



5G

**TeckNexus**  
DIGITAL SERVICE PROVIDER ECOSYSTEM

TECH TALK

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# PRIVATE 5G NETWORKS AND TESTING

Dec, 2020



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**HOST: HEMA KADIA**

CEO & Founder,  
**TeckNexus**

# Navigating this Tech Talk

## CONTENT COMPASS:

01 Private 5G Top Industry Verticals

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02 3GPP Releases and Features for Private 5G

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03 Private 5G Deployment Modes

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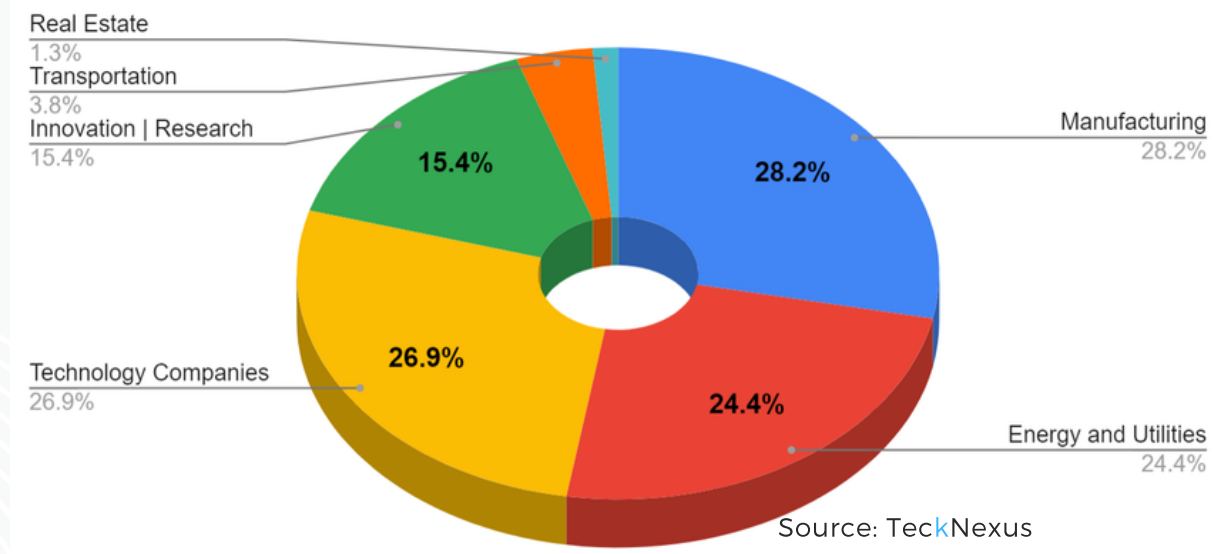
04 Private 5G Testing Considerations

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05 Anritsu 5G Testing Solutions

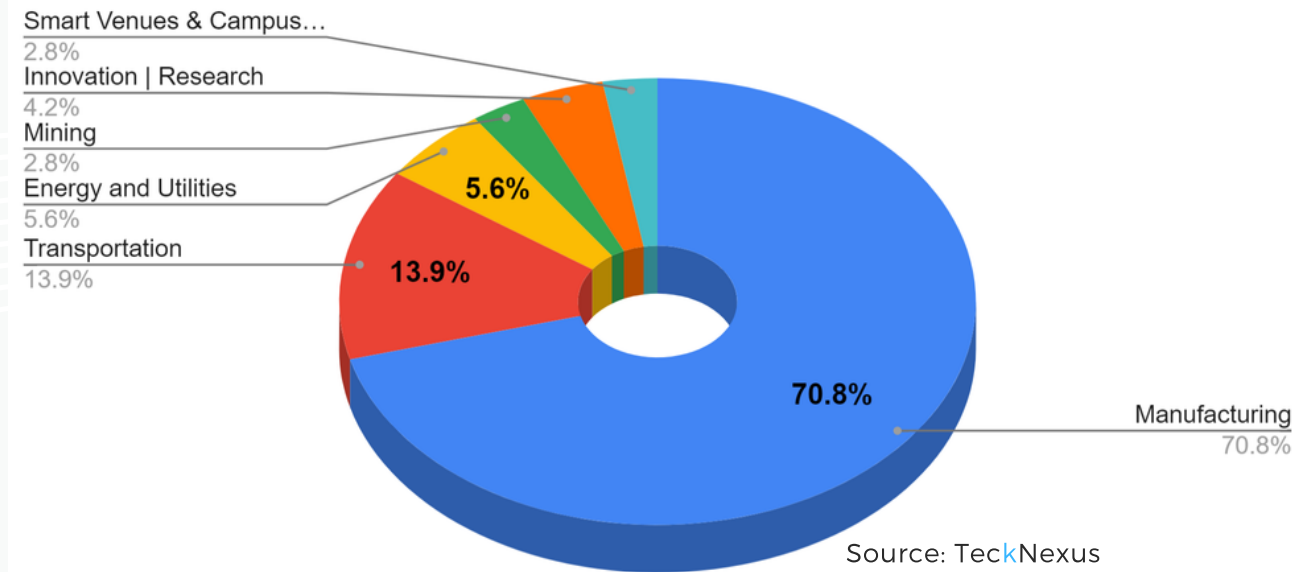
# Top Industry Verticals

FOR PRIVATE  
5G NETWORKS



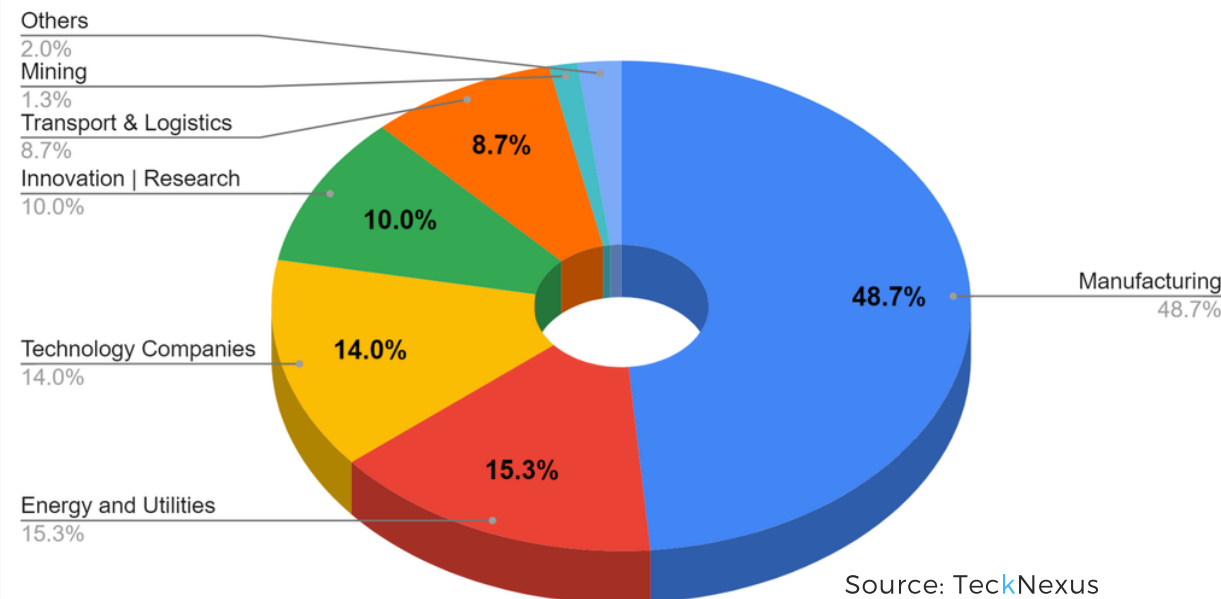
## Manufacturing

Based on analysis of global private 5G enterprise use cases and spectrum winners



## Transportation

Based on analysis of global private 5G enterprise use cases



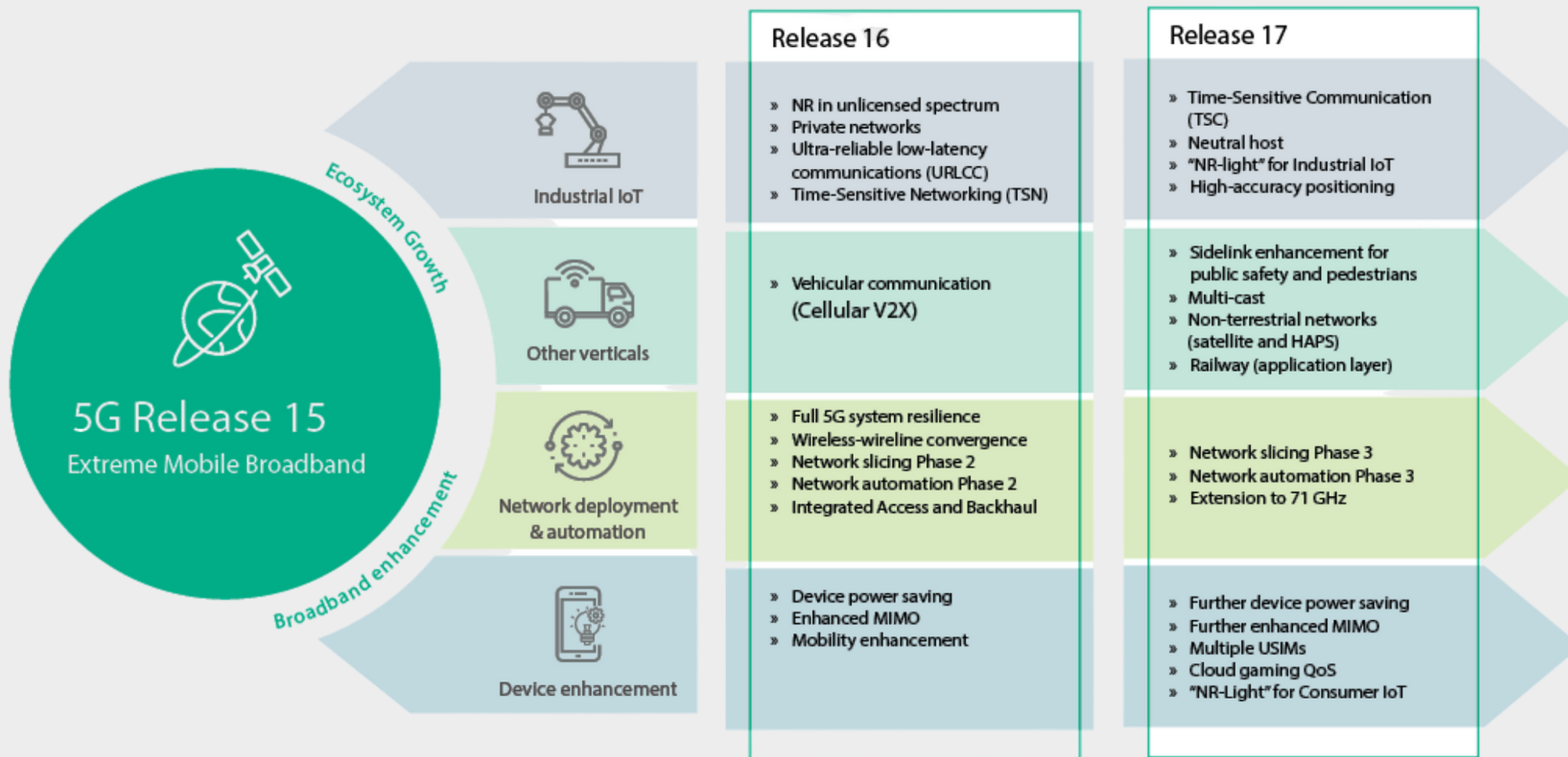
## Energy & Utilities

Based on analysis of global spectrum (mid-band & high-band) winners



# 3GPP Release Features

AND PRIVATE 5G INDUSTRY VERTICALS



# Private 5G Deployment Modes

Public 5G



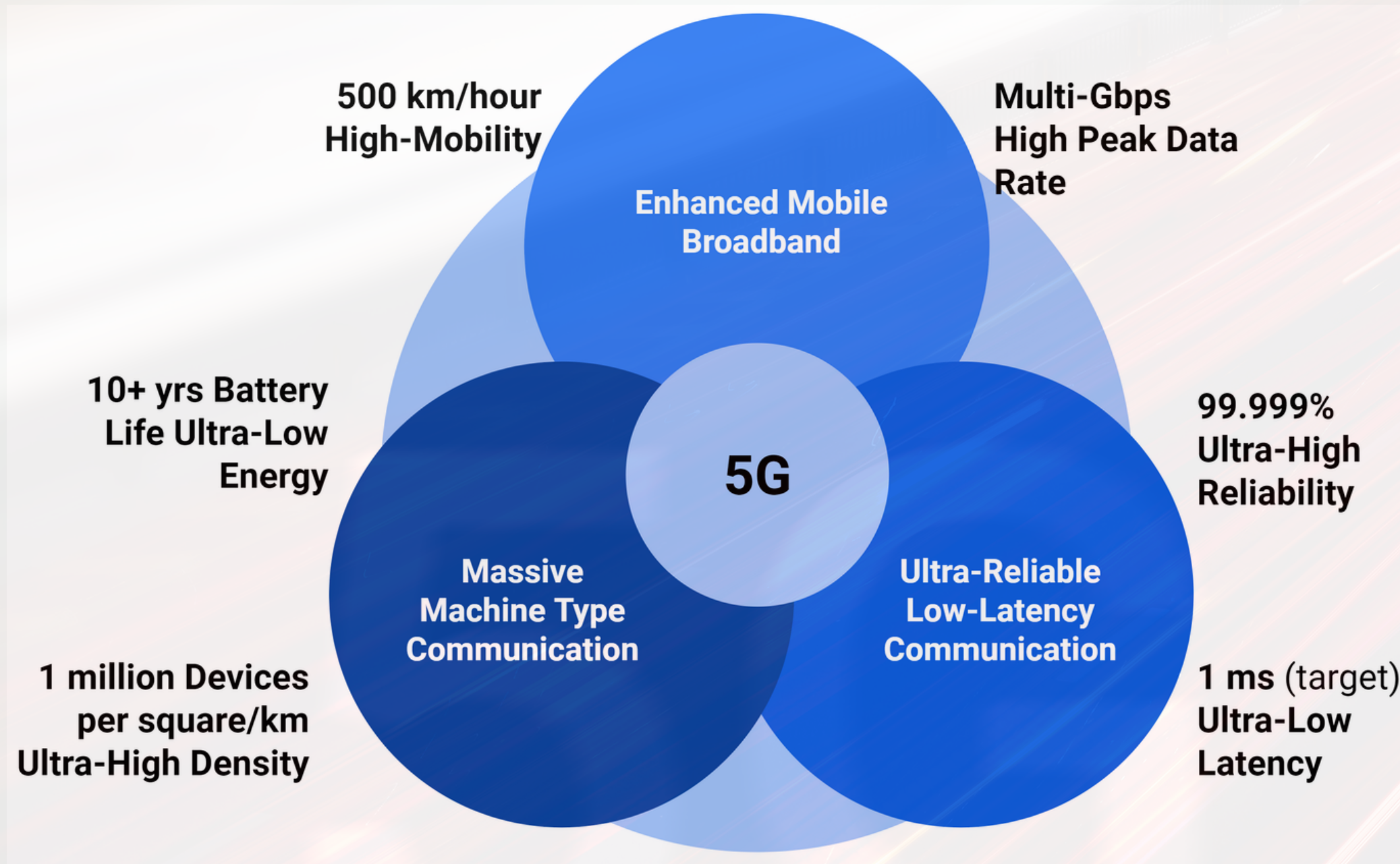
Hybrid 5G



Private 5G



# Public 5G



## Network Slicing

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For service differentiation and meeting SLAs

## New Radio Unlicensed Spectrum (NR-U)

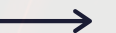
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For improved coverage capacity and mobility

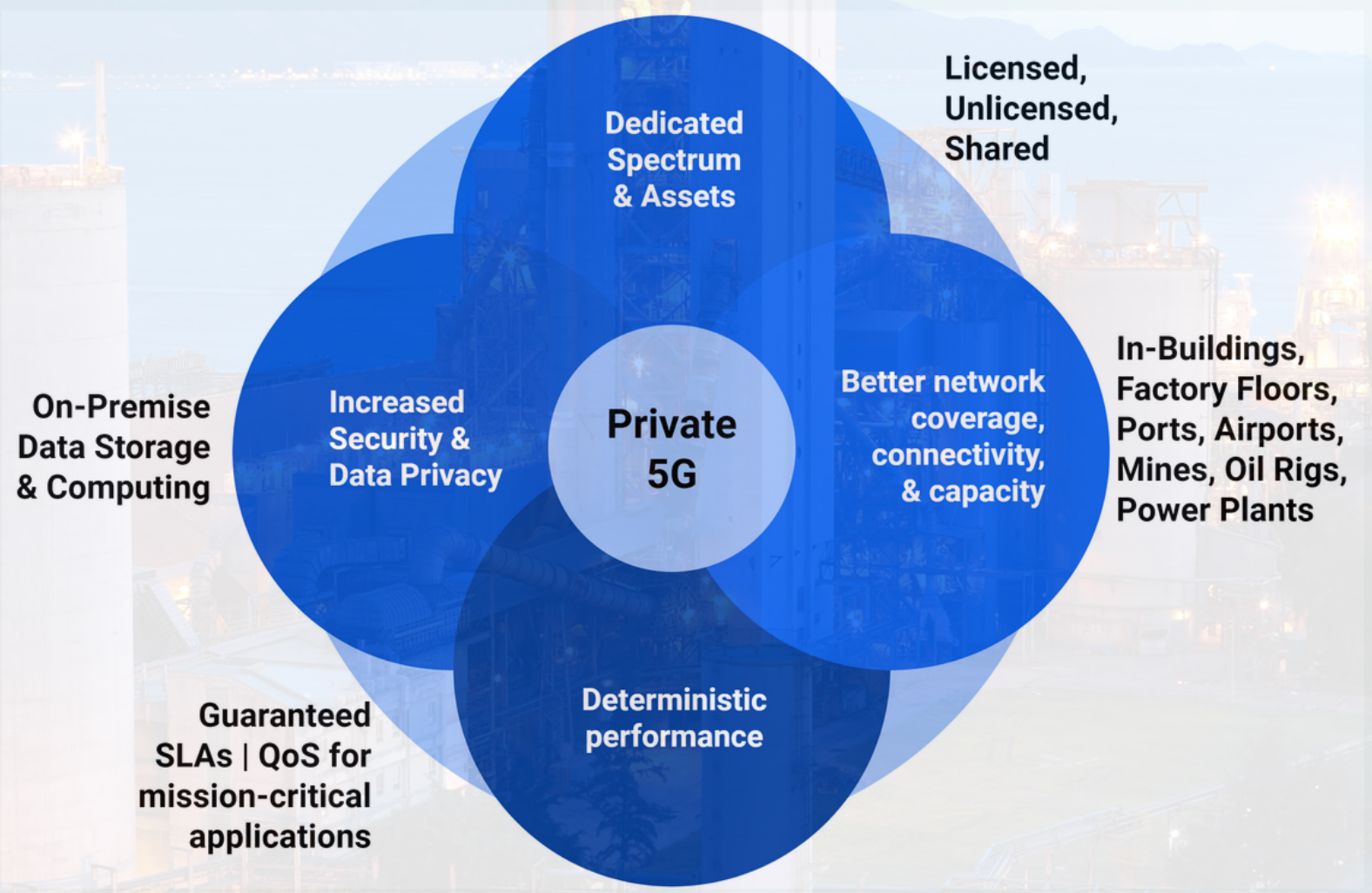
## Multi-Access Edge Computing (MEC)

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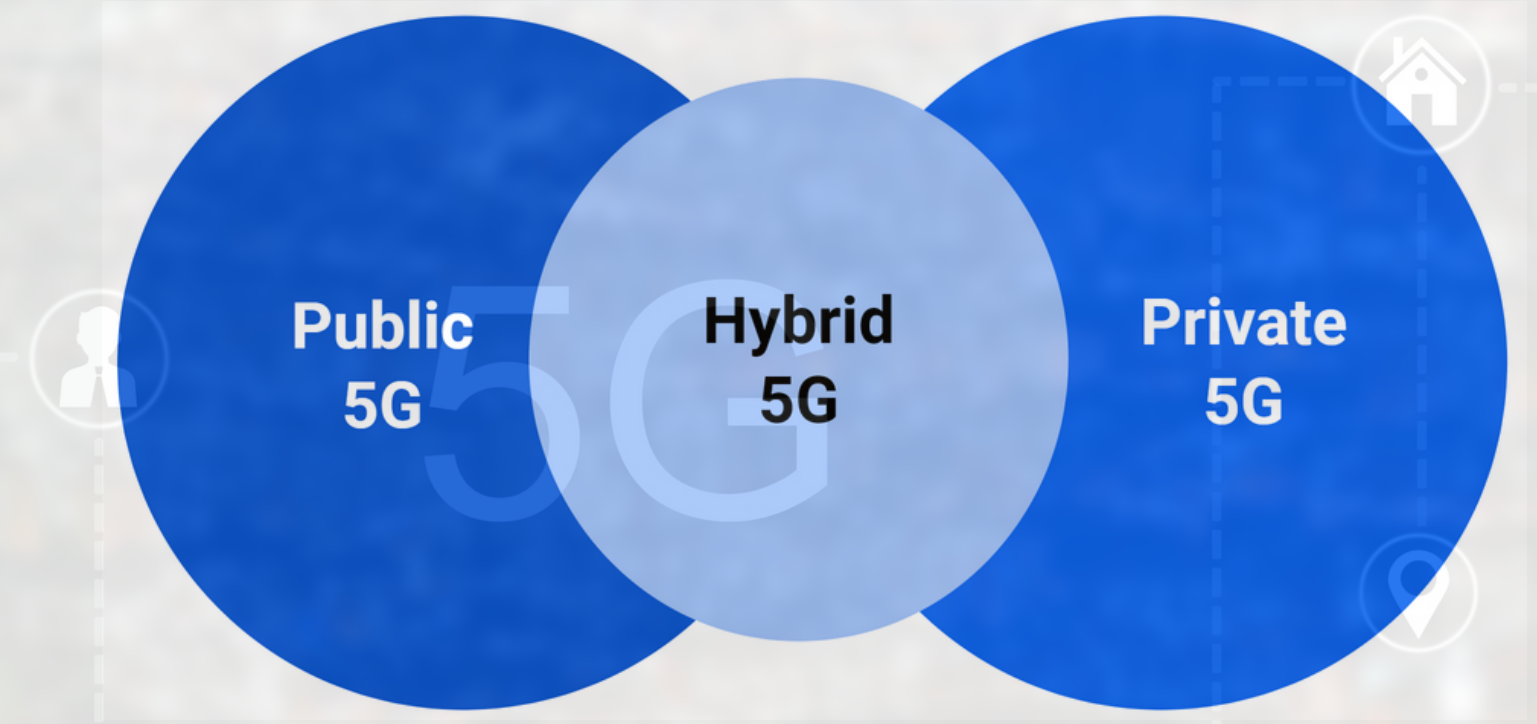
For high bandwidth and low-latency applications



# Private 5G



# Hybrid 5G



Optimize overall investments and costs

Meet SLAs leveraging network slicing capabilities

# Testing Private 5G Networks

## KEY CONSIDERATIONS

<b>Spectrum</b>	Verify support for multiple frequency bands (FR1/FR2)
<b>Interference</b>	Identify and eliminate any interference
<b>Device Complexity</b>	Verify support for sub-6GHz and mmWave
<b>Radio Access</b>	Test multiple radio access technologies, including 5G new radio (NR) and 4G LTE
<b>Deployment Modes</b>	Test different deployment modes, i.e., NSA and SA
<b>Latency</b>	Verify whether the latency requirements specified for eMBB and URLLC use cases are met
<b>OTA Testing</b>	Verify correct 5G transmission for near field and far field Over-the-Air (OTA)
<b>Bandwidth</b>	Test variable bandwidth and subcarrier spacing (SCS)
<b>Power Class</b>	Support testing for different power classes





# 5G Testing Solutions



**Vector Network Analyzer**

**5G NR Device Protocol & RF Test**

**MT8000A**

**RF Conformance**

**ME7873NR**

**Production Test (Sub-6GHz)**

**MT8870A**

**Signal Analyzer**

**MS2850A**

**NSA-NR LTE Anchor**

**Protocol Conformance Carrier Acceptance**

**Production Test (mmWave)**

**MT8000A**

**Spectrum Master**

**MS2760A**

**OTA Chamber/Shield Box**

**ME7834NR**

**ME7834NR**

**5G Testing Anritsu**

**Anritsu**  
envision : ensure

5G

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TECH TALK

# THANK YOU



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