WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

NETWORK X

17 – 20 OCT 2022

WGC EMEA

WI-FI REVOLUTION: DRIVING DIGITAL GROWTH

RAI Convention Centre, Amsterdam, Netherlands

#WGCEMEA | #wifirevolution | #lovewifi

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WIRELESS BROADBAND ALLIANCE

TIAGO RODRIGUES

CEO, WIRELESS BROADBAND ALLIANCE

CEO WELCOME ADDRESS

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WGC EMEA Speakers

Tiago Rodrigues
Wireless Broadband Alliance

Ahmed Hafez
Deutsche Telekom

Eric McLaughlin
Intel

JR Wilson
AT&T

Maria Cuevas
BT

Steve Andrews
Luminet Networks

Dr Derek Peterson
Boingo Wireless

Time	Presentation
9:00 AM (CET)	**CEO Opening Remarks** Tiago Rodrigues, CEO, Wireless Broadband Alliance
9:10 AM (CET)	**What value would convergence between Fixed and Mobile bring?** Ahmed Hafez, VP Network Convergence, Deutsche Telekom
9:30 AM (CET	**Wi-Fi and Cellular Convergence in Client Devices** Eric McLaughlin, VP & GM Wireless Solutions, Client Computing Group, Intel Corporation
9:50 AM (CET)	**Fireside Chat: How does Wi-Fi deliver the Fibre Promise?** Steve Andrews, Chairman, Luminet Networks & WBA Board Advisor (Moderator) JR Wilson, Chairman, Wireless Broadband Alliance; Vice President Tower Strategy and Roaming, AT&T Maria A. Cuevas, Networks Research Director, BT Applied Research, BT
10:10 AM (CET)	**The Future of Convergence** Dr. Derek Peterson, CTO, Boingo Wireless
	COFFEE & NETWORKING (40 minutes)

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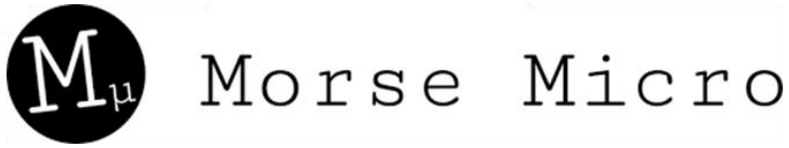
WELCOME TO NEW MEMBERS

WIRELESS BROADBAND ALLIANCE



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MEMBERS

List Not Exhaustive

Total number of members +175

+85% of the members are active on WBA activities

Operators, technology players, startups, enterprises and non-profit

Diverse membership categories to fit different objectives

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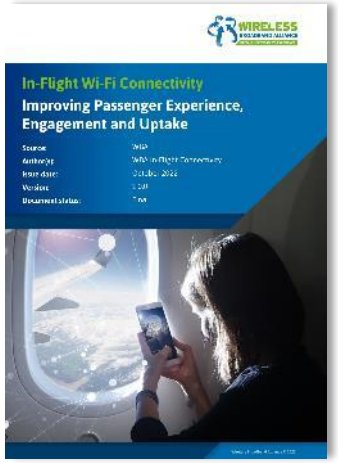
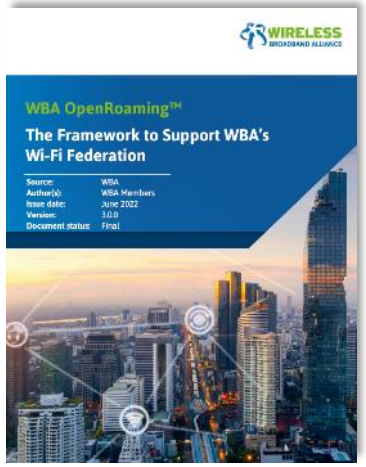
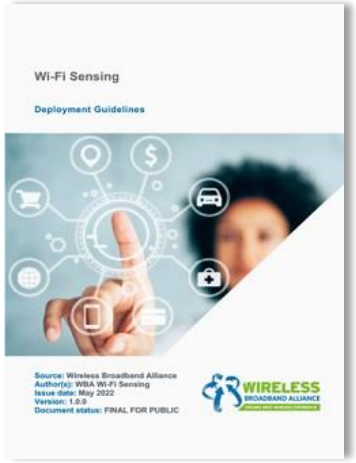
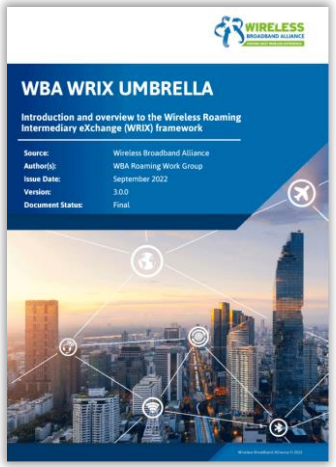
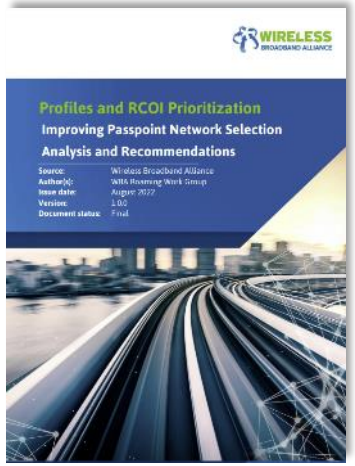
VIBRANT 2022 IN TERMS OF PROGRAMS & PROJECTS

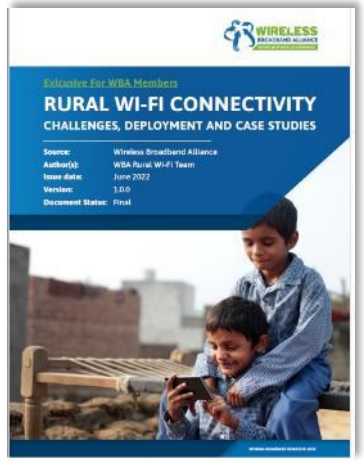












10 Project delivered on the last 8 months

Participation of members on increased by 35%

+1,500 Unique Extranet Users +200 Meetings on last 6 months

8 Projects in progress and 9 new for 2023 Roadmap

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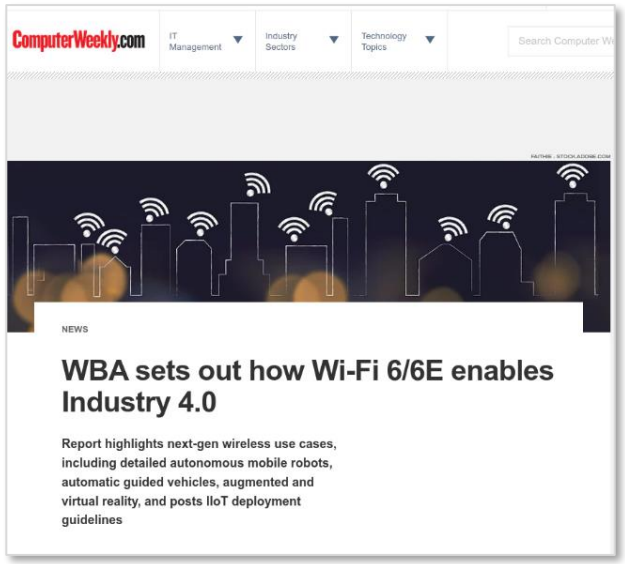
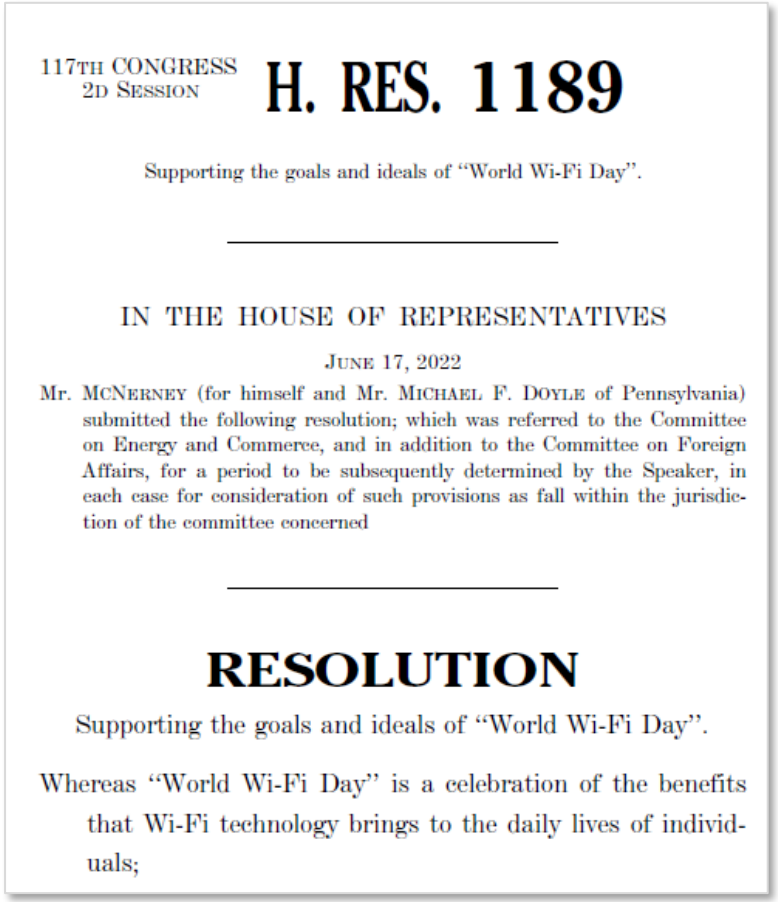
EXCITING YEAR IN TERMS OF MARKETING





117TH CONGRESS
2D SESSION

H. RES. 1189

Supporting the goals and ideals of "World Wi-Fi Day".

IN THE HOUSE OF REPRESENTATIVES

JUNE 17, 2022

Mr. MCNERNEY (for himself and Mr. MICHAEL F. DOYLE of Pennsylvania) submitted the following resolution; which was referred to the Committee on Energy and Commerce, and in addition to the Committee on Foreign Affairs, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

RESOLUTION

Supporting the goals and ideals of "World Wi-Fi Day".

Whereas "World Wi-Fi Day" is a celebration of the benefits that Wi-Fi technology brings to the daily lives of individuals;

12 press releases
+180 articles
+1M views

15% increase on website traffic

+3,500 publications downloads

16 analyst briefings

+20 analyst reports

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LEADING THE RETURN TO FACE-TO-FACE EVENTS

WIRELESS BROADBAND ALLIANCE

Q1 2022 Event in Dubai

World Wi-Fi Workshop, Brussels 20th June

Q2 2022 Event in Chicago, co-located with Wi-Fi Alliance

Innovation Forum by CTO Group Q3 2022

1st Wi-Fi event back to face-to-face

+2,000 attendees on 2022 events

+300 companies on 2022 events

Co-Location with Wi-Fi Alliance and Network X

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WBA Annual Industry Report 2023 Released today

Available at: https://wballiance.com/resource/wba-annual-industry-report-2023

…"The last twelve months have been exceptionally rich for Wi-Fi both in terms of innovation and market adoption boosted by a favorable regulatory environment. Wi-Fi remains the dominant indoor technology and enjoys a momentum driven by a combination of factors:

*the impact of the pandemic on internet usage with **Wi-Fi traffic doubling***

*the game-changing addition of the **6GHz spectrum** band around the world*

*the rapid commercial availability and **market adoption of Wi-Fi 6/6E***

*the flurry of innovative services like **OpenRoaming™ or Wi-Fi Sensing**"…*

Source: editorial team (Adlane Fellah) of WBA Annual Industry Report 2023

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2023 WBA INDUSTRY REPORT KEY TAKEAWAYS

Wi-Fi 6E is now the de facto standard, with 53% already deployed and 44% planning for the next 18 months

90% of respondents rank quality of experience (QoE) as #1 for Wi-Fi monetization

61% identified services such as HD video, AR-VR, metaverse applications as key revenue opportunities

62% of respondents deployed Passpoint, OpenRoaming or are planning to do by end-2023

+33% of respondents already have plans to deploy Wi-Fi 7 by the end of 2023

WBA Annual Industry Report 2023

Available at: https://wballiance.com/resource/wba-annual-industry-report-2023/

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NETWORK X

Join WBA and helps us to make Wi-Fi easier & better for all

More information at www.wballiance.com/membership

THANK YOU

Tiago Rodrigues, WBA CEO, tiago@wballiance.com

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AHMED HAFEZ

VP NETWORK CONVERGENCE, DEUTSCHE TELEKOM

WHAT VALUE WOULD CONVERGENCE BETWEEN FIXED AND MOBILE BRING?

WIRELESS BROADBAND ALLIANCE

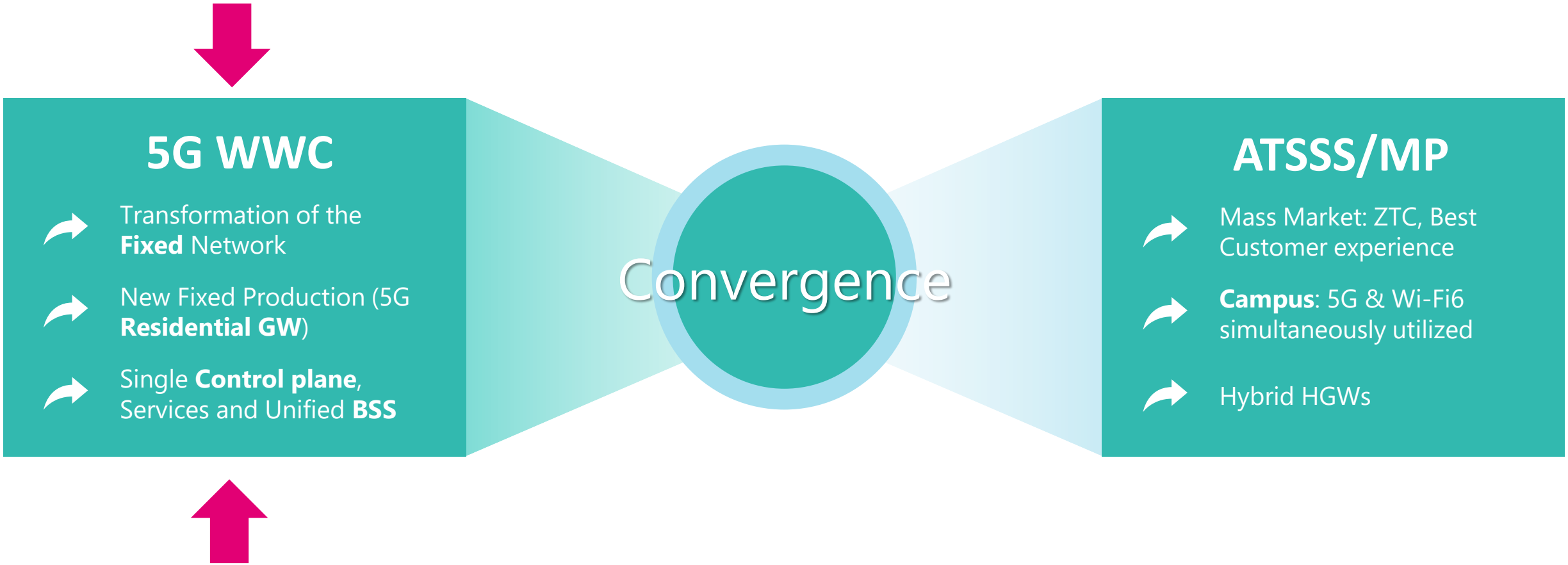
Fixed Mobile Convergence

Ahmed Hafez
VP Network Convergence – Group Technology – Deutsche Telekom

Oct-2022

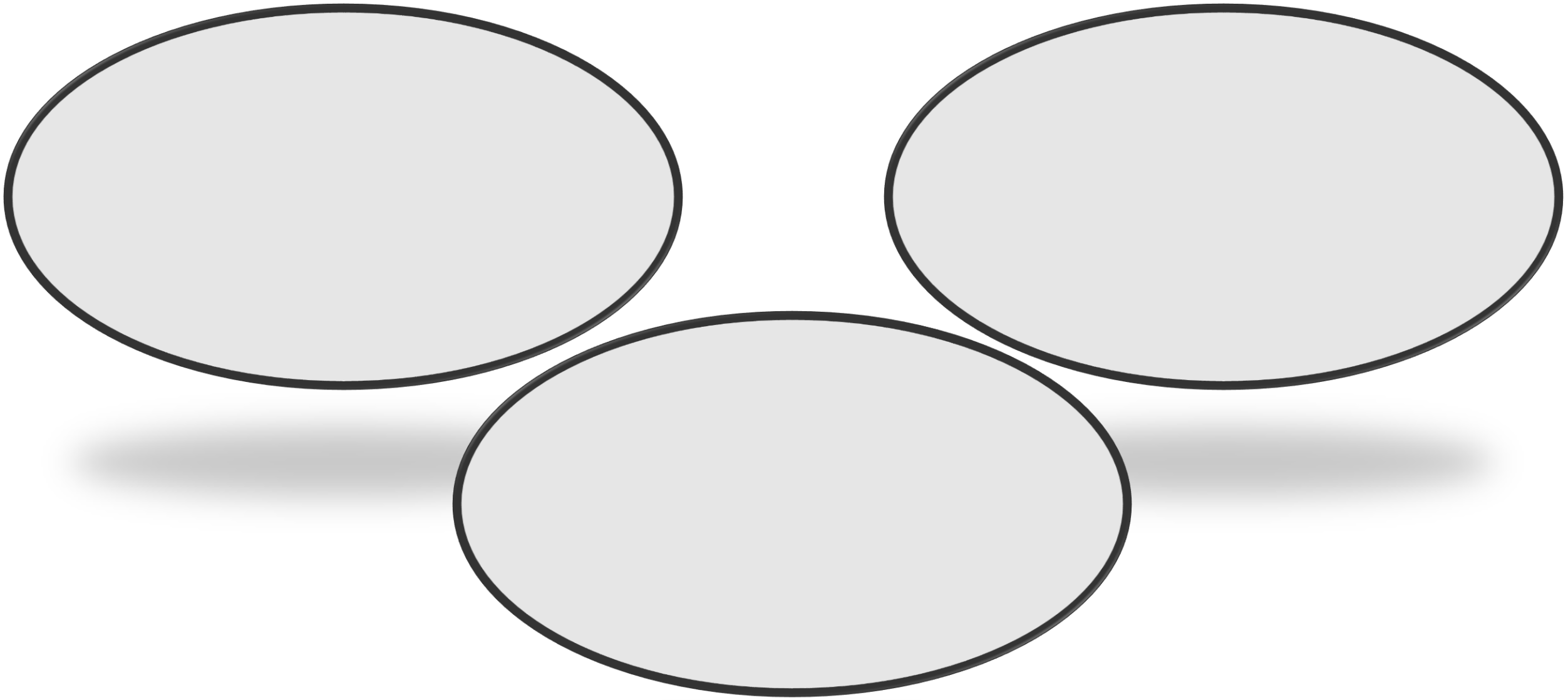
LIFE IS FOR SHARING.

Convergence Workstreams



5G Wireless Wireline Convergence (5G WWC)

- Transformation of the **Fixed** Network
- New Fixed Production (5G **Residential GW**)
- Single **Control plane**, Services and Unified **BSS**



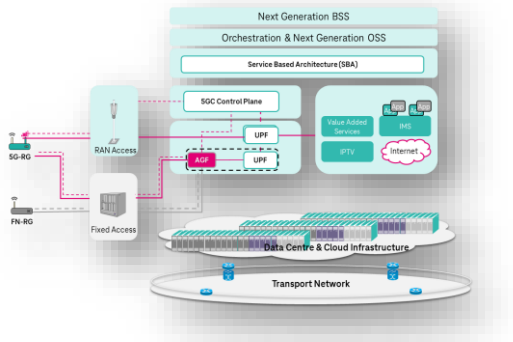
Why?

LIFE IS FOR SHARING.

Network pain points

1. Two separate Networks for Mobile and Fixed, although traffic handling and services are very similar
2. Service layer is built almost twice to serve very similar needs
3. Multiple Policy servers (PCRF, AAA mobile, AAA fixed,…etc.)
4. Different OSS and BSS systems
5. Separate evolution paths & migration challenges for each Network (Cloud, APIs, features, …etc.), and different legacies to maintain or retire.
6. Diversity in required skills and duplications of organizational functions
7. High costs to maintain these two networks separately while the margins erode

If we leverage 5GC FMC capabilities, and evolve the fixed Networks, we would be able to solve these problems through convergence



Customer Experience pain points

1. Prolonged provisioning steps and setup complications.
2. Challenging to have converged propositions/Offers.
3. Fragmentation of customer data, no consolidated E2E view…difficult customer care
4. Inconsistent user experience (different frameworks for the same services, different QoS mechanisms).
5. Unable to coordinate access types at any granularity, customer cannot leverage all accesses of DT.
6. More advanced and stable Hybrid implementation

We believe that defining a new converged connectivity product „5G residential Gateway“ in the new 5G WWC architecture would resolves these issues

What?

LIFE IS FOR SHARING.

3GPP and BBF Standards for Network-Based FMC

Operator-driven, concerted industry and standardization efforts for FMC inherent part of 5G Initiative started in 2016

<u>Industry Vision and High-Level Requirements</u>

NGMN: Market requirements/drivers, high-level architecture

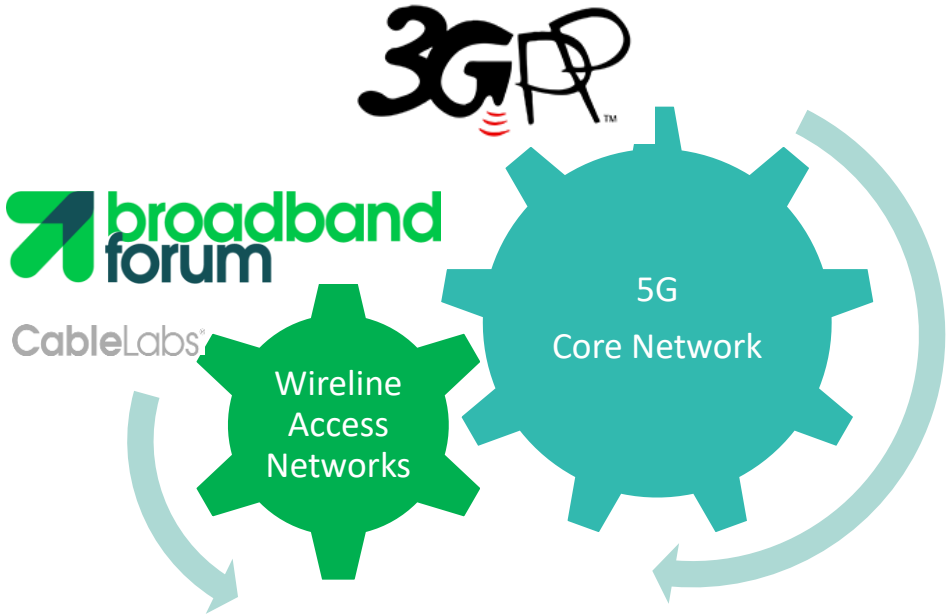
GSMA: Network services, orchestration

<u>Standardization</u>

3GPP: 5WWC

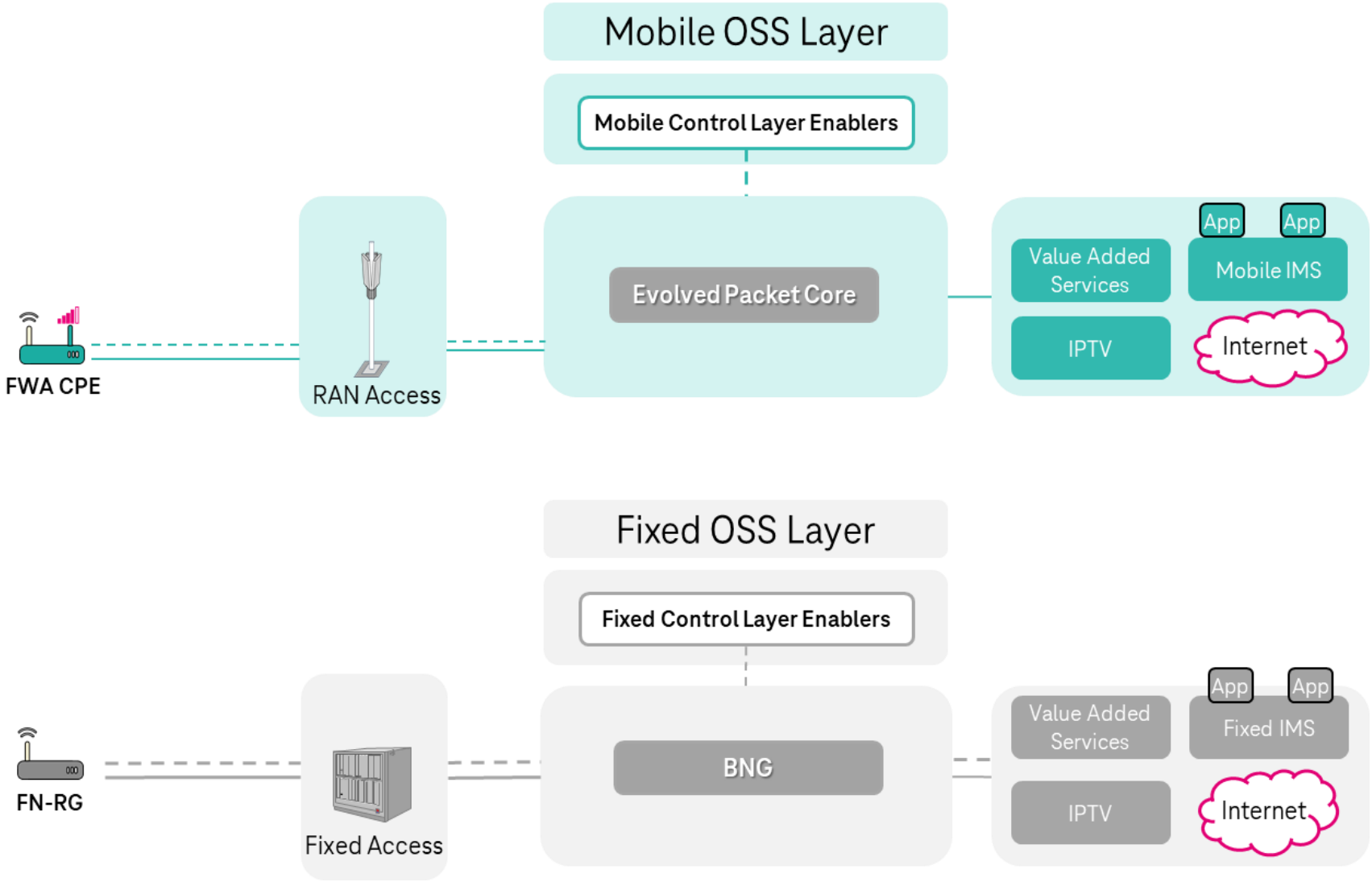
BBF: 5G WWC – cooperation with 3GPP, aligned with 3GPP R16 roadmap

CableLabs: Leveraging 3GPP & BBF specifications for cable networks („5G-Cable-RG“)



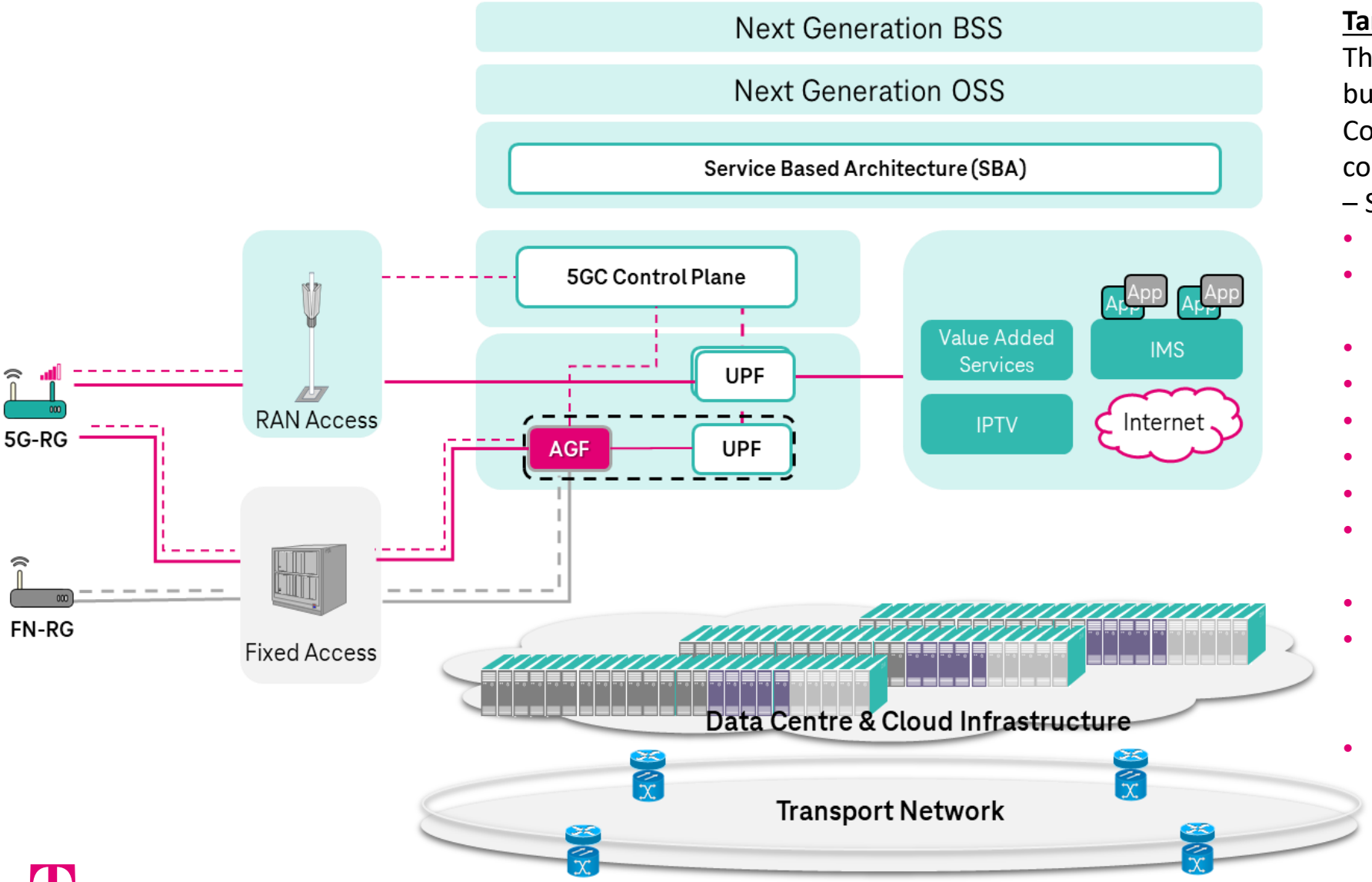
Major Set of relevant 3GPP and BBF standards delivered by 2020H2
Support smooth migration and co-existence

Today Mobile & Fixed Networks are Independent



- Lots of similarities and coherence between services offered over Fixed and Mobile, types of traffic flowing and control layers.
- However, they are two completely independent networks, with the exception of some level of aggregation on the optical layer or the IP domain at best

Target Converged Core Architecture (Long Term Target)



Target Architecture:

The AGF function will play a vital role in building the bridge between Fixed & Mobile Cores, allowing the 5GC to become the sole controller of all Networks (Fixed and Mobile) – So we can achieve:

- Single Unified Network
- Access remains separated but their procedures are streamlined.
- Common Transport Network
- Common Cloud Infrastructure
- Unified Core Network
- Services are access independent
- One layer of control enablers
- One single Management and Orchestration Layer
- One converged BSS layer.
- Production mechanisms are simplified to maximize the benefits of the convergent architecture
- Streamlined processes, operations, organization and service creation

AGF: Access Gateway Function | UPF: User Plane Function | IMS: IP Multimedia Subsystem | 5GC: 5G Core Networks | 5G-RG: 5G Residential Gateway | FN-RG: Fixed Network Residential Gateway

How?

LIFE IS FOR SHARING.

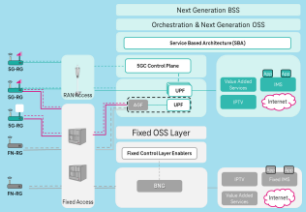
Ecosystem Elements

01

5G-RG & Customer Value

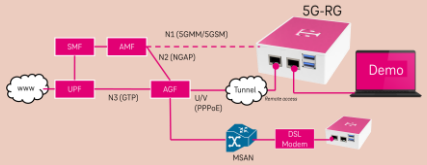
02

Architecture & Network value



03

Proof of Concept



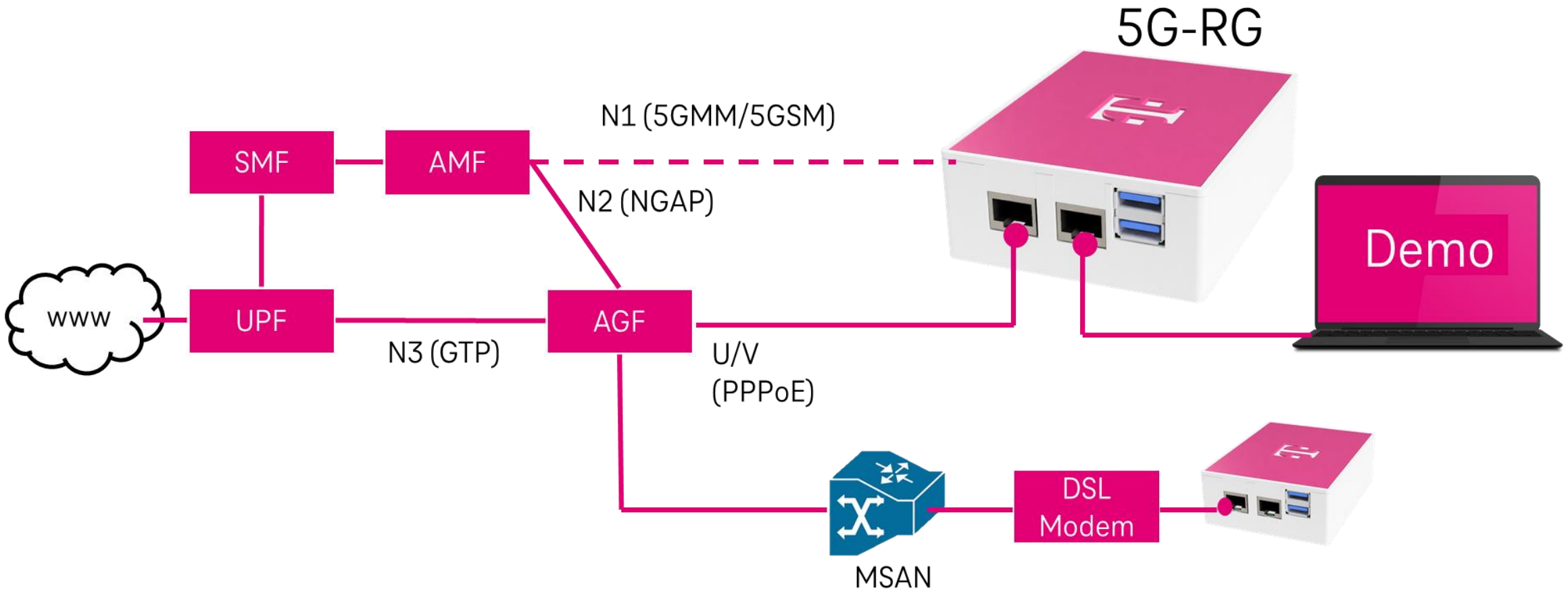
04

Policy & Control

05

Techno-economics

DT 5G-RG PoC with live traffic



Thanks!!

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ERIC MCLAUGHLIN

VP & GM WIRELESS SOULTIONS, CLIENT COMPUTING GROUP,
INTEL CORPORATION

WI-FI AND CELLULAR CONVERGENCE IN CLIENT DEVICES

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Wi-Fi &Cellular Convergence for PC Clients

October 19, 2022

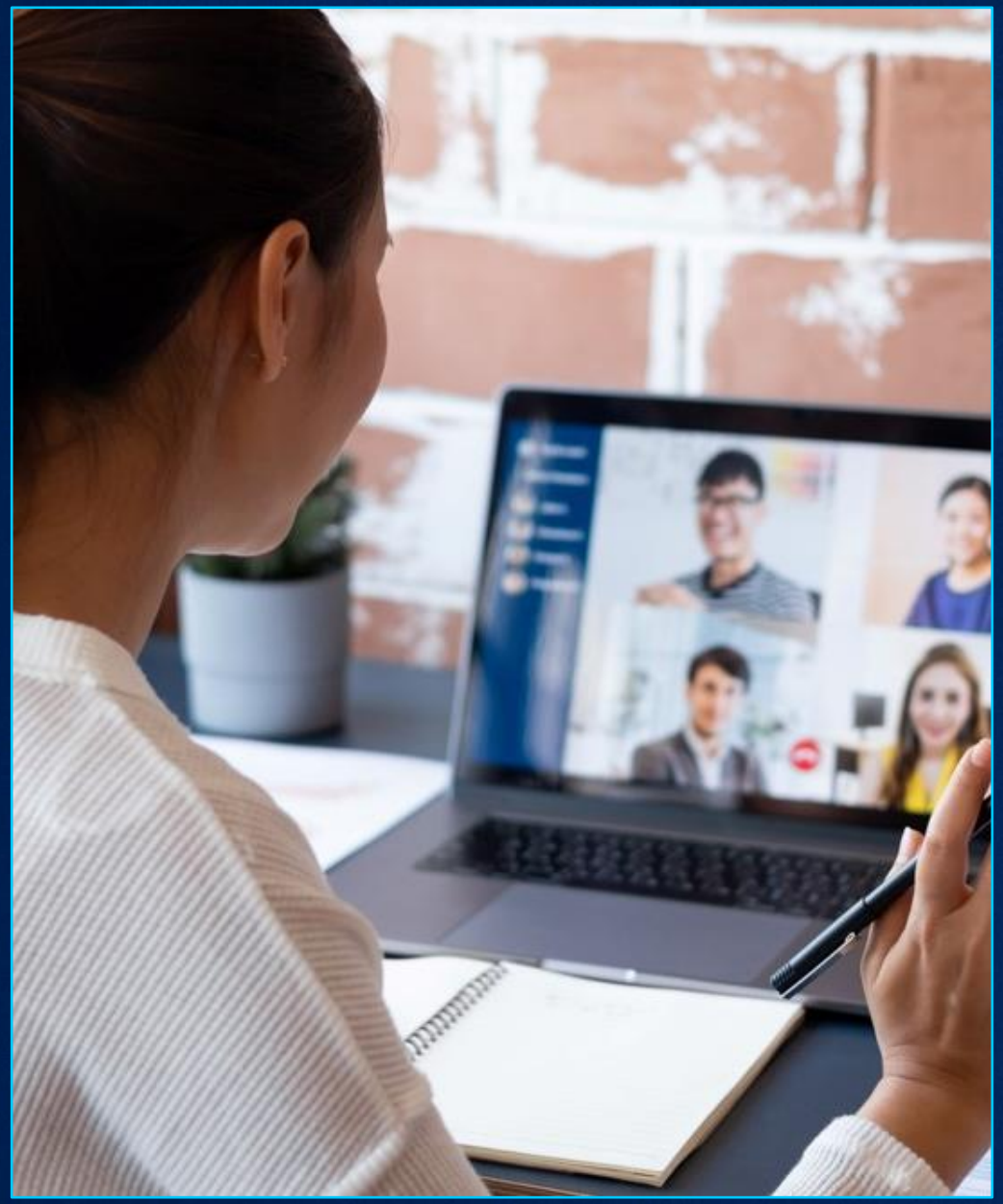
intel

Eric A. McLaughlin

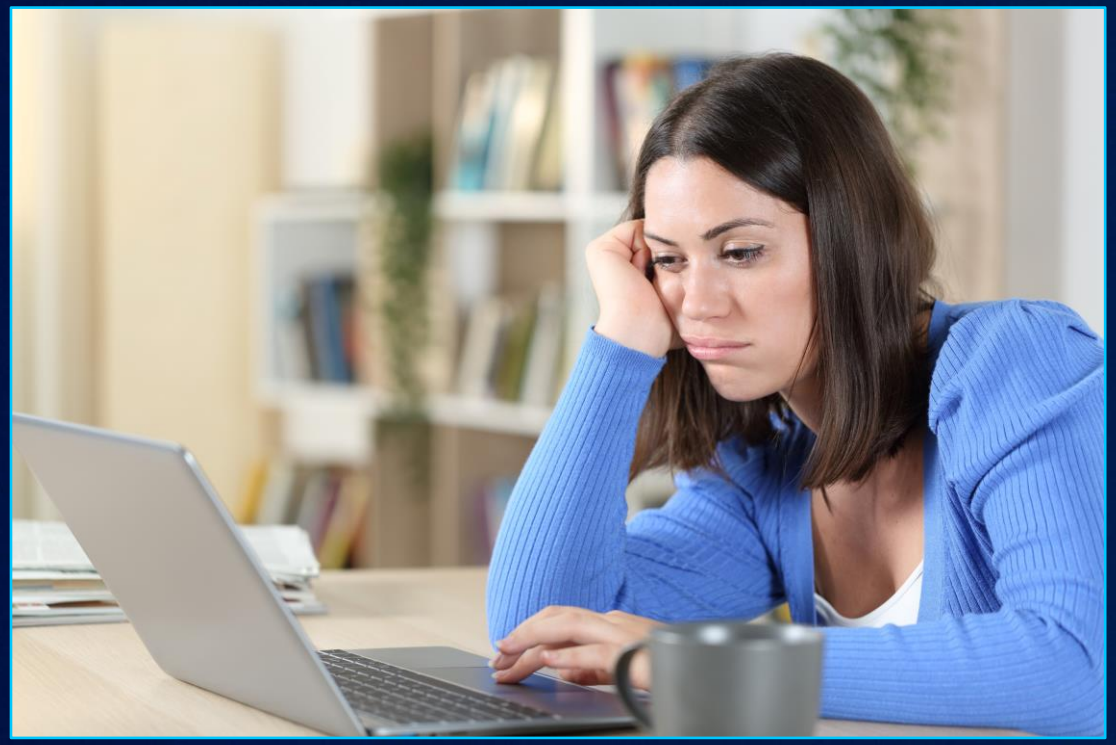
VP, Client Computing Group
GM, Wireless Solutions Group

Agenda

- Great Connectivity Expectations
- PC Platform Connectivity
- Technology / Feature Innovations
- PC Networking Convergence



How Was Your Summer Vacation?



2022 Travel Survey Statistics*

- **87%** - less likely to book vacation property with bad internet reviews
- **81%** - think vacation Wi-Fi is essential / important

* HighSpeedInternet.com 1000 American survey (Jul'22)

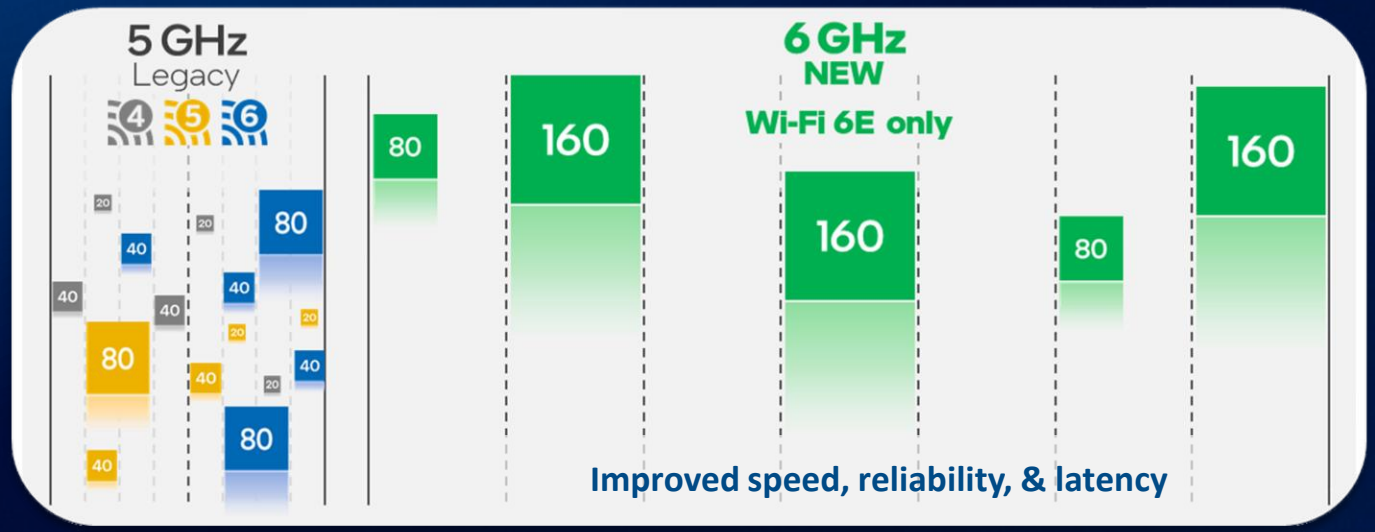
Great connectivity is expected nearly everywhere

Intel History

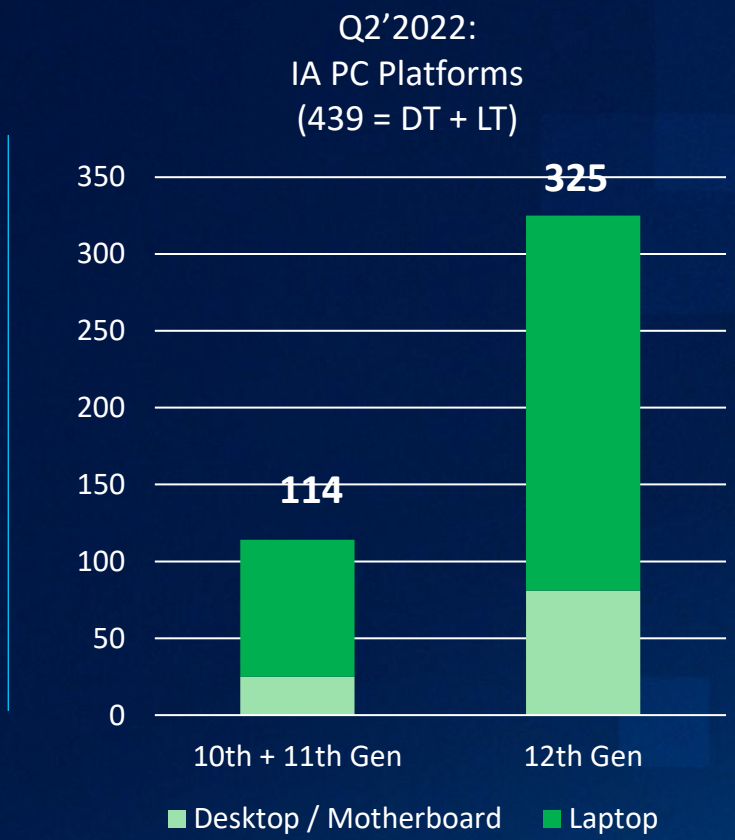
	2003	2022
	Intel® Centrino™	12 th Gen Intel® Core™
Platforms		
Wi-Fi	802.11b	Wi-Fi 6E
Products	Intel® PRO/Wireless 2100 Network Connection	

Nearly 2 decades focused on connected platform experiences

Wi-Fi 6E



- 10th + 11th Gen Intel® Core™ platforms (discrete)
- 12th + 13th Gen Intel® Core™ platform integration
- Intel® Evo™ & vPro® platform requirement



Large Wi-Fi 6E PC footprint expected to grow in 2023

Intel® Connectivity Performance Suite

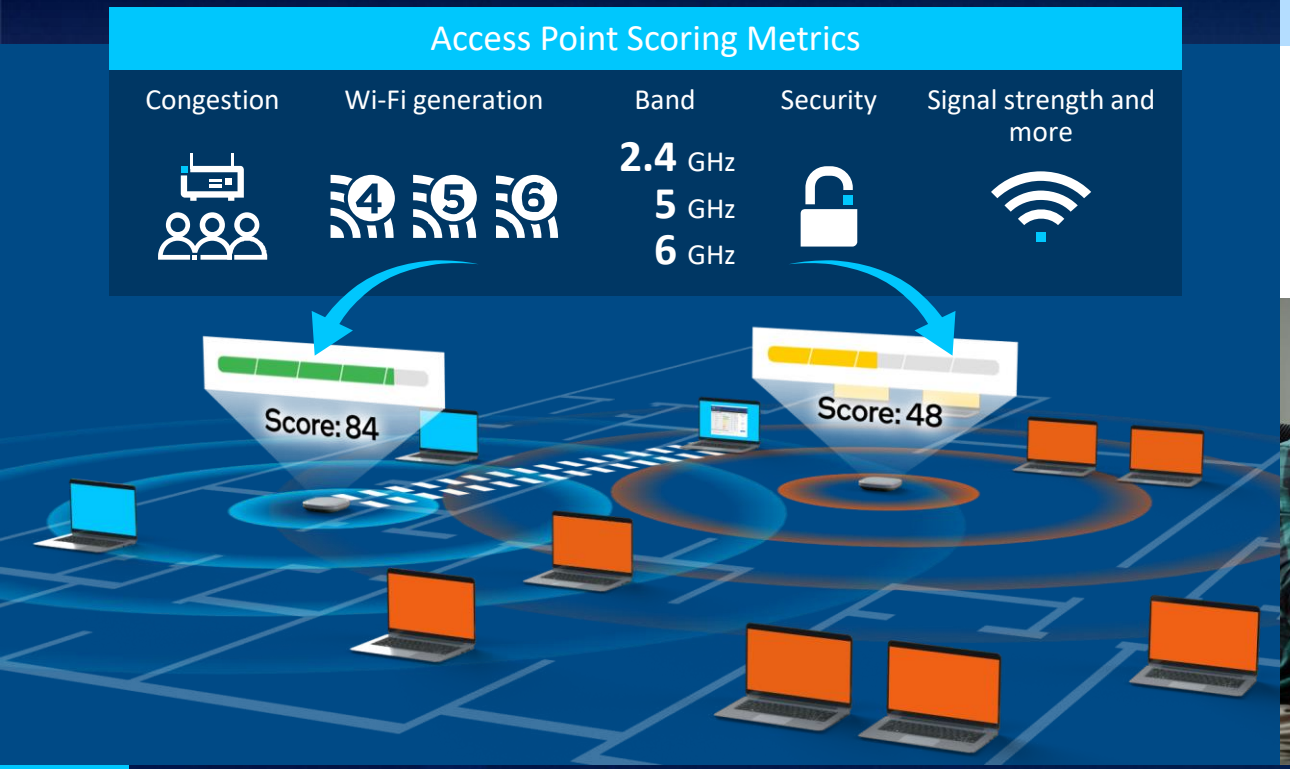
It's like your PC has a **built-in Wi-Fi expert** continuously optimizing your Wi-Fi performance

Make the Best Wi-Fi Connection Automatically

The app continuously scores available connections based on multiple key metrics.

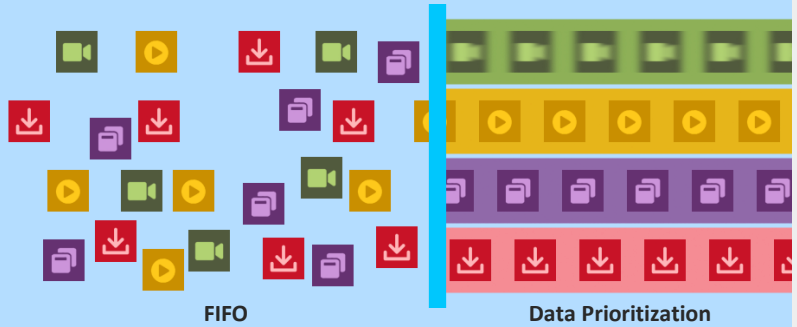
The app dynamically keeps you connected to the best Wi-Fi access point and band.

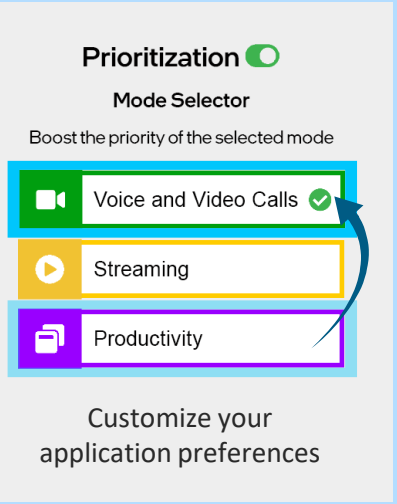
The app's client Wi-Fi optimization can help balance network usage.



Prioritize the Data that Matters Most

The app prioritizes critical traffic to help optimize experiences





Real-world improvements during network contention

Up to **66%** **lower latency[1]**
(for voice/video calls)

Up to **4x** **better resolution[2]**
(on streaming video)

Up to **30%** **faster speeds[3]**
(via best AP/band selection)

Intel® Connectivity Performance Suite & Intel® Wi-Fi 6E (Gig+)

Great Wi-Fi productivity + collaboration on new Intel Evo™ and vPro® platforms

Discover more at: intel.com/wireless

Performance varies by use, configuration and other factors.
[1, 2, 3] For details on performance claims, learn more at www.Intel.com/PerformanceIndex (connectivity). No product or component can be absolutely secure. Your costs and results may vary. Intel technologies may require enabled hardware, software or service activation. © Intel Corporation. Intel, the Intel logo, and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.

Transform How & Where You Work with Intel® 5G-enabled Laptops

Supports major operator networks worldwide

Optimized integration with Intel system architecture

5G
4G, LTE

Supports multiple WWAN standards

Intel validated for outstanding stability & reliability

Laptops with Intel® 5G Solution 5000 keep you connected in more places when Wi-Fi isn't available

Work remotely with more freedom

Complete tasks during travel time

Collaborate with others wherever you are

Stream 4K training videos and webinars

Take advantage of 5G private networks

Intel® 5G Solution 5000 delivers improved performance, flexibility, and reliability

Nearly 5x faster than 1 Gbps LTE[1]

LTE	1 Gbps	
5G	4.7 Gbps	Nearly 5x faster[1]

5G

Discover the Intel WWAN difference www.intel.com/wireless

1) Performance varies by use, configuration and other factors. For details on performance claims, learn more at www.Intel.com/PerformanceIndex (connectivity). No product or component can be absolutely secure. Your costs and results may vary.
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5G Enabled Intel Laptop Capabilities

- Hyper-connected lifestyles + cloud transition require ubiquitous connectivity
- Wi-Fi 6/6E + 5G = complimentary, fill each other's gaps when needed
- Usually technology choice is binary - based on environment / usage / need

Home	Office	On-The-Go
Wi-Fi 6/6E	Wi-Fi 6/6E	Wi-Fi 4/5/6/6E? (Open Roaming)
Or 5G	Or 5G / 5G PCN	Or 5G

True PC Wi-Fi + Cellular convergence requires
seamless roaming + technology switching (like phone experience)

PC Networking Convergence is coming soon!

Demo Video

Wi-Fi NOW

Intel demos multi-radio, multi-band Wi-Fi 6/6E/5G connectivity for laptops at MWC22

Breaking News (Mar'22)

- From technology demo to actual platform feature

Intel-Broadcom Wi-Fi 7 Demo

Industry's 1st Cross-Vendor Interoperability Demonstration

intel + BROADCOM

Carlos Cordeiro, PhD
Intel Fellow & Wireless CTO,
Client Computing Group
Intel Corporation

Vijay Nagarajan
Vice President,
Wireless Connectivity Division
Broadcom Inc.

Convergence will get even better w/Wi-Fi 7

- Improved 6 GHz use
- Even lower / deterministic latency
- Even better reliability
- >5 Gbps* PC Wi-Fi speed

Great example of industry collaboration

* ">5 Gbps Wi-Fi 7 2x2 client speed" - is based on the current draft of the 802.11be specification which specifies the theoretical maximum data rate for a 2x2 device which supports 320 MHz channels, 4096 QAM, and Multi-Link Operation is 5.76 Gbps. Based on an industry standard assumption of 90% efficiency for new Wi-Fi products operating in the exclusive 6 GHz band, the resulting estimated maximum over the air 2x2 client speed would be 5.19 Gbps

Call To Action

Let’s continue working together through the WBA to help ramp & promote:

- Wi-Fi 6E
- Open Roaming
- Wi-Fi QoS
- Wi-Fi 7

Thank You

Disclaimers

Wi-Fi 6E device tracking summary is public information compiled by Intel from vendor websites, press release announcements, and third-party device reviews. Intel provides this assessment for informational purposes only, can not guarantee its accuracy, and it is subject to change without notice.

6 GHz laptop functionality requires Intel® Wi-Fi 6E/7 products, Wi-Fi 6E/7 APs/Routers/Gateways, Operating System support for 6 GHz operation, along with country-specific 6 GHz spectrum allocation for non-licensed use and associated regional regulatory approvals. 6 GHz may not be available in some countries.

5G performance may vary and requires similarly configured 3GPP cellular networks and a carrier contract for 5G service, which is subject to regional availability and may not be available in all markets.

All product plans and roadmaps are subject to change without notice.

Statements in this document that refer to future plans or expectations are forward-looking statements. These statements are based on current expectations and involve many risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statements. For more information on the factors that could cause actual results to differ materially, see our most recent earnings release and SEC filings at www.intc.com.

For additional details, please visit www.intel.com/performanceindex (Wireless)

Performance varies by use, configuration and other factors.

No product or component can be absolutely secure.

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Intel® Connectivity Performance Suite 2.0 Demo

Multiple Connections: Aggregation, Video call, Collaboration, Dynamic Switching

ICPS

2.0

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CHAIRMAN, LUMINET NETWORKS & WBA BOARD ADVISOR

MODERATOR

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Fireside Chat: How does Wi-Fi Deliver the Fibre Promise?

STEVE ANDREWS

CHAIRMAN, LUMINET NETWORKS &
WBA BOARD ADVISOR

MARIA CUEVAS

NETWORKS RESEARCH DIRECTOR,
BT APPLIED RESEARCH, BT

JR WILSON

CHAIRMAN, WIRELESS BROADBAND ALLIANCE;
VICE PRESIDENT TOWER STRATEGY & ROAMING, AT&T

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DR. DEREK PETERSON

CTO, BOINGO WIRELESS

THE FUTURE OF CONVERGENCE

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boingo wireless

WBA Wireless Global Congress - Amsterdam

Solving the Quality of Service Conundrum

Boingo Wireless

Dr. Derek Peterson, Chief Technology Officer

October 19, 2022


Boingo simplifies complex wireless
challenges to connect people,
business and things.

Leader in Converged Wireless

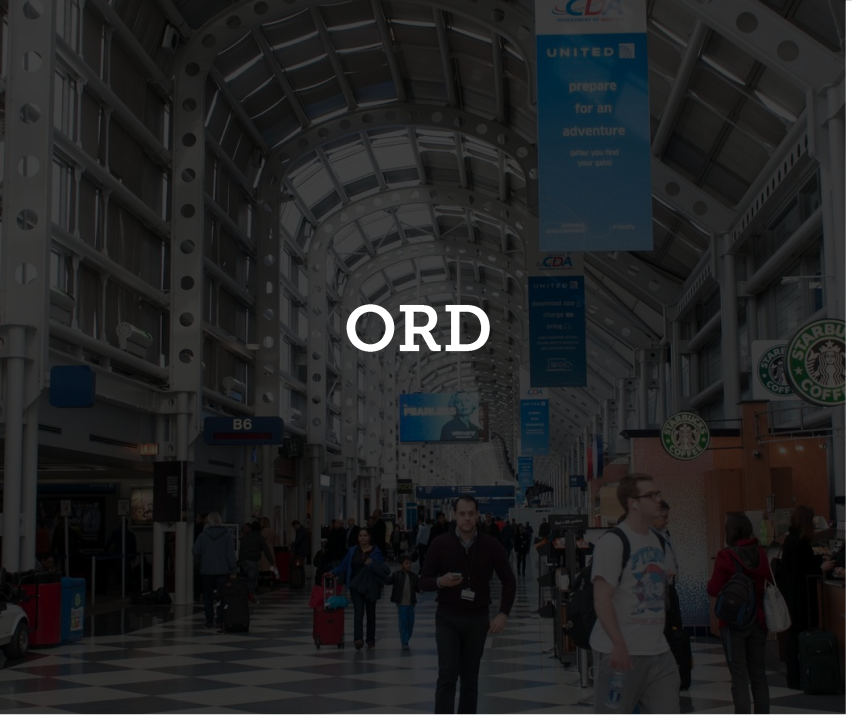
Boingo networks are designed to work together as a converged solution to reduce equipment, mitigate interference and provide world-class connectivity. We power solutions for the 5G era.

DAS & Small Cell

Wi-Fi

Private Networks

Towers

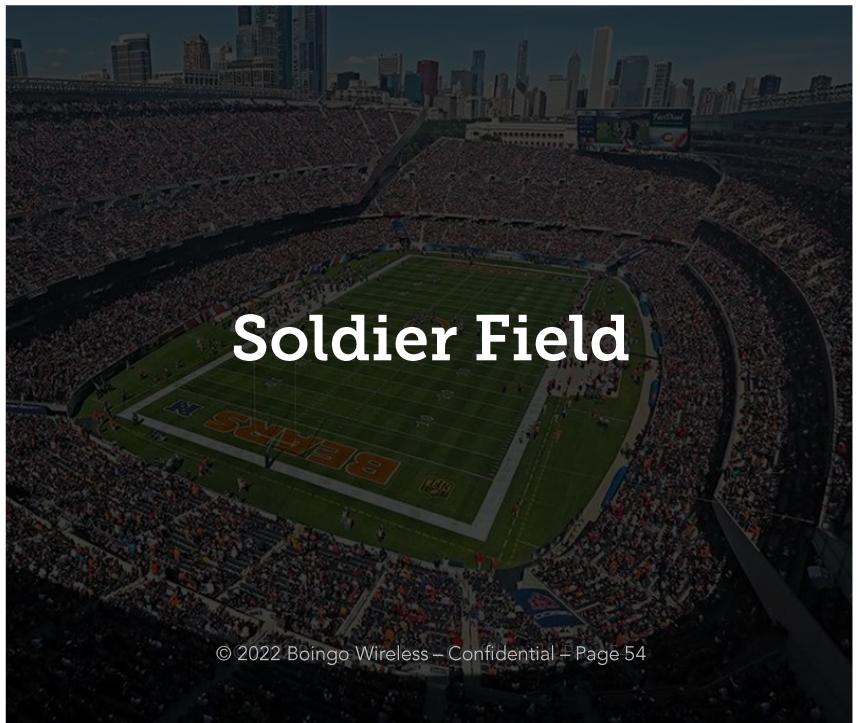


ORD

World Trade Center

Grand Central
Madison
East Side Access

Camp Pendleton



Soldier Field

Heathrow Airport

boingo
wireless


The Data
Challenge
boingo
wireless

Network Congestion

Connected device demand and network congestion is at an all-time high.

>12 billion

Active IoT devices globally

40%

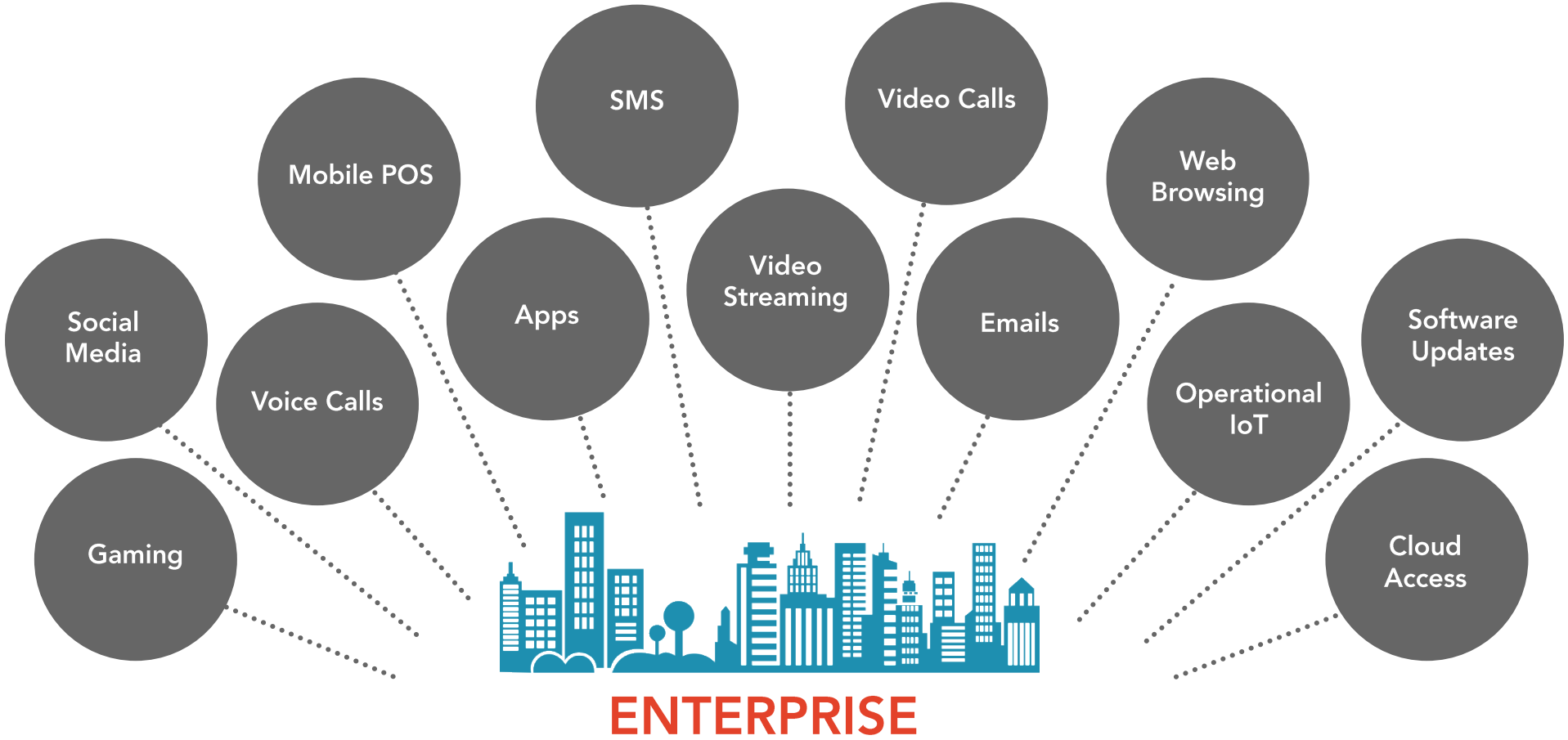
Growth in mobile network data traffic between Q1 2021 and Q1 2022

~15 million

Years of video content that Americans streamed in 2021

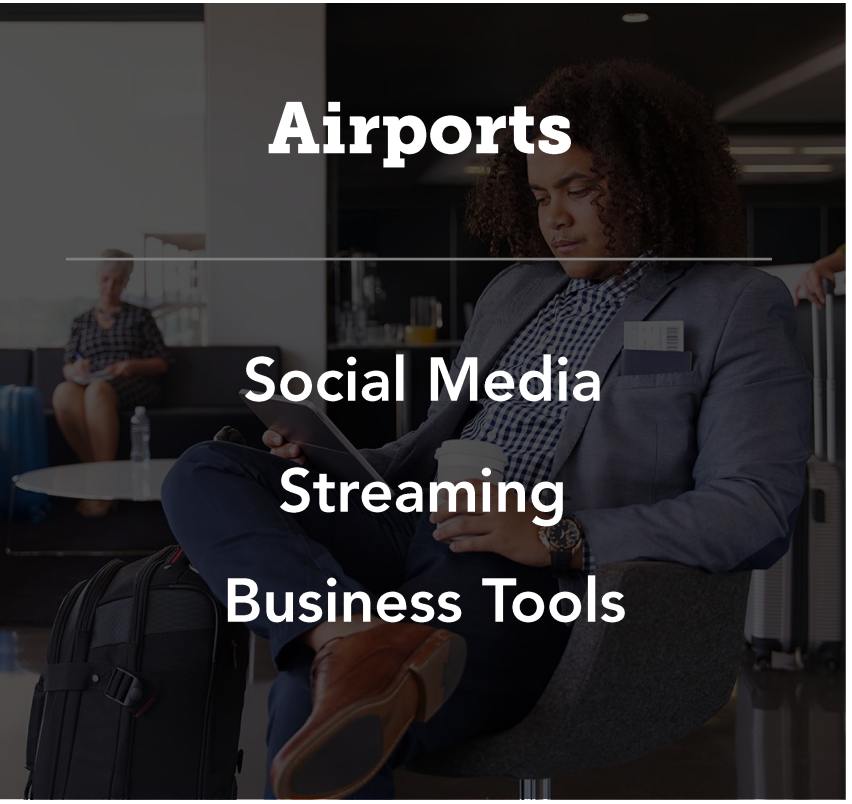
The Data Demand

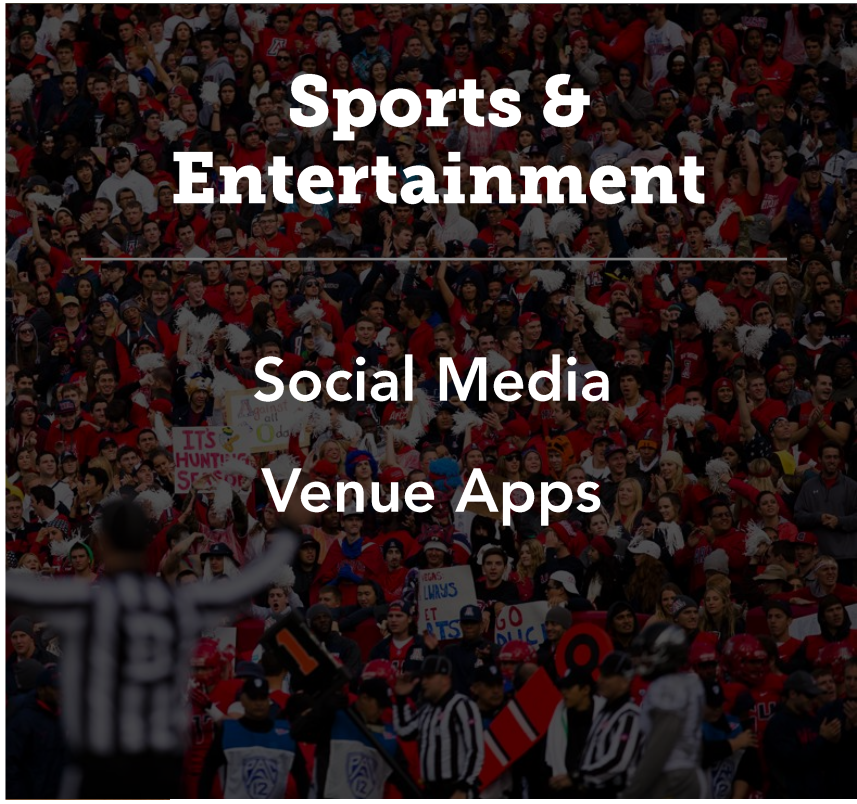
At transportation hubs, large venues, military bases and commercial properties, network bandwidth is being utilized, simultaneously, by countless applications.



Identifying Connectivity Usage

As networks are limited in the amount of data that can flow through each point, it's crucial to understand user preferences and ensure high priority traffic is given priority access.





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The QoS
Solution
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Understanding Quality of Service (QoS)

Boingo Wireless QoS technology allows the network to automatically prioritize the most important data functions.

- Ensures seamless connectivity for the things that matter most
- Acts as a layer of connectivity insurance for priority items
- Applies only when network demand surpasses a certain threshold
- Addresses bandwidth limitations in dense, congested indoor environments

Boingo DPI in Action

Boingo deep packet inspection is designed to make sure network access is assigned to the greatest need.

Tag Data

- Immediately identify all download content

Assign Behavior

- Automatically categorize each type of content
- Establish priority access parameters based on enterprise needs

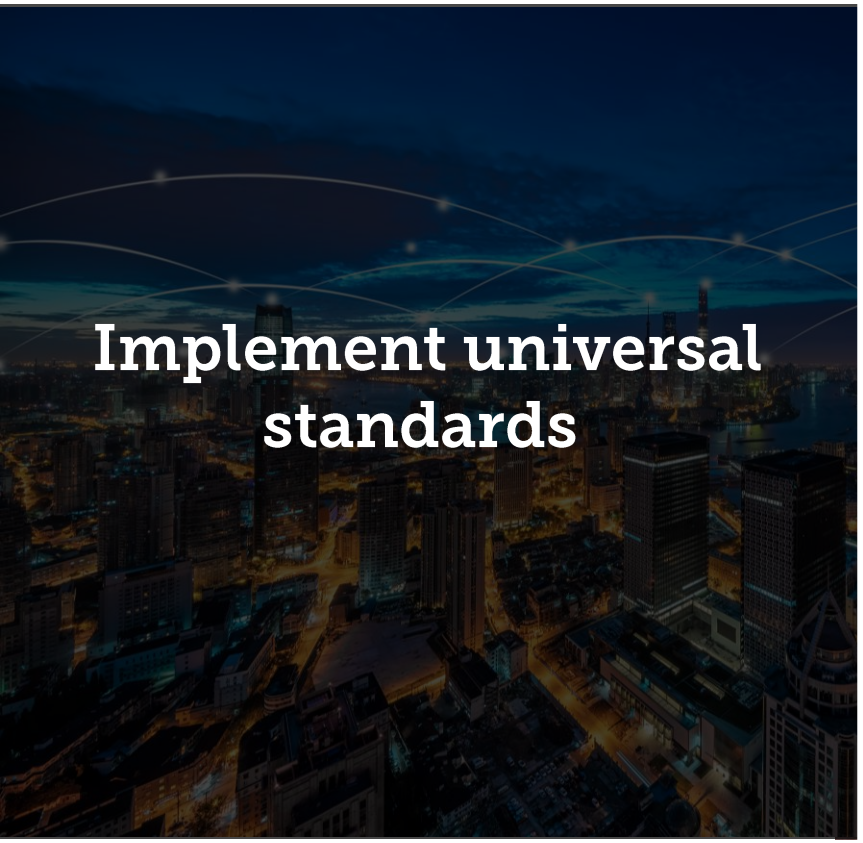
Tech Enabler

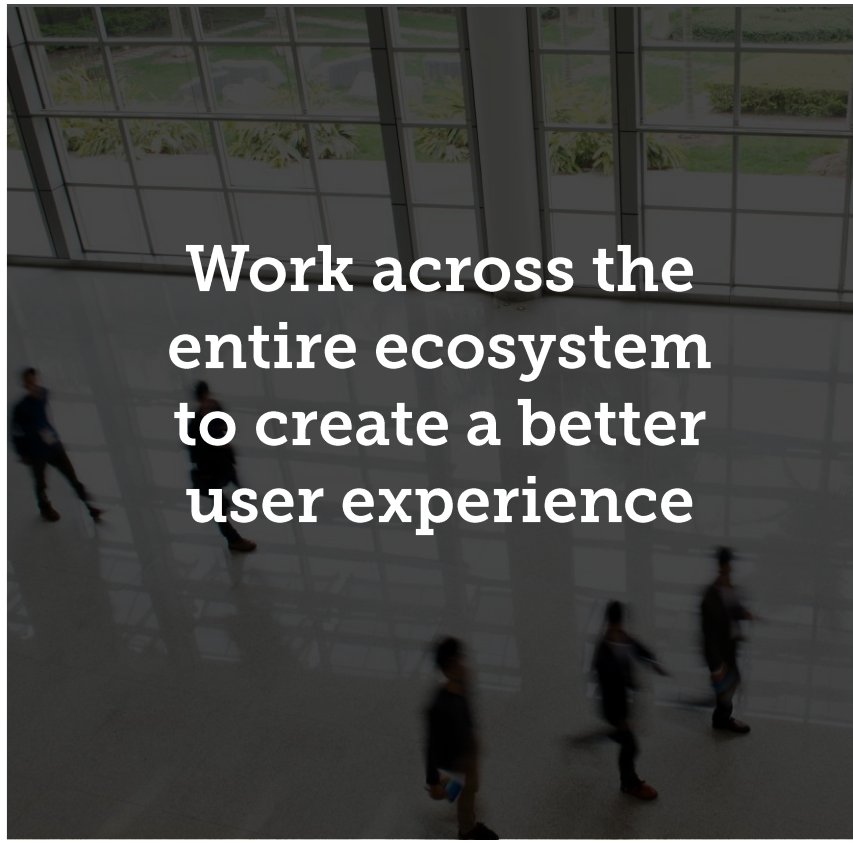
- Cache content to pull locally for patch downloads

Future Requirements

Final Thoughts

For widescale QoS deployment, we need to address end user device and Wi-Fi standards.





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WGC EMEA

WI-FI REVOLUTION:
DRIVING DIGITAL GROWTH

COFFEE & NETWORKING
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WGC EMEA Speakers

Scott Blue
Cisco

Marcelino Vogel
Please advise company name

David Huynh
Plume

Tim Twell
BT

Robert Hattink
RAI

Time	Presentation
11:10 AM (CET)	**On the Brink of Catastrophe: The Upper 6GHz Band in Europe** Scott Blue, Director of Global Wireless Policy, Cisco
11:30 AM (CET)	**Panel Discussion: Wi-Fi and its Role in the Future Smart Home** Marcelino Vogel, Wi-Fi Deployment Manager David Huynh, Chief Product Officer, Plume Tim Twell, Specialist, Wi-Fi and In-Home Networks, BT
12:00 PM (CET	**Case Study: Wi-Fi Roaming Enterprise Use Case OpenRoaming Delivering Next-Gen Capabilities to Enhance the User Experience for Wi-Fi** Robert Hattink, System and Network Consultant, RAI
	LUNCH & NETWORKING (60 minutes)

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SCOTT BLUE

DIRECTOR OF GLOBAL WIRELESS POLICY, CISCO

ON THE BRINK OF CATASTROPHE: THE UPPER 6GHZ BAND IN EUROPE

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6GHz in Europe

On the brink of catastrophe

Scott Blue
Director- Global Wireless Policy
October 19, 2022

What we'll cover

- How is connectivity growing?
- Where is the demand for capacity coming from?
- 6Ghz role in meeting that demand?
- What are the options being discussed?

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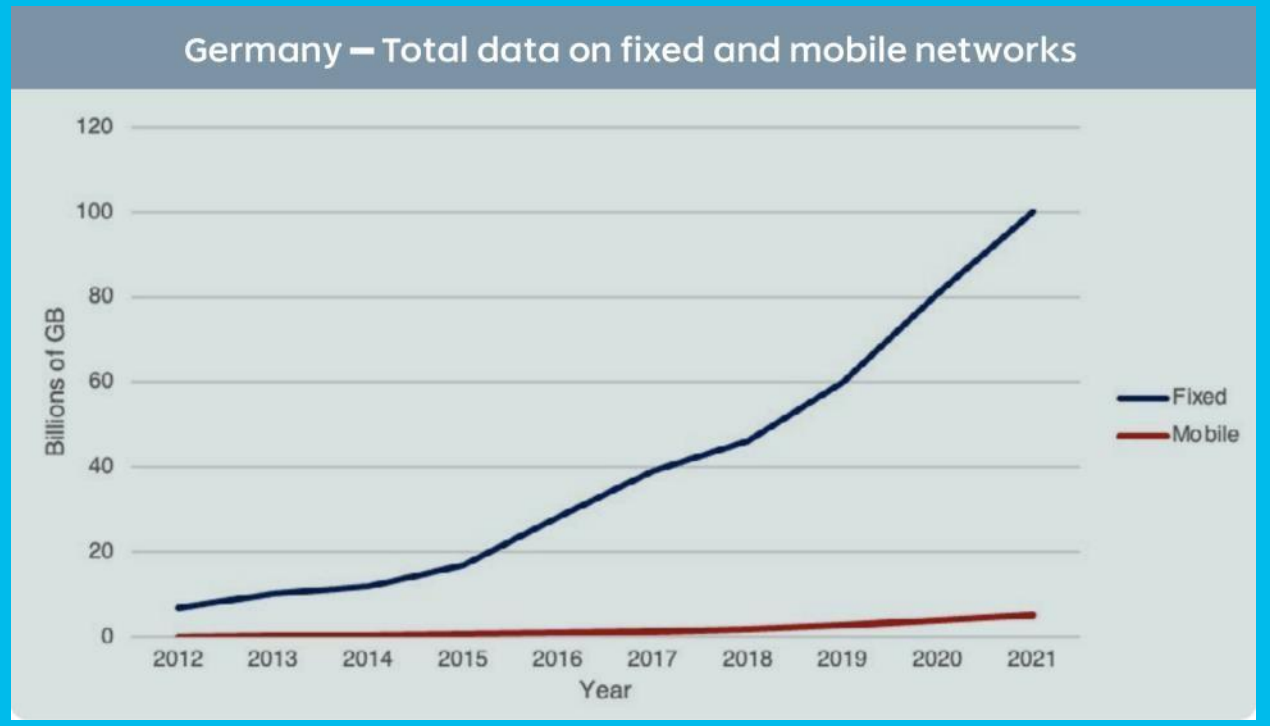
How Europeans connect to the internet

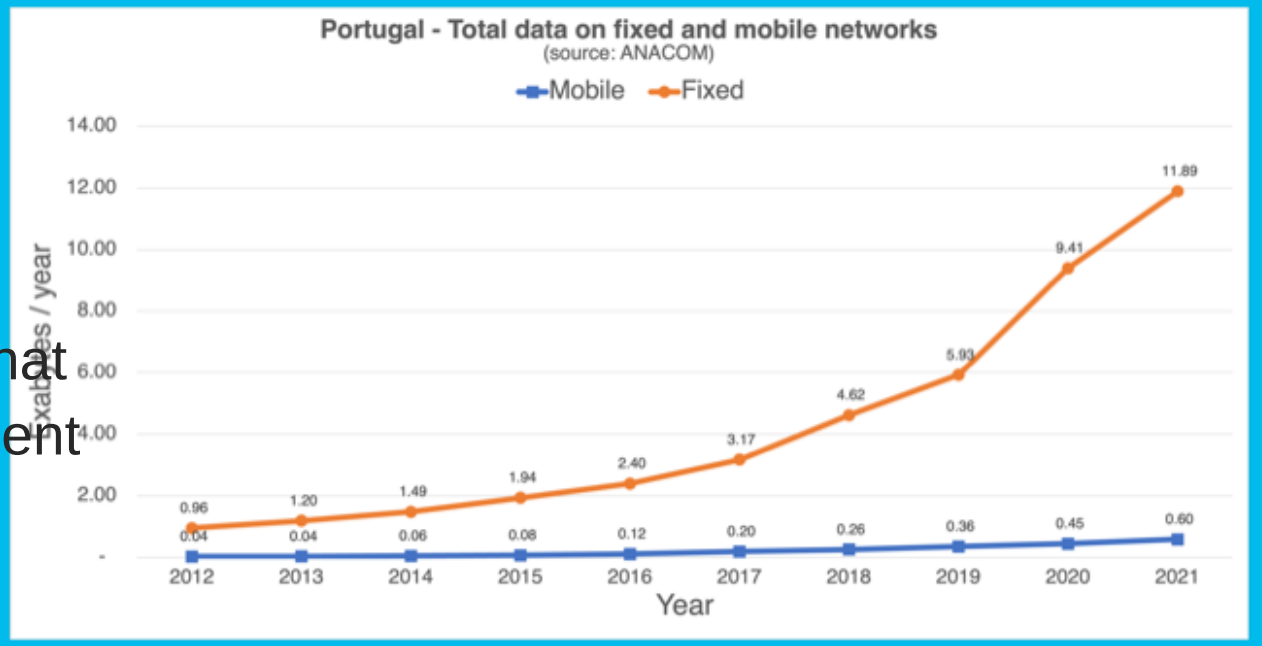
Most of the data traffic in Europe is delivered over fixed networks.

- 95.8% in German in 2021
- 95.2% in Portugal.

Mobile traffic is growing too, but it remains a small fraction of fixed traffic.

Data from the US, UK and Vietnam confirms that this is a global trend among countries with decent fixed infrastructure.





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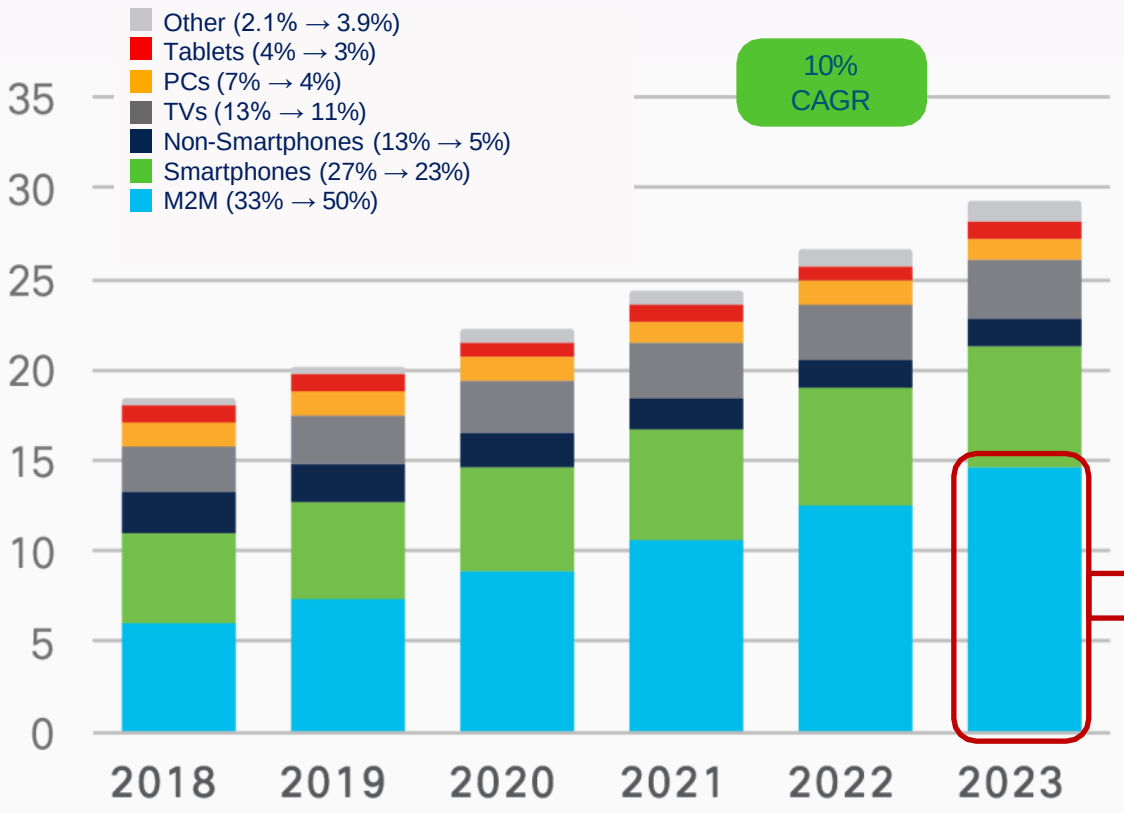
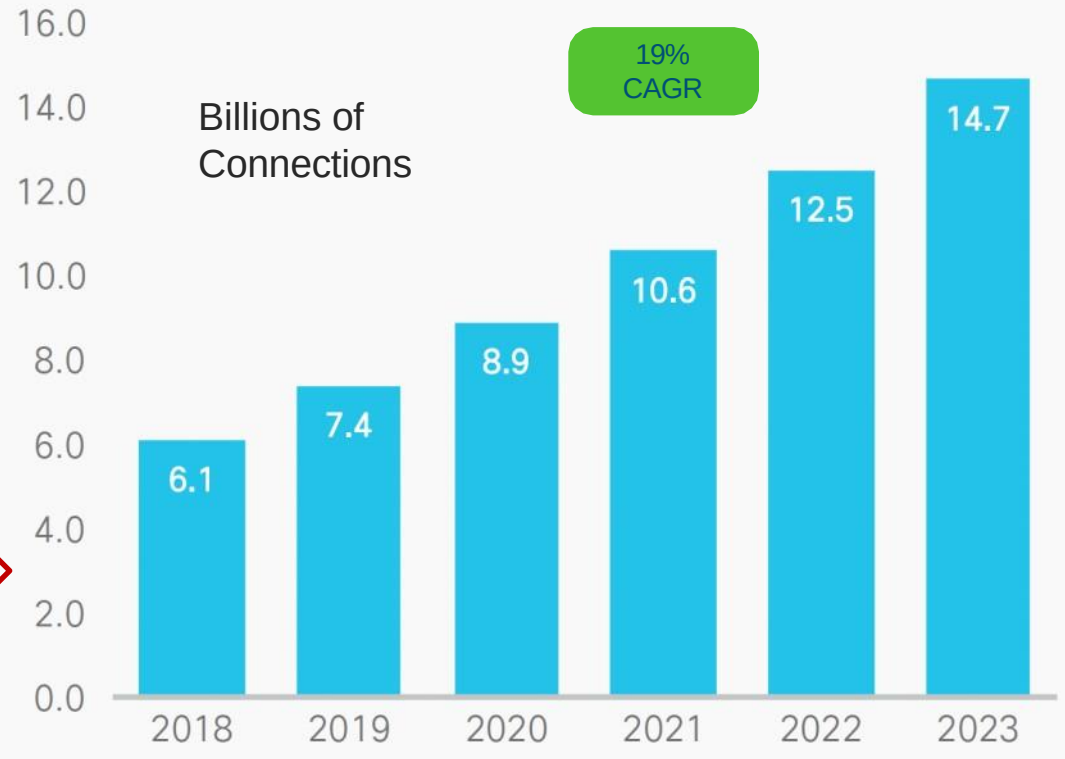
Density Megatrend
An Explosion of Access and Devices

Billions of Devices



Global M2M (IOT) Connection Growth



Source: Cisco Annual Internet Report (2018-2023)

Wi-Fi is the first choice for enterprise IoT

- 90% of fixed connections end in Wi-Fi
- By the end of 2022 15% of major customers will have >10,000 wireless M2M devices deployed.
- By the end of 2025 80% of the same group plans to have >10,000 and 40% plan to have >100,000

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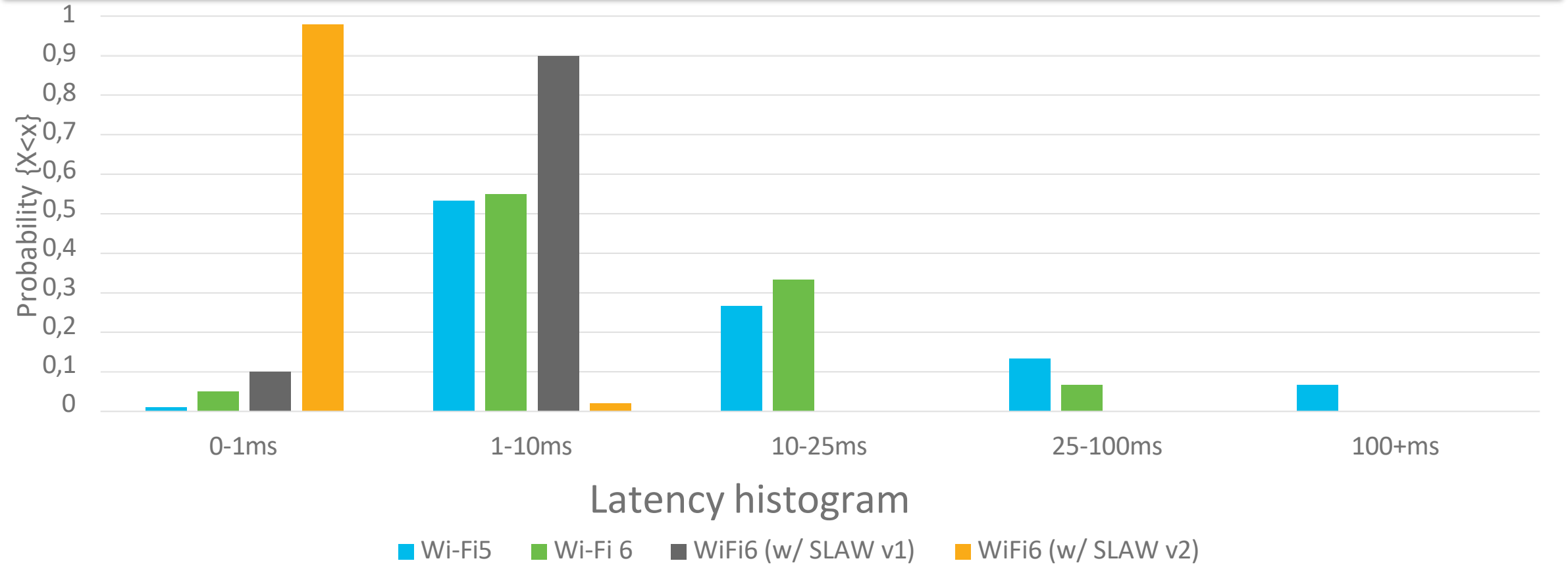
1. Wi-Fi
2. BLE
3. Zigbee
4. Thread
5. Matter
6. Private 5G
7. Public 5G

Evolution of Wi-Fi determinism



- Latency is increasingly bounded with higher levels of SLA-based Wi-Fi (**SLAW**) Innovation!
- Performance (above) estimated under high-density scenarios (80% channel-utilization)*

*8 STA Voice (periodic 20ms) for all but SLAWv2 scenario which has 1 STA with 1ms traffic period

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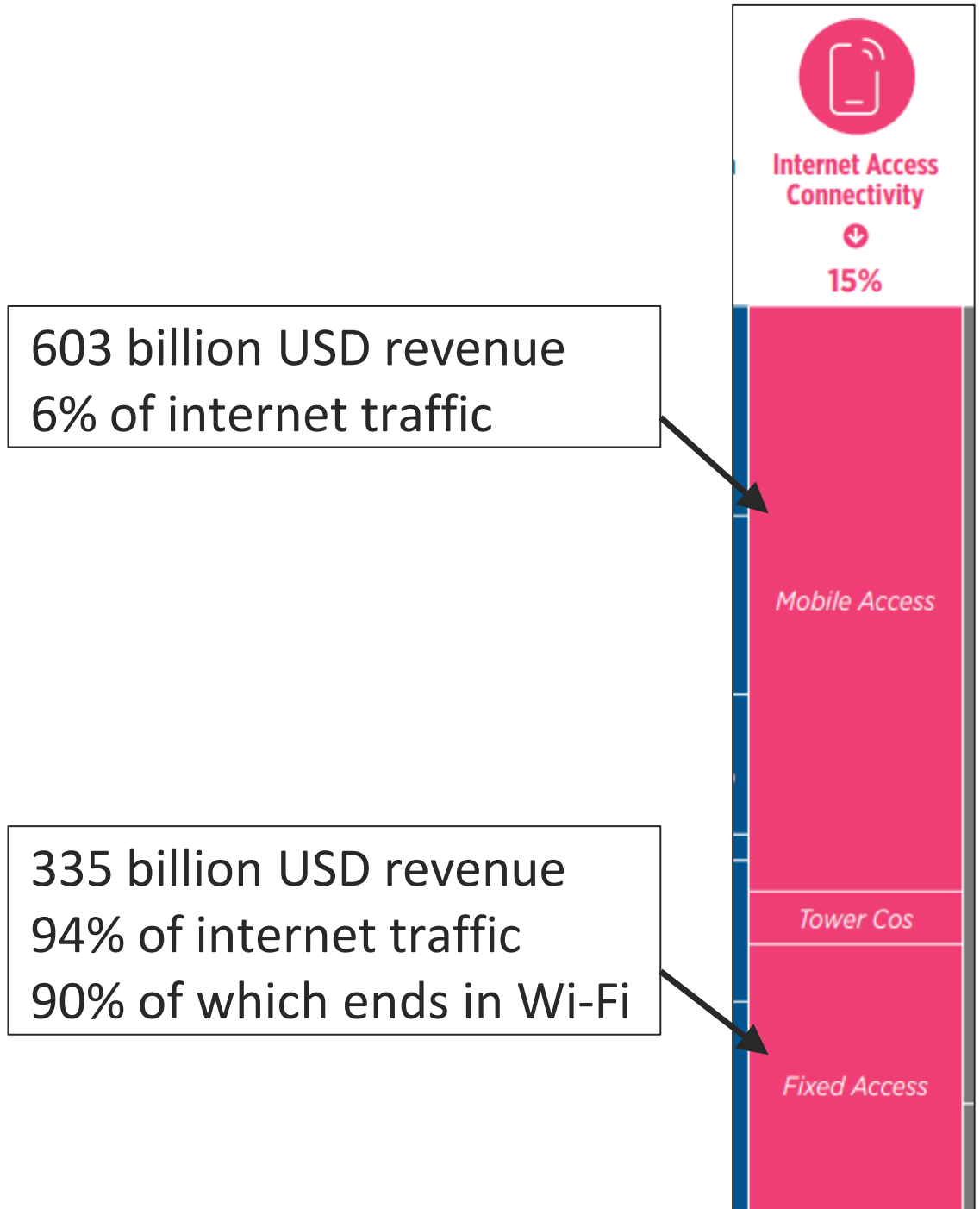
Mobile bits cost 28X more than wi-fi bits

- The physics of mid-band spectrum won't allow the current mobile industry architecture to compete with fiber, which will surpass 10 Gb/s by the end of the year and likely to hit 100Gb/s on existing plant by 2030
- it is unclear why the 5G community wants to continue to deliver YouTube indoors.



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Wi-Fi 6E: Enabling new experiences today (IoT, XR…)

Improved security
WPA3 mandatory
(Simultaneous Authentication
of Equals [SAE])

Reduced latency
Wi-Fi 6 clients only
No slower legacy data rates

Higher density
Efficient spectral reuse
(orthogonal frequency-division
multiple access [OFDMA], BSS coloring)

Increased spectrum
>2x increase over 2.4- and 5-GHz bands
More 80/160 channels

Globalized
Up to 1200 MHz of spectrum

Extended spectrum | Realized capacity | Improved experience

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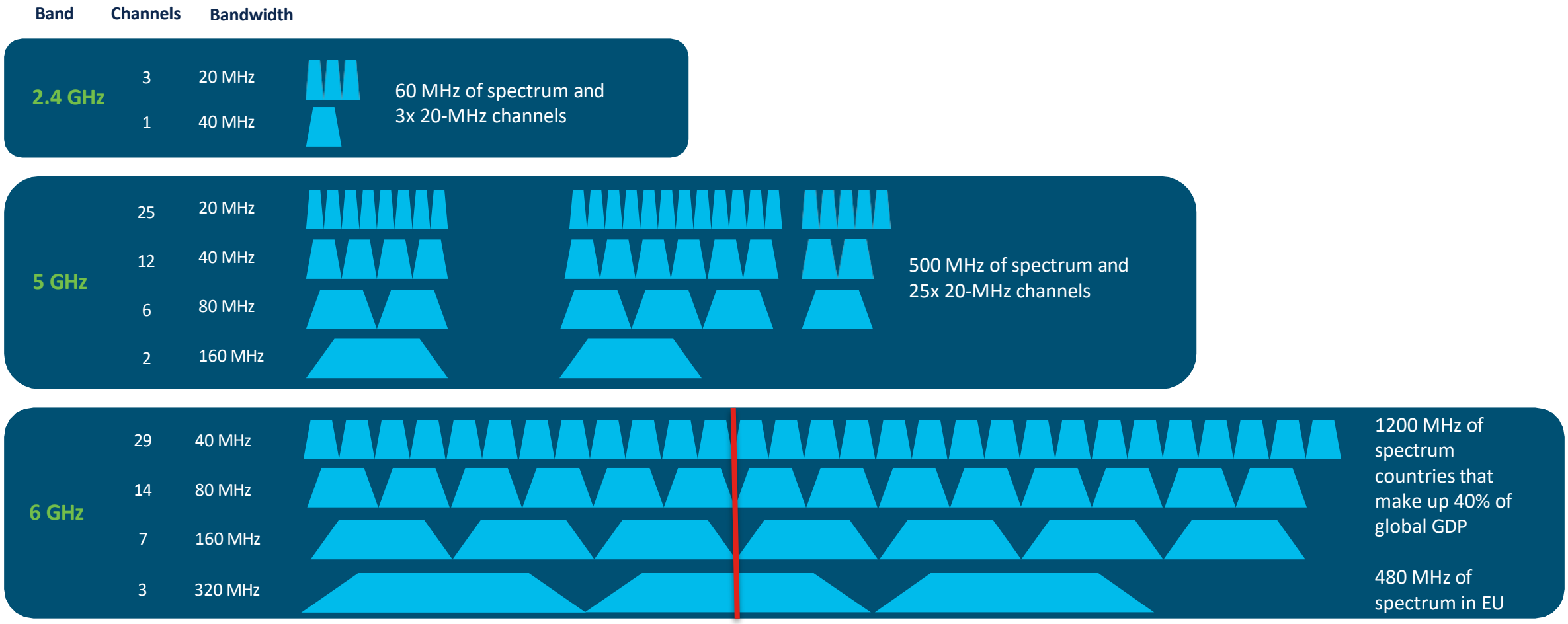
6 GHz is the biggest ever Wi-Fi spectrum expansion



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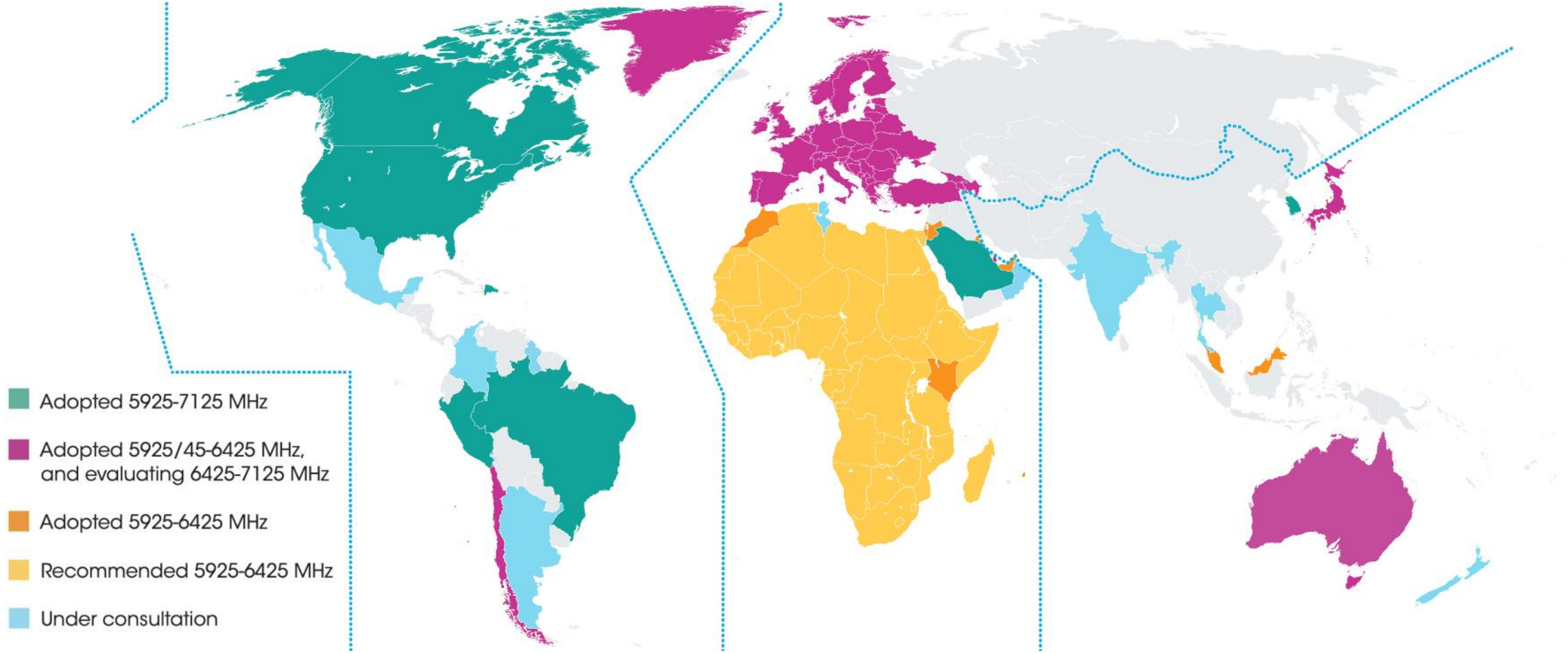
The 6 GHz band today



Countries representing more than 40% of the global gross domestic product (GDP) have opened, or have proposed opening, the full 6 GHz band for licence-exempt use.

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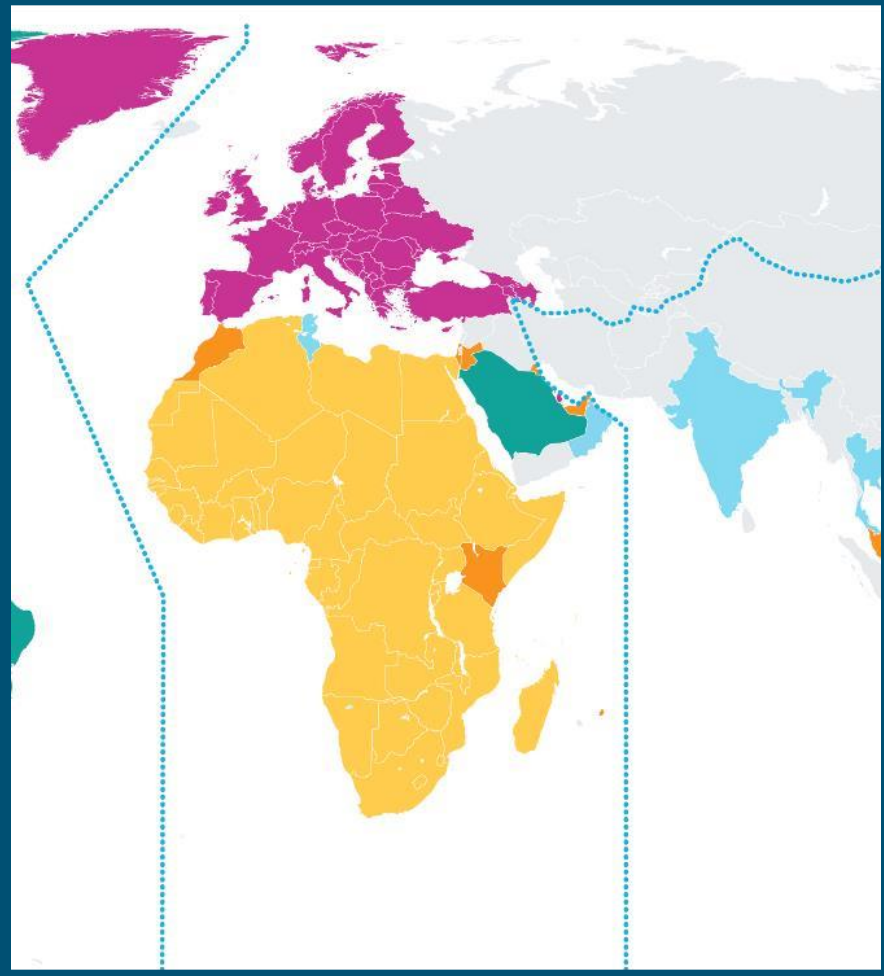
History of 6GHz in Europe:

- 2016 – an ETSI technical report was started to harmonize with similar 6GHz work going on in other regions
- 2017 – The Radio Spectrum Committee decided to only study 5945-6425MHz due to the ongoing relocation of L-Band fixed links
- 2019 – CEPT planning for WRC 19 rejected calls for 6GHz to be studied for IMT-2020 (5G) in Region 1



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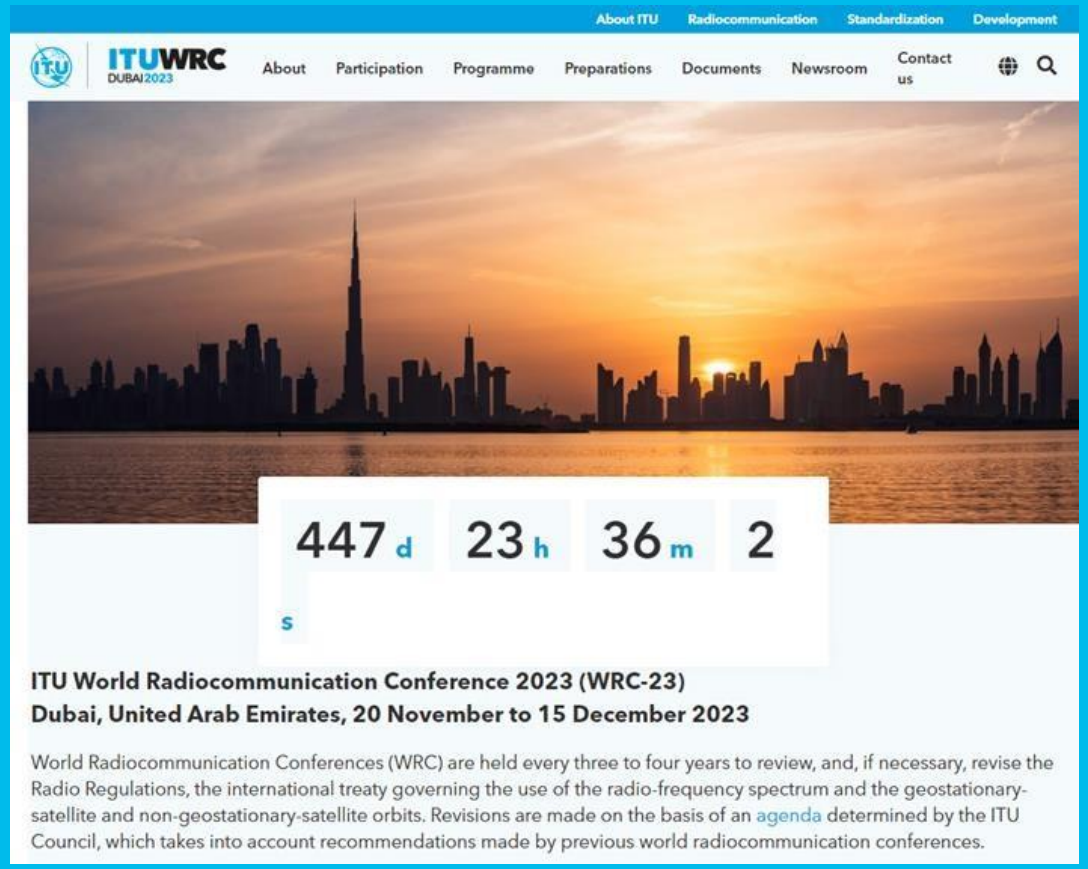
History of 6GHz in Europe continued:



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- 2019 – At WRC19 Russia demanded that the upper 6GHz band be studied for IMT because they were unable to make 100MHz of mid-band spectrum available to their operators in the 3GHz range as had been done in Europe.
- The position was supported by a handful of African countries whose networks are aligned with China.
- CEPT representatives agreed to allow studies that will see if it is possible for IMT to share with existing users in region 1 at WRC 23.

GSMA's position

- **Despite less than 6% of wireless internet capacity being delivered by MNOs, it is fair and reasonable to allocate and auction 75% of mid-band capacity spectrum for macro-cellular deployments of 5G.**

- The 5G spectrum need grew from 100Mhz of mid-band spectrum per operator to 2GHz total based on a single report
- The European mobile network architecture will start to collapse by 2028 without more spectrum (yet somehow it is going to be OK in the US)
- Even more globally harmonized spectrum will be needed for 6G
- Are mobile networks the best way to deliver YouTube to users indoors?

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The position of most of the internet ecosystem :

- **Given that more than 90% of wireless internet capacity is delivered by Wi-Fi and other unlicensed technologies, it is fair and reasonable to allocate 60% of capacity spectrum to technologies that let enterprise customers and consumers deploy their own networks.**

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- The 40-60 split is the best compromise based on the physics we must work with on planet earth
  - MNOs are going to ha
  - Wi-Fi may not be able 100Gb/s fiber even w spectrum
  - US MNOs are moving fo so solutions are being d
  - 6G spectrum should be the maximum extent pc

French lead position being put forward to the EU and ITU

- **There is no spectrum available in the 7-24 GHz range for 6G, so the 6GHz range should be reserved until at least 2030**
- **Indoor/outdoor co-existence between IMT and Wi-Fi should be studied**

- Years of more uncertainty
- Europe will either be left to build its own 6G ecosystem or align with China
- At the ITU 70% of IMT in this band was modeled as outdoor to indoor traffic. Coexistence ideas have not been studied and seem naive

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Conclusion

- Europe is falling behind given the doom and gloom predictions of the MNOs and the uncertainty in the future of Wi-Fi
- These problems are fixable, but…
  - Decisions need to be data driven
  - Real-world physics need to be given priority over political baby-splitting. Everybody being equally unhappy does not equate to best posible outcome
- Environmental impact needs to better considered


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Panel Discussion: Wi-Fi and Its Role in the Future Smart Home

MARCELINO VOGEL

WI-FI DEPLOYMENT MANAGER

DAVID HUYNH

CHIEF PRODUCT OFFICER, PLUME

TIM TWELL

SPECIALIST: WI-FI & IN-HOME NETWORKS, BT

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ROBERT HATTINK

SYSTEM & NETWORK CONSULTANT, RAI

CASE STUDY: WI-FI ROAMING ENTERPRISE USE CASE OPENROAMING DELIVERING NEXT-GEN CAPABILITIES TO ENHANCE THE USER EXPERIENCE FOR WI-FI

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IT at the RAI.

Wifi-6 And Open Roaming at the RAI.

inspiring **people**

Robert Hattink
Systen & Network Consultant
19-10-2022

rai AMSTERDAM

Every event has its own unique IT needs and setup requirements, but Wi-Fi is always a must.

The RAI IT business

inspiring people

rai AMSTERDAM

The future for the RAI.

- The first steps towards Wi-Fi 6.
- How do/did we design the Wi-Fi network.
- The results.
- Three Teams, One Dream: RAI Amsterdam's Move to Wi-Fi 6 with Cisco

rai
AMSTERDAM

Open Roaming at the RAI.

- The first steps towards Open Roaming May 2022.
- Full support from Cisco by Bart Brinckman.

rai
AMSTERDAM

Questions?

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AMSTERDAM

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WI-FI REVOLUTION:
DRIVING DIGITAL GROWTH

LUNCH & NETWORKING
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CHRIS BRUCE

CHAIRMAN NED AND WI-FI STRATEGY CONSULTANT

MODERATOR

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WGC EMEA Speakers

Dr. Yan Zhang
Metablox

Dr. Derek Peterson
Boingo Wireless

Matt MacPherson
Cisco

Ahmed Hafez
Deutsche Telekom

Dean Bubley
Disruptive Analysis

Bob El-Hawary
Cognitive Systems

Metin Taskin
Airties

Time	Presentation
1:20 PM (CET)	**MetaBlox Network, a Decentralized Open-Roaming WiFi Network** Dr. Yan Zhang, CEO, Metablox
1:40 PM (CET)	**Panel Discussion: The Union of 5G and W-Fi** Dean Bubley, Founder, Disruptive Analysis Dr. Derek Peterson, CTO, Boingo Wireless Matt MacPherson, Wireless CTO, Cisco. Ahmed Hafez, VP Network Convergence, Deutsche Telekom
2:15 PM (CET)	**The Value of Wi-Fi Sensing for ISPs** Bob El-Hawary EVP Sales, Cognitive Systems
2:35 PM (CET)	**The Value of Wi-Fi Sensing for ISPs** Metin Taskin – CTO, Airties
	COFFEE & NETWORKING (30 minutes)

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DR. YAN ZHANG

CEO, METABLOX

METABLOX NETWORK, A DECENTRALIZED OPEN-ROAMING WI-FI NETWORK

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A Decentralized OpenRoaming WiFi Network

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Certain statements contained in this presentation constitute forward-looking statements. The words "anticipate", "continue", "estimate", "expect", "may", "will", "project", "should", "believe" and similar expressions typically are used to identify forward-looking statements. The use of forward-looking statements reflects our current views, expectations, estimates and/or projections with respect to our performance, business and future events, and in this presentation includes statements relating to, among others: expectations regarding our business; expectations relating to our business goals, objectives and schedules; expectations relating to our financial performance and margins; expectations relating to our use of proceeds; and expectations relating to market trends and potential opportunities. Forward- looking statements are based on the then-current expectations, forecasts and assumptions about the business and the industry and markets in which we operate, including, among others: that there will be no unforeseen delays, disruptions or market forces negatively affecting our business operations; that the market conditions for wireless technologies will follow expected trends; and that there will be no regulation or law that will prevent us from operating our business.

Forward-looking statements are not guarantees of future performance and involve risks, uncertainties and assumptions which are difficult to predict, including, without limitation: that we may experience unforeseen delays, financing difficulties or costs that will impact our operations, financial performance or liquidity; that we will not be able to acquire necessary funds for general working capital and will be required to rely on the sale of equity for such funds; that we will not be able to advance our business plan or continue operations; that we experience technical or operating difficulties in connection with business activities; that we have difficulties obtaining or renewing our necessary licenses and permits; that new technology or services may make our hardware and equipment obsolete and it may be cost-prohibitive to upgrade and bring our hardware and equipment up to competitive standards; risks relating to market acceptance and demand for new and existing products; technological and product development risks; and those risks relating to the occurrence of natural disasters, hostilities, acts of war or terrorism, our reputation, competition, employee relations, changes in the markets in which we operate or intend to operate generally, potential downturns in economic conditions, foreign exchange fluctuations, fluctuations in the currency markets, inflationary pressures, changes in interest rates, changes in regulatory requirements which may alter or prohibit investment in our business, or changes in national and local government legislation, taxation, controls, regulations and political or economic developments in Canada or any other country in which we operate or intend to operate.

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MetaBlox Networks

A decentralized wireless access network built on WiFi OpenRoaming

Highlights

Problem

How to accelerate WiFi OpenRoaming adoption for seamless cellular traffic offloading with better user experiences?

Solution

A decentralized WiFi OpenRoaming network, a new type of WiFi operator and source for network expansion

Secret Sauce

Combining Web3 based authentication (Decentralized IDs and Verifiable Credentials) with the latest OpenRoaming framework

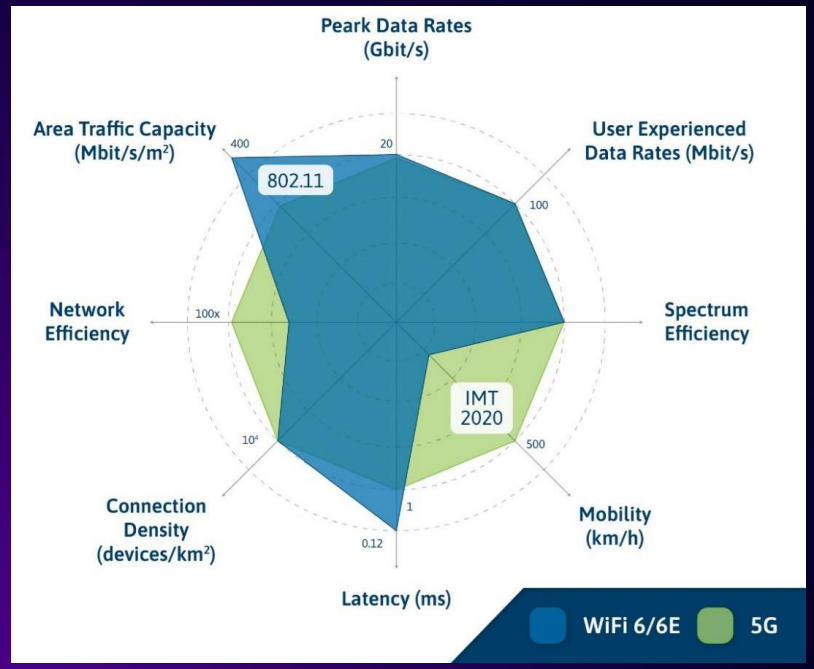
Bonus

An essential infrastructure to Web3 Applications and a new portal into Web3

Background

5G and WiFi integration is demanded by the industry

Global WiFi OpenRoaming Network has reached a 1 million AP milestone in 18 months. It provides 5G cellular traffic offloading, particularly indoor.



Comparing Wi-Fi 6/6E (802.11) and 5GNR (IMT-2020) Capabilities (Source: WBA)

WiFi still carries 74% of smartphone traffic (source: Ofcom)

5G deployment *suffers* from high Capex, excessive power consumption and poor signal coverage

WiFi 6 (2019), 6E (2021) and 7 (2024) ***make significant improvements*** and deliver increasingly comparable performance to 5G

OpenRoaming overcomes a key problem of WiFi versus cellular: The capability to seamlessly roam among different APs/operators *(note: there ~638 million WiFi networks in the world by 2023 per CISCO)*

Metablox Networks Confidential | 2022

Background

OpenRoaming offers additional benefits beyond traffic offloading

1. Turn singular WiFi networks into a large unified borderless network with higher operation potential

2. OpenRoaming makes it possible to monitor the behaviour of users, both at the network level and in context

3. Better user experiences with passwordless, no interruption switching between networks

4. Integration with Location analysis (Open Locate)

Problem

How to accelerate the adoption of WiFi OpenRoaming

WBA's "One global WiFi network" vision aims to deploy multi-million OpenRoaming APs in 2-3 years

- *How to onboard new users?*
  - A common problem for the WiFi industry for years. Passpoint OSU has been available for 10 years with no major deployment
- *Who will deploy at scale?*
  - Every operator has its own schedules.
- *Who will pay for it?*
  - Site owners have their own schedule to upgrade.
  - Lack of mature WiFI operation model to fund OpenRoaming deployment

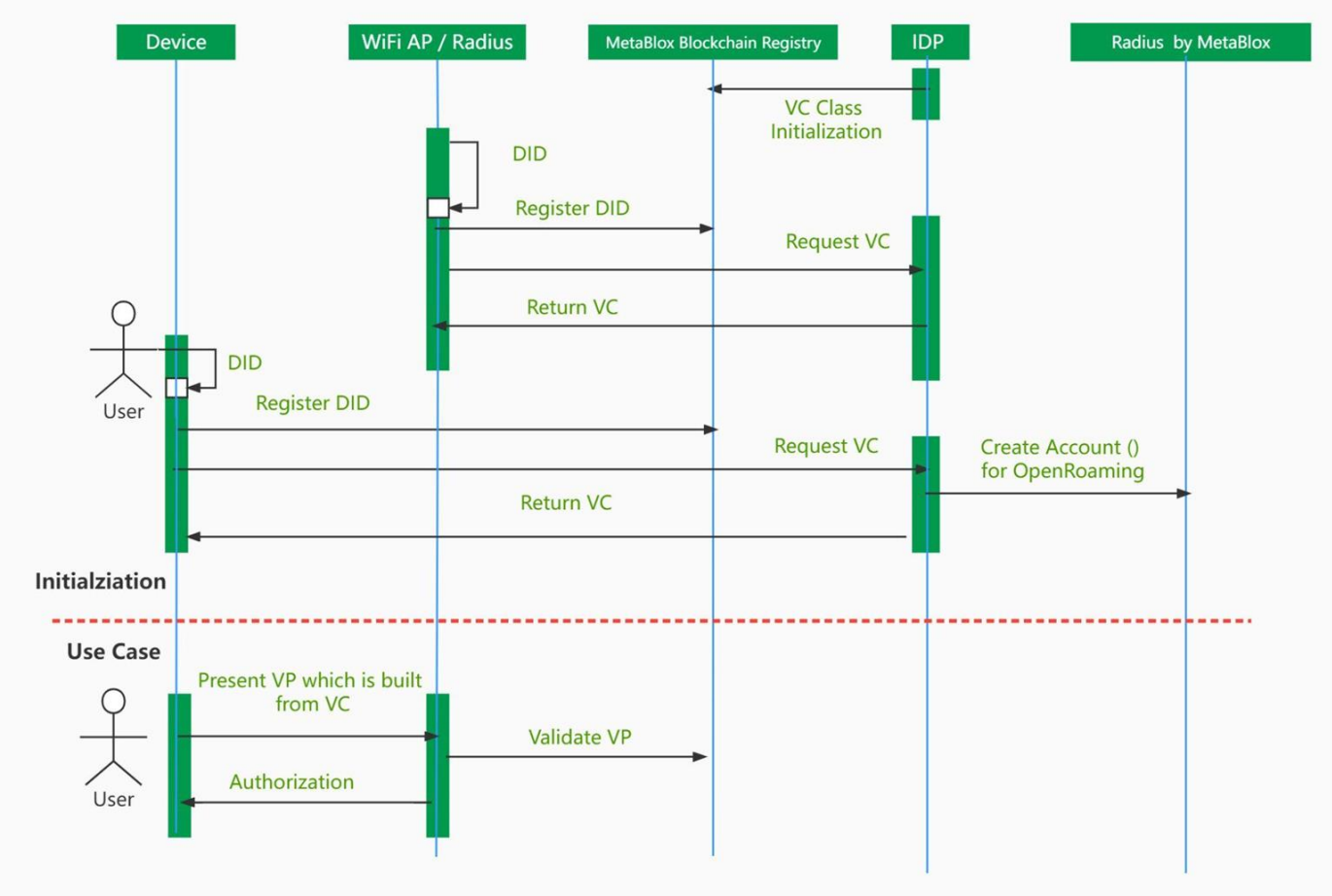
Solution: A Decentralized WiFi OpenRoaming Network

A borderless WiFi network built by the community to drive OpenRoaming

- *As secure and seamless* as other OpenRoaming networks
- Onboarding users with *decentralized authentication*
- *Decentrally built and operated* through token incentivization, no CAPEX for operators
- *Fully compatible with OpenRoaming* Protocol

Secret Sauce

Authentication based on DIDs + Verifiable Credentials



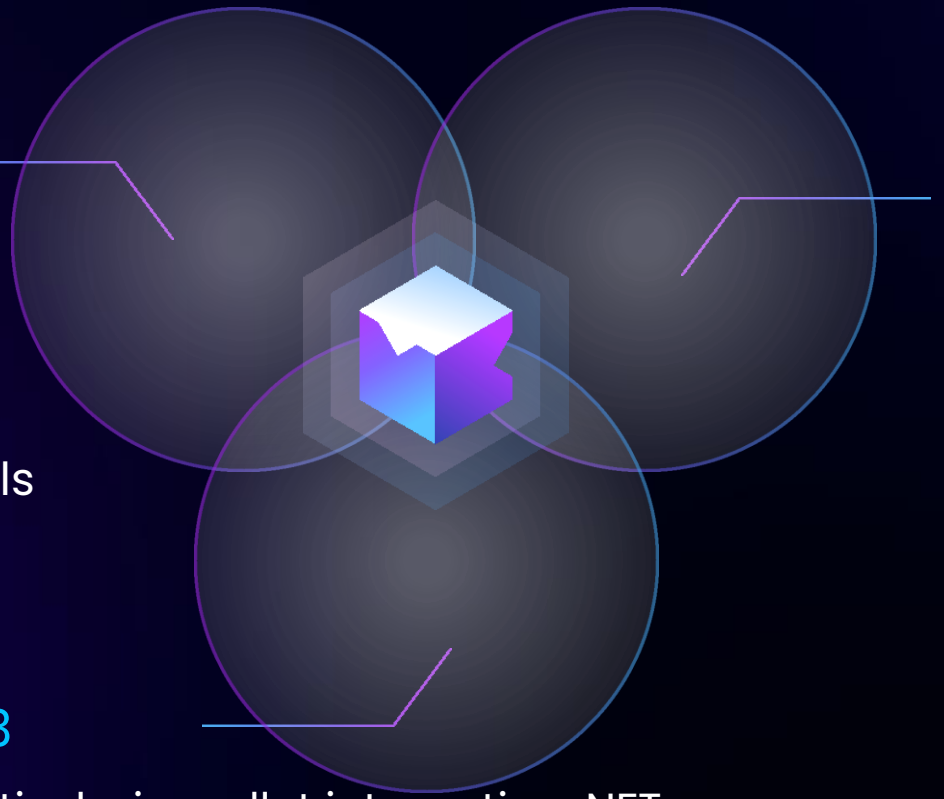
The Metablox Networks authenticates users with DID based credentials to achieve cellular-style "web3 roaming"

Components:

- DID: Self-sovereign Decentralized Identifications
- VC: Verified Credentials issued by IDP and bound to a DID, typically held by the user
- VP: Verifiable Presentations built based on VC in a cryptographic way

Key Technologies

Building at the intersection of multiple domains



Telecom Standards

- 5G cloud native architecture per 3GPP
- IEEE 802.11, Extensible Authentication Protocols

Decentralized Trust

- W3C Decentralized IDs (DIDs) and Verifiable Credentials (VCs) Standards
- Confidential Computing and Zero-Knowledge Proof
- Trust-Over-IP Technology Stack per Linux Foundation

Web3

- Multi-chain wallet integration, NFTs
- EVM, smart contracts
- Blockchain integration with WiFi SoC and modules

Metablox Networks Confidential | 2022

Benefits

Generating additional incentives for OpenRoaming network expansion

Everyone IDP can join

- **Improved user onboarding** via "WiFi OpenRoaming as-a-service.
- **Global WiFi services** can be easily offered by **any IDP,** such as loyalty/affiliate programs, crypto service providers, online games, etc.

Added value to Telcos

- **Better offloading costs**
- **Increase engagement of own applications** through our SDK, DID and analytics opening up new features
- **Simpler billing**

Attract more site owners

- **Higher operational value** can be achieved with a large borderless WiFi network vs. location constrained networks
- **Lower CAPEX**

Benefits

Ecosystem-wide benefits for WiFi users, builders, operators, agents and vendors!

It is a open protocol, everyone is welcome to join and benefit

Users

- Free services with DID, mining rewards if validate AP's performance

Operators

- Lower the capex if participate MetaBlox network, split the operational income with the community as well.
- New WiFi device identification method for analytics

Builders (Miners in crypto terms)

- Invest on APs (mining rigs) and deploy them in return of mining income

Agents

- Income for site acquisition and on-going crypto income if operate a "mining-pool" via network optimization

Vendors

- Sell more APs and Services!

Roadmap

From Pilot Projects to a Borderless WiFi Operator

Bootstrap Strategy

MetaBlox Deployed Rigs

- Released interim solutions with EAP-TTLS, DID-VC stack based on EVM
- Release MetaBlox AP as the example

Community NFT Sales

- Miner + location = NFT to raise initial deployment fund
- MetaBlox manage the deployment
- As long as NFT price holds, the miner get their ROI on day 1, reduce token selling pressure

Partner with WBA

- Officially join OpenRoaming Federation
- Help WBA to reach its growth targets
- In the process of initiating Decentralized OpenRoaming project for long-term solutions

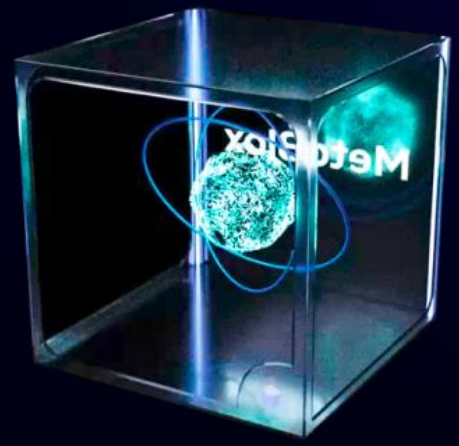
Roadmap

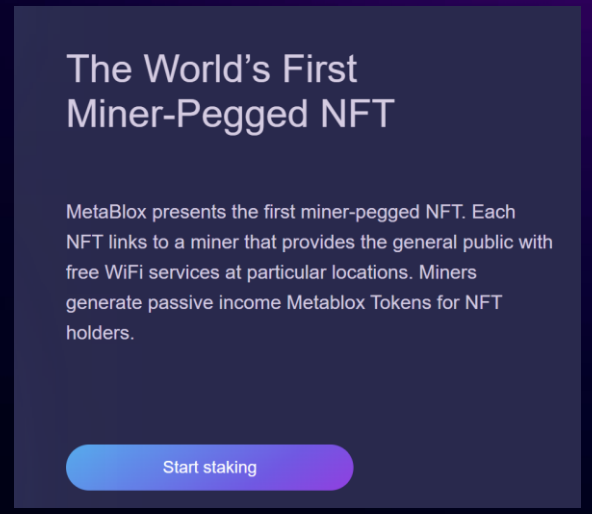
From Pilot Projects to a Borderless WiFi Operator

Current Phase 1

Launch Genesis NFT Collection

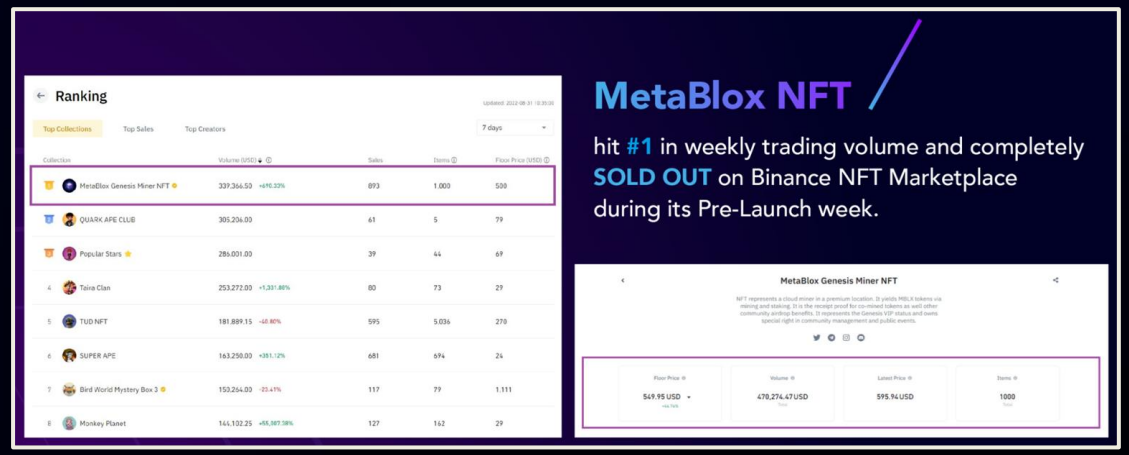
- Exciting response from the community, despite the tough market condition: MetaBlox NFT floor price increased by 30% since its initial launch





Network Up and Running Dec 2022

- Deploy at pre-selected sites in Philippines, UAE, US, Canada



Operate on behalf of NFT Owner

- Support by MetaBlox Agent teams

Project Development

From Pilot Projects to a Borderless WiFi Operator

Future Phase 2

Drive along with the WBA and WiFi Alliance

- Work on EAP-DID proposals and update the OpenRoaming protocol for decentralized authentication
- Grow to 1+ million APs in 3 years under OpenRoaming framework
- Start to incorporate “Open Locate”

Build Agent Networks

- Hundreds of teams globally on the ground to promote OpenRoaming

Open Up to the Public

- Welcome third party hardwares *since 2023*
- Full decentralized deployment will happen *in mid 2024*

Thank You!

Email: info@metablox.io

Funded By

SNZ

Crowdcreate

Harmony

SYNERGIS

NFT TECH

SLOPE

Collab+Currency

Future Life

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

DEAN BUBLEY

FOUNDER, DISRUPTIVE ANALYSIS

PANEL MODERATOR

WIRELESS BROADBAND ALLIANCE

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

Panel Discussion: The Union of 5G and Wi-Fi

DEAN BUBLEY

FOUNDER,
DISRUPTIVE ANALYSIS

DR. DEREK PETERSON

CTO,
BOINGO WIRELESS

MATT MACPHERSON

WIRELESS CTO,
CISCO

AHMED HAFEZ

VP NETWORK
CONVERGENCE,
DEUTSCHE TELEKOM

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

BOB EL-HAWARY

EVP SALES, COGNITIVE SYSTEMS

THE VALUE OF WI-FI SENSING FOR ISPS

WIRELESS BROADBAND ALLIANCE

Cognitive Systems Corp.

Creators of WiFi Motion™

The Value Of WiFi Sensing For ISPs

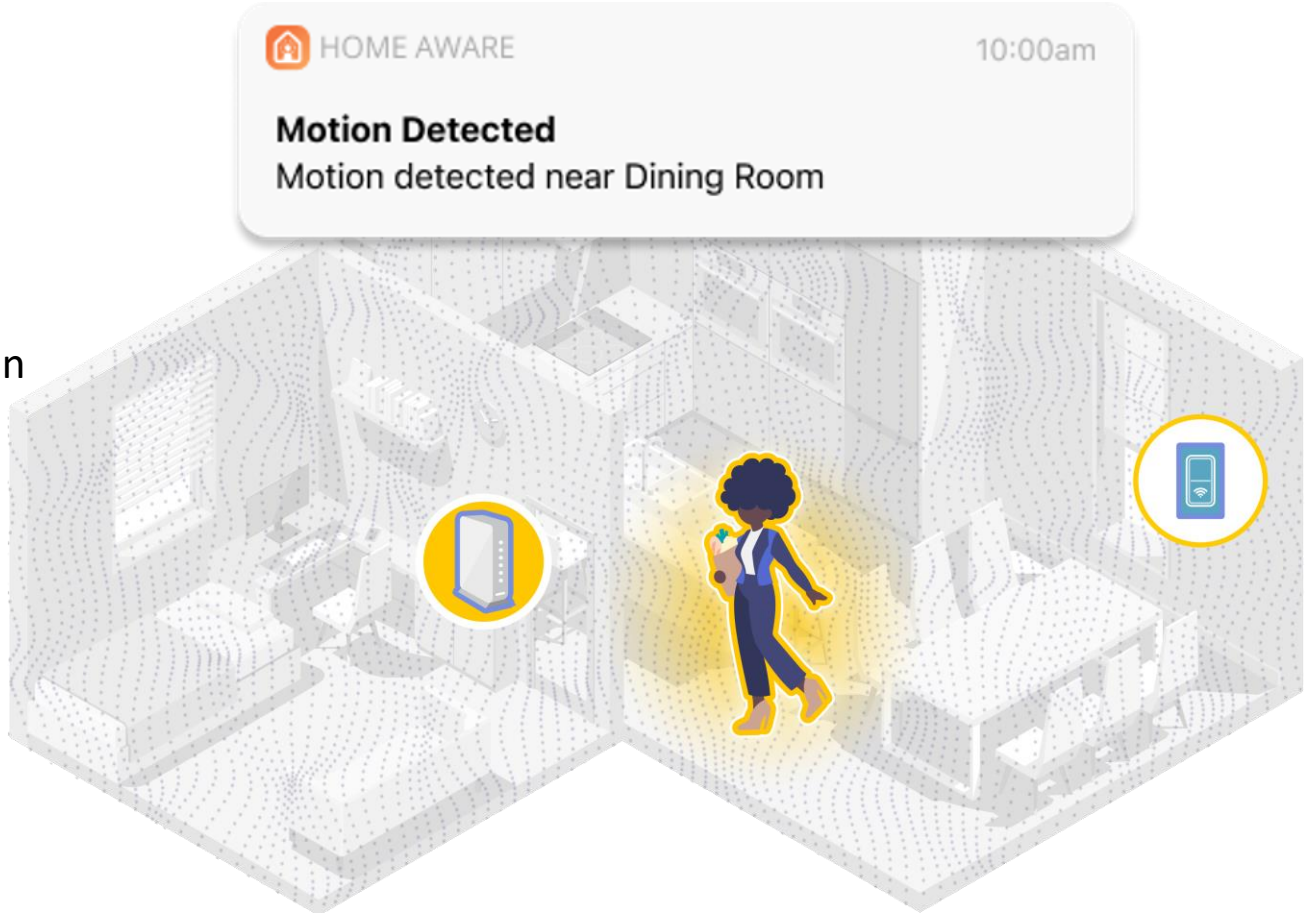
Bob El-Hawary, EVP Sales

COGNITIVE

What is WiFi Motion?

Patented AI software that analyzes disruptions in CSI caused by motion

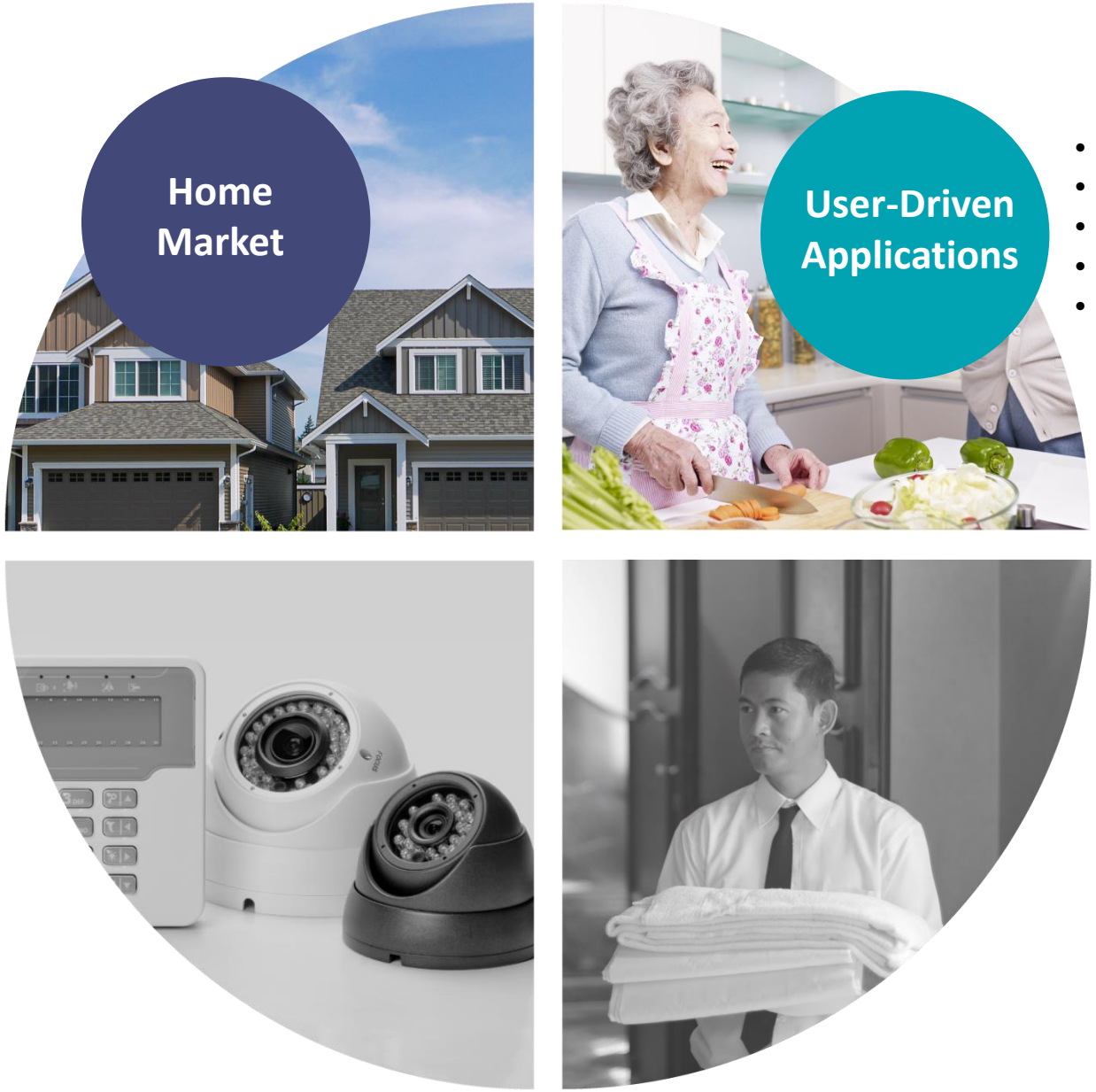
- Turns connected WiFi clients into motion sensors
- Privately indicates the time, location & density of motion
- Identifies motion patterns & trends



How is WiFi Motion Growing?

- More feedback
- Customer experience
- More data

How is WiFi Motion Growing?



- Home security
- Family insights
- Eldercare
- Smart home
- Energy management

How is WiFi Motion Growing?

- Small business
- Hospitality
- Multi-dwelling
- Network optimization
- Device mapping

How is WiFi Motion Growing?

- Motion as a smart home trigger
- Maximize privacy
- Enhance products

2.5M+

WiFi Motion compatible WiFi devices today

94%

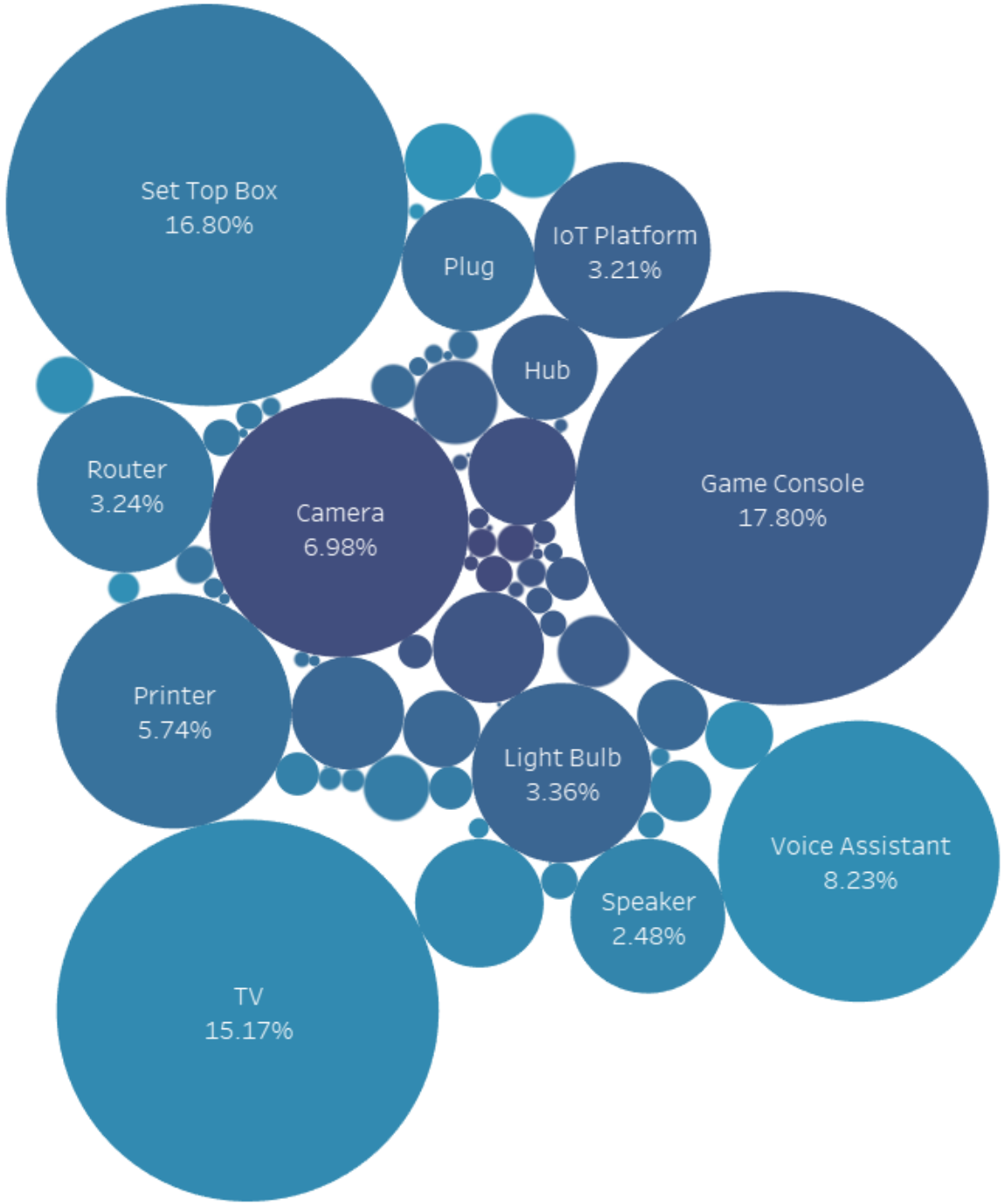
Of activated consumers continue to use WiFi Motion for the next month

18%

Of users engage daily with the WiFi Motion app

75

Countries with WiFi Motion deployments



Home Market

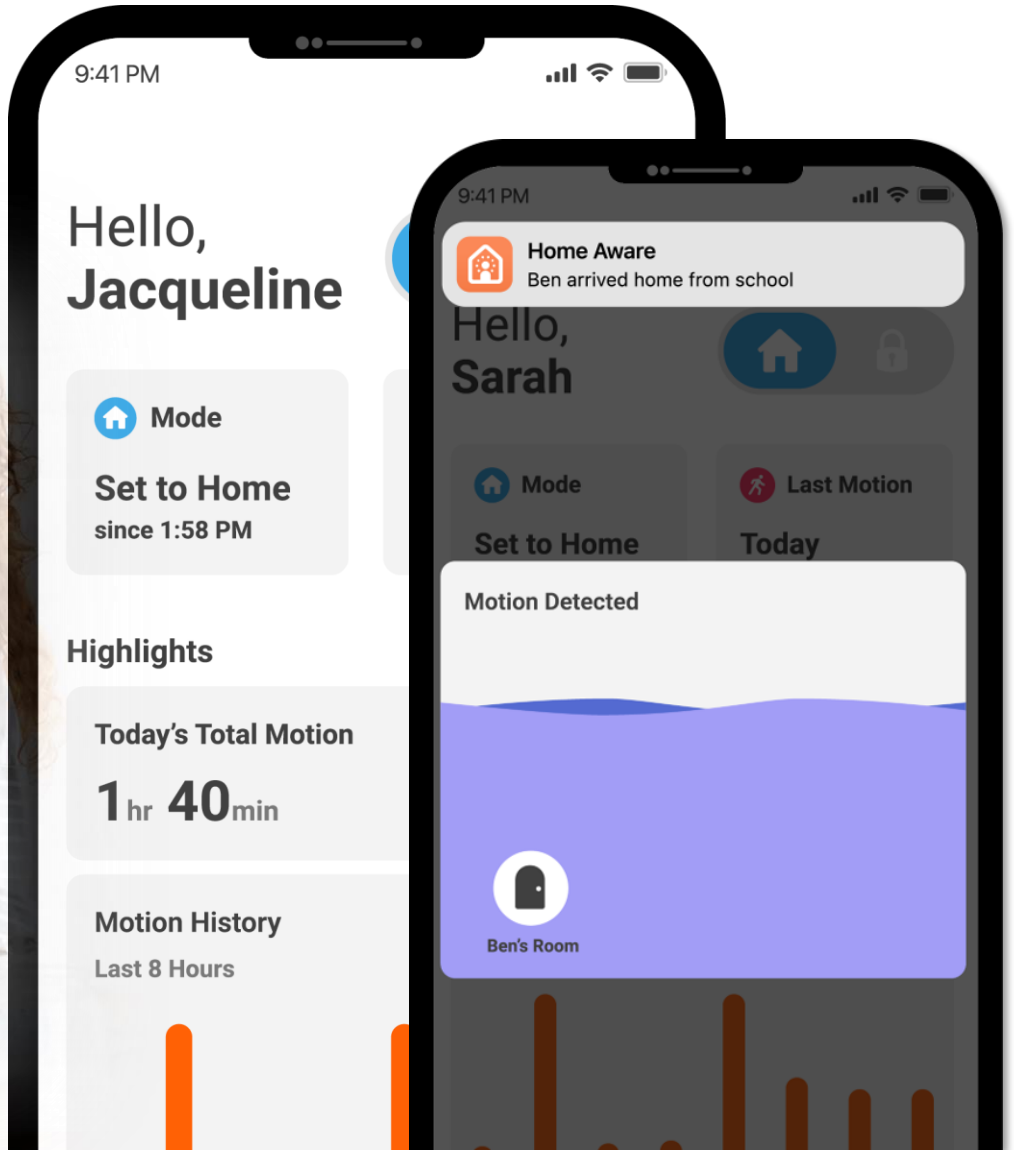
User Driven Applications

Enterprise

Partnerships

Home Aware

A camera-less home monitoring system that provides peace of mind when you're away.



Home Market

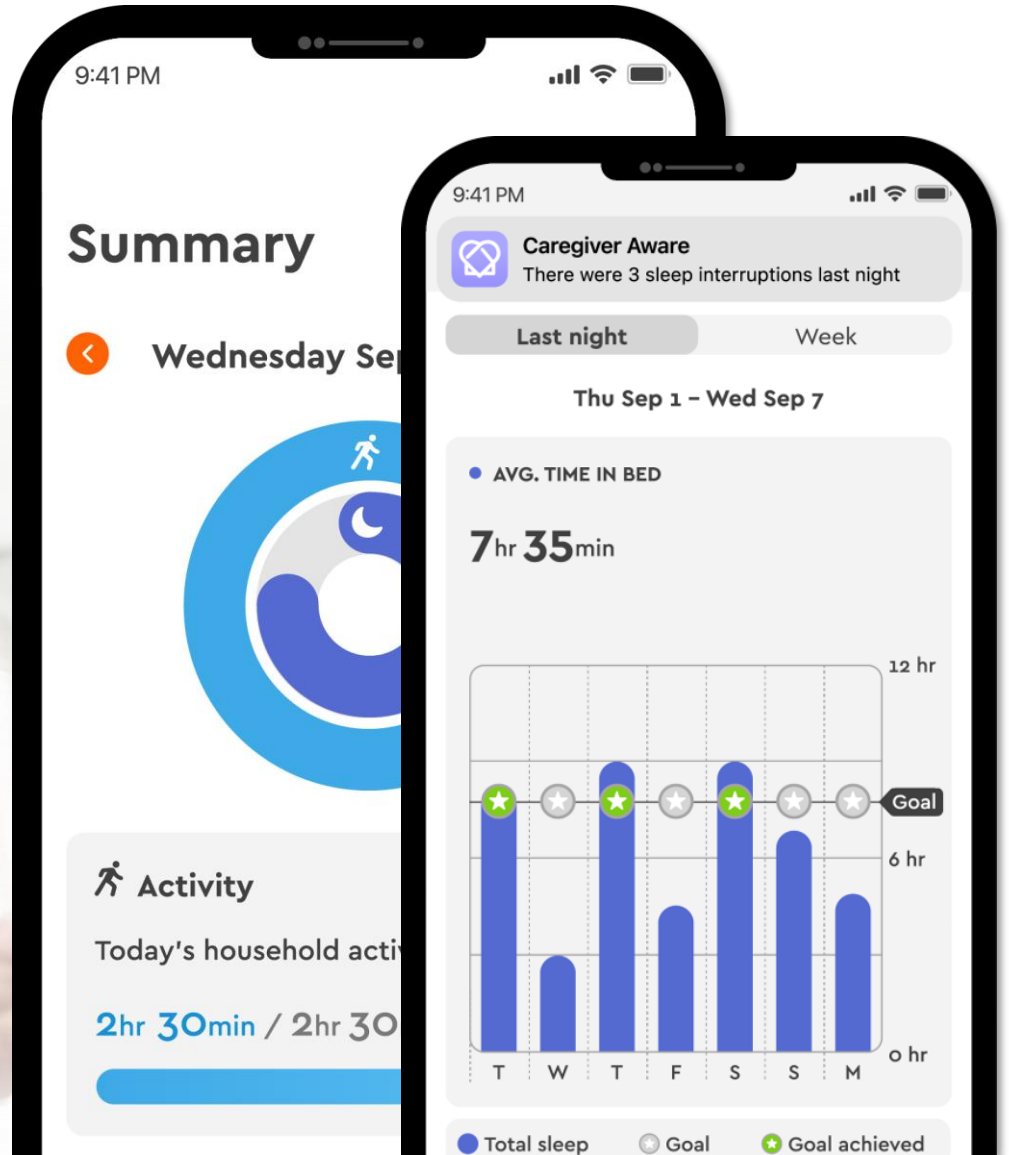
User Driven Applications

Enterprise

Partnerships

Caregiver Aware

A simple eldercare solution that gives caregivers peace of mind and helps loved ones age in place.



Home Market

User Driven Applications

Enterprise

Partnerships

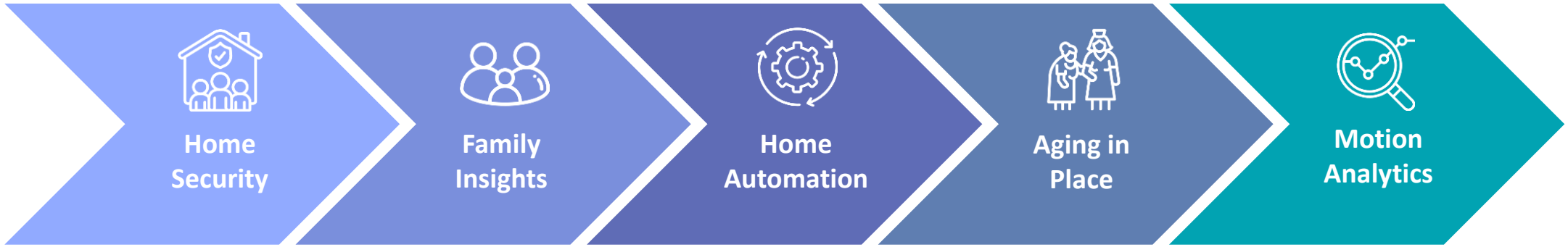
Smart Home Automation

Identify where motion is being detected to trigger motion-based home automation applications.

Turn on Kitchen lights

Your Kitchen lights will turn on when motion is detected in the Kitchen between 6pm– 7am.

Service Provider Path to Market



Get notified if motion happens when you're away

Monitor household activity & set up custom alerts

Activate lights & thermostats when motion is detected

Remotely monitor the activity & sleep of a loved one

Understand movement patterns, trends & network insights

Home Market

User Driven Applications

Enterprise

Partnerships

Enterprise Uses

Retail

Understand customer traffic patterns to maximize merchandising & staff resources

Office

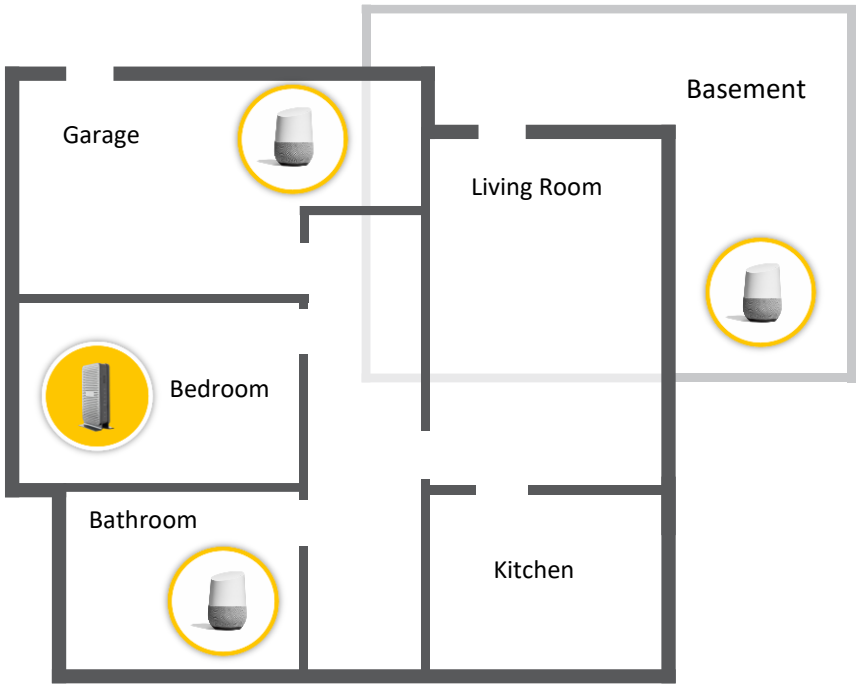
Understand motion trends & patterns for workplace optimization

Hospitality

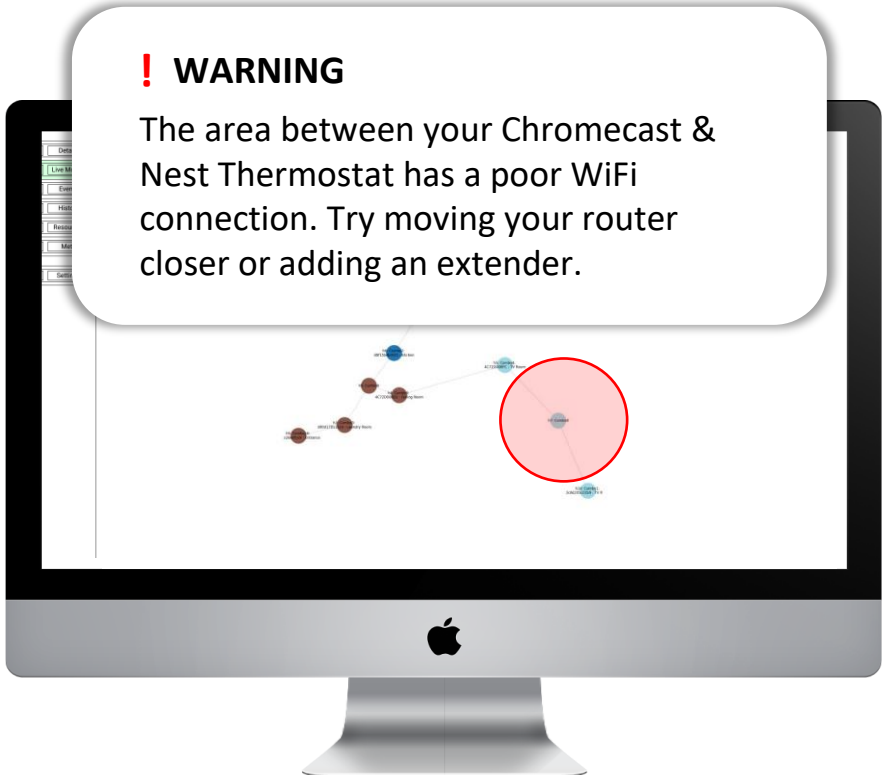
Optimize cleaning service schedules at hotels & rentals

Device Mapping

Create a 2D network topology map using the position of access points & client devices

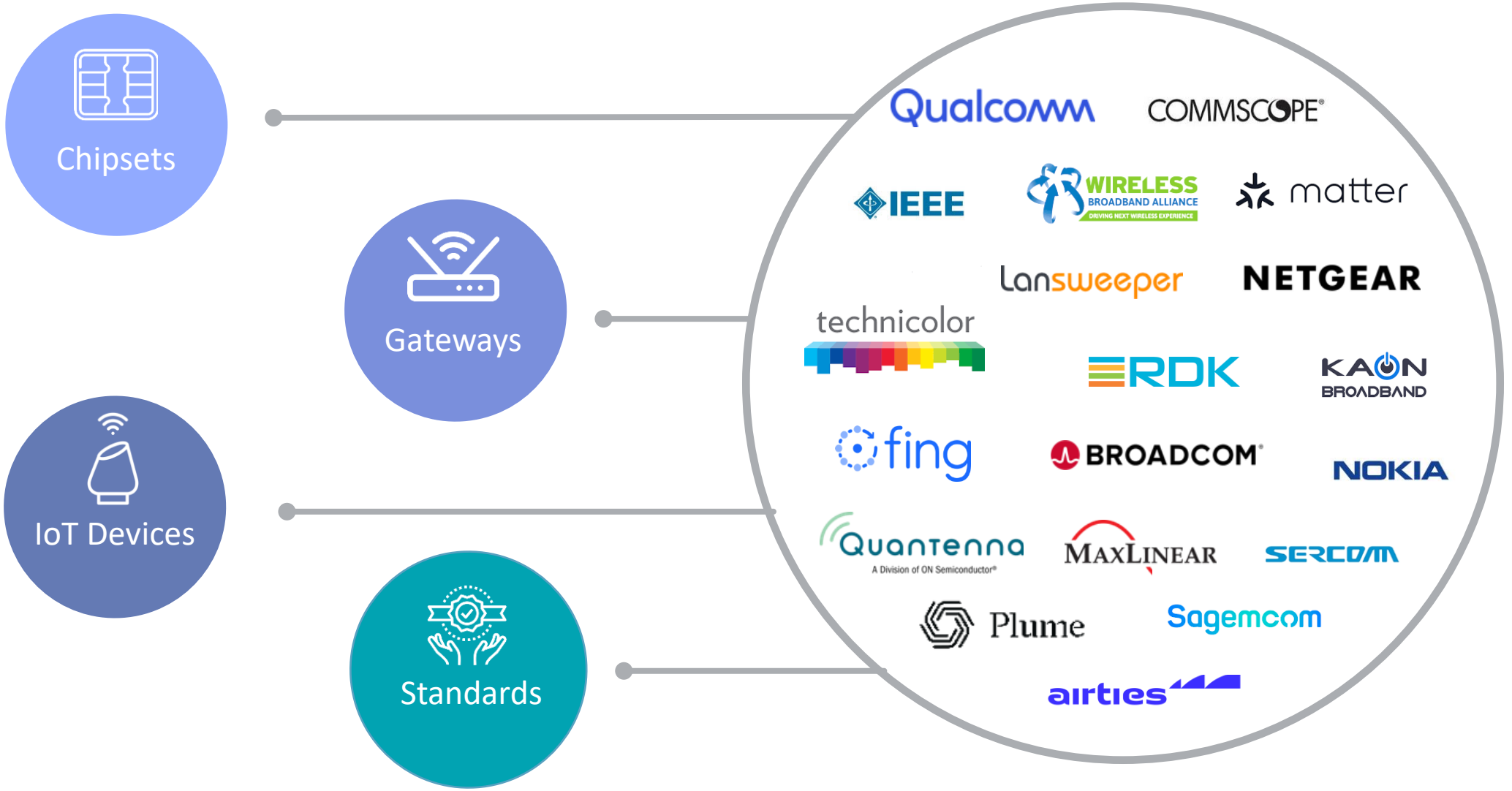


Device locations provide a spatial map of the home

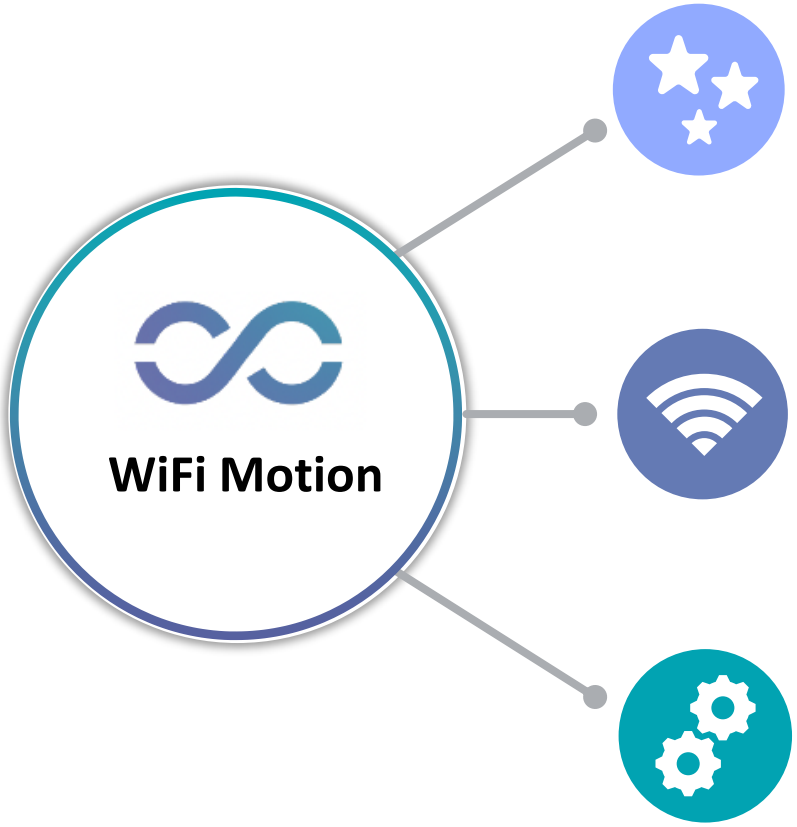


Customers & support reps can troubleshoot WiFi dead spots more easily

Partnerships



Service Provider Appeal



Revolutionize your offering with new value-add services

Set yourself apart from the competition with the most advanced WiFi

Secure the infinite future possibilities of WiFi Sensing with one software integration


Exceed your customers' expectations by delivering the *most* advanced WiFi
COGNITIVE
SYSTEMS CORP

Bob El-Hawary

EVP Sales

bob.elhawary@cognitivesystems.com

www.CognitiveSystems.com

COGNITIVE SYSTEMS CORP

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

METIN TASKIN

CTO, AIRTIES

TBC – JUSTINE TO CHASE

WIRELESS BROADBAND ALLIANCE

Converged Connectivity

Home Wi-Fi is the backbone of future converged services

Metin Taskin, CEO & CTO

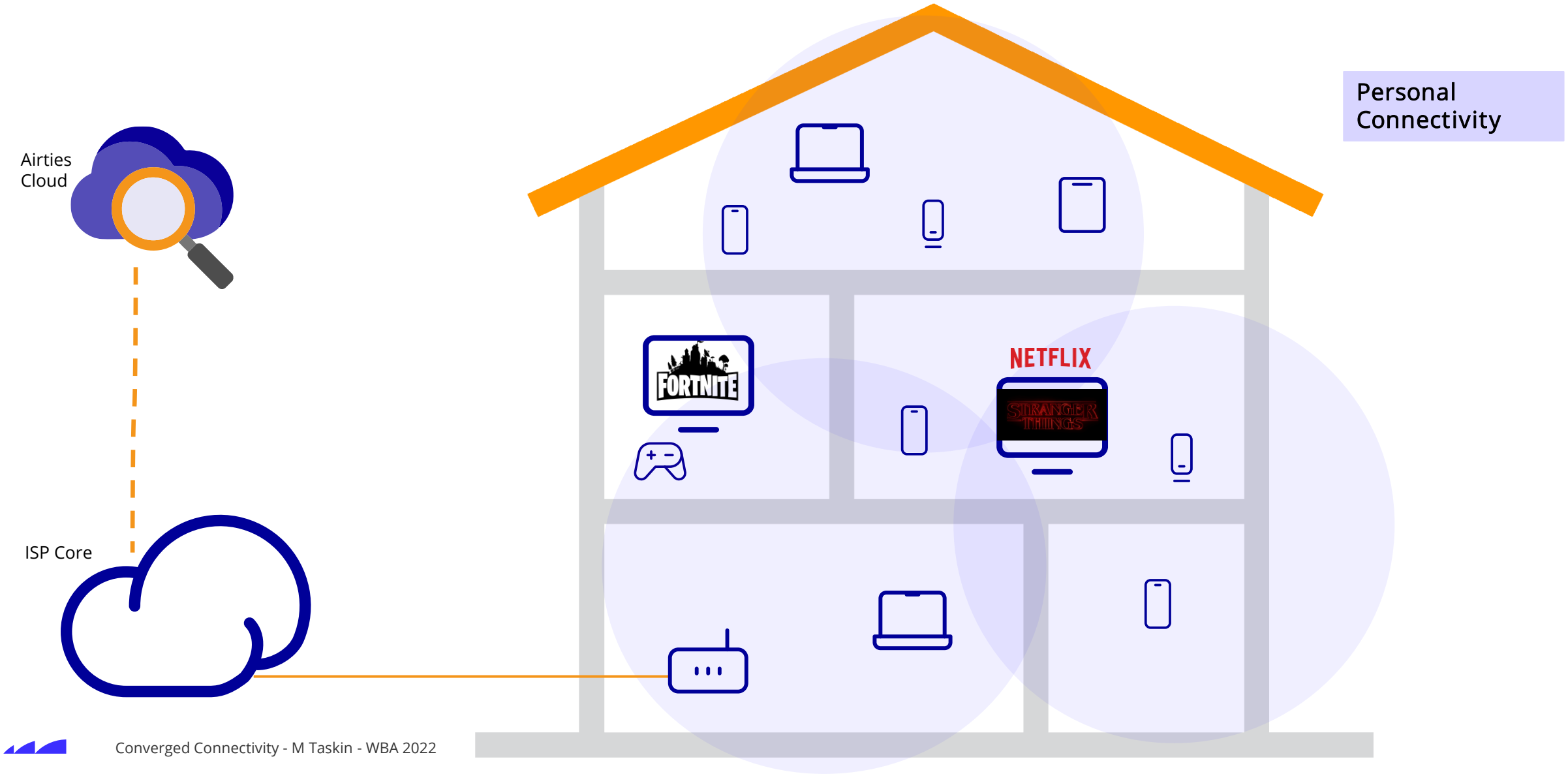
Reality check: We've moved on

How we use Wi-Fi has dramatically changed over the last 3-5 years

Home Wi-Fi supports a range of evolving use cases

Convergence of home Wi-Fi with external networks for connected homes of the future

Home Wi-Fi, Smart Wi-Fi



Huge potential of residential networks

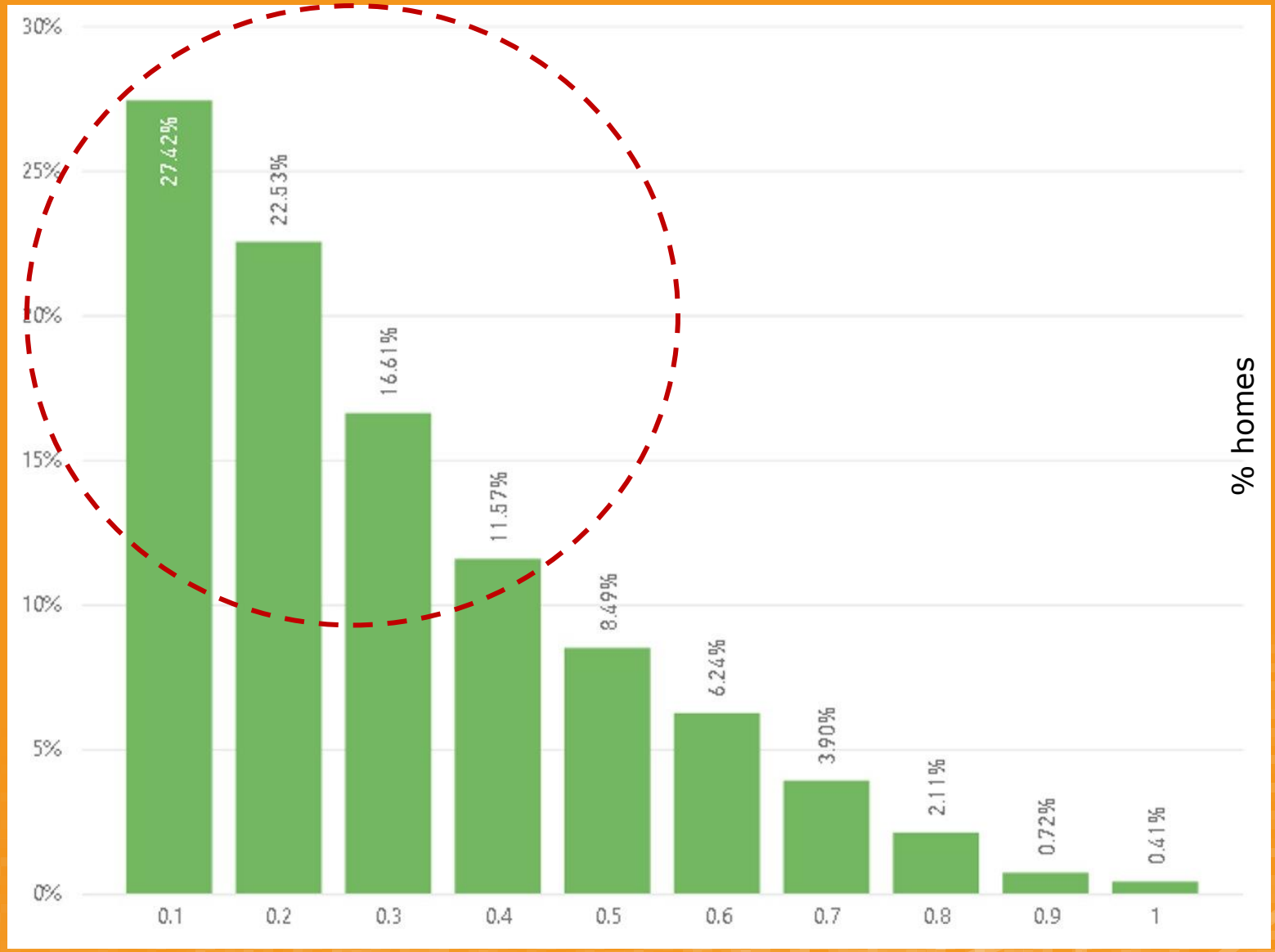
Every home can become a hotspot for mobile devices while continuing to serve the home users

Coverage can be immense as service providers often manage a sizeable percentage of subscribers in the same neighborhood

Airtime is not fully used; why not leverage this capacity for others?

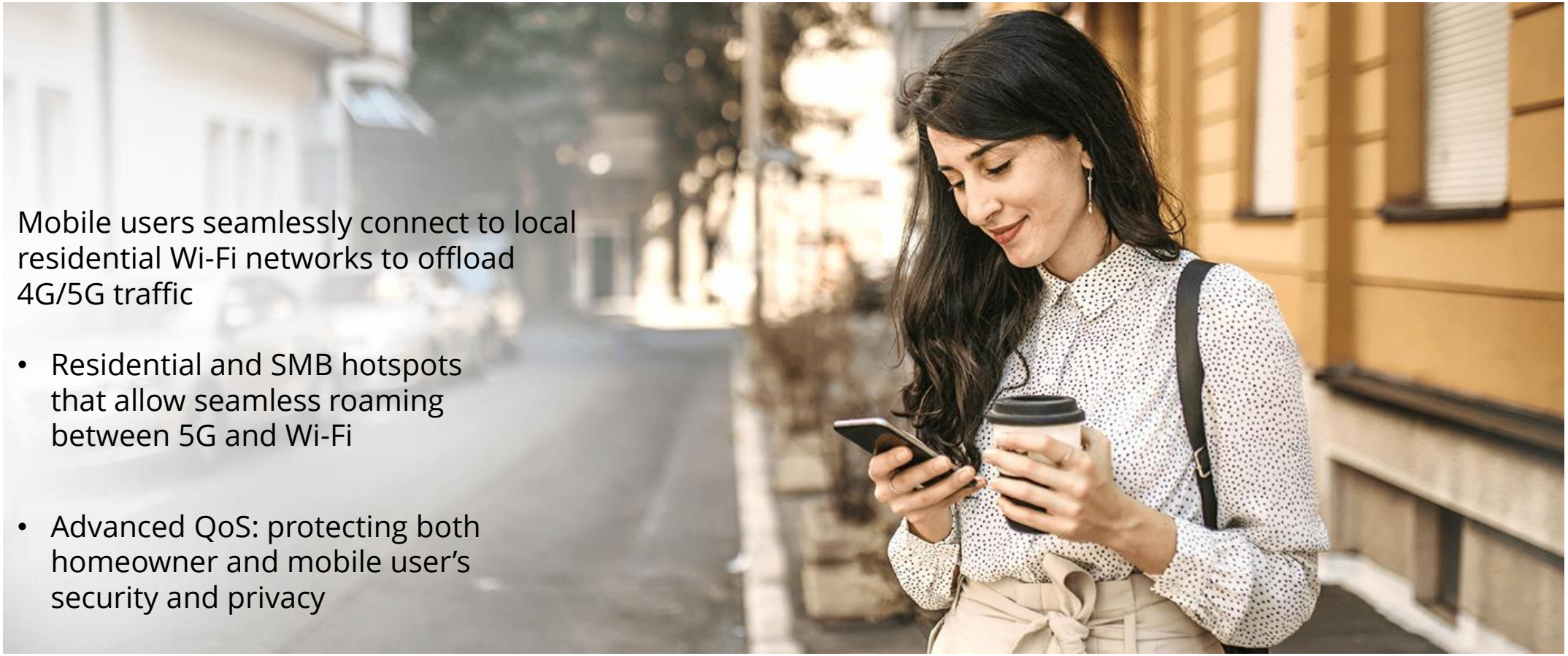
Based on anonymized data from millions of homes in Europe:

75% of homes utilize less than 50% of the airtime at 5GHz



Offload mobile network traffic on home Wi-Fi networks

Optimize network resources with simplified mobile connection to under-utilized home Wi-Fi hotspots



Mobile users seamlessly connect to local residential Wi-Fi networks to offload 4G/5G traffic

- Residential and SMB hotspots that allow seamless roaming between 5G and Wi-Fi
- Advanced QoS: protecting both homeowner and mobile user's security and privacy

Bring your (work) Wi-Fi home

Enjoy enterprise grade security and mimic the same settings as you have on your office network

Provide secure and managed home networks for working from home use cases

Extension of office network to the home and provide enterprise grade security

Advanced QoS and latency management for providing better business applications and user experience

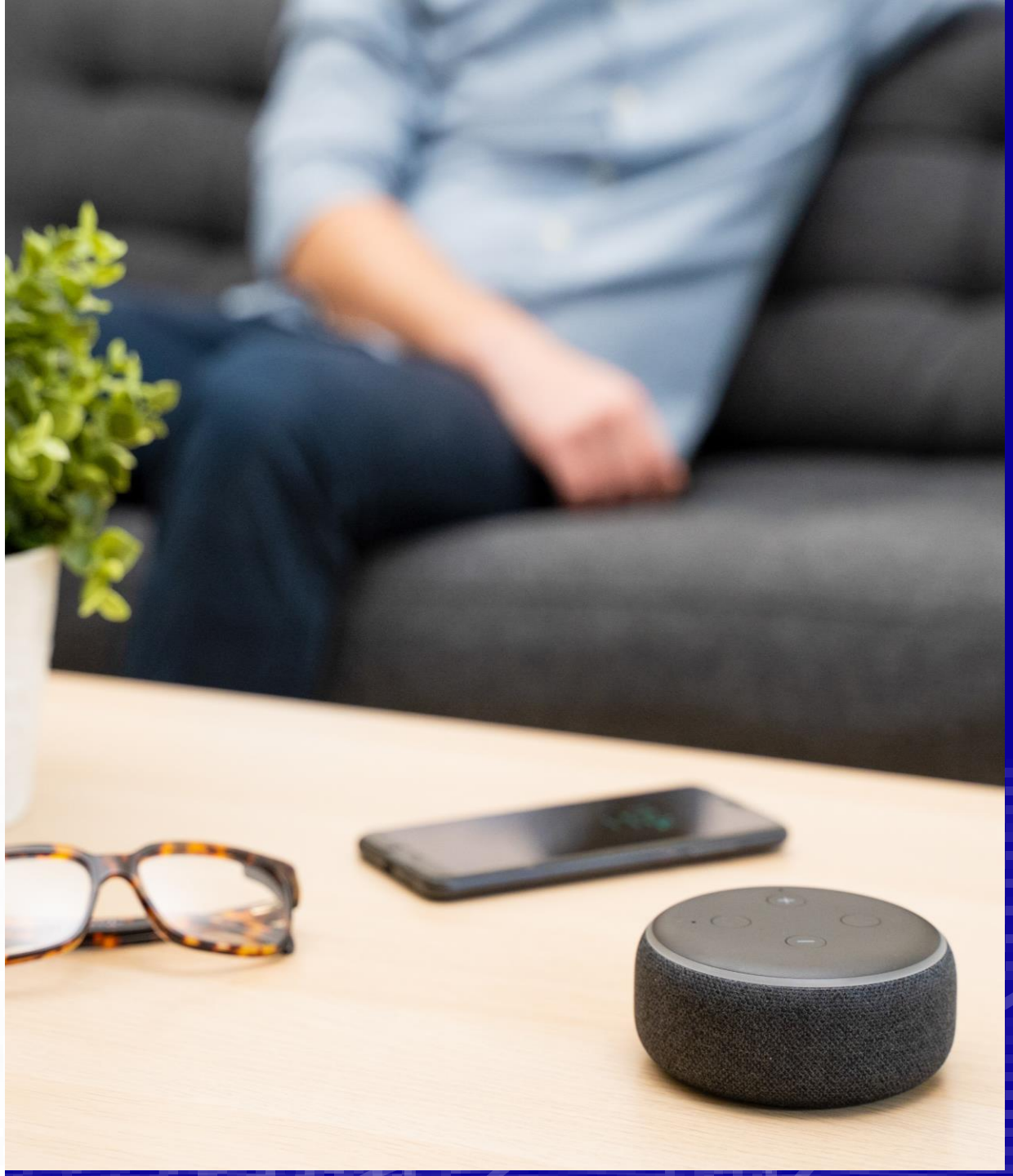
Use Wi-Fi for smarter home IoT

Optimize IoT devices in the home with better analytics and diagnostics

Leverage the standards-based interface (e.g. Matter) to enable IoT connectivity over Wi-Fi, BT, Zigbee)

Develop data analytics, diagnostics and optimization specifically for IoT networks?

Enable smooth day-to-day operations with minimum intervention



More energy efficient homes

Gain insights on energy consumption through home networks

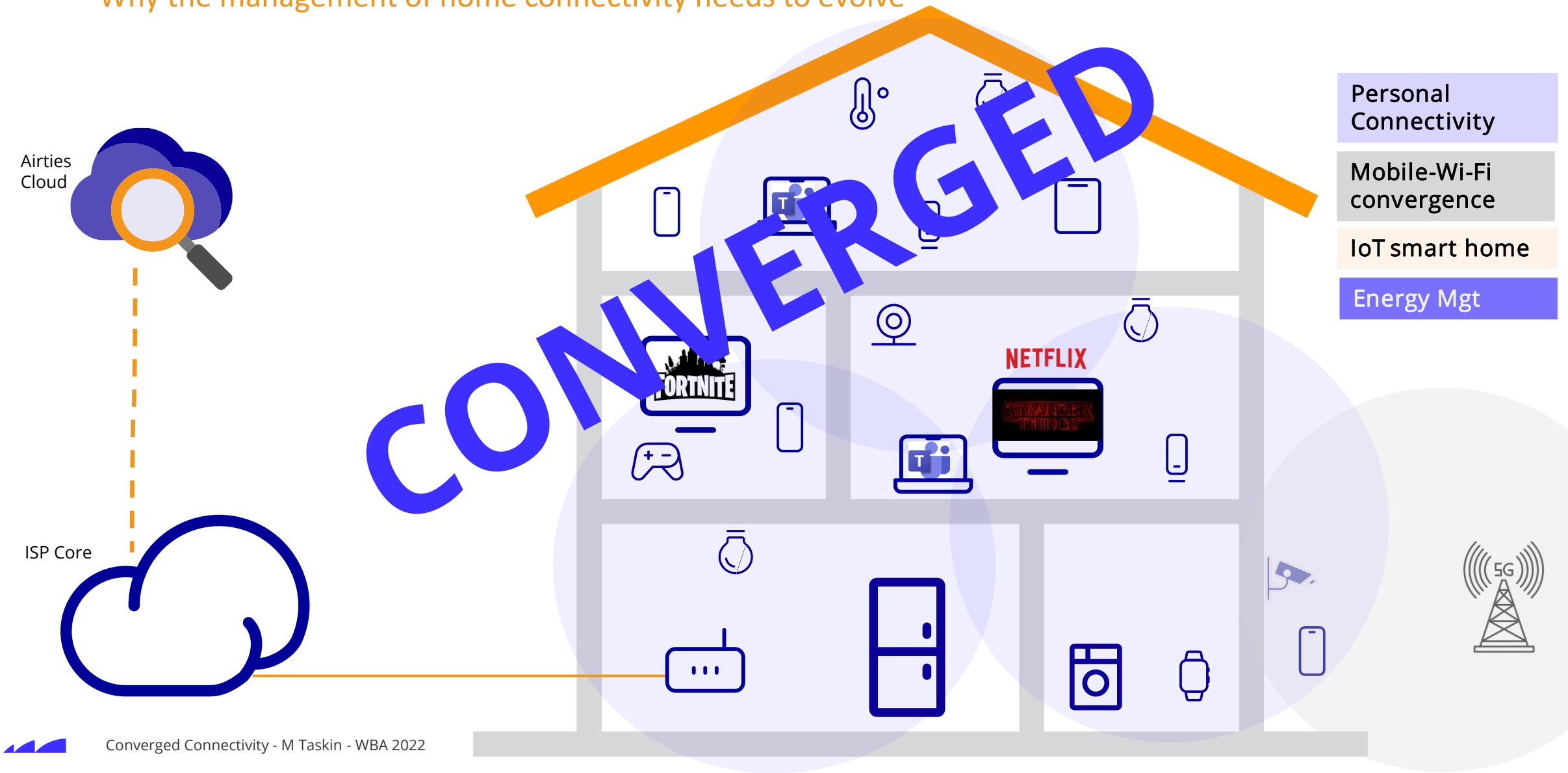
Most energy consuming devices are becoming connected

Wi-Fi is the predominant connectivity means

Service providers can manage energy management networks and provide better applications to home users

Convergence Wi-Fi – critical for success

Why the management of home connectivity needs to evolve



THANK YOU

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

WGC EMEA

WI-FI REVOLUTION:
DRIVING DIGITAL GROWTH

COFFEE & NETWORKING
BE BACK IN 30 MINUTES AT
3.25 PM CET

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

REZA JAFARI

CHAIRMAN & CEO, E-DEVELOPMENT INTERNATIONAL AND WBA BOARD ADVISOR

MODERATOR

WIRELESS BROADBAND ALLIANCE

Time	Presentation
3:25 PM (CET)	**Wireless @ Home: Voice of the Customer** Dr. Raghuram Rangarajan, Engineering Leader, Amazon
3:45 PM (CET)	**Panel Discussion: Wi-Fi Roaming: Improving the User Experience and Enabling New Business Models** Chris Bruce, Chairman NED and Wi-Fi Strategy Consultant Dr. Angelos Mavridis, Senior Wi-Fi Roaming Manager, Deutsche Telekom Bart Brinckman, Distinguished Engineer, Cisco. Cedric Gonin, VP Global Business Support, Orange
4:15 PM (CET)	**Next Generation Private Network Journey with Wi-Fi & 5G** Chris Elliott, EMEA Channel Director, CommScope
4:35 PM (CET)	**Panel Discussion: Identifying Business Opportunities and Challenges in Connected Cities** Reza Jafari, Chairman & CEO, e-Development International Thomas Locke, Chief Technology Officer, GlobalReach Technology Khalid Aziz, Head of Ecosystems & Partnerships, Signify David Wilkins, Head of Digital Place, Westminster City Council
5:05 PM (CET)	**WBA INDUSTRY AWARDS**
6:00 PM (CET)	**WBA NETWORKING DRINKS RECEPTION (90 minutes)**
	DAY 1 CLOSE

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WIRELESS BROADBAND ALLIANCE

WGC EMEA Speakers

Chris Bruce
TO UPDATE

Dr. Raghuram Rangarajan
Amazon

Dr. Angelos Mavridis
Deutsche Telekom

Bart Brinckman
Cisco

Cedric Gonin
Orange

Chris Elliott
CommScope

Thomas Locke
GlobalReach Technology

Khalid Aziz
Signify

David Wilkins
Westminster City Council

Reza Jafari
e-Development International

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WIRELESS BROADBAND ALLIANCE

DR. RAGHURAM RANGARAJAN

ENGINEERING LEADER, AMAZON

WIRELESS @ HOME: VOICE OF THE CUSTOMER

WIRELESS BROADBAND ALLIANCE

Wireless@Home: Voice of the Customer

RAGHURAM RANGARAJAN

My Home


eero
68
Canon
06
41
13,238
81
2,304
THU 8
fire tv
eero
6:46
76°
Popular Questions
Alexa, when is the next full moon?

Customer Tenets

Wi-Fi Evolution

1991: Project Approval

1999: Wi-Fi 1
- 11Mbps

2003: Wi-Fi 2,3
- 54Mbps

2007: Wi-Fi 4
- ~600Mbps

2013: Wi-Fi 5
- ~7Gbps

2019: Wi-Fi 6,
- ~9.6Gbps

2020: Wi-Fi 6E,
- 6GHz band

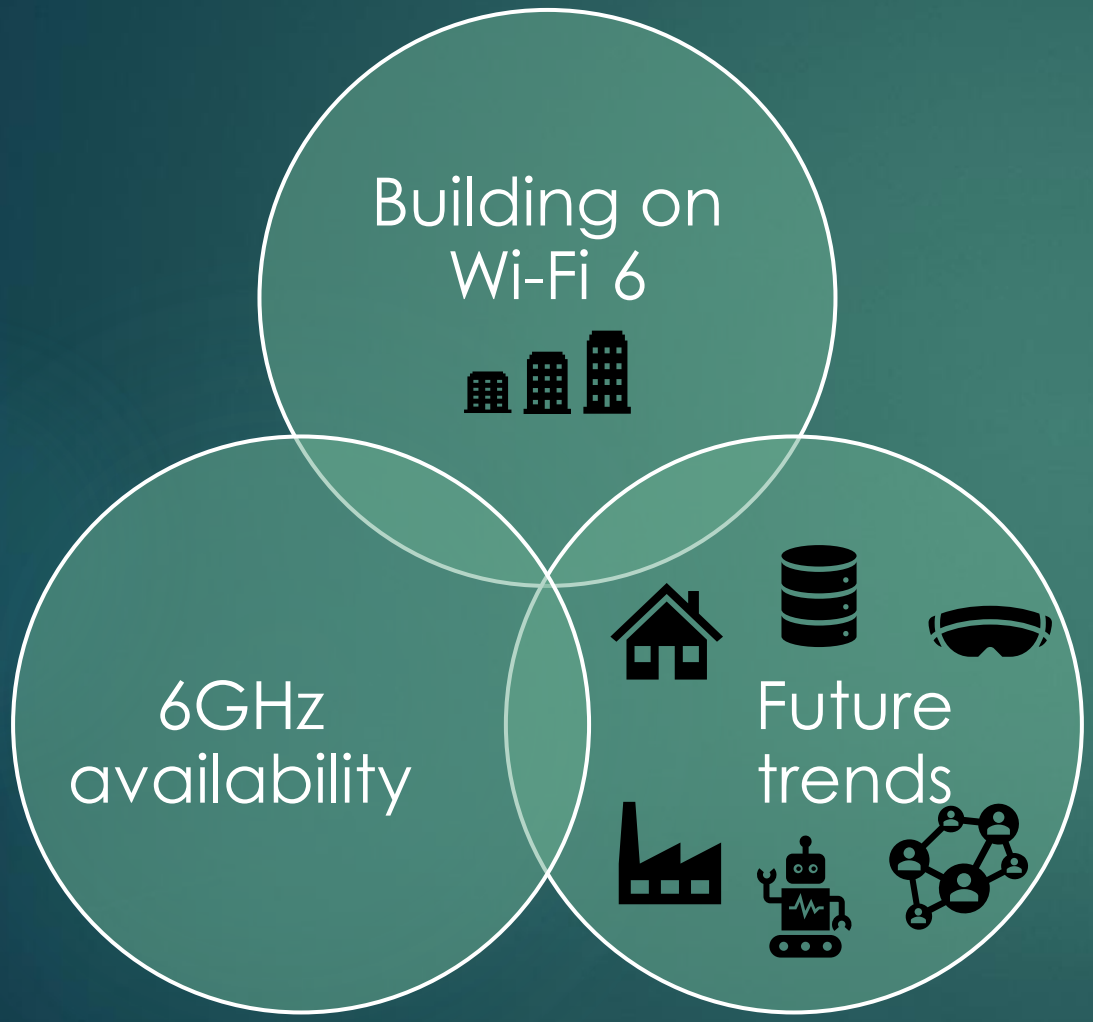
Higher modulation

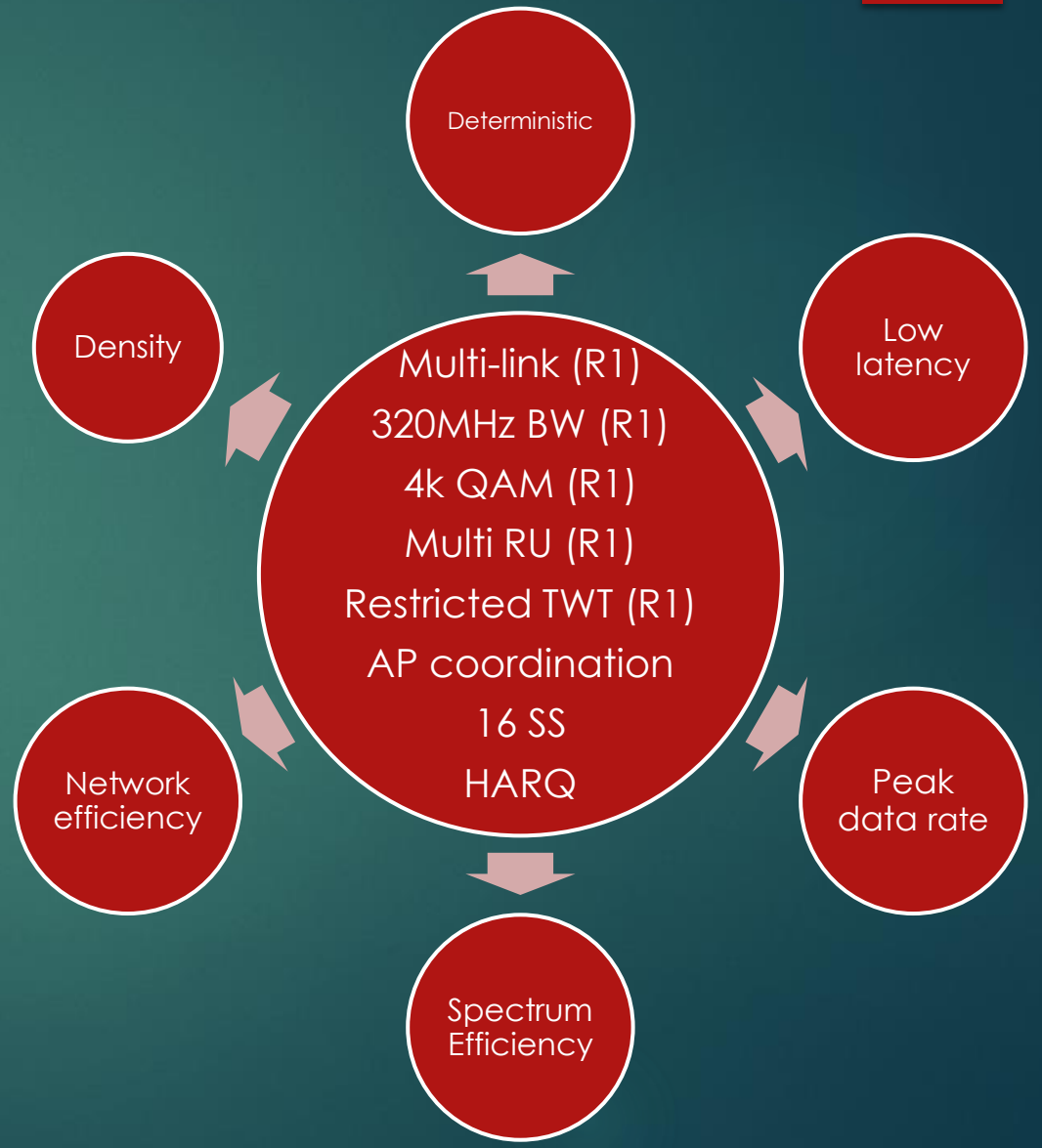
MU MIMO

DL, UL OFDMA, BSS color

Target wake time (TWT)

Wi-Fi 7 Recipe & Trends





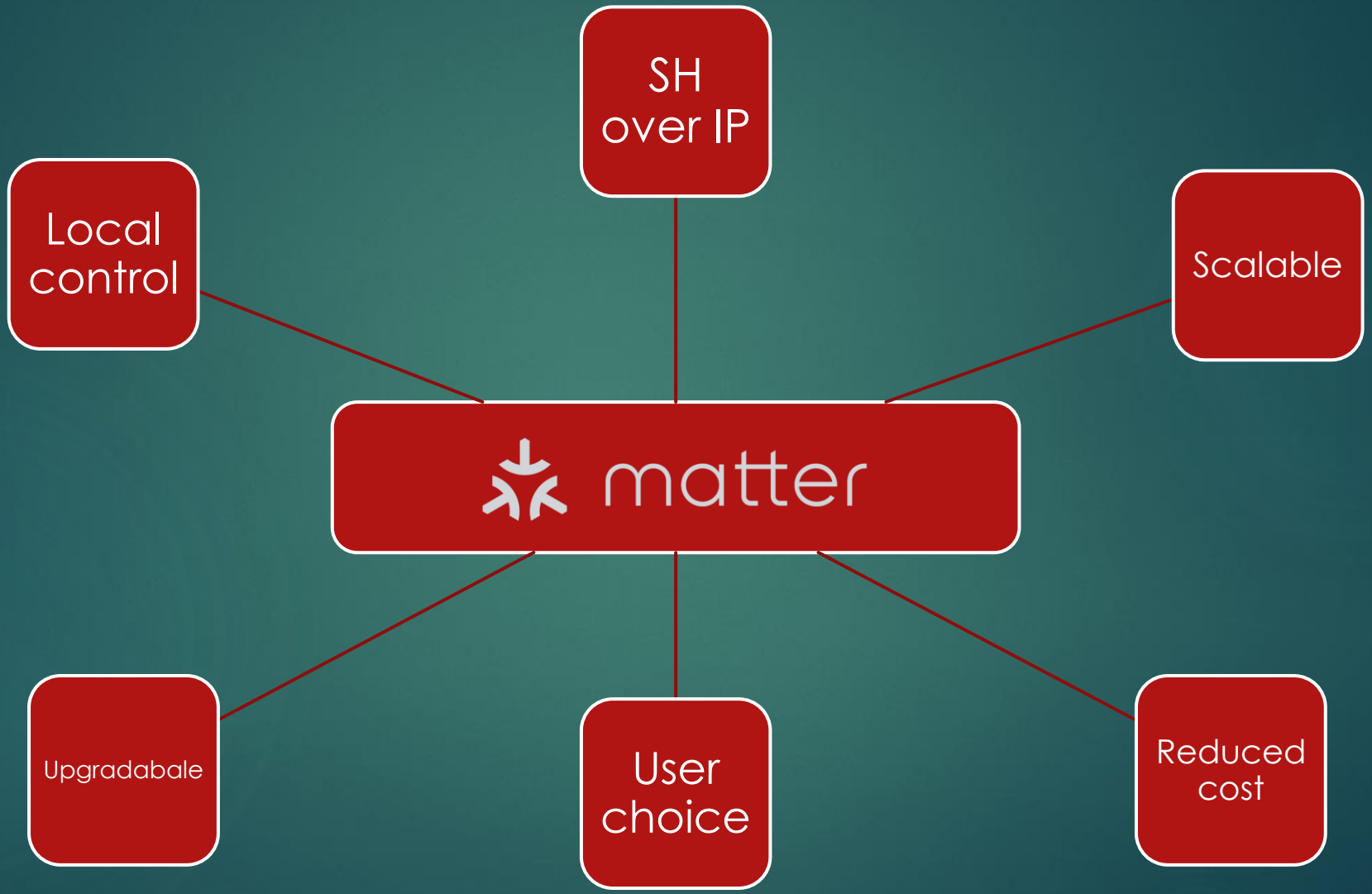
Audio experiences

LC3 codec

Isochronous channels

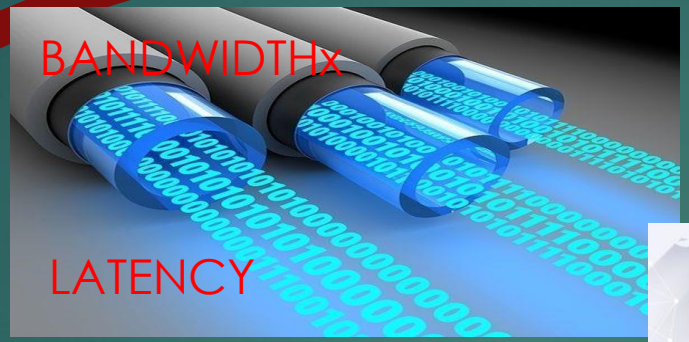
New LE audio profiles

Smart Home Matters



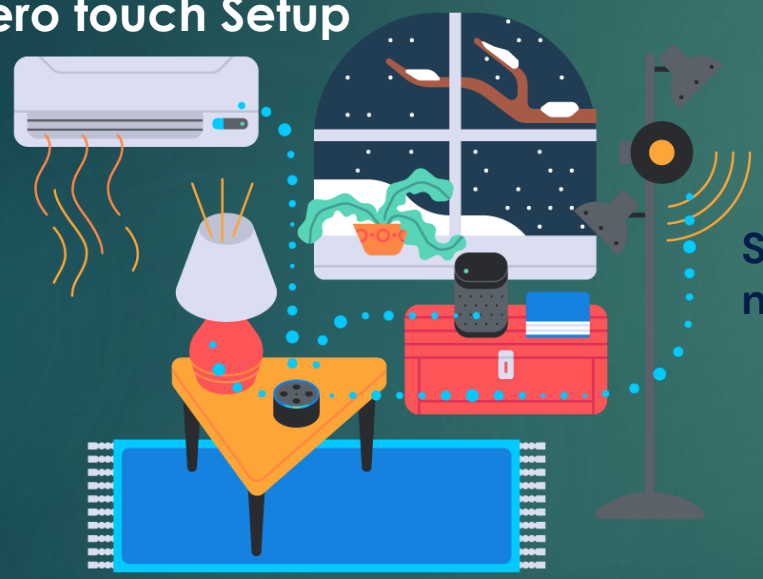
ABI Research data

Opportunities for Innovation



Customer obsessed

Zero touch Setup

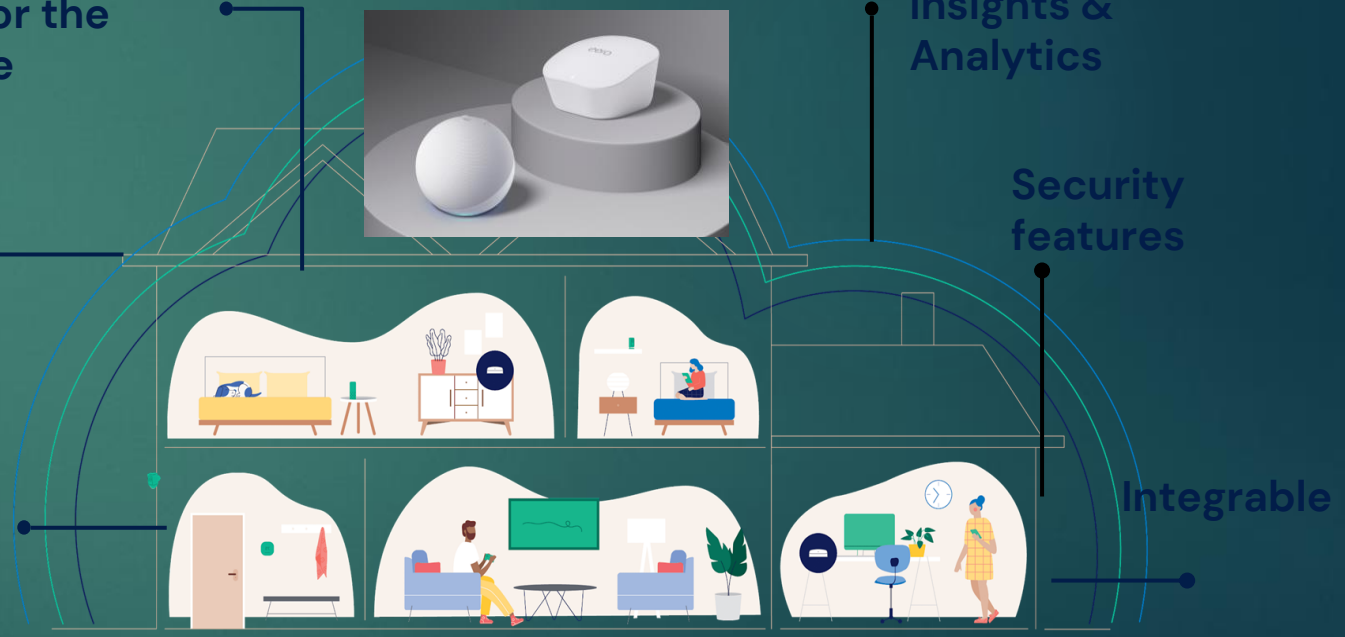


Coverage, Scalable, Just works

Coverage for the whole home

Self-healing networks

Scalable



Insights & Analytics

Security features

Integrable

Customer obsessed

Ambient intelligent home experience

Thank you

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WIRELESS BROADBAND ALLIANCE

CHRIS BRUCE

CHAIRMAN NED AND WI-FI STRATEGY CONSULTANT

PANEL MODERATOR

WIRELESS BROADBAND ALLIANCE

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

Panel Discussion: Wi-Fi and Its Role in the Future Smart Home

CHRIS BRUCE

CHAIRMAN NED AND
WI-FI STRATEGY CONSULTANT

DR. ANGELOS MAVRIDIS

SENIOR WI-FI ROAMING MANAGER,
DEUTSCHE TELEKOM

BART BRINCKMAN

DISTINGUISHED ENGINEER,
CISCO

CEDRIC GONIN

VP GLOBAL BUSINESS
SUPPORT,
ORANGE

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

CHRIS ELLIOTT

EMEA CHANNEL DIRECTOR, COMMSCOPE

NEXT GENERATION PRIVATE NETWORK JOURNEY WITH WI-FI

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RUCKUS
COMMSCOPE

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Next Generation Private Network Journey with Wi-Fi & 5G

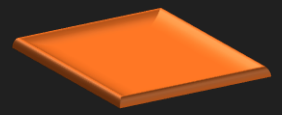
19 October 2022 | 4:30 PM CET

Chris Elliott

EMEA Channel Director, Ruckus Networks

RUCKUS®
COMMSCOPE

Converged Wireless Networks: 5G + Wi-Fi + IoT protocols

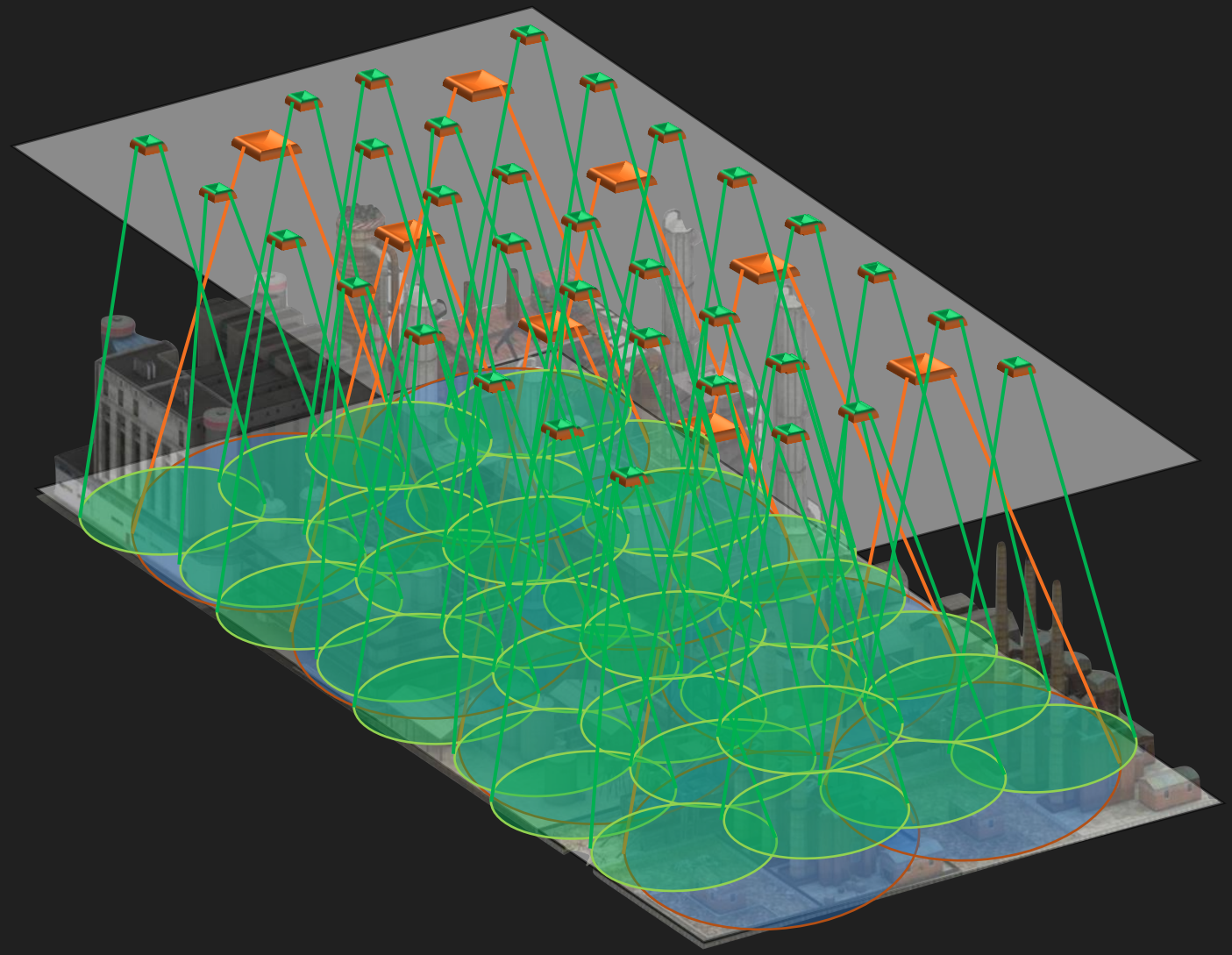


5G

- Fundamentally a WAN protocol
- High density and low latency
- Highly secure and reliable

Wi-Fi + low-power IoT radios

- Fundamentally a LAN protocol
- Extremely high Wi-Fi data rates
- Higher spectral efficiency



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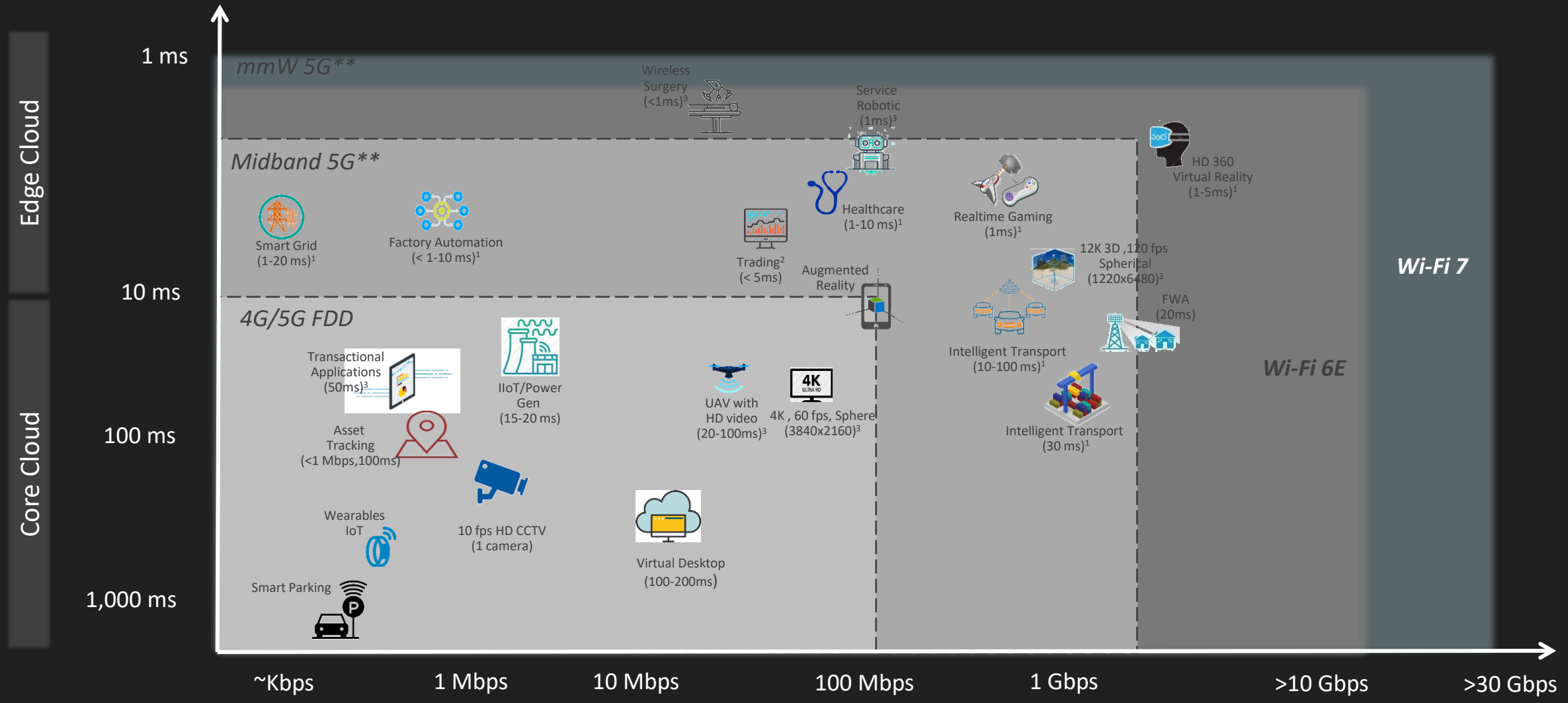
There's time and place for everything



* *Exact designation depends on specific applications.*
** *Lower latency values only achievable in Stand-Alone mode.*

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Right tool for the right job

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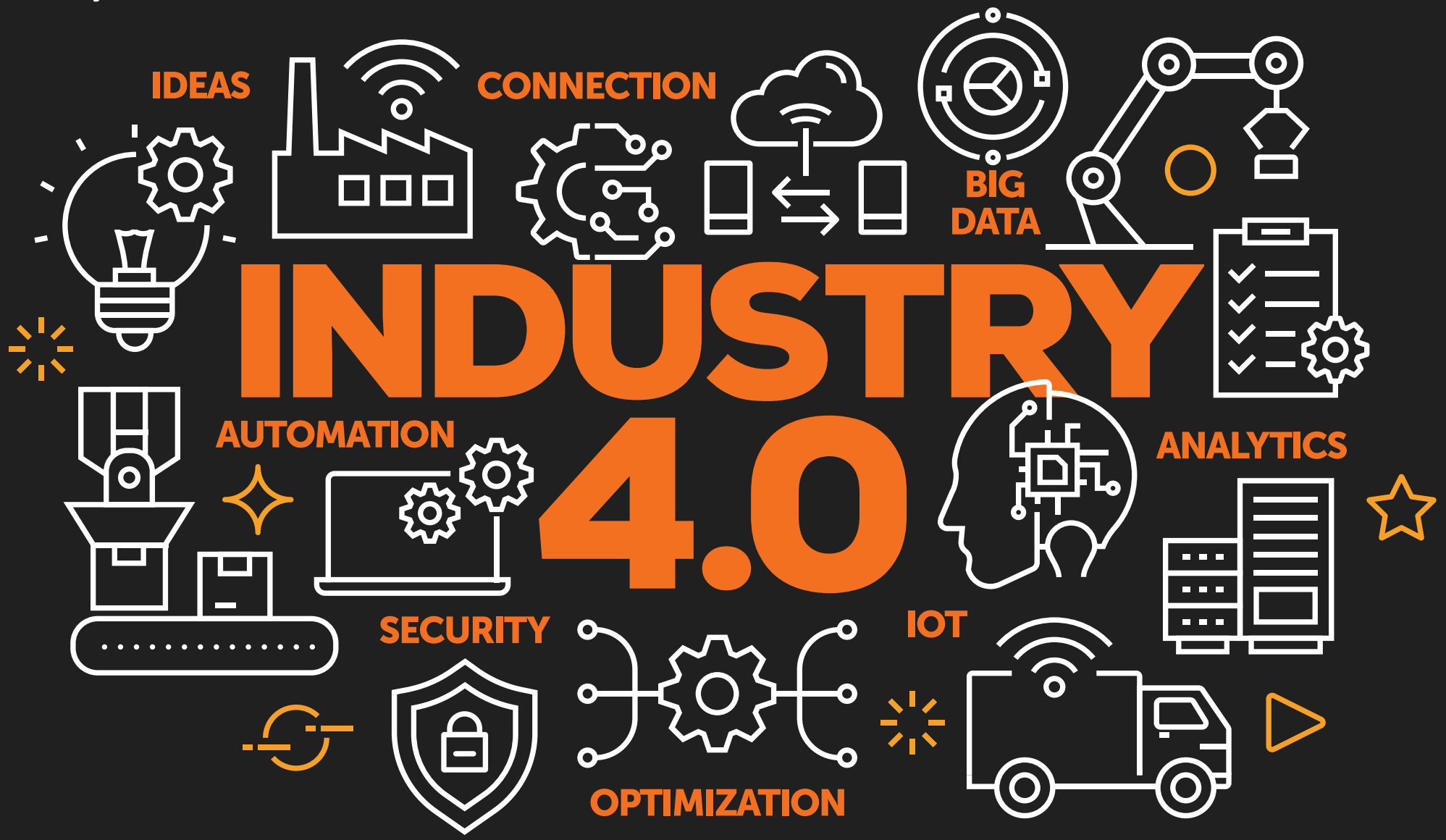
Industry 4.0



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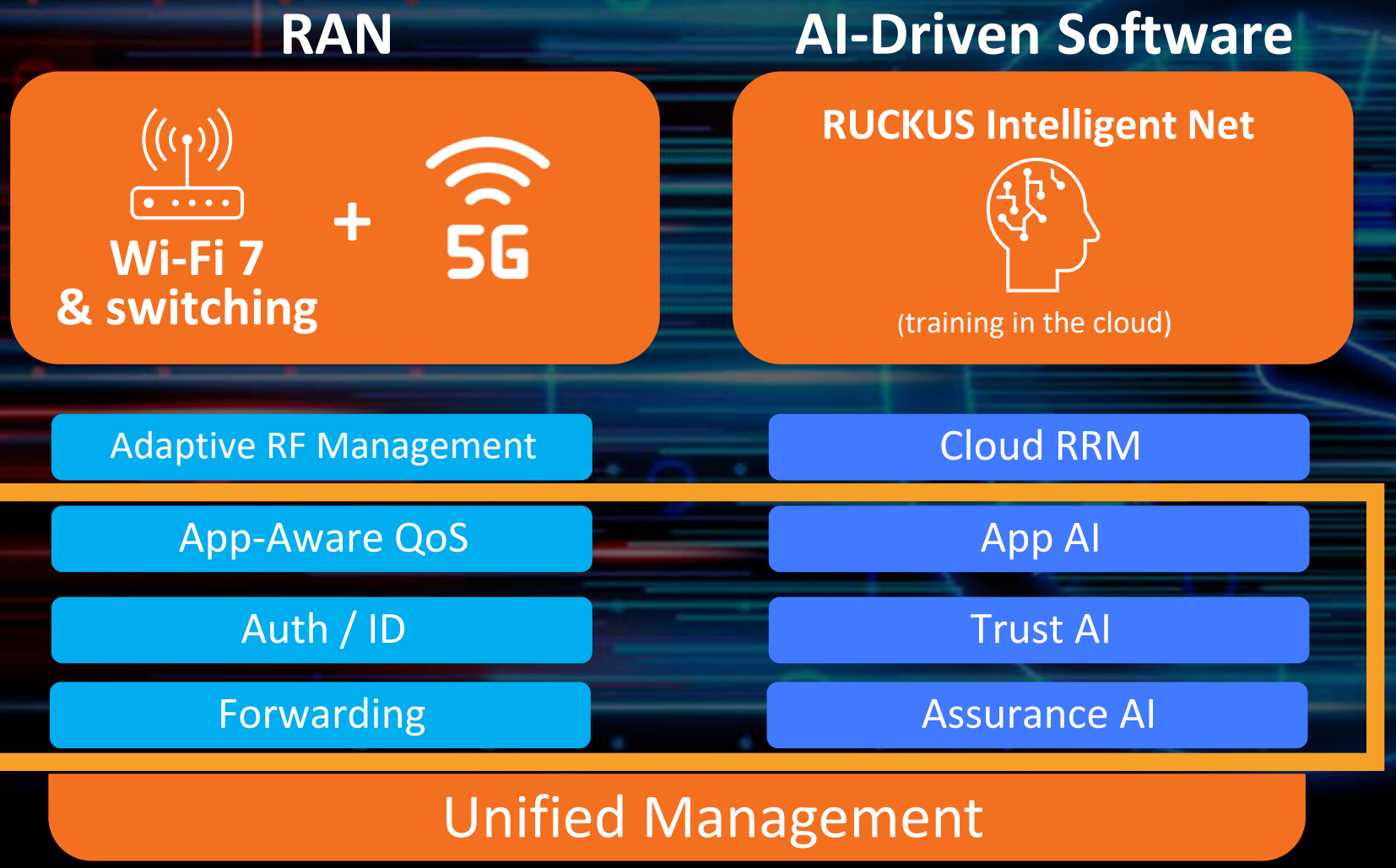
There’s a need for a unified platform



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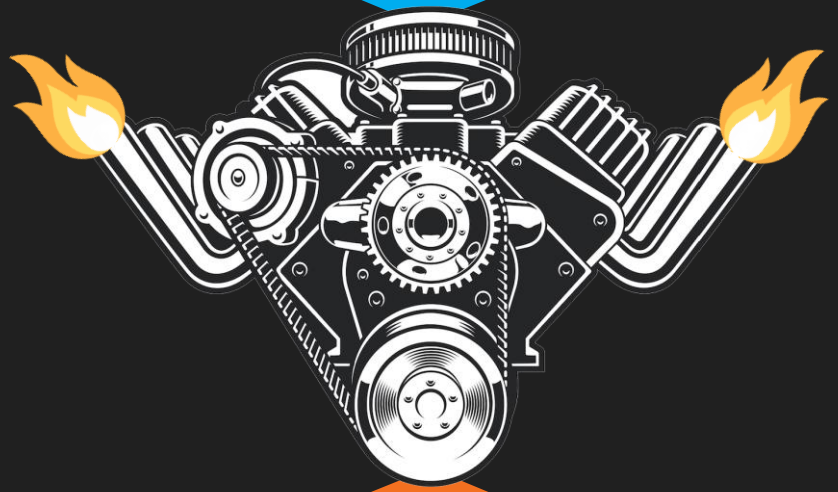
Purpose Driven Converged Extensible Platform

Wi-Fi | Wired | 5G / CBRS | IoT protocols | SD-WAN | Plugin New Services

Extensible Platform



Policy, management, control, data routing

Policy-FLEX (A.I. driven policy control & security) | Apply policies to different RANs | API Driven | Support 3rd Party RANs | Simplistic GUI driven design; guard rails available | RBAC for RANs | Zero Trust Ready

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PURPOSE-DRIVEN
ENTERPRISE NETWORKS

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

Panel Discussion: Wi-Fi and Its Role in the Future Smart Home

THOMAS LOCKE

CHIEF TECHNOLOGY OFFICER,
GLOBALREACH TECHNOLOGY

KHALID AZIZ

HEAD OF ECOSYSTEM AND
PARTNERSHIPS, SIGNIFY

DAVID WILKINS

HEAD OF DIGITAL PLACE,
WESTMINSTER CITY COUNCIL

REZA JAFARI

CHAIRMAN & CEO,
E-DEVELOPMENT
INTERNATIONAL

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WIRELESS BROADBAND ALLIANCE

TIAGO RODRIGUES

CEO, WIRELESS BROADBAND ALLIANCE

WBA INDUSTRY AWARDS

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Welcome to the 10th WBA INDUSTRY AWARDS

WBA INDUSTRY AWARDS

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BEST WI-FI NETWORK OPERATOR

WBA INDUSTRY AWARDS

WINNER!

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BEST WI-FI NETWORK OPERATOR

KT Corporation

KT's Wi-fi 6E for Evervwhere

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BEST WI-FI NETWORK TECHNOLOGY

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WINNER!

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BEST WI-FI NETWORK TECHNOLOGY

Broadcom, Cisco & Meta

Open AFC makes the mass-market adoption of Standard Power 6 GHz Wi-Fi possible

BROADCOM® CISCO Meta

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BEST IN-HOME WI-FI NETWORK

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BEST IN-HOME WI-FI NETWORK

Ambeent & Millenicom

Ambeent is helping Millenicom identify home blind spots and upsell customers on mesh systems.

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BEST ENTERPRISE WI-FI NETWORK

WBA INDUSTRY AWARDS

WINNERS!

WIRELESS BROADBAND ALLIANCE

BEST ENTERPRISE WI-FI NETWORK

Cisco & Clair Global

Cisco and Clair Global unleash OpenRoaming for 45000+ streaming fans at Bottlerock, Napa Valley

HUAWEI

Huawei Helps Shenzhen Metro in Becoming China's First Highest-level Autonomous Urban Rail Line.

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BEST WI-FI FOR SOCIAL IMPACT

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BEST WI-FI FOR SOCIAL IMPACT

Cognitive Systems

Caregiver Aware Improves lives and Healthcare with Motion Intelligence

COGNITIVE SYSTEMS CORP

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BEST WI-FI INNOVATION

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BEST WI-FI INNOVATION

TIP OpenWiFi

TIP OpenWiFi Opens the Door to Wi-Fi Innovation and Democratization

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Intel

Pioneering the Wireless Technologies Connecting Everything & Everyone, Everywhere

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CONGRATULATIONS TO ALL OUR WINNERS!

Thankyou and see you next year

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signify

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WGC EMEA

WI-FI REVOLUTION:
DRIVING DIGITAL GROWTH

WBA NETWORKING DRINKS RECEPTION

6:00 P.M.

Speakers and VIP Lounge Hall 8

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WGC EMEA

WI-FI REVOLUTION:
DRIVING DIGITAL GROWTH

End of Day 1

We'll see you here tomorrow at 9:00am

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NETWORK X

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CEO WELCOME ADDRESS

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