

# W

BT-204

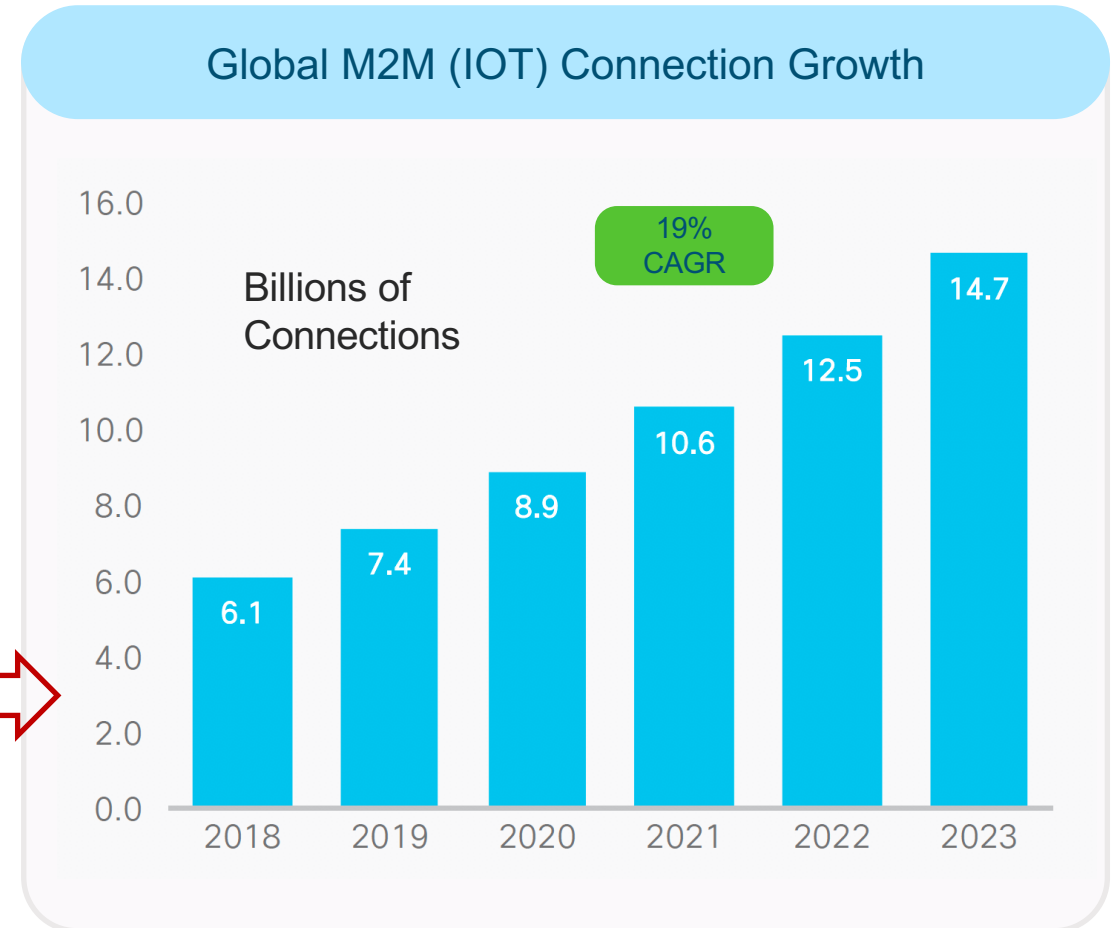
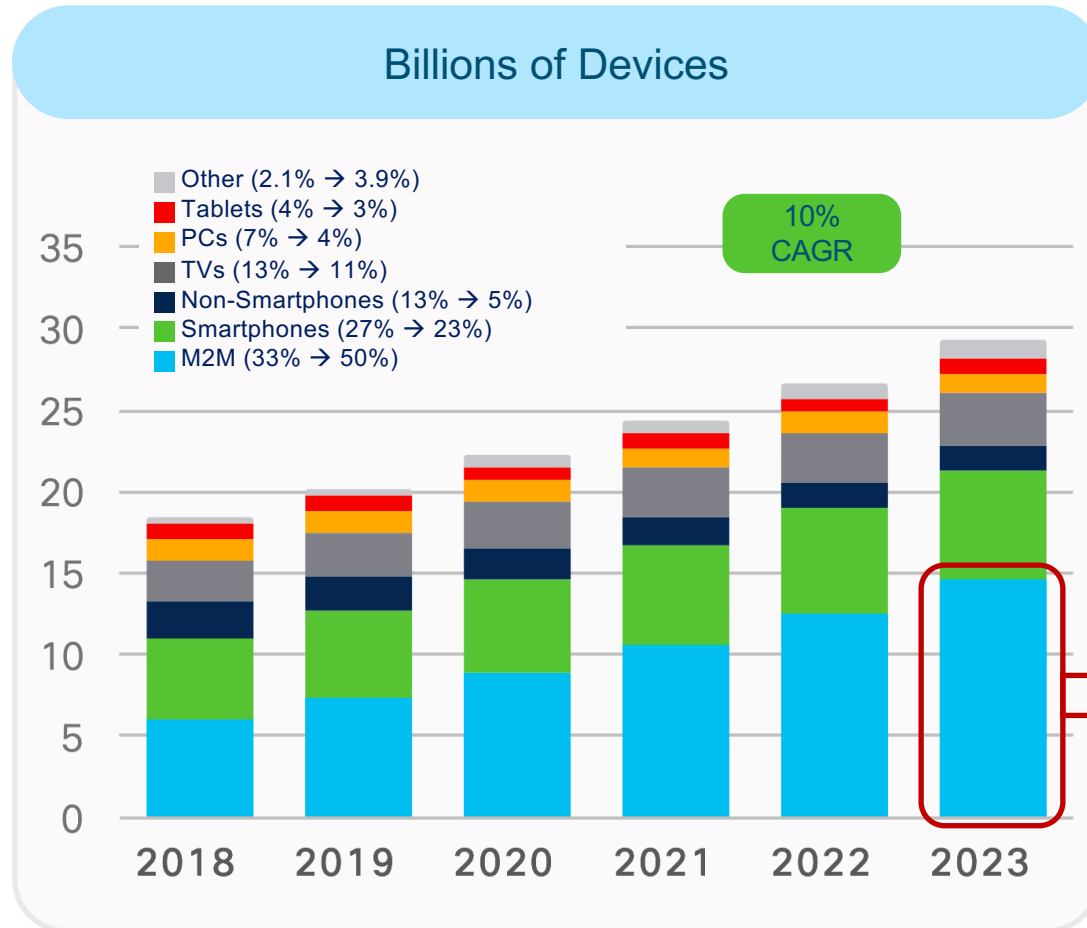
## Design IoT-Ready Enterprise Grade Wi-Fi Access Points

Bart Brinckman, Owen Troy | August 2023



*IoT in the enterprise*

# IoT device growth



For the first time in 2023, more than 50% of connections will be from IoT devices. IoT devices are the only device type with an increasing share of total connected devices

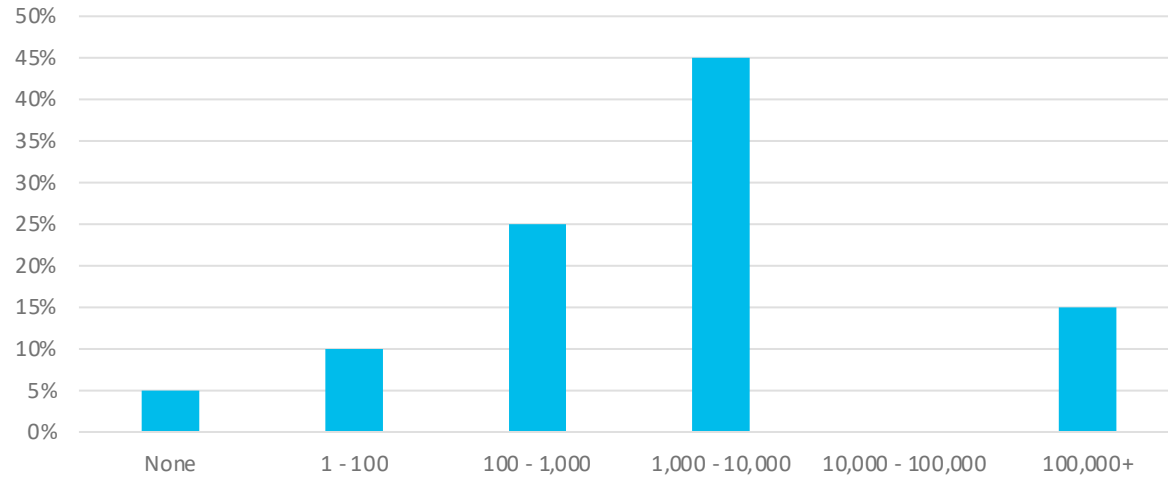
IoT devices are the fastest growing device types in enterprises with 19% CAGR

# IoT in the enterprise

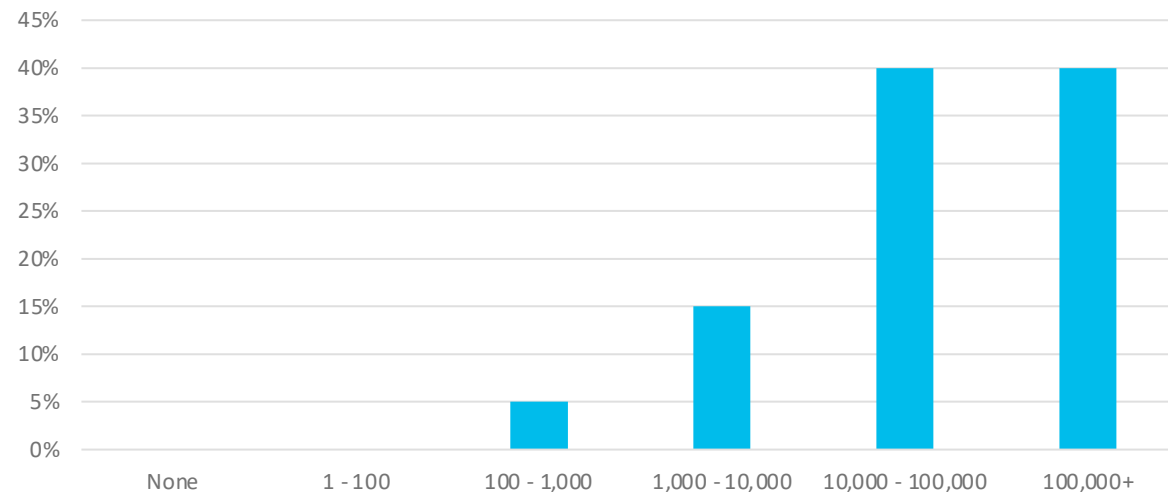
*What our customers tell us*

2022

lot devices 2022



lot devices 2025



2025

## Drivers:

### 1) Hybrid work & sustainability

- Lower seat occupancy
- Environmental monitoring & Control

### 2) Smart value chains

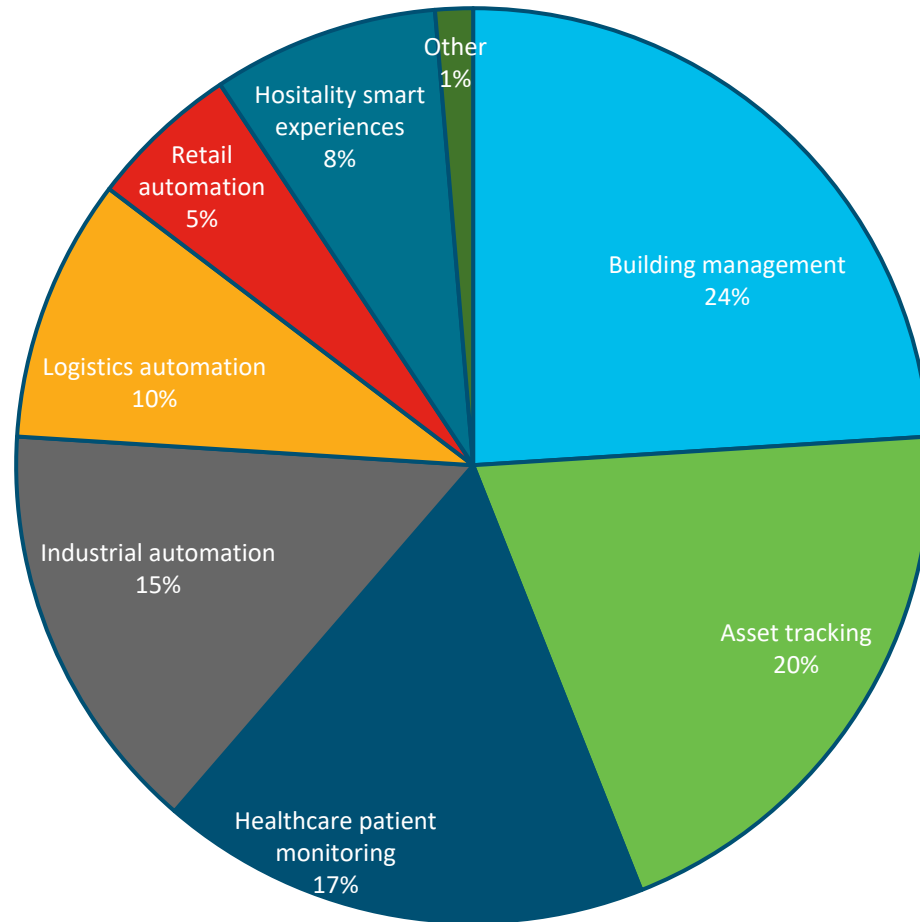
- Healthcare
- Retail
- Hospitality

### 3) Automation

- Manufacturing
- Supply chain
- Operations

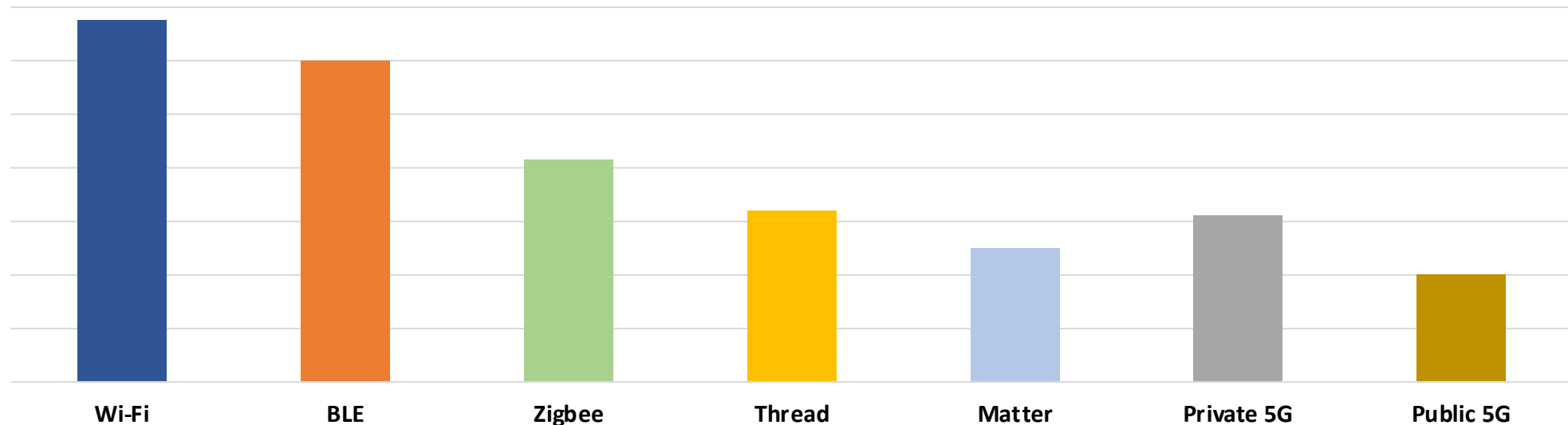
# A diverse set of Enterprise use cases

## Enterprise IoT use cases



# IoT wireless technology ranking

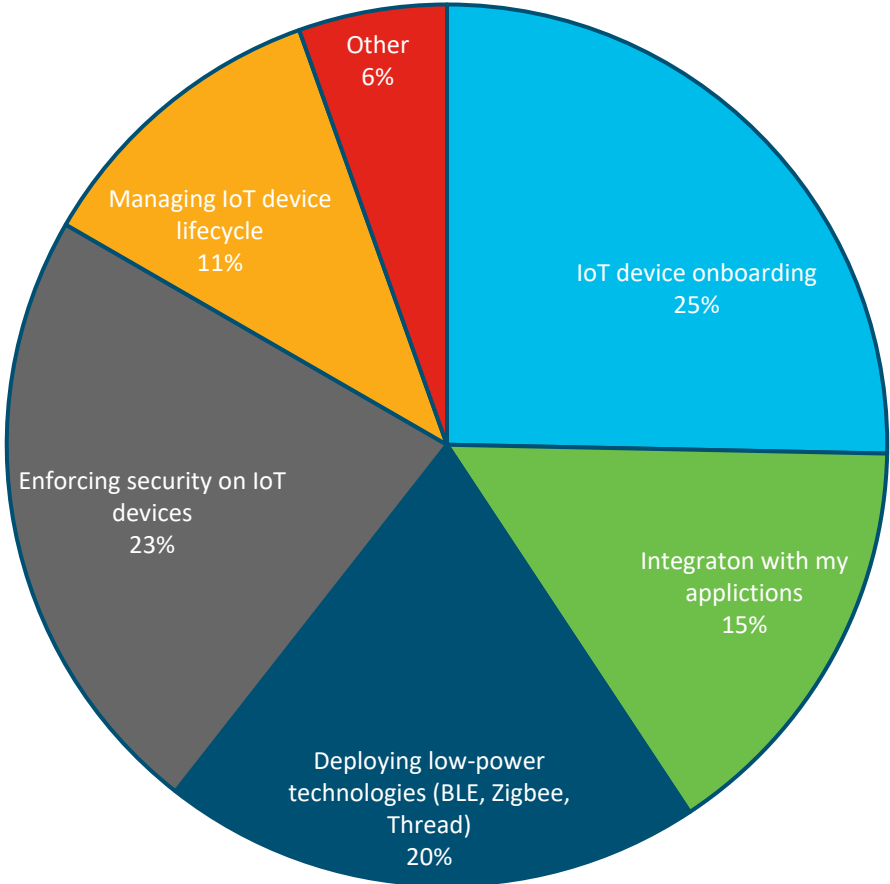
Survey of Cisco customers – what IoT access is most important to you?



Unlicensed & Supported on Cisco HW!

# The eco-system is not quite ready

Enterprise Top concerns when implementing IoT use cases



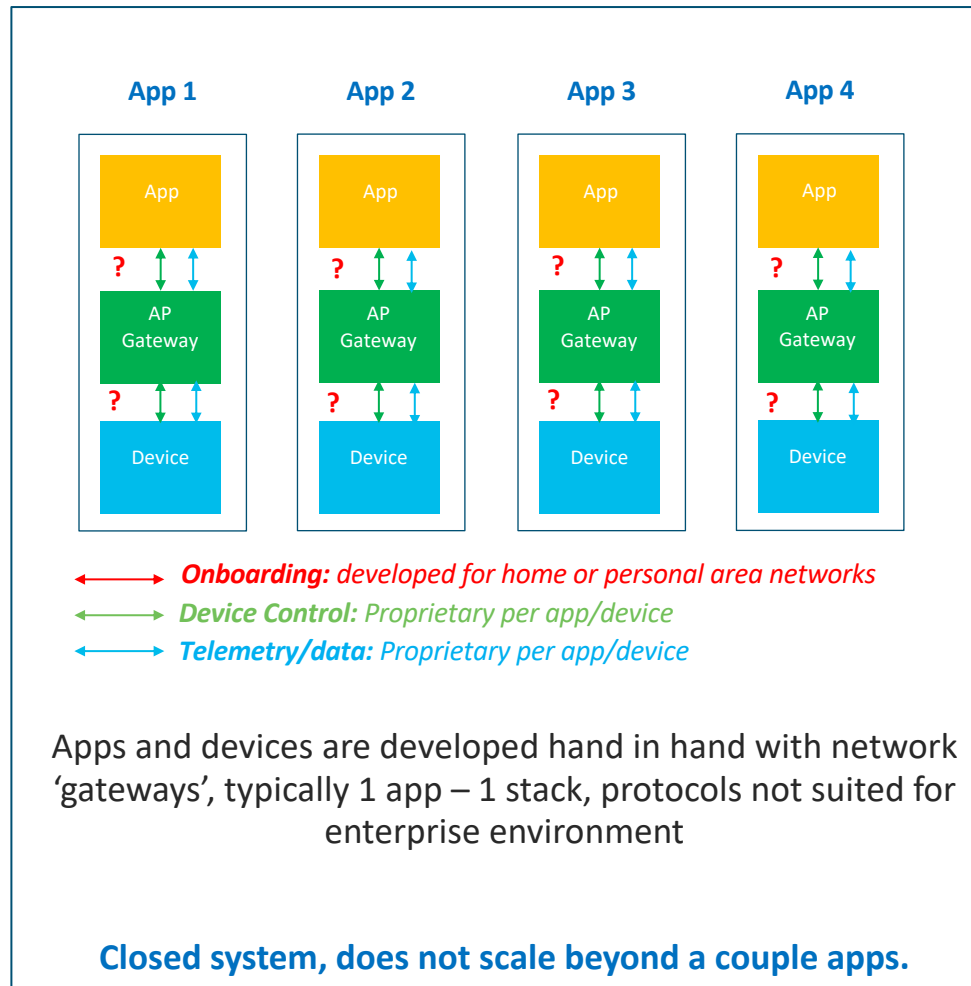
*How do we solve these painpoints?*



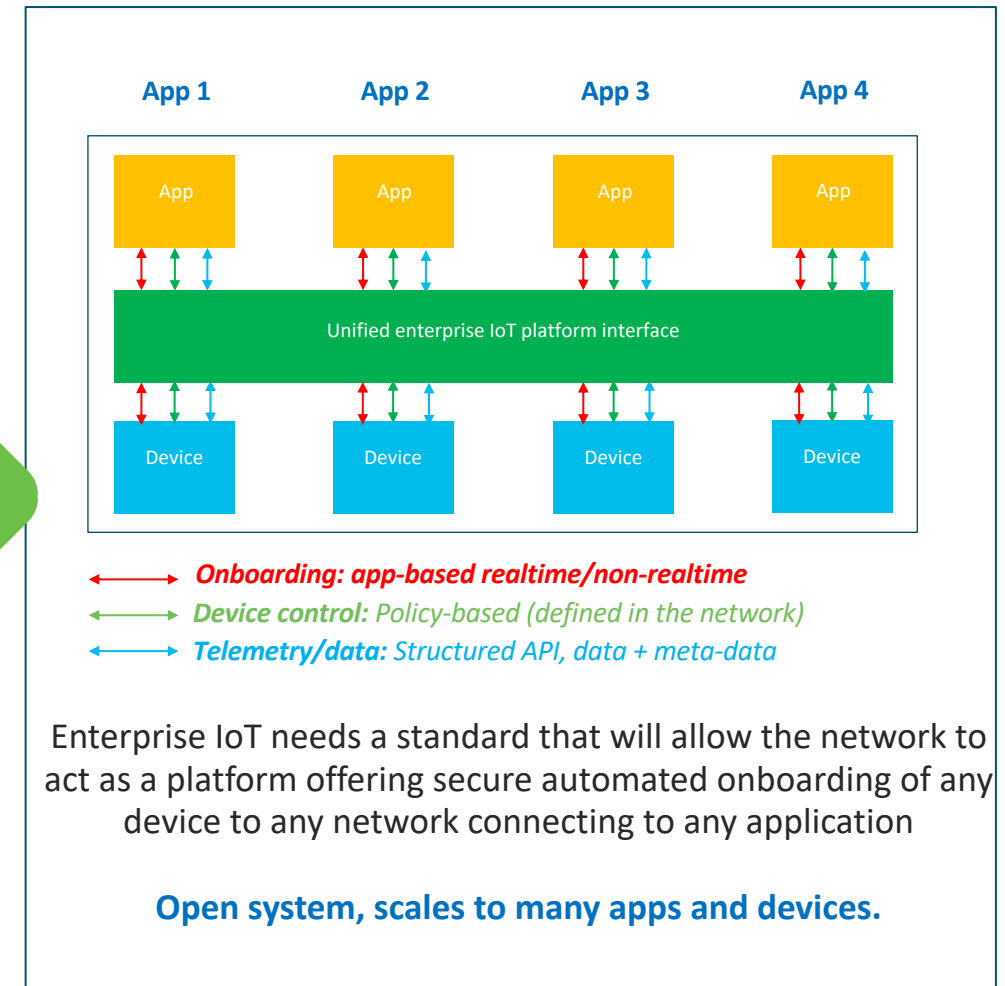
# The enterprise eco-system is fragmented

Proprietary stovepipes hold back growth

## Proprietary stovepipes



## The need for a standard



# Success Factors



Standards-based approach for partners



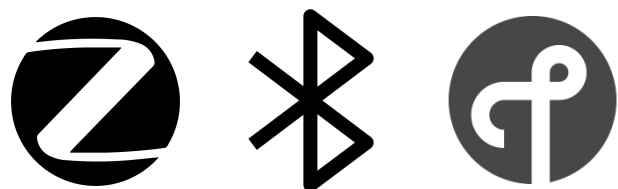
Works with what is in the market, &  
Extensible to new onboarding standards and L2 technologies







Leverage existing customer investment in APs and controllers



# Leverage existing IT infrastructure:

*Catalyst 9100 Series Access Points have a built-in Silabs IoT radio*



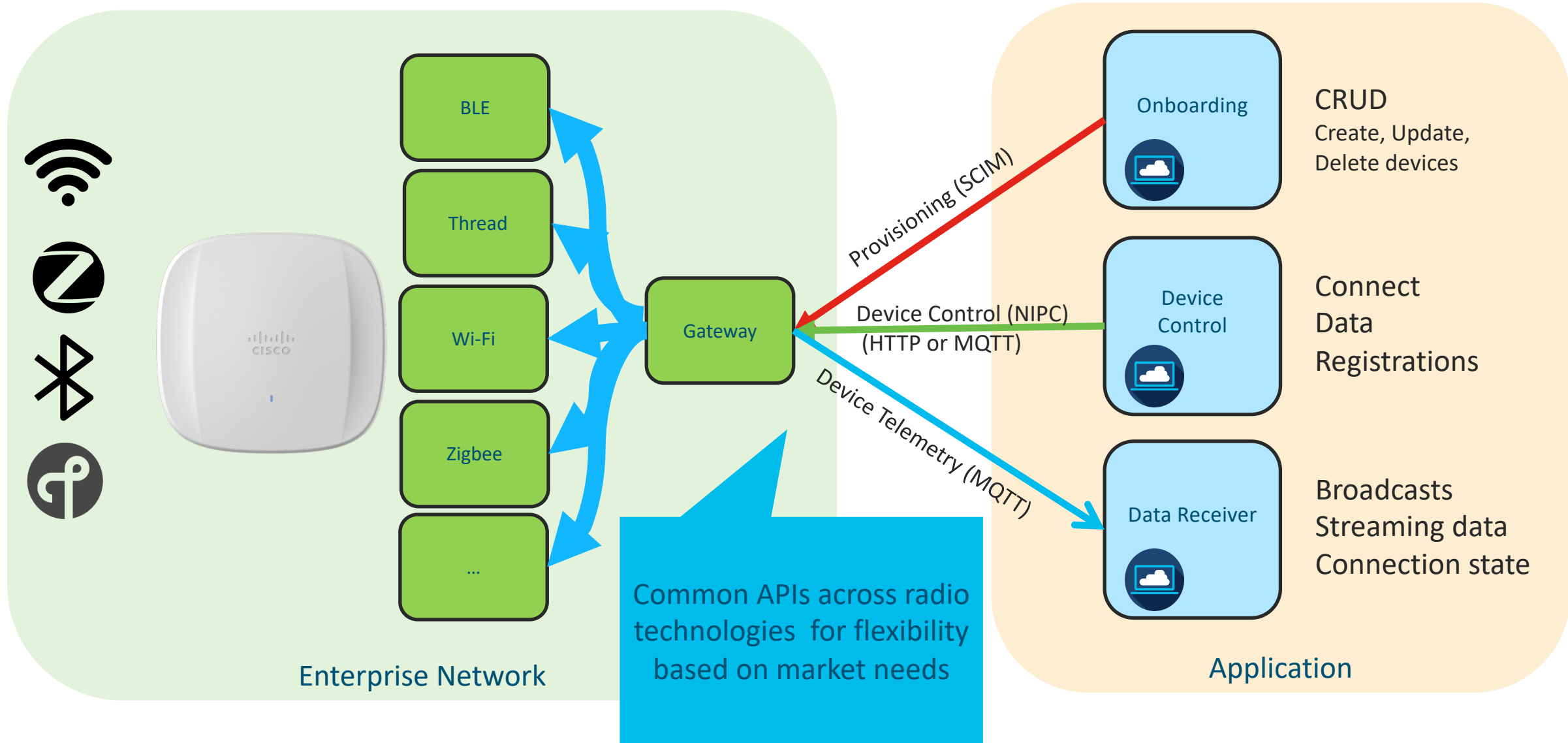
 **Configure as a BLE Gateway**  Enable Catalyst 9100 Access Points as a BLE Gateway

 **Configure as a Beacon or BLE Centra**  BLE scanning and connection-based communication, or AP (virtual beacons)

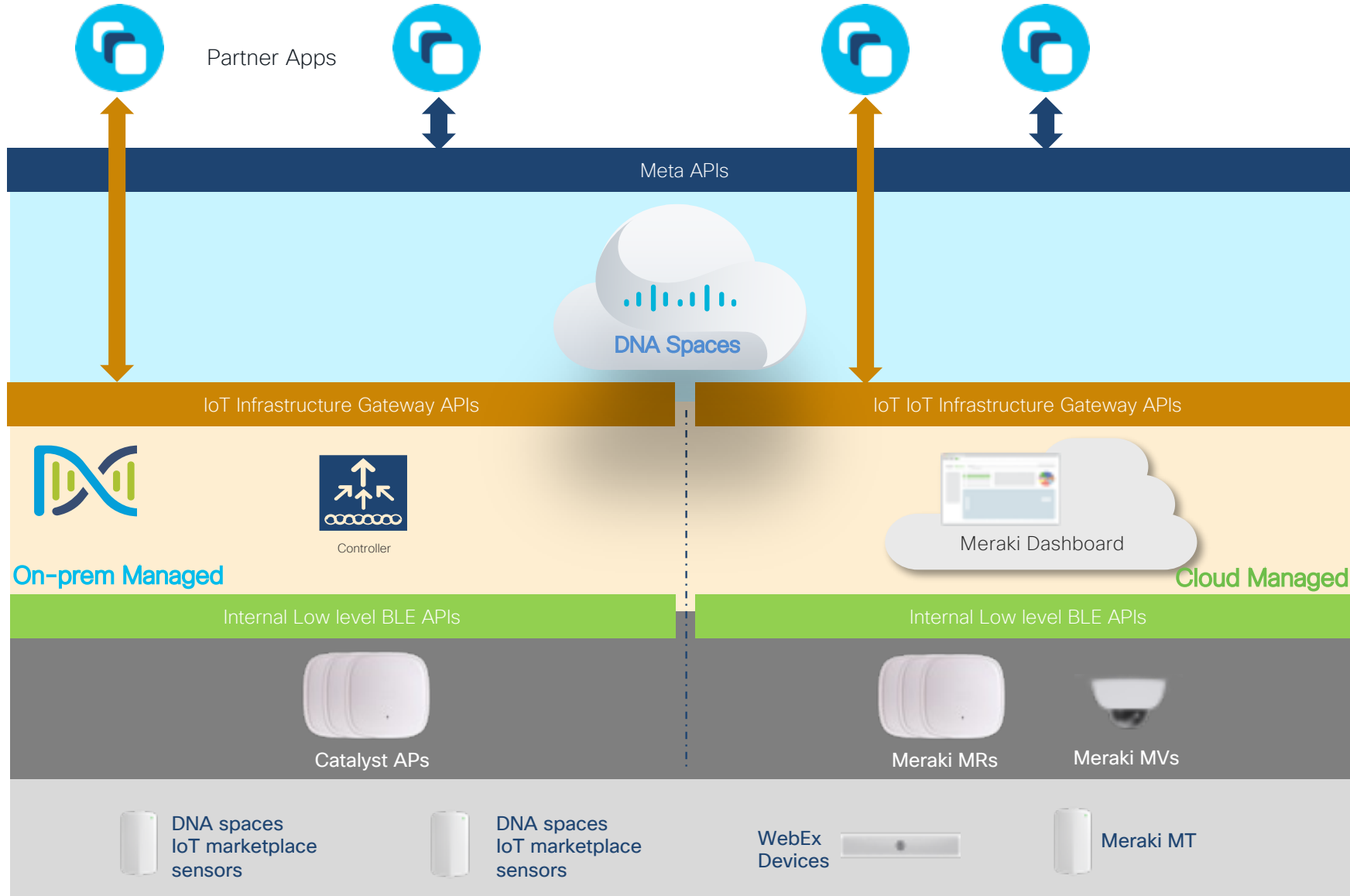
 **Configure and Talk to devices**  Configure the BLE devices from Cisco Spaces or other applications and consume telemetry from devices.

*More coming soon...*

# Standardizing APIs: Accelerating use case deployment



# Open Application integration



# Example use case: Patient monitoring with wearables

**Patient Monitoring Tomorrow**



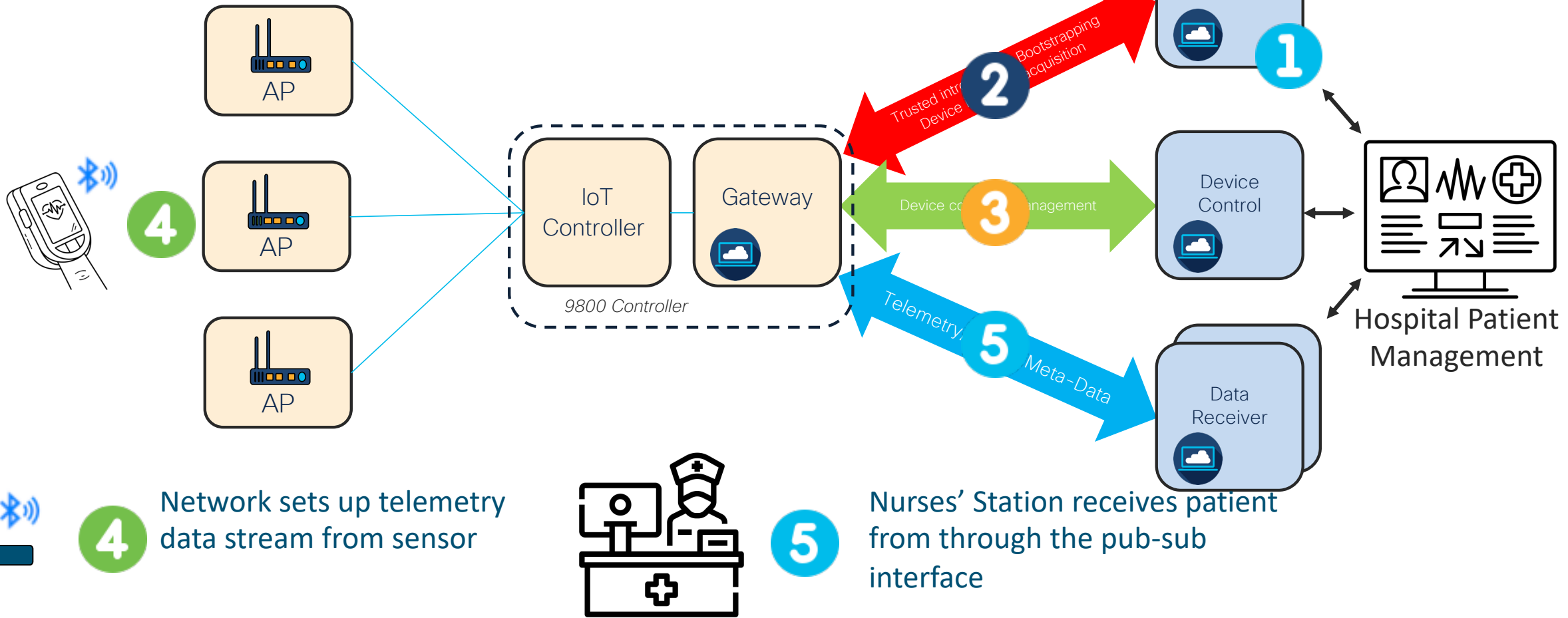
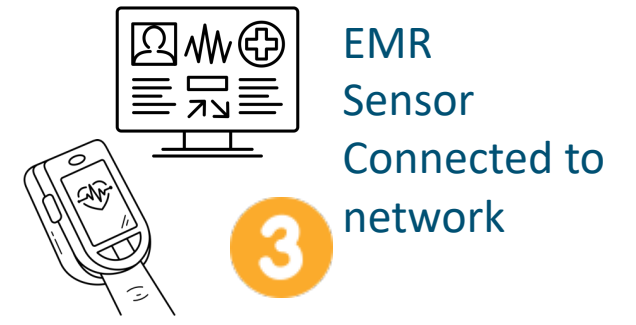
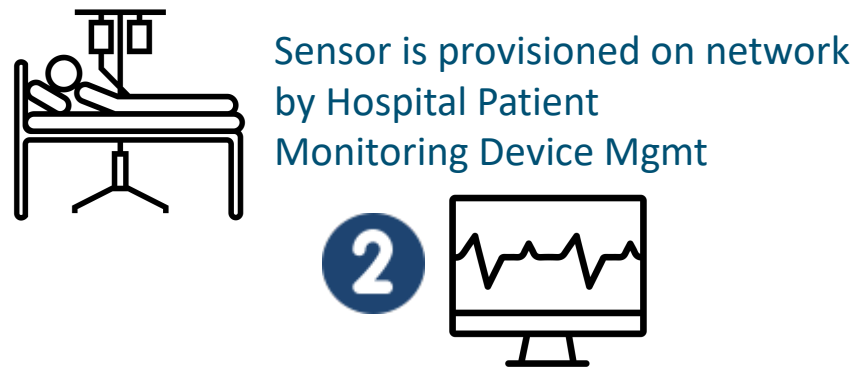
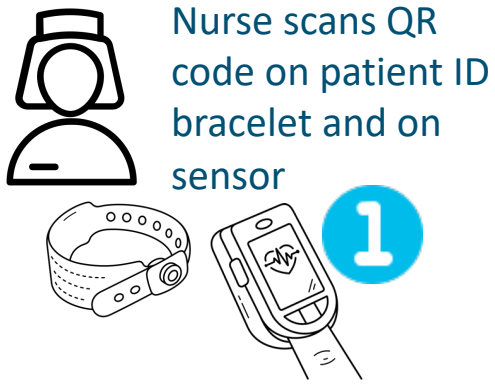
This illustration depicts a future patient monitoring scenario. It features a central white hub connected to various wearables: a smartwatch, a smartphone, and earbuds. A nurse icon stands to the right of the hub, next to a monitor displaying vital signs (79, 100). Further right is another nurse icon and a photograph of a hospital room.

**Patient Monitoring Today**

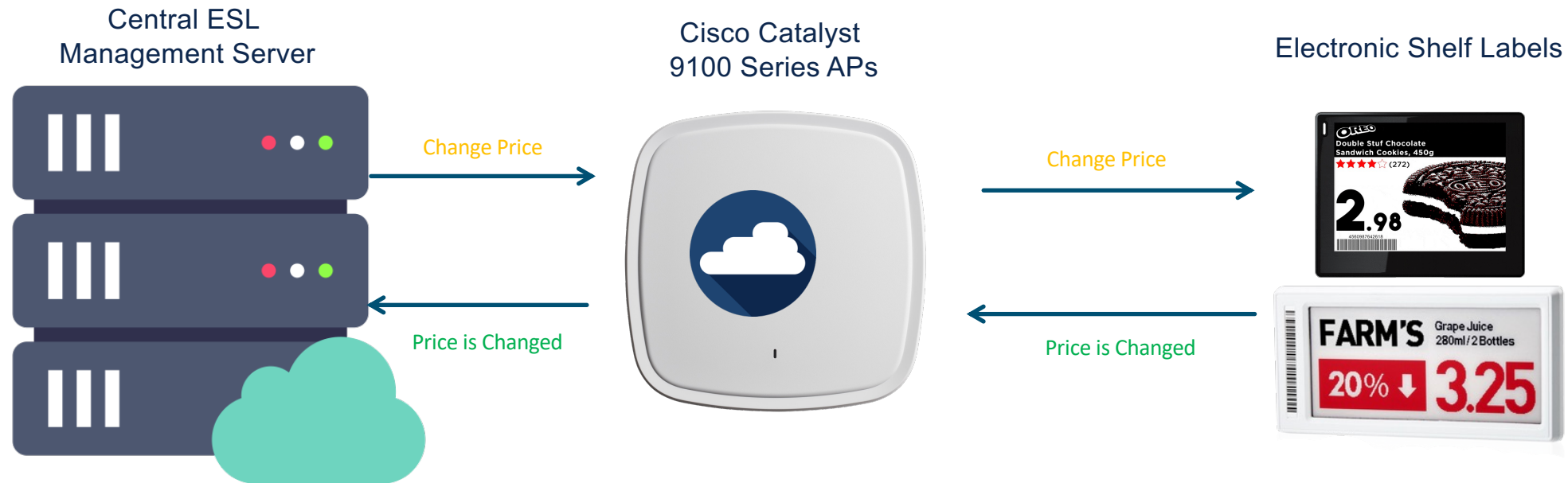


This illustration depicts the current patient monitoring scenario. It shows a nurse icon, a monitor displaying vital signs (79, 100), and a photograph of a hospital room.





# Retail Store IoT Electronic Shelf Labeling



Remote price update

Item location  
discovery

Immediate Item  
availability check



# Cisco Spaces IoT Device Marketplace

Ecosystem of third-party IoT devices – wired and wireless

The screenshot displays the Cisco Spaces IoT Device Marketplace interface. At the top, the header includes the Cisco Spaces logo, the page title "IoT Device Marketplace", a search bar, and the user name "Jose Correa". Below the header, there are two dropdown menus for "Industry" (set to "Workspaces") and "Use Case" (set to "All").

The main content area is divided into a left sidebar for filtering and a grid of product cards. The sidebar includes the following sections:

- FILTER BY**
- Type**: Radio buttons for "Wireless" (selected) and "Wired".
- Price Range**: Radio buttons for price ranges: "< US \$20", "US \$20 - \$40", "US \$40 - \$60", "US \$60 - \$80", "US \$80 - \$100", and "US \$100+". A "CLEAR" button is present.
- Battery Life**: Radio buttons for battery life durations: "> 3 months", "1-2 years", "2-3 years", "3-4 years", "4-5 years", and "5+ years". A "CLEAR" button is present.
- Technology**: A section for selecting technology types.

The product grid shows the following items:

- EnOcean EDRPB-CS**: A light switch. Price for 1 unit: **US \$41.28**. Volume discount for 1000 units: **Up to 19%**. Lead Times: 0.5 week. Features: Self-powered, no batteries, lighting, HVAC and shutter control, NFC.
- M1 Tag Beacon**: A circular beacon. Price for 1 unit: **US \$10.00**. Volume discount for 1000 units: **Up to 41%**. Battery: 8 months. Lead Times: 3-5 weeks. Features: 3-axis accelerometer sensor optional.
- i7**: A circular sensor. Price for 1 unit: **US \$15.00**. Volume discount for 1000 units: **Up to 20%**. Battery: 1.6 years. Lead Times: 6-8 weeks. Features: Replaceable battery, external on/off button.
- kontakt.io**: A small square device.
- GOOD WAY**: A rectangular device.
- EnOcean**: A square sensor.

# Cisco Spaces IoT Explorer

Monitor, manage, and optimize assets, Internet of Things (IoT) sensors, alerting system, and operational workflows

**CISCO SPACES**

**IOT EXPLORER**

Use Cases

Users

**RELATED LINKS**

- Location Hierarchy
- Set Up Guide
- IoT Device Marketplace

Explore Use Cases and set up a new one below

Click on a Use Case to get started and to learn more about each solution in DNA Spaces

- Temperature Monitoring**  
Monitor spaces and receive notifications of changes in temperature
- Asset Tracking**  
Locate, monitor and set up alerts to gain insight into your asset locations
- Presence Detection**

**Active Use Cases**

Below is where you will find all your active use cases; like tracking the temperature of your temperature for snacks!

- Asset Tracker Test - Map View**  
ASSETS: 3, EVENTS: 0  
Last modified 02-11-2022
- Asset Tracking MFD**  
ASSETS: 1, EVENTS: 0  
Last modified 11-07-2022

### Temperature Rule

Rule Conditions Actions

**Temperature Rise**  
Temperature raise above 22° Celcius

- Log the Event**  
Logged as an event
- Send Email**  
Send to role User Case Manager

**Temperature change**

- Temperature Rise**  
Trigger this rule when temperature rises by a specified amount.
- Temperature Drop**  
Trigger this rule when temperature drops by a specified amount.
- Temperature in Range**  
Trigger this rule when temperature is within a specified range.
- Temperature Outside Range**  
Trigger this rule when temperature is outside a specified range.

**Warning:** You can choose only one parameter per Rule. Create a new rule to enable additional parameters.

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Thank you!

