

Verizon Response Ready solutions



Network Enhancements 4G LTE , 5G Ready



Responder Private Core



Enhanced Mobile
Broadband Priority
QoS, **Data Priority**



Preemption



Smartphones, **Voice and Data Priority**
"Always on" QoS, MBP, Preemption(QPP)
WPS available through DHS



LTE deployable
network (VCRT)



LMR/PTT/MC PTT
Interoperability



Network Command
and Control



Applications/5G
Responder Lab

Verizon Priority & Preemption

What is priority?

Priority provides a device access to the radio access network (RAN) ahead of other devices. Priority does not imply 'priority' to resources beyond the RAN.

Mobile Broadband Priority (MBP) gives access priority to the RAN.

Private Network Traffic Management (PNTM) gives data priority beyond the RAN.

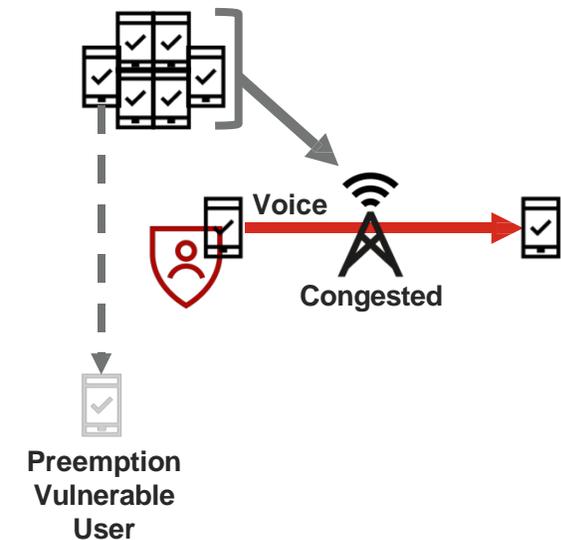
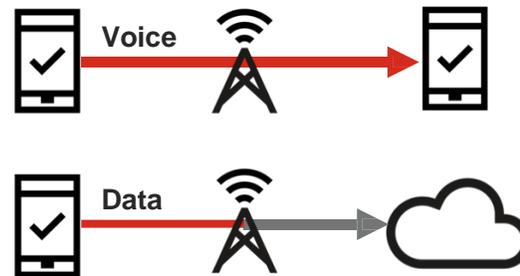
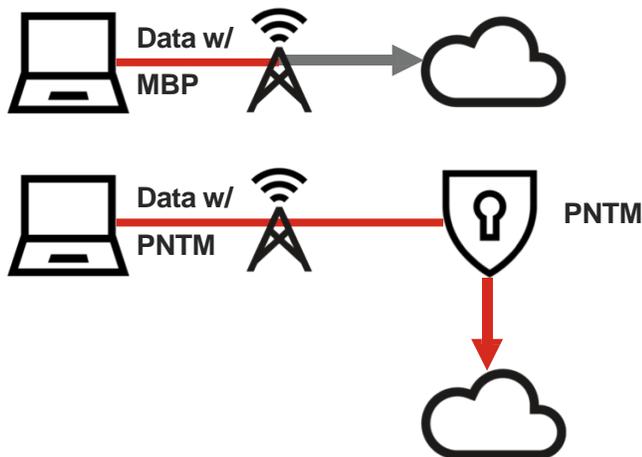
Wireless Priority Services (WPS) gives access priority to the RAN & resources beyond the RAN, for voice only.

Data has access priority to the RAN.

What is preemption?

Preemption automatically and temporarily re-allocates network resources from a lower priority user so that a preemption capable user can communicate during network congestion.

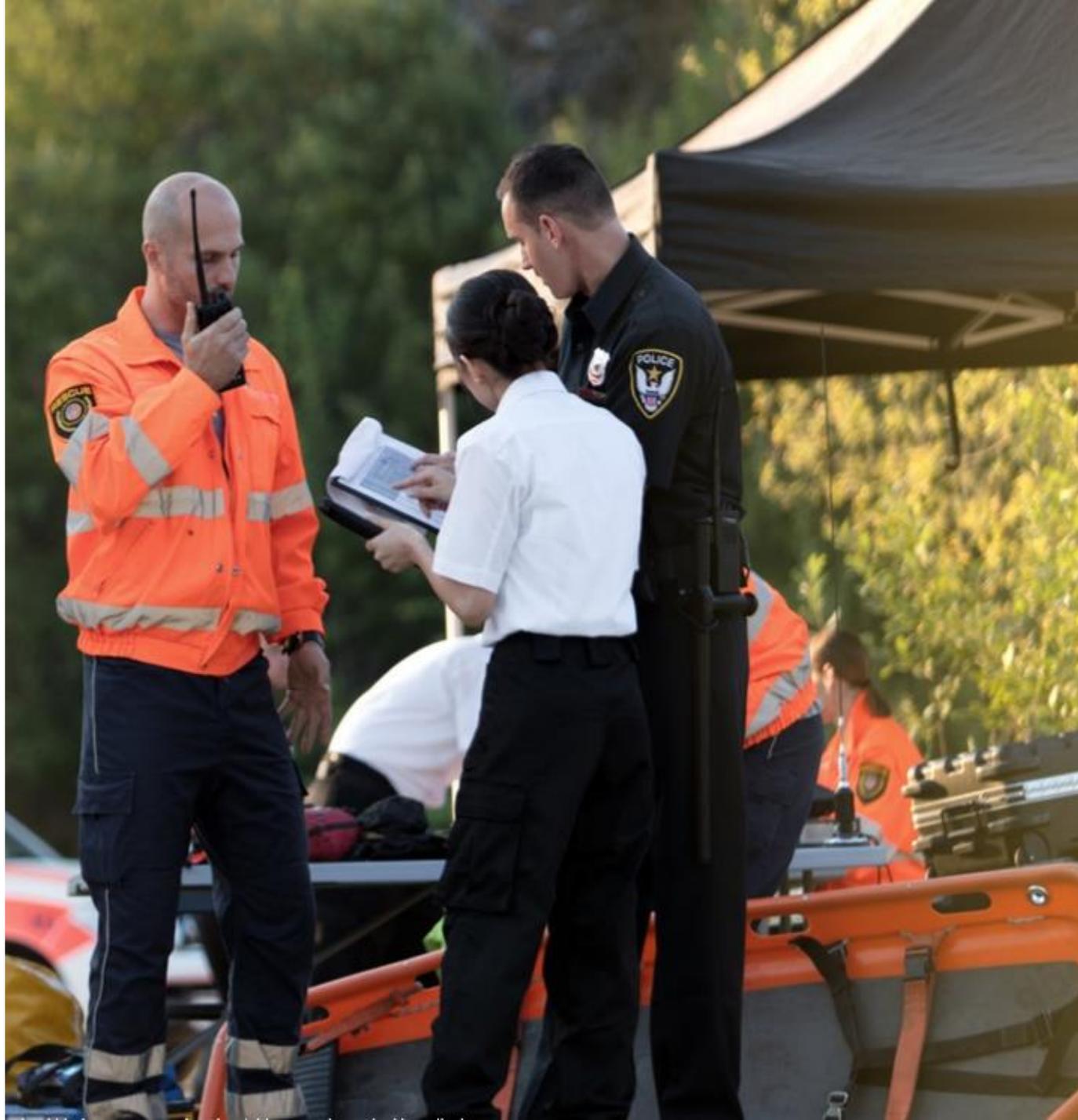
Preemption is an always-on feature that is **evoked only when the network is congested** to a point where it cannot register any more new users in that geographical area.



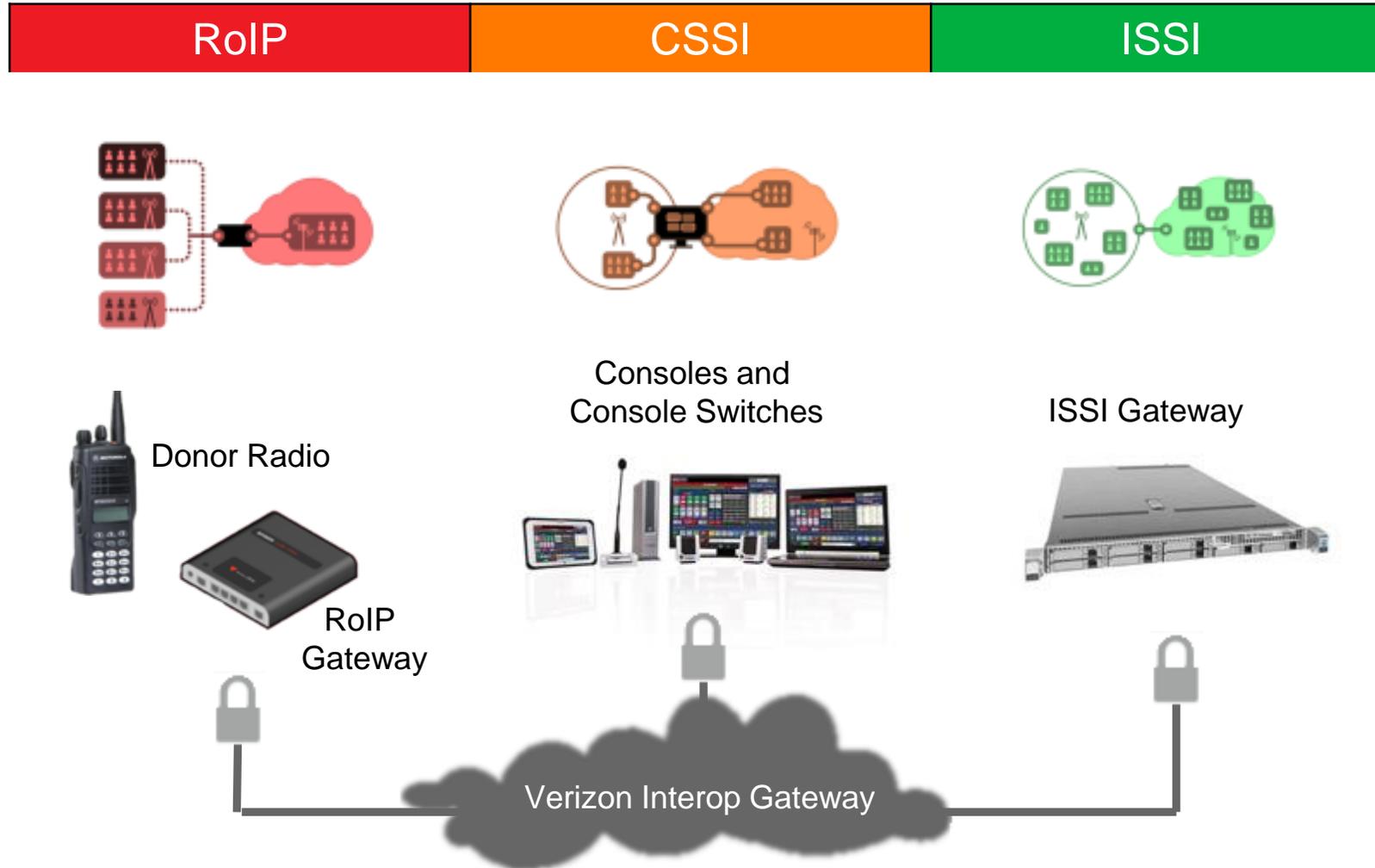
**LTE PTT+ / Radio
Interoperability**

ready[✓]

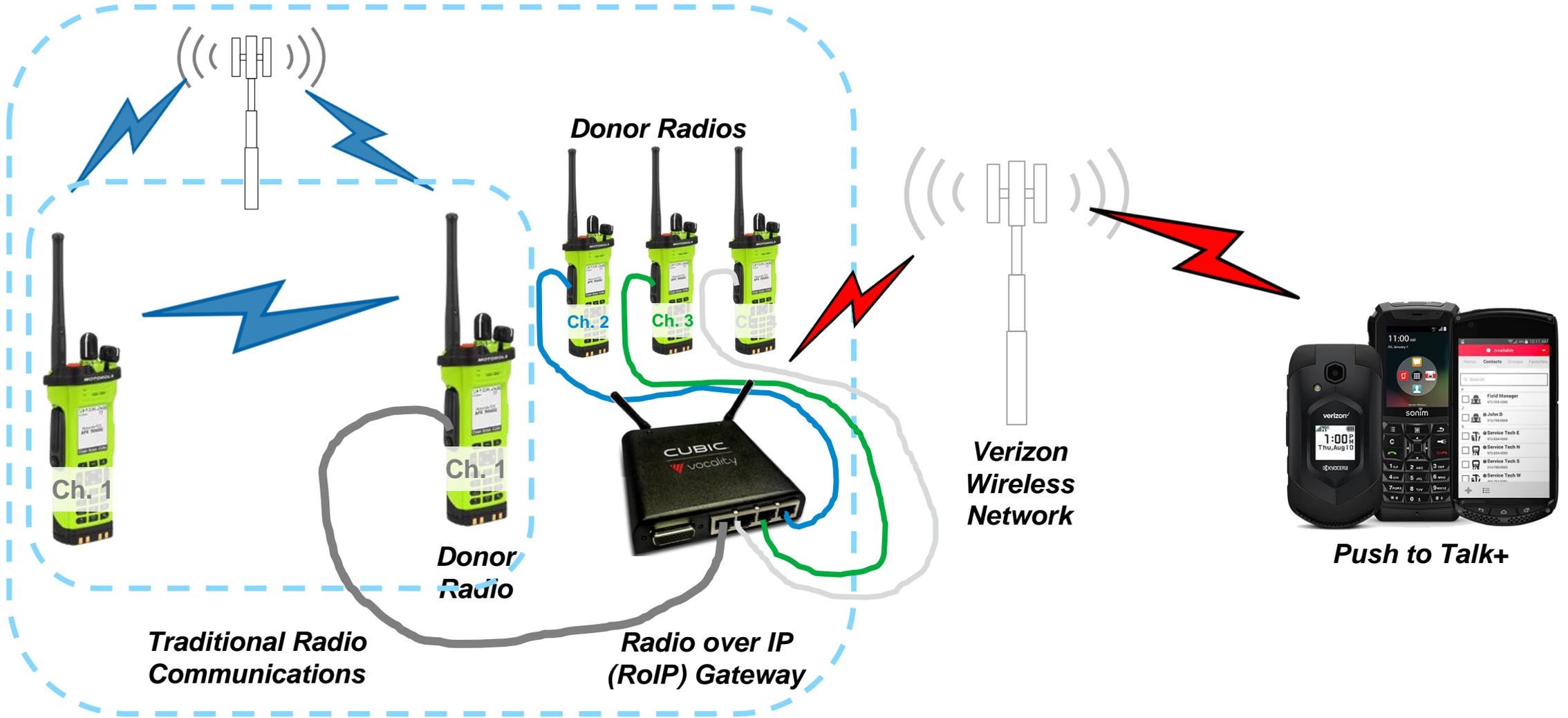
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Three ways to interop LMR with PTT+



LMR RoIP Gateway Implementation:

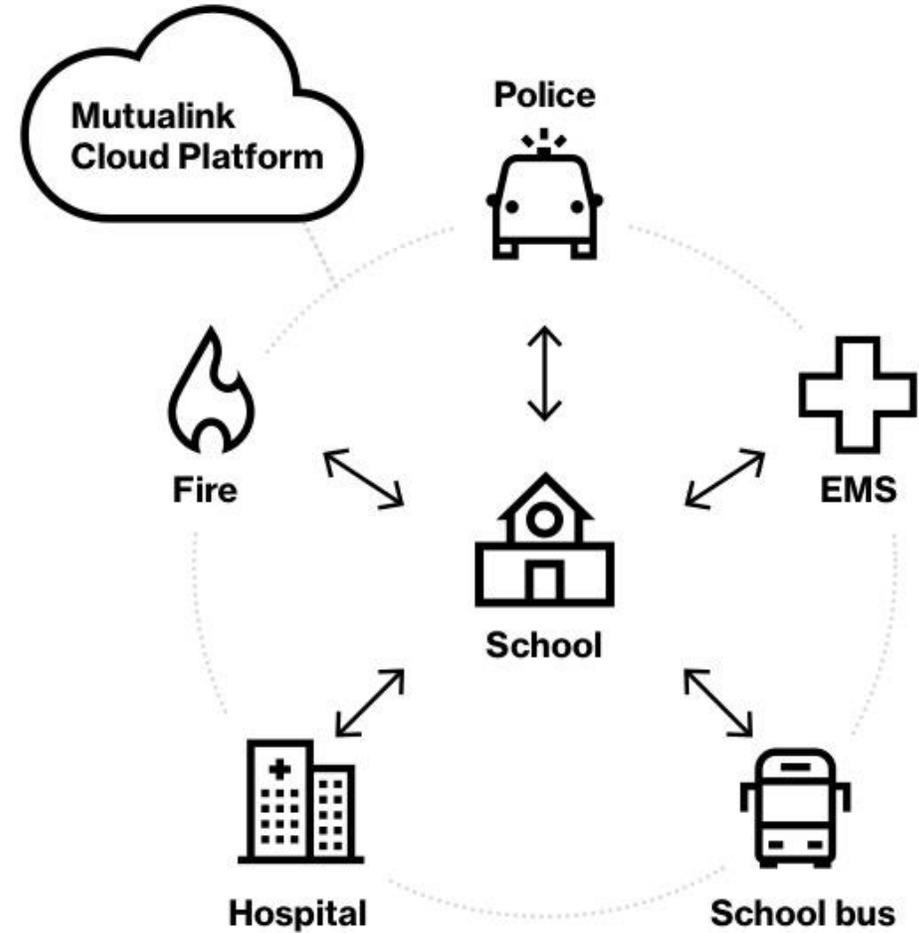


Verizon & Mutualink – Creating an interoperability experience

Solve for inter- and intra-agency communications

Easily share radio, voice, video and data for cross-agency collaboration with user access and participation privileges.

- Verizon announced strategic agreement with Mutualink at the International Association of Chiefs of Police (IACP) in Oct 2018
- Mutualink is a member of the Verizon Partner Program, which enables co-selling services
- Available to federal, state and local agencies, as well as educational institutions, enterprises and small to medium-sized businesses (SMBs)



What is the Verizon Response Team?

- 24/7/365 team of Verizon employees
- National structure facilitated by calling one number for assistance
- Live support line contact
- Immediate field response based upon request
 - Equipment Requests – Voice & Data Devices
 - Additional Network Coverage
 - Exigent Requests – missing person/kidnapping
- - **VCRT 1-800-981-9558**



Verizon Response Team

- Network Deployed Equipment
 - Cell on Wheels (COW)
 - Cell on Light Truck (COLT)
 - Repeater on a Trailer (RAT)
 - Solar Powered Repeater on a Trailer (SPROT)
 - Mobile Connectivity Trailer (MCT)



How we're deploying the Verizon 5G Ultra Wideband network

5G Rollout Approach



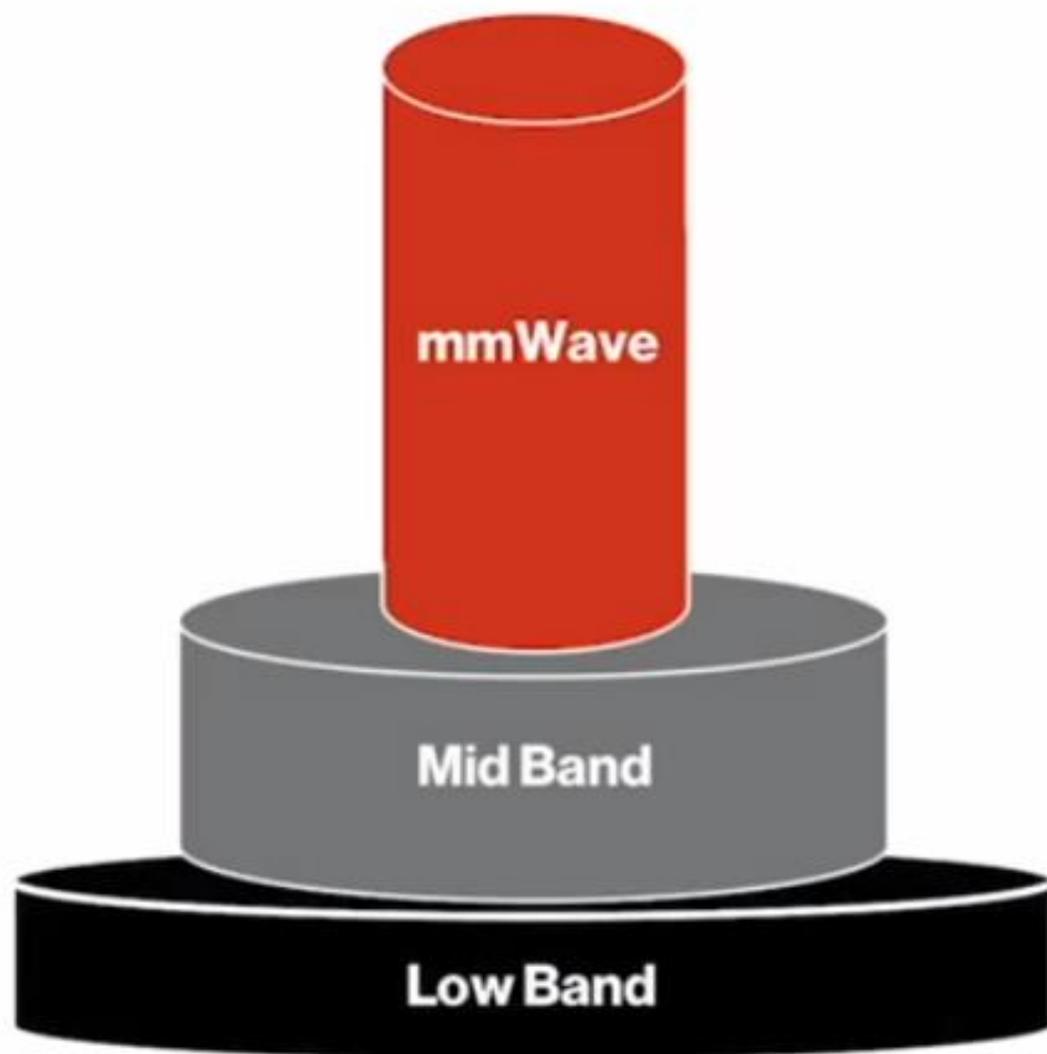
- Top Urban markets
- High density areas Pops/Traffic
- Fiber underlay critical



- Expands into Suburban
- Complementary to mmWave
- BAU Densification



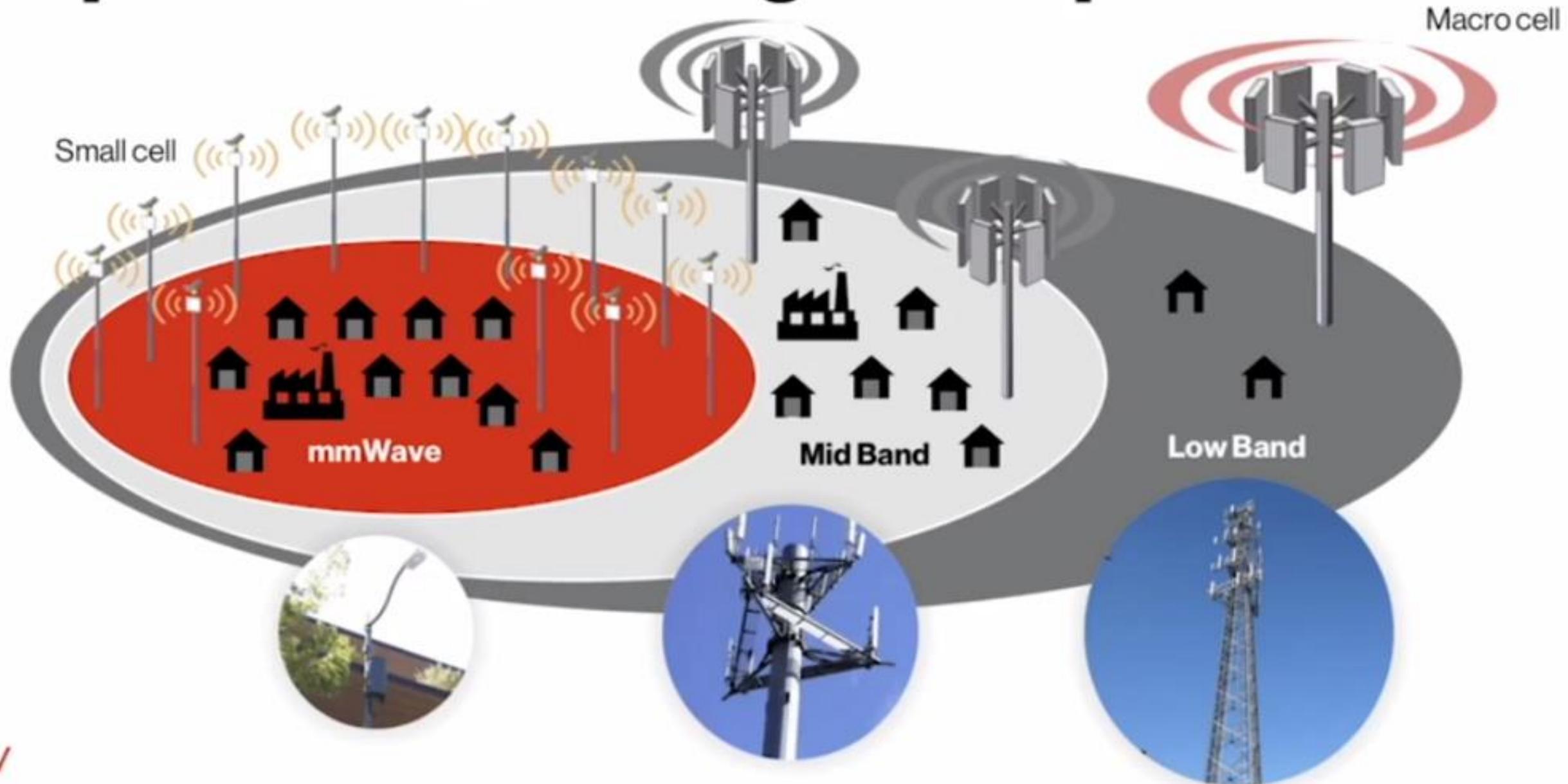
- Expands into Rural
- Coverage Layer
- 5G upgrades occur as BAU



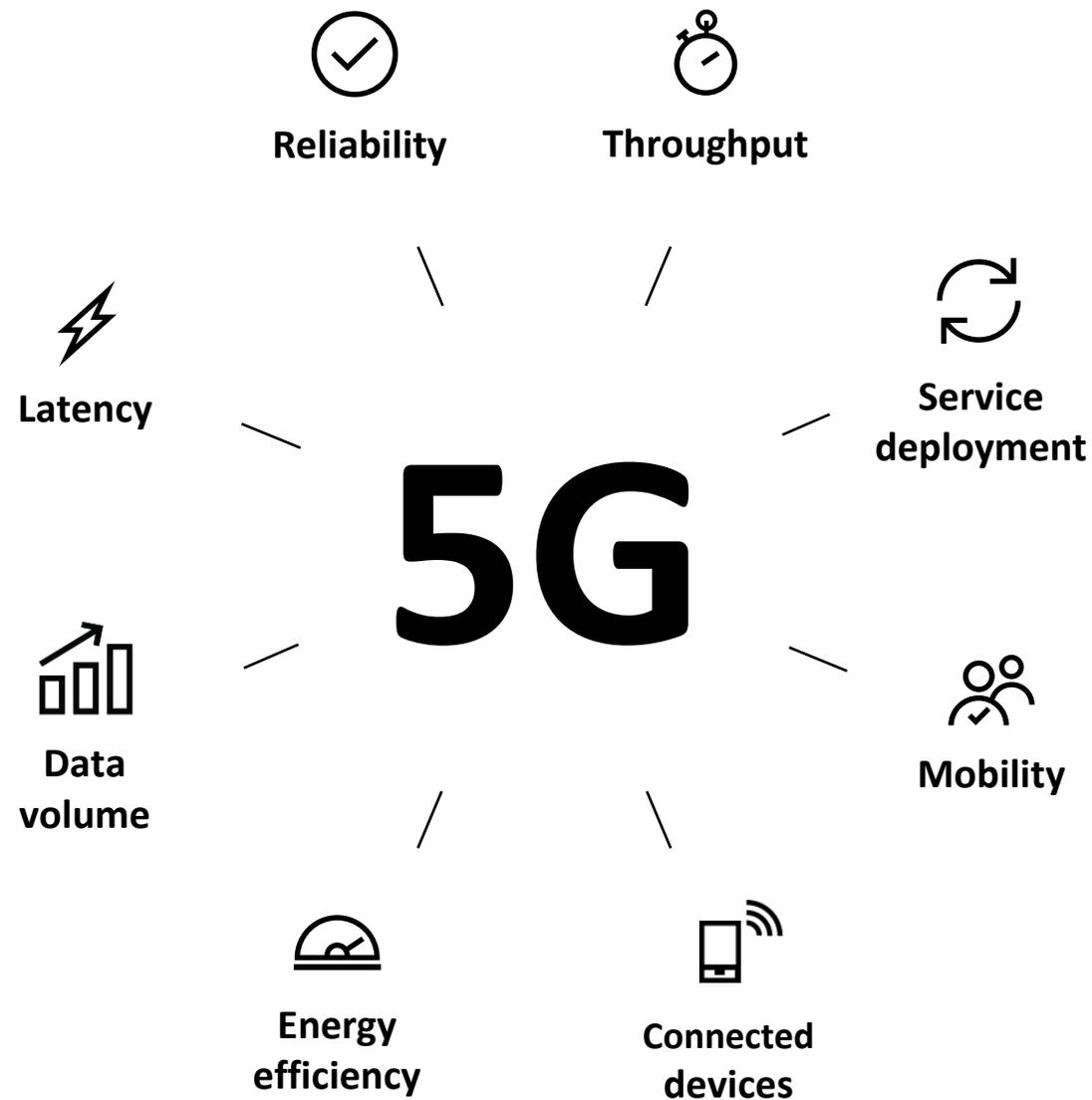
Illustrative, not to scale



Spectrum Coverage Comparison



There are eight performance attributes, or currencies, to be considered when evaluating whether a 5G network can deliver on its full potential:



The 8 currencies can only be fully realized on a 5G network built the right way.



Fiber

- Significant fiber in major cities to drive densification
- Verizon has committed to invest \$1.05 billion on new fiber-optic cable from Corning from 2018 to 2020¹



Small-cell deployment

- Verizon has spent years densifying our 4G LTE network. Many 4G locations will be used for 5G
- We have built relationships with municipalities of all sizes so we can accelerate network deployment



Millimeter-wave spectrum

- Critical spectrum holdings
- Nationwide deep millimeter-wave spectrum



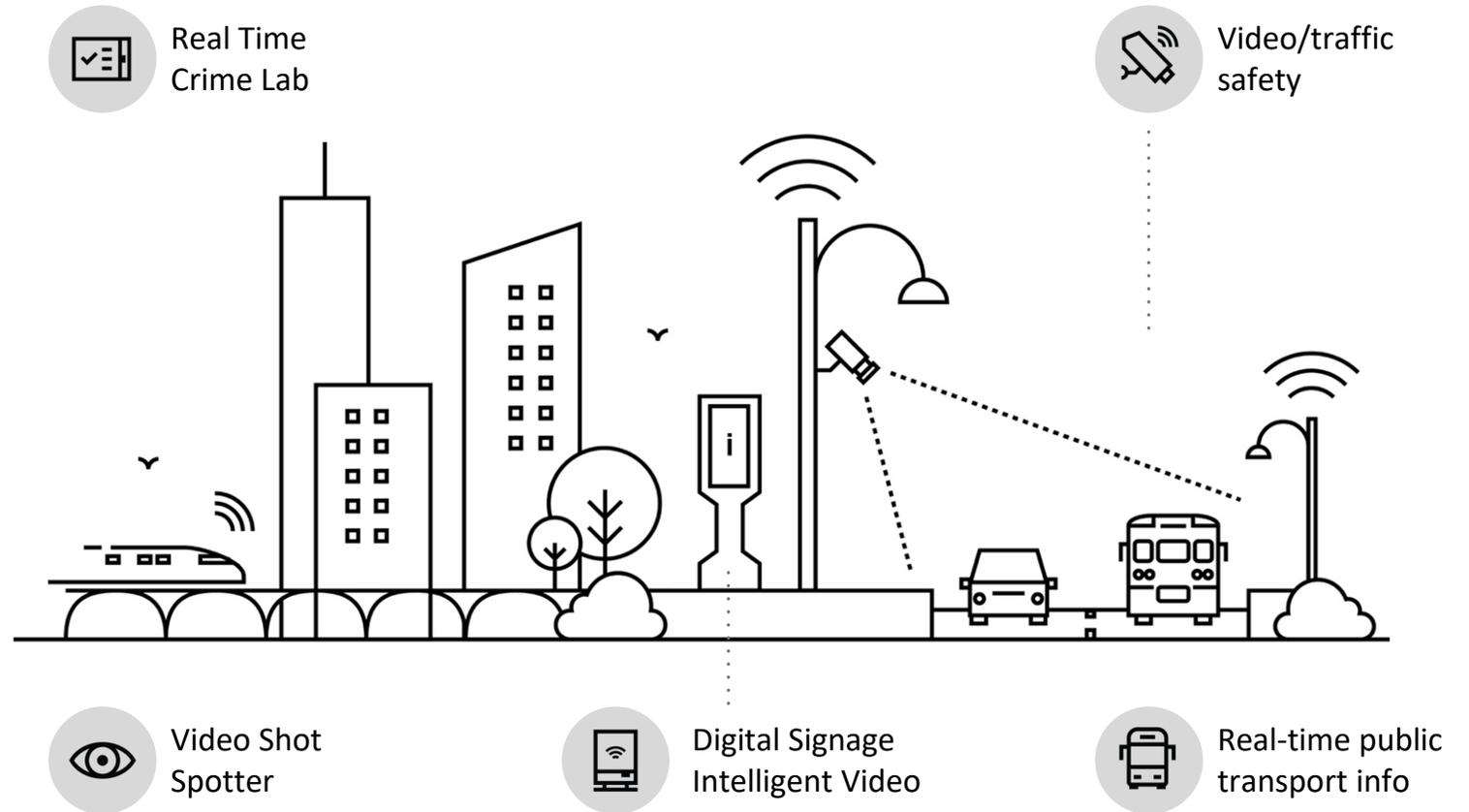
Edge computing

- We have network locations nationwide that are ideally suited to house edge computing resources
- Edge computing will enable low-latency applications

¹ [verizon.com/about/news/verizon-agrees-105-billion-three-year-minimum-purchase-agreement-corning-next-generation](https://www.verizon.com/about/news/verizon-agrees-105-billion-three-year-minimum-purchase-agreement-corning-next-generation)

Smart Communities

5G Ultra Wideband has the potential to help your community stay smart, first responders remain connected and citizens stay safe.



Do you have any questions?

For more information on Verizon Response Ready public safety solutions, visit: <https://enterprise.verizon.com/solutions/public-sector/public-safety/>

Thank you for your support!

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