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OneWeb

Connect with OneWeb

We are building a truly global communications network in space that will deliver low latency, high-speed internet services that connect people everywhere.

OneWeb at a glance

Blue chip backing

HM Government

bharti

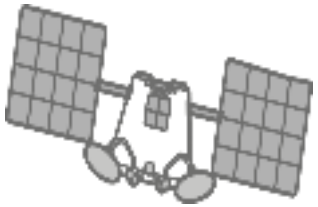
Hanwha

eutelsat

SoftBank

Satellites built by OneWeb Satellites

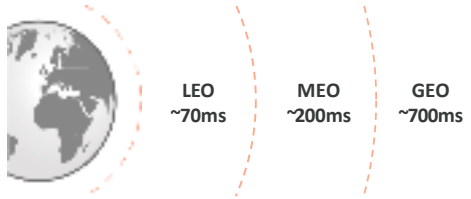
Successful launch campaign,
358 satellites in orbit to date.
The constellation when complete
will have 648 satellites.



In the time of COVID connectivity is critical infrastructure

Building a satellite network to deliver global broadband communications

Priority Spectrum
6.0 GHz of Ku-band (2.5 GHz) &
Ka-band (3.5 GHz)



Lowest Latency
~70 milliseconds

Space is a global, shared, natural resource. It is up to all of us to protect it.

Responsible Space
https://responsible.space/

OneWeb is a leader in Responsible Space

Note: Eutelsat & Hanwha investments are subject to regulatory approvals

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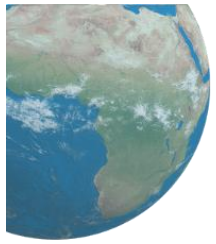
A network to serve users on land, sea and air



Performance & coverage improves as you get closer to Earth

LEO 1,200 km orbit
~ 70ms Latency
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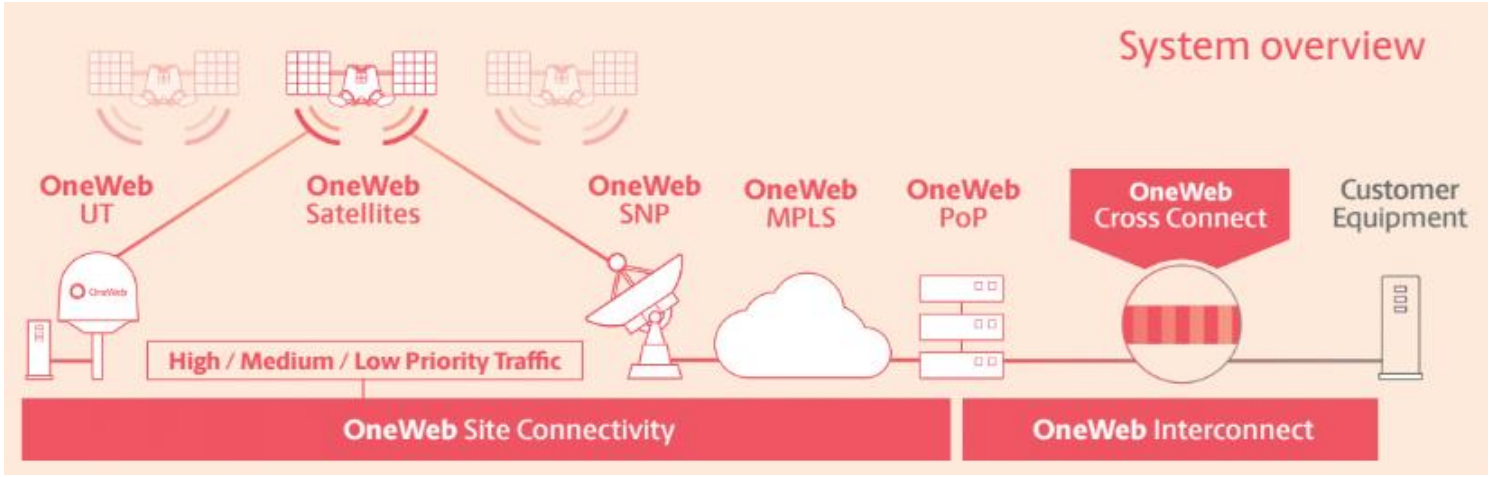
MEO
~200ms Latency

GEO
~650ms Latency

Low latency unlocks high demand applications

Constellation

- 648 low Earth orbit (LEO) satellites at 1,200km
- 49 satellites per plane, 12 planes, with in-orbit spares
- Premium Spectrum Ku- and Ka-band Rights, >3.5Ghz of globally harmonized spectrum
- Innovative satellite design with > 7Gbps per satellite, revolutionary beam technology



Access Equipment (the UT)

- Download speed up to 195Mbps
- Zero-touch configuration
- User terminal form factors for each market
- Better look angles for easy global installation

Connectivity

- Low global latency ~70ms to customer hand-off point
- Industry standard interfaces to customer equipment for simplicity of integration
- Multi-service QoS to support demanding carrier and enterprise network applications

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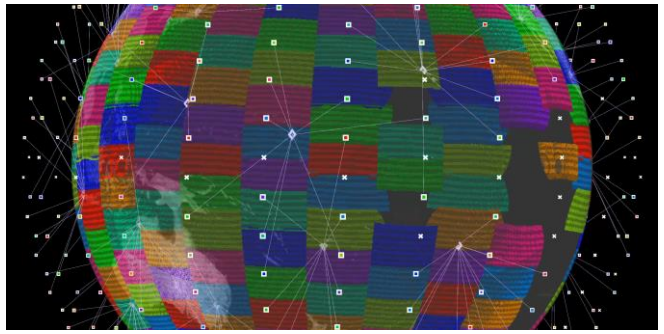
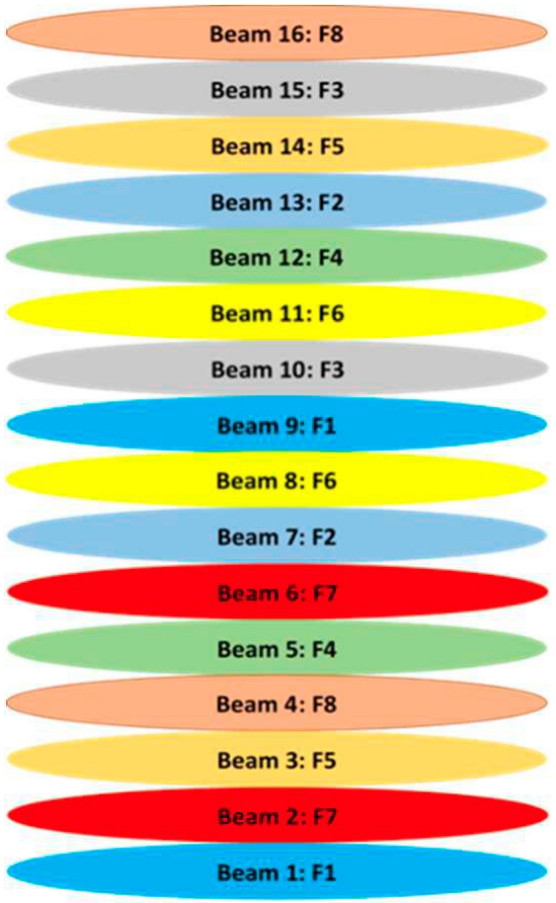
Beam pattern

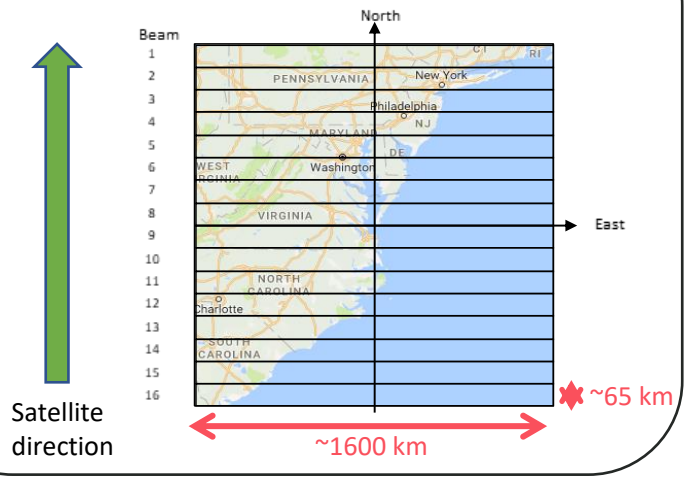
Global Satellite Beam Coverage



FWD User Beams are assigned downlink frequencies using 8-color reuse
Each frequency is used twice among 16 beams
RTN User Beams are assigned uplink frequencies using 4-color reuse
Each frequency is used four times among 16 beams



Single Satellite Beam Pattern



Each satellite has 16 user beams, arranged in a “venetian blind” pattern. The “footprint” of each satellite overlaps slightly with adjacent satellite footprints to create gapless coverage

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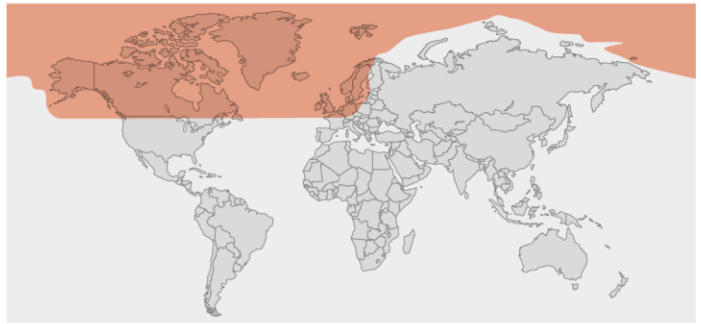
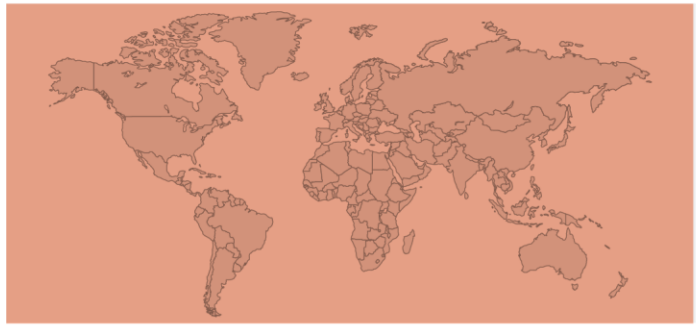
Commercial Service Introduction Timeline



CSI 1 | 4Q21
>50°N | ~200 Gbps



CSI 2 | 4Q22
Global | ~1.1 Tbps

648 Satellites

18 Launches

1.1 Tbps Fwd. Capacity

42 SNPs[1]

Global Coverage

[1]In business plan, 3 of the 45 SNPs will be funded by joint venture partners

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SNP and PoP: CSI-1, 1.5 and 2

SNP sites

- CSI-1 SNP site
- CSI-2 SNP sites

PoP sites

- CSI-1 PoP site
- CSI-2 PoP site

**Lagos, Nairobi and Istanbul – pending budget approval*

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Use Cases

Government Connect with Confidence

Defence | Security | Welfare

- OneWeb's network supports Air, Land, Sea, and Space communications for government networks and missions demanding rapid deploy ability; military-grade network security; flexibility, and the ability to scale.
- The consortium behind OneWeb, led by HM Government, Bharti Global and Eutelsat offers unique opportunities for the government sector to bring fibre-like connectivity to the tactical edge.

Enterprise Expansion

- Internet access for everyone, everywhere

- OneWeb extends the corporate office environment anywhere on the planet
- Fiber-like experience with low latency and high-speeds
- Primary or Back-up connectivity, and business continuity without significant service level reductions.
- Opportunities in many vertical markets:
  - SMEs
  - Retail (PoS)
  - E-commerce
  - Mining
  - Agribusiness
  - Industrial
  - Railway and highway
  - Banking Operations
  - Logistics

- Solutions
  - MPLS
  - Enterprise Internet
  - Cloud Peering
  - Business Continuity
  - Disaster Recovery

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Fixed Market Offer Use Case Example

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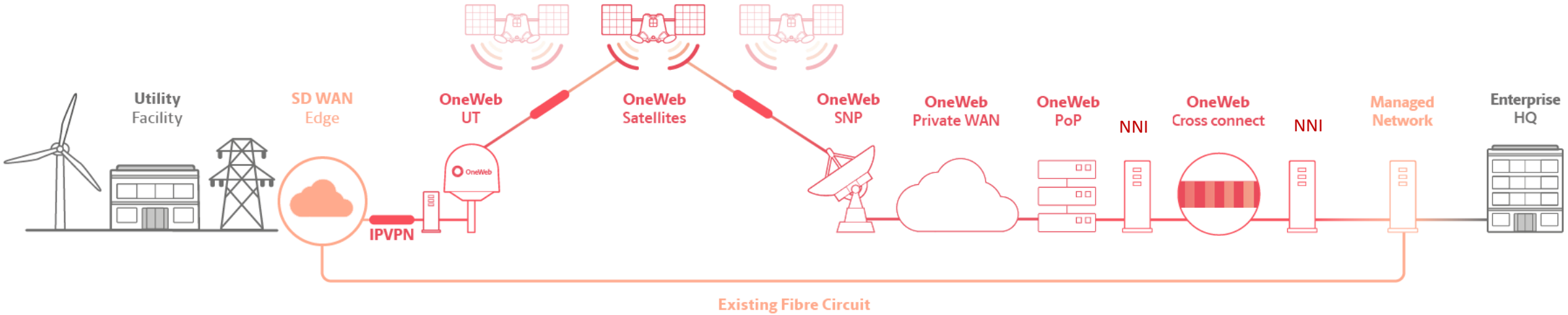
Utility Operations

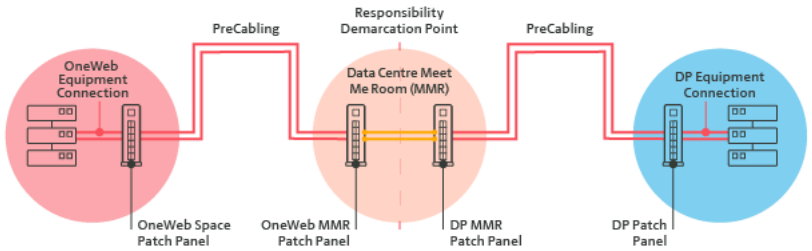
OneWeb **Protect**

Summary	**A utility site is already covered by fibre but wants to increase its resiliency with a truly diverse path sharing no common infrastructure. OneWeb is used as a warm-standby protect path.**
Solution	**Dual Parabolic** UT | **Premium** product MIR of 75/15mbps with protected traffic and usage based pricing | Based on **IPVPN** | **Cross Connect** at OneWeb POP



Partner	OneWeb	Partner

Alarms
Interactive Control
Bulk logs



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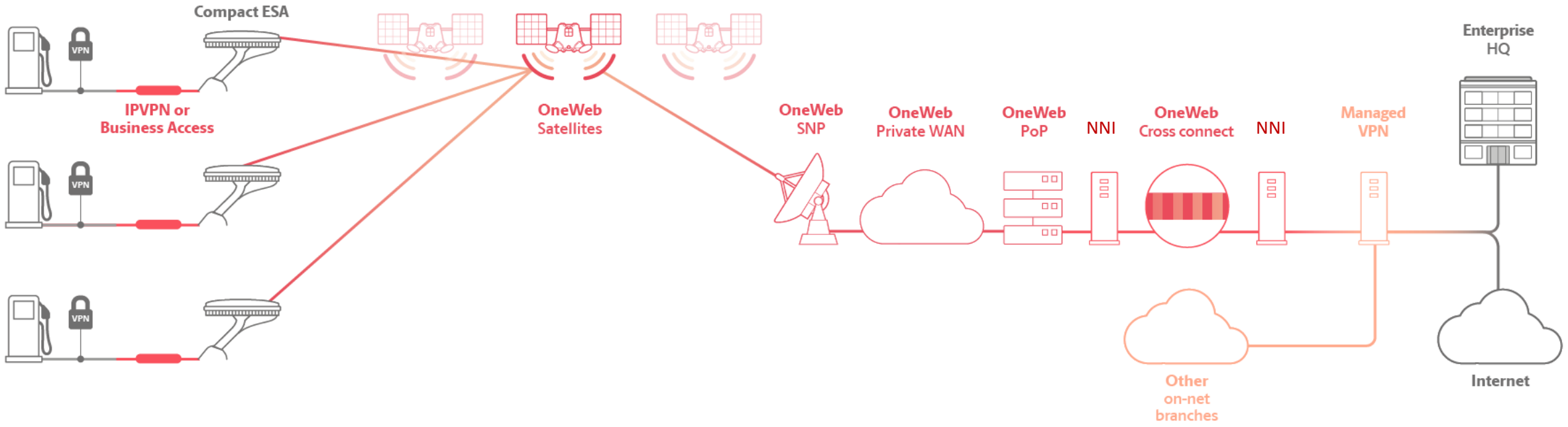
Fixed Market Offer Use Case Example

PoS Enterprise

OneWeb **Primary**

Summary	**A large enterprise wants a managed network for their POS terminals and has the last 10% of sites that are not accessible on their existing network footprint.**			
Solution	**Compact ESA**	**Premium** 15/3mbps	Based on **IPVPN** product	**Cross Connect** at OneWeb POP
Or in Protect mode this could be:		**Enhanced** 10/2mbps 50GB		



Partner	OneWeb	Partner

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Cellular Backhaul

Internet access for everyone, everywhere

- Extends existing core network to hard-to-reach locations, making internet accessible and affordable to underserved geographic areas
- Increases the capacity, availability and performance of existing solutions
- High-quality end-user service experience will immediately increase user satisfaction, enable new applications and OTT services, and support the expansion of mobile connectivity to users globally

- Applications
  - Small cell site
  - Large cell backup
  - Cell network expansion
  - Private LTE network

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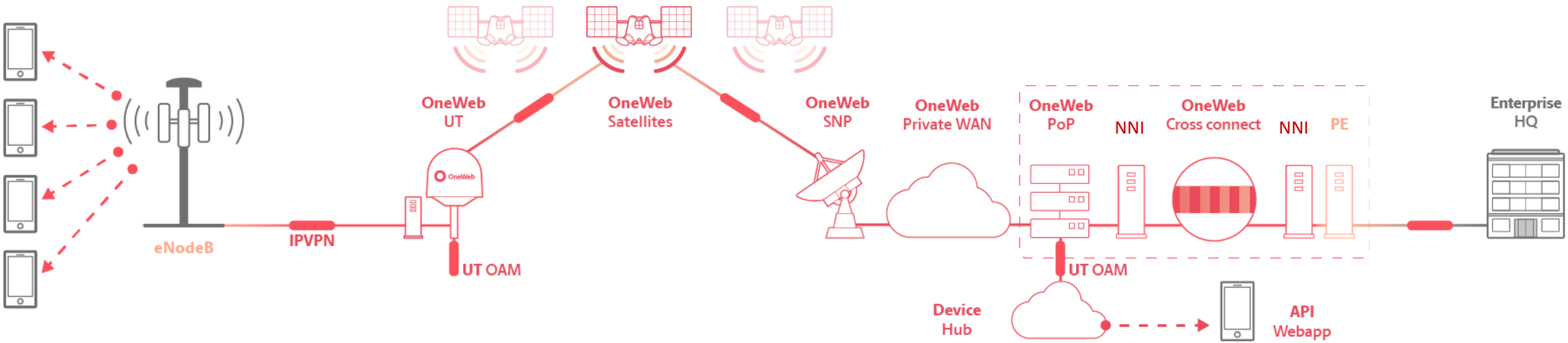
Fixed Market Offer Use Case Example

OneWeb

Rural Cell Backhaul

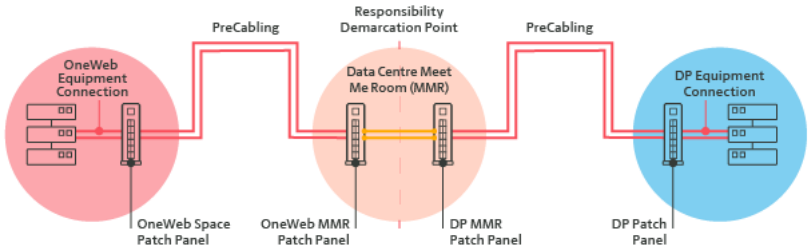
OneWeb **Primary**

Summary	**An existing mobile operator wants to extend their mobile network using OneWeb as an IP backhaul**
Solution	**Dual Parabolic** UT | **Dedicated** circuit 100/20mbps | Based on **IPVPN** | **Cross Connect** at OneWeb POP



Partner | **OneWeb** | **Partner**

Alarms
Interactive Control
Bulk logs



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Community Broadband

Internet access for everyone, everywhere

- Extends existing core network to hard-to-reach locations, making internet accessible and affordable to underserved geographic areas
- Increases the capacity, availability and performance of existing solutions
- High-quality end-user service experience will immediately increase user satisfaction, enable new applications and OTT services, and support the expansion of mobile connectivity to users globally

- Applications
  - Community WiFi
  - Smart City
  - Education
  - Healthcare
  - E-RATE

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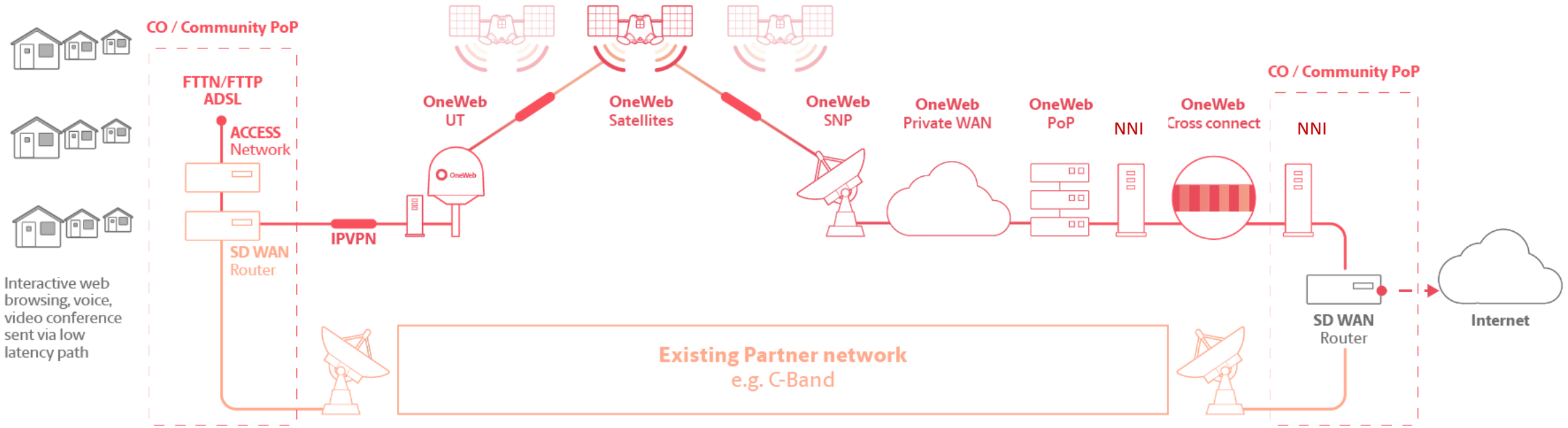
Fixed Market Offer Use Case Example

OneWeb

Community ISP

OneWeb **Augment**

Summary	**A rural ISP has existing GEO capacity, but wants to upgrade the user experience. Low latency traffic is sent over the LEO link, and buffered OTT video via GEO.**
Solution	**Dual Parabolic** UT | **Dedicated** circuit 100/20mbps | Based on **IPVPN** product | **Cross Connect** at OneWeb POP



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THANK YOU