

VoLTE Market Update

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2G/3G sunsets, while VoLTE rises

- With the arrival of 5G, the commercial pressure to retire 2G/3G networks and re-farm frequencies is increasing.
- As legacy wireless technologies approach the end of their lifecycle due to end of licences, operators are in a great position to disable or re-farm certain spectrum within their radio access networks.
- VoLTE (Voice over LTE) addresses the migration to a PS (Packet Switched) only domain by leveraging on the capabilities of the IMS (IP Multimedia Subsystem) to offer voice and messaging services over LTE.
- The time of previous wireless technologies are coming to an end, but the transition to a more efficient and better quality voice service would bring new challenges.

Devices and networks today

Not just smartphones

Dongle

Embedded Network Module

Fixed Wireless Phone

Cellular Two-way Radio

IoT Device

Modem

Payment Terminal

Tablet

Vehicle Multimedia System

Wearable

Wireless Hotspot

WLAN Router

Wristwatch

Number of device manufacturers

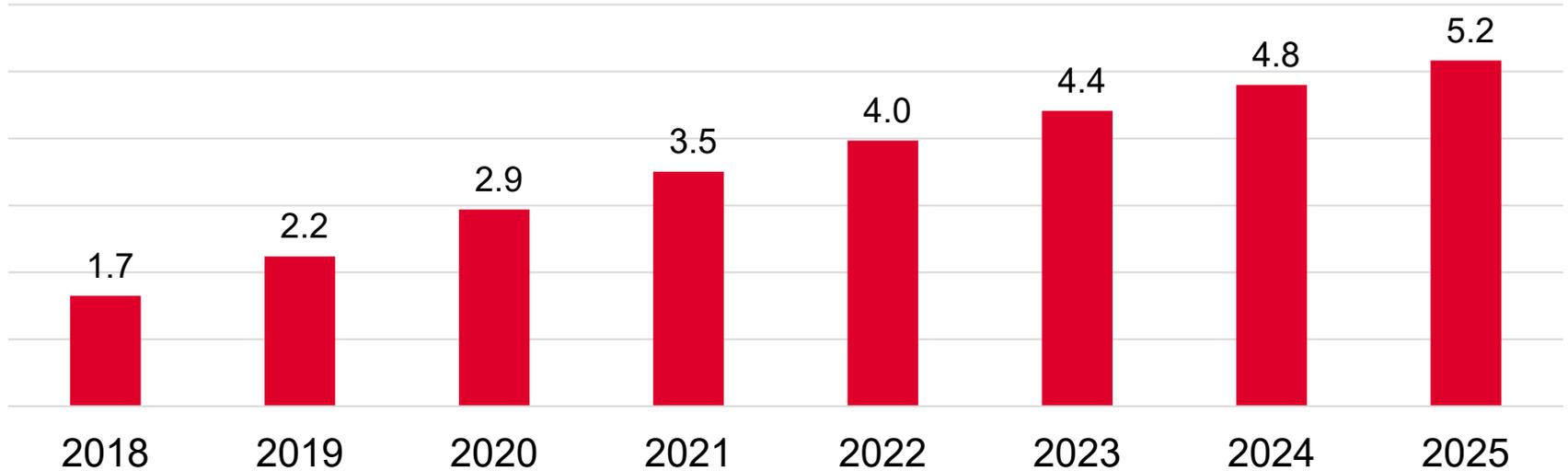
1040

Networks

235 VoLTE network launches in 107 countries

VoLTE capable devices

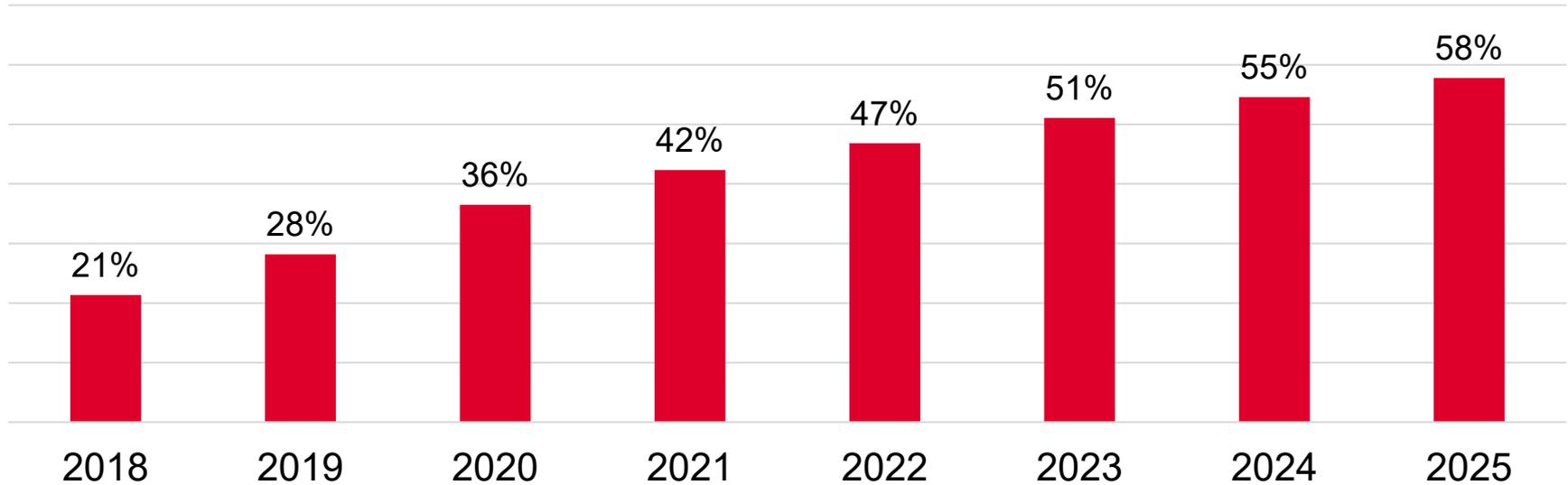
VoLTE connections globally (billion)



VoLTE connections penetration

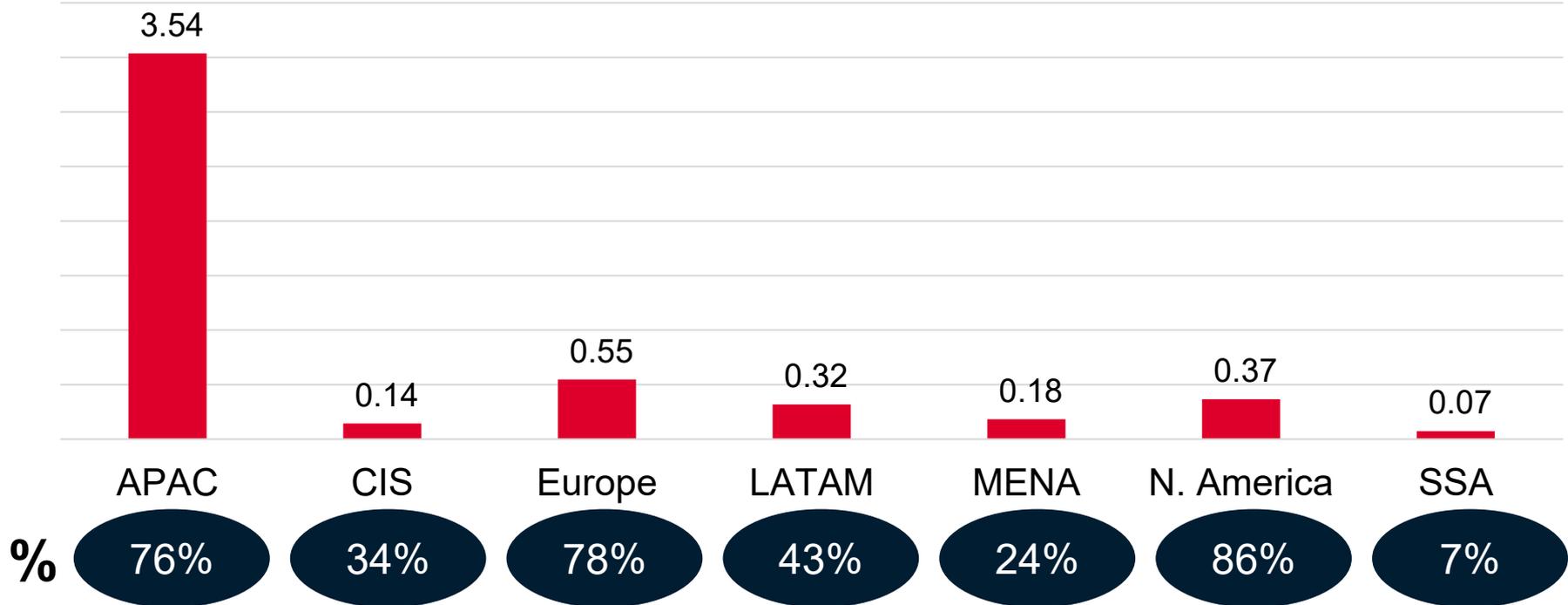
VoLTE connections as % of total connections – globally

including Vo5G, % of total mobile connections excluding licensed cellular IoT



Regional forecast for 2025

Number of VoLTE connections – 2025 (billion)



VoLTE Prerequisites



Terminal support

Since 2019, most mobile phones and wearable terminals support VoLTE. In 2020, more than 2000 devices were VoLTE capable.



Optimization

MNOs optimize their VoLTE networks so their network KPIs improve. VoLTE needs more radio coverage than 2G/3G due to the frequency, hence operators experienced complaints in early VoLTE launches



Coverage

LTE becomes the new base wireless network, the network coverage is mature enough. Globally, 4G network covered 86.78% of the population.

VoLTE Drivers

Migration to IP and 5G commercialization

VoLTE enables operators to migrate their CS infrastructure to a fully IP centric network. Without VoLTE, 4G networks cannot support voice service, therefore operators wishing to offer this communication capability will need to still support legacy technologies

Voice quality

VoLTE offers higher voice quality than legacy circuit switched voice. VoLTE provides voice in wider range of frequency and enhances the voice quality significantly.

Fast call setup

Call setup time is the time it takes from initiating the call to hearing from or speaking to the called party, and VoLTE reduces this time to about a third of that of legacy CS voices.

Multimedia communications

VoLTE also enables video calls to be provided in conjunction with HD voice. This means that not only video calls are possible between VoLTE subscribers, but also switching between Video and Voice is supported.

Efficiency

As VoLTE calls are natively supported by LTE networks, both the scarce radio resources and energy are used much more efficiently than with legacy technologies.

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to the UN Sustainable Development Goals

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Operators groups



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Networks



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Thank you

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