



WBA CTO Innovation Forum

Wi-Fi 7 & 5G Convergence

Boingo Wireless

Dr. Derek Peterson, Chief Technology Officer

October 5, 2022



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



**Chicago O'Hare
International Airport**



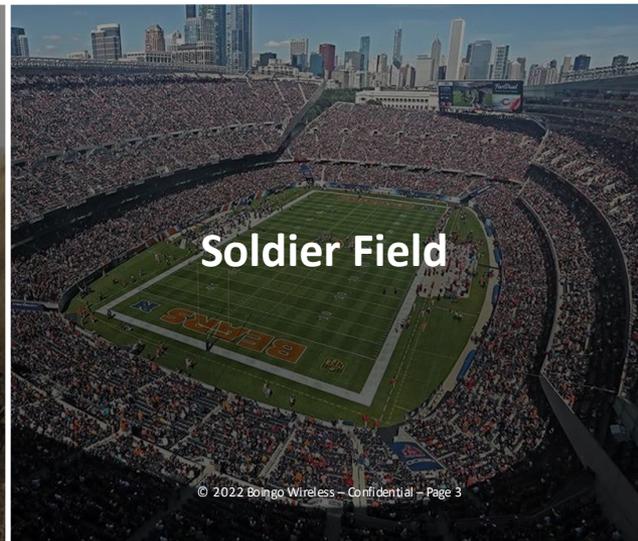
World Trade Center



Rockefeller Center



**Camp Pendleton,
U.S. Marine Corps**



Soldier Field

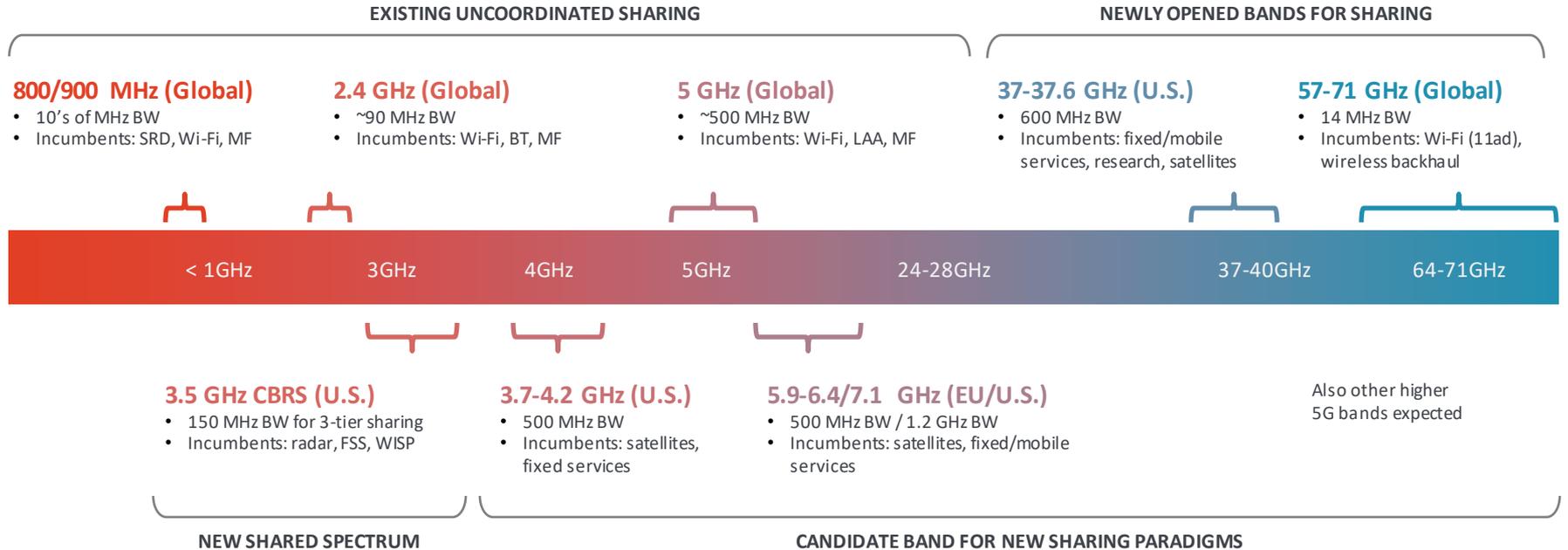


**Las Vegas Monorail
Convention Center
Station**



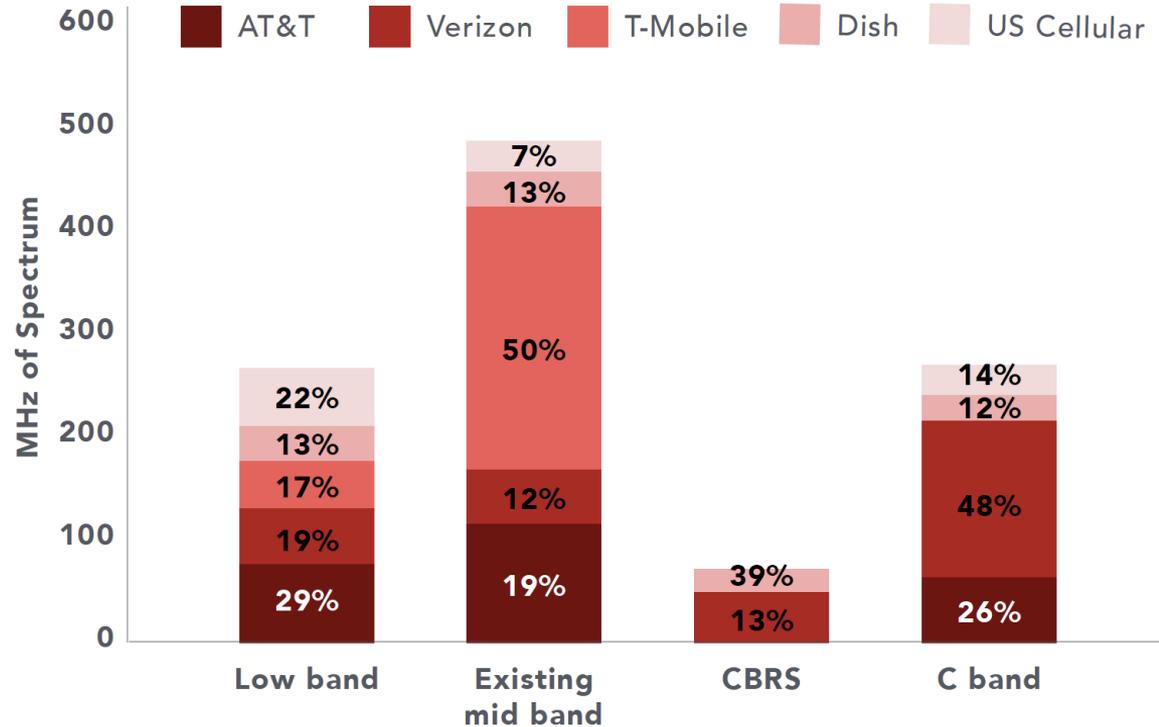
Spectrum Today

Open Spectrum



5G Cellular Spectrum

Boingo works with all carriers to deploy 5G networks





Wi-Fi
6/6E and 7

Wi-Fi 6/6E Delivers KPI Improvements

ENHANCED

Efficiency

Speed

Capacity

Performance



DENSE/DEMANDING
ENVIROMENTS



SUPPORT GROWING MOBILE
TRAFFIC



ACCOMMODATE
FUTURE USE CASES



CONNECT MORE
DEVICES



QUICKER RESPONSE TIMES

WBA is championing a
global Wi-Fi program
to ensure industry
needs are addressed

Road to Wi-Fi 7

Wi-Fi 7 / 802.11be Specifications

- 7th generation
- 30Gbps – 46Gps Throughput
- 4096 QAM
- 320MHz channels
- Multi-AP operation
- Multi-link operation
- 16 Spatial Streams
- Multi-RU
- WPA4 Security
- Extended Spectrum in 6GHz
- Spectrum sharing with Incumbents

Innovative Use Cases

- Wi-Fi Sensing
- IoT segment with smaller channels
- 3D content
- XR (AR/VR) type of applications
- Location Based Services
- Convergence and Co-Integration with 5G / CBRS etc.
- Rural
- Multi AP for Residential
- SmartHome
- Connected Vehicles

Infrastructure Digitization

- NFV/SDN
- RAN Virtualization with Software Defined Radios
- Cloud based Controllers
- Open standards (OpenWiFi)

Quality of Service

- WMM
- OCE and MBO
- Wi-Fi Vantage™
- Similar quality to QCI/5QI
- Deterministic Transmission
- Deterministic Low Latency
- Higher Spectral efficiency (~80%)
- Traffic Classification advancements

Market Segments

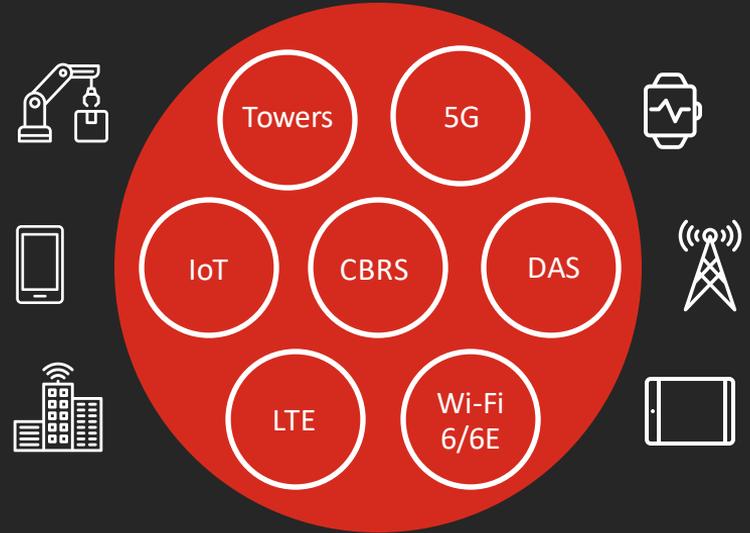
- Airports
- Healthcare
- Smart Cities
- Transit Hubs
- Manufacturing
- Office Buildings
- Industrial IoT
- Public Safety
- Outdoor Spaces
- MDU
- Hospitality
- Automotive
- Stadiums
- Concert Venues

Network Convergence

Siloed



Converged

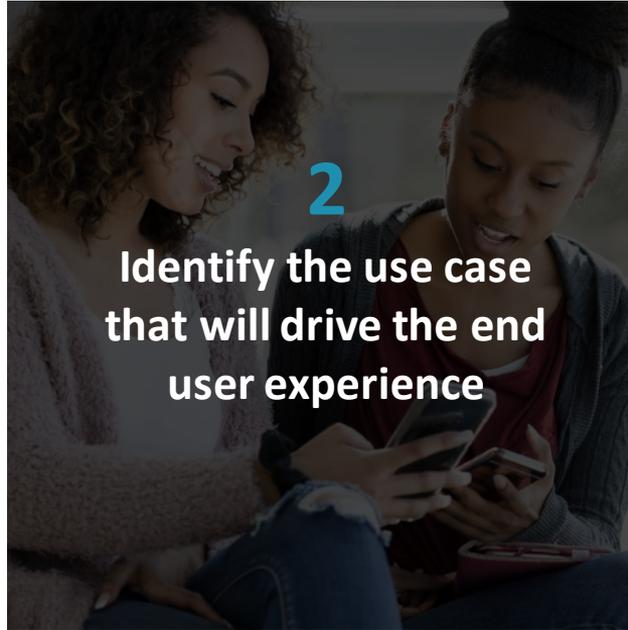
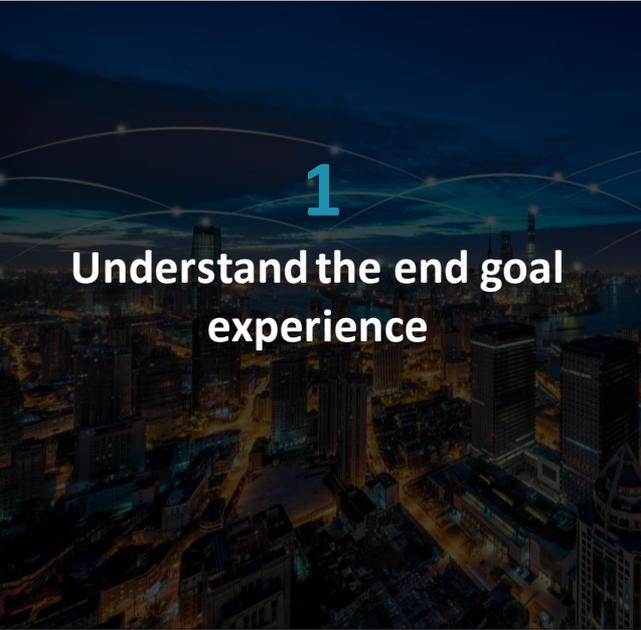




Use Cases
Lead the Way

Focus on the Use Case

The end user experience and connected use case must lead the way when designing and building network solutions.





Connecting Petco Park Gallagher Square

A conversation with Ray Chen, San Diego Padres Vice
President of Information Technology

