

5G and Beyond: 5 Considerations for Next-Gen Wireless Networks

5 Considerations for Next-Gen Wireless Networks:

- 1 User behavior driving demand
- 2 5G Drivers
- 3 Near-term 5G technologies
- 4 Infrastructure options to support 5G
- 5 Other considerations and technologies

User Behavior Driving The Demand

Wireless User Behavior Driving Demand



HOW OFTEN?

How the Smartphone Replaced Radioshack



5G Drivers

FCC Plan for 5G

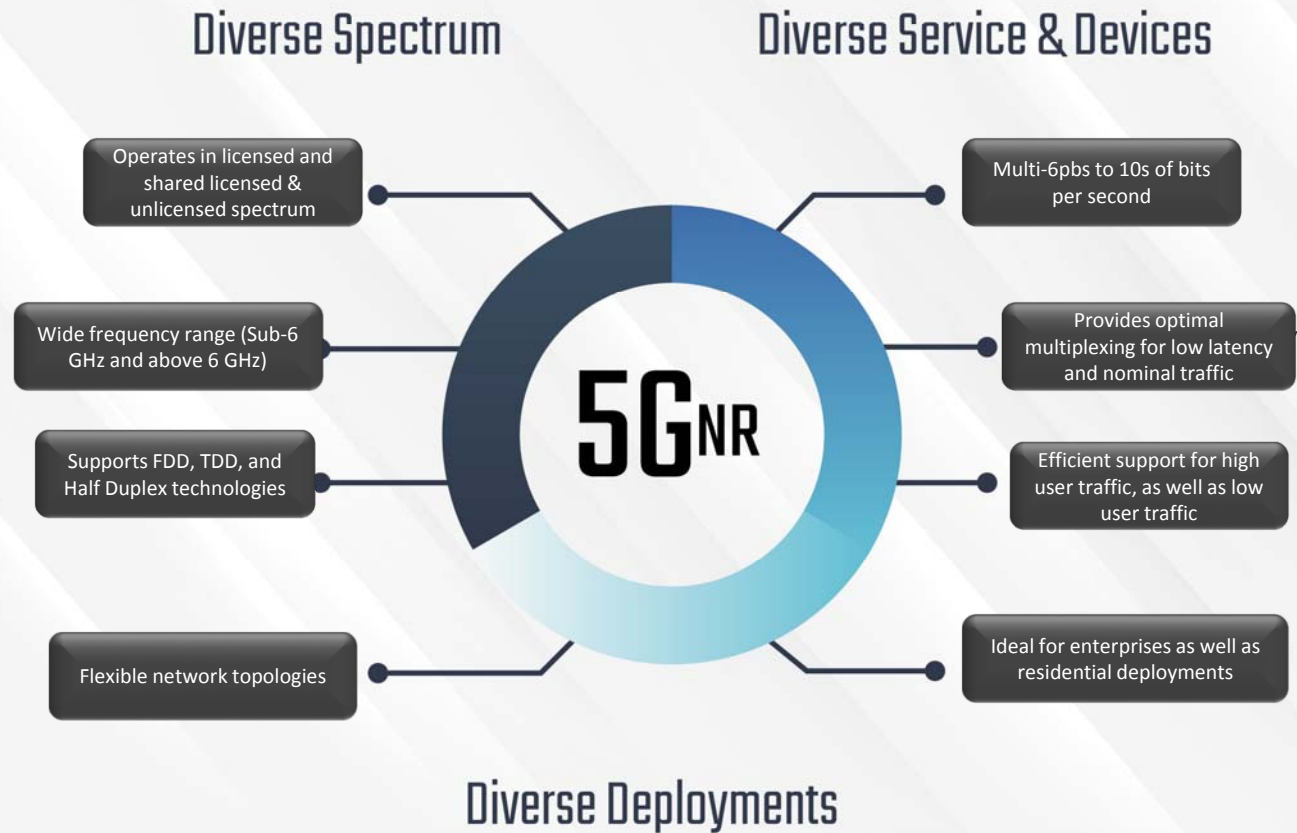


5G FAST Plan:

- Innovation in 6 GHz
- mmWave bands
- Expand 3.5 GHz for 5G
- Promote deployment of more fiber for smaller, rural carriers
- "C" band

Near-Term 5G Technologies

- 5G NR (new radios)
- D-RAN
- Beamforming



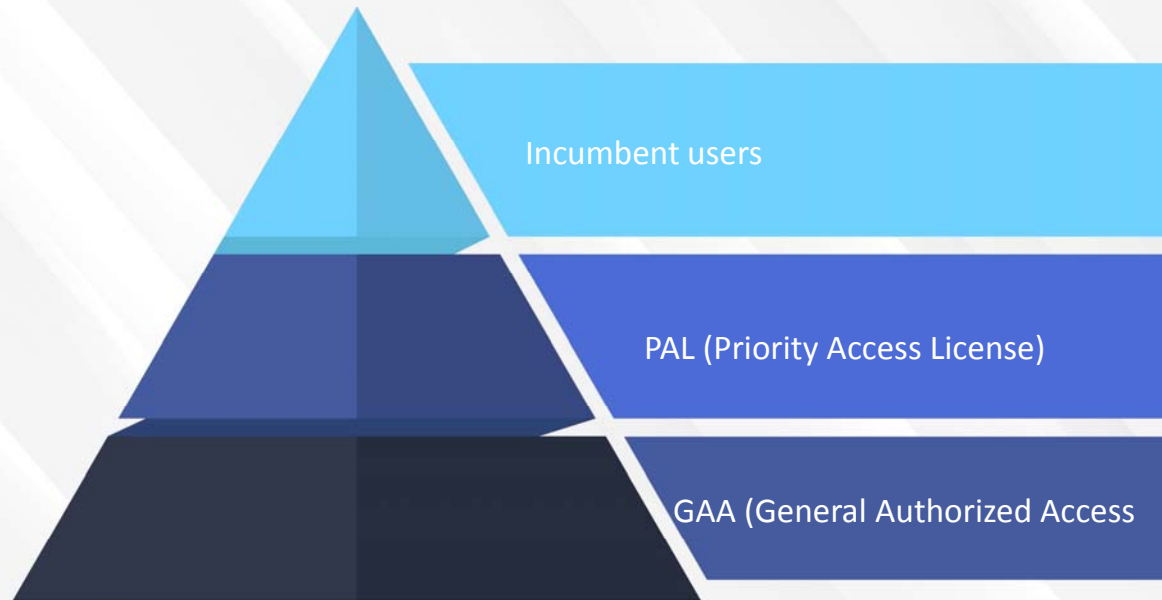
Infrastructure Options to Support 5G

- Usability of current coaxial and fiber DAS architectures
- Cat-5E and Cat-6 not sufficient: Cat-6A is minimum
- 4x4 MIMO
- Fiber to the “X”
- The fiber backhaul challenge

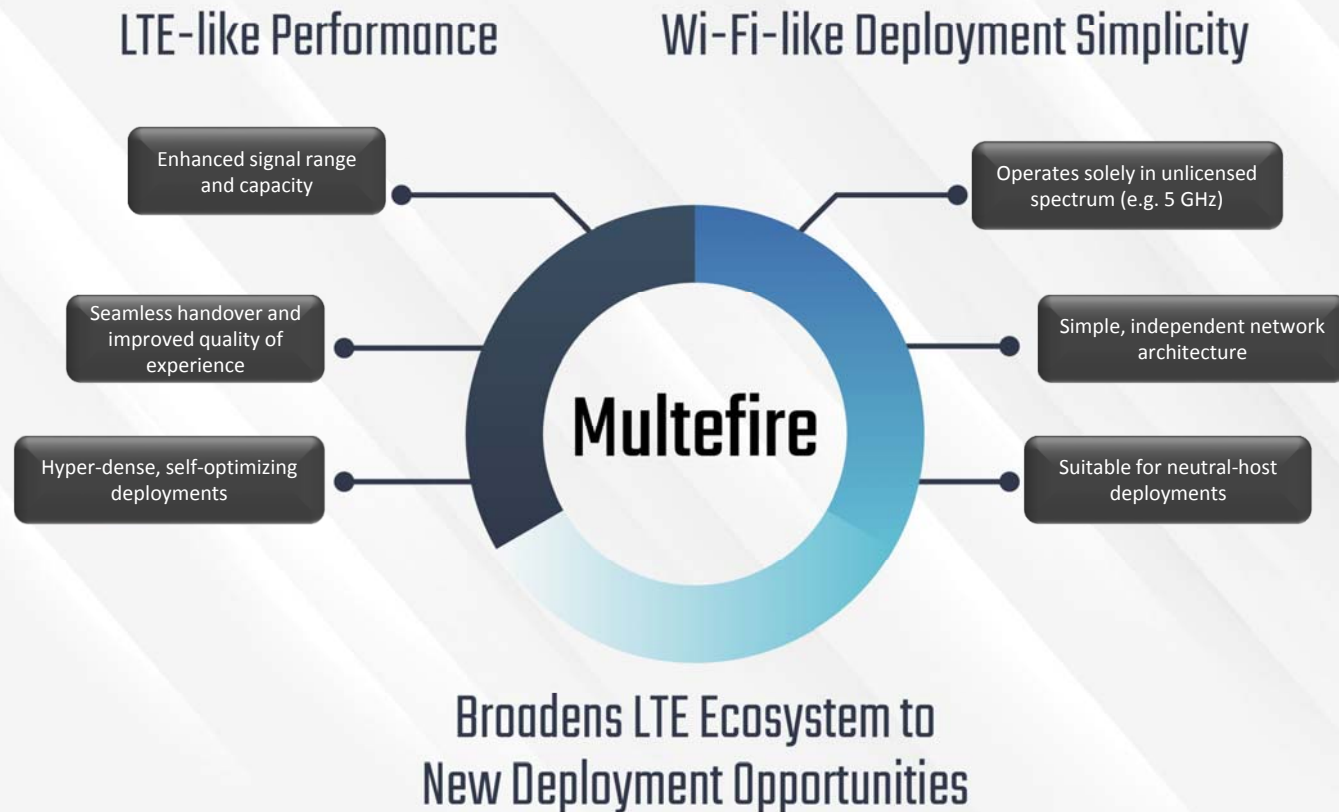
Advanced Mobile Broadband	2016	2021	Toward 2025
80 percent of sites	90 Mbps	300 Mbps	600 Mbps
20 percent of sites	300 Mbps	1 Gbps	3-5 Gbps
Few percentage of sites	1 Gbps	3-10 Gbps	10-20 Gbps

Other Considerations & Technologies

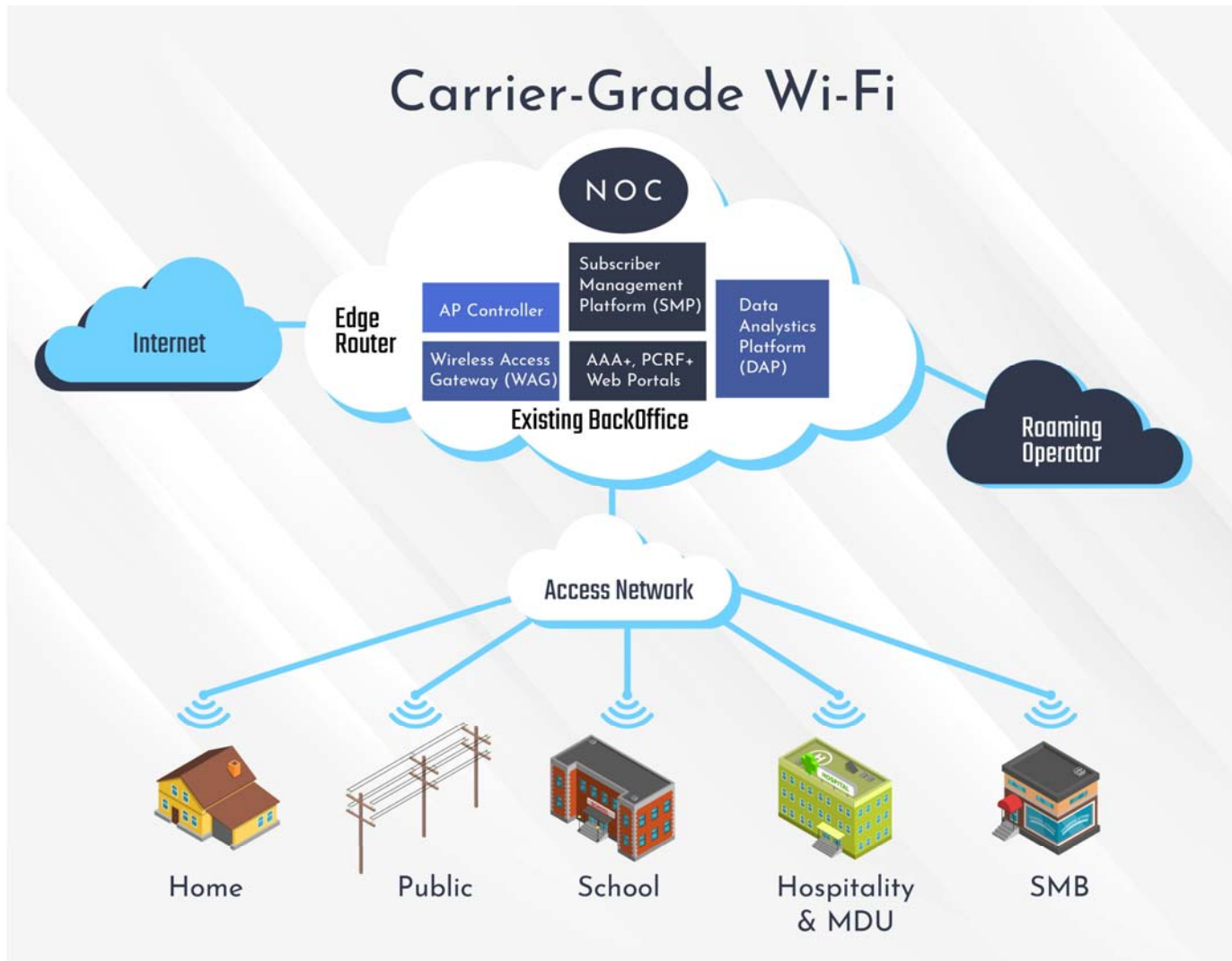
CBRS-opening up 150 MHz of spectrum



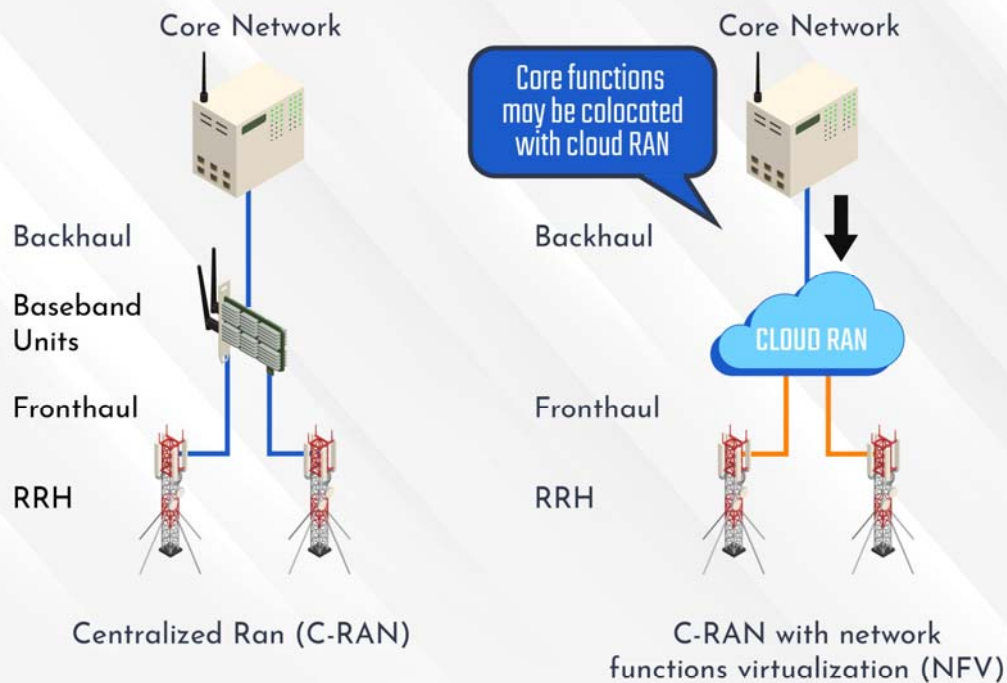
- LTE-based technology solely in unlicensed spectrum
- Targets small-cells in unlicensed spectrum bands such as the global 5GHz band
- Harmoniously coexists with Wi-Fi and LTE U/LAA



Carrier-Grade Wi-Fi



V-RAN (virtual RAN)



Takeaways

Summary



- Demand for wireless use and connectivity driving technology
- Near-term 5G and related technologies impacting infrastructure to support
- More coverage. More throughput. More fiber! (wireless does not mean cable-less)
- New technologies will open up markets for smaller (under 500,000 SF) building coverage solutions

Thank you

Questions?

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