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SHANGHAI
26 – 28 JUNE 2024
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eSIM Summit

A New Era of Innovation

MWC Shanghai

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eSIM Market: China and Beyond

eSIM 市場

Speaker

Chris Li,
Product Director,
GSMA

李浩然 GSMA 产品总监

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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

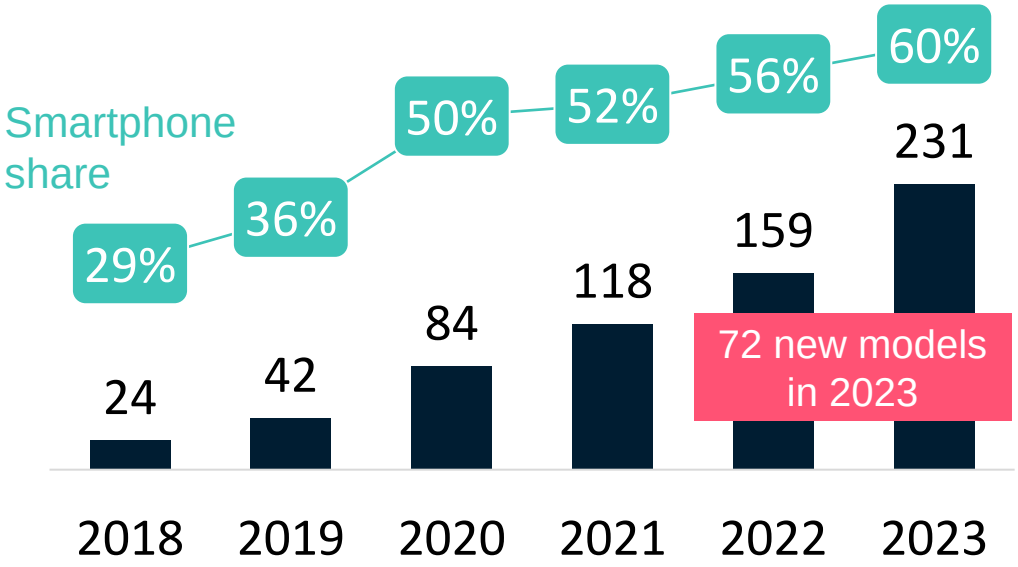
Connected vehicles
Drones
Smart meters
Security devices
GPS trackers
Healthcare devices
Security cameras
Wearables
Robots
Smartwatches
Street lighting

GSMA Intelligence

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

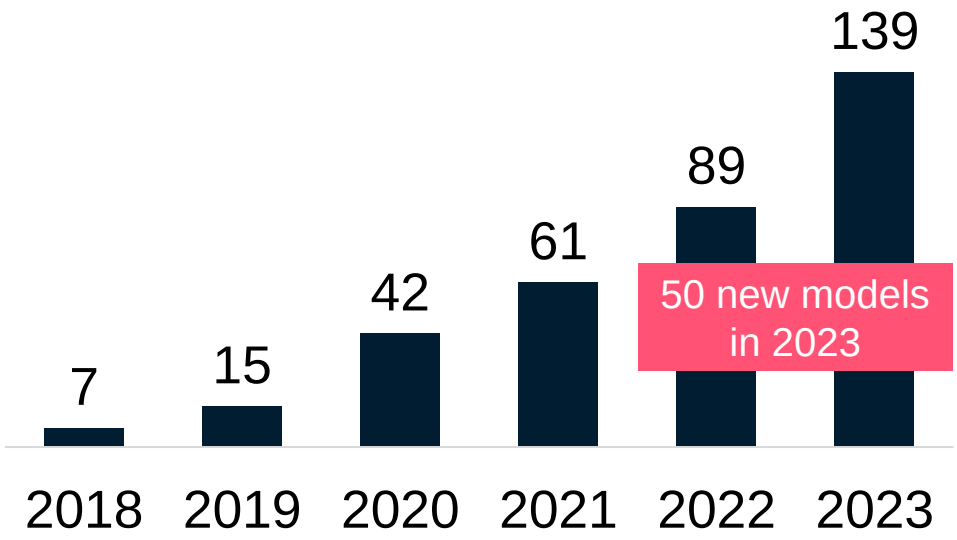
Source: GSMA Intelligence

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

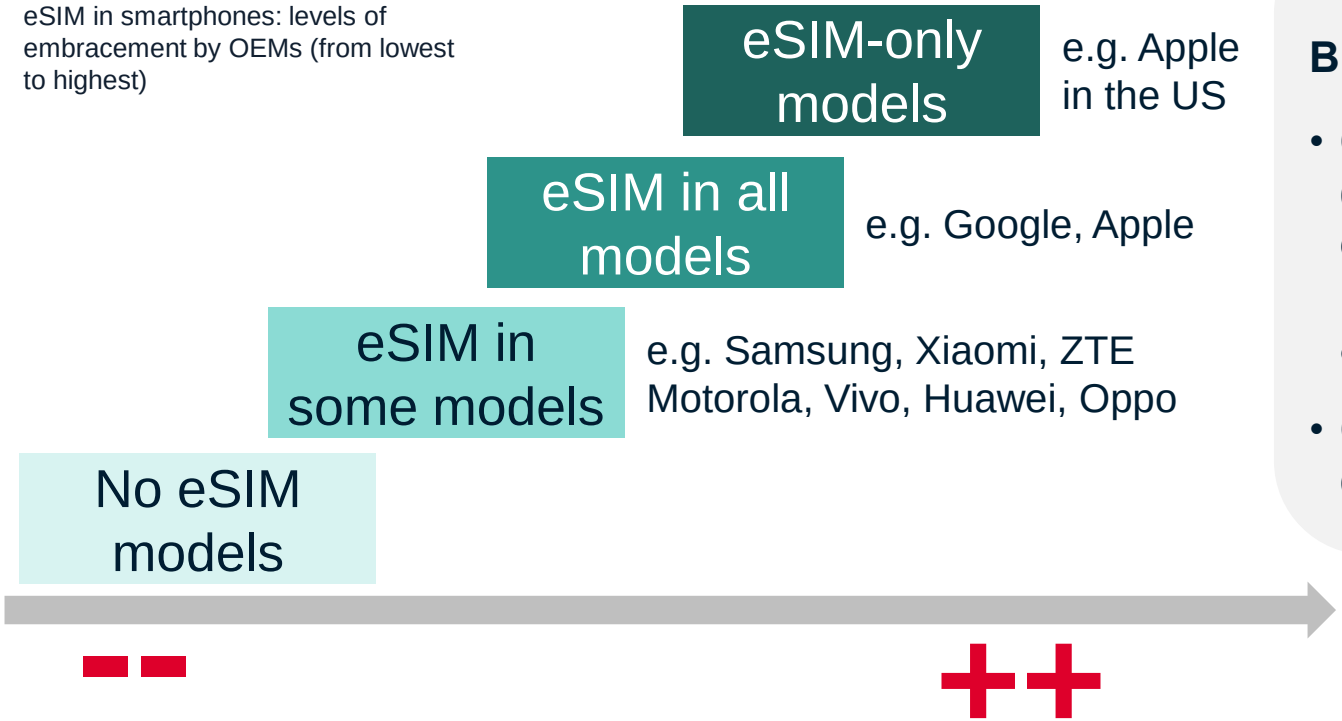
Source: GSMA Intelligence

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)



- 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

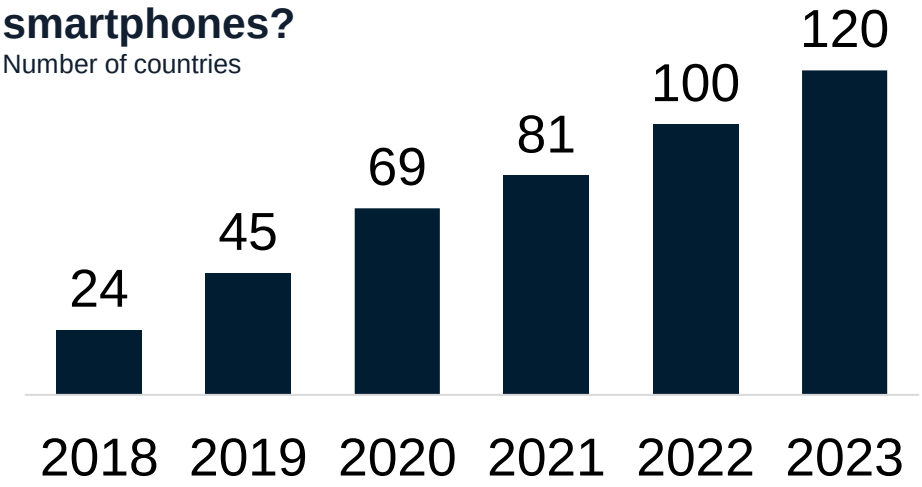
Source: GSMA Intelligence

GSMA Intelligence

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

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)**

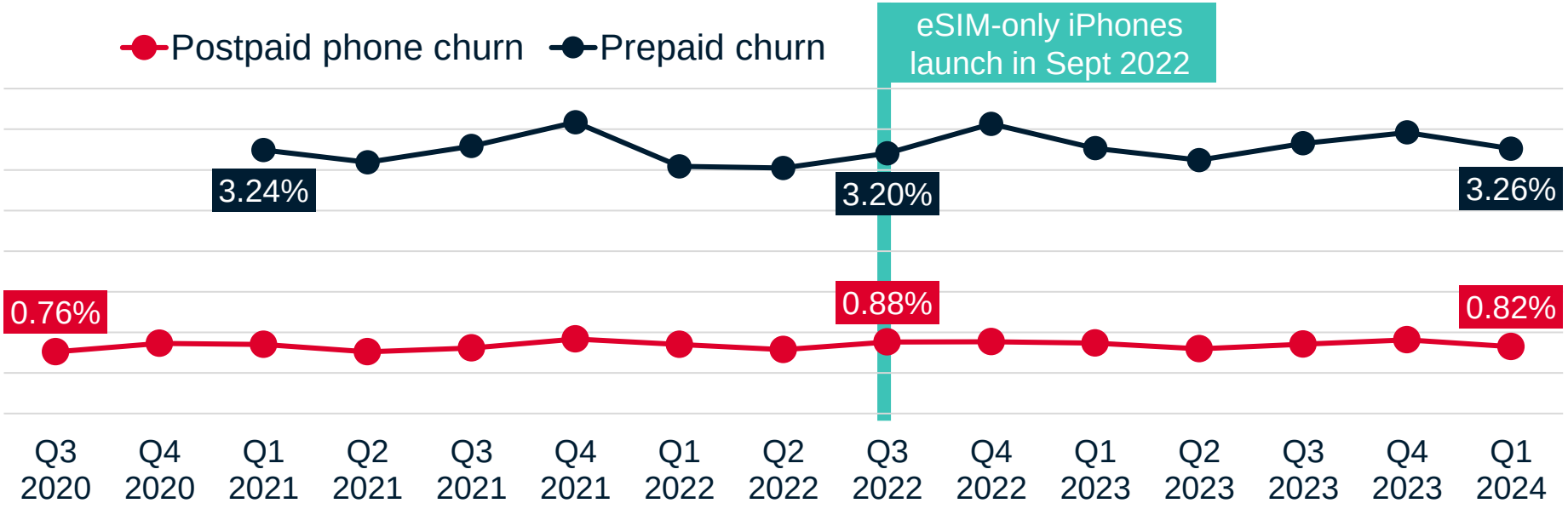
Source: GSMA Intelligence

GSMA Intelligence

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

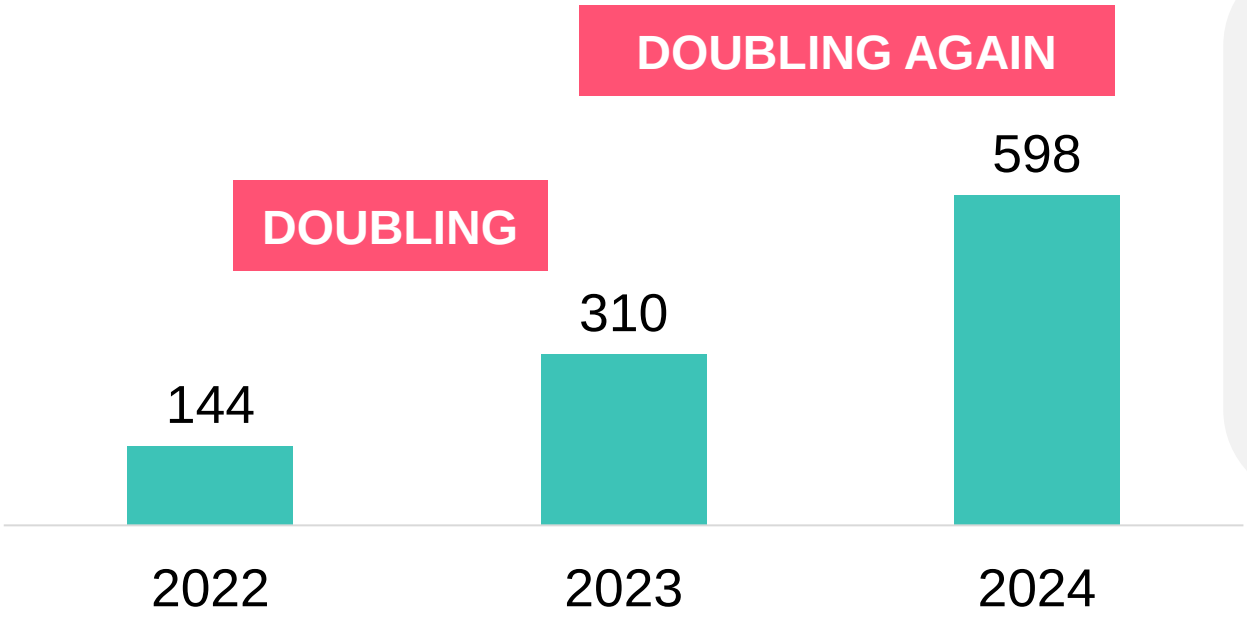


Source: MNO data and GSMA Intelligence. Average of AT&T, T-Mobile US and Verizon

GSMA Intelligence

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

Number of eSIM smartphone connections (installed base)
Million, globally



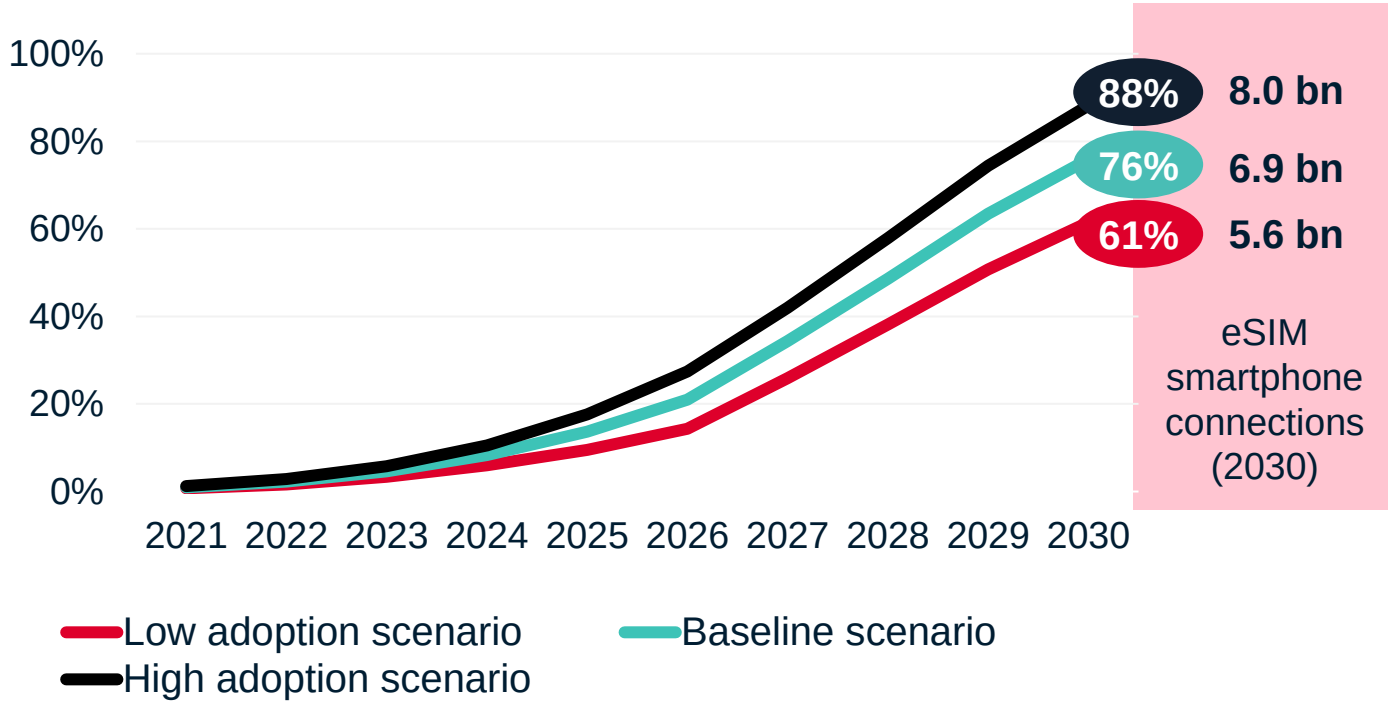
- The **US** is the largest driver of growth, accounting for ~25% of global eSIM smartphone connections (in 2024)
- **Europe** and **Asia-Pacific** follow

Source: GSMA Intelligence

GSMA Intelligence

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

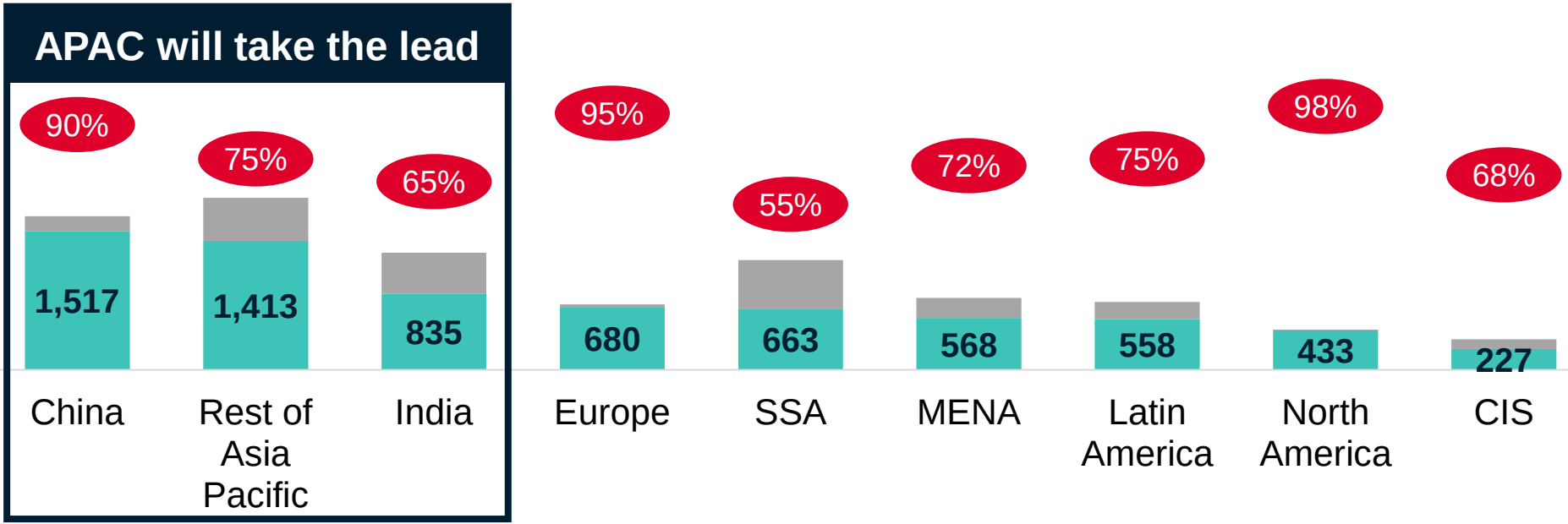
Source: GSMA Intelligence

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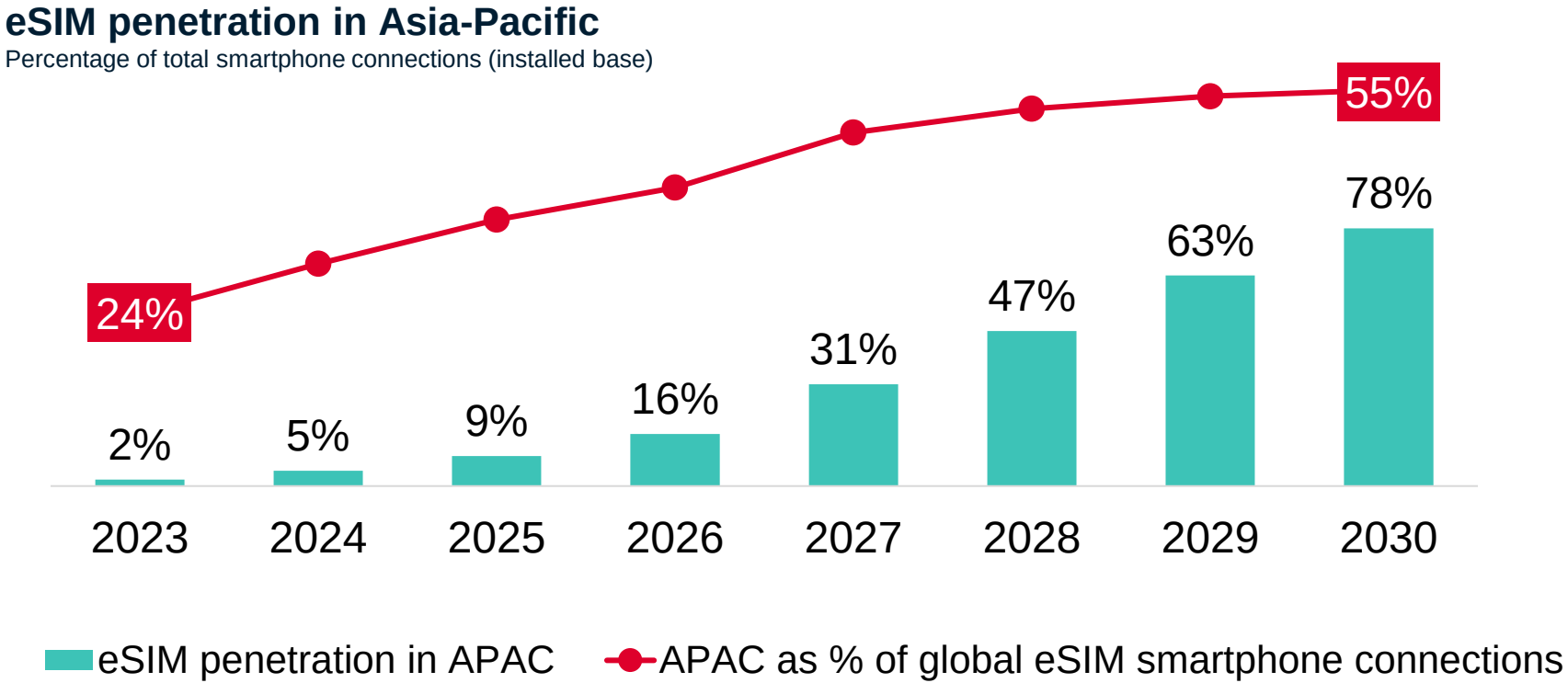
Asia-Pacific: eSIM adoption in the smartphone market
The region will have a growing role in driving eSIM



Source: GSMA Intelligence

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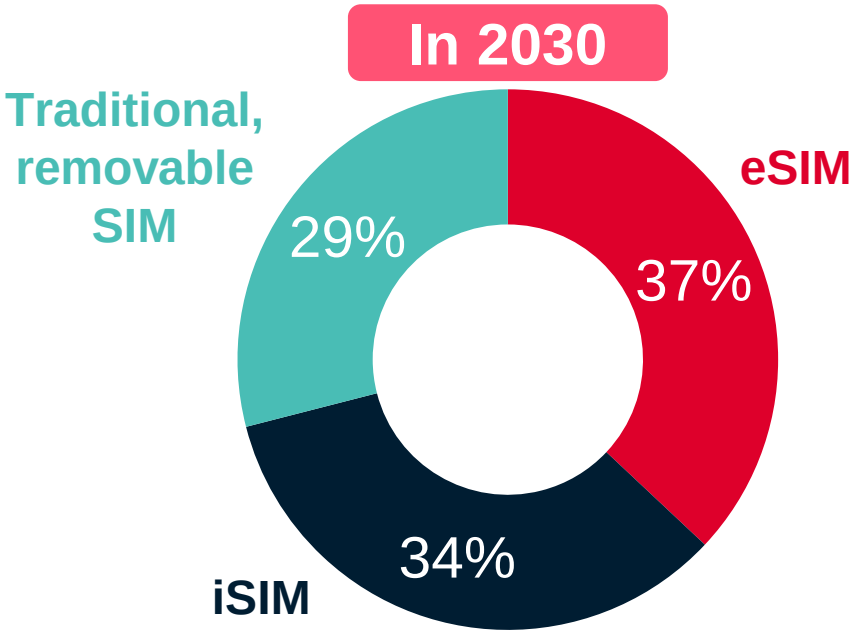
Operator expectations on eSIM & iSIM adoption
eSIM & iSIM capturing ~70% of the IoT cellular market

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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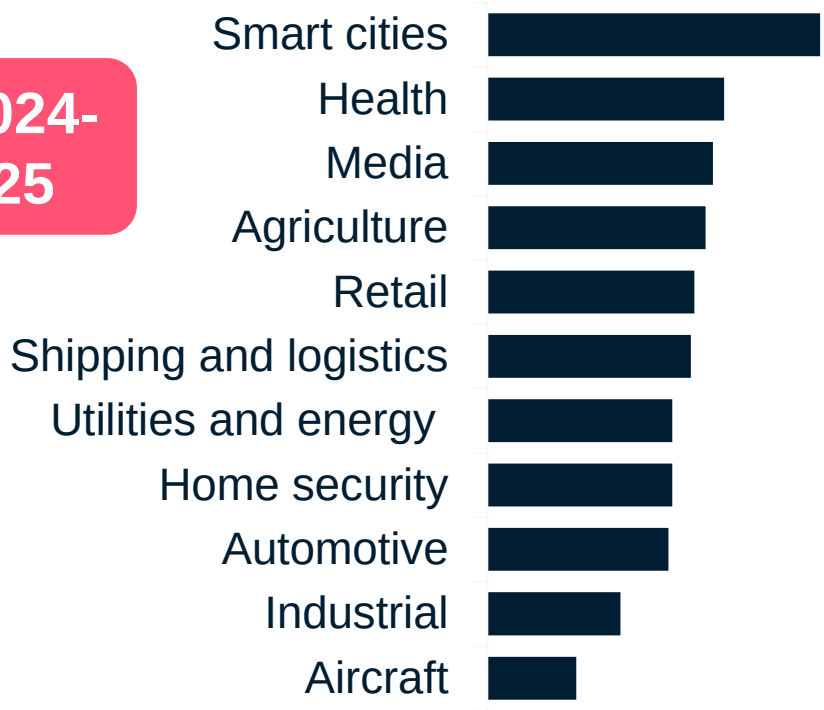
Operator expectations on eSIM demands by verticals
Seeking scale beyond automotive

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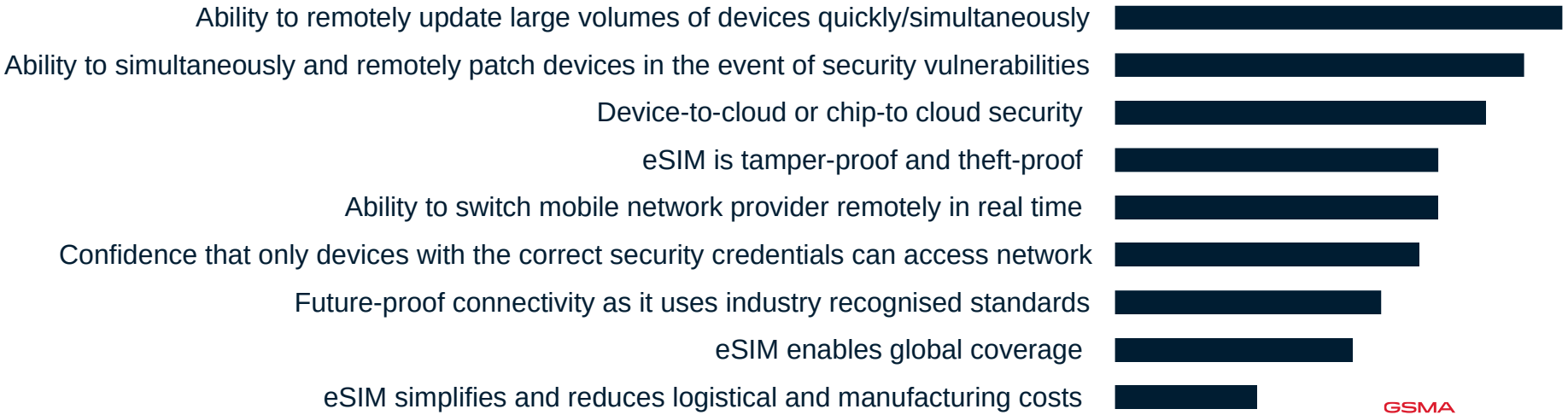
eSIM: key value-add elements for operators
Top eSIM benefits: best-in-class security & scalability

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

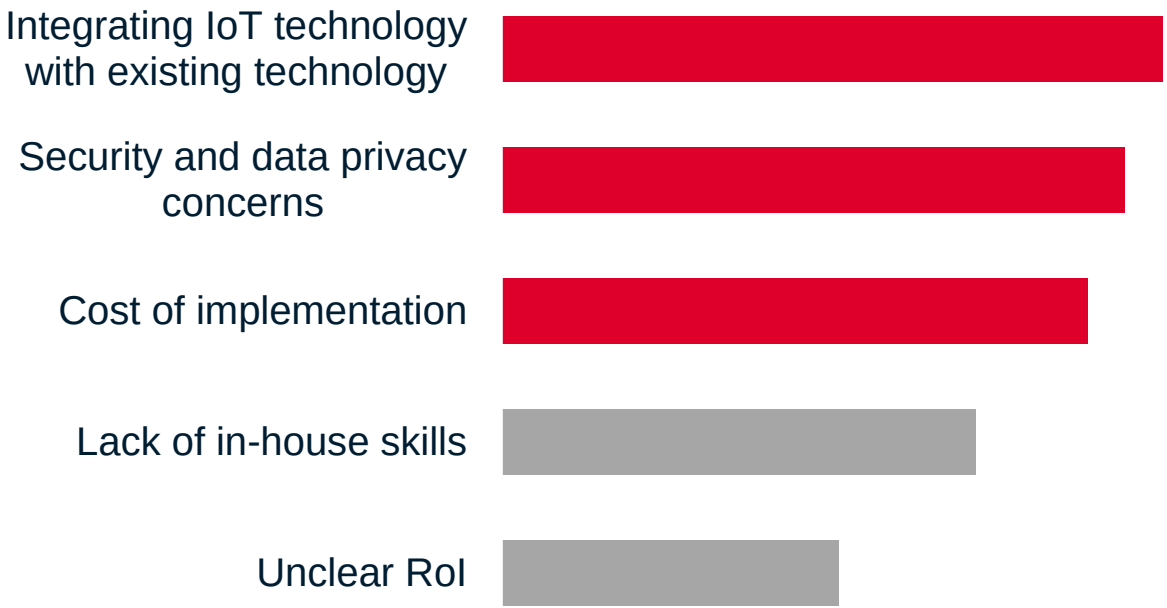
End-user enterprises have high awareness of eSIM

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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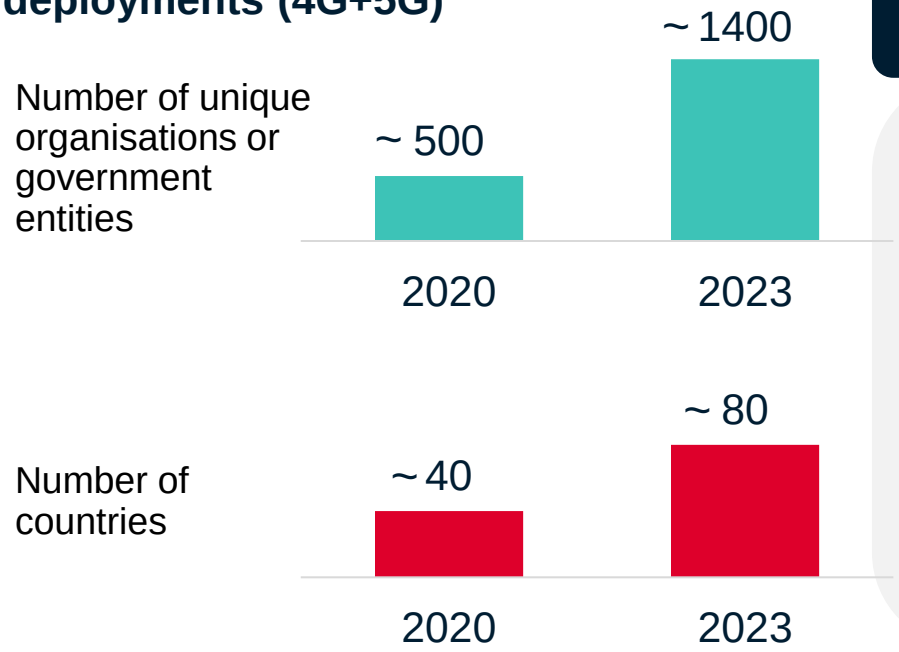
Private Wireless Networks
Momentum is accelerating: an opportunity for eSIM

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

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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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About GSMA Intelligence

info@gsmaintelligence.com

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GSMA eSIM Services
GSMA eSIM 服务

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GSMA Working Group

Specification Readiness

GSMA eSIM Consumer Readiness

eSIM Consumer Technical Specification (SGP.22) v3.1
→ Published October 2023

eSIM Consumer Test and Compliance Specifications SGP.23 and SGP.24
→ October 2024

GSMA eSIM Consumer Compliance Products v3.1
→ October 2024 or later

GSMA eSIM IoT Readiness

eSIM IoT Technical Specification (SGP.32) v1.2
→ June 2024

eSIM IoT Test and Compliance Specifications - SGP.33 and SGP.24
→ Target October 2024

GSMA eSIM IoT Compliance Products v1.2
→ October 2024 or later

Last Update 12 Jun 2024 before eSIMG#46

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Evolution

Consumer

Profile Extended Storage on the Device

eSIM Secure Profile Export – Study Report

Activation Code Retrieval

IoT

Multiple Active Profiles

Local Enabled Profile

Consumer and IoT

Post Quantum Cryptography for eSIM Consumer and IoT – Study Report

In Factory Provisioning

Last Update 12 Jun 2024 before eSIMG#46

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Together with our members, we make connectivity work for all

- Engineering the future of connectivity
- Enhancing your profile across the ecosystem
- Advancing policy and regulatory priorities
- Supporting the global ecosystem
- Delivering industry services, intelligence and training

Join us at the GSMA Pavilion, N3.B70

gsma.com/membership

Find out more

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GSMA eSIM Service – Bridging the World

00 Month 24

GSMA Industry Services for the eSIM ecosystem

eUICC Identity Scheme

This global eSIM identification system is made to work for all – as requested by the industry. So finally, manufacturers can allocate their own eUICC identification numbers (eIDs).

eUICC Security Assurance

The global security scheme for eUICC software security – building trust into the future of mobile.

Security Accreditation Scheme

The global security scheme for SIM production and subscription management suppliers that builds industry-wide trust, to protect customers.

eSIM Discovery

Adopt the industry-standard, universally recognised method for fully digital remote eSIM provisioning, allowing customers to activate their eSIM devices more quickly and easily.

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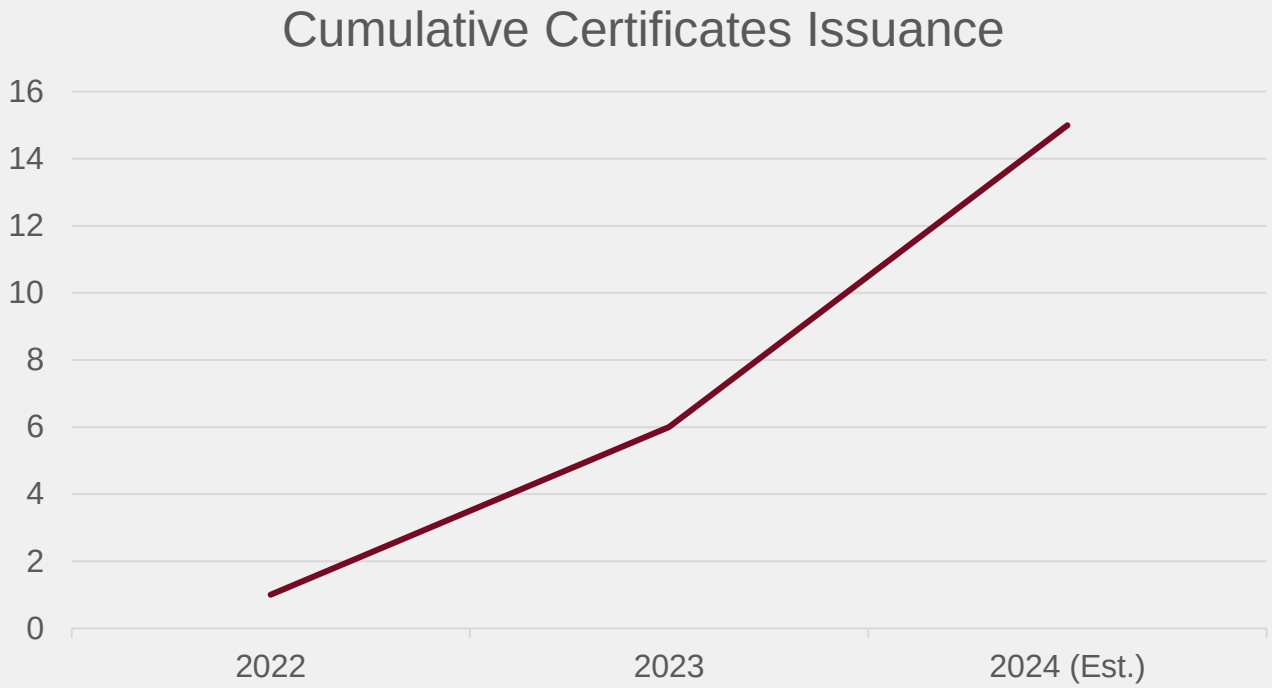
eUICC Security Assurance



The choice by eUICC manufacturer to review software

Source: GSMA eUICC Security Assurance, June 2024

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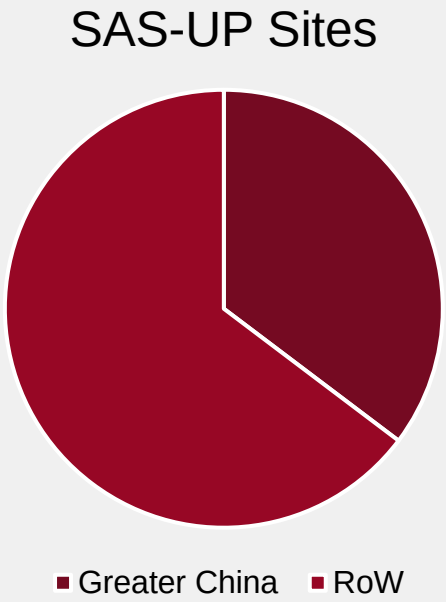
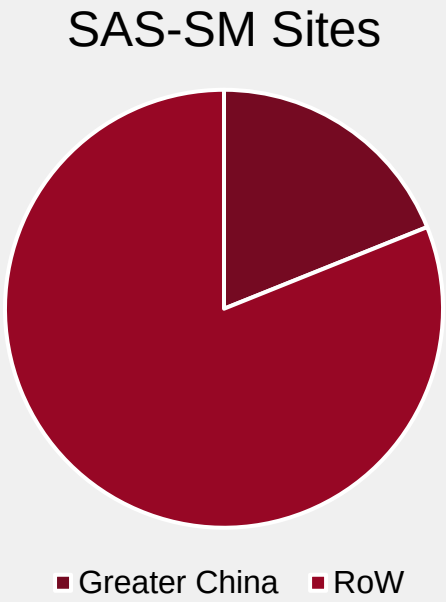
SAS – ensure secure production and operation





Source: GSMA SAS, June 2024

Streamline eSIM Activation with eSIM Discovery

12

eSIM Discovery Providers

50+

MNO Account from 30+ countries

240+

Device Models from 40 OEMs

130M+

unique devices since 2020

Source: GSMA eSIM Discovery, June 2024

Streamline eSIM Activation with eSIM Discovery

1GLOBAL	Eastcom Peace	Giesecke+Devrient
Idemia	Invigo	Kigen
Linksfield	Redtea Mobile	Teal Communications
Thales	Workz	XH Smart Tech

GSMA

Get in touch

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Product Director

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Outreach Director

GSMA

Shape tomorrow with AI, Uni-communication via eSIM

AI构建未来，eSIM联通无限

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Speaker

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邹重人 紫光同芯微电子有限公司 常务副总裁

中国联通 30 百年传承 三十向新

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AI构建未来 eSIM联通无限

陈丰伟

中国联通 2024年6月

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无AI 不终端

用AI把智能终端重新做一遍

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终端的AI AI的终端

三星

Galaxy AI功能

苹果智能

Apple Intelligence的套件

华为

HarmonyOS NEXT鸿蒙星河版
与盘古大模型5.0

三星“智能戒指”

戒指形态的健康追踪可穿戴设备

AI Pin

颠覆传统、无需屏幕的可穿戴设备

Rabbit R1

陪伴性质的AI伴侣

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无蜂窝 不AI

“失网” 就是“失智”

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AI对连接需求极大增强

云端大模型

（算力与端侧）

本地大模型

（端侧与交互实现）

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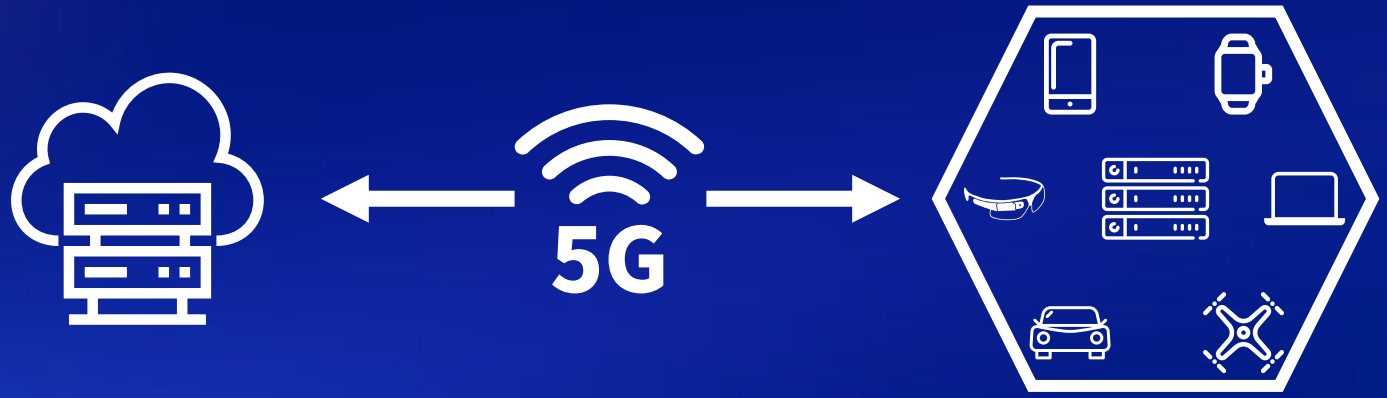
5G是实现全时连接的基本保障



云端算力

终端AI应用

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无eSIM 不蜂窝

终端卡槽“终有一别”

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eSIM是发展趋势

终端产业

节省成本 — 全球产品版本一致

形态精致 — 集成度更高

实现领先 — eSIM国际趋势

用户

节省时间 — “空中发卡”全新体验

安全保障 — 网络级加密、定位

自由选择 — 开关、换号方便

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联通是国内eSIM最全应用领域资质的运营商

可穿戴

2018年首发一号双

70余款可穿戴产品

手表、智能眼镜、手机壳

平板和PC

2023.10 eSIM iPad 10

2024.5 eSIM iPad air、iPad Pro

物联网

自研CPE、定位器

电力、无人机、汽车

中国联通 30 百年传承 三十向新

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联通eSIM管理体系保障业务行稳致远

eSIM管理平台	CA安全证书	eUICC管理	eSIM终端管理	eSIM业务管理
首个自研DP+平台	官方认可	供应商评审	终端测试	业务受理流程
消费电子 SGP.22 V 2.5	证书互认	安全保障协议	业务调试	符合安全要求
IoT SGP.32 V 1.0	一个证书通全国	eUICC测试	功能验证	流程持续优化

中国联通 30 百年传承 三十向新

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中国联通eSIM产业合作计划

技术支持

- eSIM LPA 开源方案
- 解决方案

合作对接

- 一站式对接
- 优先入库

专属支持

- 资费政策
- 万店营销

共建eSIM产业生态
共赢终端行业未来

终端

芯片模组

eUICC

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eSIM+AI

珠联璧合，天生一对


中国联通
30
百年传承
三十向新
CUPC 24
向新同行 共创智能新时代
中国联通合作伙伴大会欢迎您
2024年7月19-20日 上海
AI

中国联通 China unicom

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AI构建未来，eSIM联通无限

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TMC, a global practitioner of commercial innovation solutions and best practices

全球领先的安全芯片供应商
Leading Global Provider of Security Chips

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We are TongxinMicro from China.

源于清华大学

From Tsinghua University

eSIM 一芯通全球

One Chip One World

适配全球移动终端的eSIM解决方案已实现商用

The eSIM solution tailored for global mobile devices has been launched commercially


中国联通
China unicom
紫光同芯
TONGXIN MICRO
One Chip, One World

更自由，更安全
More Freedom, More Security

中国联通 China unicom

紫光同芯 TONGXIN MICRO

国产智联
双元跃迁

AI & eSIM

一体两翼
缺一不可

eSIM & 安全应用
eSIM&Security application

安全能力
与生俱来

国产eSIM
Domestic eSIM

安全护航
智联世界

适配全球移动终端的eSIM
eSIM adapted global Terminals

TMC eSIM全球商用
TMC eSIM for Global Commercial Use

中国联通 China unicom | 紫光同芯 TONGXIN MICRO

eSIM WLCSP封装国内率先商用
First commercial use of eSIM WLCSP package in China

GSMA SAS-UP Wafer个人化国内率先商用
First commercial use of Wafer perso in China

全球多国覆盖
Covering multiple MNOs worldwide

支持多网络制式
Support Multiple Network Types

TMC eSIM解决方案在移动终端设备上全球商用
The TMC eSIM solution is globally commercially available on mobile terminal devices.

2024国产eSIM全球商用元年
2024 marks the first year of global commercial use of domestically produced eSIMs

全球商用难点
Challenges in Global Commercial Use

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海外运营商覆盖
MNOs Coverage in Oversea

SM-DP+非标准协议·
运营商更新Profile·

终端适配
Terminals Adaptation

不同终端操作系统·
不同LPA版本·

WLCSP封装
WLCSP Package

·生产流程控制
·可靠性

个性化需求
Customized Requirements

·定制eID
·预制profile管理
·eSIM COS更新

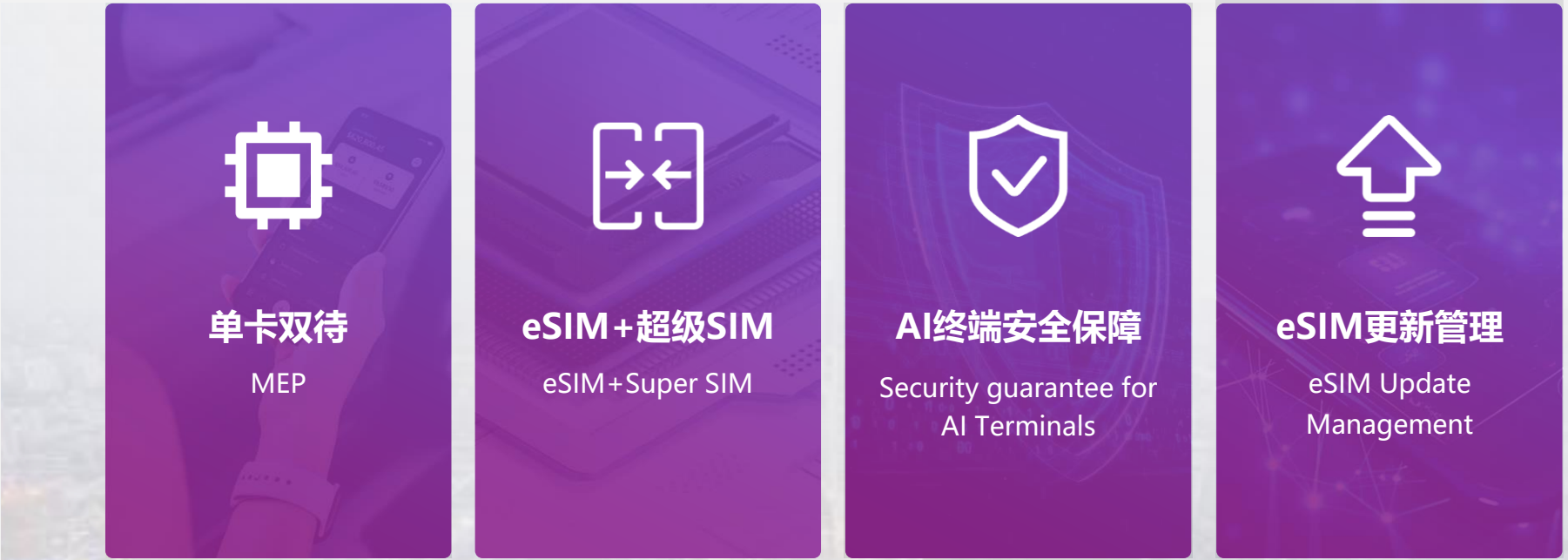
产品 Product

18个月 18 Months

商用 Commercial Use

持续创新
Continuous Innovations

中国联通 China unicom | 紫光同芯 TONGXIN MICRO



单卡双待
MEP

eSIM+超级SIM
eSIM+Super SIM

AI终端安全保障
Security guarantee for AI Terminals

eSIM更新管理
eSIM Update Management

5G eSIM联合实验室
5G eSIM Joint Laboratory

中国联通 China unicom

紫光同芯 TONGXIN MICRO

产品质量提升

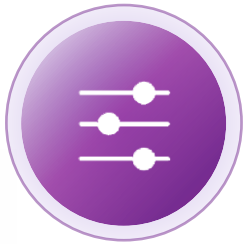
Improving Product Quality

产品创新方案

Innovative Schemes

拓展使用场景

Expanding Scenarios of Use



推进试点进程

Advancing the Pilot Process

中国联通 China unicom

紫光同芯 TONGXIN MICRO

THANKS

科技之光照亮幸福生活

THE LIGHT OF SCIENCE AND TECHNOLOGY BRIGHTENS HUMAN LIFE

GSMA

Panellist Discussion

嘉宾讨论

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Speaker

Guo Lin,
Vice Director,
CAICT CTTL-Terminals
郭琳 中国信通院泰尔终端实验室副主任

Speaker

Chen Fengwei,
Deputy General Manager
Unicom VSENS Communications Co., Ltd.
陈丰伟 联通华盛通信有限公司副总经理

Speaker

John Zou
EVP of
Tongxin Microelectronics Co., Ltd.
邹重人 紫光同芯微电子有限公司常务副总裁

GSMA

CaaS 2.0: Ubiquitous Connectivity and its Implications for Made-in-China.

泛在连接：赋能中国制造出海

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Speaker

Dr. Jin Hui,
CEO & Co-founder,
Redtea Mobile

金辉 博士 红茶移动CEO兼联合创始人

Hosted @ MWC GSMA

RedteaMobile

泛在连接：赋能中国制造出海

CaaS 2.0: Ubiquitous Connectivity and its Implications for Made-in-China

金辉 博士
Hui Jin, Ph.D.
CEO & Co-founder, Redtea Mobile

Simplify Connectivity for a More Productive World

5 years, 「CaaS 1.0」 >> 「CaaS 2.0」

2019

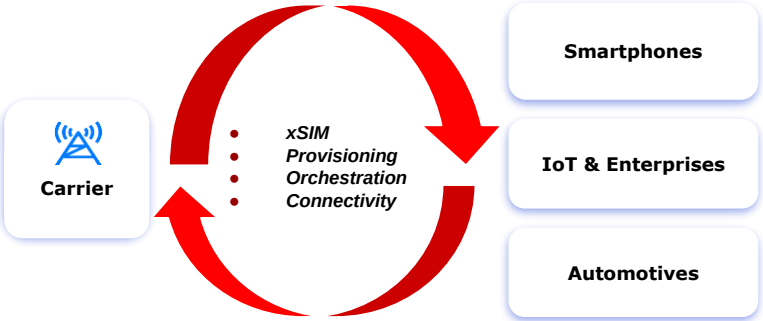
- ***CaaS 1.0 - Connectivity as a Service (CaaS) - the Next Paradigm***

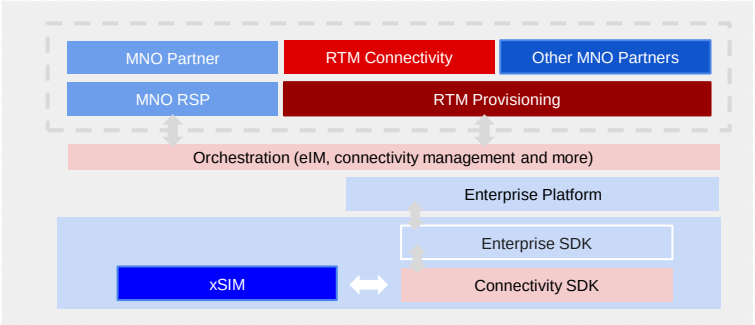
2024

- ***CaaS 2.0 - Ubiquitous Connectivity and its Implications for made-in-China.***

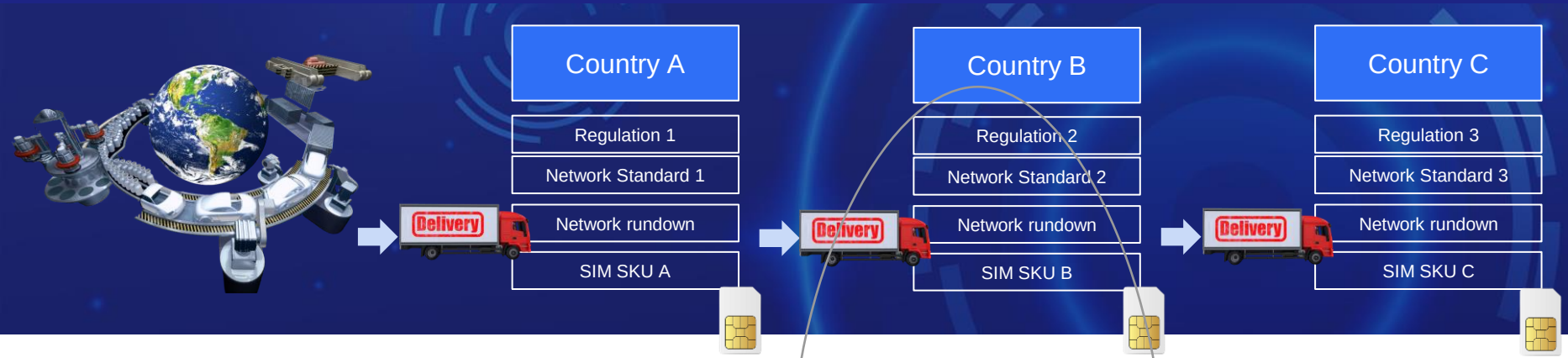
eSIM: *Goes Beyond Connectivity.*

- **Connectivity still dominates the revenue but with a balanced structure.**
- **Highlights,**
  - End-to-End.
  - Future-Proof: SGP.31/.32
  - Open: Bring Your Own Connectivity.
  - Portable.

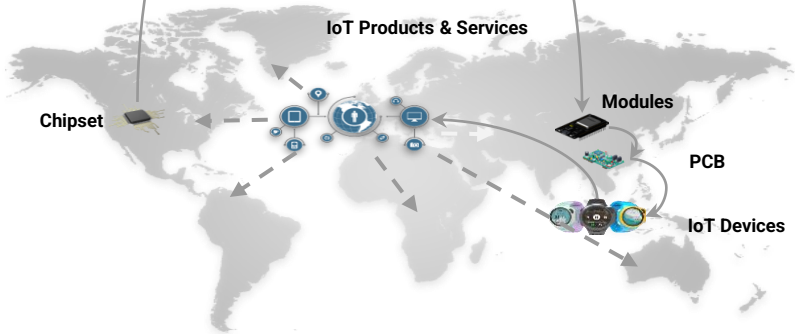




Challenges with Enterprise IoT.



- ❑ Global & Local Coverage.
- ❑ Regulation Issue.
- ❑ Complex Supply Chain.
- ❑ SLA.



Use Case: Massive Deployment of Enterprise IoT.

verizon · Deutsche Telekom · AT&T · vodafone · Telefónica · . . .

Connectivity

IoT Enterprise Client

Orchestration

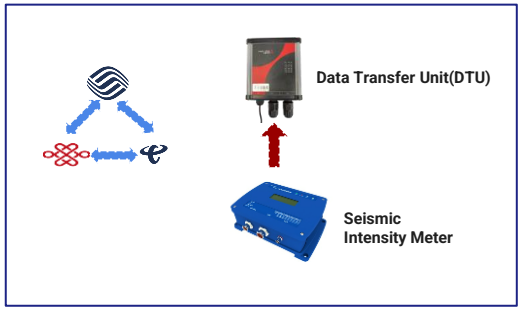
- Single-pane-of-glass platform to connect Management Platforms (CMPs) of multiple operators.
- SIM fleet and tariff management, rich features for cost optimization and SLA tuning.
- eSIM to match between devices and different operators, over the air.

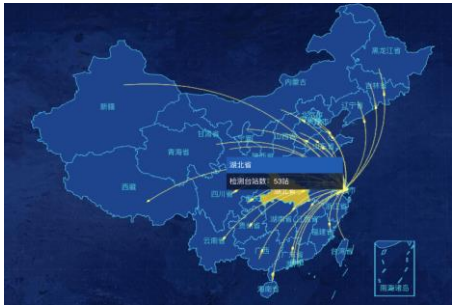





Use Case: Digital Transformation of Critical Infrastructures.

CHINA EARTHQUAKE ADMINISTRATION
中国地震局



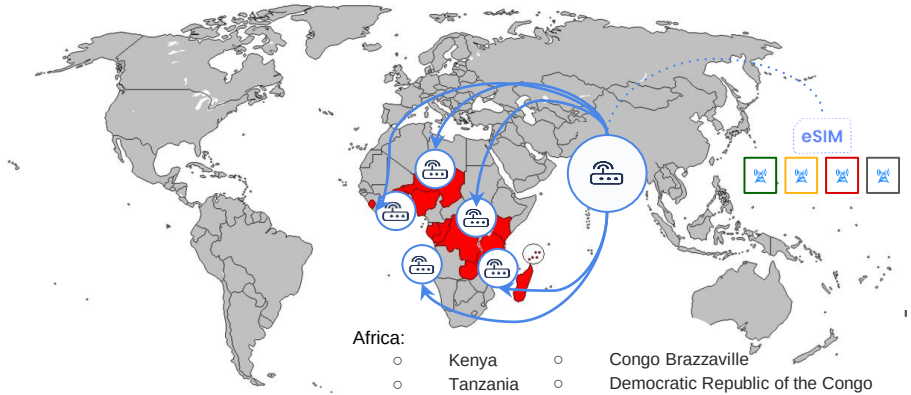


Redtea Deliverables,

- ❑ Connectivity: Consolidation of 3 operators.
- ❑ Orchestration: Automatic operator switching for reliability.
- ❑ xSIM: Special-purpose DTU with eSIM.

Use Case: Single SKU for Cross-Country FWA.

SIM manufacturing >> mno selection >> global distribution >> delivery >> value-added service

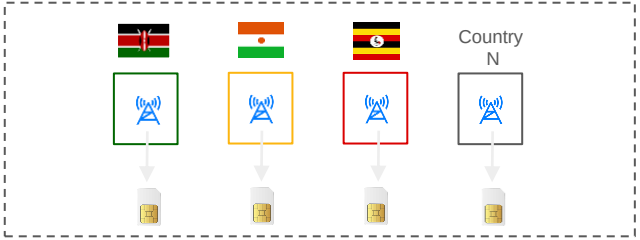


Africa:

- Kenya
- Tanzania
- Uganda
- Rwanda
- Malawi
- Zambia
- Niger
- Burkina Faso
- Chad
- Congo Brazzaville
- Democratic Republic of the Congo
- Gabon
- Madagascar
- Nigeria
- Seychelles
- Niger
- Togo
- Sierra Leone

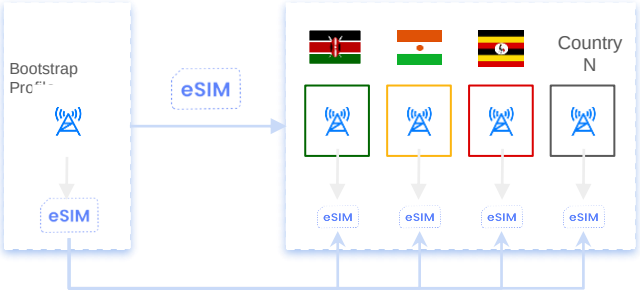
Legacy

multiple skus



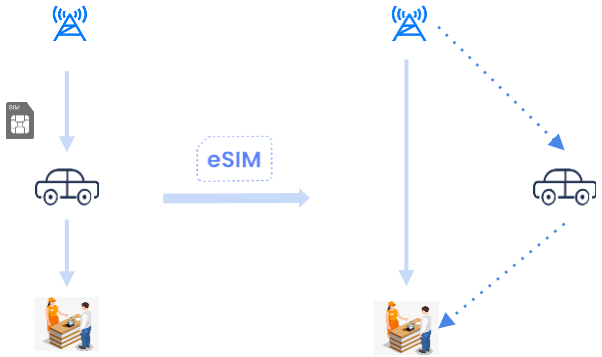
eSIM

one single sku

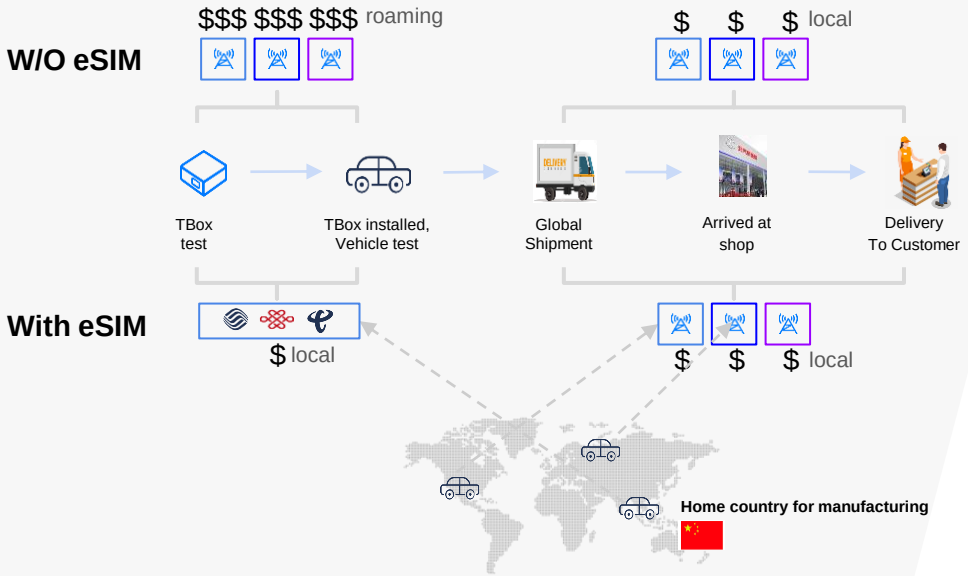


Use Case: Automotive Industry.

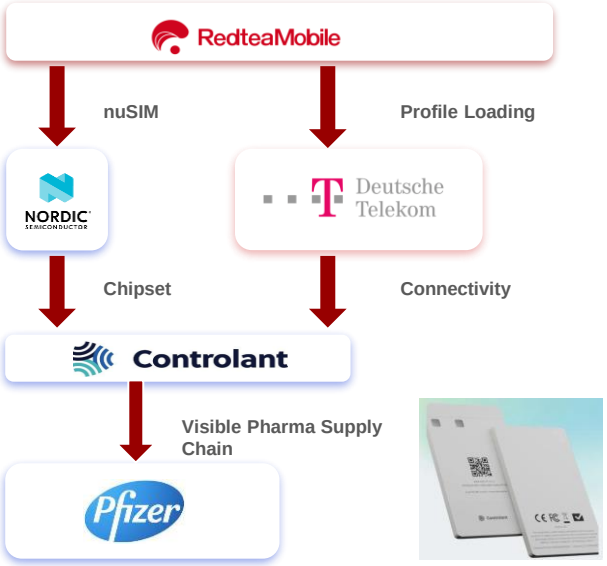
New Business Model with eSIM.

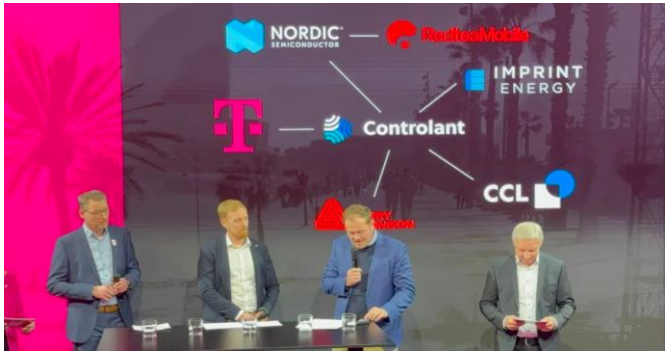


Productivity & Compliance with eSIM.



Use Case: iSIM(nuSIM) for Pharma Supply Chain.



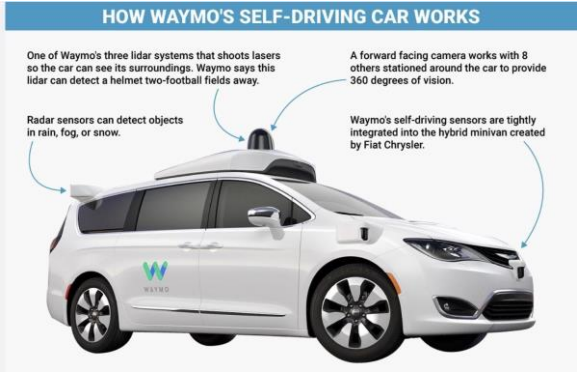


Redtea Deliverables,

- Integrated SIM with Nordic as the core component of the Saga card device.
- Provisioning platform for DT.

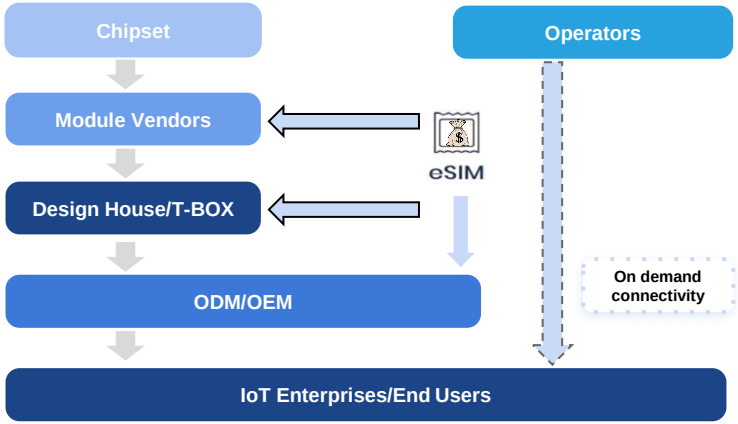
Inspiration from FSD：Sunk Cost as the Key.

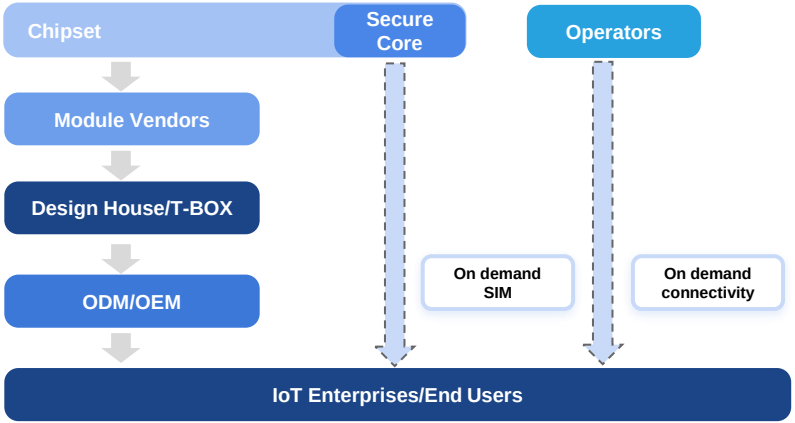
- ***Sunk Cost: The key factor for a product/service to scale out in a ubiquitous manner.***



Lower Sunk Cost

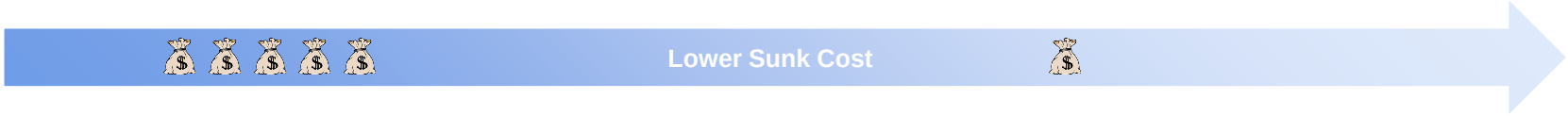
CaaS 2.0: Towards Ubiquitous Connectivity.



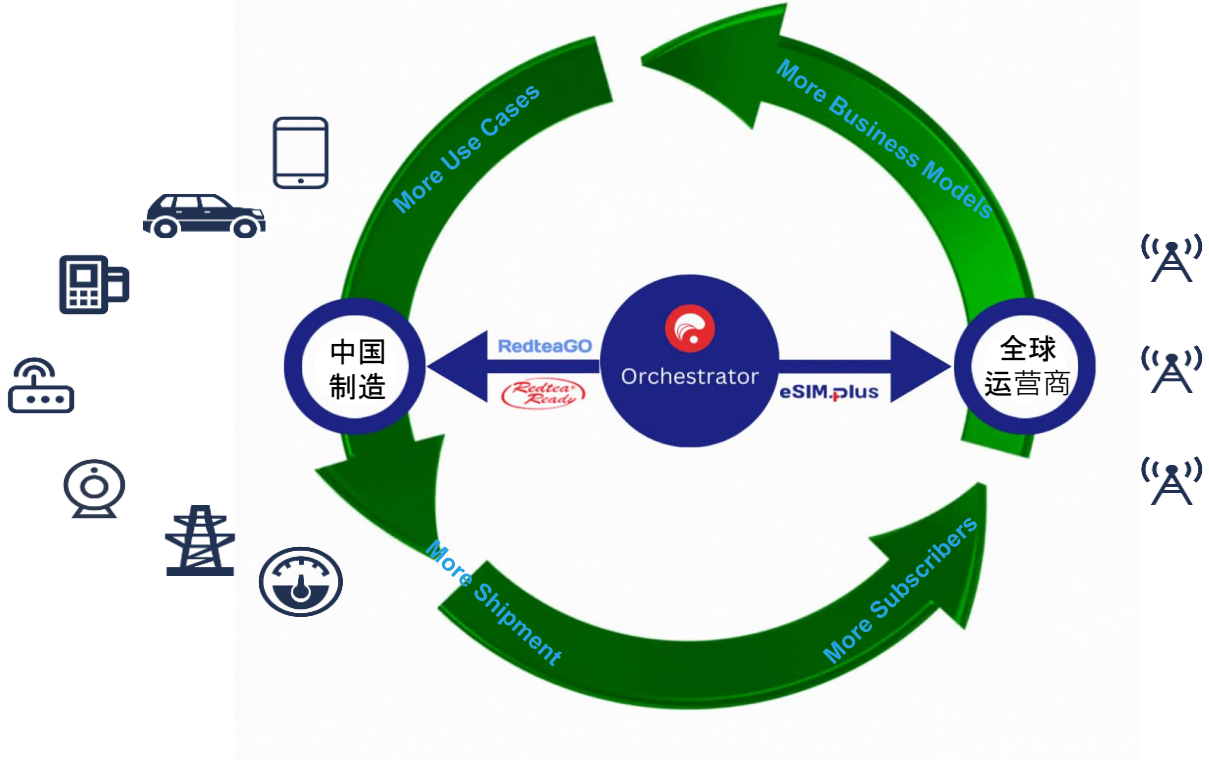


CaaS 1.0: On demand Connectivity

CaaS 2.0: On demand SIM & Connectivity



Global Connectivity Orchestrator: 点亮数字中国出海.



国家高新技术企业
GSMA会员
GSMA SAS-SIM 认证RSP平台，欧盟部署数据中心

高通公司投资企业

苹果官方全球eSIM服务提供商
德国电信NuSIM官方合作伙伴
英飞凌ISPN合作伙伴
中国联通eSIM产业合作联盟首批成员
中国移动物联网联盟成员成员
华为AIoT产业联盟成员

《快公司》「2016中国商业最佳创新公司50」
福布斯评选：全球100家「最以顾客为中心」的企业
2017年3月在澳门与GSMA联合主办WAS#5

THANKS

RedteaMobile

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GSMA

Leading the New Future of Mobile Communications

引领移动通信“芯”未来

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Speaker

Dan Li,
Marketing director of
HED
李旦 华大电子市场总监

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CEC 中国电子 | 华大电子

eSIM：引领移动通信“芯”未来

eSIM: Leading the New Future of Mobile Communications

华大电子/HED
李旦/Nadeel Lee

华大电子 – 中国安全芯片龙头企业

HED–China's leading Security Chip supplier

SIM芯片累计出货量超180亿颗;

SIM chip shipment > 18 billion

首家超级SIM芯片供应商

累计出货量超1亿颗;

First SWP-SIM chip supplier, Shipment > 100 million

eSIM芯片覆盖消费级/工业级/车规级

累计出货量超过10亿颗;

Consumer/Industrial/Automotive grade shipment > 1 billion

HED

00085.HK

CEC Group

TOP3

Global SIM/eSIM IC Supplier

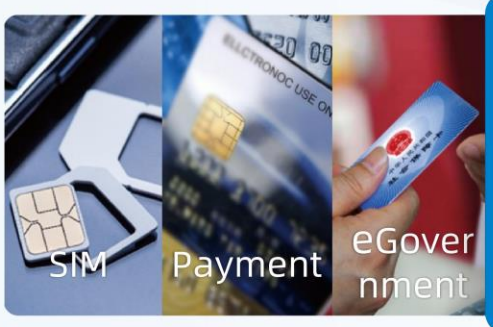
25 Billion

Shipment

2.7 Billion

Revenue in RMB

HED Offering



Smart Card

Mobile Security

IoT Security

IoV Security

SIM Evolution

2FF

3FF

4FF

DFN8

WLCSP

HED's eSIM Offering

	Consumer	IoT
HW	eSIM IC for Consumer up to **2.5MB** NVM Consumer Grade	eSIM IC for IoT up to **700kB** NVM Industrial Grade
OS	**Consumer** SGP.22 v2.5&v3.1 GSMA compliant	**Consumer & IoT** SGP.22 v2.2 & SGP.32 v1.1 GSMA compliant
Package	WLCSP	DFN8(MFF2, DFN8 3*3)
Personalisation	Perso on wafer SAS-UP site	Perso on package SAS-UP site
LPA	LPAd reference	LPAd/IPA reference

HED's new eSIM Chip

国内首颗“最大容量、工艺最先进”安全芯片

China's first maximum capacity security chip with 40nm eFlash processing

2.5MB eFLASH
15+ profiles
OS Update

High Capacity

CPU 120MHz
ALG performance X 3

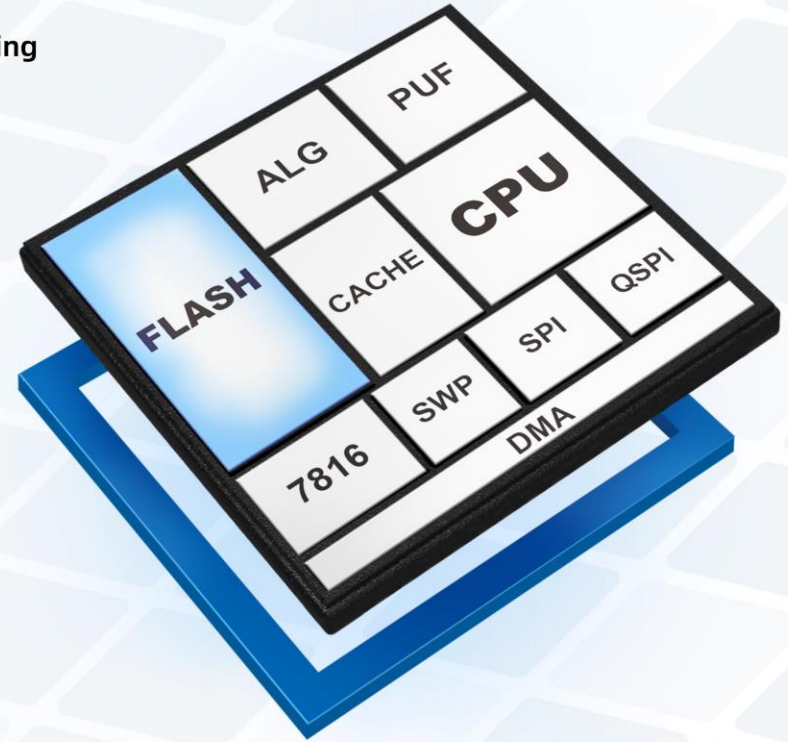
High Performance

CC EAL6+
PUF

High Security

WLCSP
Perso on Wafer

Small package



HED's eSIM Solution

HED提供eSIM整体解决方案

HED Provides eSIM total solution

采用最先进的eSIM

安全芯片

Advanced

eSIM chip

支持最新功能特性

多个码号同时激活成为可能

Newest features E.g MEP

全球运营商平台互操作

覆盖全球200+运营商

200+ MNOs interoperability

支持**多运营商**配置

15+ profile

multiple network operator profiles

符合**GSMA产品认证**

GSMA eSA certified

GSMA™

符合**GSMA最新RSP技术规范**

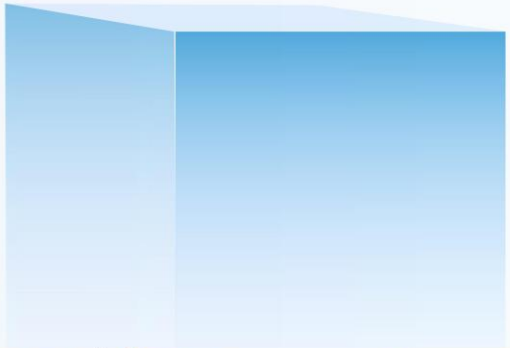
GSMA compliant OS

HED eSIM Advantages

LARGER

更大空间，更多可能

- Larger free user memory
- **15+** SIM profiles
- OS Update
- Multiple SIM profiles(MEP)
- Multiple applications



SMALLER

更小尺寸，更加灵活

- Small WLCSP packaging
- **94%** less space than a physical card

FASTER

更快速度，更强体验

- Profile download speeds up to **5x** faster
- Profile local management speeds up to **6x** faster

eSIM Benefits

For End User:

Easier to switch networks

灵活切换运营商

For OEM:

Improve Reliability

Water&Temperature-Resistant

抵御恶劣环境影响，易于做结构防水

Improve device flexibility

Reduce space for better device design

更大的设备灵活性，减小空间，利于设备设计

广泛普及与应用
Widely applied

设备设计与创新
Device innovation

物联网连接简化
Simplified IoT connectivity

Imagine the Future

多网络融合
Multiple Network Combined

安全不断升级
Security Improving PQC

低碳环保
Lower Power Consumption

市场挑战与应对
Market challenges

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Thank you

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MWC Shanghai

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