CABANA HAPPY VALLEY

BΛICElls

CASE STUDY

with LittleBird™ & ALEF

CBRS has made LTE private networks more accessible for enterprise, government, healthcare, utilities, industrial complexes, and other organizations in the United States. This case study explores the ongoing growth of CBRS private networks, showcasing how Cabana Happy Valley leveraged CBRS to provide its residents with smart-home amenities.

The adoption of CBRS private networks is happening incredibly quickly. According to the **OnGo Alliance**, over 350,000 CBRS access points are operational, with the **NTIA** reporting that the number of operating devices grew by 121% from April 2021 to January 2023. This significant CBRS growth trend is expected to continue in the residential real estate market, with the multi-dwelling units (MDU) segment taking center stage. For example, Greystar - a real estate company managing over 800,000 multifamily and student units - is currently **exploring the uses behind CBRS.**

Cabana Happy Valley is an apartment complex in Phoenix, Arizona. The apartment building was looking for an easy way to improve property values and simplify the lives of its residents. The expansion of available amenity services offered the potential to do both.

Creating a comprehensive smart-home solution for residents would provide the property with a

Baicells

distinct competitive advantage. Smart homes are meticulously designed to enhance daily life by offering amenities accessible through smartphone apps, enabling residents to conveniently unlock doors, control lighting, and adjust air conditioning settings. Nevertheless, Cabana Happy Valley is not the sole apartment complex incorporating smart-home features into their designs. According to ResearchandMarket.com, the smart apartments market is projected to reach a substantial $5.3 billion by 2027.

Beyond catering to residential needs, the smart functionality serves a dual purpose by aiding the property management team in acclimating residents to their new homes. Currently, the apartment complex exclusively accommodates Taiwanese residents who are training American workers for the nearby TSMC semiconductor plant. The implementation of smart-home features has greatly simplified the process for property managers to provide new residents with keys and facilitate the integration of Taiwanese individuals into American life.

Implementing this smart technology for 292 apartments plus communal spaces would require technical knowledge uncommon within property

Baicells

management groups. Cabana Happy Valley would need to outsource these IT services to the solution that best fit their use case and could be quickly installed while keeping the capex and opex low.

Cabana Happy Valley explored several avenues to provide its residents with these amenities. The property chose a CBRS-based solution after learning about the technology's capabilities. Coverage, reliability, and network security were the property's concerns – all areas where CBRS private networks excel.

The property then chose Alef Edge to build their CBRS private network smart home solution. Alef works directly with enterprise customers to offer a private mobile network as a service solution to simplify network buildouts. Alef built a custom private networking solution by leveraging ecosystem partners Baicells, LittleBird, CELLocity, and Vall Technologies. CELLocity provided the core, LittleBird provided the amenity access point, Baicells provided the four Nova430e's required to make the network possible, and Vall Technologies was the installer.

The Nova430e radio was chosen for this deployment due the unit's small footprint, low-cost, and ability

to host a dual-carrier design to maximize network capacity. The four Nova430e's were placed on corners of the property, with the antennas facing toward the units. The antenna sectors were a variety of sizes and provided 100% coverage of the property, easily reaching the apartments and penetrating the walls to enable the smart home connectivity. The base stations were installed in two days, a much shorter time than running a dedicated wired connection to the units would take. Then, the LittleBird controller, which allowed users to access the smart-home

amenities, was connected to the private network.

Ultimately, this single-building deployment exemplifies the transformative power of CBRS technology in the real estate sector, particularly in the context of smart apartment solutions. CBRS has ushered in a new era of private networks, enabling enterprises like Cabana Happy Valley to enhance their property values and simplify the lives of their residents. With the exponential growth of CBRS access points and device usage reported by industry

Baicells

"One of the things we noticed when we used a competitive radio to Baicells, the cost didn't quite work out and complexity didn't quite work out for somebody who needed something as simple as Wi-Fi in an MDU environment. It's not like you're working in an environment where cost is not an issue and complexity is not an issue.

Costs and complexity are absolutely essential in what I call the MDU marketplace."

James Jacobellis, Alef Edge SVP of Sales and Technology Partners

Click here to watch the full interview.

associations, it is evident that this technology is poised to play a pivotal role in various sectors.

Cabana Happy Valley's decision to embrace smart-home functionality was a forward-thinking move, aligning with the booming market for smart apartments. This market's projected growth to $5.3 billion by 2027 underscores the demand for such amenities among residents seeking convenience and modern living standards.

The rapid and seamless deployment of the smart home solution, without the need for extensive building wiring, was a testament to the efficiency and versatility of Baicells plug-and-play hardware solutions and

the overall CBRS technology stack. This case study serves as a blueprint for other enterprises looking to leverage CBRS for various applications, from enhancing security to driving automation and improving internal workflows.

In summary, Cabana Happy Valley's successful integration of CBRS technology into their property elevated residents' quality of life and exemplified the potential for CBRS to revolutionize various industries. As CBRS continues to evolve and expand its footprint, we can expect to see more innovative use cases and success stories like Cabana Happy Valley's in the future.

Baicells