

# 5G. More than a Wireless Upgrade.

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# Expected 5G Performance Gains over Existing 4G LTE

Giant performance leaps over existing mobile networks



100x	Higher User Data Rates
100x	More Connected Devices
1000x	More Data Volumes
10x	Lower Latency

# Three Primary Use Case Categories

Connectivity anywhere and anytime to anyone and anything



## Enhanced Mobile Broadband (eMBB)

Extremely high data rates, low latency, extreme coverage



## Massive Machine Type Communications (mMTC)

Extremely large volumes, ultra dense coverage, small payloads



## Ultra-reliable Machine Type Communications (uMTC)

Extremely high reliability and availability, ultra low latency

# Enabled 5G Mobile Network Use Cases

Prioritized MNO opportunities for new revenue opportunities

## High-Speed Internet Access

Enhanced Mobile Broadband



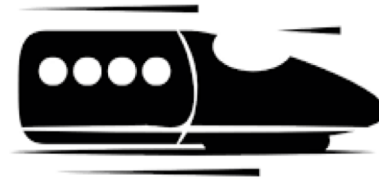
## Self-Driving Cars

Low Bandwidth & Latency



## Improved User Mobility

High-Speed Train



## Broadcast Communications

Broadcast Services



Network Slicing is the SECRET SAUCE of 5G mobile networks

## Real-Time Communications

Tactile Internet (ex. AR/VR)



## Critical Lifeline Comms

1<sup>st</sup> Responder Services



## Ultra-Reliable Comms

eHealth Services



## Massive IoT

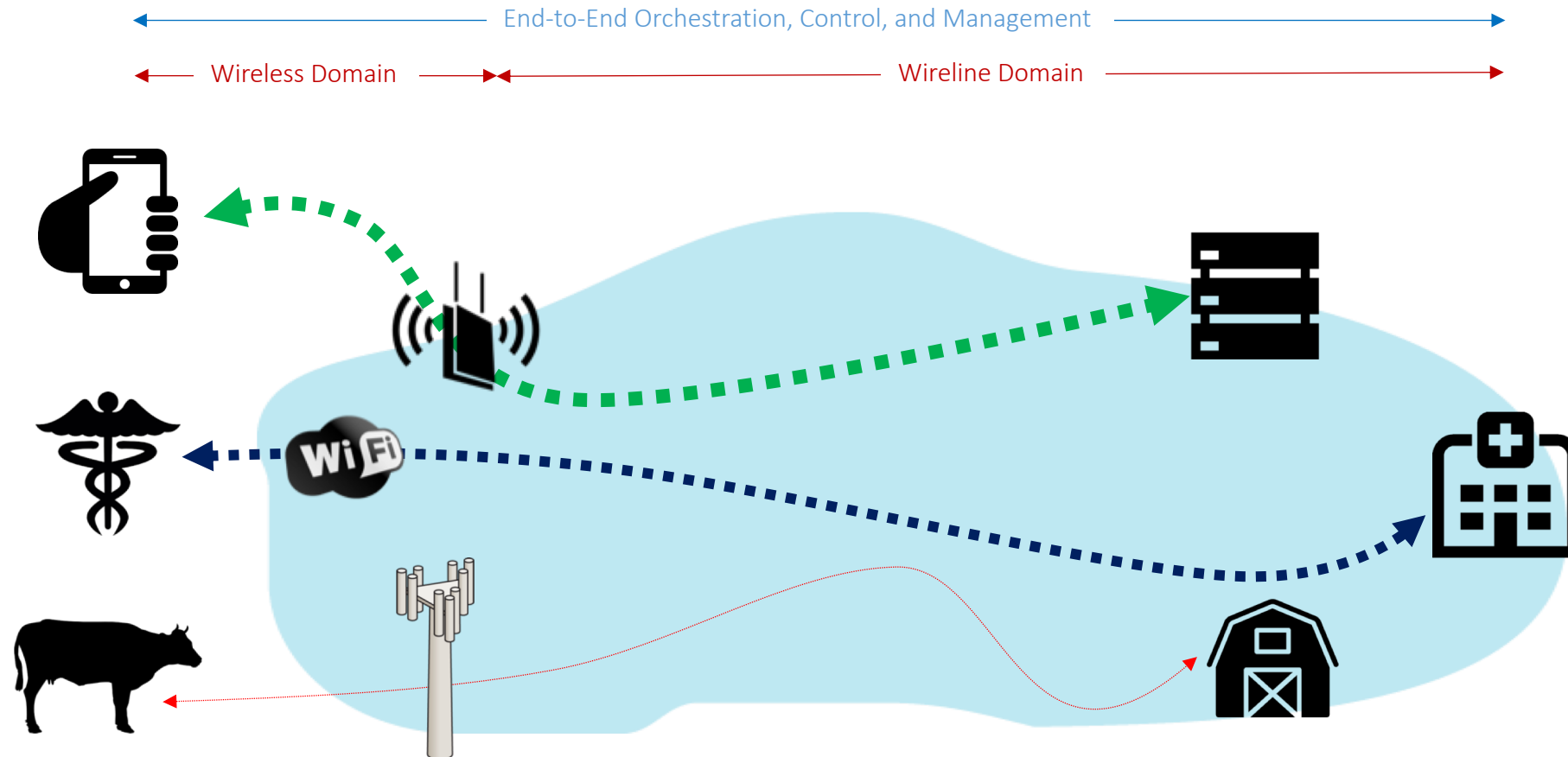
Sensor Networks



# Network Slicing Ensures Differentiated 5G Use Cases

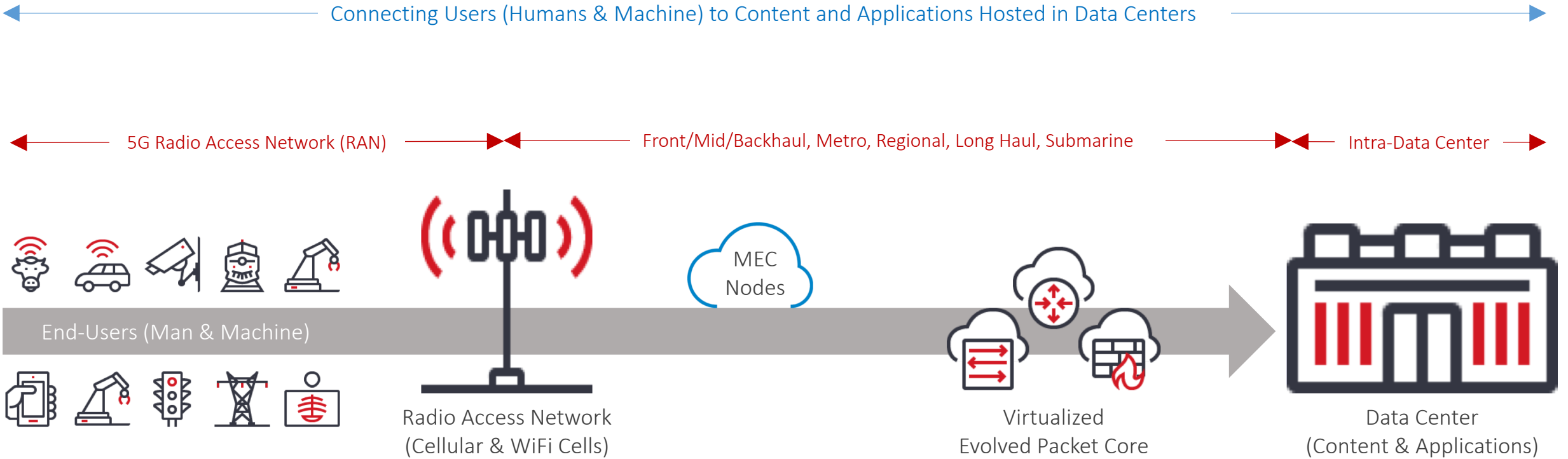
Evolving from “best effort” 4G services to SLA-backed 5G services

**Network Slicing** allows MNOs to *carve out* virtual networks over a common physical infrastructure (wireless and wireline), where each 5G Use Case receives guaranteed end-to-end network performance in terms of capacity, speed, latency, and availability, which is a major leap forward when compared to existing “best effort” 4G networks



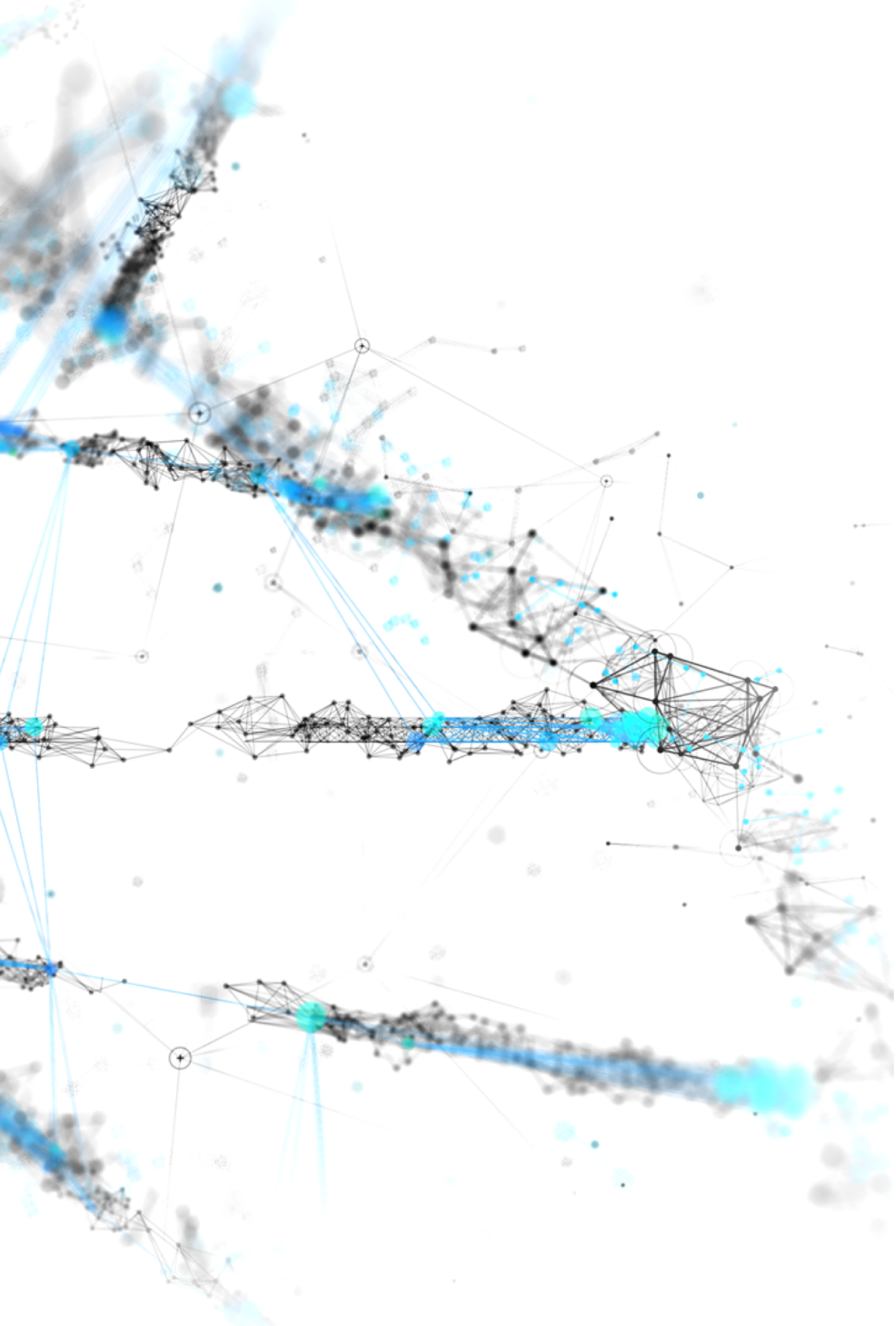
# Impact of 5G on Wireline Networks

Connecting users, man and machine, to data, content, and applications



For every new generation of mobile networks, we were asking similar questions as we are today about 5G

When more performance is delivered, we find new ways to use it



# Mahalo!