GSMA™ Intelligence

Showcase Live

Network evolution: VoLTE implications for 2G/3G network sunset

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Agenda

GSMA Intelligence

1	Era of multigenerational networking

2	After the 2G and 3G

3	Prerequisites to shutdown 2G/3G

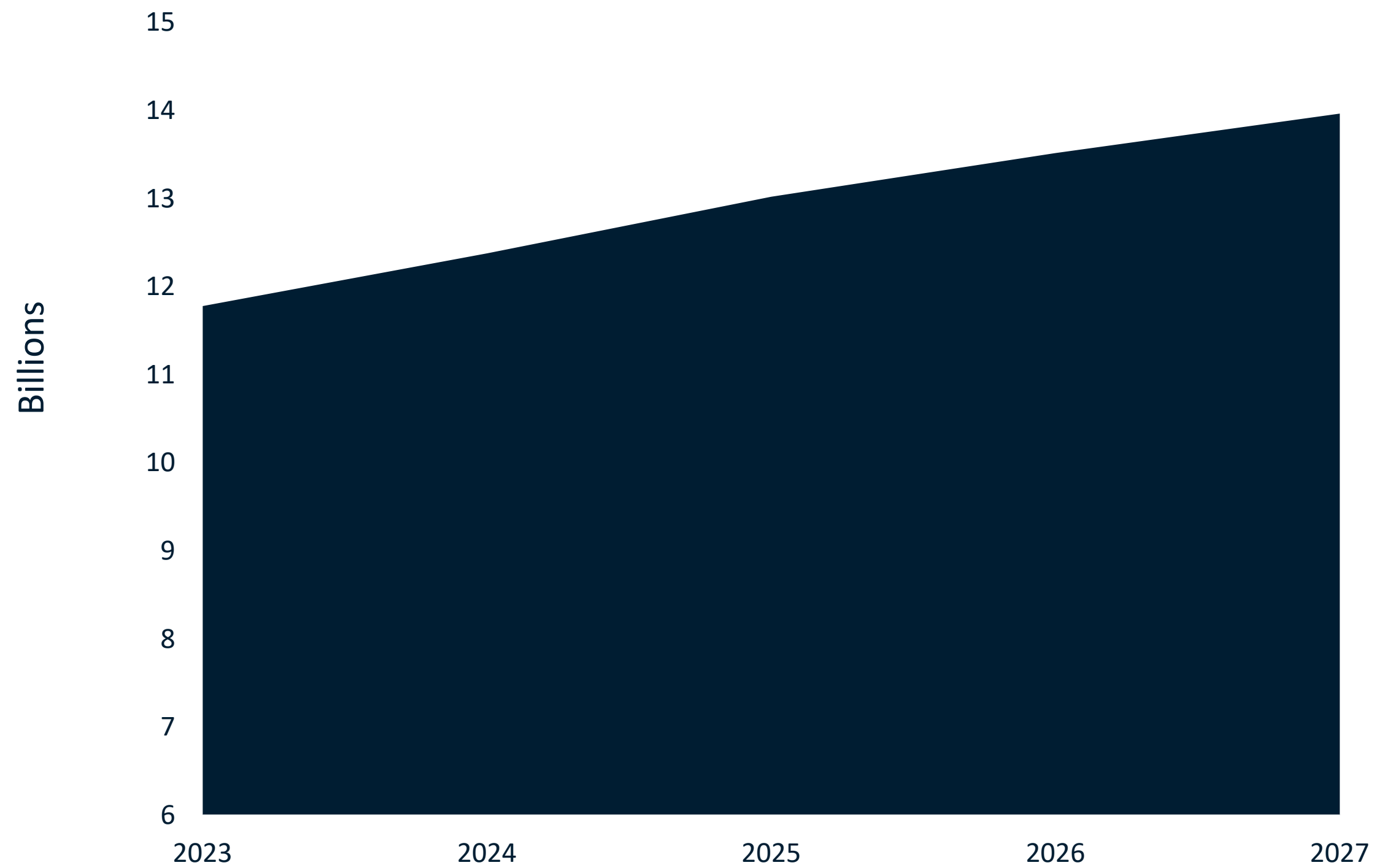| 4	VoLTE implications

Operators require a new approaches that reduces network operating costs

Increasing demand for connectivity

Cellular Connection 2023 - 2027

Mobile Data Traffic 2023 - 2027

Non-5G   5G

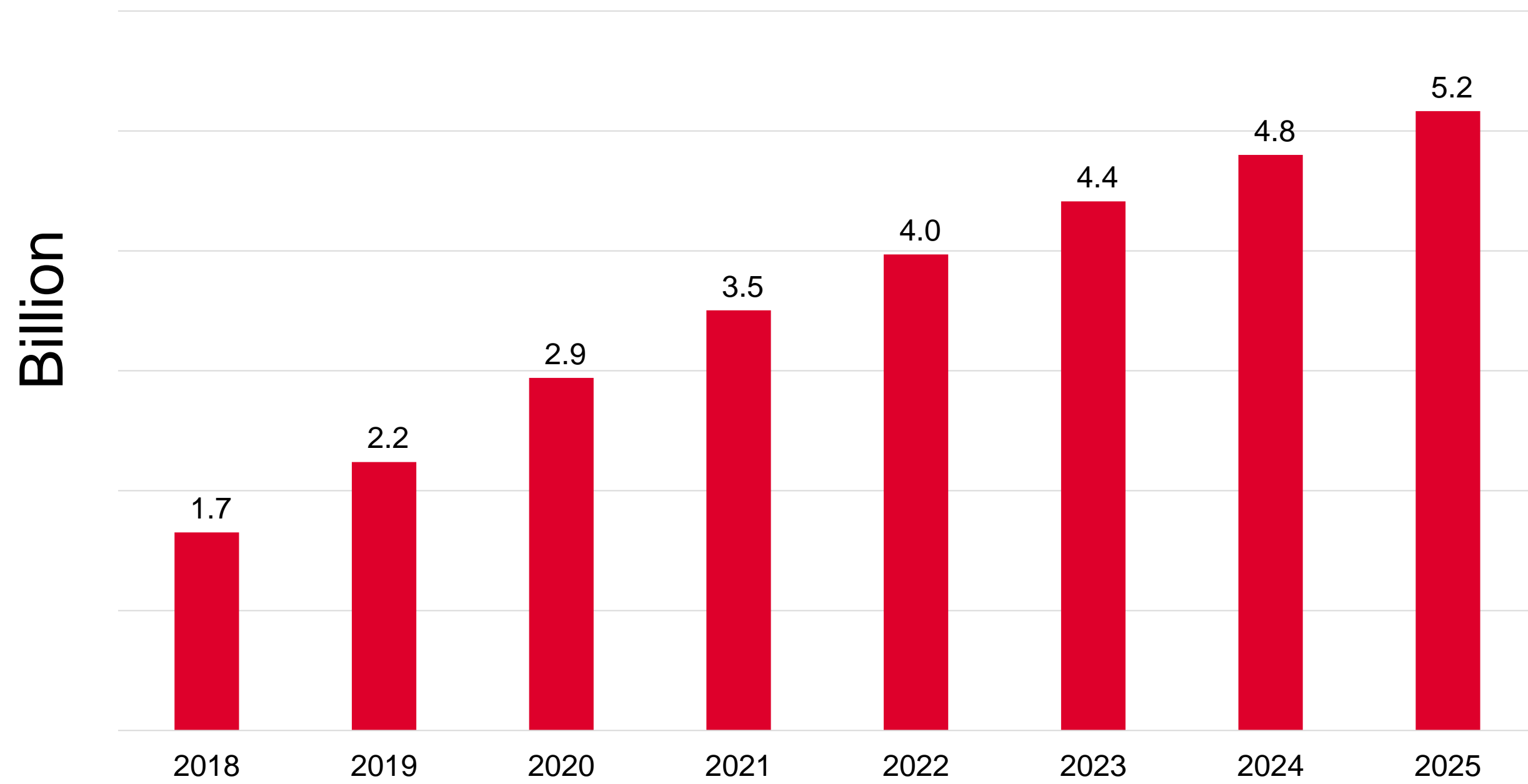*Source: GSMA Intelligence*
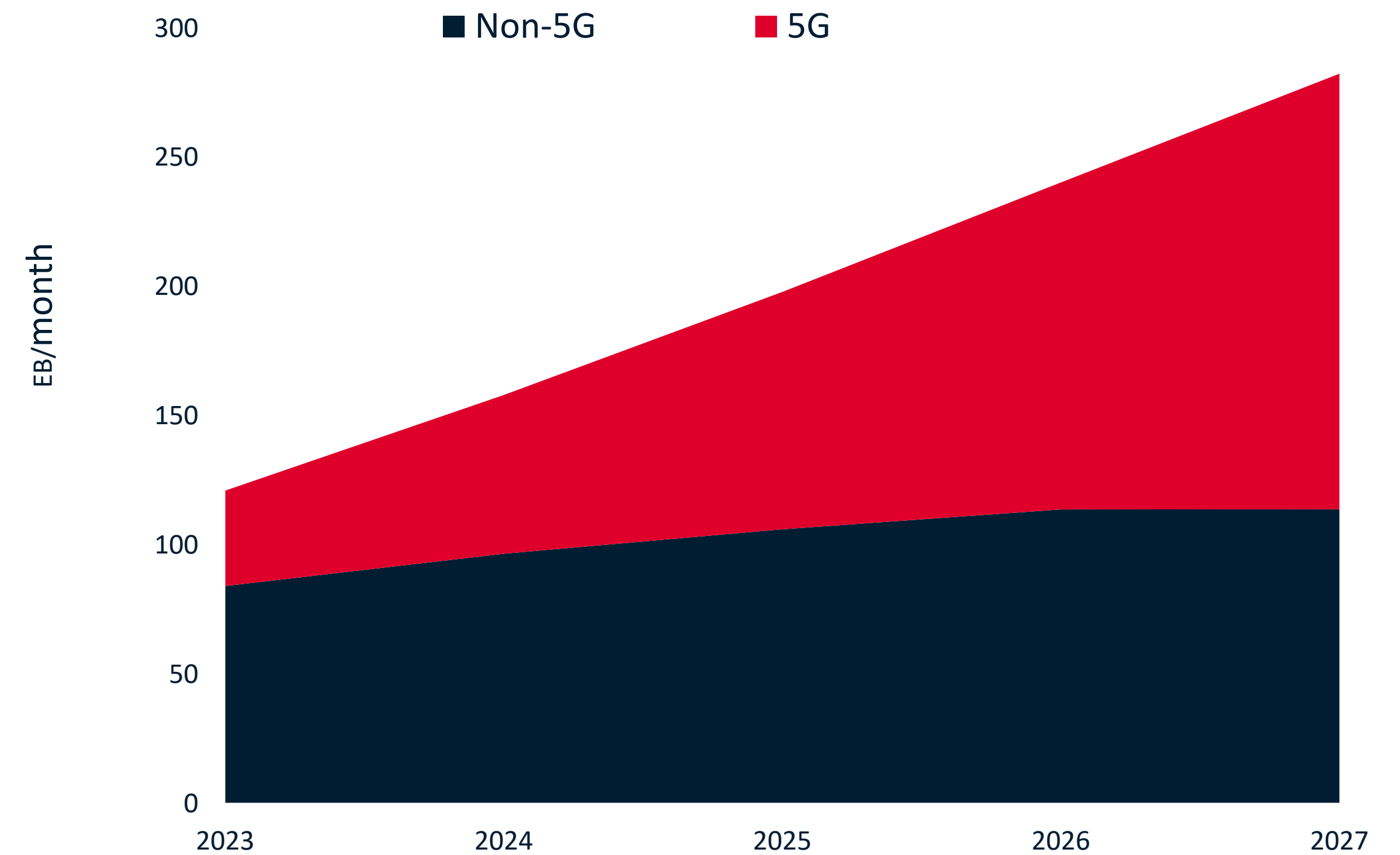
Source: Ericsson

Coexistence of different technologies

- Telecommunication ecosystem are rolling out a new technological generation in every 10 years

- Network operators will find it harder to maintain these different technologies at the same time, efficiently

- Spectrum is a finite and scarce resource, thus operators are urged to use it efficiently

- The ecosystem needs to balance, and avoid harming existing customers with older user equipment but also aim to use recent technologies
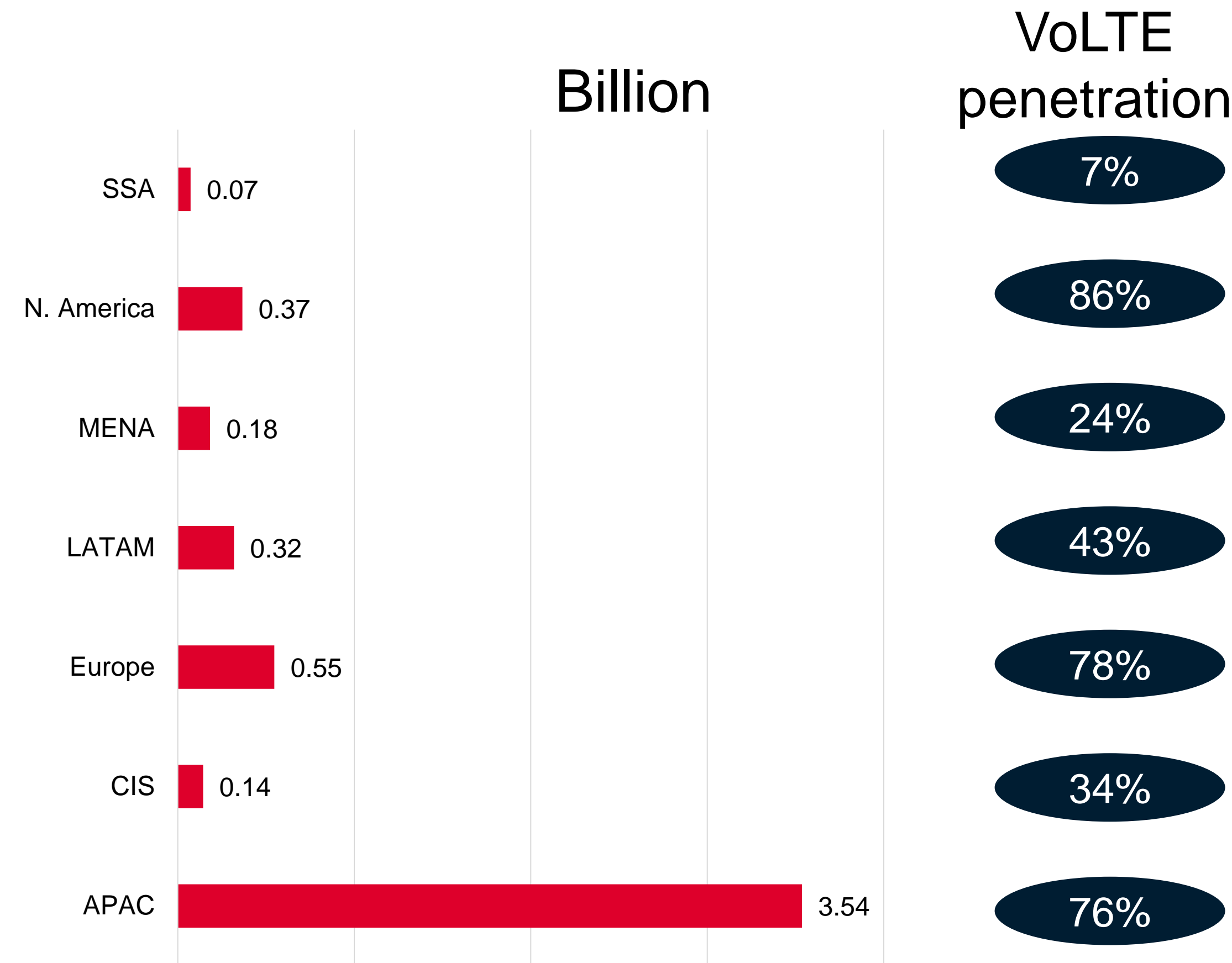
Number of connections globally

Legend: 2G, 3G, 4G, 5G
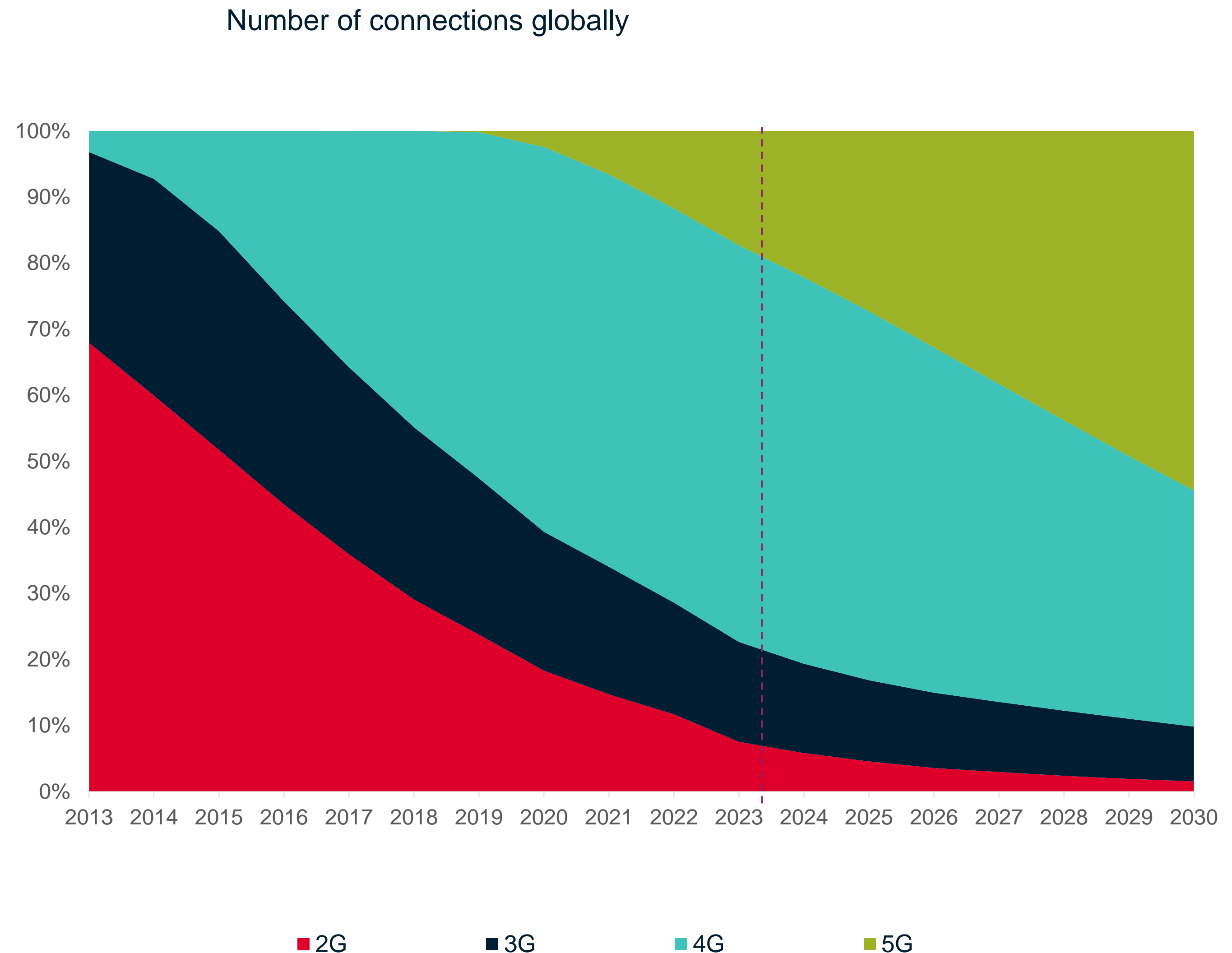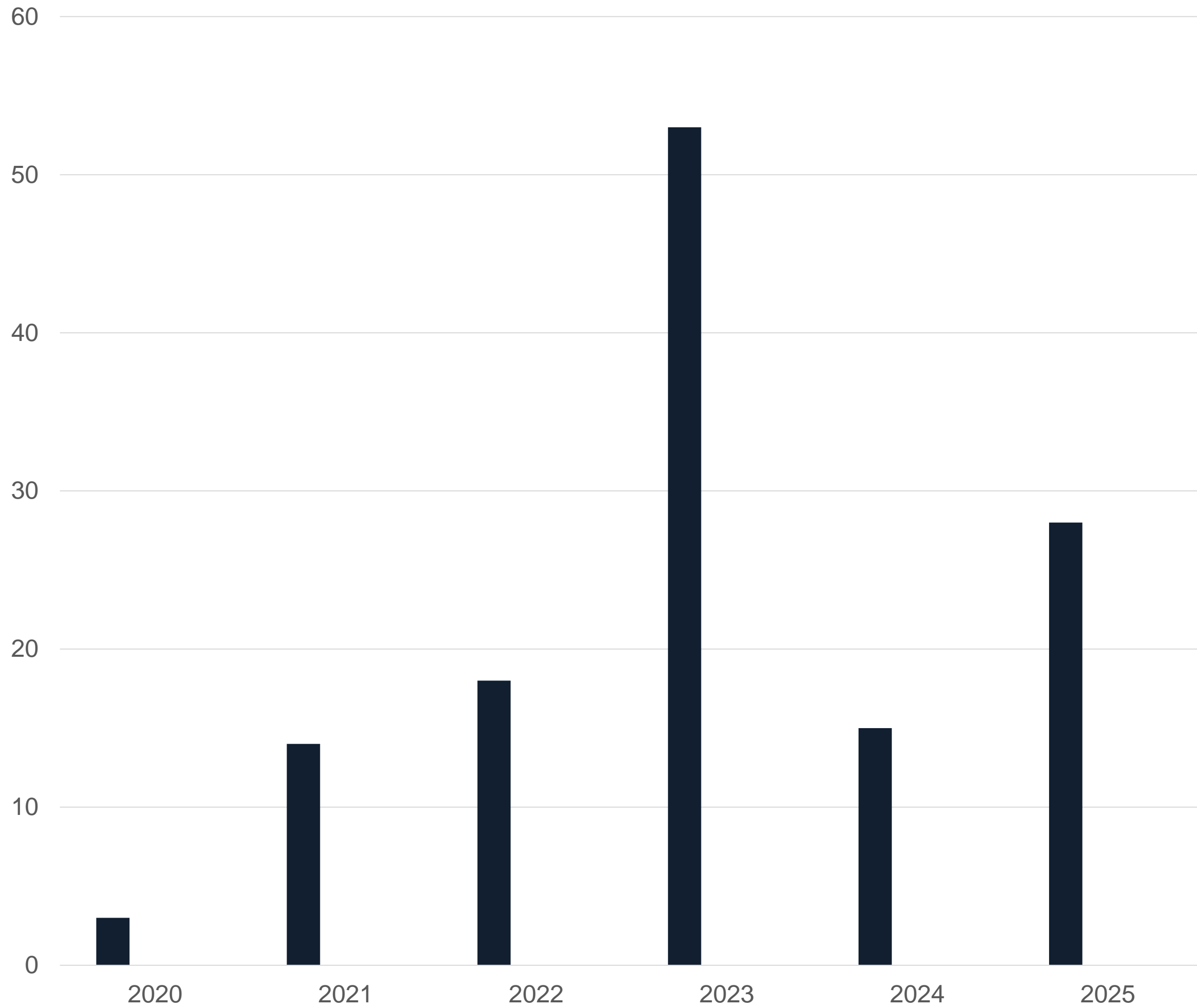
Voice after the 2G and 3G era

VoLTE connections globally

Billion

Number of VoLTE connections – 2025

Billion

VoLTE penetration

| Region	Connections	Penetration
SSA	0.07	7%
N. America	0.37	86%
MENA	0.18	24%
LATAM	0.32	43%
Europe	0.55	78%
CIS	0.14	34%
APAC	3.54	76%

Network shutdowns

Number of completed and planned 2G and 3G network sunsets, 2020–2025

Regional breakdown: Completed and planned 2G and 3G network sunsets, 2020–2025

Europe   Asia Pacific   North America

Source: GSMA Intelligence

Prerequisites to shutdown 2G/3G

GSMA Intelligence
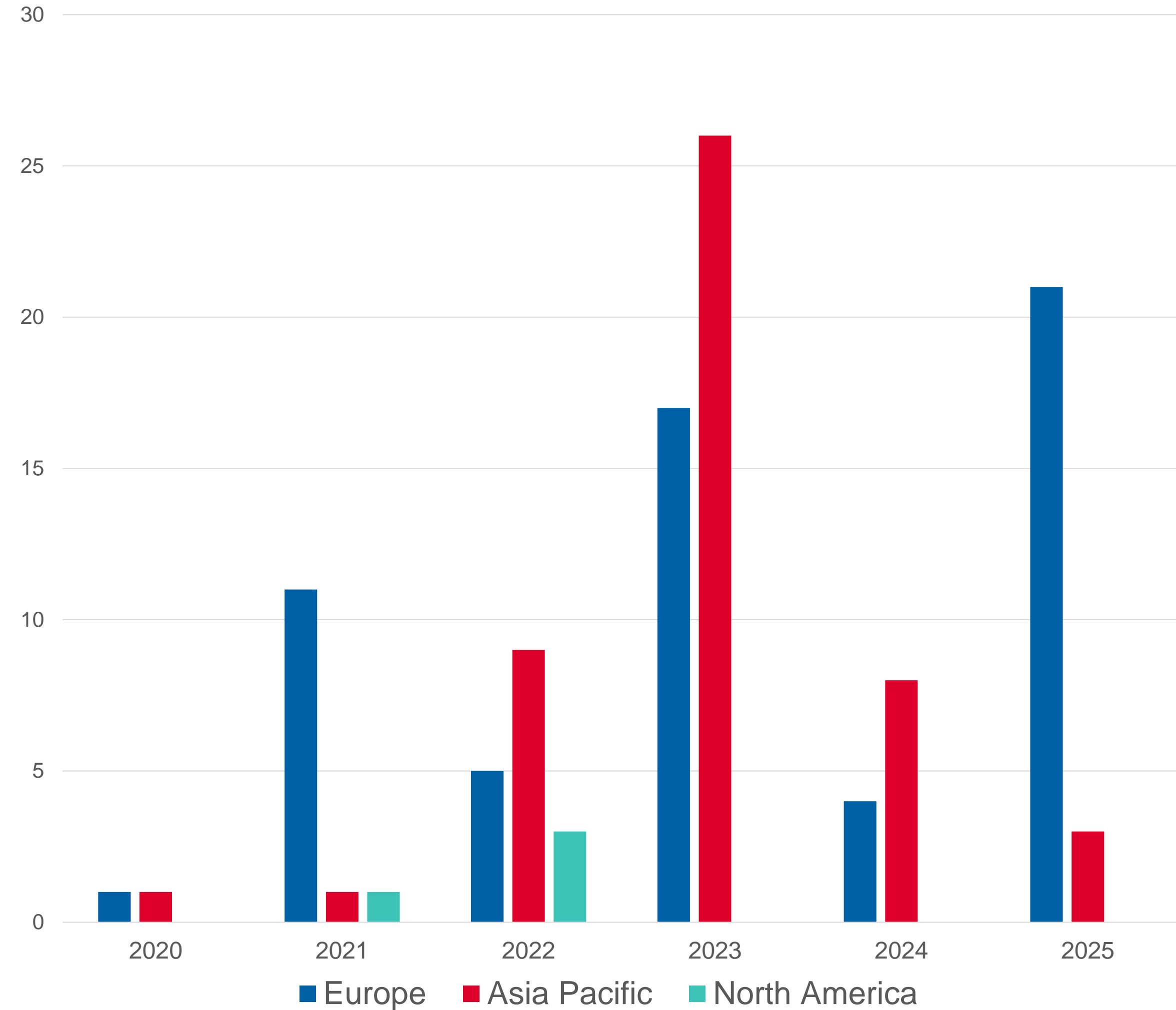
Terminal support

After Apple's decision in 2019, most mobile phones and wearable terminals support VoLTE voice. Globally, smartphone penetration has reached 76% in Q1 2023
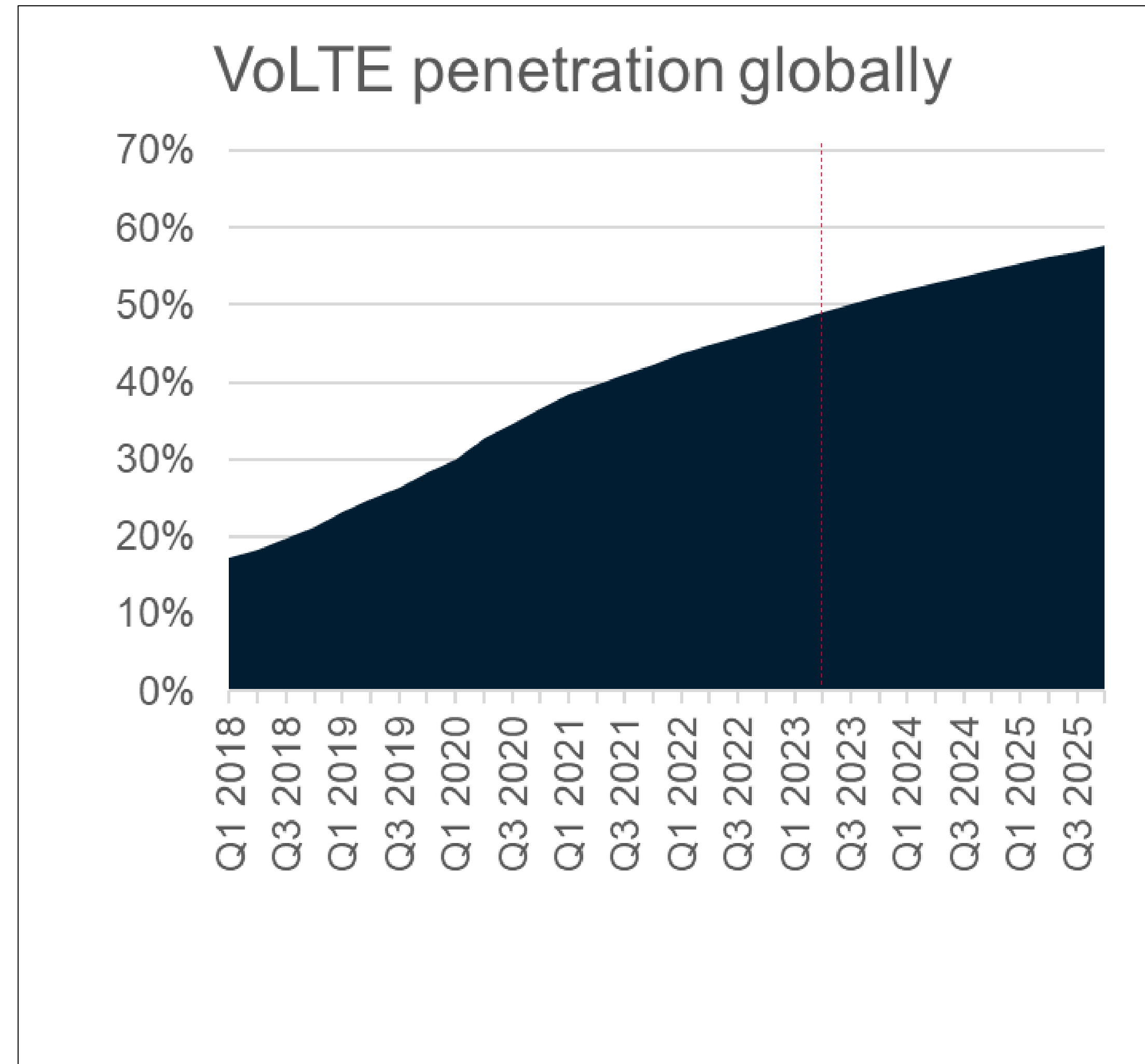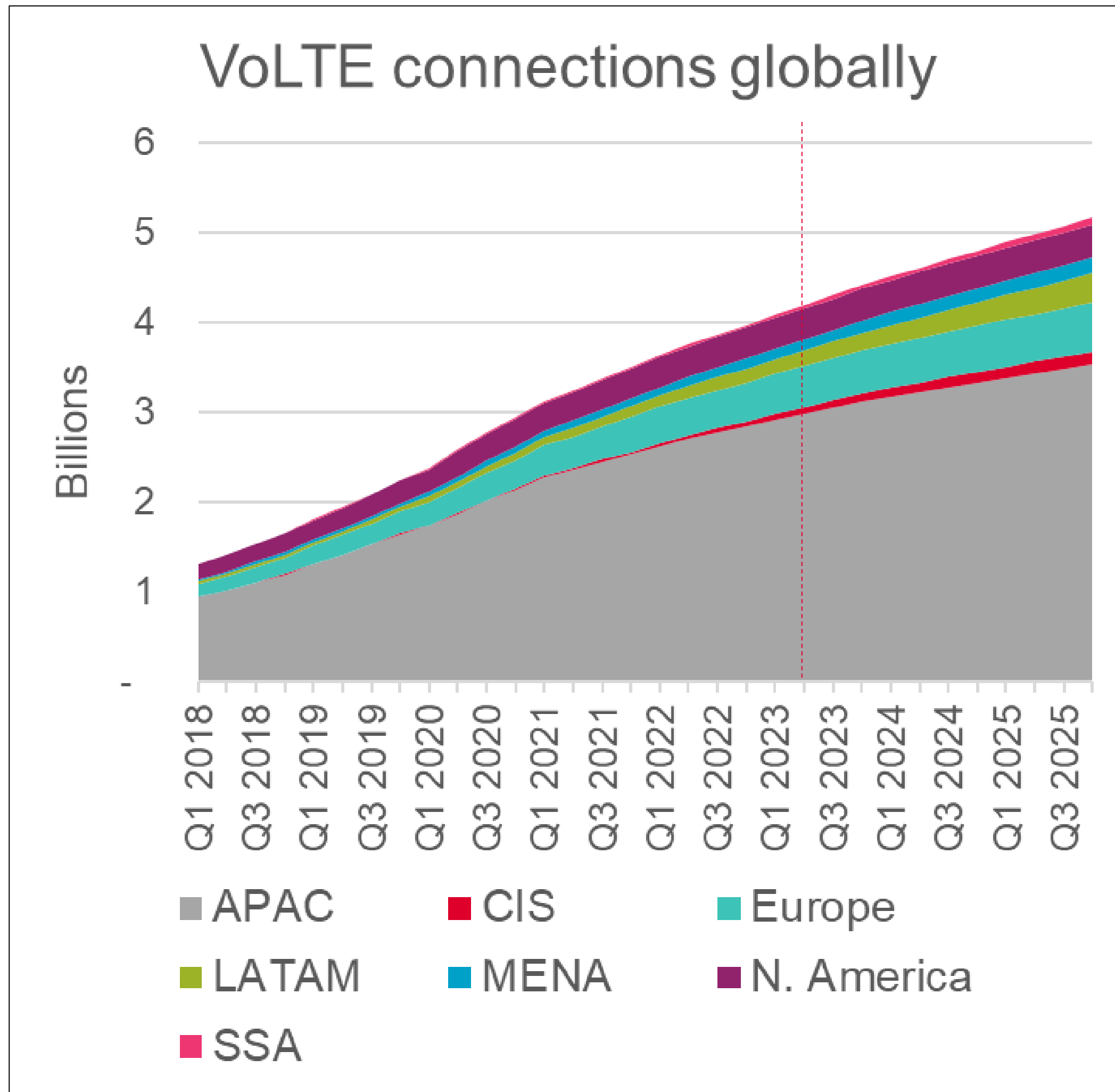
Optimization

Network operators optimized their 4G and 5G networks so their voice network KPIs improved significantly. Currently, most networks are optimized for VoLTE.

Coverage

4G and 5G becomes the new base wireless network as the network coverage is mature enough. Globally, 4G network coverage by population is over 92% as of today.

VoLTE's global march

VoLTE connections globally

VoLTE penetration globally

Legend: APAC, CIS, Europe, LATAM, MENA, N. America, SSA

Source: GSMA Intelligence

Successful experience with VoLTE

1. **Think early:** Deploy VoLTE three years before the commercial use of 5G. Achieve a high VoLTE penetration rate before the large-scale use of 5G
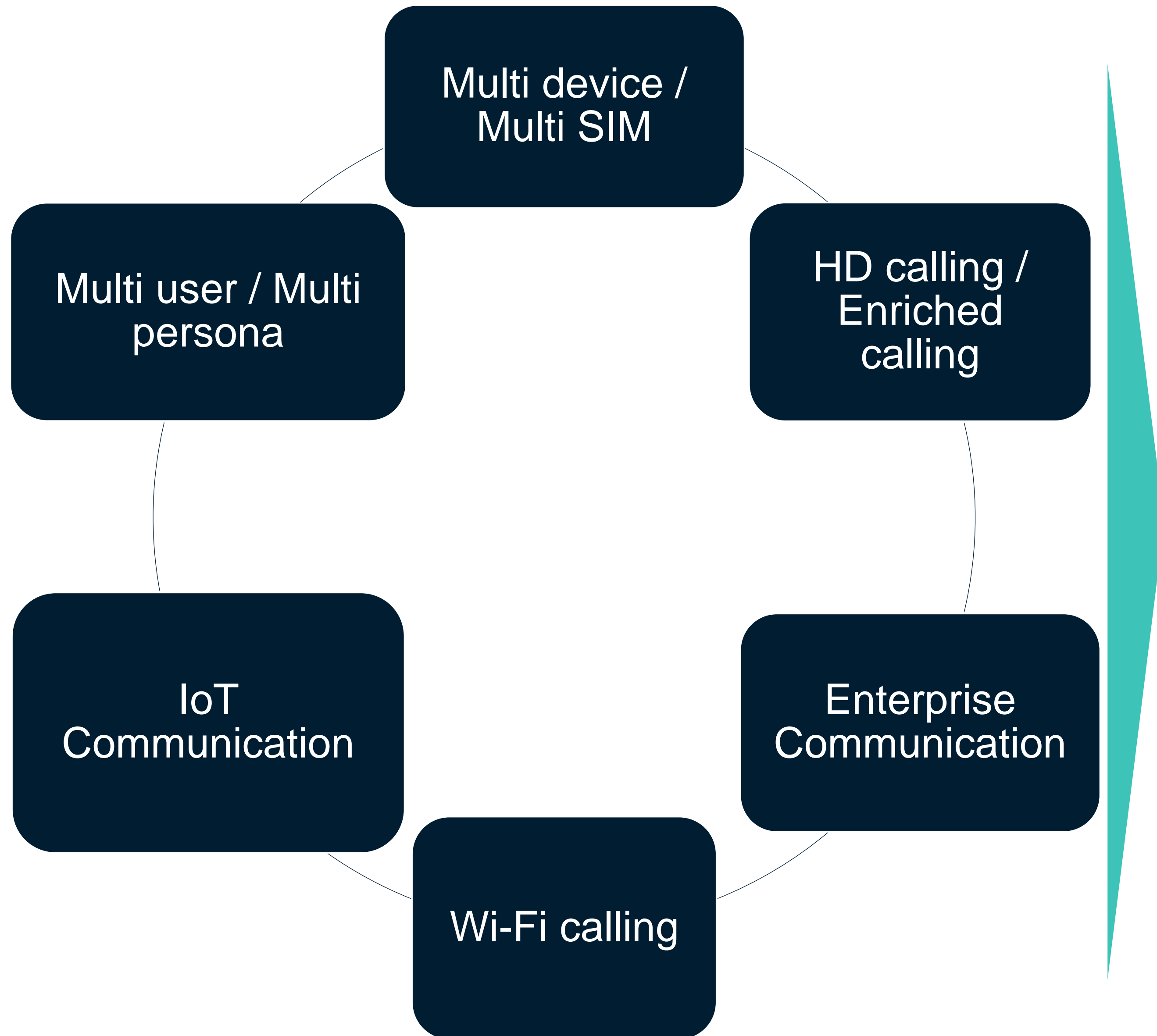
2. **Customer QoS:** Monitor and improve user voice QoS. Find the comparative advantages of your voice service

3. **Business case:** Developing new enterprise voice services based on VoLTE to generate more revenues. Interactive call, video ring back tone, HD video call, etc.

New Opportunities for VoLTE

Multi device / Multi SIM

HD calling / Enriched calling

Multi user / Multi persona

Enterprise Communication

IoT Communication

Wi-Fi calling

- Establishes a strong foundation for basic voice

- Enables the creation of these new kinds of offerings

- Can increase revenue, reduce churn and attract new customers.

Thank you

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