

# Lead, don't follow

## With Cisco Mobility Services for IoT

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# Objectives for today

Learn strategies to grow your IoT business profitably



## Grow Faster

*Win more business*  
*Accelerate time-to-revenue*  
*Increase competitiveness*



## Operate Smarter

*Transform Operations*  
*Increase profitability*  
*Maximize Efficiency*



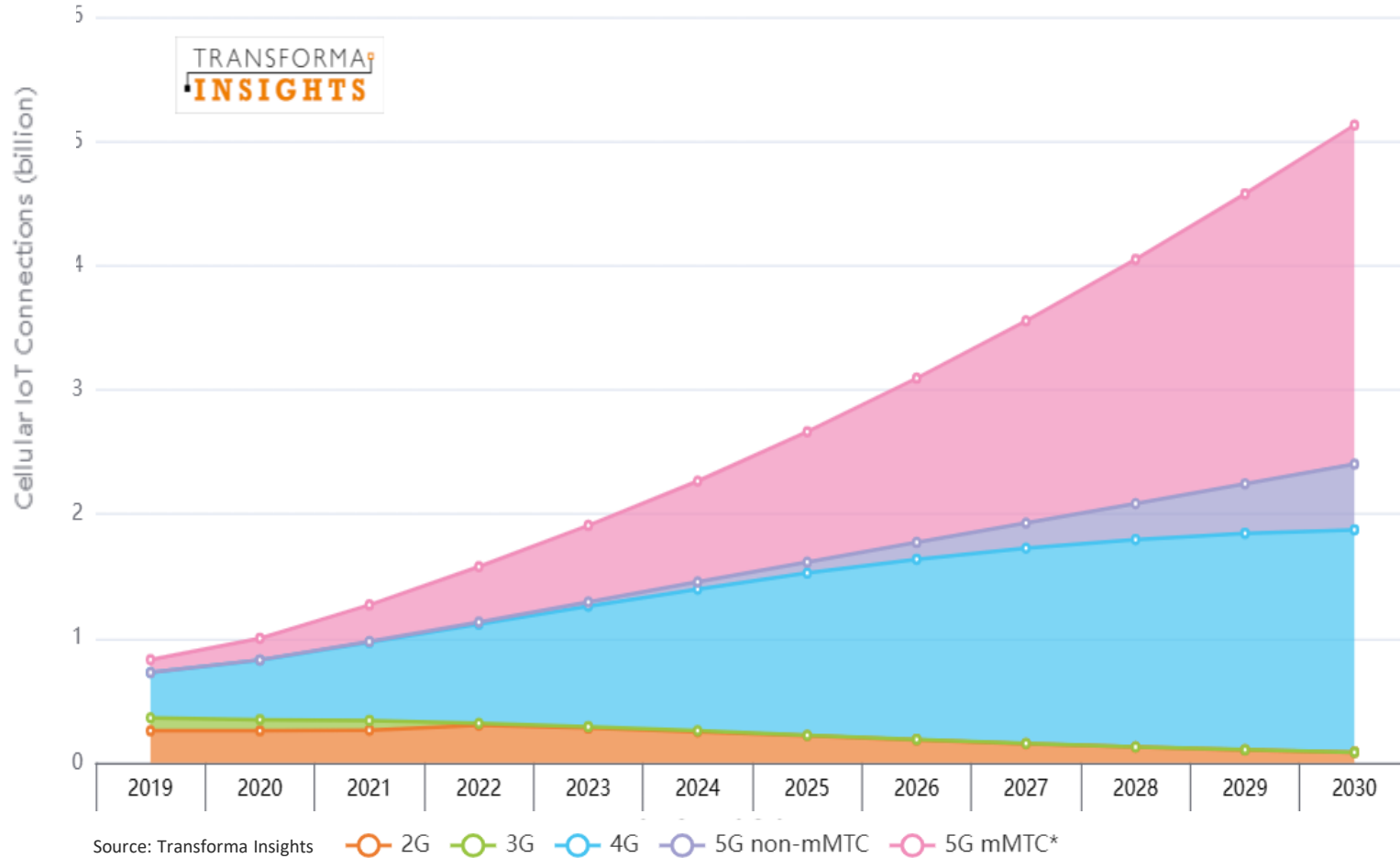
## Deliver Better

*Provide Higher Performance*  
*Improve Service Reliability*  
*Speed Technology Innovation*

# Trends shaping the future of cellular IoT



# Cellular IoT connections growing to 5B by 2030



# Across a wide variety of industries and use cases



## Connected Car

Auto makers are making driving safer through vehicle telematics and adding new revenue streams

High data usage, low latency, complex SIM lifecycle management



## Financial Services

Financial organizations are getting scale and reliable service for PoS and ATM systems

Mission-critical connectivity, low latency



## Smart meters

Utilities are saving costs and improving customer service with smart electric meters

Low data usage, low reliability, high latency



## Asset management

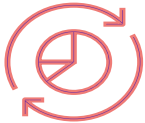
Retailers are monitoring the health of their machines and servicing them faster

Low data usage, low reliability, high latency

# Running a sustainable IoT business is challenging



**Downward ARPU/MRR pressure**  
Lower profitability



**Scarce IoT resources**  
Slow technology adoption and innovation



**Current platform limitations**  
Low performance at scale, low agility



**Rigid legacy systems**  
Operations, customer service,  
account management



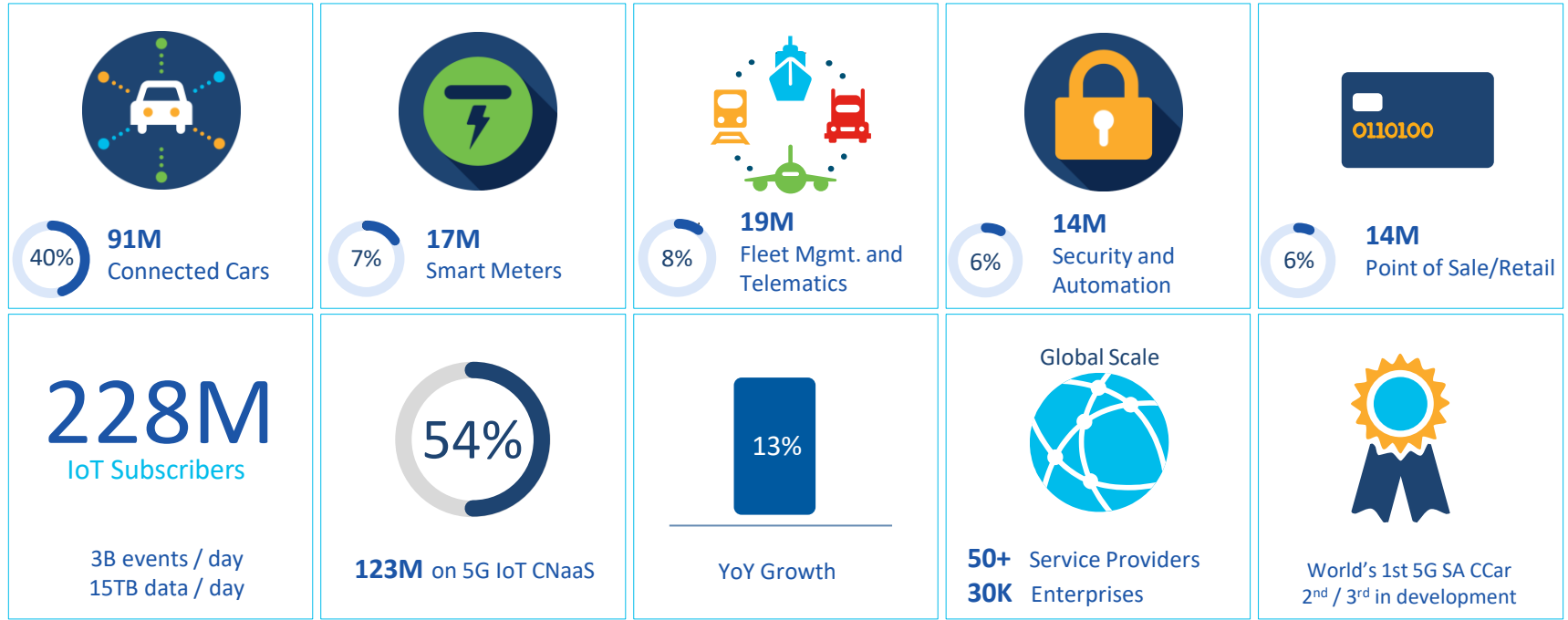
**Poor customer experience**  
Service reliability, customer credits



# Cisco's innovations to grow IoT services and revenue

# Leading IoT Use Cases and Cisco's business snapshot

Driving real world impact at scale

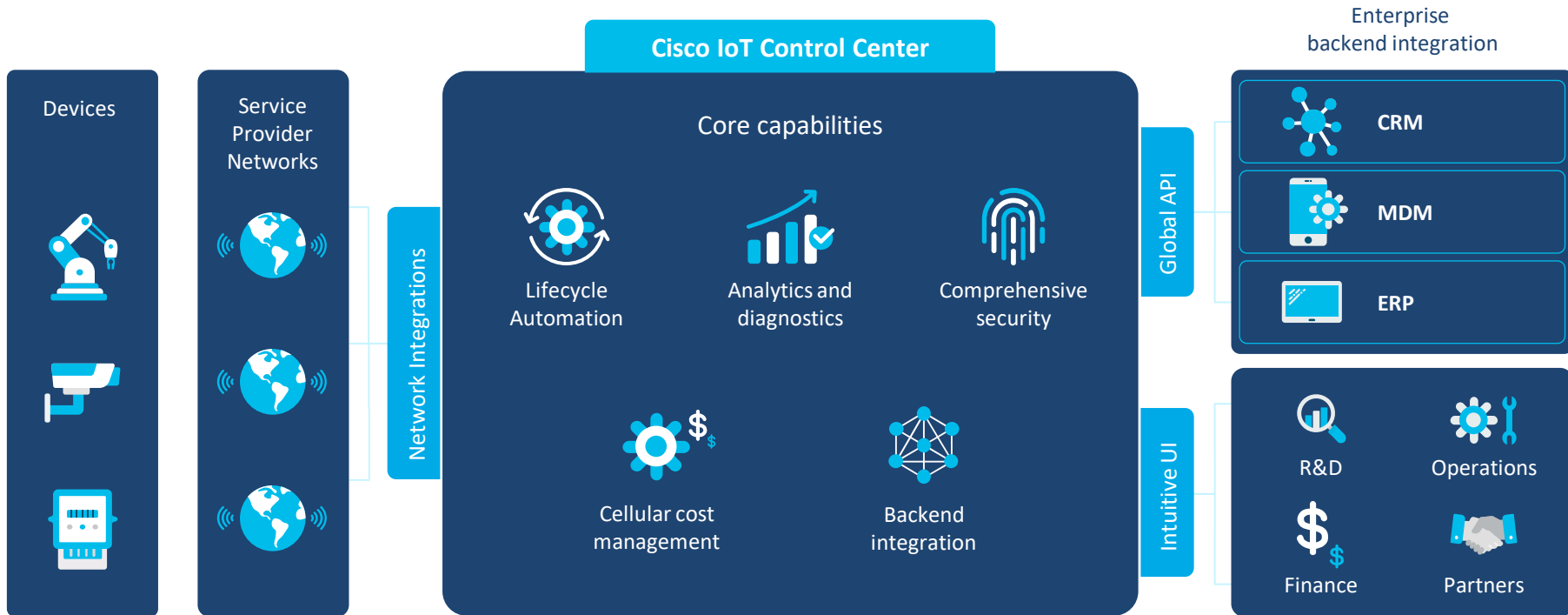


32%, 73M includes Consumer, Insurance, IIoT, Asset tracking and other use-cases.



# Cisco IoT Control Center

An engine for innovation, growth, and profitability



# Connectivity is enabling a broad range of experiences

This is an opportunity for Service Providers as well as OEMs

Predictive maintenance with diagnostics



Data enrichment for 3<sup>rd</sup> party services (EV infra, emergency, etc.)



Infotainment applications, Wi-Fi hotspot

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



Accident Avoidance



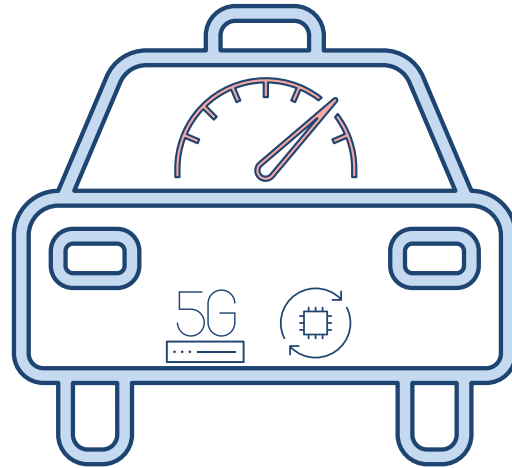
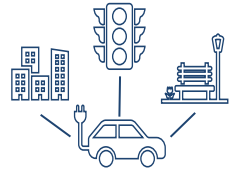
Telematics, Fleet Management and Location based services

Ecommerce / marketplace for 3<sup>rd</sup> party apps



OEM led / usage-based insurance

HD Maps, VRU protection services, Virtual Private Assistants, etc.

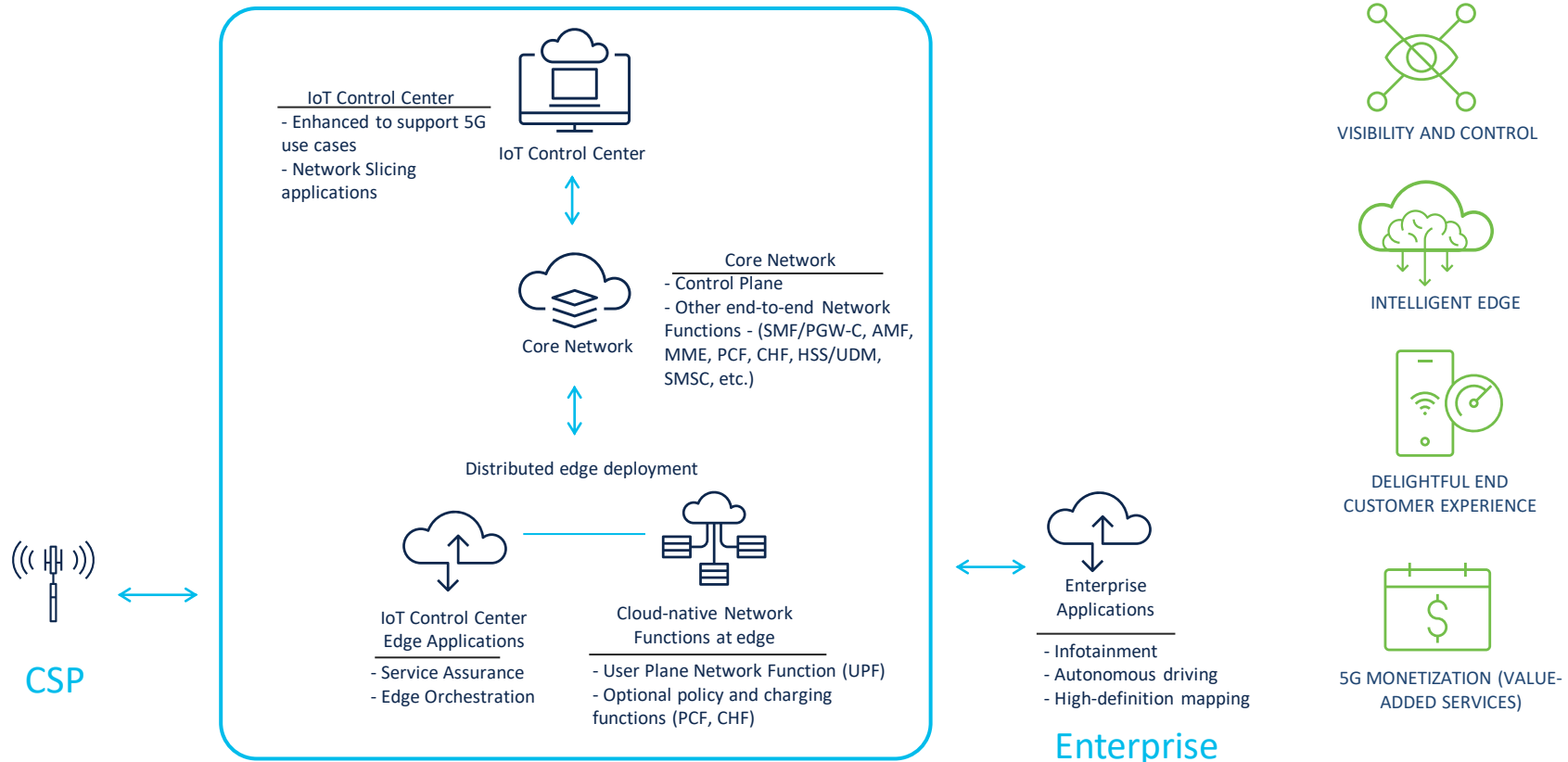


Safety and Security, Behind the scenes Telematics

Consumer Experiences

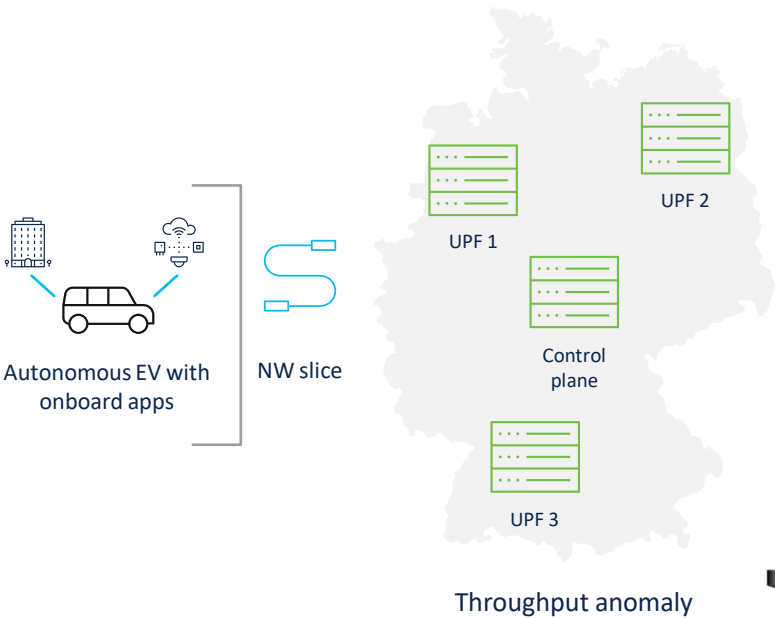
# Cisco's full stack 5G service

Enabling IoT deployments with agility and low risk



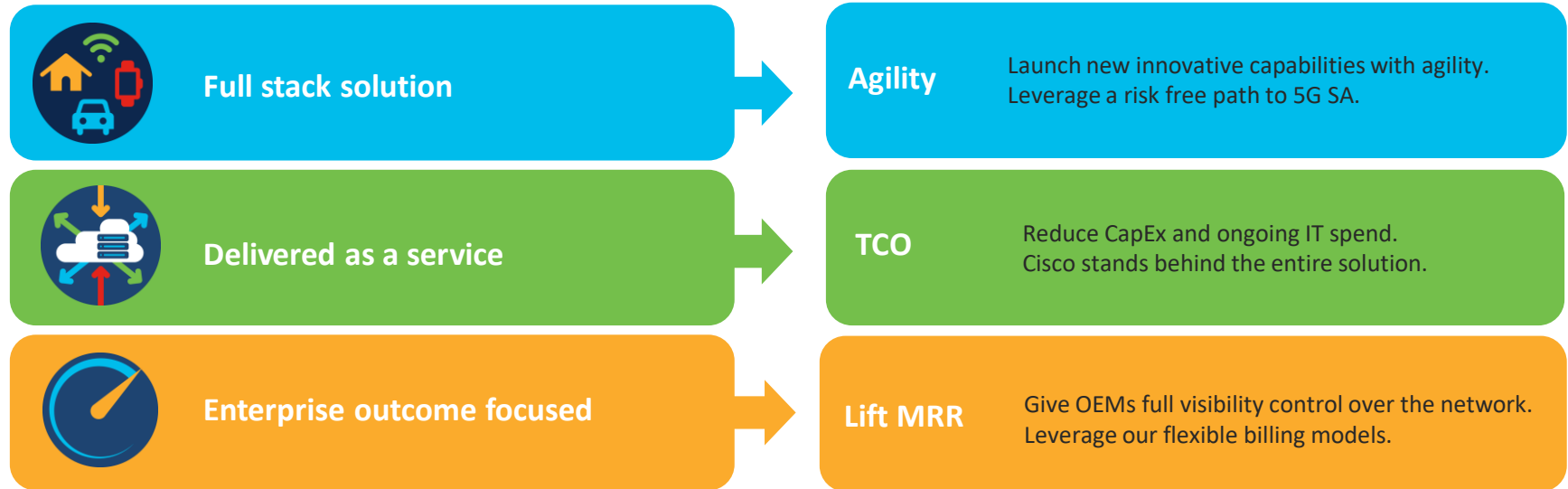
# Support diverse 5G applications with slicing and edge capabilities

Dynamic network slicing is available with IoT Control Center today



# Key benefits to SPs and enterprises

## Enabling 5G IoT services with agility and low risk



# Carrier portability with Cisco eSIM Flex



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# IoT connectivity is spreading globally

This is driving the need for carrier flexibility



## Automotive

Localization flexibility in the supply chain



## Asset tracking

Roaming charges contribute to high total cost of ownership



## Smart meters

Expensive trail-and-error methods by technicians to identify the most suited SP esp. in rural areas



## Fleet management

Fleet management solution providers lack the ability to configure post deployment



## SD-WAN

High end routers need several hours of staging to configure SP

# Leverage the eSIM Opportunity

Monetize global OEM deals



## Monetize inbound and outbound swaps

- Acquisition bounties
- Resale arrangements

Serve  
OEM  
use cases



Connected Car



Fleet Mgmt.



Asset tracking



Smart meters

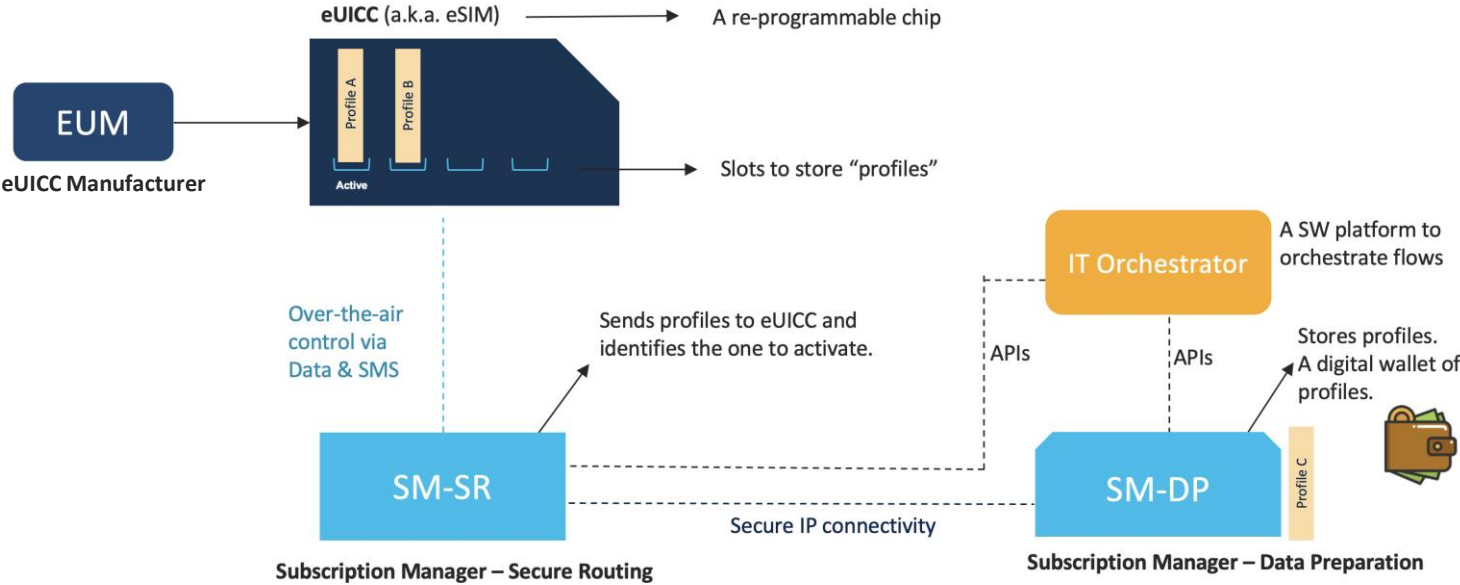


SD-WAN



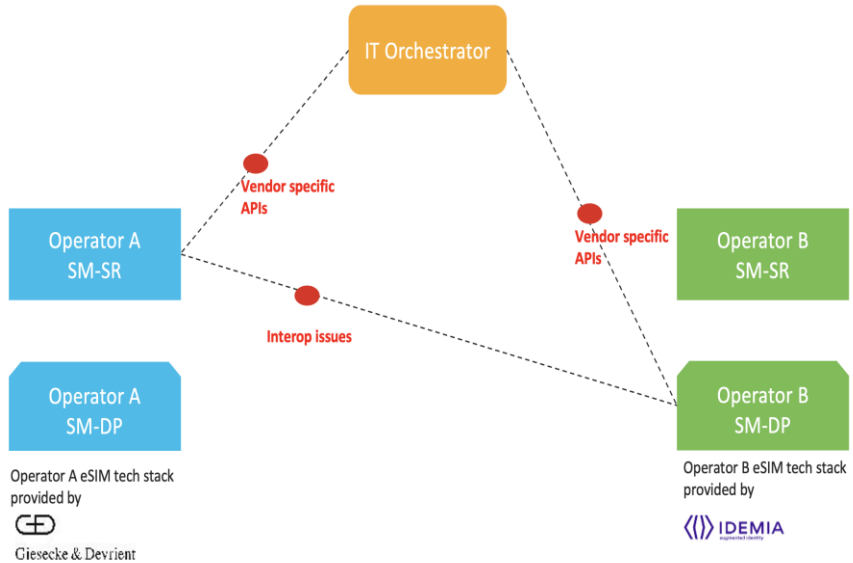
# eSIM architecture and components

## A quick crash course



# Industry Problem with eSIM for IoT

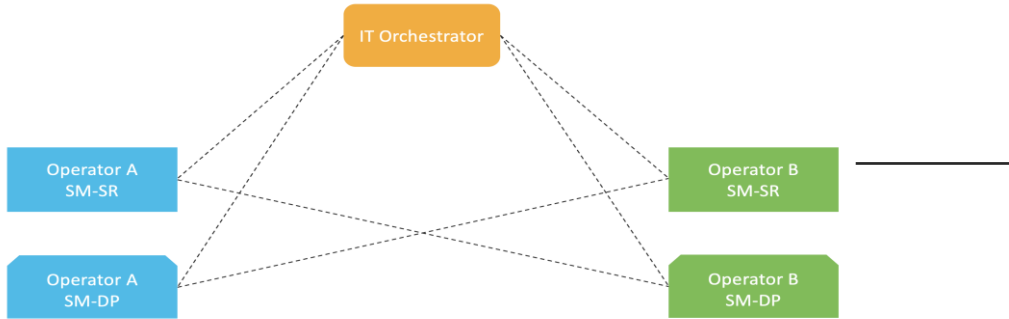
## Complexity and Interoperability issues



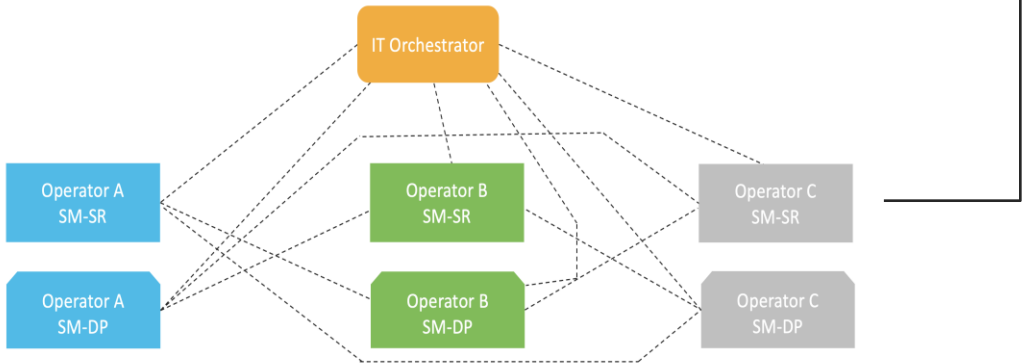
- Operators can have different EUM vendors providing the eSIM tech stack leading to vendor specific APIs & Interoperability issues.
- Troubleshooting across multiple EUM vendor tech stack introduces unsustainable operational overhead in time.

# Industry Problem with eSIM for IoT

IT integrations and operational overhead blow up quickly



*IT integrations required to orchestrate carrier swap between 2 operators interchangeably*

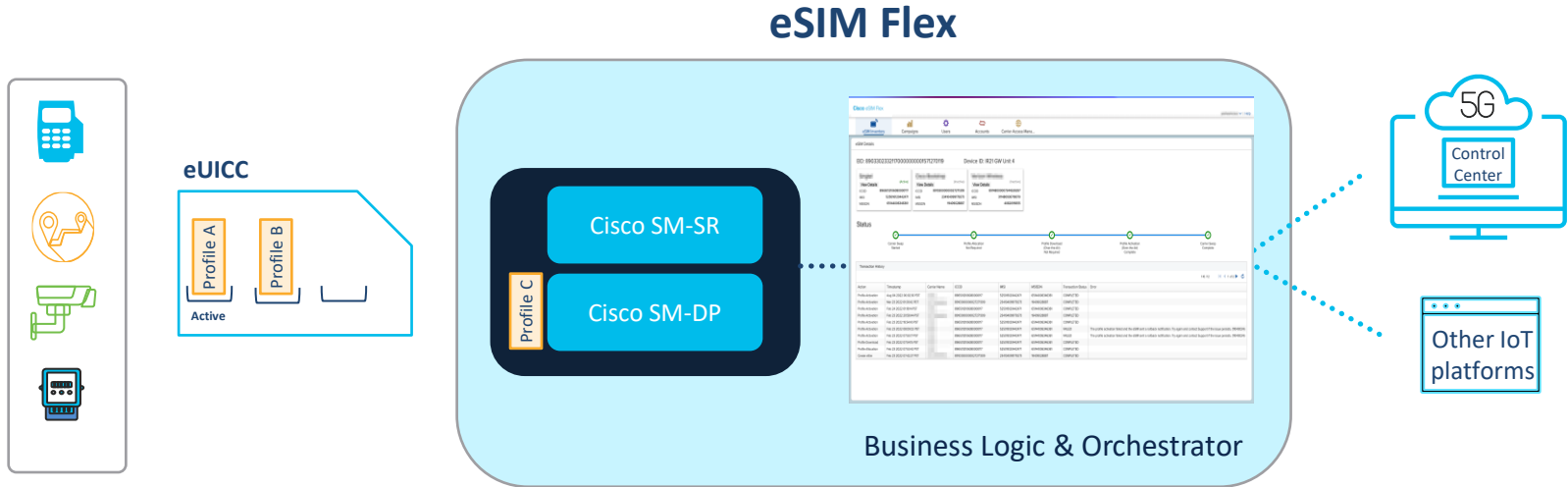


*IT integrations required to orchestrate carrier swap between 3 operators interchangeably*





- Point-to-point integrations to orchestrate carrier swaps interchangeably increases exponentially with the number of operators.
- Onboarding a new Operator requires new & complex IT integrations.
- Troubleshooting/Debugging any carrier swap failures across Operators is a severe operational overhead

# Cisco eSIM Flex architecture and benefits

Accelerating time to value from 6 months to 6 weeks



**eSIM as a Service**

-  Turnkey eSIM solution
-  Unlock Carrier Ecosystem
-  Eliminate IT integrations
-  Cisco Managed Service

# Proactive Support with AI/ML



# Reactive support undermines customer satisfaction

Issue detection must be autonomous

Enterprise informs SP of a problem !! Result = billing credit !!



Hardware Issues



Software Bugs



Network Problems



Malicious Actors

## Enterprise Impact

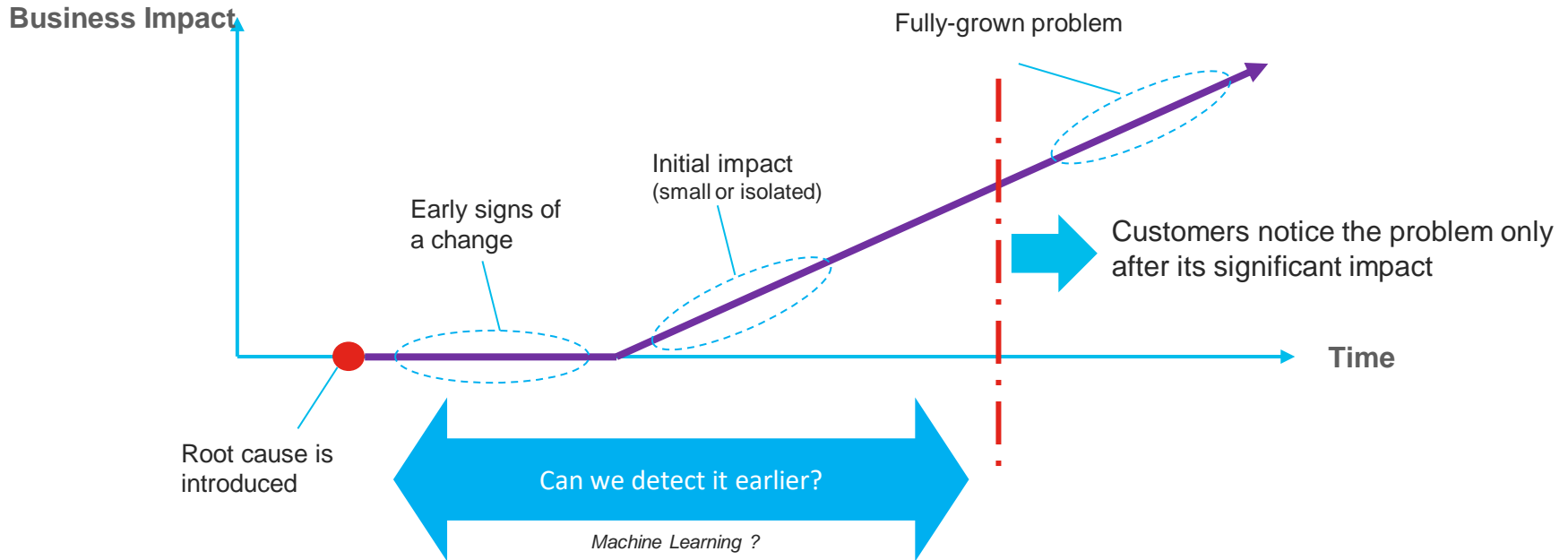
- Service interruption
- Revenue loss
- Increased operational costs
- Liability

## Service Provider Impact

- Low customer satisfaction
- Escalations and credits
- Increased support costs
- Account churn

# Detecting problems early is the key

Losses compound quickly if problems are detected too late



# Drive down costs with AI/ML and automation

## Harness massive amounts of IoT data

### IoT deployments at massive scale

#### Control Center Dataset



50+ SPs WW | 10+ Major Vertical | 3B events / day | 15TB data / day

### 1. Analyze



### 2. Detect Anomalies



### 3. Action

Insights Details

Voice Usage on Feb 12, 2019

Voice Usage: 271.028 Minutes

Device Count: 85

Avg. Usage/Device: 316 Minutes

Export

Top 100 Sessions by Usage

IMEI	Usage
880017P02PFD3A8002140	48.500 Minutes
880017P02PFD3A8002140	35.000 Minutes
880017P02PFD3A8002140	28.000 Minutes
880017P02PFD3A8002140	25.000 Minutes
880017P02PFD3A8002140	22.000 Minutes

#### Connectivity Behavior

Session length, frequency, duration etc.

#### Consumption Behavior

Usage patterns, roaming, excessive usage



# The Cisco difference

We are the market leader with cellular IoT

Our global experience, reach, and track record of success 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

With our scale and reach, we have the most comprehensive understanding of the market and your needs. From the complexity of connected cars to the massive scale of smart meters, Cisco has helped over 32,000 businesses in every industry grow their cellular IoT business.

We are constantly innovating

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

Q&A





The bridge to possible



# Enterprise demands are shifting with pervasive, global connectivity

Service Providers are responding to several fundamental shifts



Full control over the network



Distributed cloud native applications



Carrier portability

**Enterprise demands**

**SP's financial structure needs to evolve**

- Offset ARPU decline by monetizing new IoT applications
- Focus needs to be on selling outcomes for end to end use cases
- Cost structure will need to leverage as a service economics

**SP implications**

# Why Cisco Mobility Services

## Leveraging our scale and investing for the future



### Accelerate Time to Value

IoT delivered as a service accelerates TTV from years of integration down to months.

Serve global OEMs with our eSIM Flex technology and ecosystem, within weeks.



### Manage TCO

Our as a service approach dramatically cuts down your IT spend and capex investment.

Help your enterprises manage TCO and curb anomalous device behavior with AI/ML.



### Full stack IoT

Focus on scaling your IoT practice rather than on IT integrations with our full stack offer

Monetize your investments and enable a non disruptive evolution to 5G SA.