

June 2018



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Qualcomm



# 5G

## The Fabric for Society



# A platform for the future



Multi-gigabit speed



Scalable to extreme simplicity

Ultra-low latency



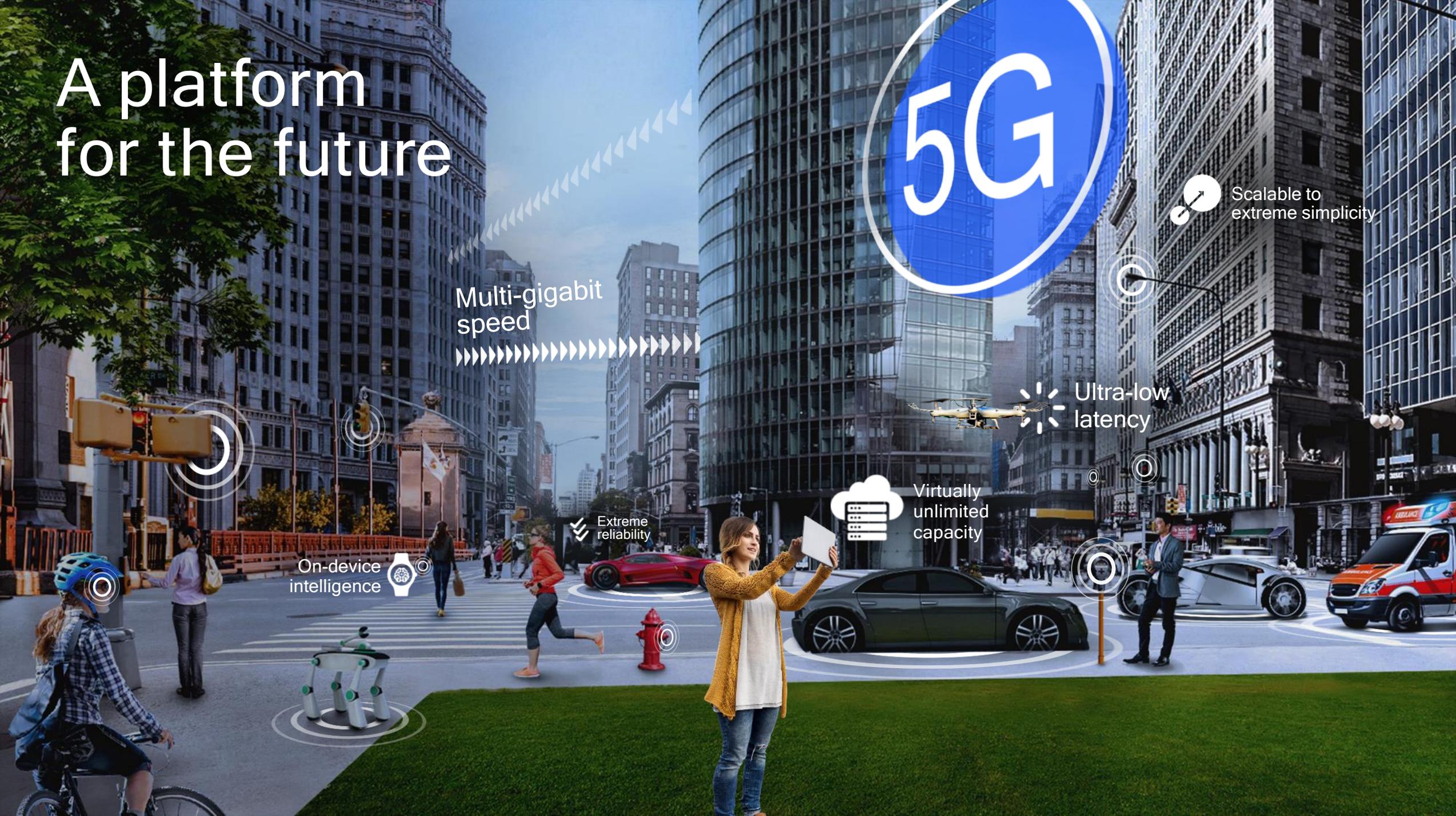
Virtually unlimited capacity



Extreme reliability



On-device intelligence



# 5G will be a commercial reality in 2019

 Connectivity and intelligence everywhere



360° video social sharing

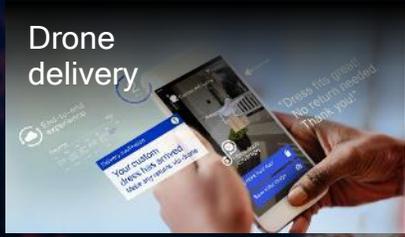
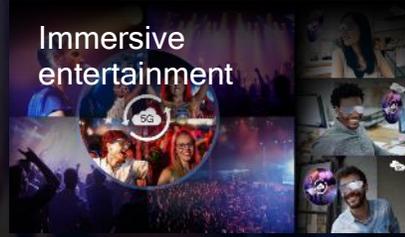
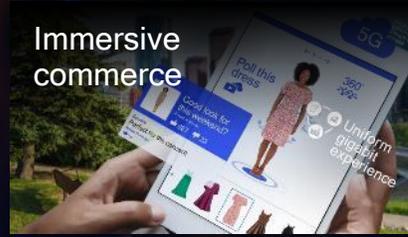


Stefan  
OMG. It's like I'm right there

 Immediate and rich social interactions



# 5G – touching all aspects of your life, even a dress



# Fueling precision agriculture – even the cotton found in a simple dress uses 5G

## Massive sensor network

On-device intelligence  
Untethered surveillance

Ubiquitous always-available connectivity

Extreme mobile broadband

### Edge intelligence

Days to harvest: 5

Total yield prediction (Tons): 2,476.3

Cotton yield: [Bar chart]

Forecast: 64° 61° 57° 52° 49° 46° 43°

Rainfall: [Bar chart]

Sunrise/sunset: [Table]

Autonomous

### Pests detected



# Enabling reliable wireless IoT connectivity at transport hubs



Local management for low latency and protection of sensitive data

Real-time inventory

- Lumber
- Manufacturing
- Produce
- Hardware
- Automotive
- Technology
- Earth/Soil
- Retail

AR-guided execution

Reliable robotic control

UHD surveillance

Reliable, autonomous AGVs

On-premise compute and storage

Updating

### Real-time asset tracking

At port (Days): 3

Location: [Map]

Spools shipped: [Bar chart]

Capacity: [Bar chart]

Camera: [Image]

On-device intelligence

5G NR Private network

Seamless interworking with public network

# Essential to the future autonomous vehicles

Non-line-of-sight sensing

Intention sharing

C-V2X Autonomous

Accident 5 cars ahead



## Smart logistics

"Relay driver found"

### Fabric climate

Load (lbs)	18.3K
Capacity (ft <sup>3</sup> )	1,966.1
Moisture (% RH)	44.2
Temperature (°F)	78.4



Sensors

# Communicating directly with people and things



V2V  
Car intends to enter lane

V2I  
Green for 20s



V2N  
Rerouting  
Construction 1.3 mi



V2V Non-line of sight  
Car approaching from blind spot



V2P  
Cyclist approaching

# For closer collaborations at the work place



# For closer collaborations at the work place

**Real-time insights**

Days to market: **37**

Production estimate: **2.3M**

Distribution (K): [Bar chart]

Orders (K): [Bar chart]

Color swatches: [Color palette]

Sist: 33-34½  
Wst: 24½-26½  
Hip: 33½-35½

360°

Bathilde  
São Paulo

Six degrees of freedom  
**XR**

Aylin  
Istanbul

Edge processing for low latency and offload

Complementing on-device processing and intelligence

# Bringing immersive, virtual shopping experiences anywhere

Instant cloud access  
**5G**

Social feed



**Good look for this weekend?**

Posted 24 min ago

987

23

Sandra

Perfect for the concert!

Posted 18 min ago

110

Poll this dress



360°

Bust 33-34½

Waist 24½-26½

Hip 33½-35½

360°

360°

Always connected

Uniform gigabit experience



# Driving the next industrial revolution with flexible manufacturing

 **XR** Guided execution

 Ultra reliable, low-latency wireless connection

 Surveillance

 Dynamic factory reconfigurability

 Real-time supply chain visibility

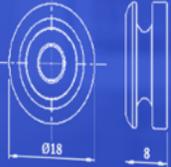
 **5G NR**  
Private network

 Predictive maintenance



**Demand fulfillment** 

Quantity: 3 Button # 513217

Procedure:  Final: 

# With real-time asset tracking and efficient delivery

End-to-end experience

Su	Mo	Tu	We	Th	Fr	Sa
Viewed on-line	Ordered in store at Latta's	Tailored and shipped	En route ground	Delivered via drone	Concert 8pm	
8:31pm	8:42pm	11:21pm	ETA: 1h	4:39pm		

2 Days

**Delivery notification**  
**Your custom dress has arrived**  
Make any returns via drone

5G  
4G

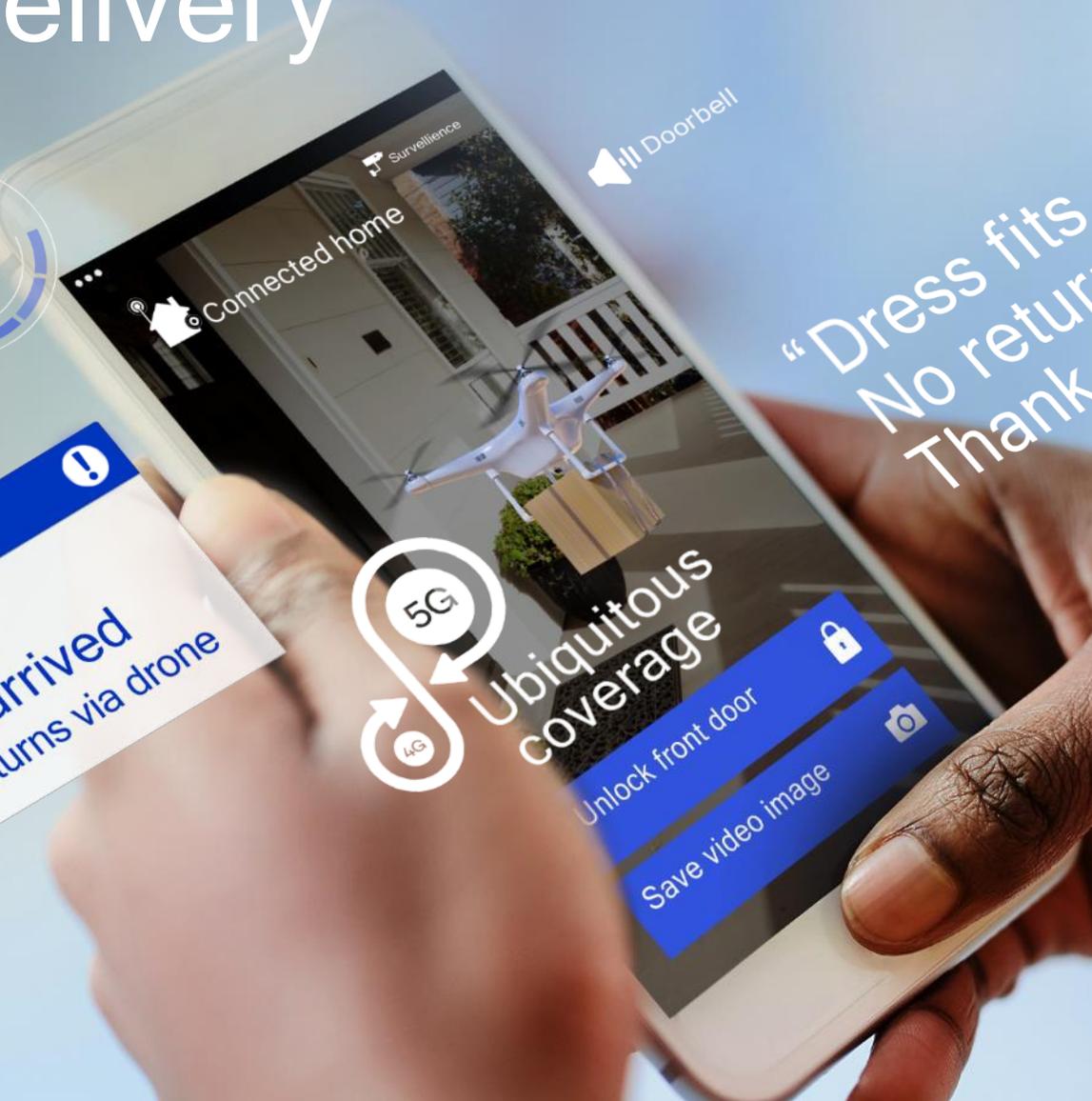
Ubiquitous coverage

Unlock front door

Save video image

Doorbell

"Dress fits great!  
No return needed.  
Thank you!"



# To get you to the wireless 5G era as you'll know it



Connectivity  
and intelligence  
everywhere



Kimiko  
Love that  
dress ;)



360° video  
social sharing



Stefan  
OMG. It's like  
I'm right there



Immediate  
and rich social  
interactions

# Bringing you the next-generation immersive experiences





# Powering our future digital economy

# \$12.3 Trillion

In goods and services by 2035\*

\* The 5G Economy, an independent study from IHS Markit, Penn Schoen Berland and Berkeley Research Group, commissioned by Qualcomm

# A unifying connectivity fabric

Like electricity, you will just expect it everywhere





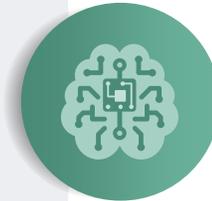
# The wireless edge realizes the full potential of 5G

Inventing technology at scale to realize the promise of AI on trillions of connected devices



## Perception

Hear, see, monitor, and observe



## Reasoning

Learn, infer context, and anticipate

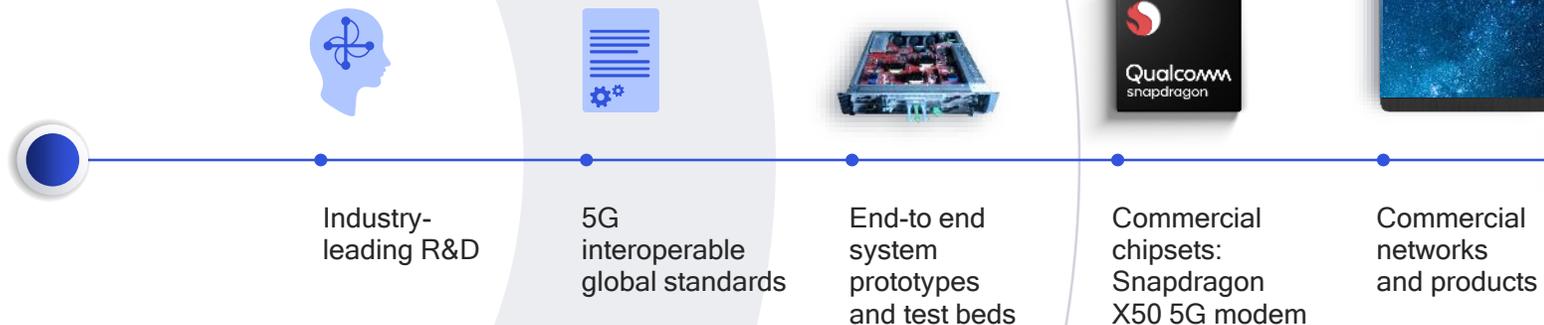


## Action

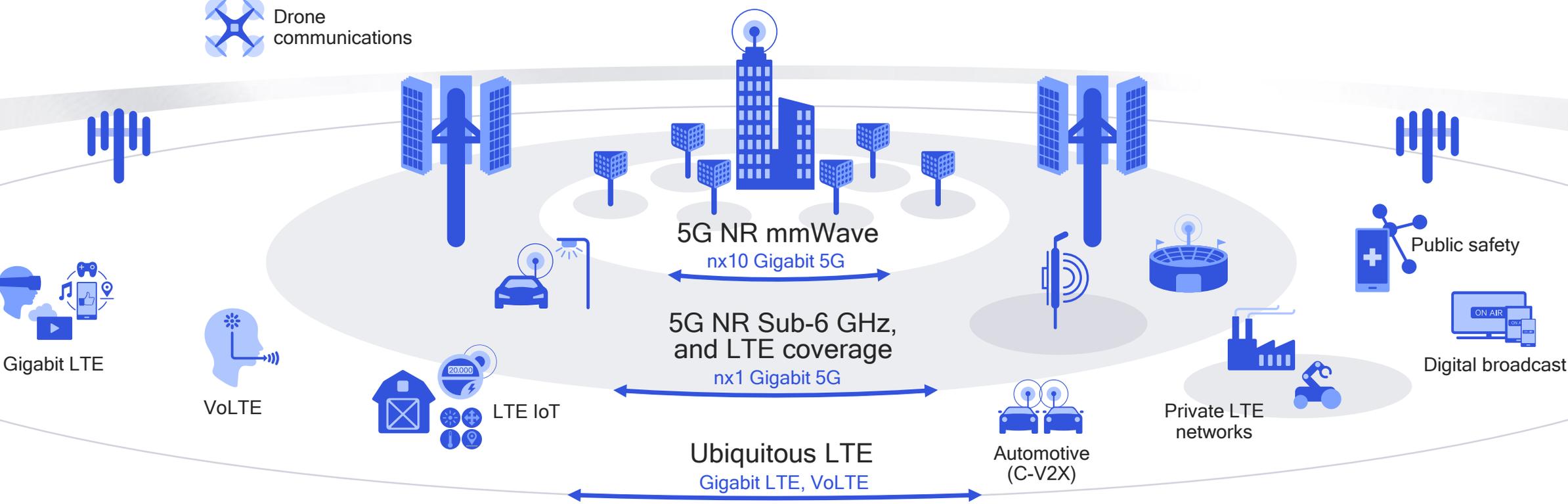
Act intuitively, interact naturally, and protect privacy



# The faster path to 5G by 2019



# LTE Advanced Pro accelerates the 5G mobile expansion







# Thank you

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