Qualcomm

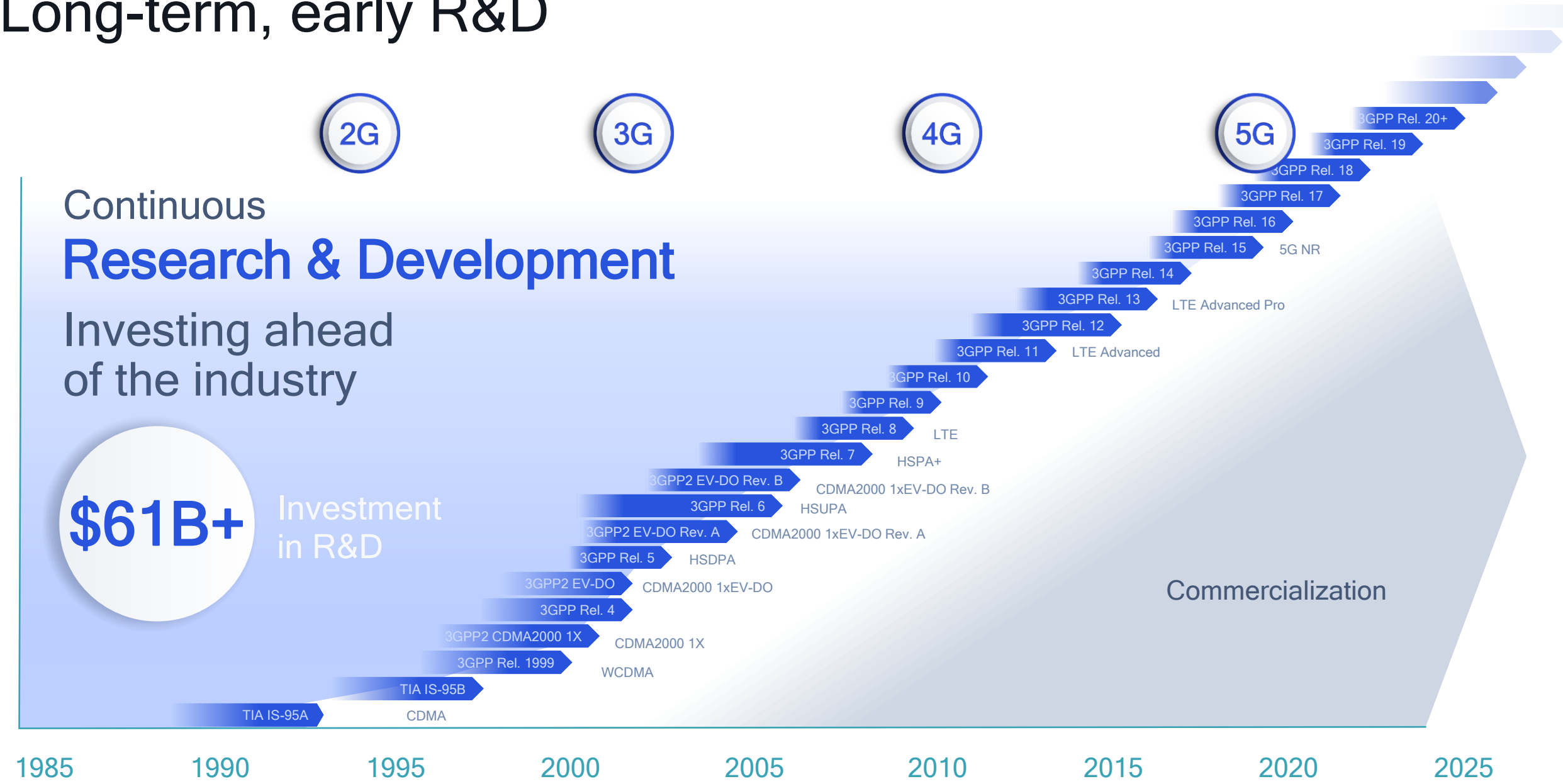
Qualcomm’s 5G view

Qualcomm International Inc.

Héctor Marín

5G

Long-term, early R&D



Qualcomm R&D data as of Q1 FY20

5G will address the insatiable demand for mobile broadband

Over **5x** growth in mobile data traffic from 2019 to 2025

~164B Gigabytes

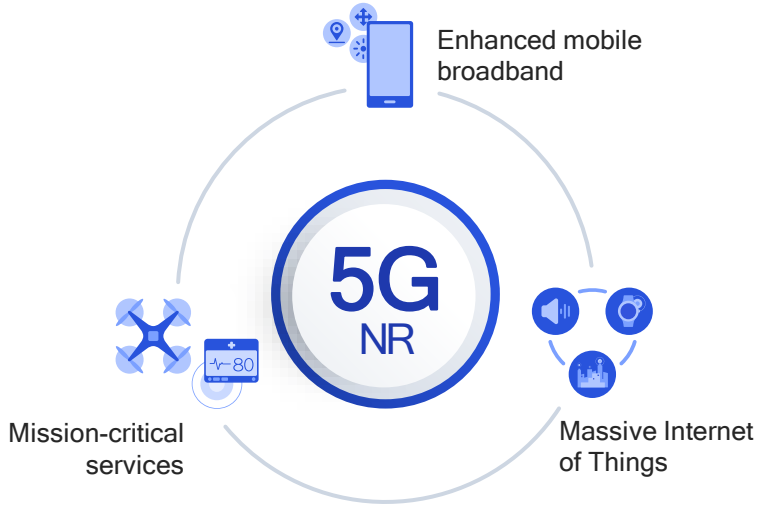
Monthly global mobile data traffic in 2025

In 2025, **~75%** of mobile data traffic from multi-media creation & consumption

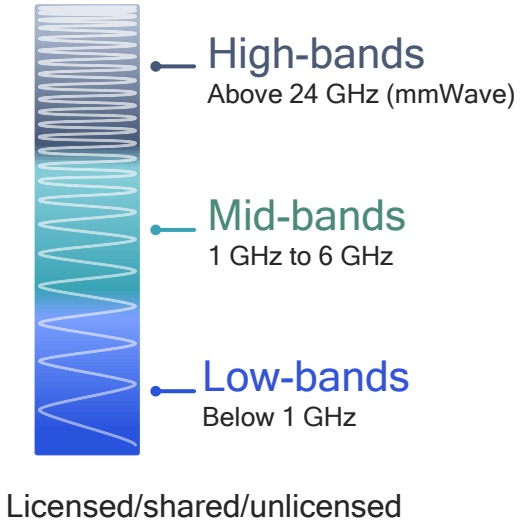
By 2025, **45%** of mobile data traffic will be carried by 5G networks – 1.3x more than 4G/3G/2G traffic today

Source: Ericsson Mobility Report June 2020

5G NR is a unified, more capable air interface



Diverse services



Diverse spectrum

Diverse deployments

10x Decrease in end-to-end latency

10x Experienced throughput

3x Spectrum efficiency

100x Traffic capacity

100x Network efficiency

10x Connection density

Based on ITU vision for IMT-2020 compared to IMT-advanced; URLLC: Ultra Reliable Low Latency Communications; IAB: Integrated Access & Backhaul

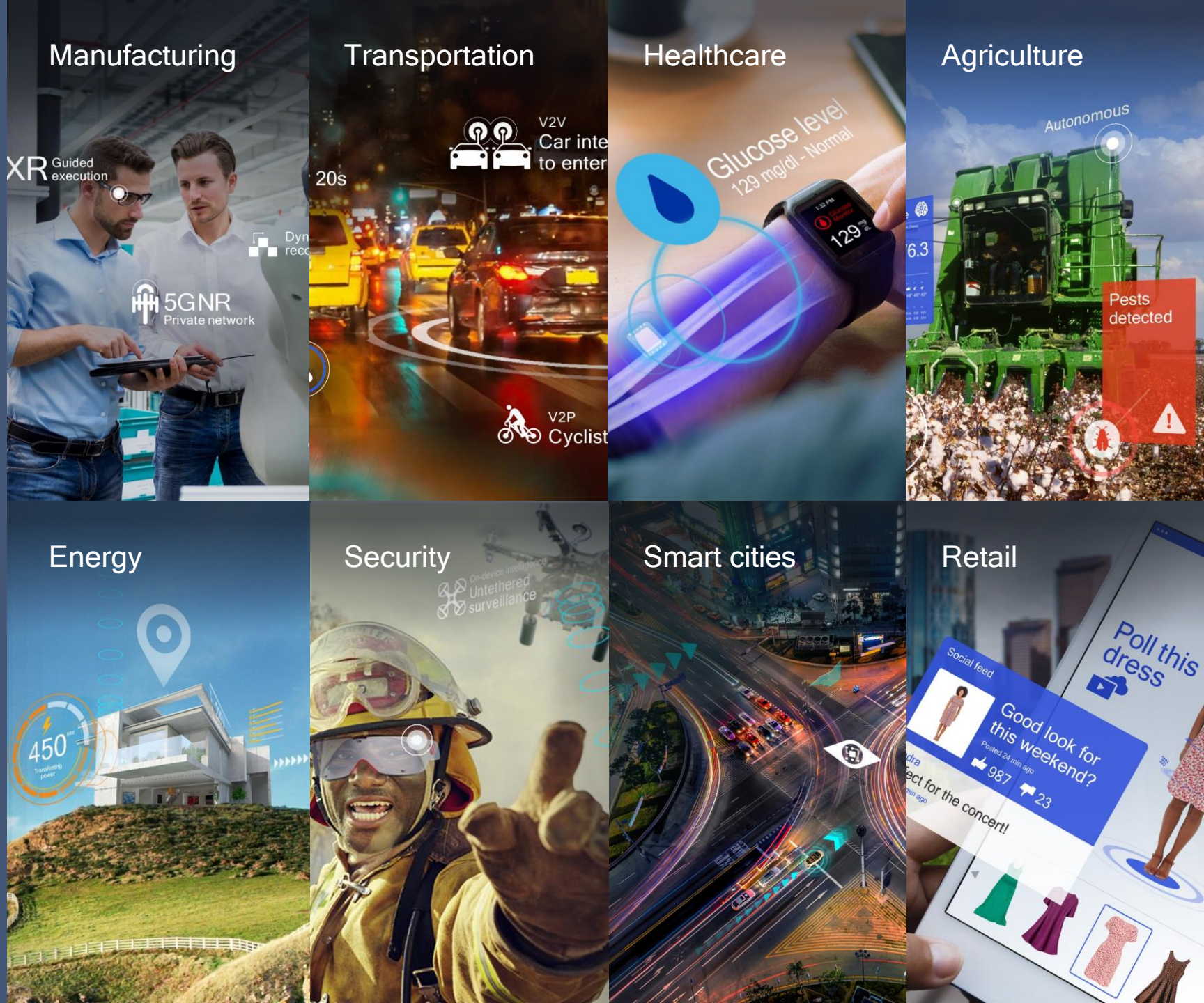
5G

Expanding the mobile ecosystem to new industries

Up to

$13.2T

economic impact of 5G-enabled goods and services in 2035*



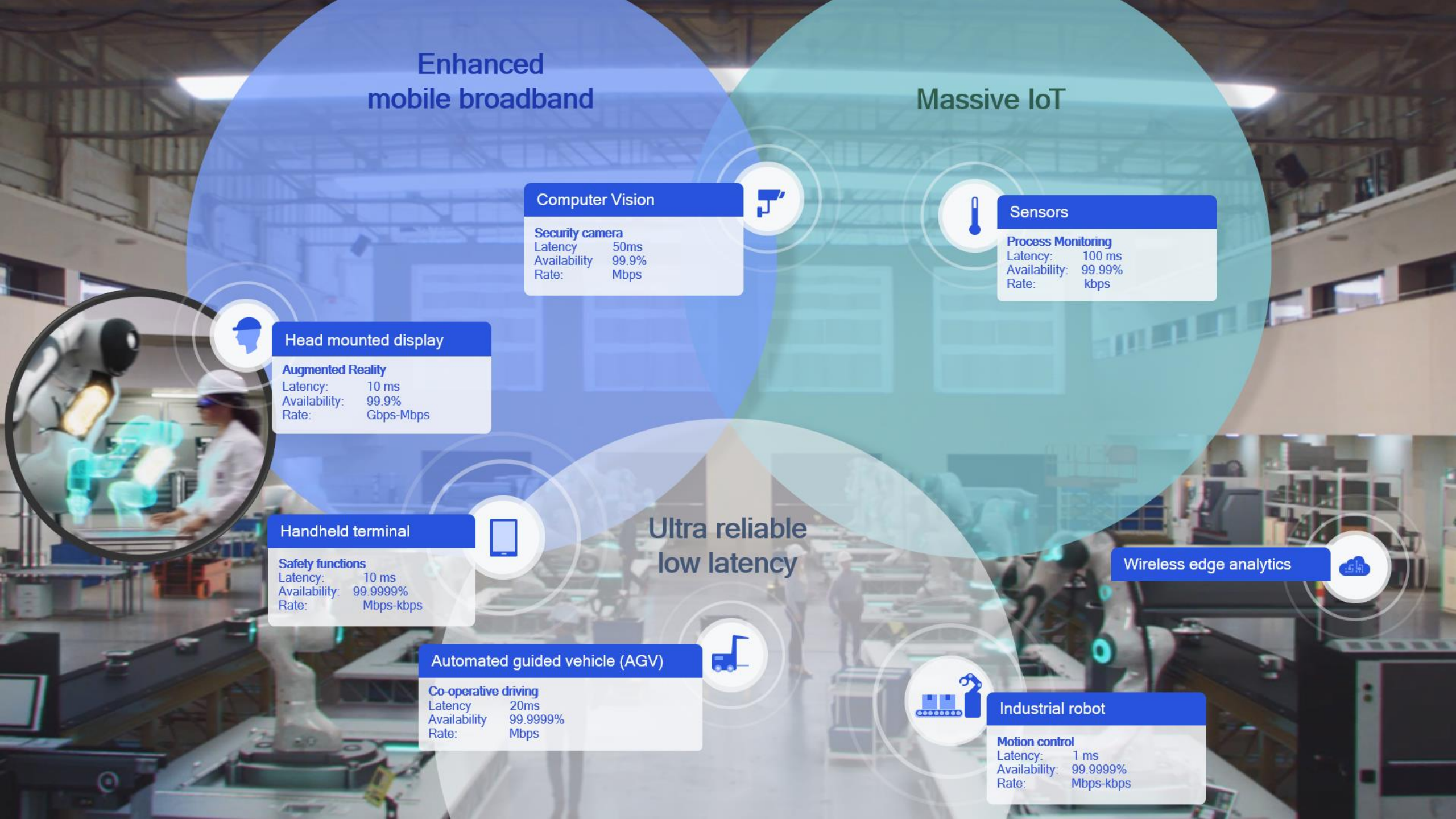
* The 5G Economy, an independent study from IHS Markit, commissioned by Qualcomm, October 2019

>$5 Trillion[1]

Global economic output in 2035 enabled by 5G in the following five categories

Manufacturing	Transport	Construction	Utilities	Mining
$3,364B	$659B	$742B	$273B	$249B

1. "The 5G economy: How 5G technology will contribute to the global economy" by IHS Economics / IHS Technology


Enhanced mobile broadband
Massive IoT
Computer Vision
Security camera
Latency 50ms
Availability 99.9%
Rate: Mbps
Sensors
Process Monitoring
Latency: 100 ms
Availability: 99.99%
Rate: kbps
Head mounted display
Augmented Reality
Latency: 10 ms
Availability: 99.9%
Rate: Gbps-Mbps
Handheld terminal
Safety functions
Latency: 10 ms
Availability: 99.9999%
Rate: Mbps-kbps
Ultra reliable low latency
Wireless edge analytics
Automated guided vehicle (AGV)
Co-operative driving
Latency 20ms
Availability 99.9999%
Rate: Mbps
Industrial robot
Motion control
Latency: 1 ms
Availability: 99.9999%
Rate: Mbps-kbps

Connecting classrooms and remote learning

Access to high-quality teaching and content

Always connected devices (laptop, tablets)

Personalized learning

More personalized learning

Student wireless backpack

Immersive XR learning experience

Learning anywhere, at school, home and more

Digitized classrooms and libraries

“5G WILL BE AS REVOLUTIONARY AS ELECTRICITY”

“WITH 5G WE ARE LIVING IN A GOLDEN YEAR OF TELECOMMUNICATION”

Qualcomm

Thank you!

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