eSIM Market: China and Beyond

eSIM 市場

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eSIM availability in consumer devices
Commercialisation is ramping up

eSIM consumer devices

- Smartphones
- Smartwatches
- Tablets
- Laptops
- Cars
- Security cameras
- 5G FWA CPE
- Bikes
- Wearables
- GPS trackers

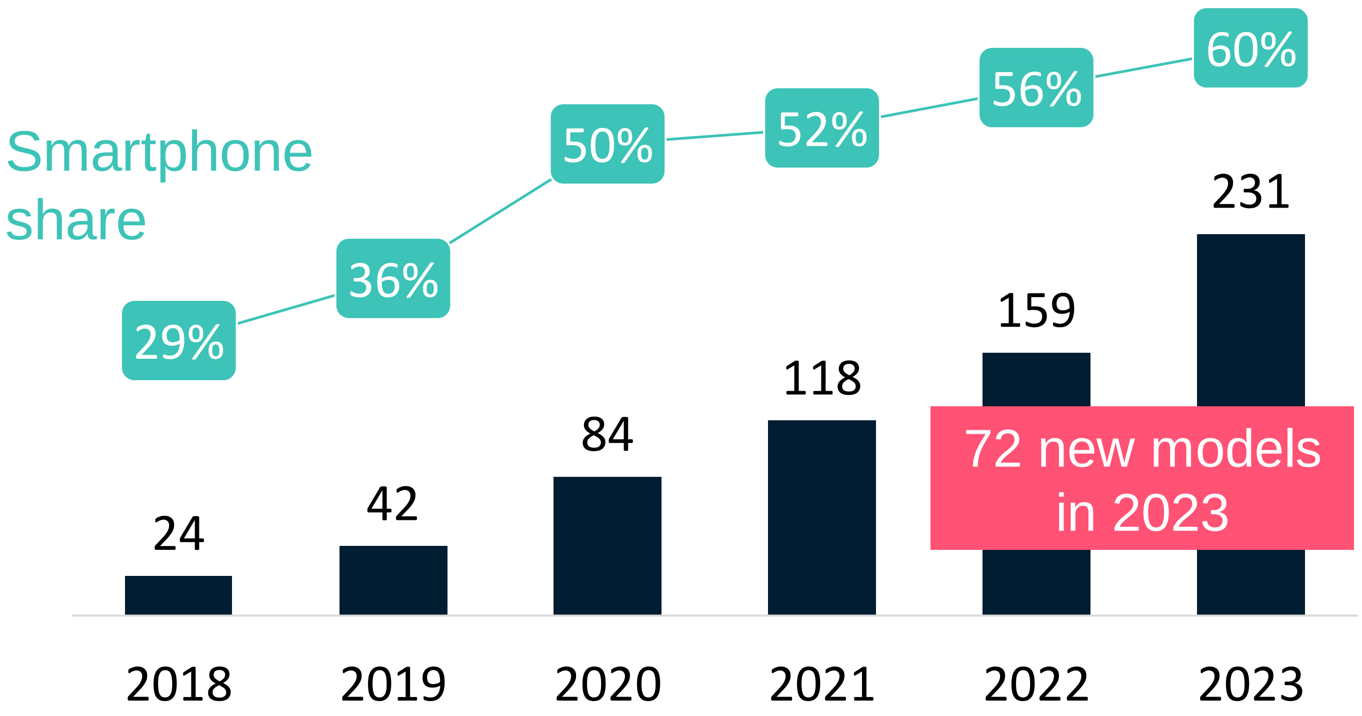
eSIM IoT Devices

- Connected vehicles
- Drones
- Smart meters
- Security devices
- GPS trackers
- Healthcare devices
- Security cameras
- Wearables
- Robots
- Smartwatches
- Street lighting

eSIM availability in consumer devices
2023 the strongest year so far; 2024 looks solid too

How many eSIM consumer devices have been launched?

Number of models launched (sum of smartphones, smartwatches and tablets; cumulative figures) and smartphone share (i.e. eSIM smartphones as % of total eSIM consumer devices)



- **10x** growth over the last five years
- Most of the top OEM brands have launched eSIM devices
- Smartphones lead
- **2024 looks solid too**: 29 new models launched during January-May 2024

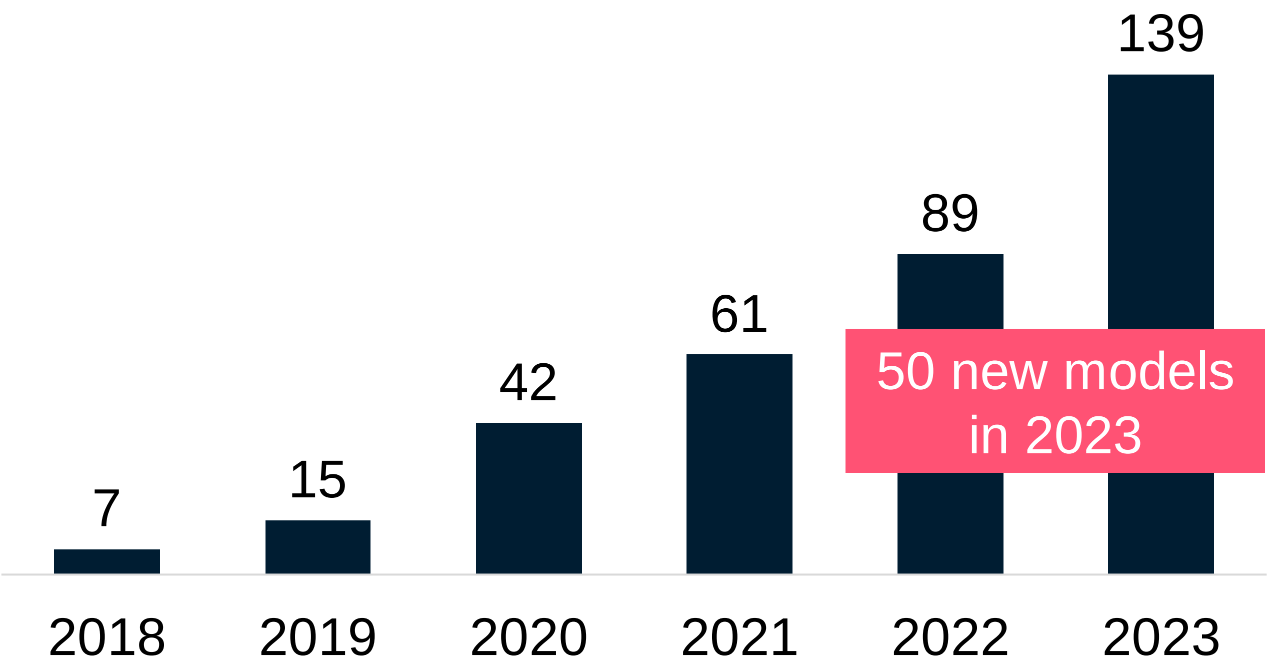
Source: GSMA Intelligence

GSMA Intelligence

eSIM availability in smartphones
Rising; eSIM-only iPhones in the US a major milestone

How many eSIM smartphones have been launched?

Number of models commercially available for purchase.
Cumulative figures



- **Doubling** over the last two years
- Most brands have launched eSIM. Apple, Samsung and Google leading, followed by Motorola
- Launches are accelerating. 5G and eSIM get together
- eSIM-only iPhones in the US a major milestone (Sept. 2022)
- More work to do: eSIM is mainstream in flagship smartphones. Expanding availability of eSIM beyond flagships

GSMA Intelligence

Source: GSMA Intelligence

eSIM in smartphones
OEMs have taken different approaches to eSIM so far

Four different routes

eSIM in smartphones: levels of embracement by OEMs (from lowest to highest)

- eSIM-only models — e.g. Apple in the US
- eSIM in all models — e.g. Google, Apple
- eSIM in some models — e.g. Samsung, Xiaomi, ZTE Motorola, Vivo, Huawei, Oppo
- No eSIM models

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- Good to see progress

BUT…

- OEMs taking four different routes creates confusion, and it doesn't help drive eSIM adoption at scale
- Greater embracement of eSIM is needed

Source: GSMA Intelligence

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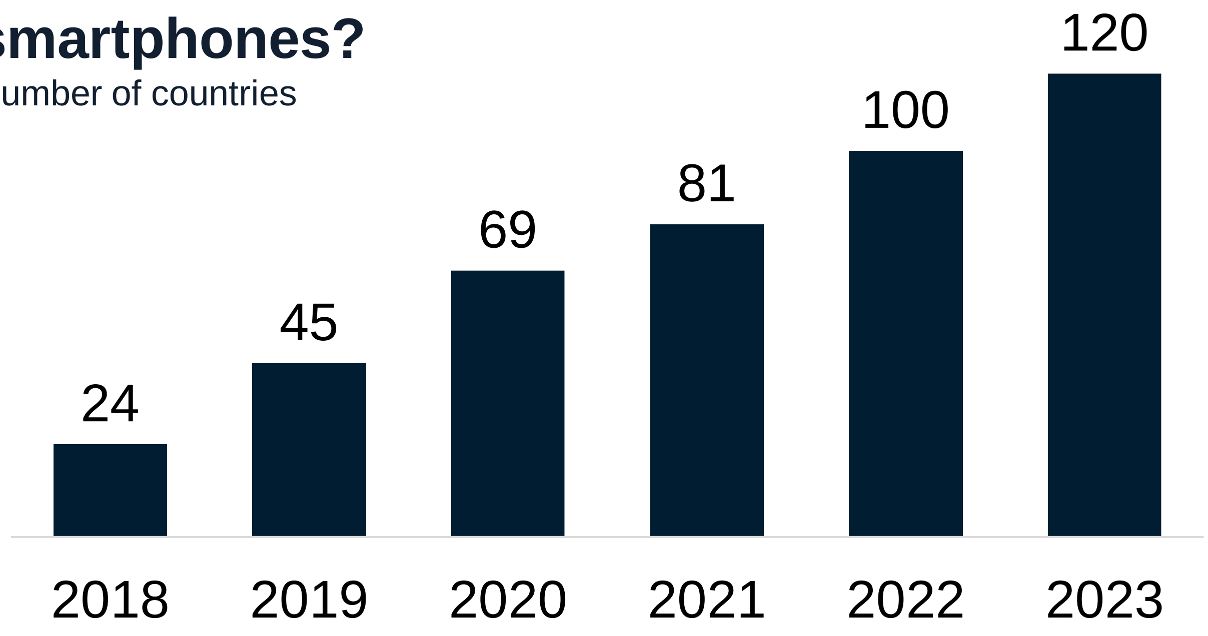
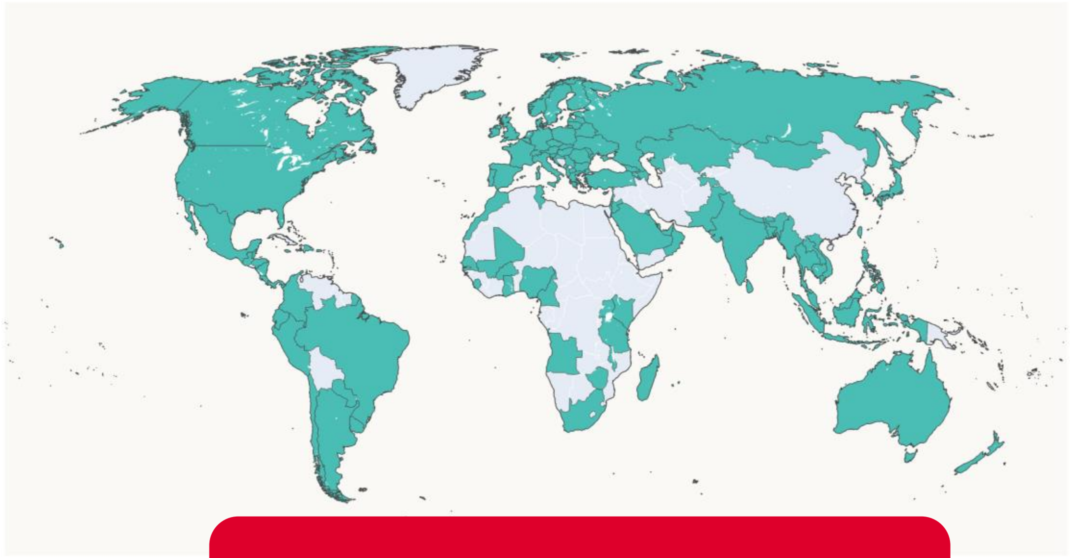
eSIM service for smartphone is now global
Half of the world's countries have launched eSIM

How many countries have launched commercial eSIM service for smartphones?
Number of countries



eSIM geographical reach



Excluding eSIM for international roaming

- China is still a notable exception: timelines are unclear
- Africa is catching up: most of the 20 new launches in 2023 were in countries from Africa

Source: GSMA Intelligence

New business models are emerging
Centred on digital & capitalising on the shift to digital

A range of operators have launched digital-first or digital-only consumer propositions, (including digital brands) targeting digital native and tech-savvy customers

Leveraging eSIM as a main connectivity form factor

Digital brands

Some examples

- **Visible (US)**
- **Fizz (Canada)**
- **Telia Dot (Finland)**
- **Yoodo (Malaysia)**
- **Win by inwi (Morocco)**
- **Source (France)**

Source: GSMA Intelligence

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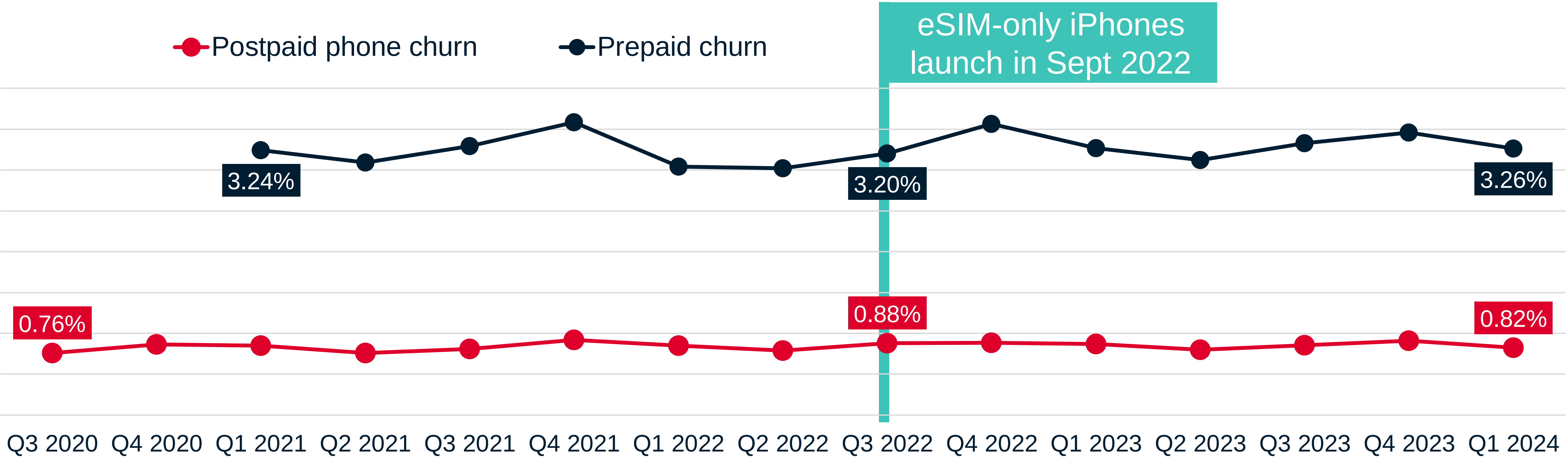
The mobile churn concern has no real evidence
Churn dynamics in the US: eSIM has had no impact

Why the US? It's (by far) the biggest eSIM smartphone market (~30% eSIM penetration)

- eSIM-only iPhones launch in Sept 2022 & Apple having ~half of the phone market



Source: MNO data and GSMA Intelligence. Average of AT&T, T-Mobile US and Verizon

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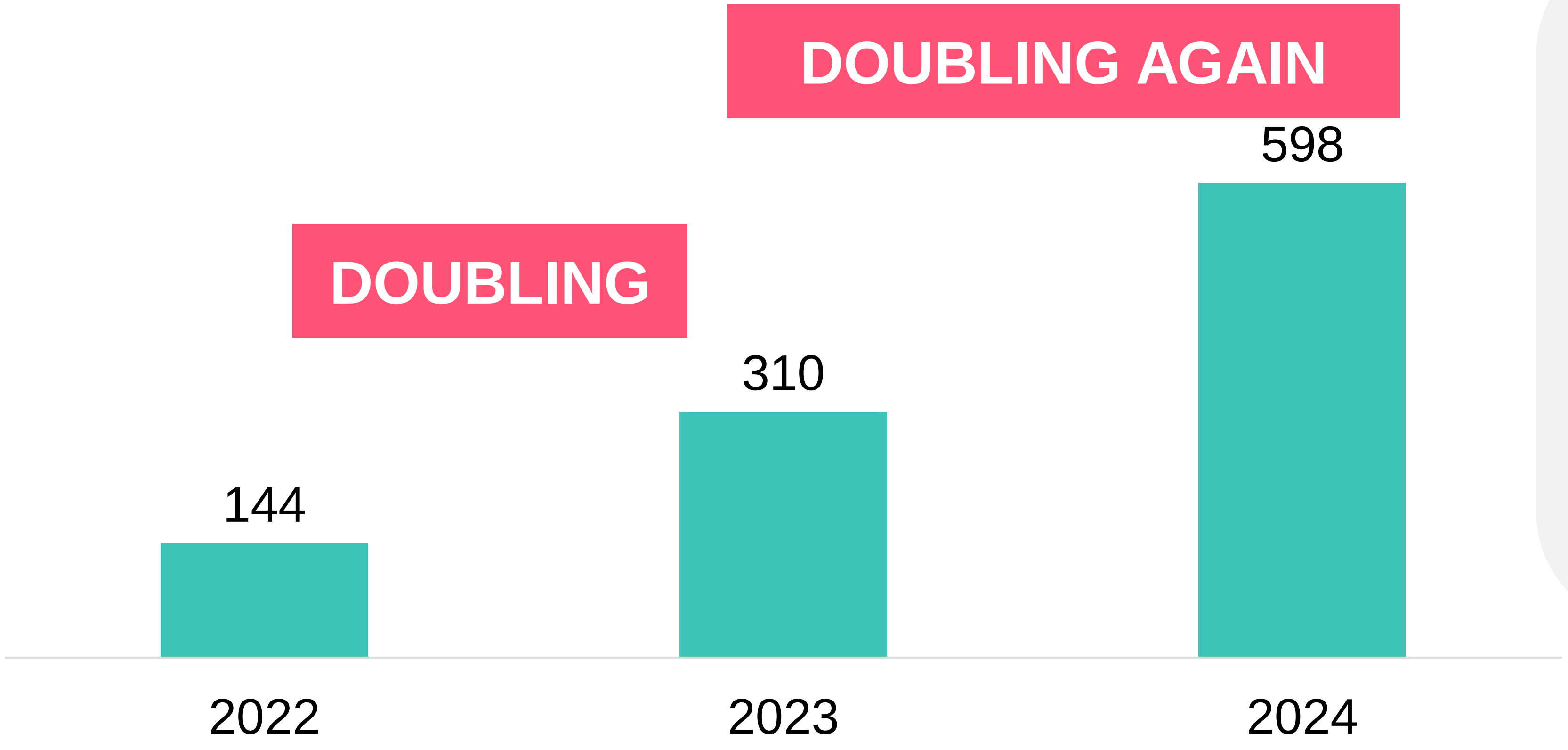
What about consumer adoption of eSIM?
eSIM smartphone connections doubling for two years!

Number of eSIM smartphone connections (installed base)

Million, globally



- The **US** is the largest driver of growth, accounting for ~25% of global eSIM smartphone connections (in 2024)
- **Europe** and **Asia-Pacific** follow

Source: GSMA Intelligence

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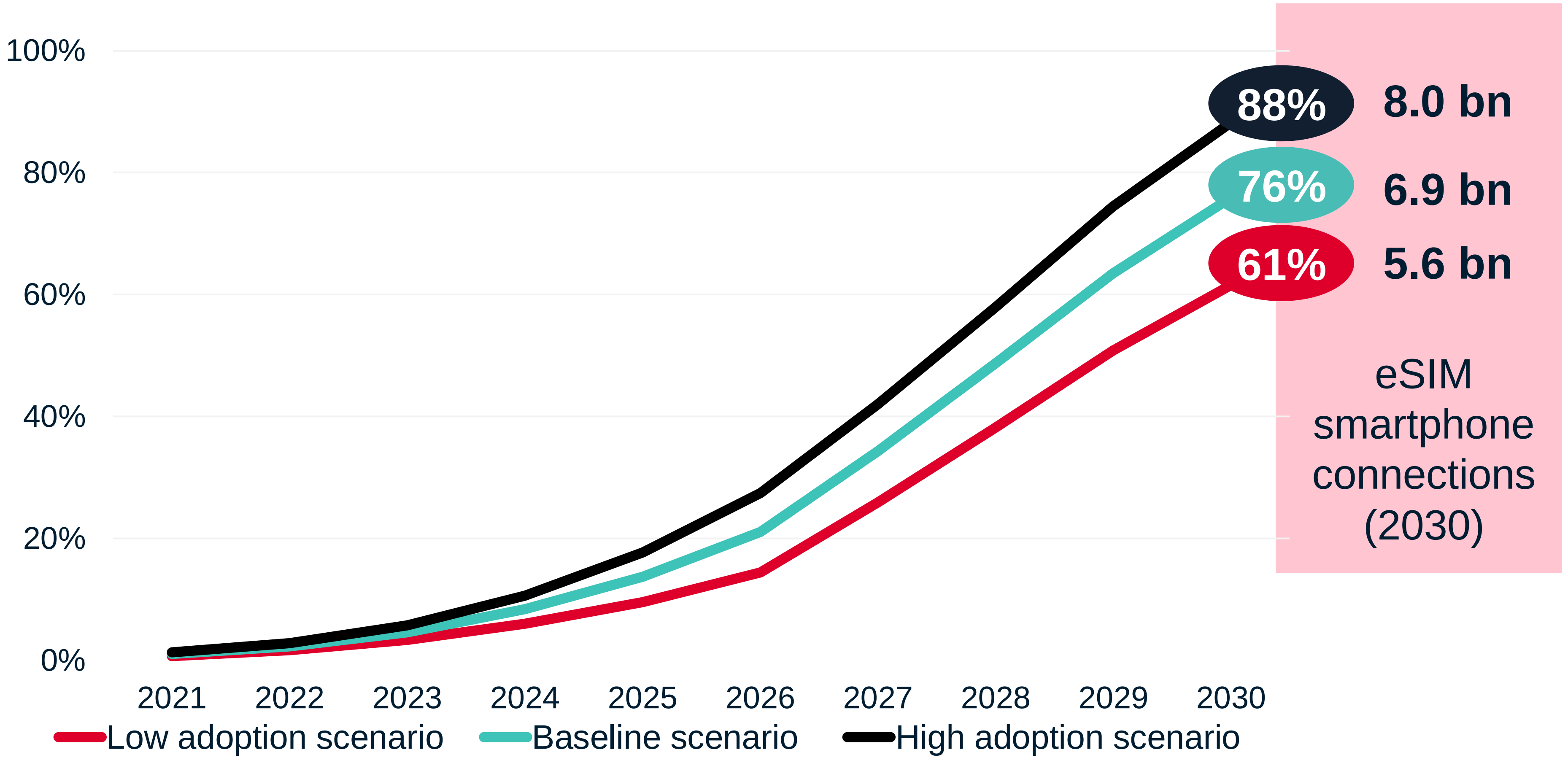
Long-term outlook for eSIM in the smartphone market
Consumer awareness grows, but adoption takes time

eSIM smartphone connections to 2030

Percentage of total smartphone connections (installed base) globally



Key milestones: Baseline scenario (globally)

1 billion eSIM smartphone connections by **2025**

By **2028**, **half** of smartphone connections will use eSIM

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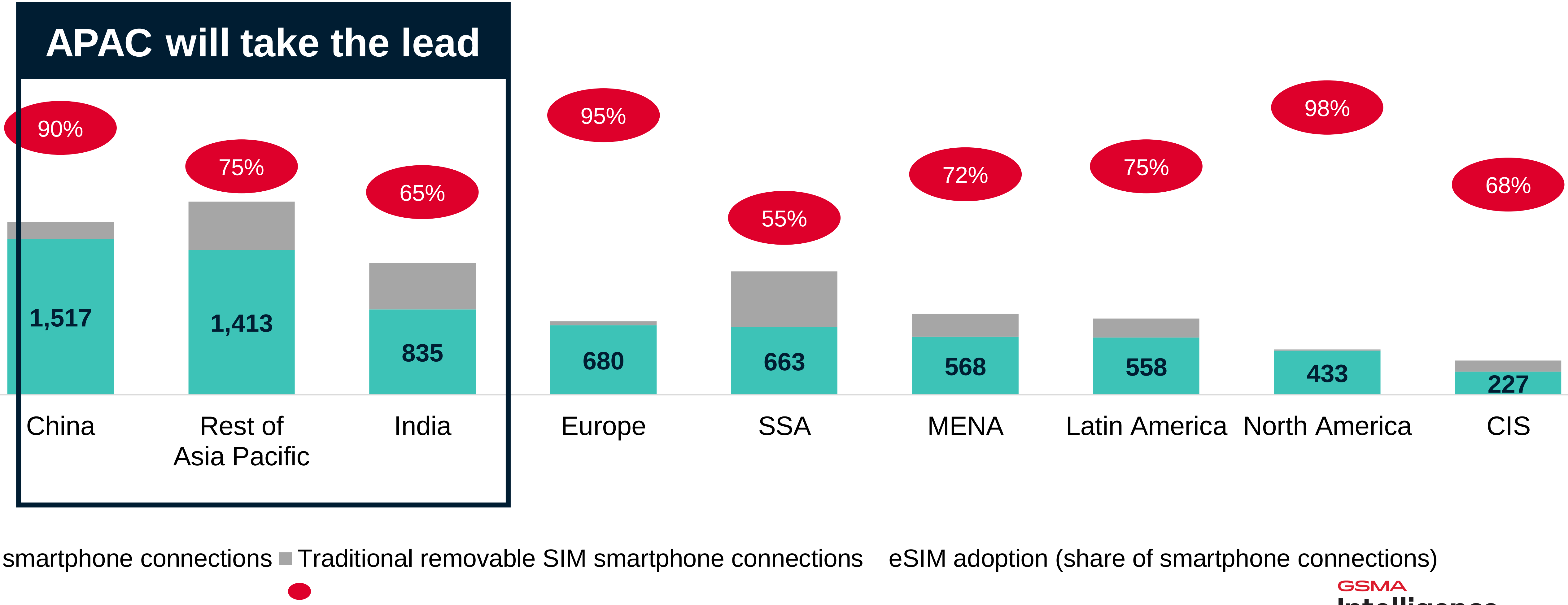
Source: GSMA Intelligence

eSIM adoption in the smartphone market
Speeds will vary by regions: APAC will take the lead

eSIM smartphone connections by region, 2030

Baseline scenario, installed base (million)



Source: GSMA Intelligence

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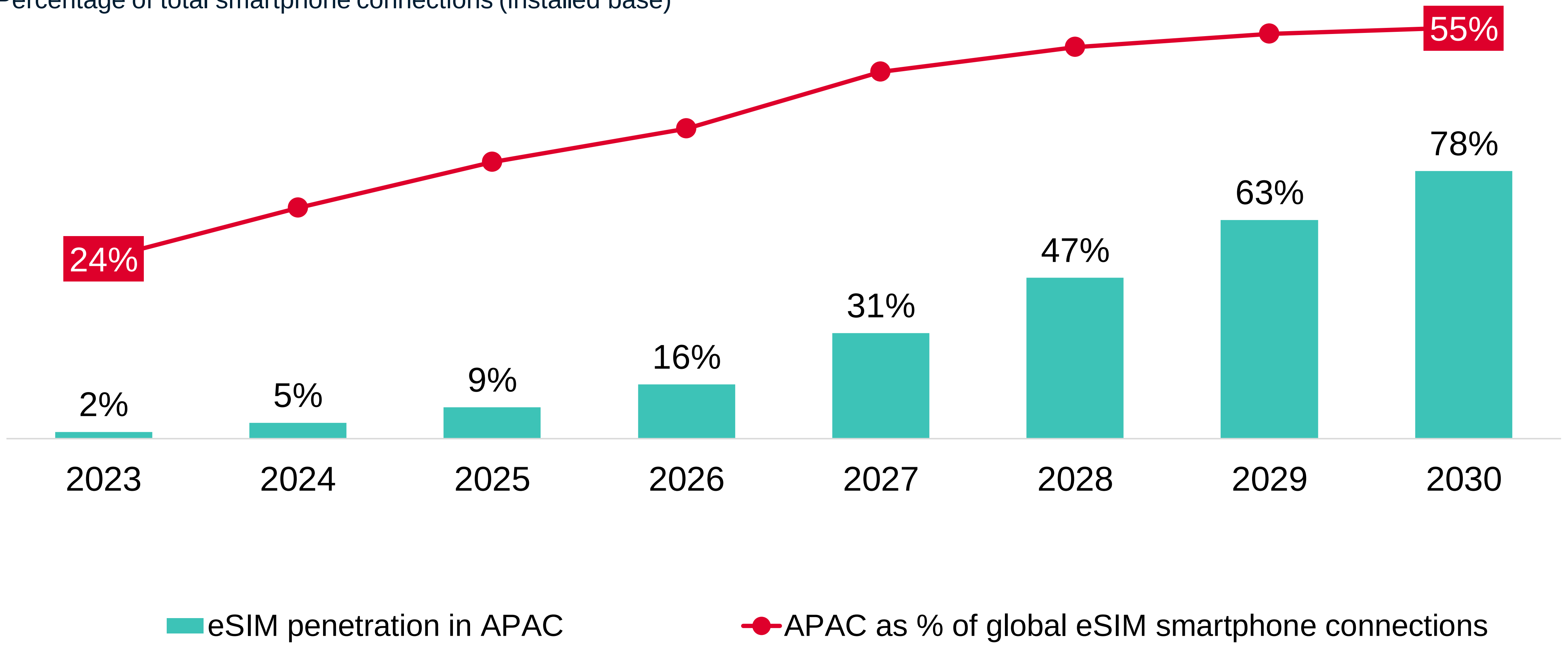
Asia-Pacific: eSIM adoption in the smartphone market
The region will have a growing role in driving eSIM

eSIM penetration in Asia-Pacific

Percentage of total smartphone connections (installed base)



Source: GSMA Intelligence

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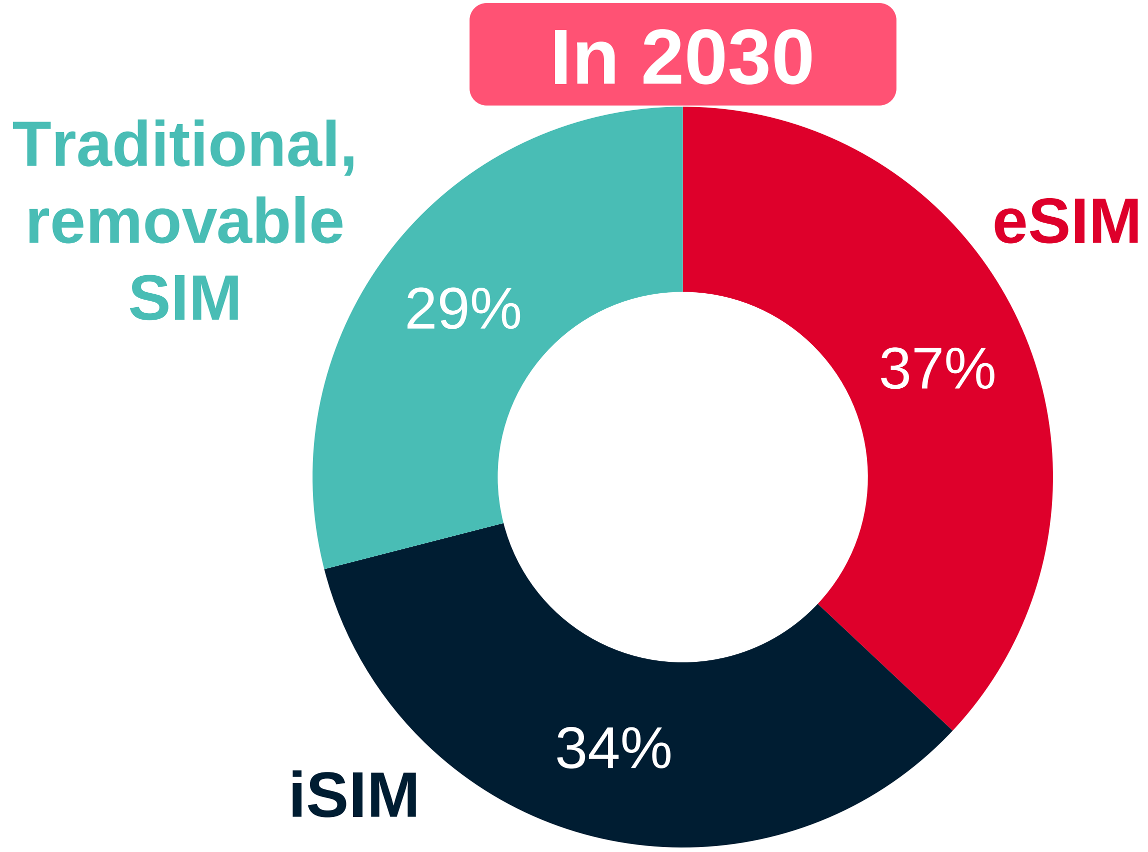
Operator expectations on eSIM & iSIM adoption
eSIM & iSIM capturing ~70% of the IoT cellular market

Operator views: Share of the total number of cellular IoT connections
Globally



- Today, a majority of cellular IoT devices use the traditional, removable SIM
- Our survey shows that operators expect eSIM and iSIM to account for a combined **71%** of the IoT cellular market by **2030**
- **eSIM versus iSIM is not an either/or scenario**; both are valid options that will coexist for years to meet the requirements of varied IoT use cases

Source: GSMA Intelligence Operators in Focus – Operator Enterprise Survey December 2023

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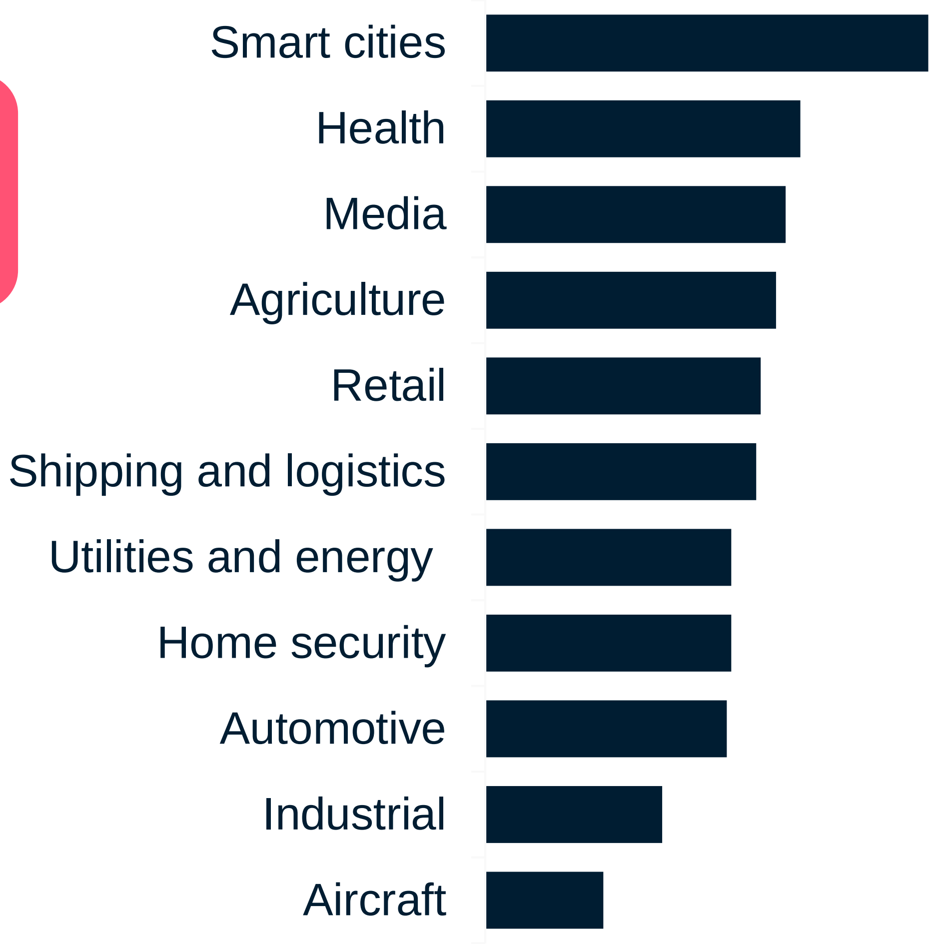
Operator expectations on eSIM demands by verticals
Seeking scale beyond automotive

Operator views: Demand for eSIM-enabled solutions from industry verticals

Globally.

In 2024-2025



- General consensus that enterprise demand for eSIM-enabled solutions will grow across **most industries**
- **Automotive** ranked lower (because eSIM is already mainstream!). Nevertheless, automotive will continue to lead in eSIM adoption while offering new business opportunities (e.g. contract renewals, use of dual-eSIM technology)
- **Smart cities leads expectations for growth**

Source: GSMA Intelligence Operators in Focus – Operator Enterprise Survey December 2023

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eSIM: key value-add elements for operators
Top eSIM benefits: best-in-class security & scalability

It is encouraging to see an alignment between the benefits of eSIM for IoT deployments expected by end-user enterprises and those promoted by operators –both centre on security and scalability

Operator views: benefits of eSIM for enterprise IoT deployments

Globally

Source: GSMA Intelligence Operators in Focus – Operator Enterprise Survey December 2023

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Understanding IoT deployment challenges is key
eSIM needs to help enterprises address key challenges

1

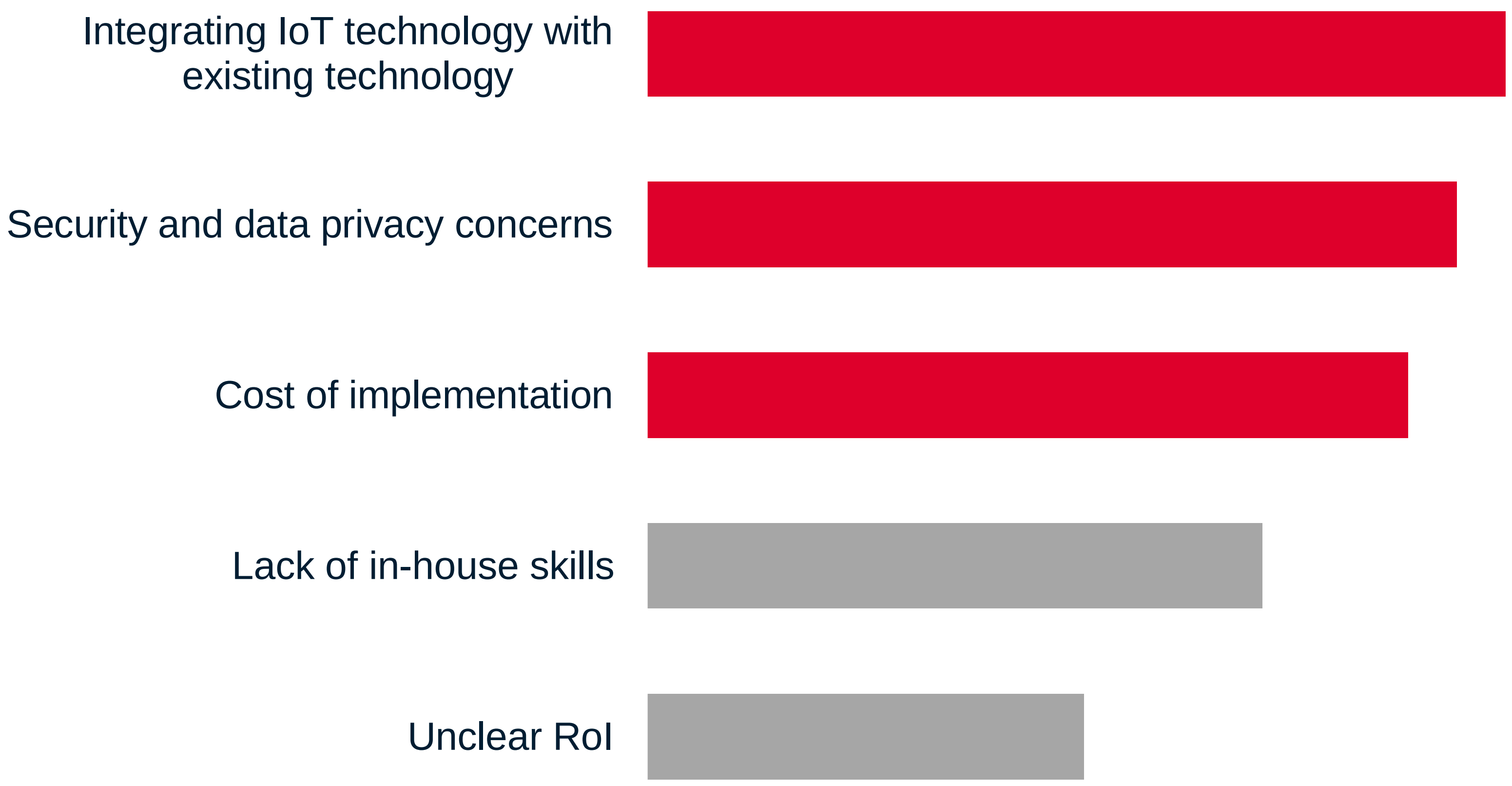
End-user enterprises have high awareness of eSIM

2

They believe eSIM is important to achieve success in IoT deployments

Top challenges faced by enterprises when deploying IoT solutions

Globally. Across most vertical sectors



Source: GSMA Intelligence Global Enterprise Survey. ~2900 enterprises across most vertical sectors

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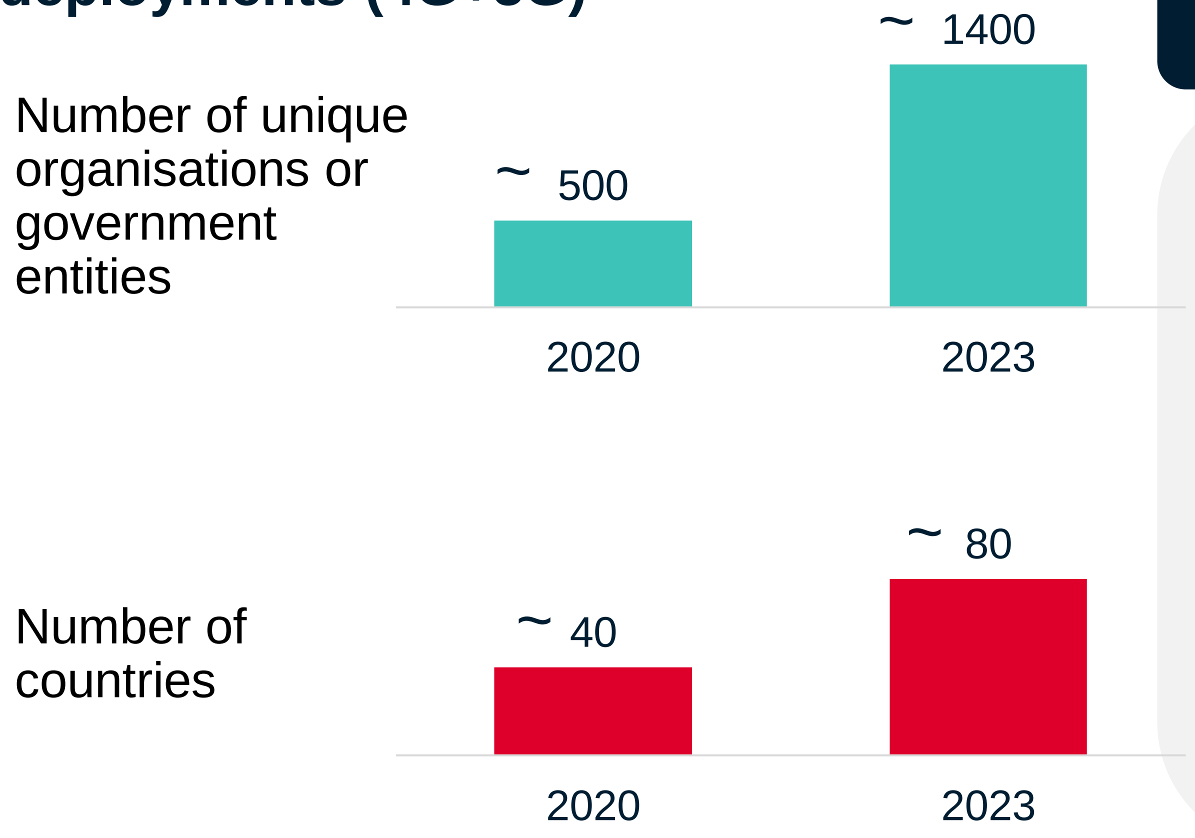
Private Wireless Networks
Momentum is accelerating: an opportunity for eSIM

Private Wireless Networks deployments (4G+5G)



Trends in Private Networks deployments

- 4G was the leading network in the early days; **5G has now taken the lead**
- **Industrial sectors lead** (e.g. manufacturing, mining)…but there are deployments in all sectors of the economy
- Deployments are mainly in the **developed world** so far, with the US, Germany, China, UK and Japan leading
- **Growing and diverse range of suppliers**

Source: GSA. GSA counts customer references as unique organisations or government entities deploying one or more 3GPP-based 4G LTE or 5G networks in a given country that are worth more than €100,000

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Scaling eSIM
Some of our recommendations

1. Help enterprise customers address their IoT pain points through eSIM
2. Understand what enterprises expect from eSIM
3. Leverage learnings from consumer eSIM
4. Full ecosystem alignment on specifications is crucial
5. eSIM versus iSIM is not an either-or scenario
6. Scaling up IoT services is the ultimate objective

Discover GSMA Intelligence Exclusive eSIM Bundle

1

Major Report

Accelerating eSIM globally: state of the consumer market, user behaviour and adoption growth scenarios

2

Major Report

eSIM vendors in focus: exploring views and expectations on eSIM in smartphones

3

Spotlight

Scaling eSIM in IoT markets: new tech and market developments should help accelerate adoption

4

Dashboard & Data

Consumer eSIM in Focus 2023: Consumer Behaviour, Devices and Services Launches, Adoption Forecast

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