaSat-1

20x Speed
2x Subscribers



ViaSat-2 Coverage / Bandwidth



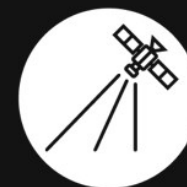
ViaSat-2

Better Fit to Demand
>2x Bandwidth
~7x Coverage
Flexibility

ViaSat-3 – True Visible Earth Coverage



ViaSat-3 Global Constellation

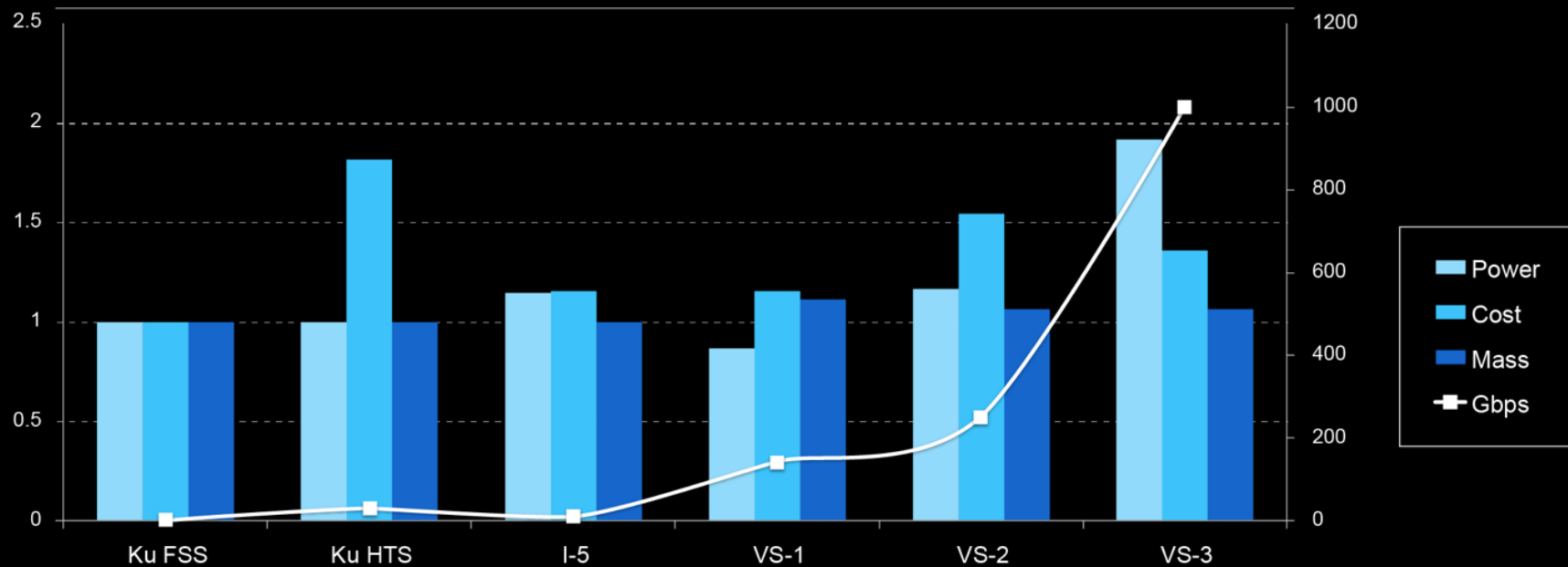


ViaSat-3

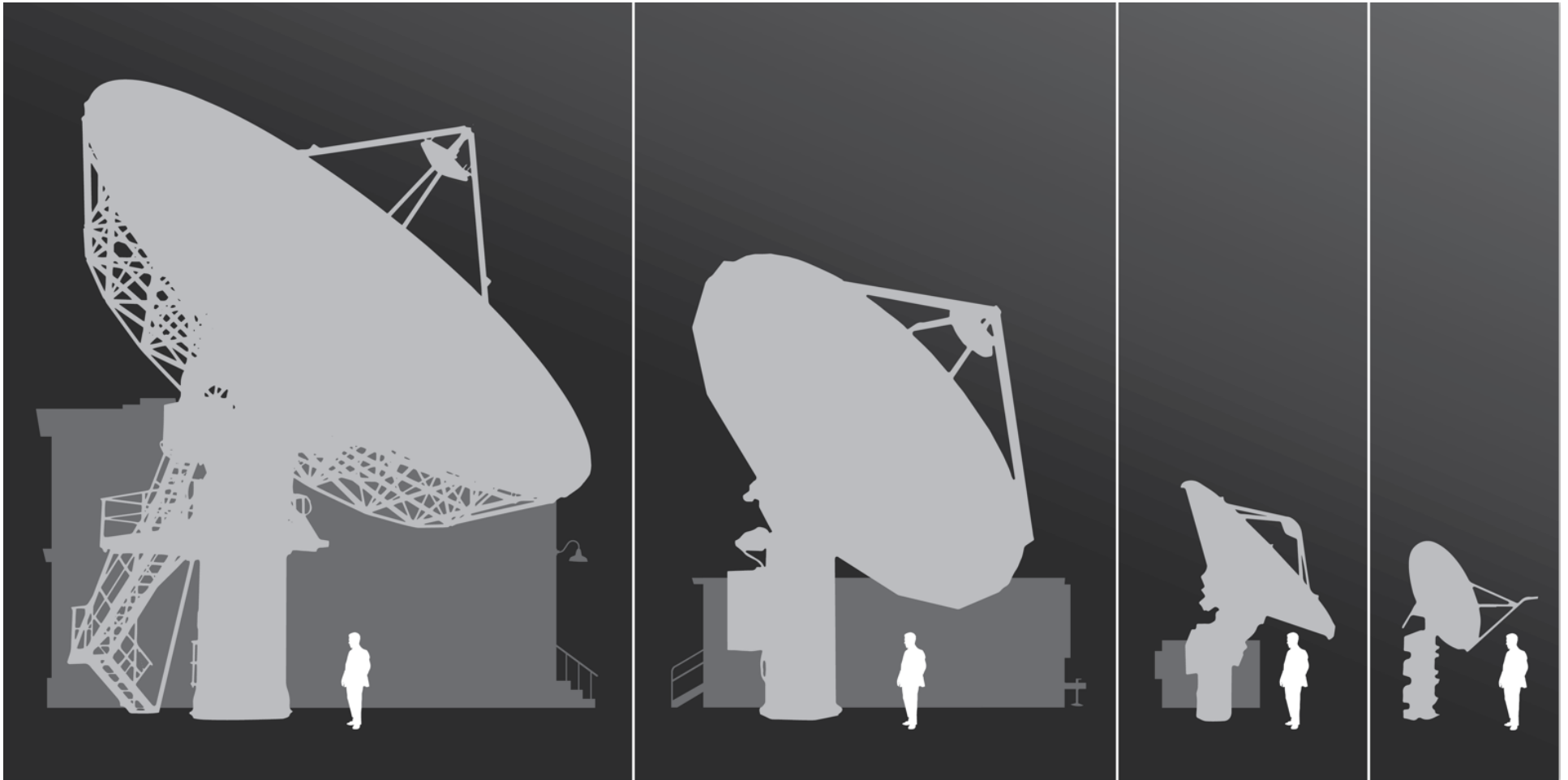
Multi-Tbit/s Flexible
Global Broadband

Satellite Productivity Comparison

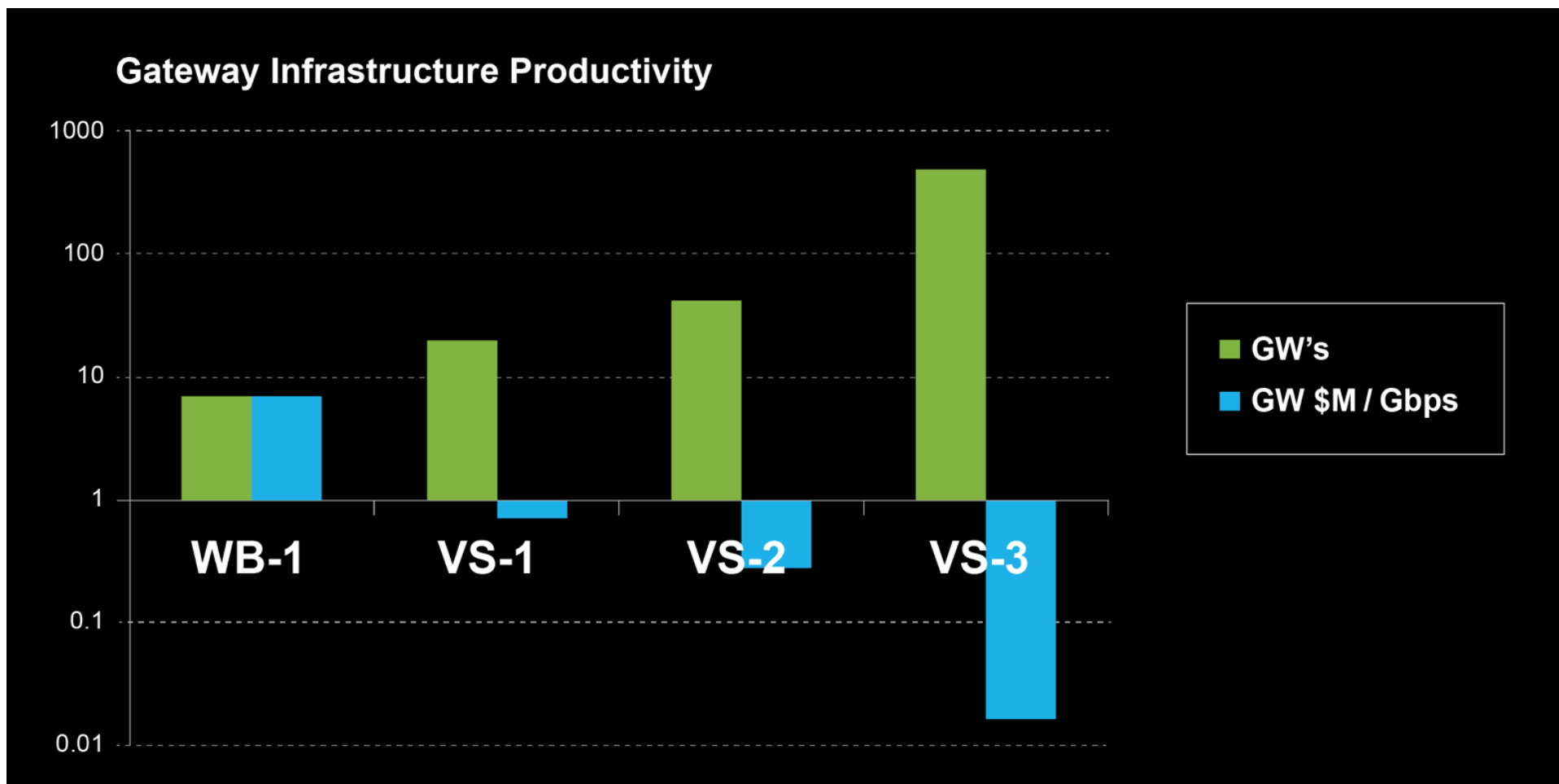
Satellite Productivity Comparison



Smaller, Lower Cost Gateways

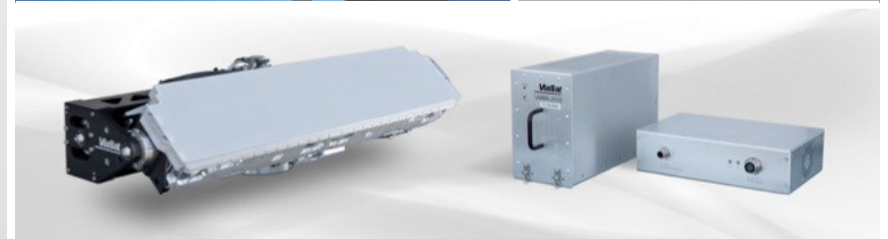


Gateway Productivity



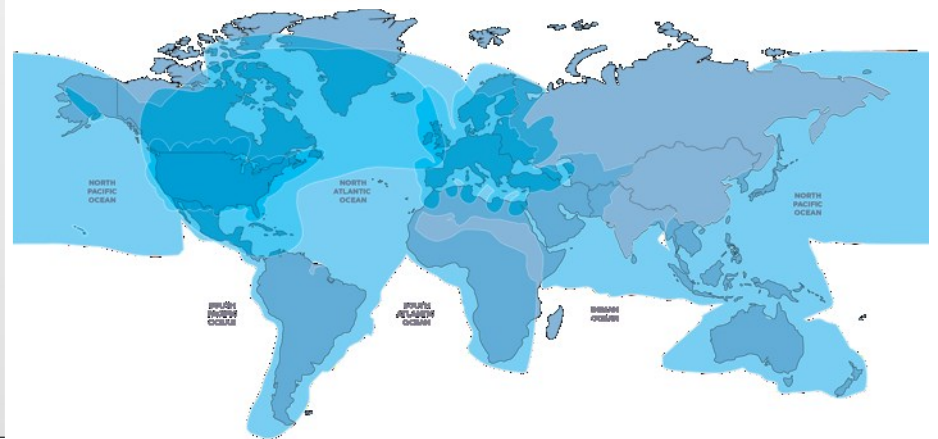
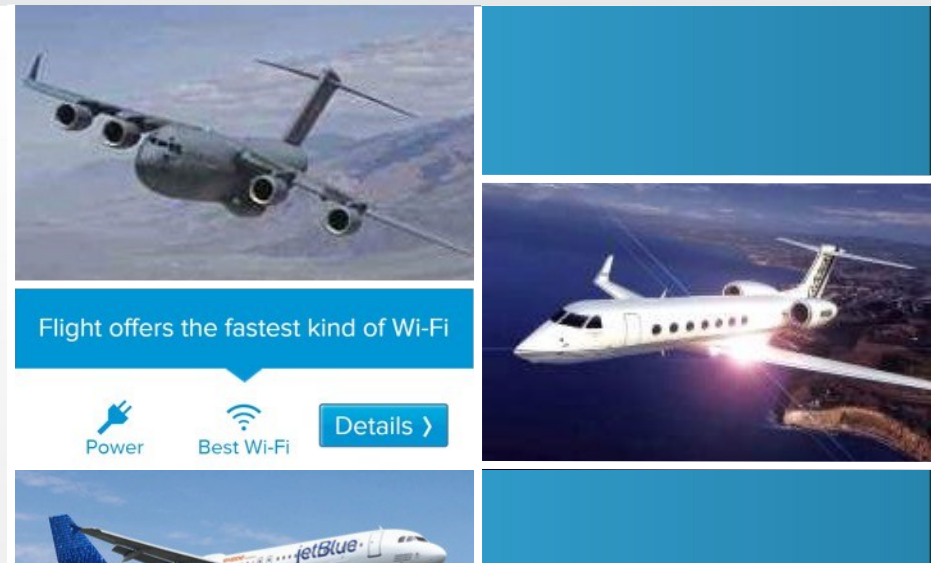
Most Popular Broadband Systems in the World

- » Over 2 M terminals shipped
 - › Fixed, mobile, portable
 - › Consumer, enterprise, government
- » Designed for internet use competitive with DSL, fixed site 4G...even some cable
- » Vertically integrated space & ground system delivers best satellite bandwidth economics
- » Embedded acceleration mitigates latency for fast page loads, media-rich content
- » New Flexible Broadband System for Regional Operators

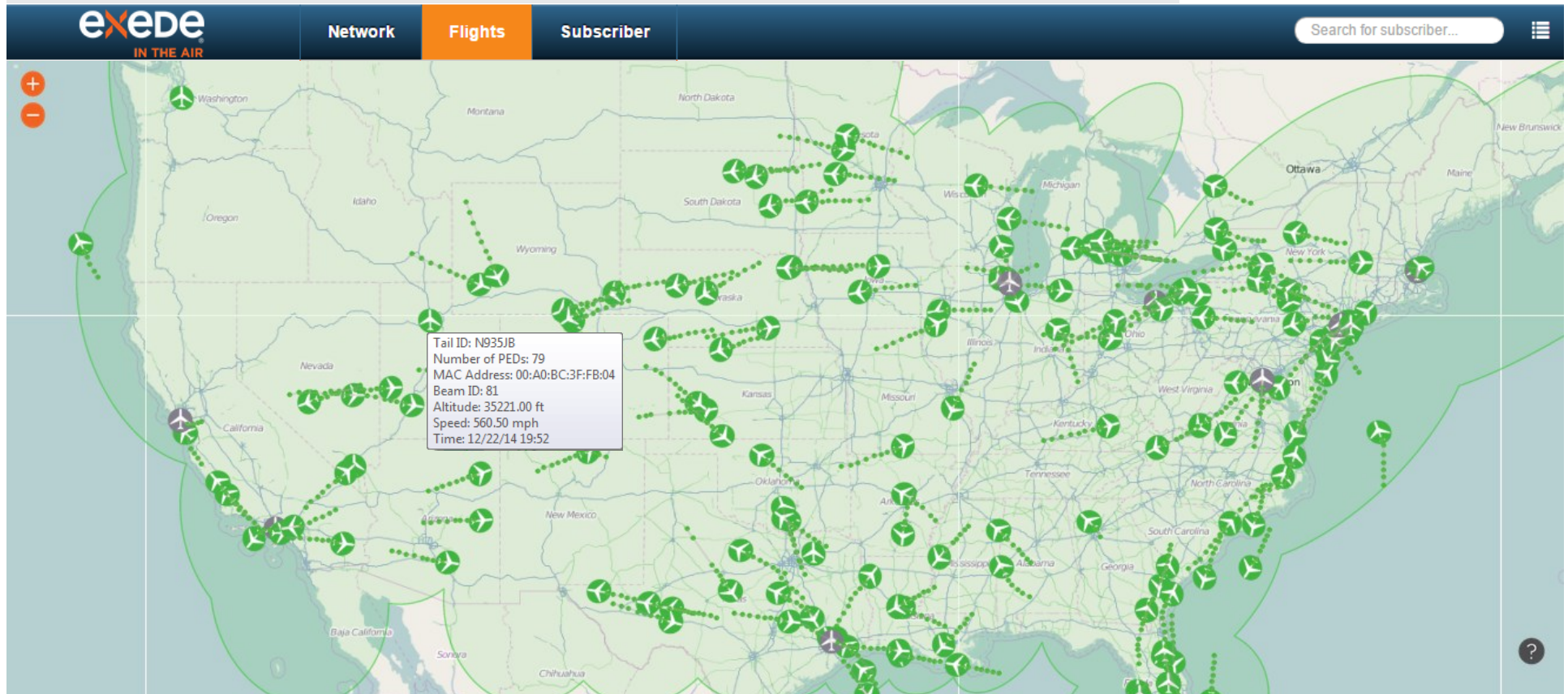


In-Flight Internet

- » First Ka-band in-flight Internet
 - › Live on over 200 JetBlue and United aircraft
 - › Rated “Best Wi-Fi” by Routehappy
- » 500+ global aircraft in Ku and Ka-bands
- » Millions of operating hours
- » Civilian and government VIP services
- » High performance government ISR missions



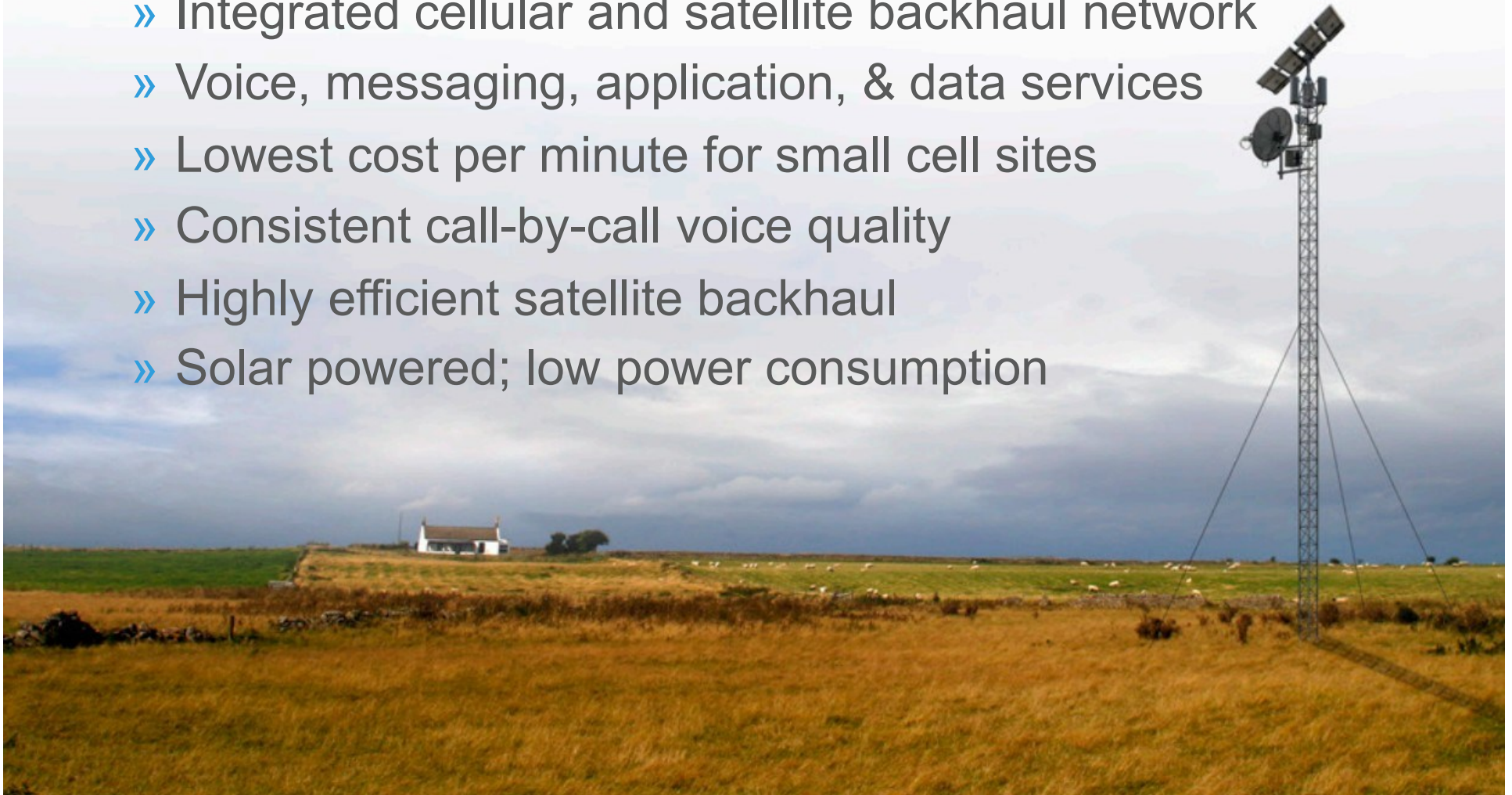
Outperforming Take Rates



- » Over 4x the average number of passengers using the service on each flight compared to nearest competitor
- » Over 2.5 million devices connected in first year of service

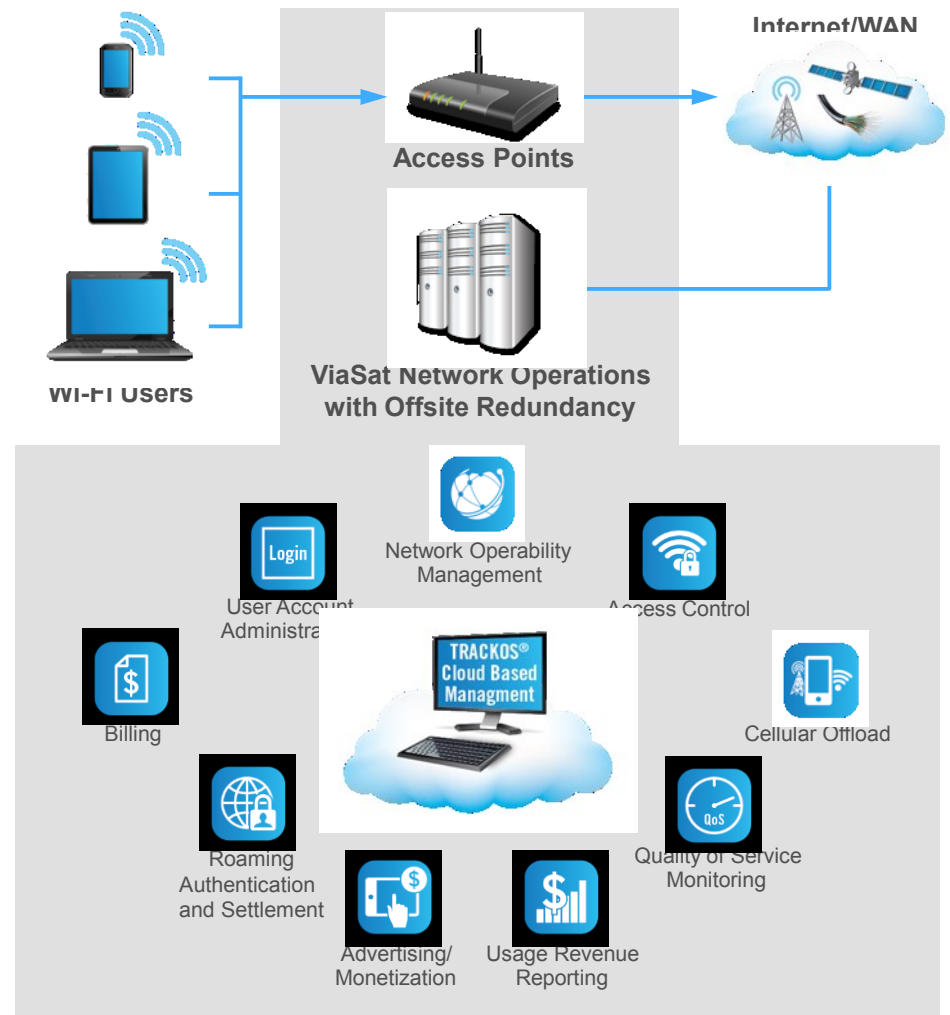
Wireless Extension: GSM Access to Underserved Areas

- » Integrated cellular and satellite backhaul network
- » Voice, messaging, application, & data services
- » Lowest cost per minute for small cell sites
- » Consistent call-by-call voice quality
- » Highly efficient satellite backhaul
- » Solar powered; low power consumption



Wireless Extension: Managed Wi-Fi Services

- » Plug-n-play hotspots for single and multi-site networks
- » End-to-end management:
 - › Network design
 - › Installation
 - › Reporting
 - › Monitoring



Bringing Internet to the Unserved

Rural WiFi Video Here

Conclusion

- High throughput is not the same as high capacity
- High capacity satellites and smaller more productive gateways permit High Economic Return on Invested Capital
- High capacity satellites enable services to previously unserved markets at urban performance levels
- Access to Ka and V band spectrum is needed to support high capacity satellite networks
- Access to unlicensed spectrum is needed to facilitate local distribution of service in some markets