Unlock New 5G and IoT Revenue Streams with Cisco Mobility Services

Cisco Knowledge Network Webinar

February 13, 2024

Simplifying 5G Complexity: Cisco Mobility Services Platform

A turnkey platform to rapidly monetize innovative 5G services

Today's speakers

James Brannan

Director, Provider Mobility Product Management and Technical Marketing

Darin Kaufman

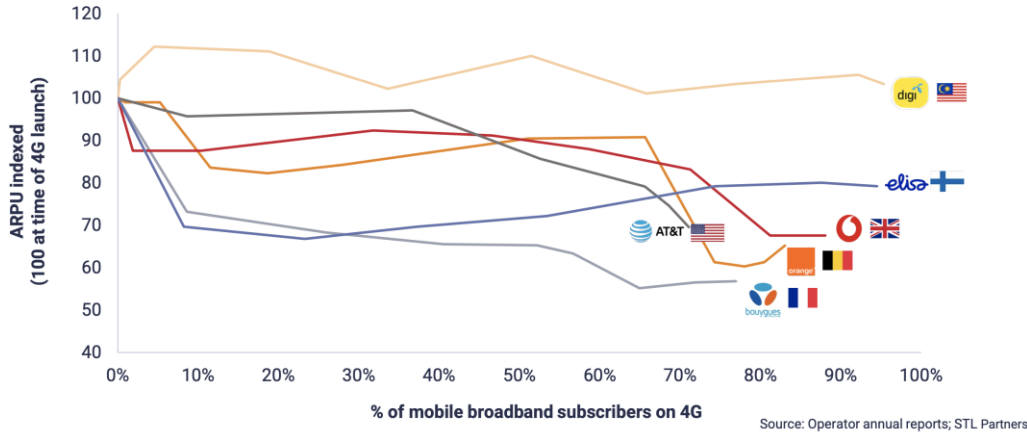Director, Provider Mobility Product Management

Kailash Kothari

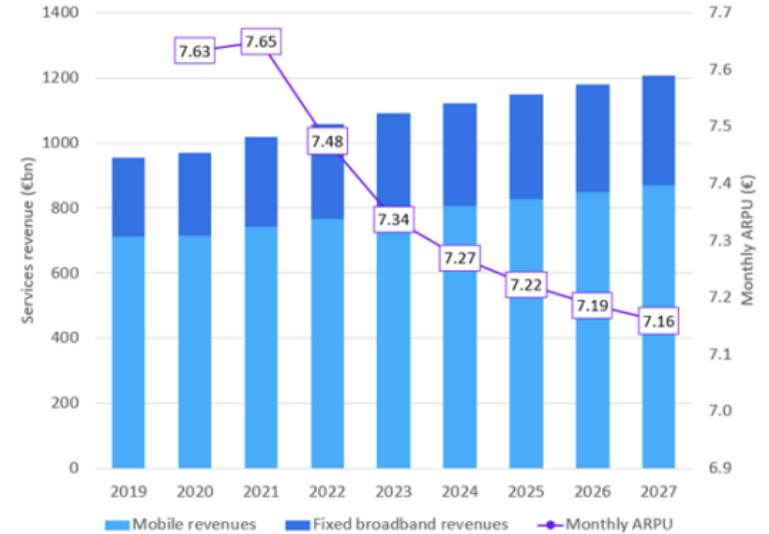Director, Product Management, Provider Mobility

Agenda

- State of the 5G Market

- Introducing Cisco's Mobility Services Platform

- Key Offers and Use Cases

- Getting Started

5G impact to Consumer ARPU
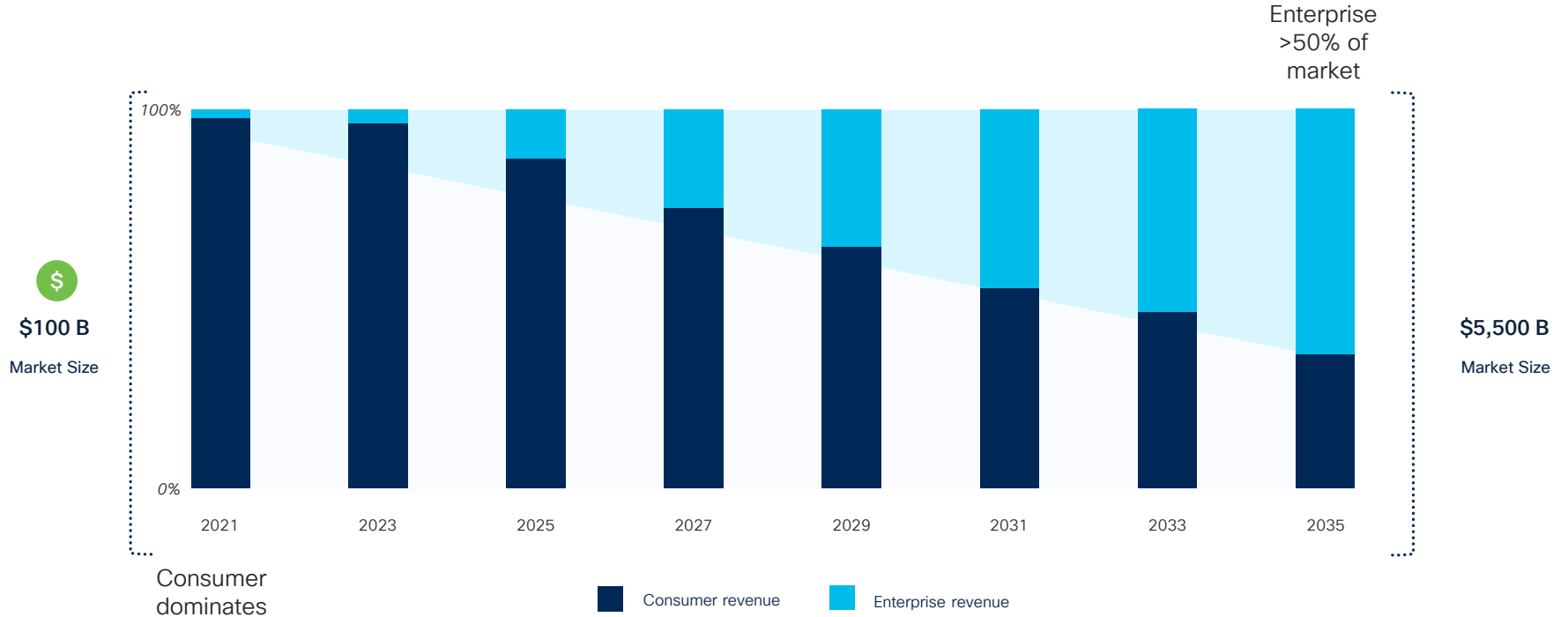

Impact of 4G on the ARPU of selected telcos

ARPU indexed (100 at time of 4G launch) vs % of mobile broadband subscribers on 4G

Source: Operator annual reports; STL Partners

Telecoms services revenue forecast by service type (€bn)

7.63, 7.65, 7.48, 7.34, 7.27, 7.22, 7.19, 7.16

Mobile revenues | Fixed broadband revenues | Monthly ARPU

Source: Omdia

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The Enterprise Mobile Services Opportunity

Enterprise & industry will drive SP growth over the next decade

Enterprise >50% of market

$100 B

Market Size

$5,500 B

Market Size

100%

0%

2021 2023 2025 2027 2029 2031 2033 2035

Consumer dominates

■ Consumer revenue   ■ Enterprise revenue

The Enterprise Mobile Services Opportunity

SPs will be well served by taking a holistic view across the key end customers

People

Things

Spaces

The opportunity with Thing (IoT)

Mobile IoT services driving growth across a range of industries and use cases

Connected Car

Driving safety and vehicle telematics

Financial Services

Scale/reliability for financial systems

Smart Meters

Cost savings and superior customer service

Asset Management

Machine/device health and service cycles

Worldwide, IoT connections will increase 220% from 2.2 billion in 2021 to 7.0 billion in 2031*

*https://www.analysysmason.com/research/content/regional-forecasts-/iot-worldwide-forecast-rdme0/

SPs are facing many challenges with Enterprise Mobility

Downward ARPU/MRR pressure

There's a need to monetize value-added services

Slow Time to Value

Multiple technology integrations

High cost to serve

Results in lower profitability

Risk

High up-front financial risk

Complexity

Operational and transactional complexity

Poor customer experience

Service reliability, customer credits

Introducing Cisco Mobility Services Platform

5G Home Broadband	Mobile Worker	Secure Remote Branch	Digital OT Warehouse	Digital OT Factory	Smart Meter	Asset Tracking	Fleet Management	Vehicle Telematics

Mobility Services Platform

Service catalog

Visibility

5G
MNO
(B2B, B2E, eMBB/FWA)

Public

Private 5G
(Enterprise)

Private

6E

IoT
(Things)

Connectivity

Security

Programmability

Public & private hybrid infrastructure deployment models

Our Value Proposition

One platform for all enterprise services

Accelerate time to value and agility

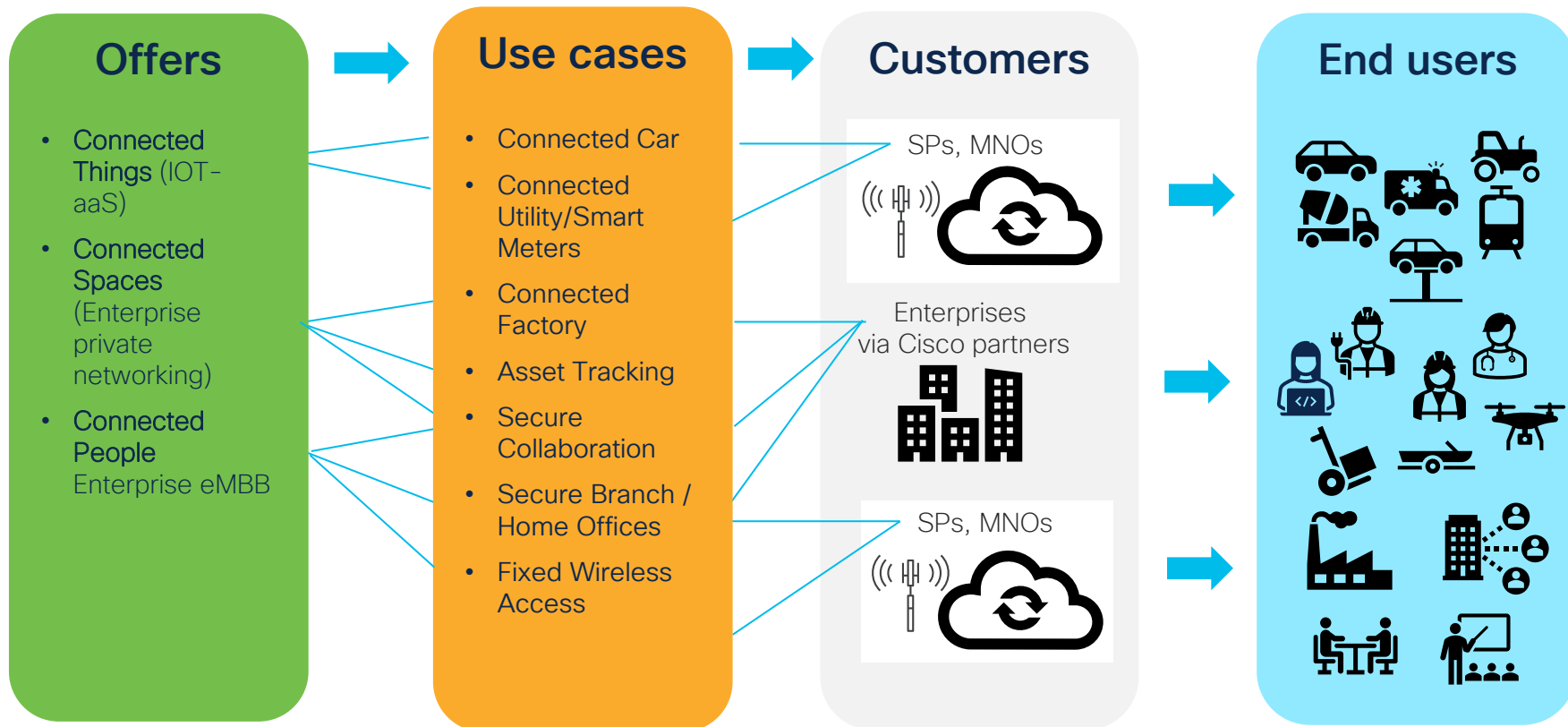Build once and scale for all enterprise 5G service
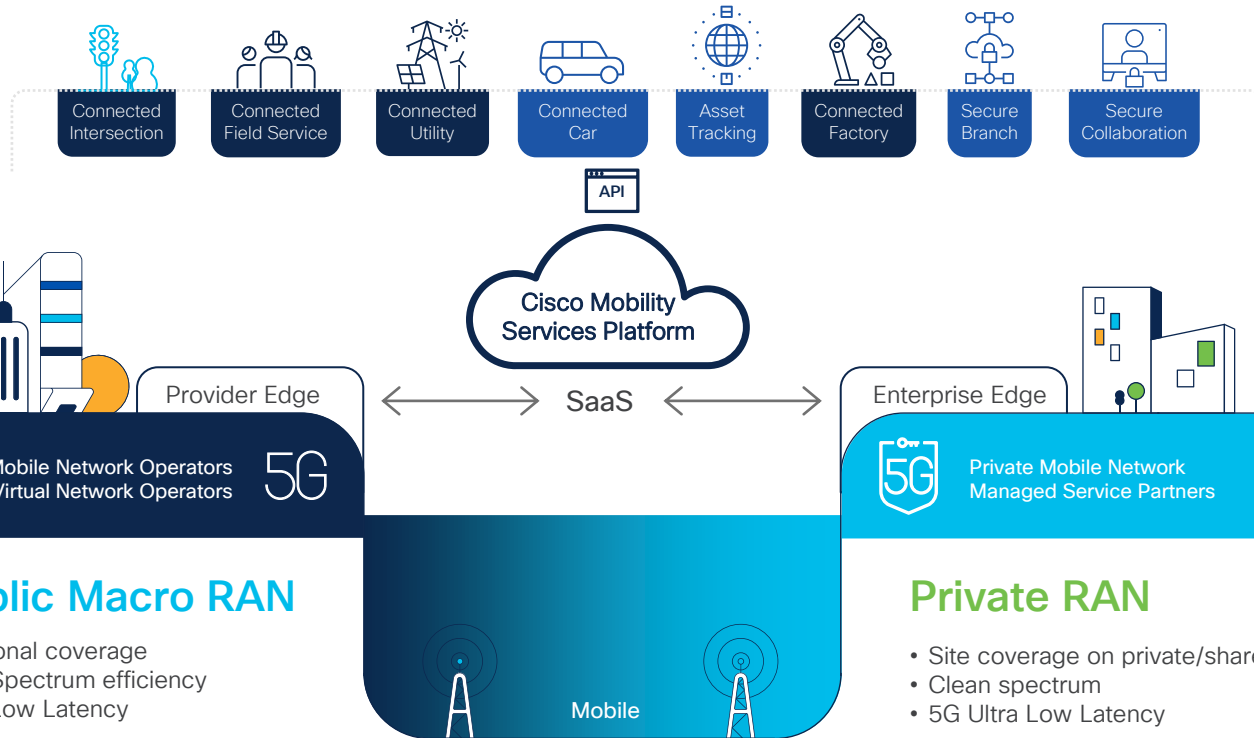
Proven scale and first mover 5G use cases

Common policy, visibility, assurance across Enterprise LAN, Wi-Fi & 5G

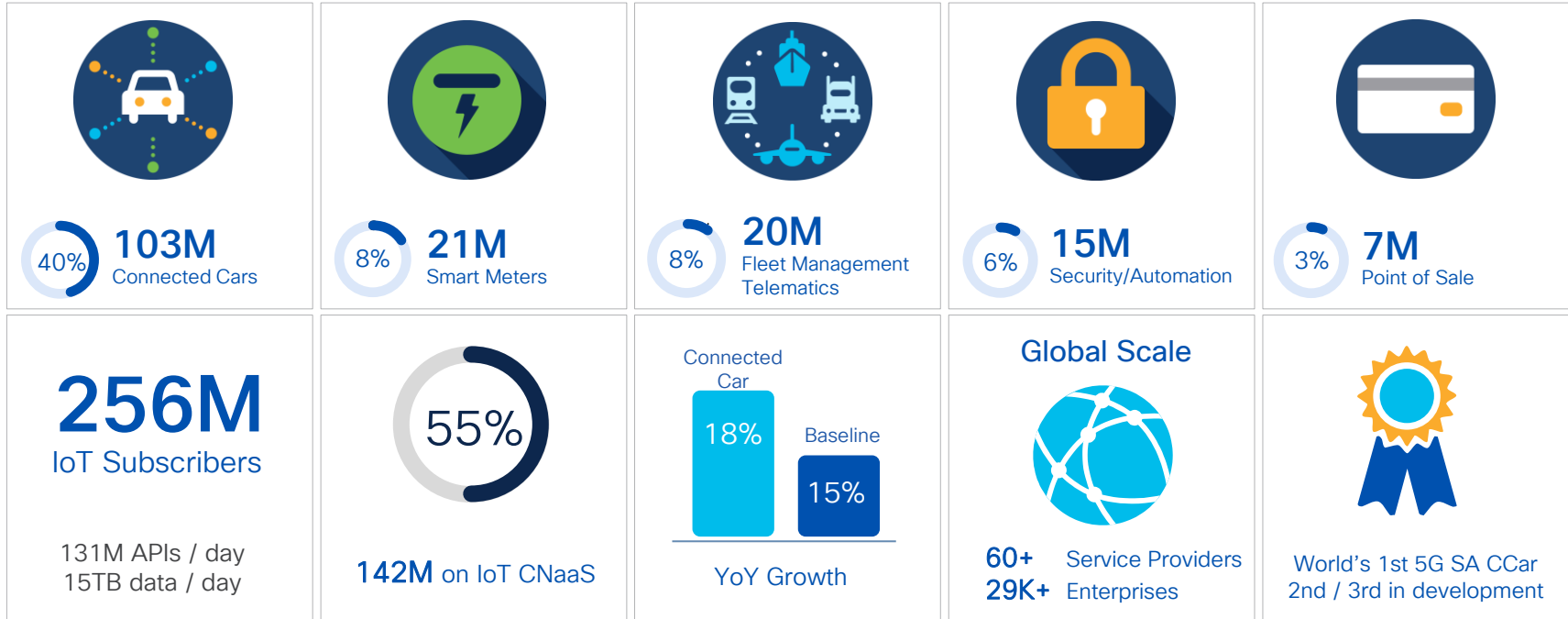# Cisco Mobility Services Platform Offer Catalog

Offers

- Connected Things (IOT-aaS)
- Connected Spaces (Enterprise private networking)
- Connected People Enterprise eMBB

Use cases

- Connected Car
- Connected Utility/Smart Meters
- Connected Factory
- Asset Tracking
- Secure Collaboration
- Secure Branch / Home Offices
- Fixed Wireless Access

Customers

SPs, MNOs

Enterprises via Cisco partners

SPs, MNOs

End users

Mobile services powered by a platform

Digital platform for all mobile services

| Connected Intersection | Connected Field Service | Connected Utility | Connected Car | Asset Tracking | Connected Factory | Secure Branch | Secure Collaboration |

API

Cisco Mobility Services Platform

Provider Edge ← → SaaS ← → Enterprise Edge

Mobile Network Operators
Mobile Virtual Network Operators
5G

5G
Private Mobile Network
Managed Service Partners

Public Macro RAN

- National coverage
- 5G Spectrum efficiency
- 5G Low Latency

Mobile

Private RAN

- Site coverage on private/shared spectrum
- Clean spectrum
- 5G Ultra Low Latency

Connected Things

IoT Control Center Business Snapshot

40% **103M** Connected Cars	**8%** **21M** Smart Meters	**8%** **20M** Fleet Management Telematics	**6%** **15M** Security/Automation	**3%** **7M** Point of Sale

256M
IoT Subscribers

131M APIs / day
15TB data / day

55%

142M on IoT CNaaS

Connected Car **18%**

Baseline **15%**

YoY Growth

Global Scale

60+ Service Providers
29K+ Enterprises

World's 1st 5G SA CCar
2nd / 3rd in development

90M includes Consumer, Insurance, IIoT, Asset tracking, Retail, and other use cases.

Cisco's full-stack service with IoT Control Center

Cisco's Full-Stack IoT Service

Control Center

Distributed IoT Control Center 5G Apps

- NW Slicing App
- Assurance App
- Edge Orchestration App
- Billing Models

Core Network

Radio

VNFs at the Edge

IoT Control Center Edge Apps

Distributed Edge Deployment

Enterprise Apps

Visibility and control

Intelligent edge

Delightful end-customer experience

5G monetization (value-added services)

Enabling new immersive experiences with 5G

Predictive maintenance with diagnostics

Data enrichment for third-party services (EV infra, emergency, etc.)

Infotainment applications, Wi-Fi hotspot

OTA updates (cybersecurity correction, driving features, etc.)
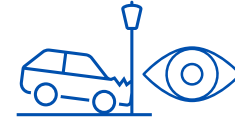
Accident avoidance

Telematics, fleet management, and location-based services

E-commerce / marketplace for third-party apps

OEM led / usage-based insurance

5G

HD maps, VRU protection services, virtual private assistants, etc.
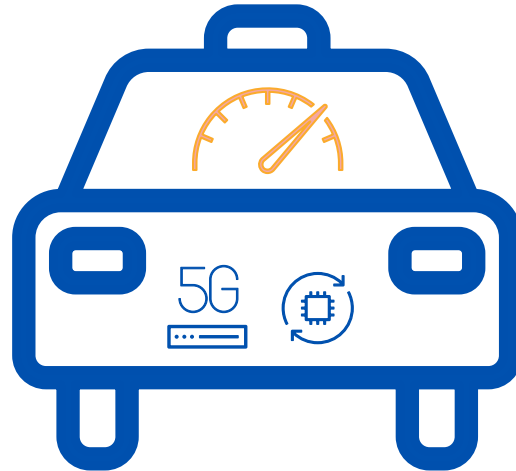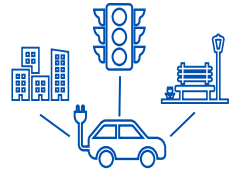
Safety and Security, behind-the-scenes Telematics

Consumer Experiences

Connected Spaces

Private 5G solution
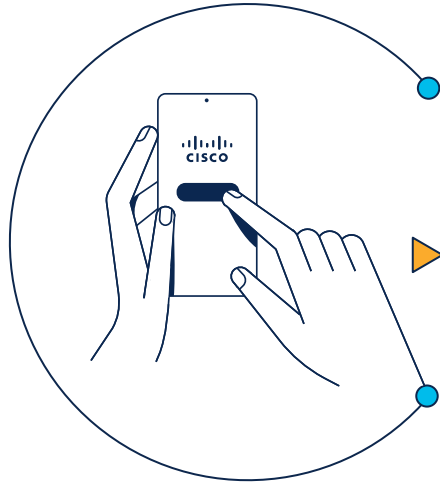
Management
Cloud managed

Identity and policy
Intuitively integrated into existing enterprise systems

Mobility core
Industry-leading 4G/5G converged mobility core

Radios
Certified and validated Open RAN radio partners

Enterprise Ready

The Cisco differentiator for Private 5G

Integrated enterprise architecture

- 5G becomes part of access architecture with Wi-Fi

- Consistent operations and management

- Intent-based policies across both Wi-Fi, 5G, and other access technologies (e.g., LoRA)

- Synergies with existing Enterprise network systems (e.g., Catalyst, ISE, etc.)

As-a-Service delivery

- Full-stack solution, tested and ready to integrate

- Operations and lifecycle management maintained by Cisco and its partners

- No need to worry about infrastructure management, operations, configuration

Built on proven technology

- Cisco IoT Control Center powers millions of SIM-based services

- Zero-touch provisioning

- Industry-leading network security (#1 in Industrial Security and Industrial IoT)

- The only vendor capable of offering one network that supports enterprise campus through edge and beyond

Connected People

Enterprise eMBB / FWA solution (Roadmap)

Your access

Wi-Fi[3]

4G & 5G[1,2]

Standards-based demarcation contracts

Roaming

Control plane

User plane
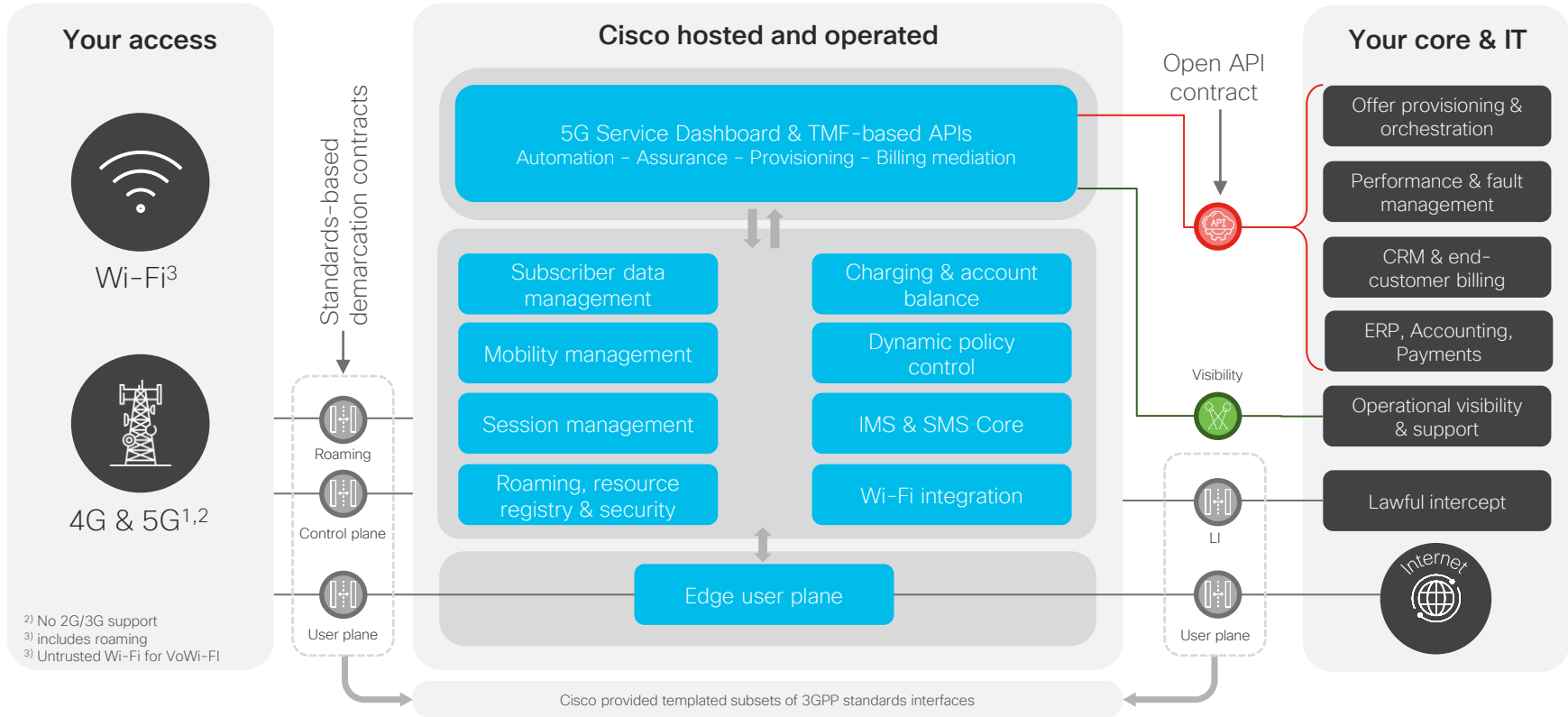
[2] No 2G/3G support
[3] includes roaming
[3] Untrusted Wi-Fi for VoWi-FI

Cisco hosted and operated

5G Service Dashboard & TMF-based APIs
Automation – Assurance – Provisioning – Billing mediation

Subscriber data management

Charging & account balance

Mobility management

Dynamic policy control

Session management

IMS & SMS Core

Roaming, resource registry & security

Wi-Fi integration

Edge user plane

Cisco provided templated subsets of 3GPP standards interfaces

Open API contract

Visibility

LI

User plane

Internet

Your core & IT

Offer provisioning & orchestration

Performance & fault management

CRM & end-customer billing

ERP, Accounting, Payments

Operational visibility & support

Lawful intercept

[1] Charging, account balance and rating

API ecosystem enabled Digital Experiences

Digital experiences for all Enterprise Mobility Services

**API-enabled
self-serve digital
experiences**

Customer
acquisition

Fulfillment and
service provisioning

Upsell /
cross-sell

For....

People

Things

Spaces

Enablement via MSP APIs, marketplace, developer apps

✓ Seamless customer experiences

✓ Drive up revenues

✓ Reduce operational costs

Across People, Things, Spaces

End-customer experiences provided by SP, enabled by Cisco

Customer acquisition

Fulfillment and service provisioning

Upsell / cross-sell

Third-party developer apps

TMF compliant APIs + Control Center REST APIs + Marketplace

Cisco Mobility Services Platform
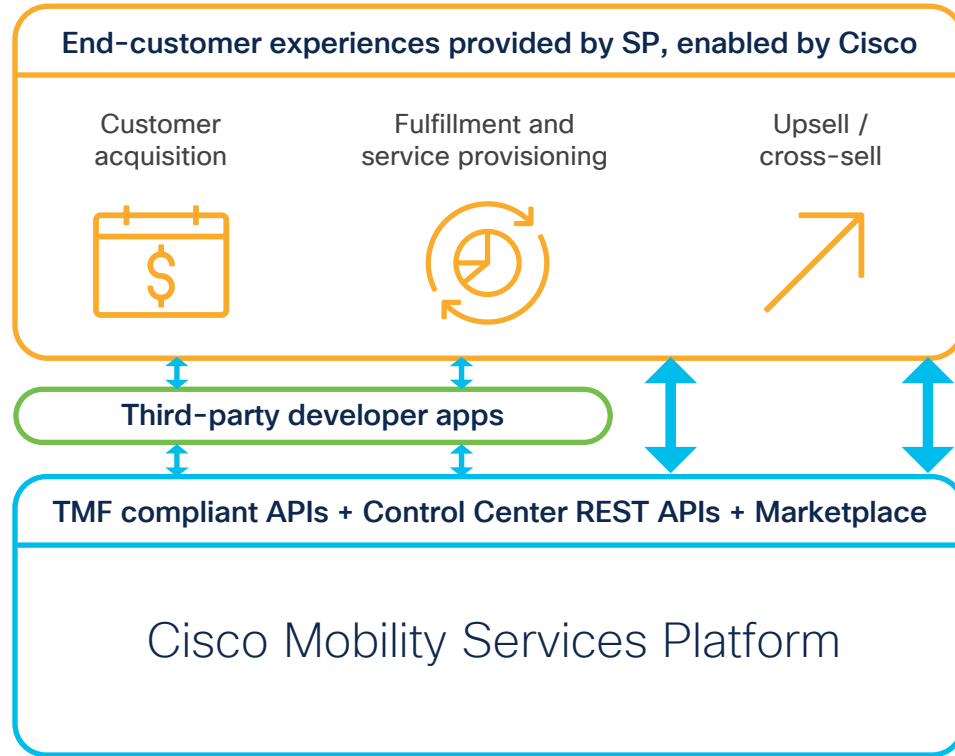
The Cisco difference

We are the Mobility market leader

Our global experience, reach, and track record are second to none. We connect more devices and connected cars for more enterprise customers than any other platform on the planet.*

We understand your business better

Our scale and reach gives us a deep insight into markets and your needs. From the complexity of connected cars to the massive scale of smart meters, Cisco has helped 32,000+ businesses across industries expand their cellular IoT.

We are constantly innovating

At Cisco, we are solving tomorrow's challenges today to give you the competitive edge to focus on what matters most— growing your business.

Over 240M connected devices including 100M connected cars for over 32,000 enterprises.

For more information visit our web page:

cisco.com/go/iot-mobility

Coming to Mobile World Congress Barcelona?

Please plan to visit us
Cisco booth #3E30, Hall 3

- Demos
- Speaking sessions
- Meeting opportunities

26 – 29 Feb 2024
Fira Gran Via,
Barcelona

Questions?

CISCO

The bridge to possible