

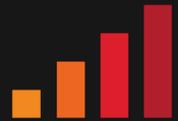


lmt

5G – Cybersecurity (RE)evolution

*Egons Bušs
Security Director at LMT*





SECURITY THREATS HIGHLIGHTS 2019



Formjacking attacks skyrocketed, with an average of 4,800 websites compromised each month



Ransomware shifted targets from consumers to enterprises, where infections rose 12 percent



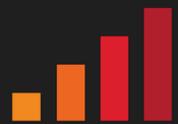
More than 70 million records stolen from poorly configured S3 buckets, a casualty of rapid cloud adoption



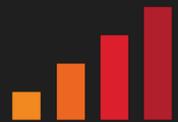
Supply chains remained a soft target with attacks ballooning by 78 percent



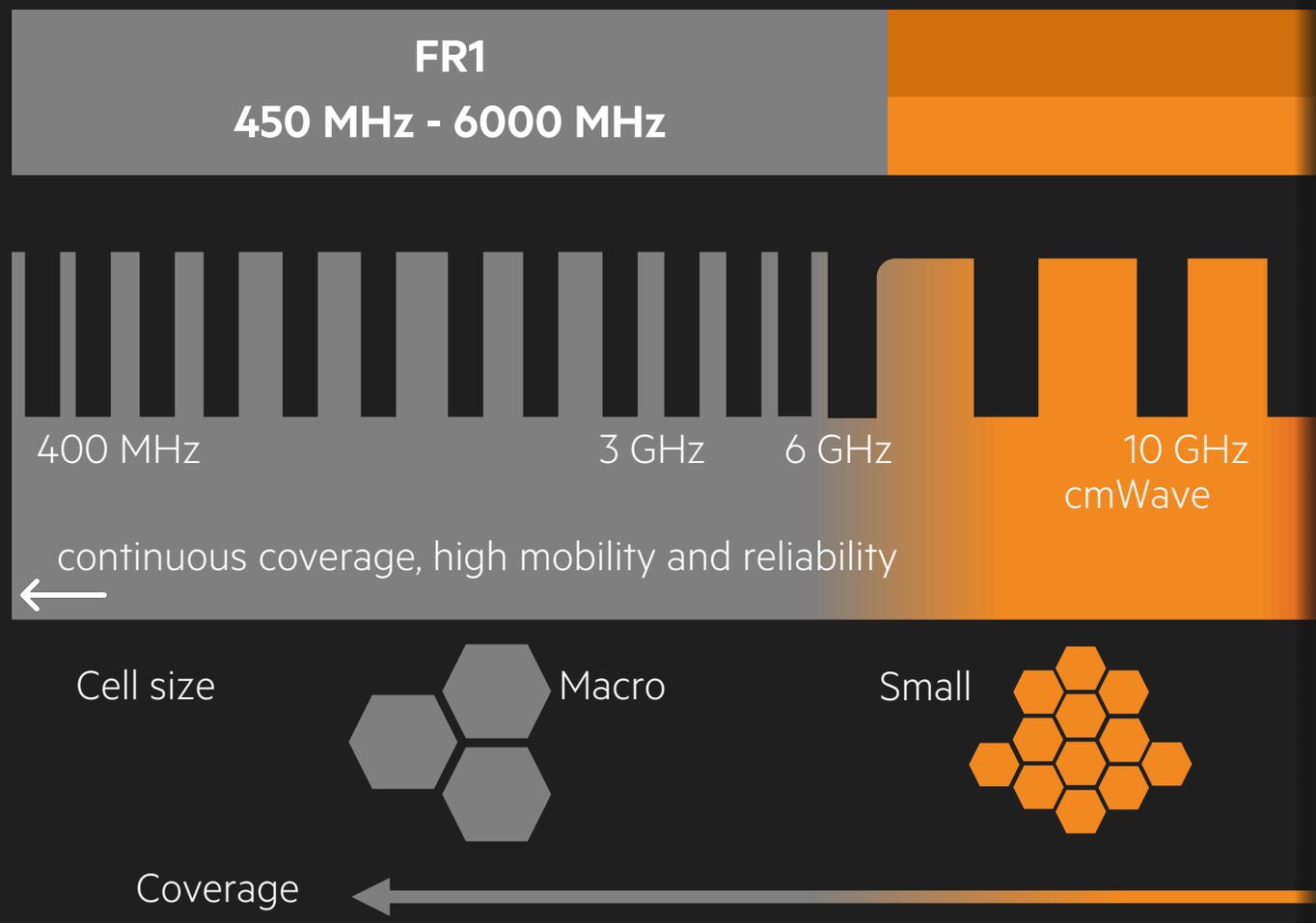
“Smart Speaker, get me a cyber attack” — IoT was a key entry point for targeted attacks; most IoT devices are vulnerable

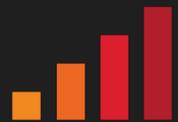


WHAT WILL HAPPEN IN 5G ERA?

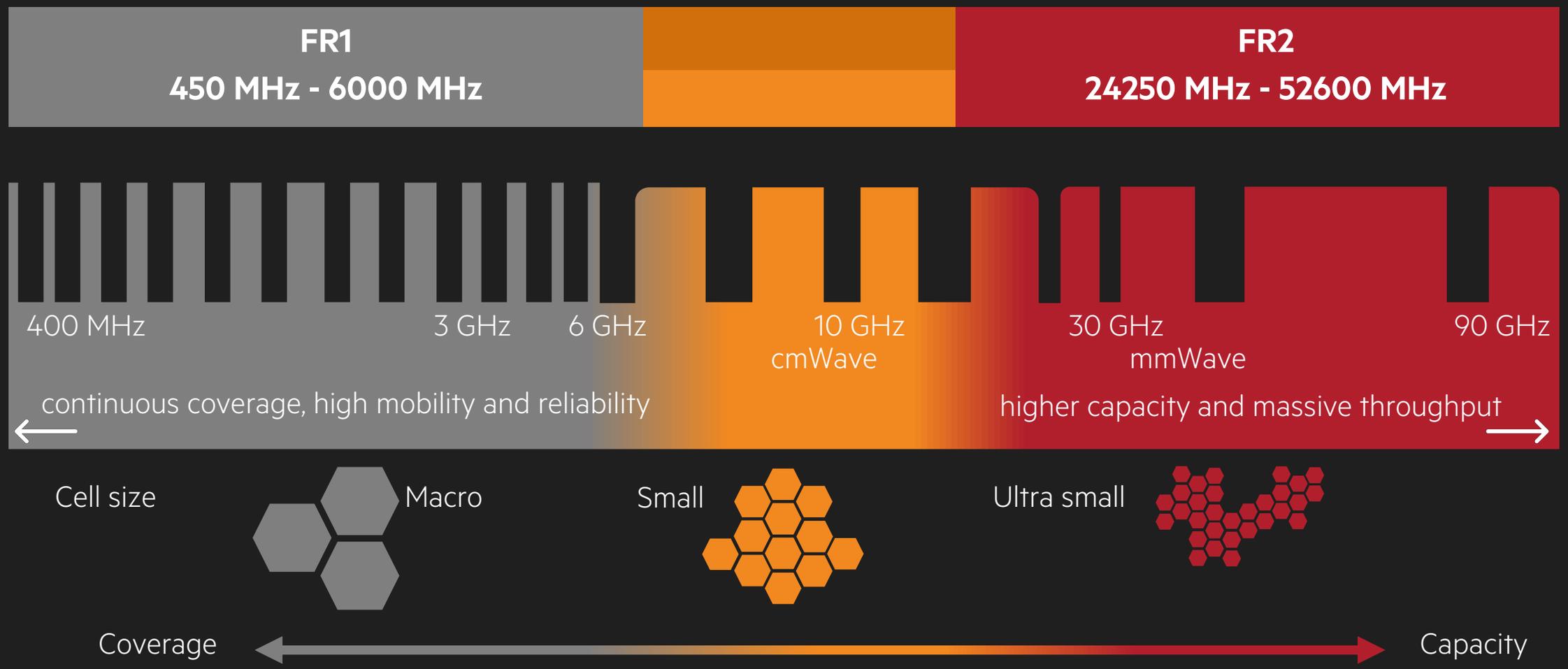


FREQUENCY RANGE DESIGNATION

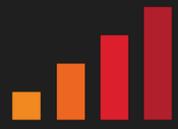




FREQUENCY RANGE DESIGNATION

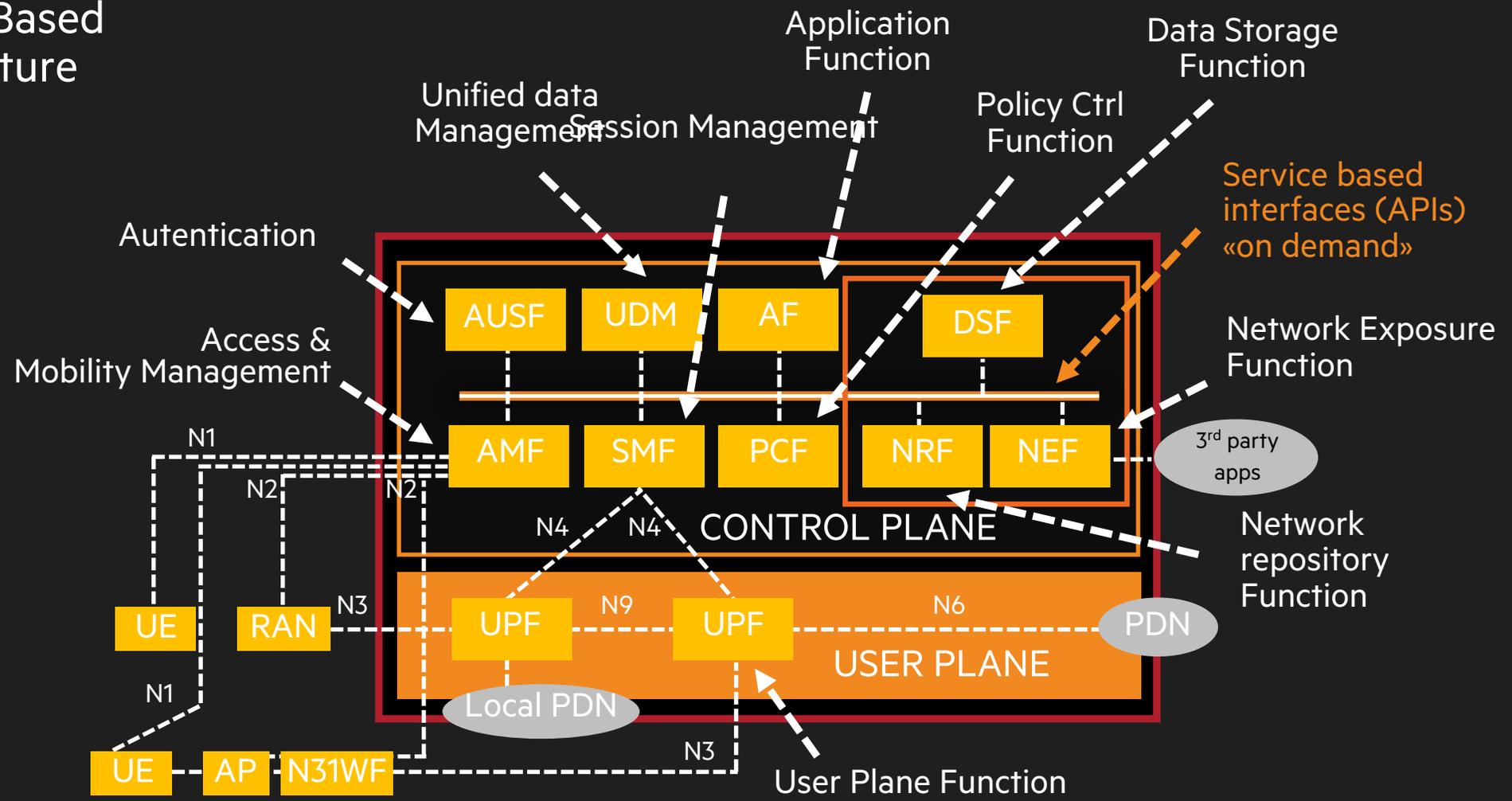


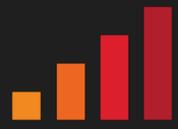
Source: Nokia, 2018



SERVICE BASED REPRESENTATION

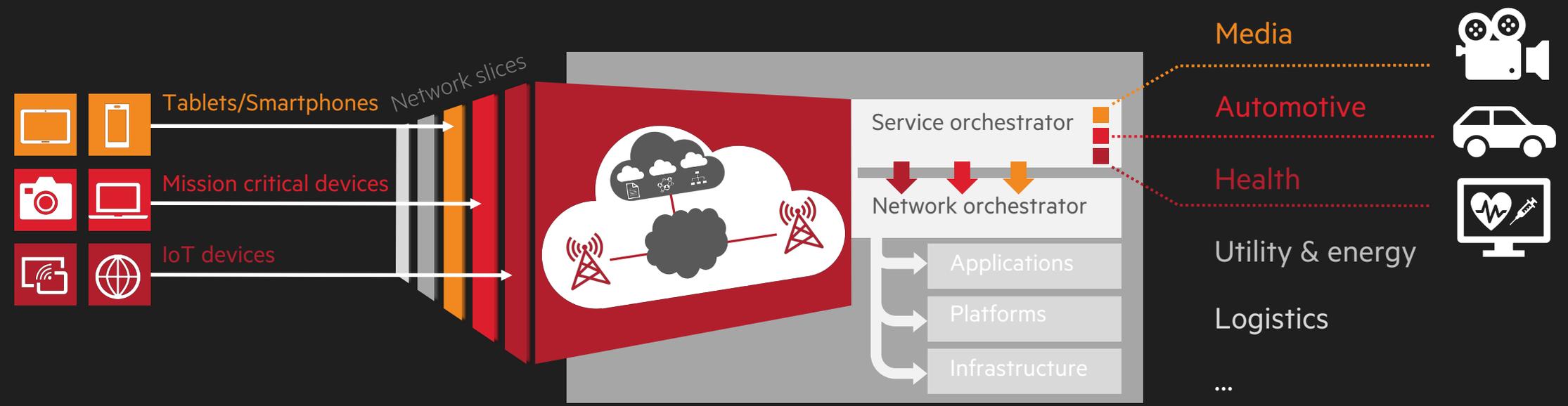
5G Core (SBA) Service Based Architecture





THE CONCEPT OF NETWORK SLICING

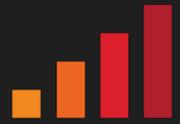
Including the service and the network orchestrator



Assignment of devices to network slices

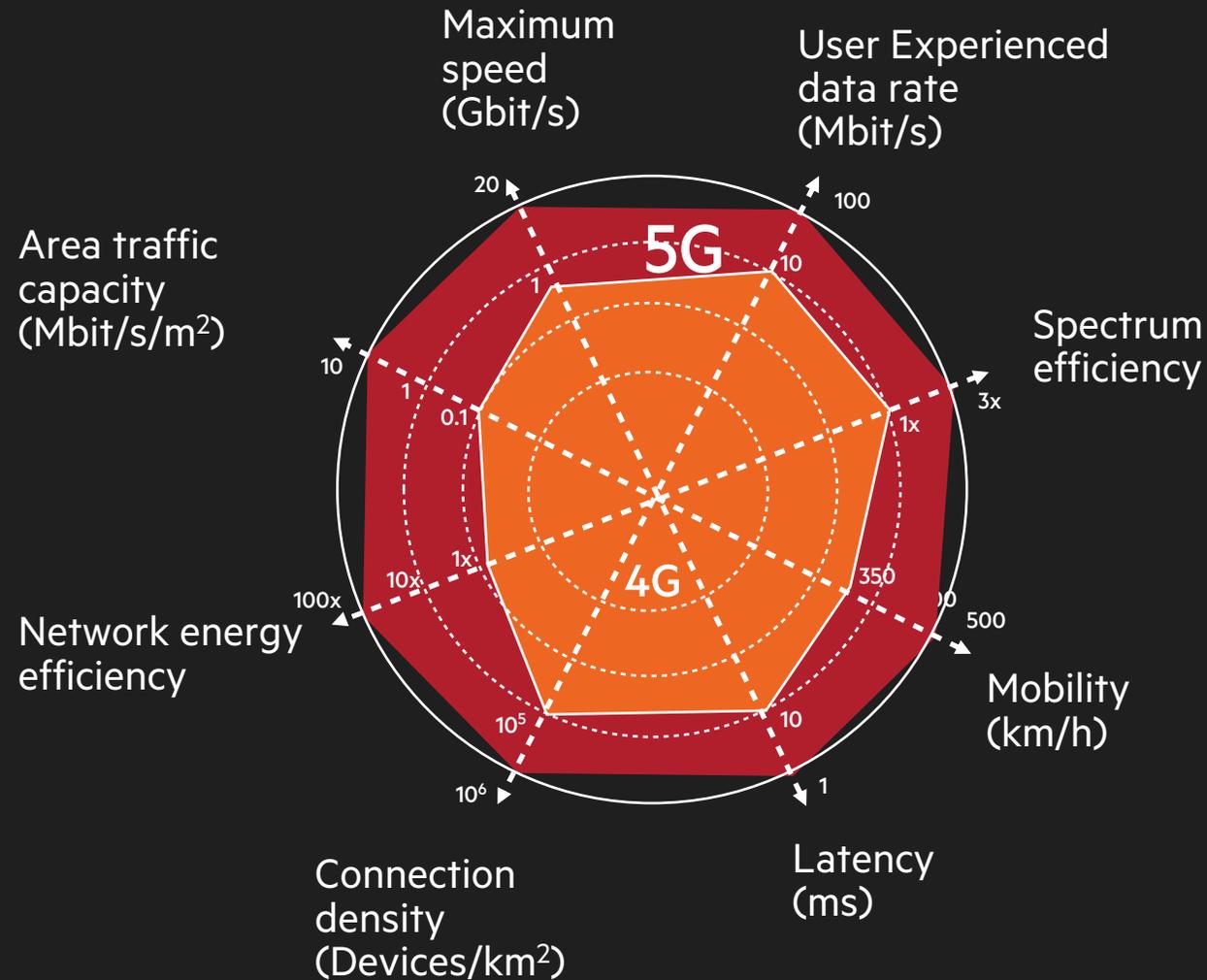
Service optimized, isolated architectures

New business with different industries



5G IS MORE FOR INDUSTRIAL NEEDS

5G CHARACTERISTICS





DULL



DIRTY



DANGEROUS



MONEY



TIME



PRODUCTIVITY

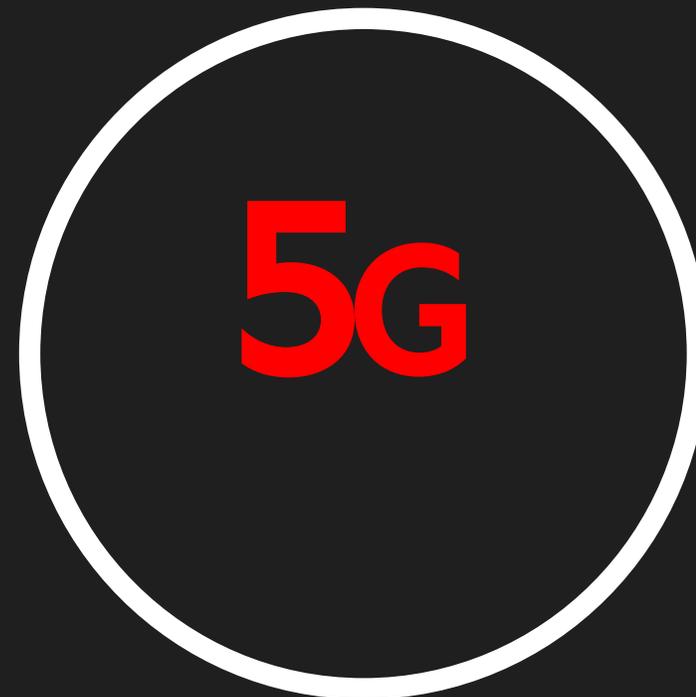
**99.9999 %
UPTIME**



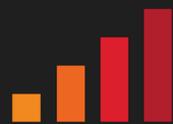
1s



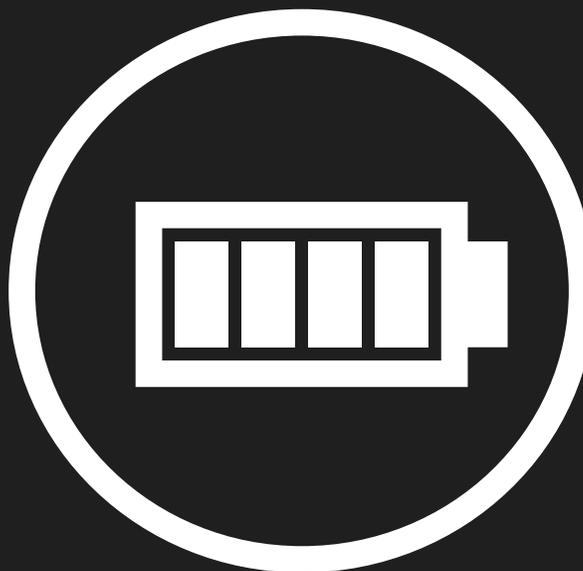
30ms



1ms



5G DEVICE BATTERY LIFE



10 YEARS

1,000,000 DEVICES PER KM²



Enhanced mobile broadband

- Multi-Gbps data rates
- Extreme capacity
- Uniformity
- Deep awareness

Mission-critical services

- Ultra-low latency
- High reliability
- High availability
- Strong security

Massive Internet of Things

- Low cost
- Ultra-low energy
- Deep coverage
- High density



Mobile Devices



Networking



Automotive



Robotics



Health



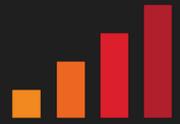
Wearables



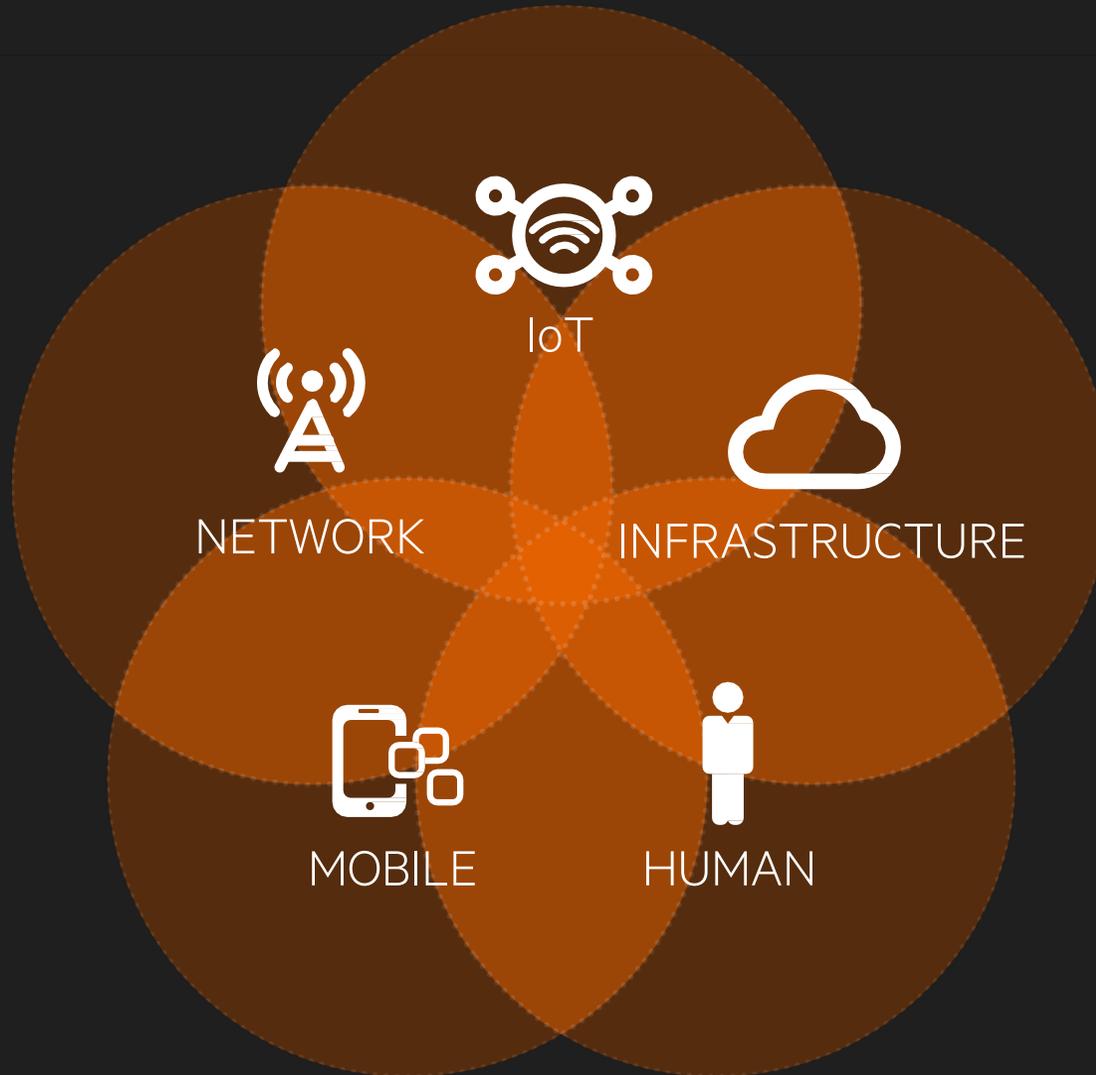
Smart Cities

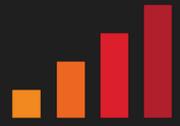


Smart Homes

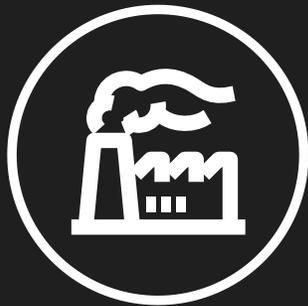


A SYSTEM IS ONLY AS STRONG
AS ITS WEAKEST LINK





BE SMART WHEN CHOOSING YOUR NEW SMART DEVICE



Reliable
vendor



Reliable
seller



Safe
network



**“The important thing is
not to stop questioning”**

Albert Einstein

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