



The bridge to possible

Why "Fi": Because Innovation is the Future, and the Future is Cisco Wireless and Wi-Fi 6E

Maren Kostede, Technical Leader, EMEA Enterprise Networks &
Software Sales

Cisco Webex App

Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated until February 24, 2023.



... about Maren

- joined Cisco in 2005
- Systems Engineer/ Wireless Specialist for Northern Germany
- 2018 Technical wireless sales lead for Cisco EMEAR
- 2023 Technical Leader, Enterprise Networking and Software Sales EMEA

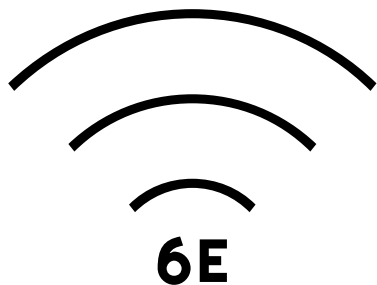
- › Mom
- › Hamburg/ Germany
- › Traveling
- › (future 😊) Sailing





Agenda

- What is Wi-Fi6 E?
- Cisco Solution
- Beyond Wi-Fi & Future



Faster speeds. Lower latency.
Better user experience.

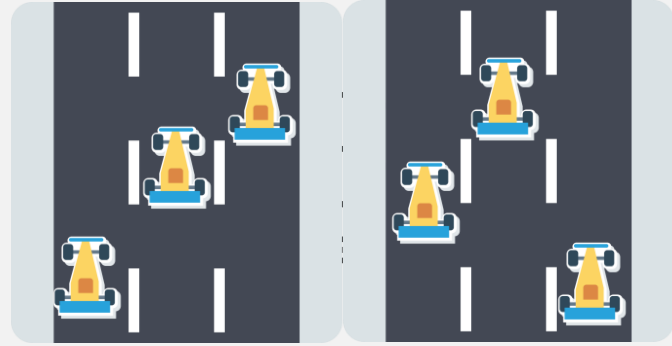


6 GHz solves the “Wi-Fi traffic jam”

2.4 and 5 GHz are congested,
and must support old clients



6 GHz is twice as wide as
5 GHz and only allows new, fast clients



This results in faster speeds, lower latency, and better overall experience

Yes, for real!

Pre Wi-Fi 6E



- Limited reusable channels
- Channels congestion
- Interference

Wi-Fi 6E

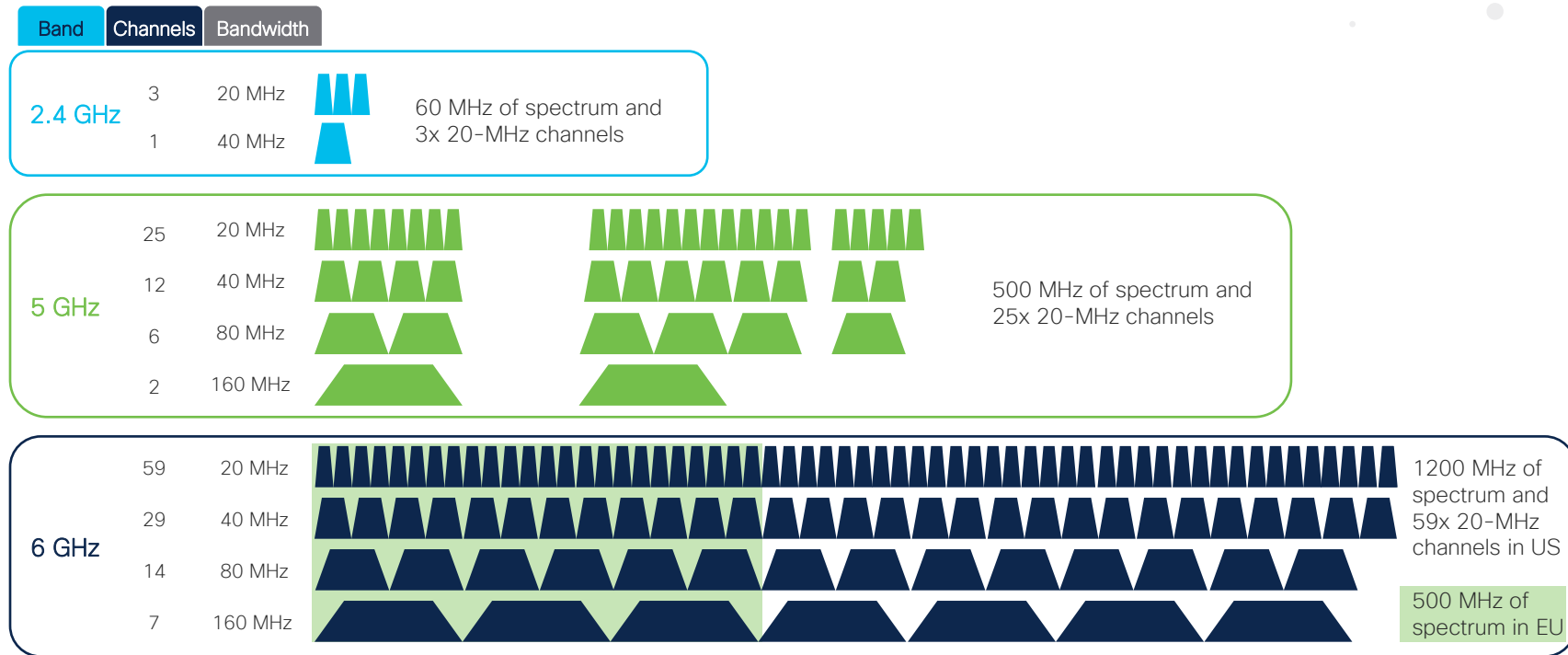


- More spectrum
- wider Channels
- Clean RF

CISCO *Live!*



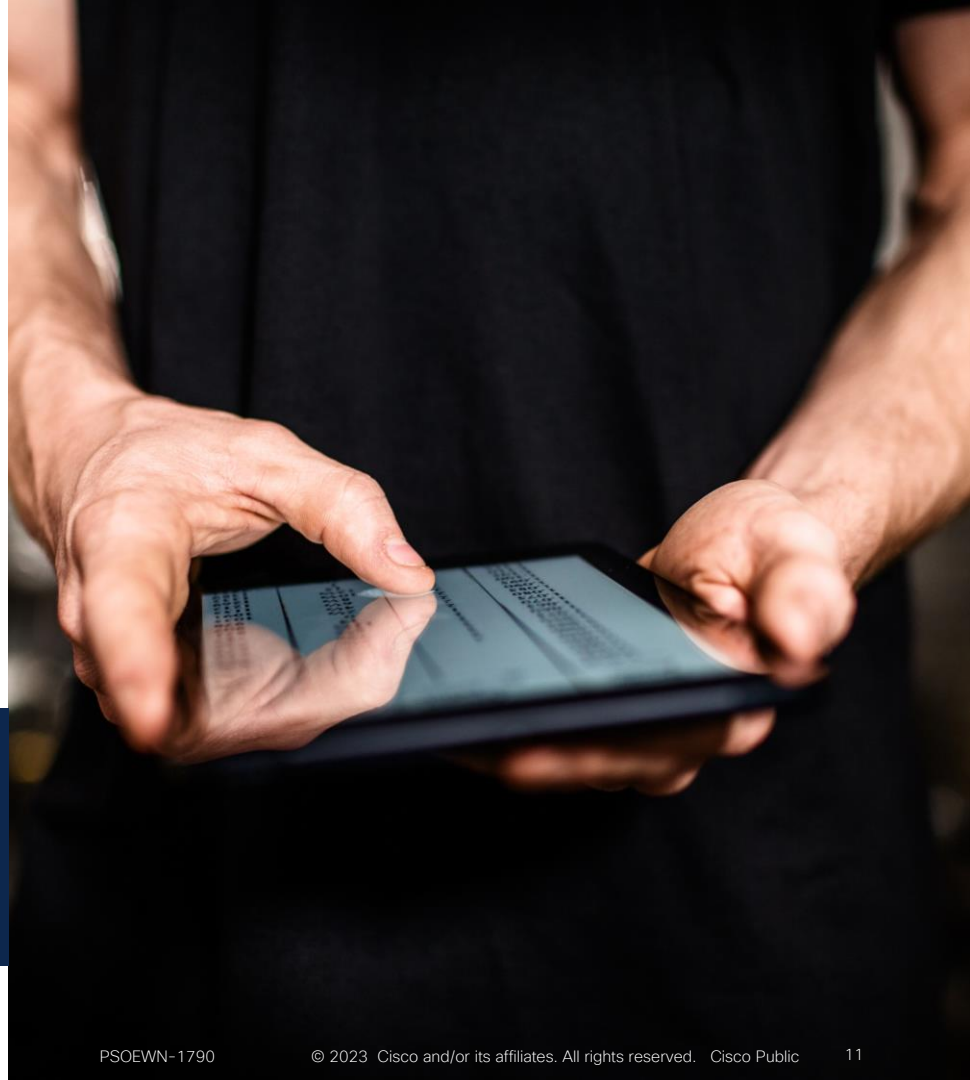
6 GHz is the biggest Wi-Fi spectrum expansion ever



Secured by Wi-Fi Protected Access 3 (WPA3)



WPA3 is mandatory with 6E, and includes
Simultaneous Authentication of Equals (SAE), Protected
Management Frames (PMF), and 192-bit keys



Enhanced experience through Wi-Fi 6E



Education

AR/VR/XR learning,
e-learning, digital
education



Public venues

High-resolution
video, cellular
offload, Wi-Fi
calling, new
audience
experiences



Hybrid workspaces

Digital collaboration
(video conference,
digital white boards,
etc.), teleworking



Healthcare

Telemedicine,
robotics, smart IoT
devices and
wearables, asset
tracking



Manufacturing

Automated and
digitized operations
and supply chain,
robots

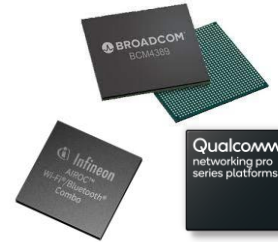
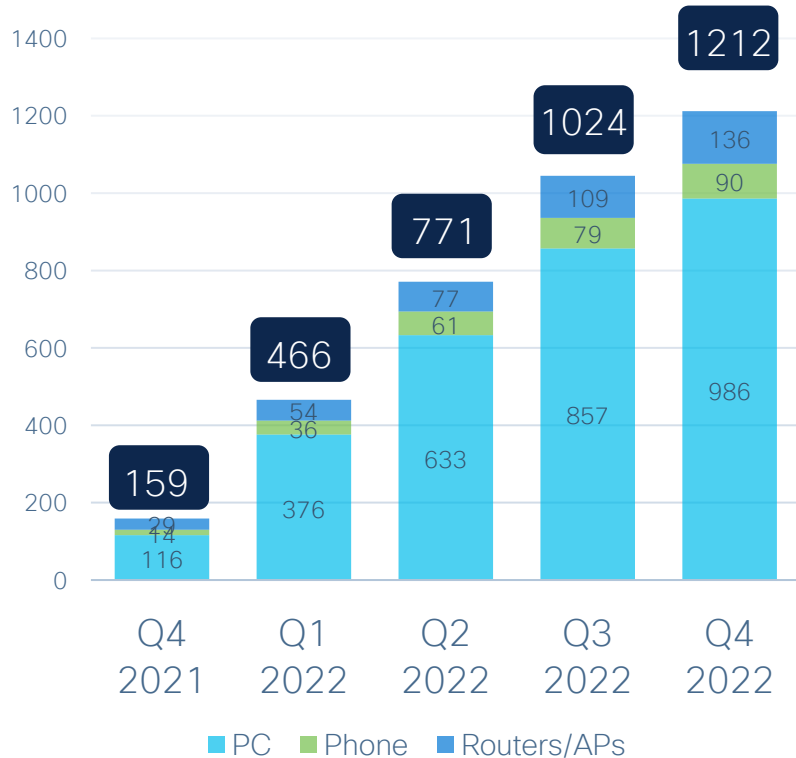
Capacity/
Bandwidth

High density

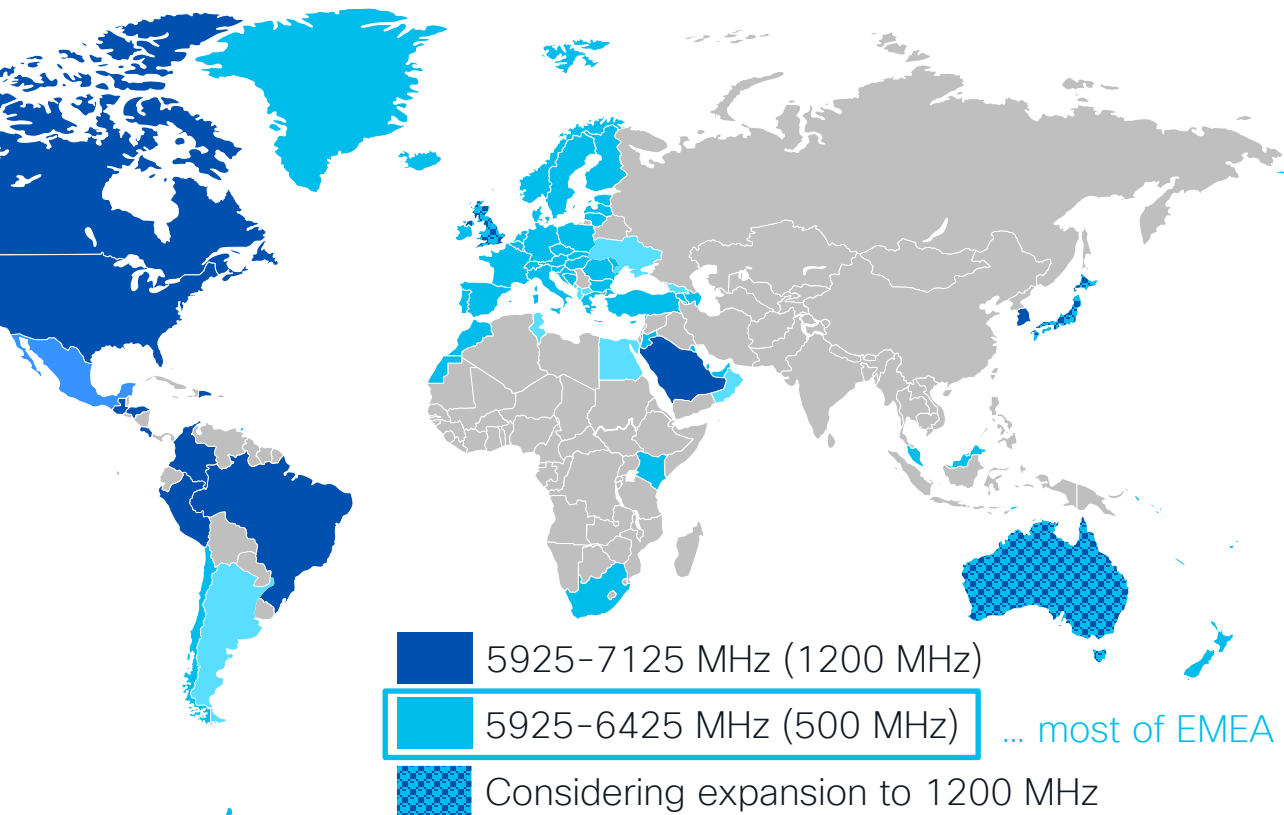
Performance


Low latency

Wi-Fi 6E Client Device Eco System



6 GHz Availability & Wi-Fi 6E Outdoor in EMEA



 For Wi-Fi 6E, external Antenna APs and **outdoor** use are not yet permitted by regulatory bodies in EMEA*

*CEPT/ECC:
<https://docdb.cept.org/download/1448>



Catalyst Wi-Fi 6E – ONE family of Access Points

New Wi-Fi 6E Access Points

One Product, Two Management Modes



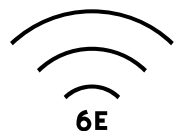
DNA Mode
C9800 & DNAC Stack



Meraki Mode
MR Dashboard Stack



Industry's best, broadest & most energy-efficient Wi-Fi 6/6E portfolio



 Management mode can be changed

Cisco's complete Wi-Fi 6E & Wi-Fi 6 wireless stack



Cisco Catalyst™ 9800 Series
Wireless Controllers



Cisco Catalyst 9100
Access Points



Managed by
Cisco DNA Center



Translate business intent into network
policy and capture actionable insights



**CISCO
SPACES**

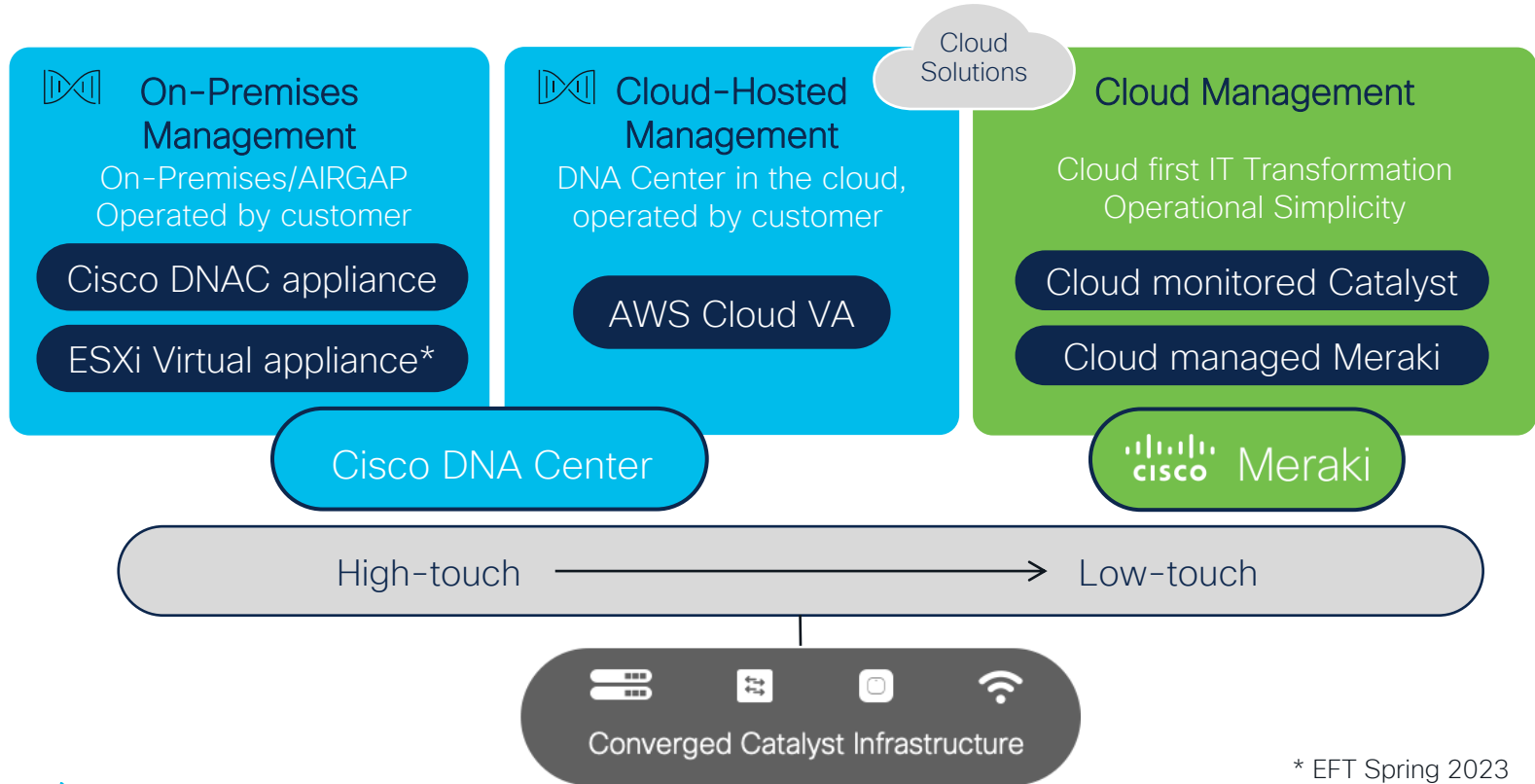
Digitized by
Cisco Spaces

Digitize people, spaces, and things

Full-stack network intelligence

15

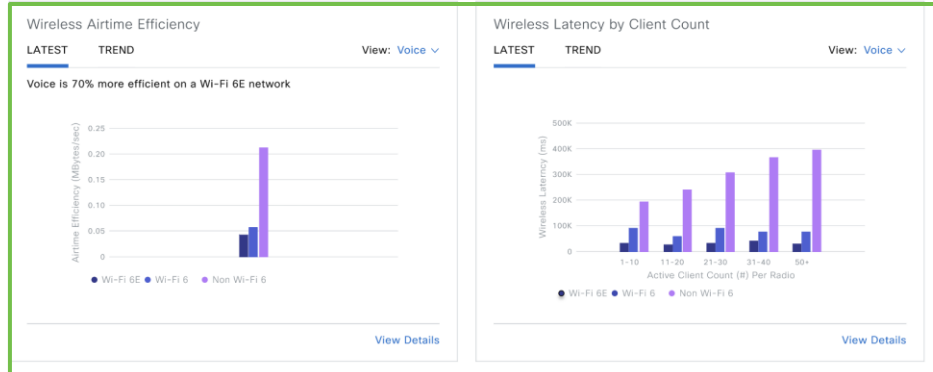
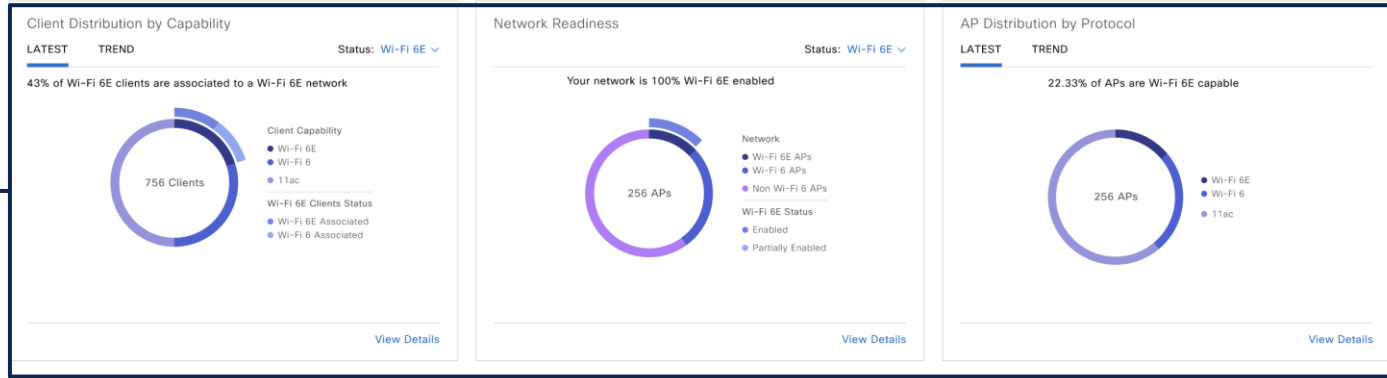
Your IT operation model, your way



* EFT Spring 2023

Cisco DNA Center: Wi-Fi & 6E Dashboard - readiness and benefits of 6 GHz

Readiness



Benefits
(less Airtime/ low latency = GOOD)

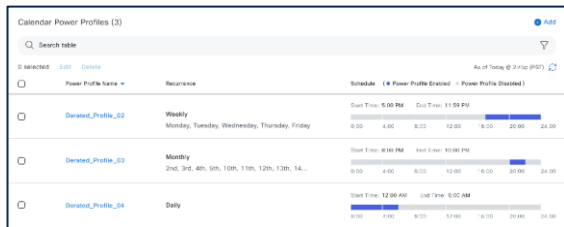
Catalyst & Cisco DNA Center Power Optimizations Feature Suite

AP Power Save Mode

Lower AP Power Usage



- Switch off for off-peak hours
- lower the power consumption during off-peak



IOS-XE 17.8**

AP Power Distribution

Control over how power is used



- Reallocate AP Power to different radios while operating on PoE+ (30W)
- Example: Disable 2.4G radio -> use power for 6G radio

Rules (3)					
0 selected Edit Delete As of Today @ 2:45p (PST)					
<input type="checkbox"/>	Sequence	Interface	Interface ID	Parameter	Parameter Value
<input type="checkbox"/>	0	Ethernet	GigabitEthernet0	Speed	5000 Mbps
<input type="checkbox"/>	1	Radio	6 GHz	State	Disabled
<input type="checkbox"/>	2	USB	USB 0	State	Disabled
3 records Show records: 10 1-3 < >					

IOS-XE 17.10**

AP Power Saving Insight

Power, Money, and Emissions Savings on Cisco DNA Center*



- Power Savings and feature enable trend on PoE dashboard
- Trends at global, site and AP level views



* DNA Center integration is on the roadmap (Assurance PoE Visibility, visibility of \$ and CO₂)

**Supported on Catalyst APs: 9115, 9120, 9130, 9136, 9166, 9164, 9162

Cisco Device Ecosystem Partners

Client-side Benefits Only Available to Cisco Wireless Networks



SAMSUNG



iOS Analytics,
Fastlane and Fastlane+

Neighbor AP
Table

BSSID	AP Name	Channel	RSSI (dBm)	Location	Time	Disassociation Reason
08:00:00:00:00:00	LAB-AP001 (802.11B)	149	-55	GlobalNorth America/US001	May 8, 2024 9:58 PM	User triggered disassociation
08:00:00:00:00:00	AP001 (802.11B)	149	-75	GlobalNorth America/US001	May 8, 2024 9:58 PM	Client side
08:00:00:00:00:00	LAB-AP002 (802.11B)	149	-55	GlobalNorth America/US001	May 8, 2024 9:58 PM	User triggered disassociation
08:00:00:00:00:00	LAB-AP003 (802.11B)	149	-55	GlobalNorth America/US001	May 8, 2024 9:58 PM	Client side

Disassociation
Details

Neighbor AP
Visual



SAMSUNG Analytics

Event	Time	Details
WPA-PSK	5:51:50:561 PM - 5:51:50:561 PM	
Client Side Disassociation	5:47:50:561 PM	Device Turned Off
Client Side Disassociation	5:47:50:561 PM	AP:AP001 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP002 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP003 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP004 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP005 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP006 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP007 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP008 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP009 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP010 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP011 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP012 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP013 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP014 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP015 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP016 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP017 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP018 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP019 (802.11B) (BSSID:00:00:00:00:00:00)
Client Side Disassociation	5:47:50:561 PM	AP:AP020 (802.11B) (BSSID:00:00:00:00:00:00)

Device
Turned Off

Airplane Mode
Turned On

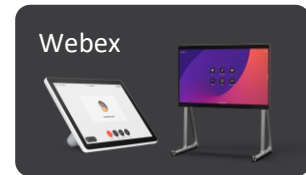
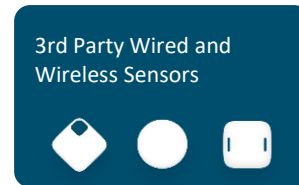
intel. Connectivity Analytics

- Issue reporting, roam and disassociate reasons
- Neighboring APs, BSSID, RSSI
- Enhanced device classification

Cisco Spaces: Expand your Wi-Fi 6E Solution using BLE & WebEx and 3rd Party Solutions to create safer and smarter Workspaces



Catalyst 9136 AP, use with Cisco Spaces



Wireless beyond Wi-Fi...

Only Cisco offers a choice for the most demanding wireless use cases



Cisco Ultra-Reliable Wireless Broadband

Fiber-like performance anywhere

<10ms latency, 99.999% availability, 350 km/h with zero packet loss hand-offs

Simplified deployment

based on IP, easy to install as Wi-Fi,
no dependency on spectrum, CapEx model

Industrial certified

Certifications (rail, shock, vibration, etc.),



Cisco Private 5G

Simple to start (Managed-Service)

pay-as-you-grow model; minimize up front costs

Intuitive to operate

single pane management; automatic upgrades;
AI driven insights

Trusted

99.999% resiliency available;
Cisco Validated Designs (CVD);

Catalyst IoT Access Points & Solution

Your network goes wherever you need it



- 50C



+75C



Shock / Vibration



Water



Dust



Industrial certifications
(e.g. EN50155)

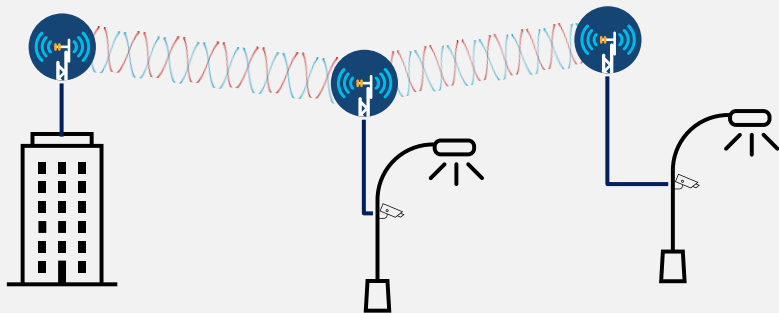


Industrial protocols

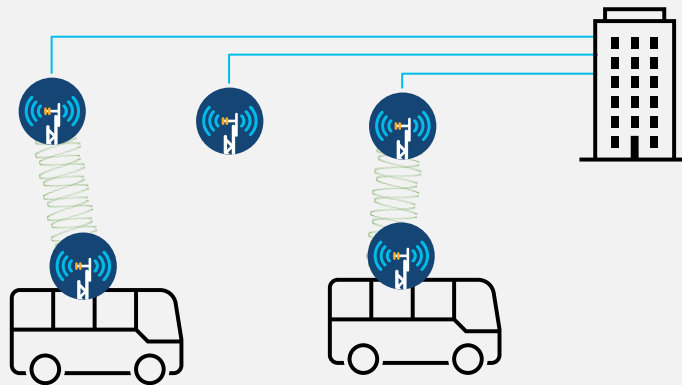
Cisco Ultra-Reliable Wireless Backhaul

Reliable fiber-like wireless connectivity, anywhere

Connectivity where fiber isn't available or too costly



Connectivity for moving assets



Proven • Deploys like Wi-Fi • Full control of your network • Unlicensed spectrum

One Access Point Hardware, 2 Wireless Technologies

Cisco Ultra-Reliable Wireless Backhaul (Cisco URWB)



*“Extend your network to
remote or mobile
locations”*

Deploy and Manage at any scale with
Cisco IoT Operations Dashboard

Cisco Catalyst Wireless



*“Connect devices to
your network”*

Pair with Cisco DNA software for deep
network insights and management

Next generation of outdoor and industrial wireless portfolio

Purpose-built dedicated wireless client



Catalyst IW9165E
Rugged Access Point
and Wireless Client

Cisco URWB

WGB

Wireless backhaul that's
easy to deploy



Catalyst IW9165D Heavy
Duty Access Point

Cisco URWB

Premier outdoor and
industrial access



Catalyst IW9167E Heavy
Duty Access Point

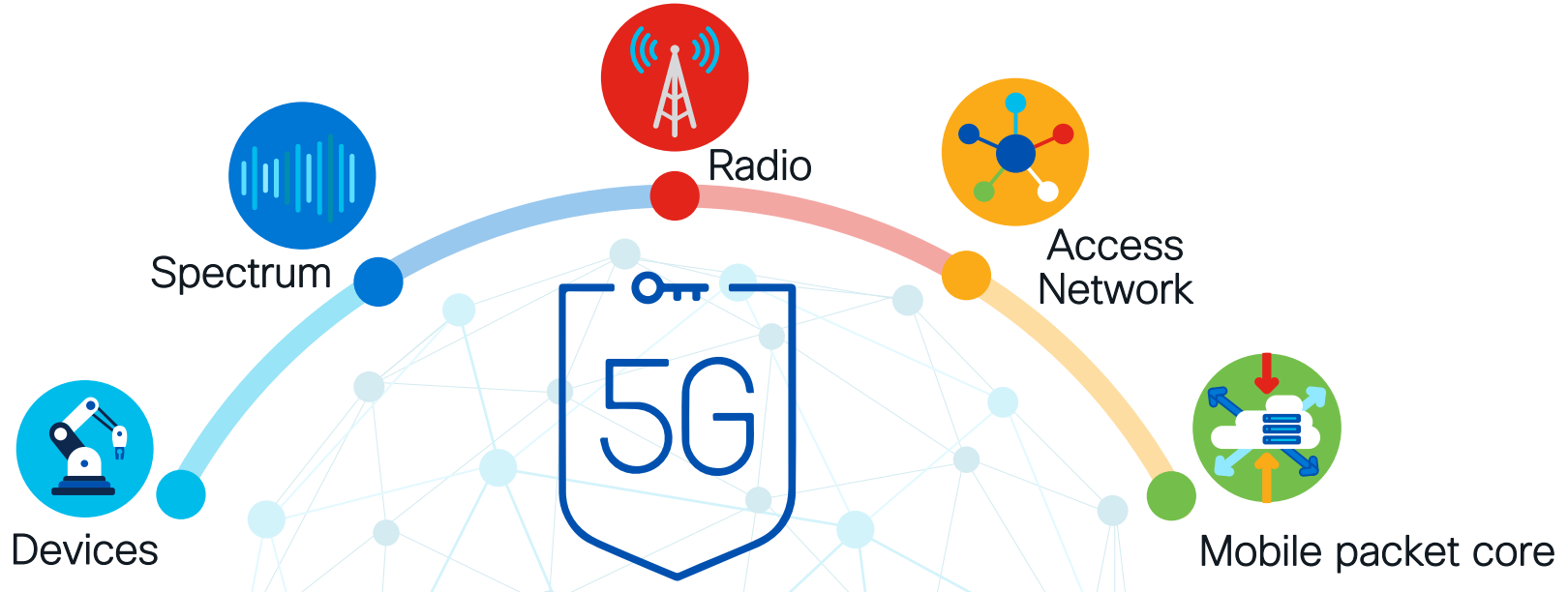
Cisco URWB

Wi-Fi 6E-ready*

WGB

Connect more devices. Wirelessly. Reliably. Even on the move.

Considerations & Components for Private 5G

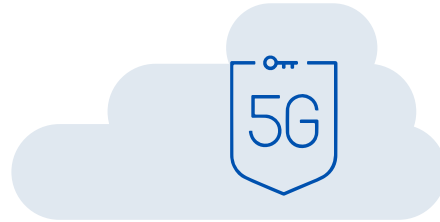


A private cellular network that is built using 3GPP 5G technology, dedicated to carrying traffic from a specific entity (e.g., enterprise) in licensed radio spectrum

Cisco Private 5G

Delivered **as-a-service** to ease adoption

Public
5G network



Private
4G/5G network

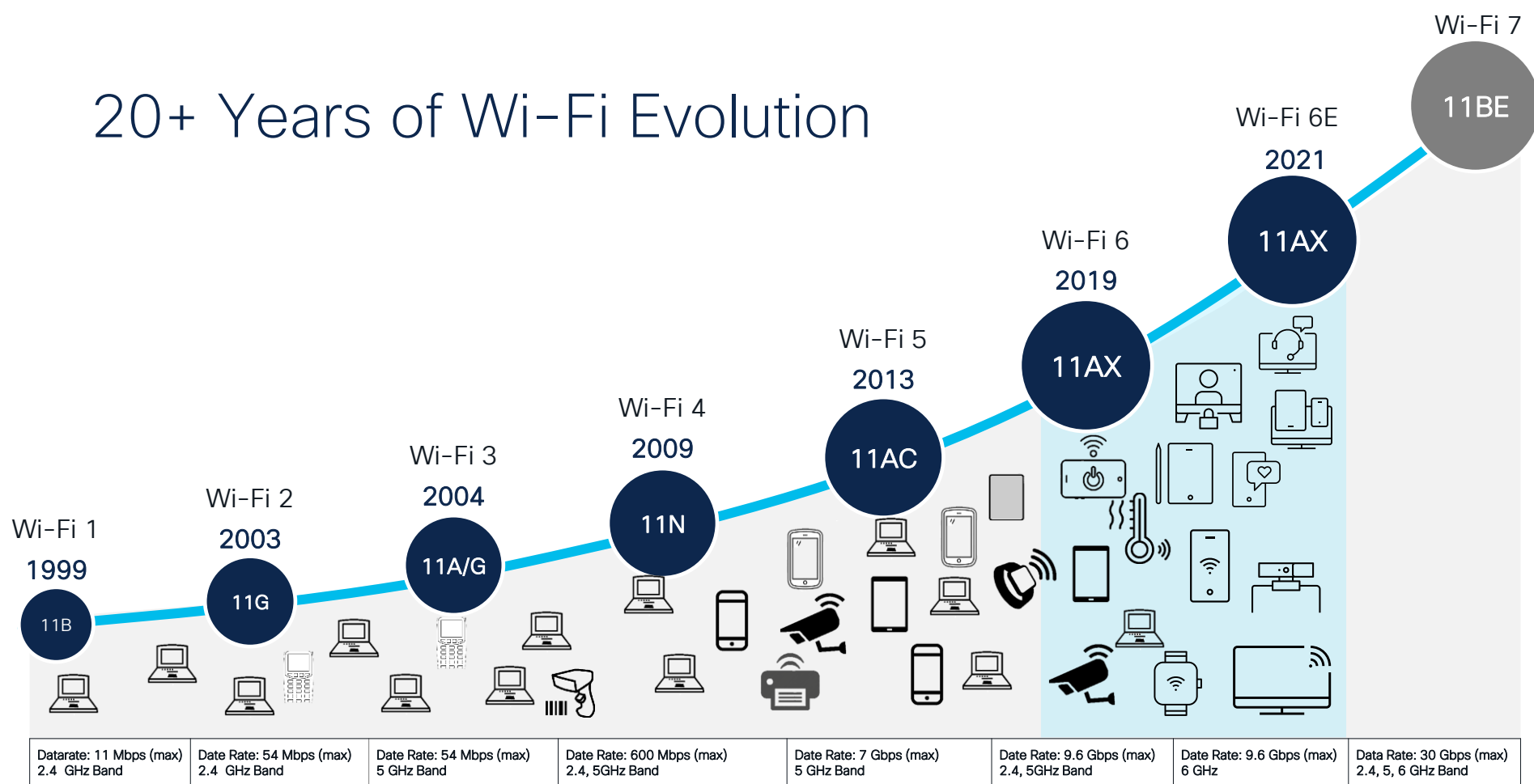
Perimeters of
privately owned
campus/building

Service provider



Enterprise/Industry

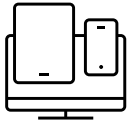
20+ Years of Wi-Fi Evolution



How to choose the ideal future wireless solution?

1

What are the devices to connect?



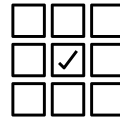
2

What are the application requirements?



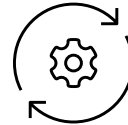
3

Deployment scenarios?



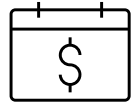
4

What are the different technology options?



5

What are the capex and opex implications?



Continue Your Education



Visit the Cisco Showcase for related demos.



Book your one-on-one Meet the Engineer meeting.



Attend any of the related sessions at the DevNet, Capture the Flag, and Walk-in Labs zones.



Visit the On-Demand Library for more sessions at ciscolive.com/on-demand.

Complete your Session Survey

- Please complete your session survey after each session. Your feedback is important.
- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Session Catalog and clicking the "Attendee Dashboard" at <https://www.ciscolive.com/emea/learn/sessions/session-catalog.html>





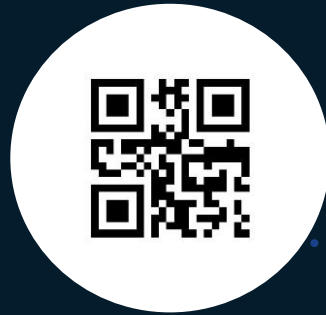
The bridge to possible

Thank you

CISCO *Live!*

Are you playing the Cisco Live Game?

Scan the QR code and earn your
Cisco Theater points here



CISCO *Live!*

ALL IN