

5G Fixed Wireless Access

How Real is the Threat to Cable and Fiber?

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Safe Harbor

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Submit your questions to the host using the chat window on your screen. We will have a brief Q&A at the end of the presentation.

5G – It's a thing



% of connections*
43% 2018

59% 2025



1.4bn 2025

15%
of connections*

*Excluding cellular IoT

5G

Spectrum assets are critical to enable bandwidth

	FR1 "Sub-6GHz"				FR2 "mmW"
	Low band 0.7 – 1.8GHz	Mid band 1.8 – 2.7GHz	High band 3.0 – 3.8 GHz	Ultra-High band 4.0 – 6.0GHz	mmWave band 24-28GHz / 38-39 GHz
Primary use case	Handset / mobility			Fixed Wireless	
	IoT				
Propagation / penetration	Excellent				Poor
Channel bandwidths	10-40MHz		40-100MHz		100-800MHz
Likely DL speeds per carrier*	150 Mbps		300-600 Mbps		1Gbps+

Fixed Wireless

The first realistic use case for 5G mmW



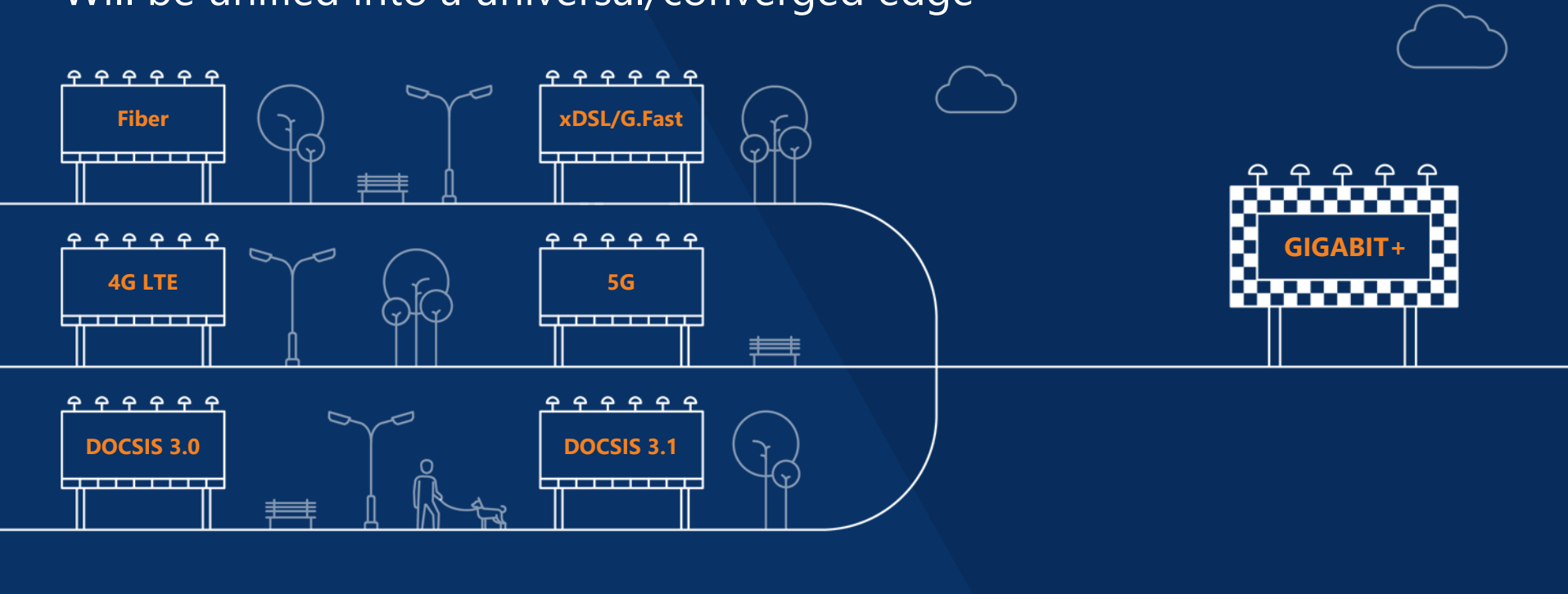
5G

mmWave is a great technology for FWA

Perception of mmW technology	Solution
Mobility (handsets) not well suited	Fixed Wireless is becoming the main use case for operators instead of handsets.
In-building coverage is unpredictable	mmW is surprising.
Cell sizes are too small	5G mmW small cells are going to be ubiquitous. mmW can propagate for 1-2 km for certain service types.
mmWave is still a long way off	mmW works now, and the technology will be mainstream in 2020.
mmWave is unreliable	While reflections can assist with propagation, they also change with weather, physical objects and build-out. Intelligent, autonomous CPE is required to utilize.

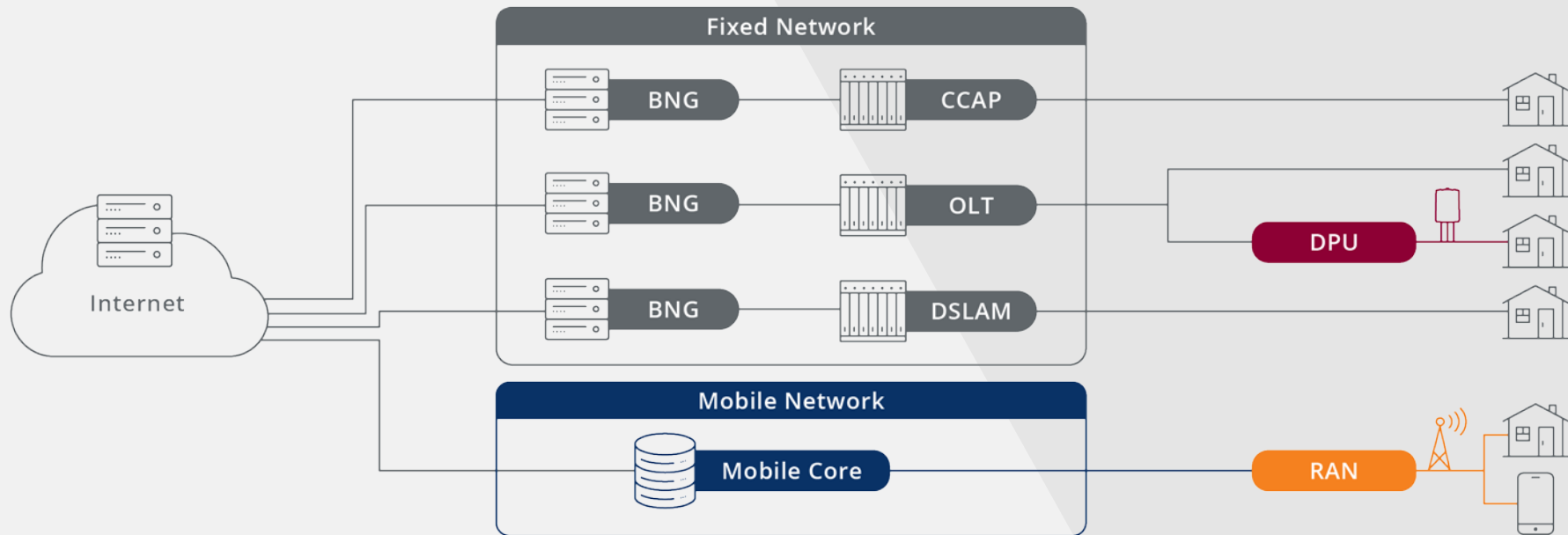
Disparate access technologies

Will be unified into a universal/converged edge

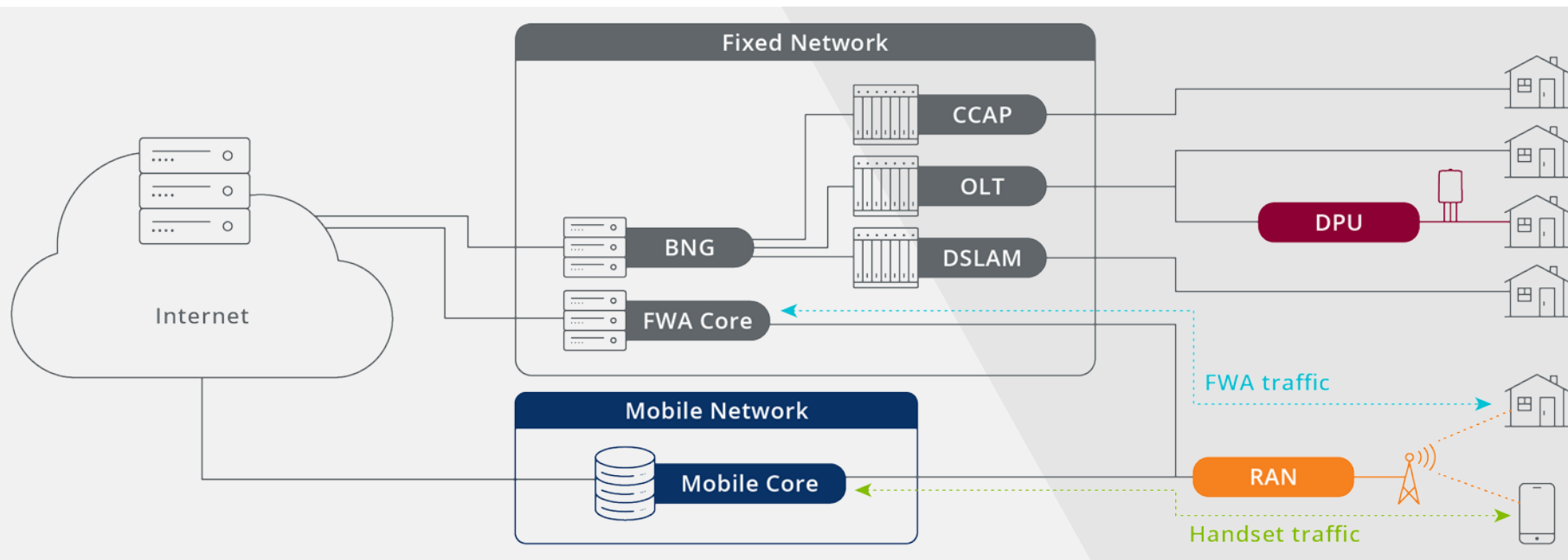


Impact of Broadband on the Mobile Network

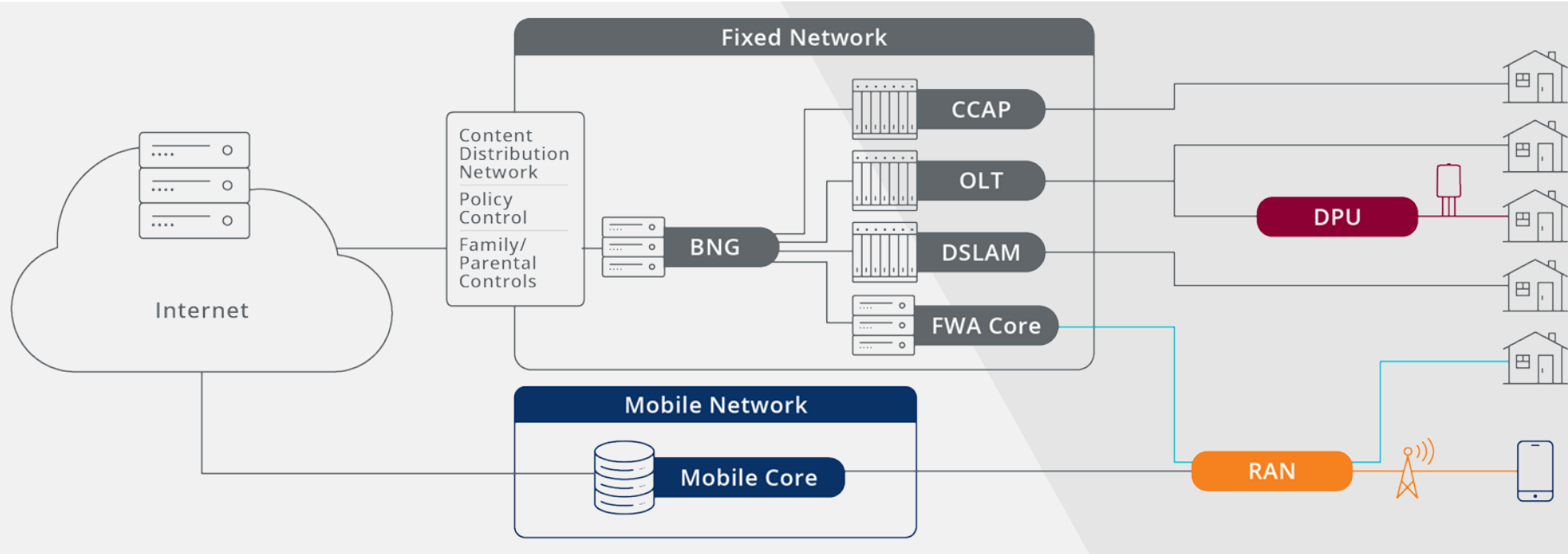
Mobile + Fixed core and access networks are rigid and disparate



Scale the Data Plane for Fixed Wireless

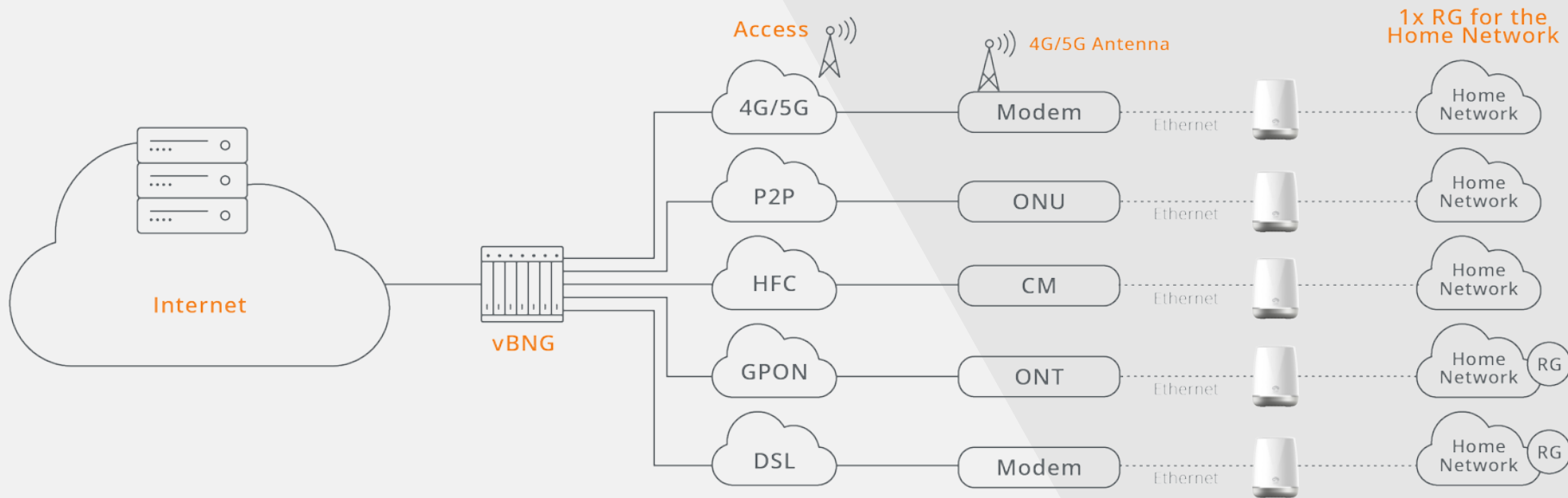


Fixed Wireless and mmW



Minimise investment; create a common experience for users

Common Gateway Architecture agnostic to the Access Medium



Virtualization and Disaggregation

The key to future-proofing and monetizing next generation network, ready for mmW disruption



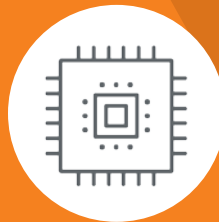
Disaggregate chassis-based / vendor-specific hardware to virtualized next generation COTS platforms for scale and efficiency.



Converge & Virtualize previously logically separated access data plane services into a lighter-weight scalable network



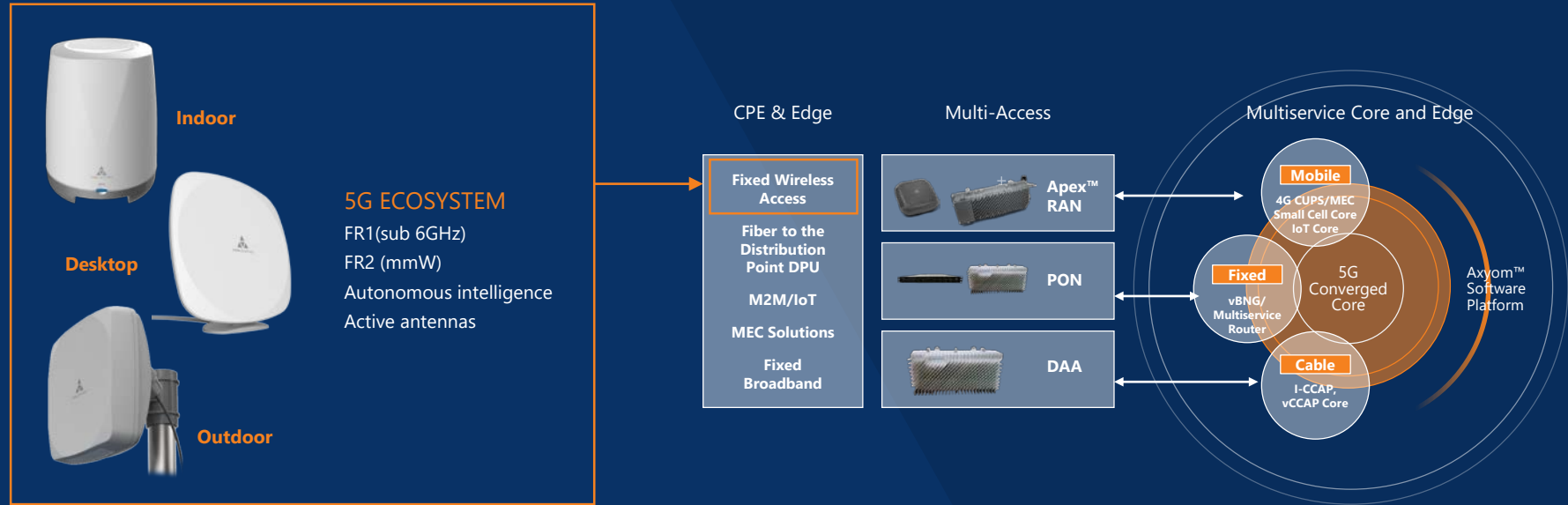
Separate control and data plane services for independent scalability.



Control and User Plane Separation (CUPS) allows user plane to reside as close as possible to 5G gNBs.

Casa Systems

Readying service providers for mmWave disruption



How real is the 5G Fixed Wireless threat to Cable & Fiber?

- 5G FR1 (Sub-6GHz): no change from 4G, not a material threat.
- 5G FR2 (mmWave): highly capable and is ready for deployment in 2020 – subject to spectrum assets. A genuine alternative to Cable & Fiber technologies.
- Unlikely that 5G mmWave will become a ubiquitous offering to replace ALL Cable & Fiber, however it will take substantial market share.
- 5G mmWave will be particularly relevant in under-performing footprint or geographies where a disruptor over-builds.

Bottom Line: 5G FWA mmWave is the next broadband disruptive technology.

Q&A

If you have questions, please submit using the chat window on your screen.



Thank you

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