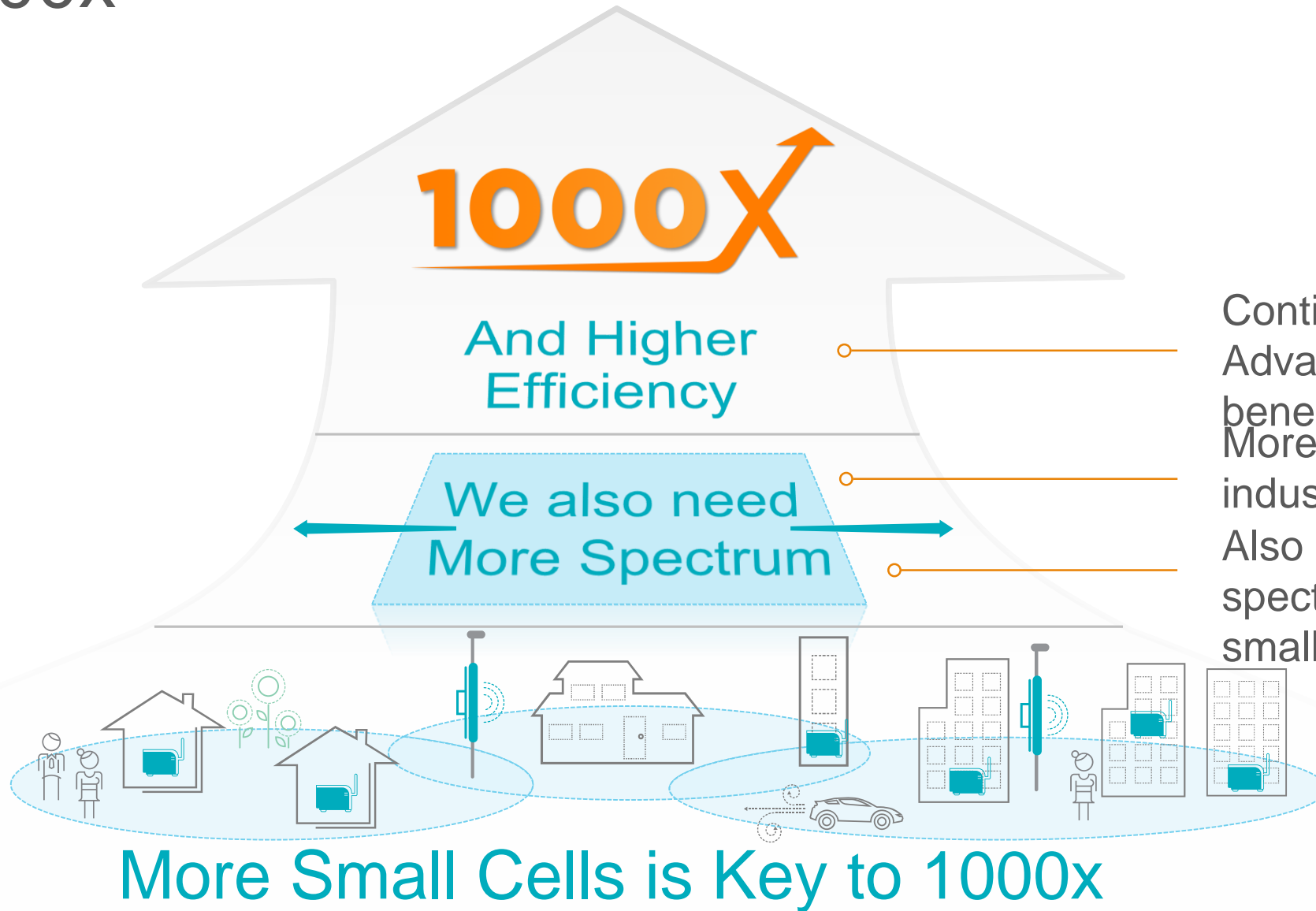


Francisco Giacomini Soares
Sr. Director, Government Affairs

LTE Challenges

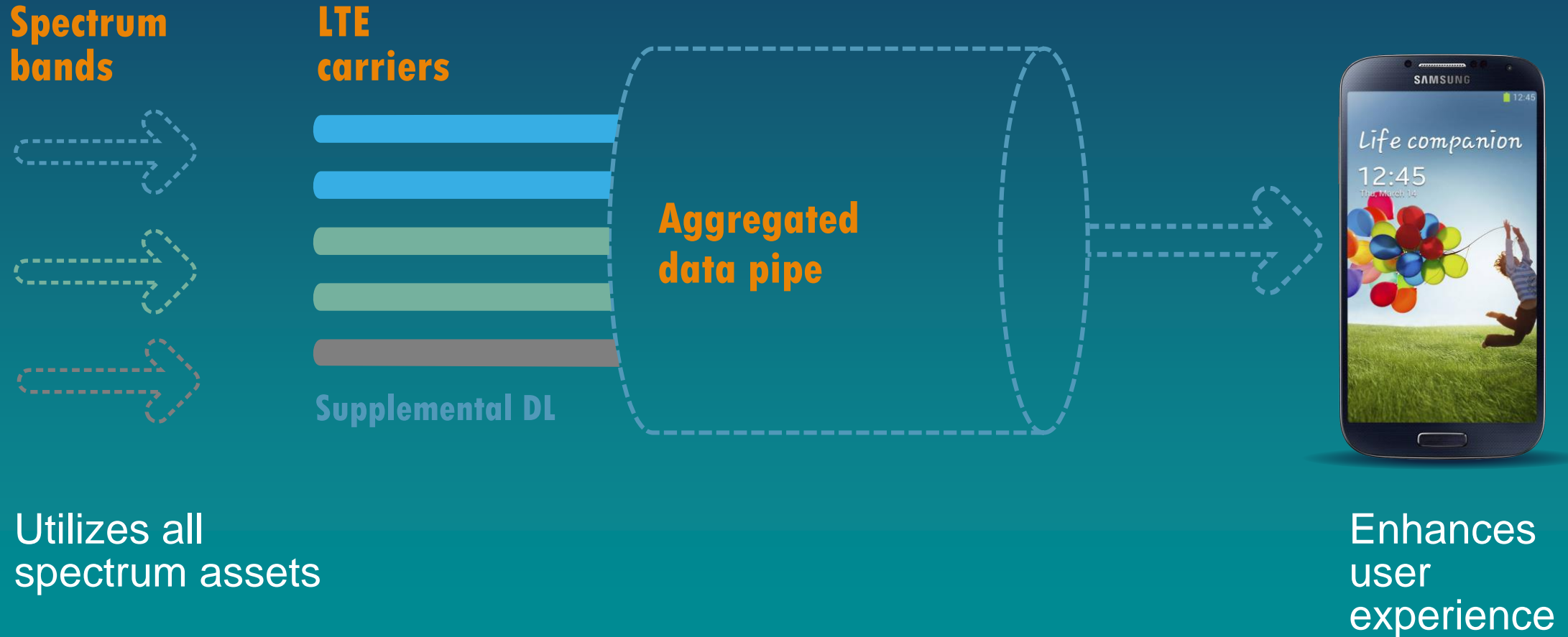


Small cells in licensed spectrum—the foundation of 1000x



Continue to evolve LTE
Advanced and extend its
benefits to unlicensed
More licensed spectrum is the
industry's top priority
Also leveraging unlicensed
spectrum opportunistically in
small cells

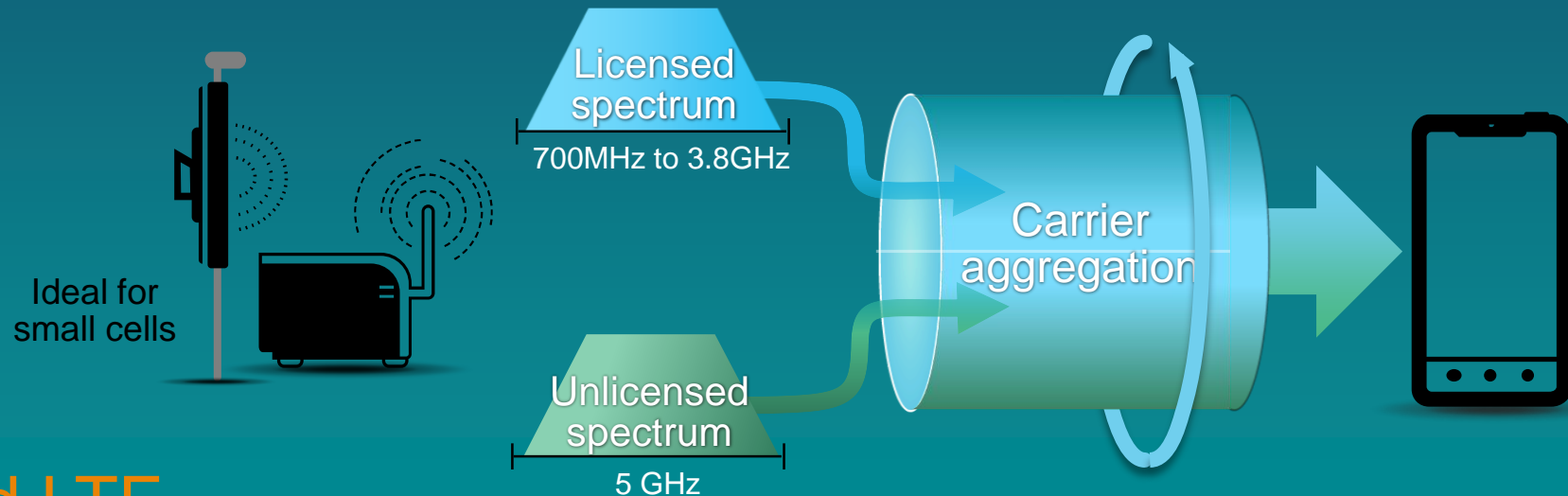
LTE-advanced carrier aggregation



Extending the benefits of LTE Advanced to unlicensed spectrum

Better network performance¹

Enhanced user experience with robust mobility

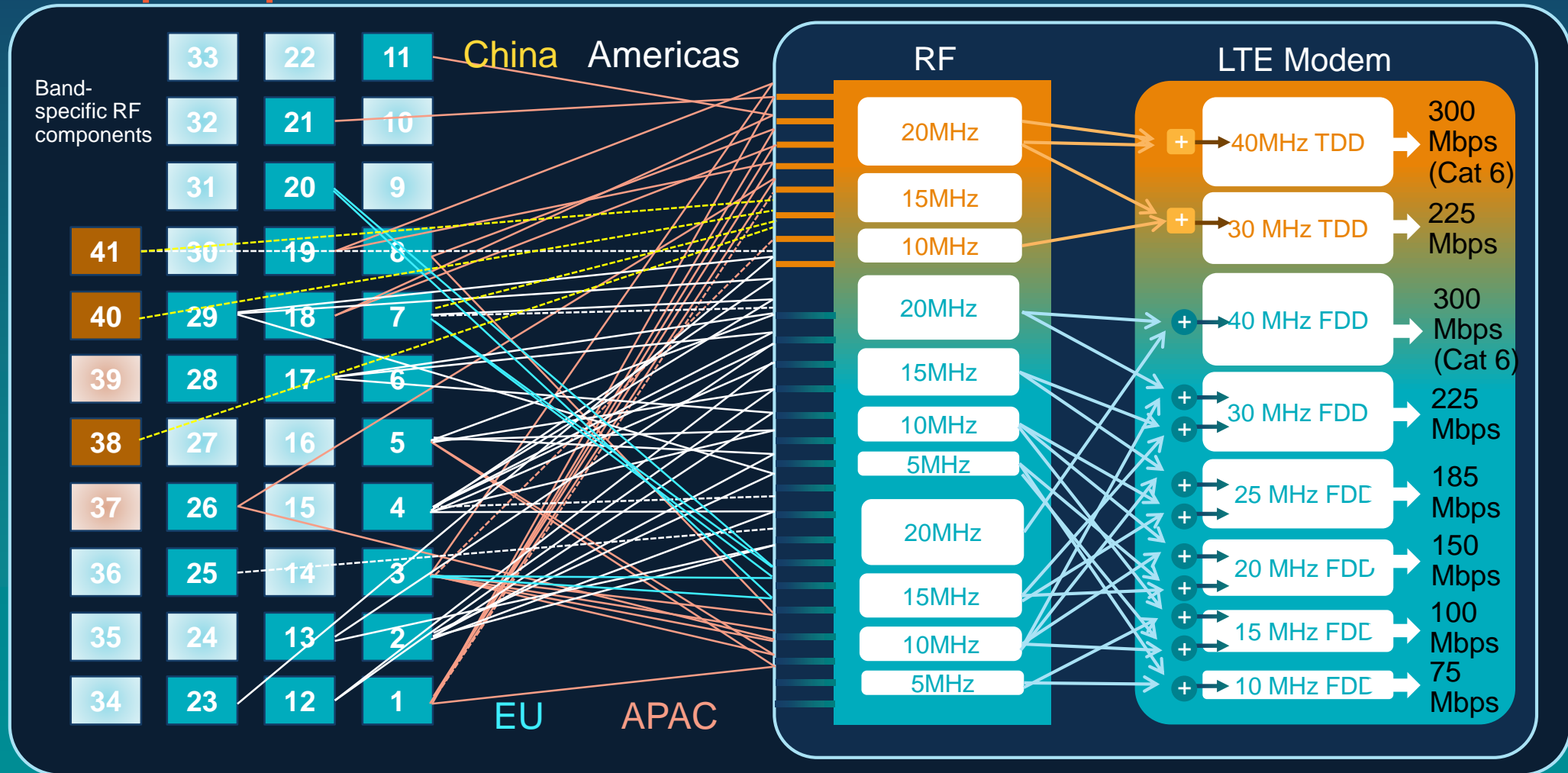


Unified LTE Network

Coexists with Wi-Fi

Success requires management of increasing complexity

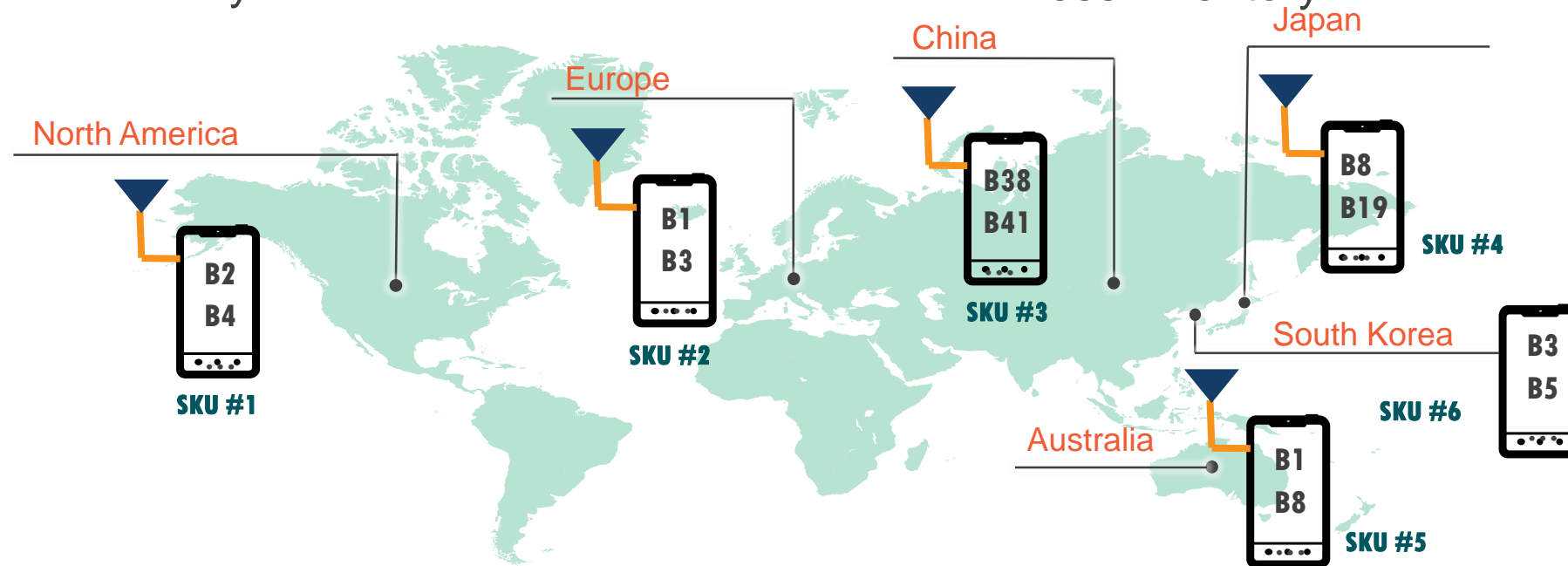
Driven by global adoption of carrier aggregation



Global nature of LTE requires more than local solutions

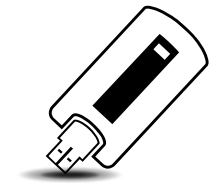
Conventional RF solutions require several designs (SKUs) for the same phone

- Multiple Designs (several SKUs)
 - Multiple NRE
 - Fragmented BOM
 - More inventory
- Single design (single SKU)
 - Reduced NRE
 - Consolidated BOM
 - Less inventory



Single SKU helps increase the volume and reduce the costs to make LTE mainstream

Inherent LTE FDD/TDD interworking and seamless voice

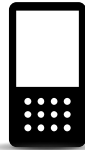


Initial
launches
LTE data

LTE for data only

LTE TDD/FDD with
2G/3G multimode
launched globally¹

Inherent seamless TDD/FDD
interworking for data



Initial voice
solution
LTE data handsets

LTE for data
2G/3G for voice

Circuit switched fallback
(CSFB) to 2G/3G voice
launched globally
(FDD and TDD)

Inherent seamless TDD/FDD
interworking



Long-term voice
solution
LTE VoIP handsets

Simultaneous LTE VoIP
and rich data services

Coming: VoLTE with single radio
voice call continuity (SRVCC)
+ CSFB to 2G/3G voice for roaming

Inherent seamless TDD/FDD
interworking for VoLTE

2G/3G coverage continuity and roaming

¹Including seamless data LTE and 3G interworking with mobility through redirection, and packet switched handover.

Qualcomm Technologies' VoLTE technology leadership

Working closely with ecosystem for VoLTE deployments

Global VoLTE Solution

- World's 1st commercial integrated VoLTE modem and IMS solution with SRVCC
- Chipsets enabled 1st major launches in Korea (Aug. 2012) and US (May 2014)
- Chipsets and IMS solution powered 1st nationwide launch in Japan (June 2014)

Long history of trials and deployments with major operators and infra vendors



Thank you

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