

CITY OF THOMASVILLE AND SUNBELT EXPO

Wi-Fi Boosts Tourism and Commerce from City Center to Agriculture Expo



CASE STUDY



OVERVIEW

Thomasville, Georgia, is investing in the revitalization of its downtown area to encourage tourism and business development. But the Wi-Fi service was failing to keep up with demands, frustrating visitors and local businesses. The Sunbelt Expo, the largest agricultural exposition in North America, was also struggling with poor Wi-Fi across the 100-acre exhibit site. Ruckus gave them both crowd-pleasing performance and the foundation for future growth.

CHALLENGES

- Existing guest Wi-Fi couldn't handle high-density usage, interference, or coverage over expansive outdoor areas
- Applications like mobile apps and point of sales were constrained by unreliable Wi-Fi
- Management complexity and poor performance made it difficult to expand services or strengthen security

SOLUTION

Thomasville

- 28 indoor and outdoor Ruckus APs
- Virtual SmartZone controller

Sunbelt Expo

- 25 indoor and outdoor Ruckus APs
- ZoneDirector Controller

BENEFITS

- Ruckus Wi-Fi easily and efficiently covers large outdoor areas and supports big crowds, supporting visitors and vendors in Thomasville's downtown and the Sunbelt Expo
- Thomasville IT now has stronger, more granular cybersecurity
- Sunbelt Expo staff can plan more advanced offerings for exhibitors and create new revenue streams

VISITORS AND VENDORS ARE FRUSTRATED BY POOR GUEST WI-FI

Wine connoisseurs, cheese lovers, flower enthusiasts, antique hunters, and history buffs all flock to Thomasville, Georgia. In Thomasville, there are showy treasures, like colorful Victorian homes and a fragrant five-acre rose garden. And there are hidden treasures, like the whimsical Lost Quail scavenger hunt.

City administrators are committed to making Thomasville a great place to visit and live. Especially with technology investments.

Over twenty years ago, the city had the foresight to build a fiber optic network to serve schools, libraries, local businesses and hospitals. Today, Community Network Services (CNS) reaches the whole city with high-speed Internet, television and telecommunications services.

More recently, Thomasville decided it needed a serious Wi-Fi overhaul. "Indoors or outdoors, the existing Cisco Wi-Fi was slow and unreliable," says Clint Wilkerson, information technology director at city of Thomasville.

Thomasville created a fantastic interactive mobile app to promote local businesses and help tourists discover all those big and small treasures in the downtown area. Unfortunately, there was a disconnect—literally—between the mobile app and the city's free guest Wi-Fi. The Wi-Fi was so unreliable that people couldn't connect. Or connections dropped. The Wi-Fi was particularly bad during big outdoor events, like the famed Rose Festival in April and Victorian Christmas in December.

In terms of crowds, though, nothing tops the Wi-Fi demands of the Sunbelt Expo, the largest agricultural exposition in North America. The expo is held in Moultrie, which is about 28 miles from Thomasville. What's the connection between the two cities? Thomasville's networking team, which reports to Wilkerson's colleague, Marvin Golden, is responsible for managing the Wi-Fi network for the Sunbelt Expo.

"The Sunbelt Expo covers over 100 acres of indoor and outdoor exhibits. The Wi-Fi challenges are enormous. Whichever Wi-Fi vendor we chose for Thomasville would be the one we recommended for the Sunbelt Expo," says Marvin Golden, Network Operations Director for City of Thomasville. "We set the bar high in our selection process, because so much was riding on picking the right vendor."

After researching vendors and speaking with NTS, a technology provider based in Thomasville, Golden's team asked for a demo of Ruckus equipment. "My whole team was impressed with Ruckus. The network management was easy and elegant compared to the legacy Wi-Fi. The access point performance—from coverage area to throughput—was even better than we expected."



“There’s no issue with coverage no matter where you are or how many people are around you. Local merchants absolutely love the new Wi-Fi. It’s another investment that demonstrates our commitment to their success. We have active community revitalization programs for the downtown area. Now Wi-Fi is one of our selling points to attract new business.”

CLINT WILKERSON

Director of IT
City of Thomasville

“For the first time, we have the ability to use controls and permissions at a granular level to isolate traffic segments, which enhances security and supports new service offerings. A cornerstone of our mission is smart farming education. Now we’re entering a new phase in that mission with smart Wi-Fi.”

CHIP BLALOCK

Executive Director
Sunbelt Expo

FREE GUEST WI-FI IN DOWNTOWN DISTRICT IS FINALLY FREE FROM PROBLEMS

The IT team, with the help of NTS, began replacing the old Wi-Fi with Ruckus in all the municipal buildings. “In my own research, Ruckus AP technology always stood out as unbeatable. Sure enough, their radio and antenna technology enabled us to consolidate from four APs to two per floor, and we still got better throughput than we had before,” says Wilkerson.

Similarly, the coverage outdoors was just as efficient. “We only had to deploy eight APs to cover three main streets,” says Wilkerson.

But how would the Ruckus signal strength handle the long city streets, congested areas and crowd sizes that could bloom to thousands overnight?

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SECURITY AND AGILITY IN THE AGE OF SMART CITIES

Smaller municipalities like Thomasville share some important priorities with emerging smart cities like Atlanta, the state’s capital. “If you’re committed to technology, then cybersecurity is critical. We took a big leap forward in security capabilities with Ruckus,” says Wilkerson.

To start, IT set up separate SSIDs for guests, city-owned devices and BYOD devices. Each SSID is assigned to a VLAN. IT also set up a captive portal for staff, which is integrated with Active Directory. This is the first time that IT has had the ability to assign a single credential to employees. “Before Ruckus, security mechanisms were so hard to set up that they were limited or ineffective. In the case of integration with Active Directory, we couldn’t do it at all. Now we’ve got more granular security but it’s easy to implement.”

Ease of management also makes the IT team more agile. “The Ruckus management system is not just a pretty interface. Every task and workflow is streamlined and automated so it feels almost effortless to manage a municipal Wi-Fi network. We have a small staff with a long list of responsibilities. The new Wi-Fi gives us more capabilities than we had before, but it’s also incredibly easy to work with. Which means we can be more responsive to city planners. We feel like we’ve just scratched the surface of what we can do to enhance the quality of life in our city,” says Wilkerson.

HEALTHY GROWTH OF AGRICULTURAL EXPO HAMPERED BY POOR WI-FI

The Sunbelt Expo is the largest agricultural exposition in North America—over 1,200 exhibitors and thousands of visitors attend each year. The exposition covers a sprawling 100 acres. Visitors can see towering irrigation systems and massive combines in actual work settings.

The fields and farm equipment are also a towering challenge for Wi-Fi signals. “The interference from all the metal has always been a problem for our Wi-Fi,” says Chip Blalock, executive director at Sunbelt Ag Expo. “The buildings are fixed, but a lot of this heavy equipment is constantly changing positions during live demonstrations.” Some vendors even brought their own APs to ensure that they could get a reliable Wi-Fi connection to support point of sale terminals.



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MARVIN GOLDEN

Network Operations Director
City of Thomasville

“It was so frustrating that we had to constrain marketing and promotional programs because of the limitations of the existing Wi-Fi. Now it doesn't feel like there's any limit to what we can do. We don't have to worry that the Wi-Fi will crash the first-time visitors try to download something or hundreds of people log on simultaneously to watch an exhibitor video.”

BECCA TURNER

Vice President, Marketing and Public Relations
Sunbelt Expo

Interference wasn't the only problem: the Wi-Fi infrastructure couldn't keep up with the high-density demands. “This expo is so extensive in size and scope that it's like setting up and running a small city for three days. When 80,000 people came to town, our Wi-Fi bogged down,” says Blalock.

Blalock recalls one of the worst Wi-Fi failures. “It was the busiest day of the expo and the entire Wi-Fi network virtually shut down. We couldn't process any credit cards and had to go to a cash basis. After the show closed, the staff was there for hours working on reconciliations. It was a nightmare that we never wanted to repeat.”

Golden and CNS met with Sunbelt Ag Expo to recommend replacing the old Wi-Fi with Ruckus. “To keep our costs down, you might say that we milked our existing Wi-Fi as long as we could. We were genuinely surprised by the affordability of the Ruckus solution. But it turns out we could replace—and even expand—our Wi-Fi at a much lower cost than we had projected,” says Blalock.

Like Thomasville, the Sunbelt Expo has an interactive mobile app that the staff and vendors bank on to help visitors plan their day. For vendors, it's another opportunity to promote their exhibits and products. “It was so frustrating that we had to constrain marketing and promotional programs because of the limitations of the existing Wi-Fi,” says Becca Turner, vice president, marketing and public relations at Sunbelt Ag Expo. “Now it doesn't feel like there's any limit to what we can do. We don't have to worry that the Wi-Fi will crash the first-time visitors try to download something or hundreds of people log on simultaneously to watch an exhibitor video.”

Even without factoring in new revenue sources and expansion in services, the expo team says that it's already gotten a return on investment in the new Wi-Fi. “We've seen a dramatic improvement in the coverage, throughput and reliability of the Wi-Fi,” says Blalock.

The expo staff is looking into extending the Wi-Fi to 100 acres of the research farm that adjoins the exhibit grounds. “Now that we know how well Ruckus covers the exhibit grounds, we're talking about doubling the coverage area,” says Blalock. “That's a huge leap in scope that we wouldn't even have considered before. Now it's a matter of when we want to do it, not whether or not it's possible.”

They're also discussing offering tiers of Wi-Fi service to exhibitors. The ability to offer tiered services would create a new revenue stream for the expo organizers and an opportunity for exhibitors to enhance education, sales and promotions online.

“For the first time, we have the ability to use controls and permissions at a granular level to isolate traffic segments, which enhances security and supports new service offerings,” says Blalock. “A cornerstone of our mission is smart farming education. Now we're entering a new phase in that mission with smart Wi-Fi.”