

5G mmWave - Reshaping the mobile experience

Creating value for the
citizens and
businesses

Vikas Dhingra

Senior Director, Qualcomm



5G
mmwave



5G mmWave commercialization and spectrum

Commercialization - 28 operators*

Spectrum available - 31 countries*

* Current or expected by end of 2022

Expanding
breadth,
availability
of 5G mmWave
devices

150+

5G mmWave devices
launched or announced
by 50+ vendors

Source: GSA, July, 2022

Expanding
availability
of 5G mmWave
devices with n258
band

35

Devices w/ n258 band

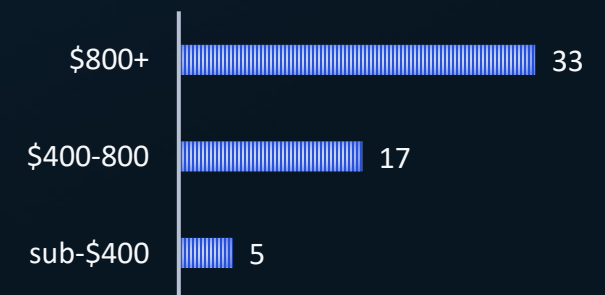
Healthy mixture of
smartphones, CPEs and
industrial modules

Source: GSA, July, 2022

5G mmWave
growth scales
with availability in
lower tiers

22 < \$800

Number of 5G mmWave smartphones available
by price category

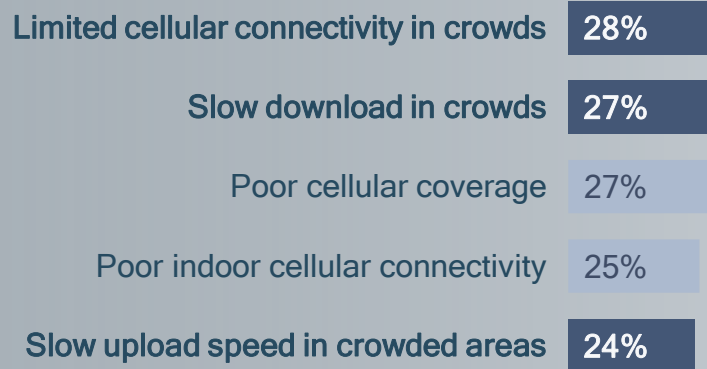


Source: IDC Mobile phone tracker, Q1, 22

5G mmWave value proposition - best consumer experience wherever customers are, including at congested locations

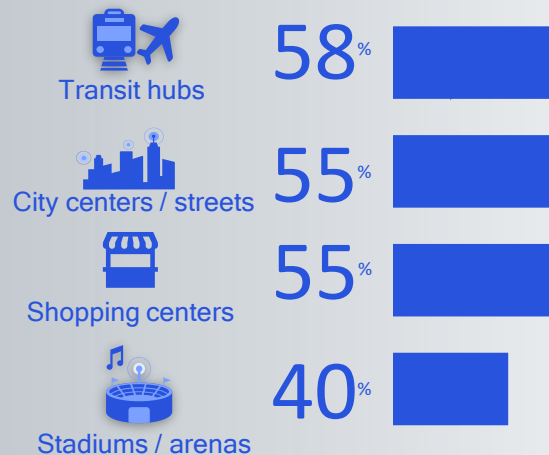
Pain Points

with smartphone experience are in crowded places

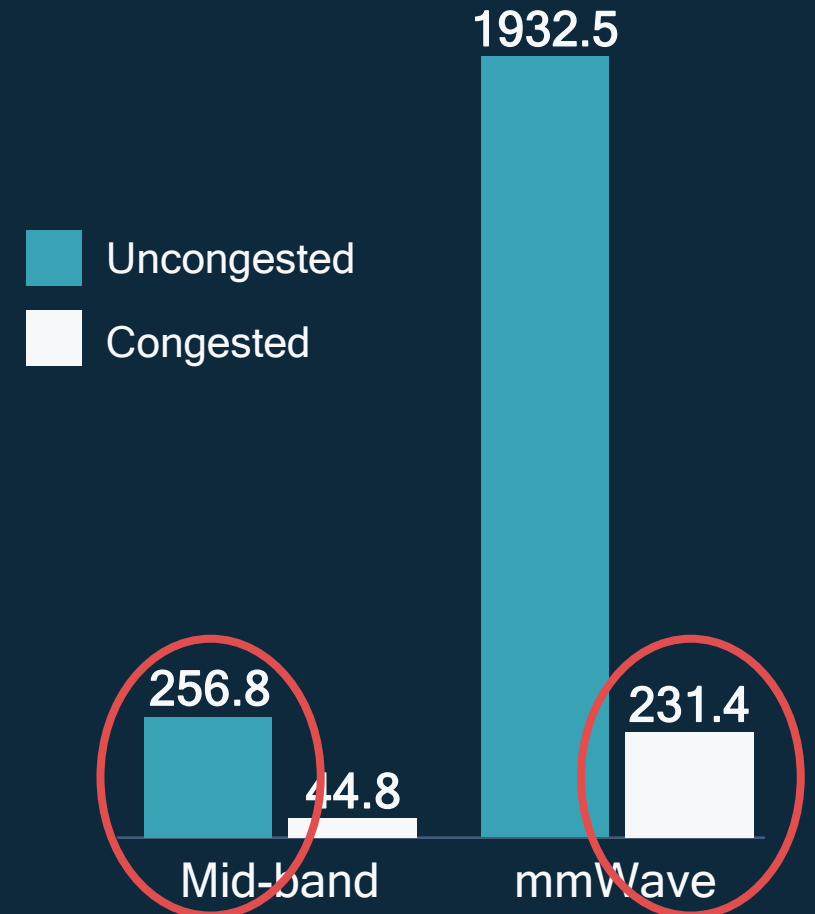


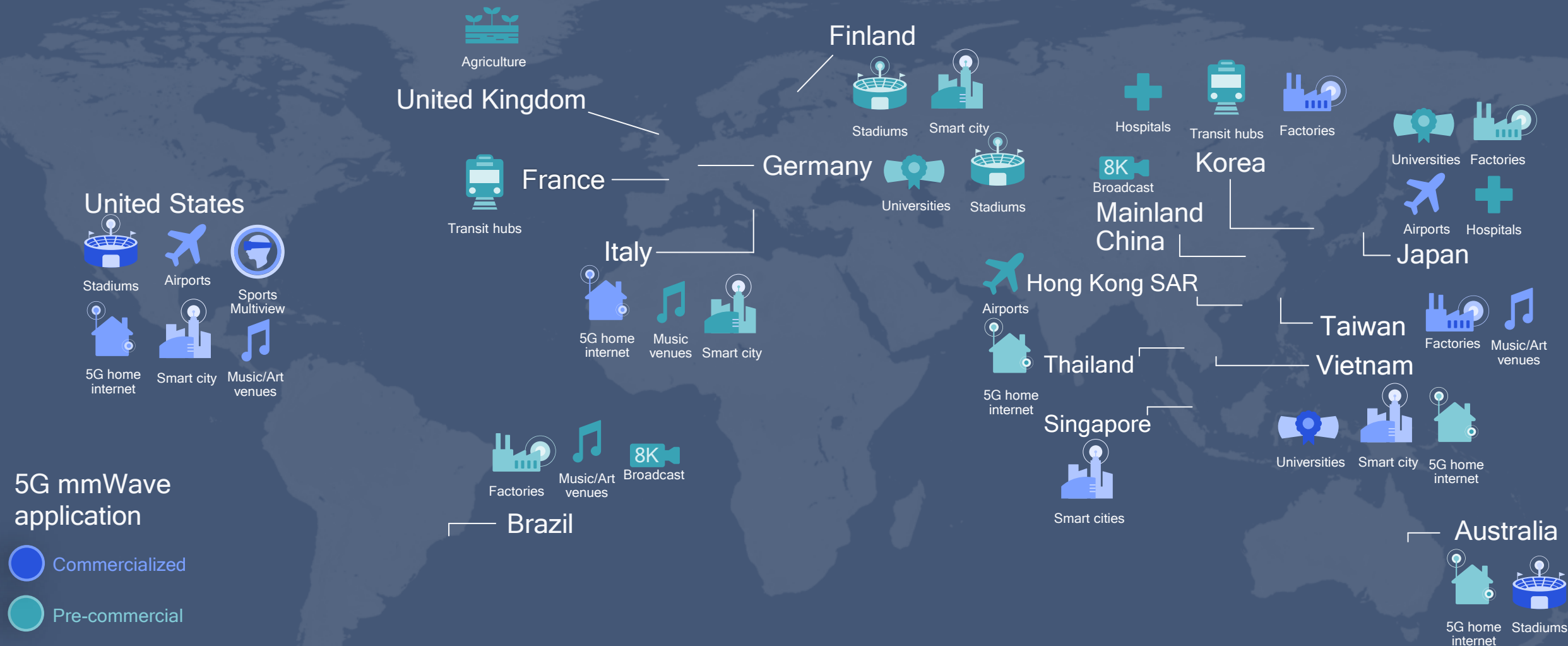
Most Desired Use Locations

Two thirds experience issues in crowded areas at least weekly



Median download throughput (Mbps)

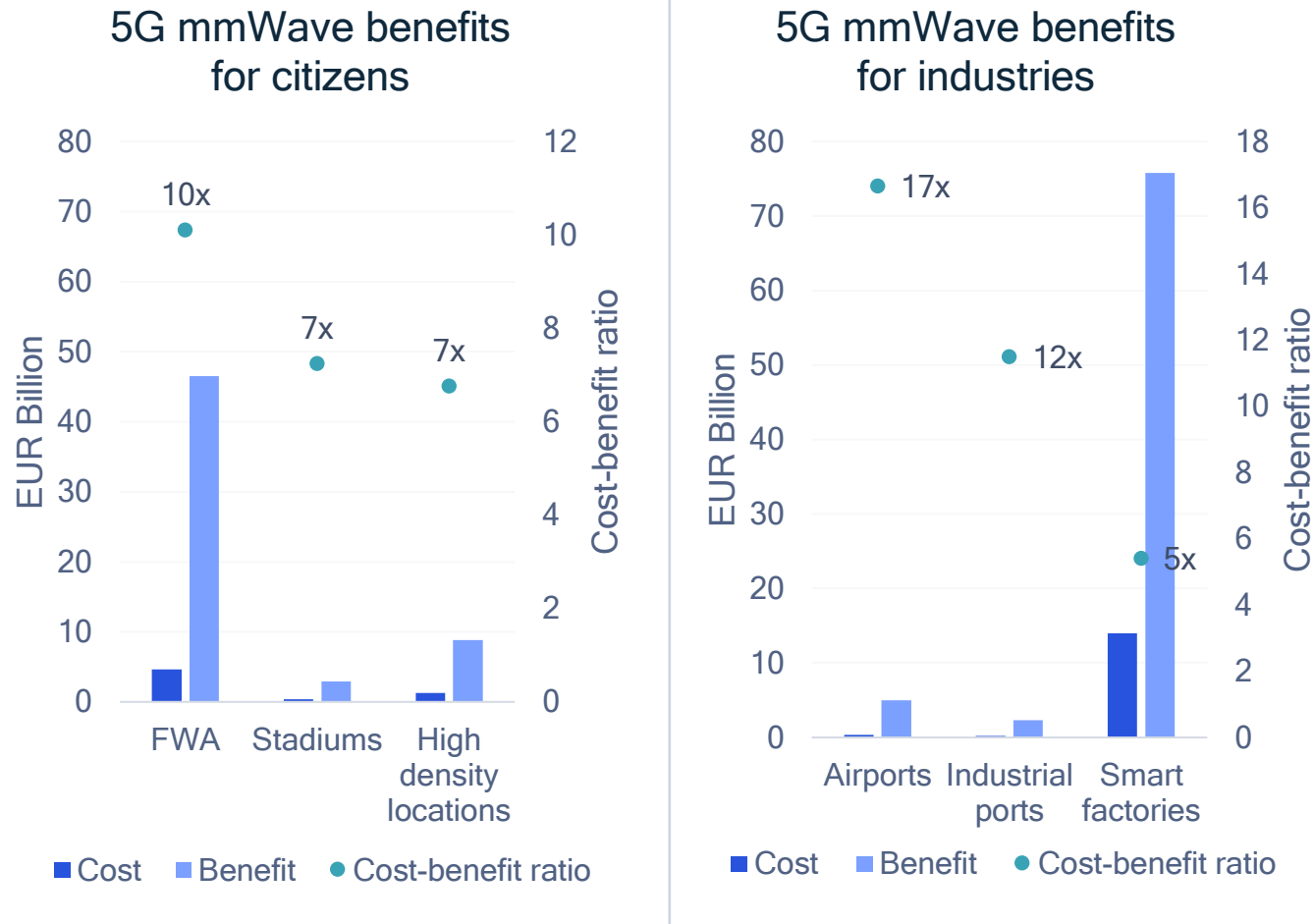




5G mmWave applications

Countries and regions with mmWave use cases across mobile, fixed-wireless access, enterprise and private networks

5G mmWave has significant economic benefit for the citizens and industries across several use cases.



Source: "Status, costs and benefits of 5G 26GHz deployments in Europe," Analysys Mason, May '21

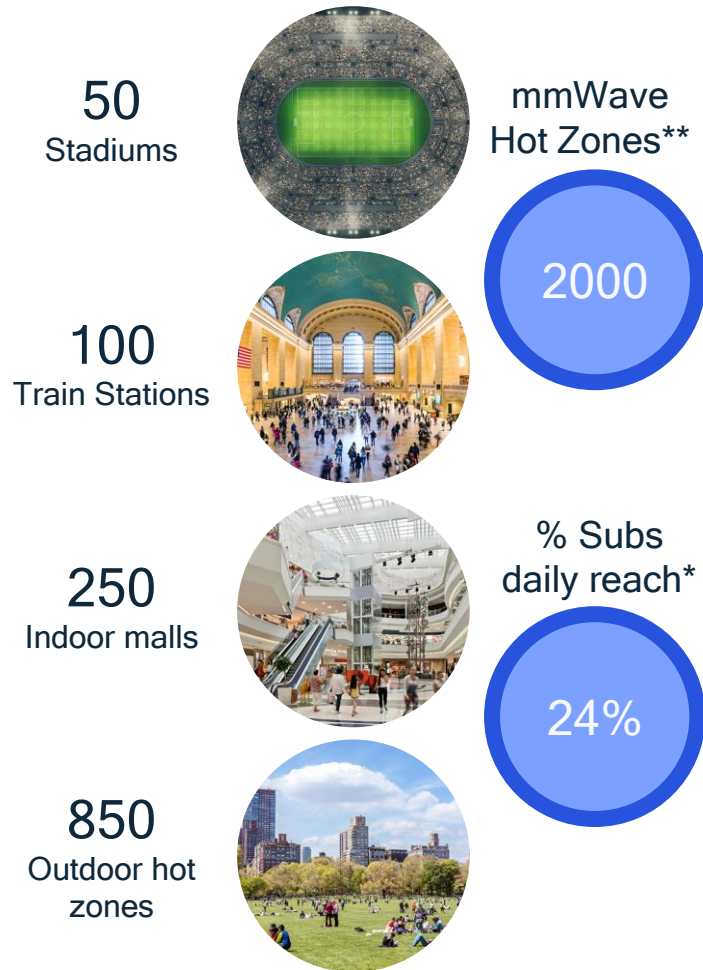
5G mmWave benefits for citizens

- Better access to information and media in crowded places
- Improved city living experience

5G mmWave benefits for industries

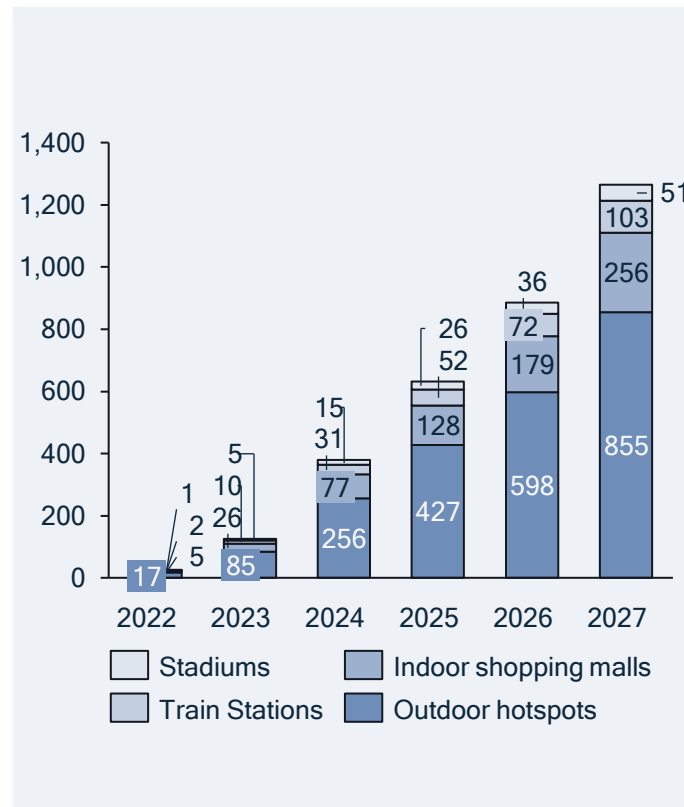
- Increased safety, productivity and efficiency
- Real-time access to multi-faceted information
- Highly reliable wireless remote control

5G mmWave realization - cost-efficient strategic deployments at key locations; scale to support customer adoption

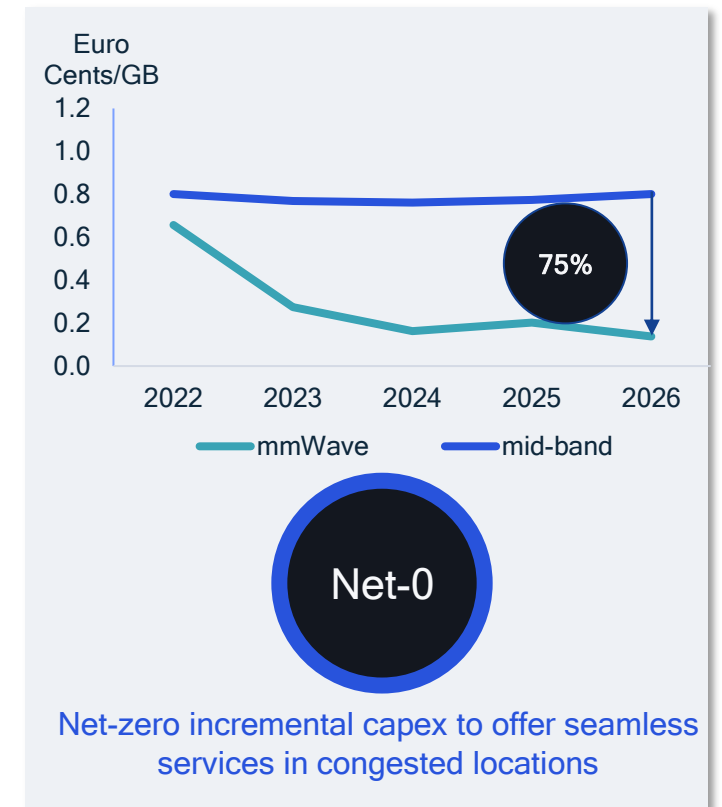


* Subscribers able to experience mmWave daily

Yearly rollout (number of locations)



Cost-efficiency of 5G mmWave rollout



** Hypothetical UK operator with 30% market share

5G mmWave

Time to allocate the spectrum and realize deployments is now

- 1 Abundant spectrum available
- 2 Adoption in all key markets
- 3 Proven technology
- 4 A mature device ecosystem
- 5 Use cases for today and the future
- 6 Substantive growth and returns

mmWave ROI for mobile use



With
2000
mmWave hot zones*







24%
Subscribers daily reach*

* Hypothetical UK operator with 30% market share
Source: Qualcomm and Bell Labs Consulting study, April 2022



Thank you

Follow us on:    

For more information, visit us at:

www.qualcomm.com & www.qualcomm.com/blog

Nothing in these materials is an offer to sell any of the components or devices referenced herein.

©2018-2022 Qualcomm Technologies, Inc. and/or its affiliated companies. All Rights Reserved.

Qualcomm and Snapdragon are trademarks or registered trademarks of Qualcomm Incorporated. Other products and brand names may be trademarks or registered trademarks of their respective owners.

References in this presentation to “Qualcomm” may mean Qualcomm Incorporated, Qualcomm Technologies, Inc., and/or other subsidiaries or business units within the Qualcomm corporate structure, as applicable. Qualcomm Incorporated includes our licensing business, QTL, and the vast majority of our patent portfolio. Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated, operates, along with its subsidiaries, substantially all of our engineering, research and development functions, and substantially all of our products and services businesses, including our QCT semiconductor business.