



# Industry Success Stories

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How CBRS is Driving Wireless Innovation for Enterprises  
and Service Providers

April 2024

CBRS is gaining momentum in the US. The innovative shared spectrum methodology is being used more and more in a variety of industries, including education, manufacturing, and utilities. The number of Citizens Broadband Radio Service Devices (CBSDs) has skyrocketed from zero in early 2020 to approximately **370,000** by the end of 2023.

CBRS offers enterprises and service providers valuable mid-band spectrum at little or no cost, allowing users to ramp up with minimal upfront expenses.

CBRS has come to be used in a variety of formats, including neutral hosts, public and private networks, and fixed wireless access. With CBRS, enterprises and Wireless Internet Service Providers (WISPs) can accomplish things they were not able to do previously, either technologically or cost-effectively.

This eBook highlights how some industry verticals are benefitting from CBRS-based cellular network deployments.



**110+**

members of the OnGo Alliance (MSPs, SIs, WISPs, Vendors, Telcos)



**370K+**

CBRS Small Cells deployed in the US



**>770**

devices authorized by FCC to operate in CBRS-spectrum



**> 5,000**

Professional Installers are CBRS Certified



**> 1,000**

different operators using GAA license



**5G**

5G-NR Ready





Industry 4.0 is changing the way companies manufacture their products. Factories are using new technologies to make their operations run more efficiently. Machine learning, AI, video analytics, IoT, cloud, and near-edge computing are all helping manufacturers use digital automation to bring their businesses to new heights.

Factories have found an impressive array of uses with CBRS-based wireless broadband networks, including HD-video for quality assurance, collaborative robots, AGVs, PTx, IoT, smart glasses, and the use of real-time data analytics to reduce downtime and help operations run more smoothly.



**John Deere Uses CBRS for Smart Factories**

“By bringing in a cellular communication network, we can maintain reliability but add mobility. We can be far more dynamic in the way that we move product through the factory.”

*Kiel Ronning, Industry 4.0 lead at John Deere*

John Deere has designed 700 tractor models since 1837

**CBRS Network Use Cases**

- ☑ Autonomous mobile robots
- ☑ Automated guided vehicles
- ☑ Connected robotic welding



**CPChem Deploys 8 CBRS-based LTE Networks**

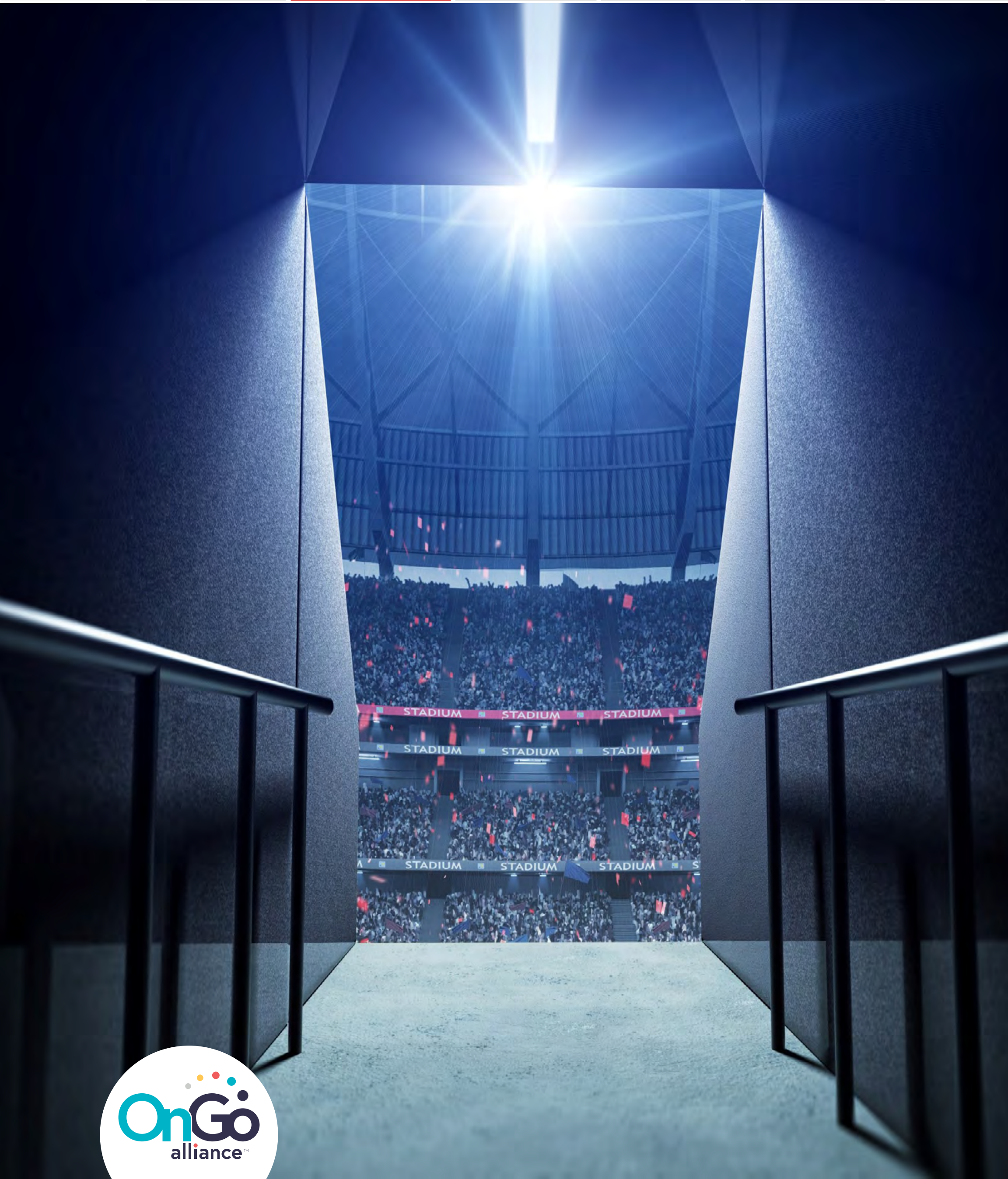
“We’ve kind of cracked the code in terms of working in some of the most hazardous environments in the world.”

*Paul Savill, Kyndryl's global Practice Lead for Networking and Edge Compute.*

An estimated 3,000 mobile devices will be used for mission-critical business applications.

**CBRS Network Use Cases**

- ☑ Covers indoor and outdoor environments
- ☑ Worker-connected phones and tablets



Many major sports and entertainment venues are deploying CBRS-based mobile networks to improve connectivity and provide enhanced digital experiences for participants and fans attending games and events. Private mobile networks allow venues to have greater control over network traffic and provide dedicated bandwidth allocated specifically for that facility. This helps ensure reliable connectivity even when attendance is high, keeping fans connected for streaming video, checking stats, ordering food, and posting to social media. The localized nature of private networks means sports and entertainment venues can customize the mobile infrastructure to their specific needs rather than rely on public carrier networks designed for general consumer usage.





**Cowtown Coliseum Deploys Hybrid Network for Rodeos, Concerts, and Sporting Events**

“With thousands of fans flocking to the venue for each event, it’s critical to have a wireless connectivity backbone that provides an unrivaled and immersive connected experience.” This fuels our ability to enhance events for the record-setting millions of western sports and live entertainment fans who visit us annually from around the world.”

**Jason Oberlander**, chief commercial officer of ASM Global [venue operator].

The Cowtown Coliseum was the first indoor arena to host rodeos in the country.



**NFL Uses CBRS for Team Communications**

“In an NFL game, every moment matters – seconds matter – as the margin between winning and losing is miniscule. The backbone of world-class play on-the-field is communication.”

**Sowmyanarayan Sampath** Verizon Business CEO

**CBRS Network Use Cases**

- Point of Sales
- Mobile ticketing
- Voice communications

**CBRS Network Use Cases**

- Critical time-sensitive voice communications during game for NFL coaches to discuss strategy and call plays
- Super Bowl LVII broadcast backstage communications

CBRS will be used at all 30 National Football League stadiums in 24 states.



Airports are deploying private 4G and 5G networks using CBRS to enable advanced communications across their facilities. By building a CBRS-based private network, airports can provide secure, reliable cellular coverage for operations, staff communications, IoT devices, and passenger services. These private networks help airports support mobile check-in, baggage tracking, push-to-talk communications, GPS-based equipment location, video security surveillance, and more.





**Newark Liberty International Airport Uses Private LTE to Enhance Operations**

“Boingo Wireless has deployed a world-class network that fulfills passenger demand for fast, seamless connectivity, while also providing a robust connectivity backbone to support digital airport operations. Newark Terminal A is utilizing a combination of leading wireless technologies to create a tech-forward experience for travelers and airport employees.”

**Robert Galvin**, Chief Technology Officer for the Port Authority of New York and New Jersey

Newark’s revamped Terminal A is scheduled to host over 14 million passengers per year.



**Minneapolis-Saint Paul International Airport Uses CBRs-Based Private Network to Improve Airport Processes**

“We are always looking for ways to leverage technology to provide innovative solutions and improve both operational efficiency and the customer experience.”  
**Eduardo Valencia**, the CIO

*Eduardo Valencia, the CIO of the Metropolitan Airports Commission*

The Minneapolis-St. Paul International Airport serviced over 31 million passengers in 2022.

**CBRS Network Use Cases**

- ☑ Improved coverage & capacity – indoors and outside
- ☑ Digital signage
- ☑ Logistics management

**CBRS Network Use Cases**

- ☑ Infrastructure monitoring
- ☑ Digital signage
- ☑ Airside maintenance tracking
- ☑ Common Use System Equipment
- ☑ Video surveillance
- ☑ Mobile application use





K-12 schools have provided CBRS-based broadband access to students who had challenges attending virtual classes and doing their homework, which has moved increasingly online.

Lowering the 'homework gap', enabling digital signage, providing enhanced learning spaces and neighborhood coverage, and enhancing safety and security are prime use cases for K-12 schools.





**Tukwila, Washington and Federated Wireless Use CBRS to Connect Students**

“Having access to internet-based learning tools from home is a crucial component of this mission. This network empowers us to bridge the digital divide that has unfortunately disadvantaged some of our students for far too long.”

*Concie Pedroza, Tukwila School District Superintendent*

**CBRS Network Use Cases**

- Improved broadband capacity
- School and neighborhood coverage

A grant from the Washington State Department of Commerce helped fund the CBRS-based private network.



**Nacogdoches ISD Use CBRS Network to Help Community**

“Too many families in too many communities are falling behind because they lack access to affordable broadband connectivity. This is an opportunity to try an alternative method that will positively impact our students.”

*NISD Superintendent Dr. Gabriel Trujillo*

**CBRS Network Use Cases**

- Upgraded broadband bandwidth across the network
- Expanded school coverage to include neighborhood homes

Nacogdoches ISD has over 6,500 students spread over six public elementary schools, one middle school, and three high schools.



Universities have found benefits from a CBRS network, expanding coverage with far fewer access points than Wi-Fi over entire campuses as well as in classroom buildings, dorms, athletic centers, and sports arenas. Innovation hubs have been created on campuses to solve industry challenges. CBRS can also be used to track equipment that is often moved from classroom to classroom or from building to building, handle PoS, and enable HD video for security.





**Cal Poly Pursues CBRS-based Campus Innovation Lab**

“Cal Poly continues to lead in the development of a digital campus. We’re driving innovation for smart buildings and smart agriculture by introducing new devices and applications, and now we have a more reliable way to get data from point A to point B. Federated Wireless and AWS are giving us the 5G backbone to make the digital campus a reality.”

***Bill Britton**, Cal Poly’s vice president for information technology services and chief information officer*

Cal Poly’s six colleges offer 150 undergraduate majors and minors and over 50 graduate programs.



**CBRS Accelerates Smart Agriculture at The Ohio State University**

“As our needs evolve, we can expand the network very quickly and inexpensively to pursue new research initiatives that will accelerate the adoption of digital agriculture technologies to improve agricultural productivity and sustainability at farm, regional, national, and global scales.”

***Dr. Scott A. Shearer**, chair of Food, Agricultural and Biological Engineering at The Ohio State University*

OSU has more than 200 academic centers and institutes

**CBRS Network Use Cases**

- Innovation hub
- Neutral host network
- Enhance bandwidth
- Improve connectivity
- Autonomous farming research

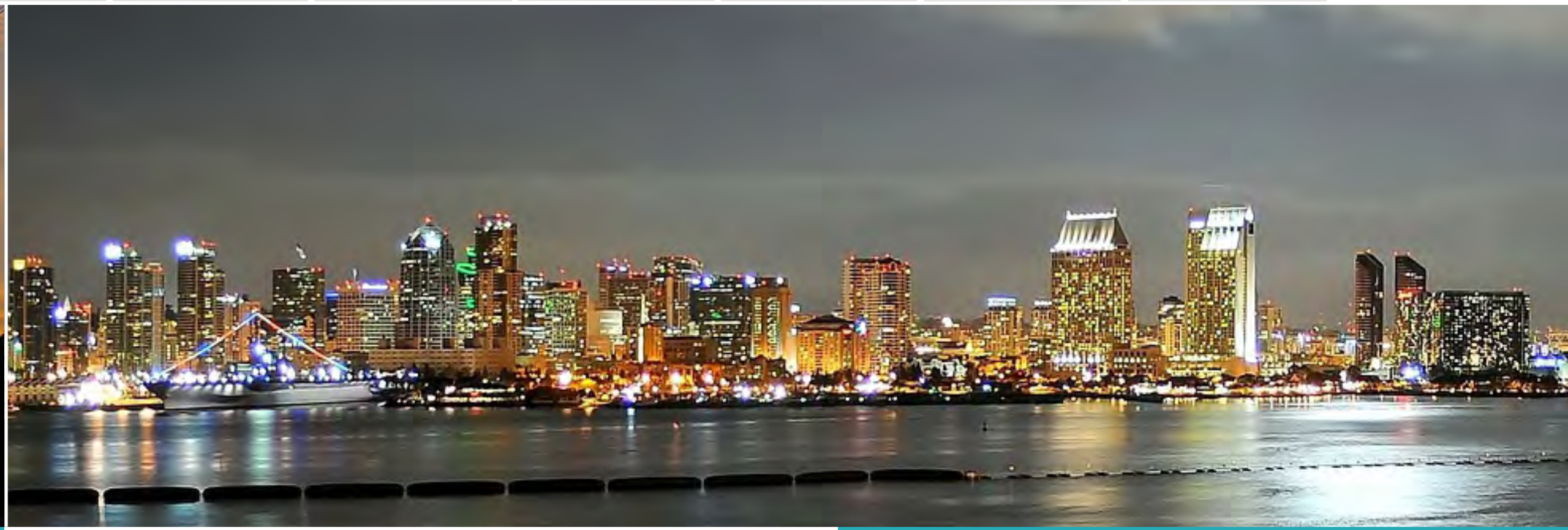
**CBRS Network Use Cases**

- Enable advanced precision agriculture applications



Utilities are using CBRS to securely create their own private networks, which can be used for machine-to-machine communication, advanced metering infrastructure, smart grid applications, and to provide broadband coverage to areas where traditional communications networks are not available. Additionally, CBRS can be used for high-speed, low-latency communications, allowing utilities to reduce operational costs, increase reliability, and improve customer service.





**Illinois Electric Cooperative to connect underserved rural communities with CBRS**

“Illinois Electric Cooperative is taking a major step towards expanding connectivity and broadband services in areas where they are unavailable.”

***Matt Haverfield**, Network Operations Manager for Illinois Electric Cooperative*

Founded in 1936, the IEC provides electricity and Internet service to 14,000 rural accounts across the state.

**CBRS Network Use Cases**

- ☑ Fixed Wireless Access
- ☑ Improved capacity & coverage
- ☑ Better user experience



**San Diego Gas & Electric starts private LTE build with CBRS spectrum**

“Private LTE really does change the landscape for utilities that go down that path. It helps us as a whole, as a country, as a community, to have that reliability and sustainability of our power systems.”

***Bruce Albright**, Burns & McDonnell's company's 5G solutions manager (Contractor supervisor for SDG&E project)*

**CBRS Network Use Cases**

- Planned use cases**
- ☑ Metering
  - ☑ Faulted circuit indication
  - ☑ Mission critical push-to-talk
  - ☑ Supervisory control and data acquisition

SDG&E provides energy to over 3 million customers in Southwestern California over 4,100 square miles.



Hospitality is comprised of a wide swath of people-pleasing industries, including hotels, casinos, cruise ships, and tourism. They are using CBRS to provide guests with reliable, high-speed internet access, improve their internal operations such as point-of-sale systems, security cameras, contactless check-in, room notifications, and for streaming entertainment.





**Seattle's Sound Hotel adds CBRS-based private network**

“The Sound Hotel blends Seattle’s creative bedrock with its innovation boom. We strive to provide our guests with a truly unforgettable experience – and connectivity is central to that.”

*Barry Baxter, General Manager, The Sound Hotel*

The Sound Hotel in Seattle offers 142 rooms in the beautiful Belltown neighborhood in Seattle.

- ☑ Environmental sensors
- ☑ Improved staff communications
- ☑ AI and ML powered video surveillance

**CBRS Network Use Cases**



**Faena Hotel, Miami Beach, deploys CBRS-based private LTE network**

“The Faena Miami Beach is a perennial award-winning luxury resort, known for its VIP clientele and events. Their guests are accustomed to superior service, and we are proud to enable superior mobile connectivity for Faena guests, staff and visitors. We are thrilled to have been chosen to support the Faena’s technology needs with this ground-breaking new CBRS technology.”

*Dan Harkness, CEO of Quantum Wireless*

The Faena Hotel in Miami Beach was the first hotel to receive the Forbes five-star rating the year it opened.

**CBRS Network Use Cases**

- ☑ Neutral Host Network
- ☑ Improved coverage
- ☑ Enhanced wireless capacity





Smart Cities integrate advanced technologies and data-driven solutions to enhance the efficiency, livability, and sustainability of urban areas. Using interconnected IoT devices, sensors, and data analytics, cities are able to optimize the management of city services and resources. Smart cities improve the quality of life for residents by reducing congestion, lowering pollution, and managing resources efficiently.



**Longmont, CO Expands School District CBRN Network to Offer City Services**

“Part of the vision is to get everyone connected. It’s not about profit, it’s about connections.”

*Valerie Dodd, Executive Director of NextLight*

Longmont has approximately 100,000 citizens and is located roughly 10 miles from Boulder

**CBRN Network Use Cases**

- ☑ Improved coverage & capacity
- ☑ Availability for school children throughout city
- ☑ Video surveillance in public parks



**Las Vegas Uses CBRN to Bridge the Digital Divide**

“We want to be known across the world as the entertainment capital, but we also want to be known as a technology epicenter where we have the right ecosystem to bring business and people together to create great opportunities for the future.”

*Michael Sherwood, Chief Innovation Officer for the City of Las Vegas*

Las Vegas is the 24th largest city in the US by population

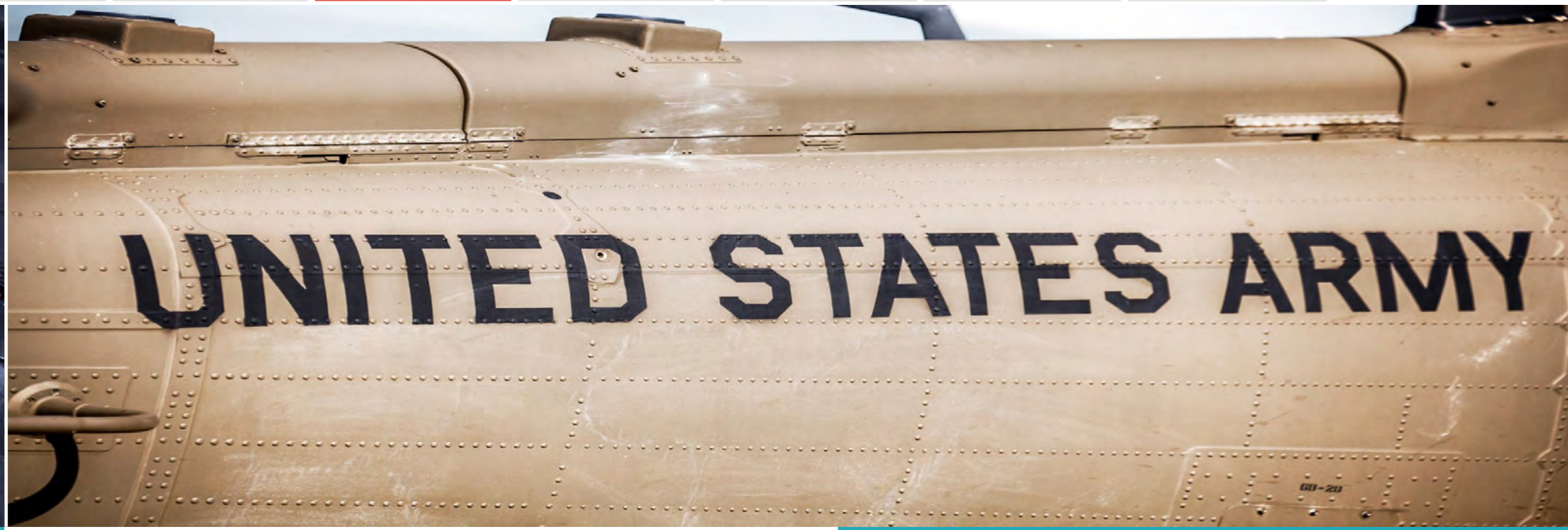
**CBRN Network Use Cases**

- ☑ Educational connectivity
- ☑ Improved coverage
- ☑ Support for local businesses and government



Military bases can benefit significantly from CBRS-based private networks as they have large populations, enormous inventories, and high-tech devices that must be remotely and securely managed. Private networks allow personnel to integrate advanced technologies like IoT devices, drones, and autonomous vehicles, enabling enhanced surveillance, logistics, and overall operational capabilities.





**Marine Corps Logistics Base Albany Tests Advanced Warehouse Operations**

“We are excited to begin working with other DoD and military leaders to extend the power of edge computing and private 5G to telehealth, training, facilities security, supply chain optimization, and other mission-critical operations.”

***Kurt Schaubach**, Chief Technology Officer of Federated Wireless*

The US Department of Defense allocated \$600 million in 2020 to test 5G on multiple military bases



**Fort Carson Tests Smart Base Transportation**

“The project seeks to utilize a 4G network to exploit technology capabilities that leverage AV sensors, then integrate that data with other data sources to inform decision making.”

***Jim P. Allen**, Army Engineer Research and Development Center’s program manager*

Fort Carson bills itself as the “Best Hometown in the Army – Home of America’s Best.”

**CBRS Network Use Cases**

- ☑ Real-time robotics
- ☑ Smart security cameras
- ☑ Inventory and asset management assistance

**CBRS Network Use Cases**

- ☑ Traffic and weather integration
- ☑ Improved decision making
- ☑ Internet of Things



Wireless Internet Service Providers (WISPs) have been for years on the forefront of bridging the digital divide. They build local networks in lesser-served areas and are a source of great support for these communities, providing reliable and affordable broadband. A large part of this is done with Fixed Wireless Access (FWA). WISPs have been the early frontrunners in utilizing the Innovation Band, successfully offering high speed access to consumers and businesses with CBRS FWA.

Incoming funding for broadband through BEAD and other federal programs have the potential to further increase WISP CBRS deployments. State broadband offices are expected to lay out plans where CBRS FWA will be complimentary to fiber, especially in areas where deploying fiber would be impractical due to costs, location, and supply time. The WISPs should be able to leverage their extensive FWA experience and broaden their reach.





**NextLink brings broadband to America's heartland**

Nextlink is an ISP that delivers broadband internet and voice services in Illinois, Iowa, Nebraska, Texas, Oklahoma, and Kansas to residences and businesses.



**local2u delivers WISP and MVNO services with CBRS**

local2u is a West Virginia company that delivers fixed wireless and mobility in one solution, rolling out service to more than 60 sites in the state.



**How a Kansas ISP Swiftly Leveraged CBRS to Connect a Rural Community**

Velocity is a Kansas-based ISP, part of the Butler Electric Cooperative that serves roughly 7,500 residential and commercial sites.



**Farmers Use CBRS to Increase Yields**

Trilogy Networks is a private company based in Boulder, Colorado, that supplies a hybrid multi-cloud network that accesses over 1,000 rural operators.



Exceptional indoor cellular coverage for employees, tenants, and customers is now more accessible for enterprises than ever before, thanks to CBRS-based neutral host networks. These networks enable multiple mobile operators to share infrastructure, which is delivered by a single neutral host operator. This allows enterprises to take control of their cellular services using shared spectrum, ensuring that users experience seamless connectivity for making and receiving calls throughout the building—it just works.





**Meta Deploys Neutral Host Networks in Buildings Across Country**

Meta is one of the world's top 10 largest companies by market capitalization.



**University of Virginia Trials CBRS Neutral Host Network on Campus**

The University of Virginia was founded in 1819 by Thomas Jefferson. Its central campus covers over 1,000 acres.



**Exclusive Las Vegas Nobu Hotel Adds CBRS-based Neutral Host Network**

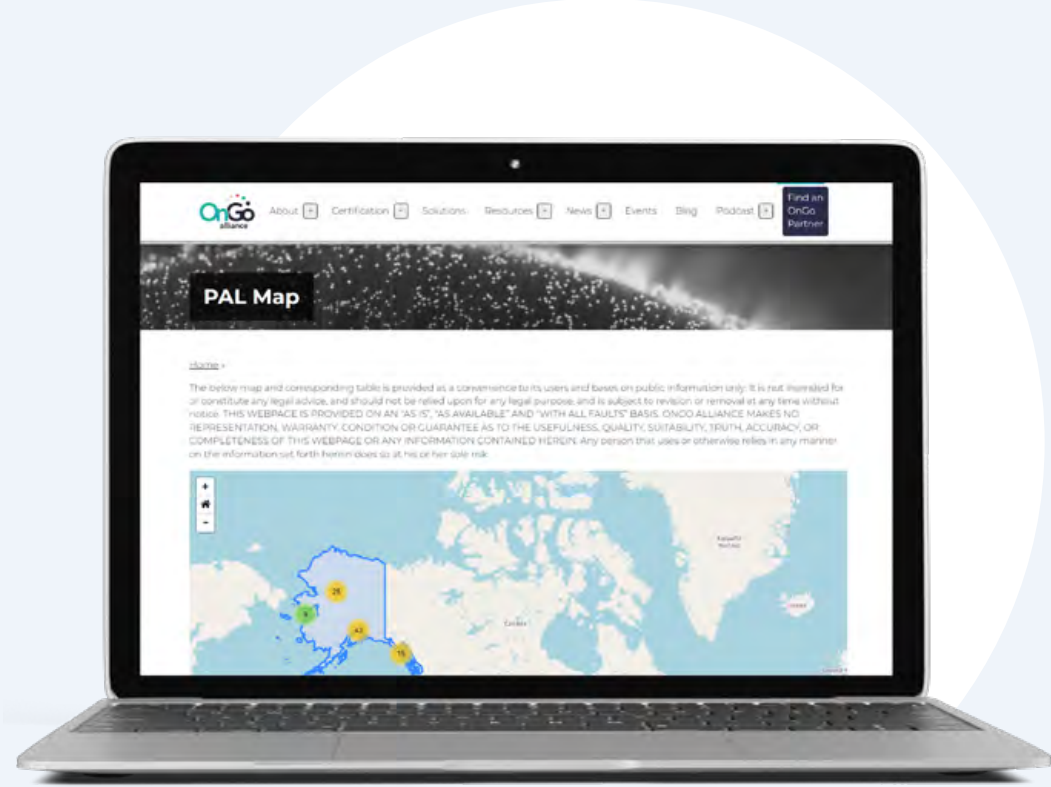
The Nobu Hotel is a 182-room boutique hotel located within the Caesars Palace resort in Las Vegas.



**Largest University in the US Begins to Deploy Neutral Host Network on Campus**

ASU's facilities cover over 23 million square feet. The university offers over 400 undergraduate programs and majors.

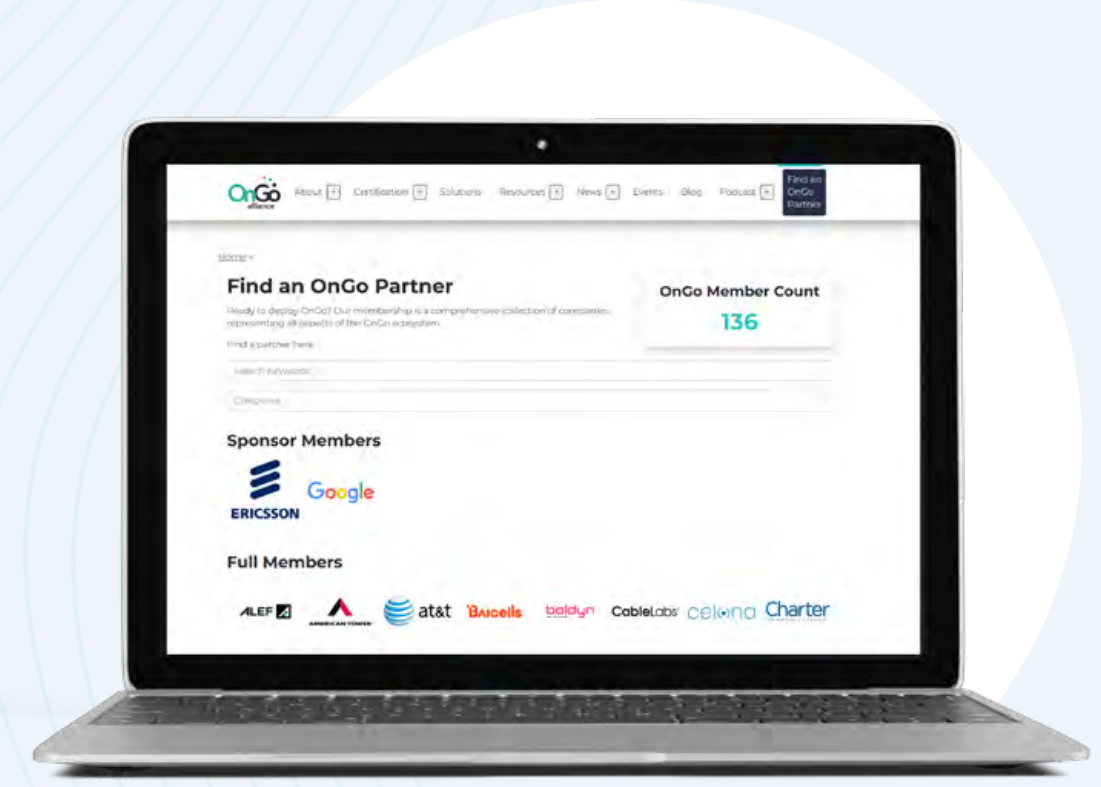




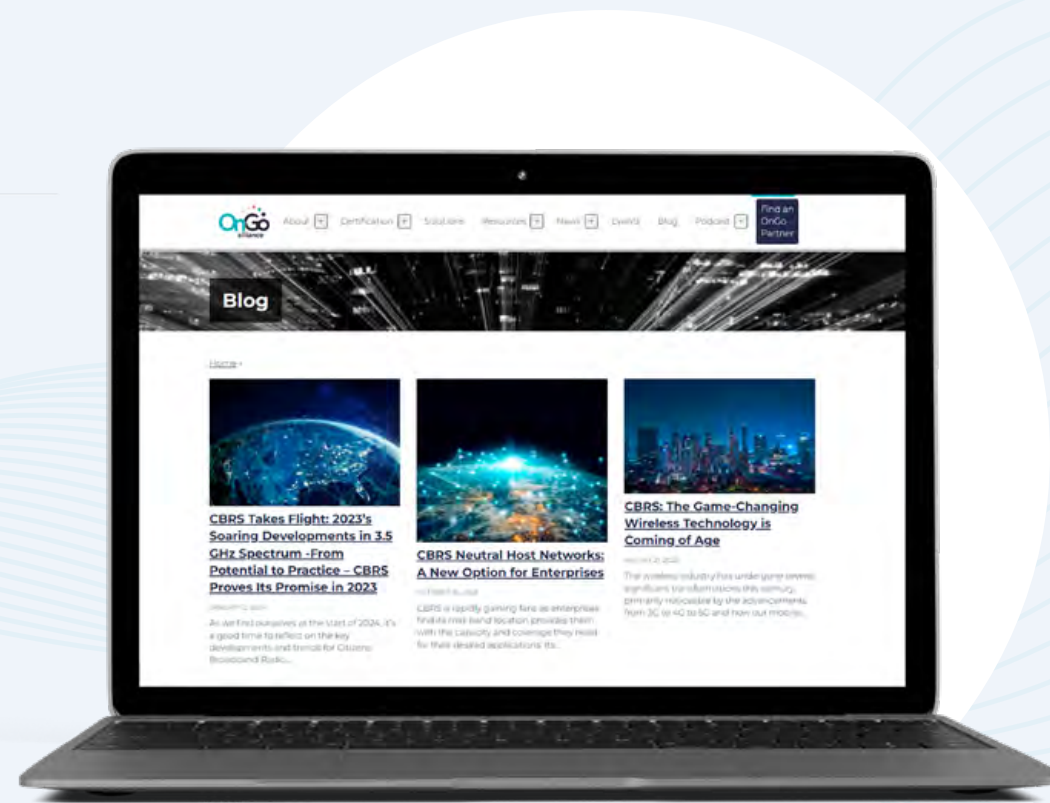
**Interactive Priority Access License Map**



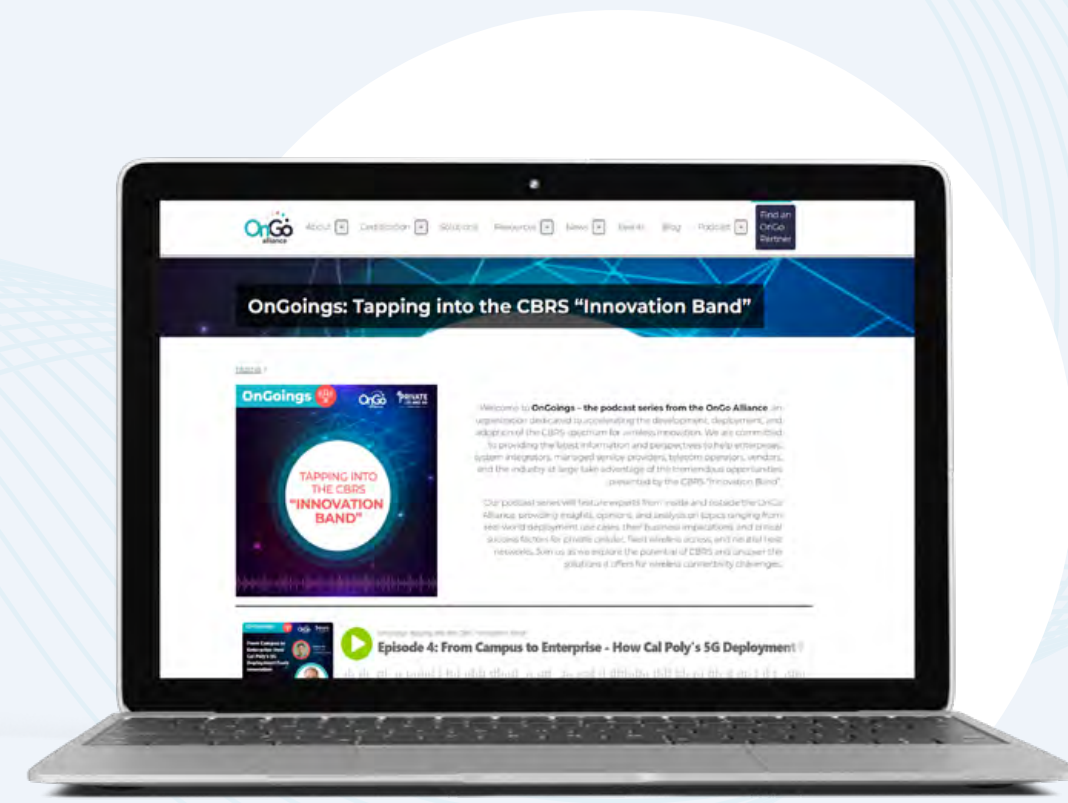
**Resource Library**



**Leading CBRS Vendors**



**OnGo Commentary**



**Podcasts: Interviews with Notable CBRS Users and Vendors**





## About the OnGo Alliance

The OnGo Alliance is an industry consortium that promotes the development, commercialization, and adoption of LTE and 5G solutions for the US 3.5 GHz Citizens Broadband Radio Service (CBRS), and evangelizes shared spectrum globally. Formerly the CBRS Alliance, this 110+ member group accelerates the buildout of effective and efficient CBRS networks, using 4G and 5G solutions. There are over 365,000 CBRS Access Points across the U.S. currently broadcasting wireless signals on the CBRS spectrum, via private and fixed wireless networks, spanning various sectors including enterprise IT, industrial IoT, smart cities, rural broadband, transportation, hospitality, retail, and real estate. The Alliance has also established a product certification program for OnGo equipment in the CBRS band ensuring multi-vendor interoperability. For more information, please visit [www.ongoalliance.org](http://www.ongoalliance.org) and follow the OnGo Alliance on [LinkedIn](#) and [Twitter](#).

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