

# Wi-Fi in the 5G Era

Gabriel Desjardins  
Director, Product Marketing  
Wireless Communications  
and Connectivity Division



October 1, 2019

# AGENDA



Wi-Fi 6 Innovation



5G Services



Wi-Fi Accelerates 5G Services



Future of Wi-Fi



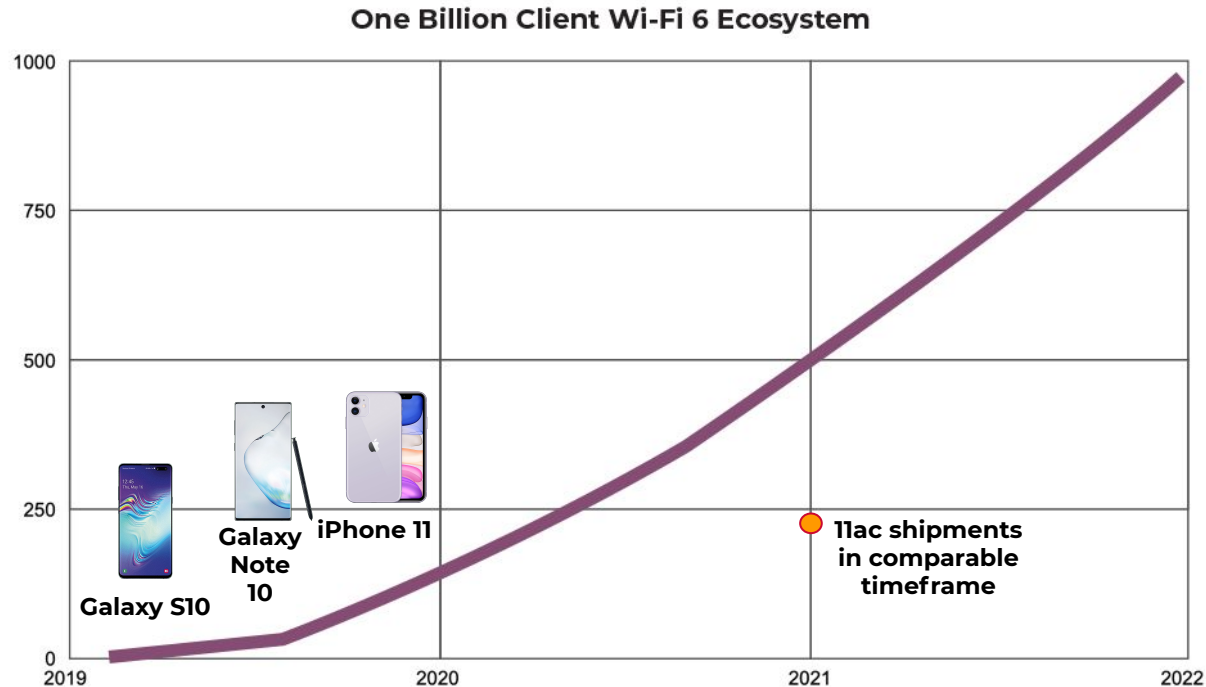
# Wi-Fi 6 Ecosystem



# Zero to One...Billion

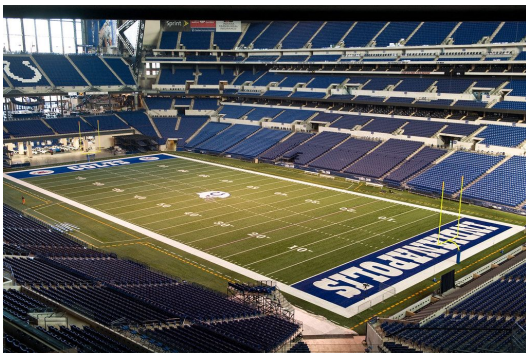
## Rapid Launch in 2019

- Samsung flagships
- iPhone 11
- Wider proliferation in 2020 and beyond
- Faster growth than 11ac
- Infrastructure launches in all markets



# Wi-Fi 6 Infrastructure

- Strong acceptance across access markets
  - Launches: Retail (18Q4), Enterprise (19Q1), Service Provider (19Q3) with dozens more to come
- Approaching technology maturity
- Initial public venue launches underway



Lucas Oil Stadium, Indianapolis Colts



Aruba 510 Series



Cisco Catalyst 9115



Extreme AP510



SFR Box 8

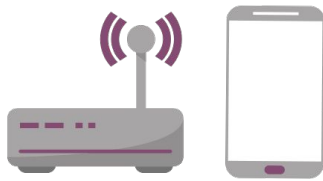


ASUS ROG Rapture  
GT-AX11000



NETGEAR - Nighthawk  
AX6000

# Broadcom Wi-Fi Highlights



**100+ Million Wi-Fi 6 chips** already shipped  
phones and router around the world

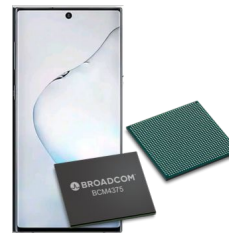


Broadcom has 3 best-in-class chips  
included in the **Wi-Fi CERTIFIED 6** testbed

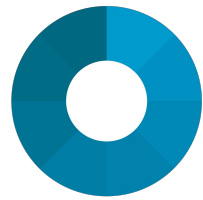


GS10 GS10+ GS10E GS10 5G GN10 GN10+ GN10 5G & Galaxy

As of September 16, Broadcom's BCM4375 chip enables  
**the world's leading smartphones by Samsung**



Introducing the world's first  
**WI-FI CERTIFIED 6 PHONE**  
—the Samsung GN10—  
powered by Broadcom's  
BCM4375



5G Services

# The 5G Services Vision



## High Data Rates

Better User  
Experience



## IoT Support

Home and Industrial  
Automation



## Low-Latency

Real time Applications



## Fixed Wireless Access

Last Mile Connectivity



## High-Mobility

V2X



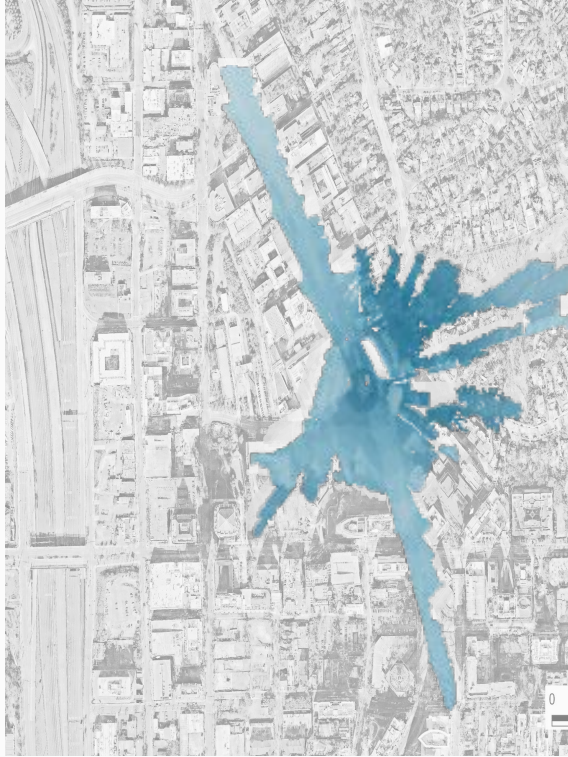
## Spectrum and Energy Efficiency

Lower Costs and High Capacity



# mmWave 5G needs expensive densification

600 MHz



2.4 GHz



24 GHz





## By the Numbers

- McKinsey: 5G network needs **3X more** investment than 4G
- T-Mobile: **\$1.5 Trillion** in Capex for 5G mmWave network in the US
- Google: **45%** of the US population will not get Gigabit mmWave 5G



# Wi-Fi Accelerates 5G Services





# Wi-Fi is the Answer

Wi-Fi 6 meets  
IMT-2020 criteria  
for **indoor and  
dense urban**  
use cases



# Wi-Fi 5G Services Available Today



## High Data Rates

Better User  
Experience



## IoT Support

Home and Industrial  
Automation



## Low-Latency

Real time Applications



## Fixed Wireless Access

Last Mile Connectivity



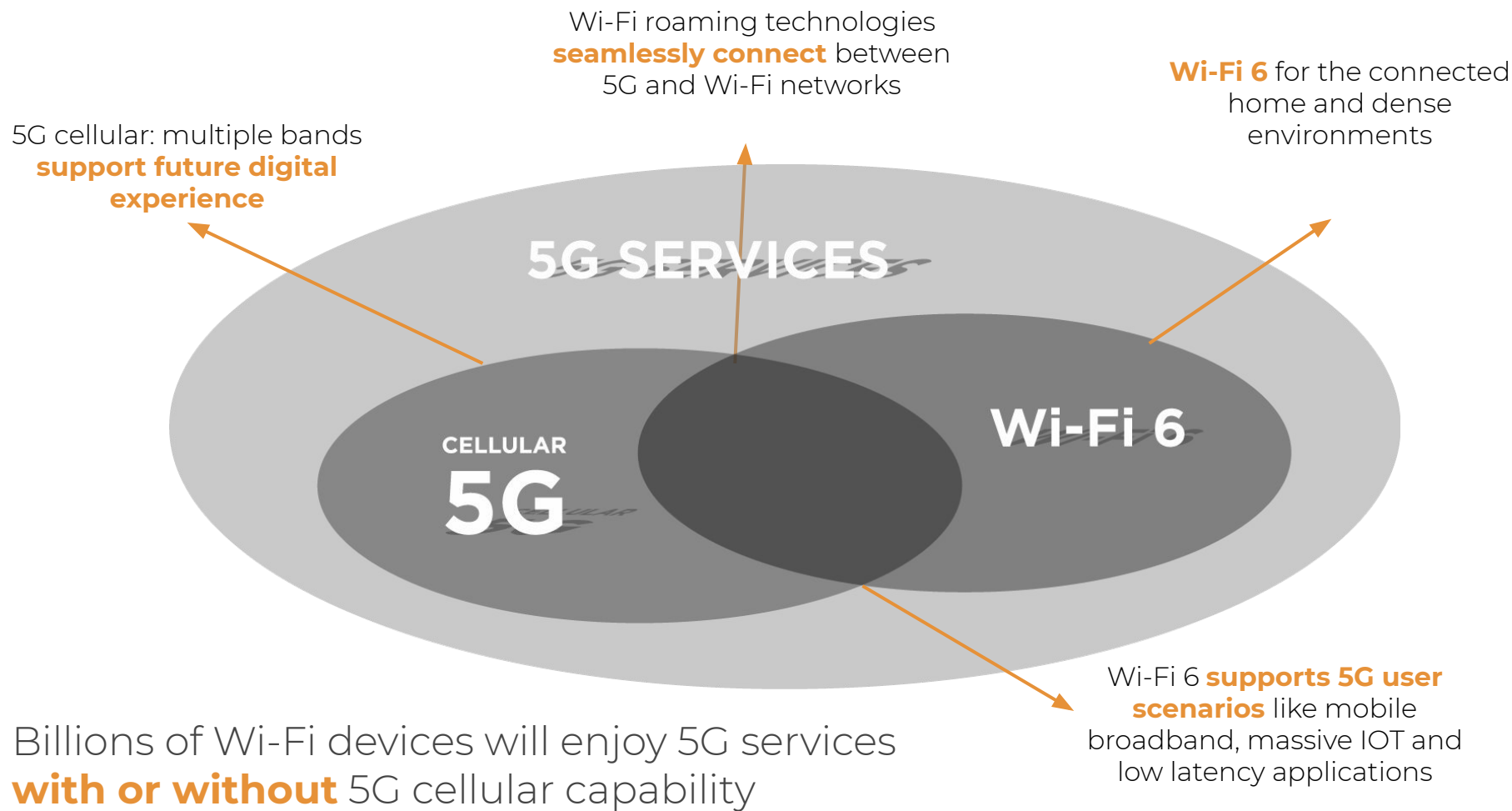
## High-Mobility

V2X



## Spectrum and Energy Efficiency

Lower Costs and High Capacity



## **SUMMARY:** Wi-Fi 6 offers stability and seamlessness for 5G services

- 1 Has the **reliable performance** required for 5G services
- 2 Rapidly approaching a **billion unit** ecosystem
- 3 Seamlessly “covers” 5G hotspots with secure roaming
- 4 Substantially **reduces cost** of 5G deployment
- 5 Powers most **5G class** applications

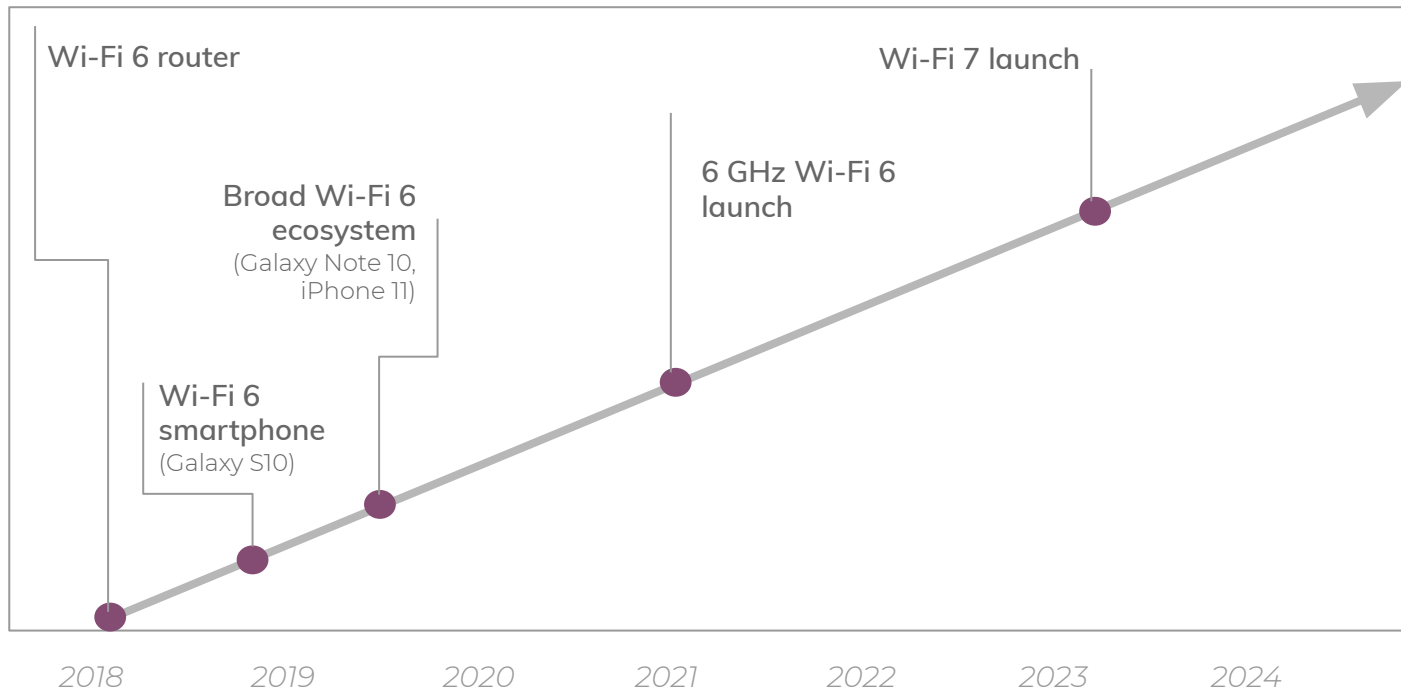


# Future of Wi-Fi





# Wi-Fi Roadmap



**2018** - Wi-Fi 6 router

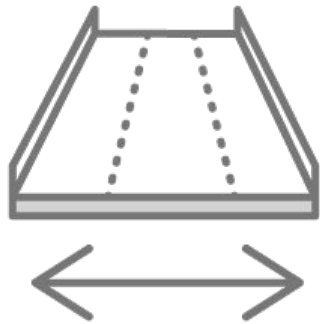
**2019** - Wi-Fi 6 smartphone (Galaxy S10)

**2019** - Wi-Fi 6 ecosystem (Galaxy Note 10, iPhone 11)

**2021** - 6 GHz Wi-Fi 6 launch

**2023** - Wi-Fi 7 launch

# Wi-Fi 6 in 6 GHz: 5G Services from the Ground Up



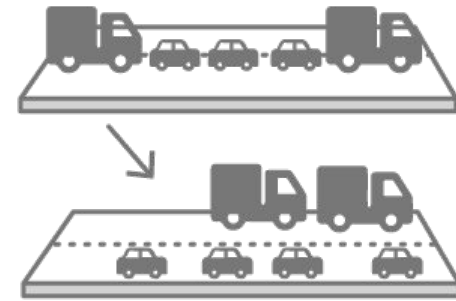
## Wider Bandwidth

160 MHz channels  
2x bandwidth  
2x throughput



## More Spectrum

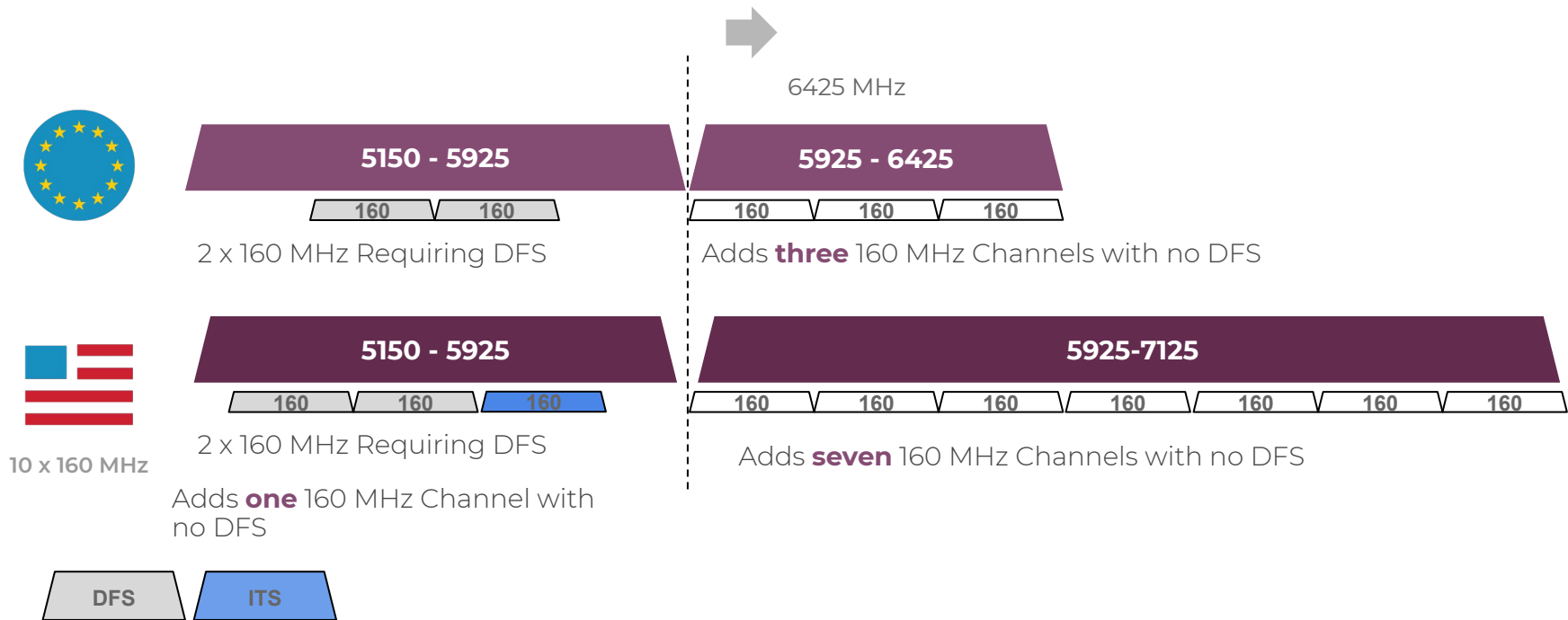
Up to 1200 MHz of  
additional spectrum  
for Wi-Fi in 6 GHz  
band



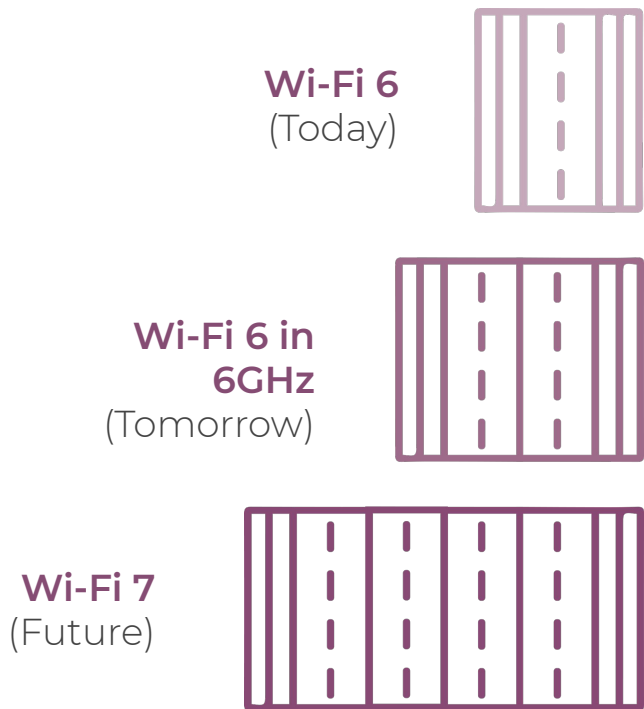
## Scheduled Traffic

Guaranteed low-latency  
No channel  
contention

# 6 GHz brings 160 MHz to life



# Future Wi-Fi: Wi-Fi 7 and Multi-Gigabit Speeds



- 6 GHz gives consumers **a sneak peak into the future of Wi-Fi**
- Premium technology delivers **5G services indoors** where mmWave signals can't reach
- Wi-Fi built for 160 MHz channels is **just the beginning** as Wi-Fi 7 expands to 320 MHz
- Wi-Fi 7 will bring **multi-gigabit throughput and improved latency** across the whole home

# Thank You

