

STADIUM CASE STUDY

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OBJECTIVES

A large football stadium required a reliable Wi-Fi network to ensure staff access throughout most areas of the facility. Initially, a new wireless system was installed, but without a comprehensive AP (Access Point) design. Instead, the Access Points were placed in the same locations as the legacy system, with additional APs added in areas with high wireless complaints.

Despite these efforts, the wireless solution was plagued with performance issues, including frequent dropouts and slow speeds throughout the stadium. To address these ongoing problems, the stadium engaged Akomplished WiFi Solutions to conduct a thorough troubleshooting survey and resolve the Wi-Fi issues.

APPROACH

Customer Requirements:

We began by discussing with the customer to gain a comprehensive understanding of their requirements, issues, desired outcomes, and the specifics they wanted in the final report.

Coverage Check:

We conducted a thorough coverage check by walking every 3-5 meters within each section of the stadium using Ekahau survey, Sidekick II, and an iPad. This provided accurate 2.4, 5, and 6 GHz Wi-Fi data results.

Physical Inspection:

We performed a physical inspection of all Access Points to ensure they were installed correctly, mounted properly, and free from obstructions.

Analysing the Data:

We carried out an in-depth analysis of the Ekahau survey results, including heatmaps and spectrum analysis data. This allowed us to thoroughly understand the stadium's wireless environment, which was crucial for building the report and formulating recommendations.

Report:

We provided a detailed report outlining all findings, heatmaps, and recommendations.



AT A GLANCE

CHALLENGES

- Ineffective Installation
- Complex Environment
- Channel Interference

BENEFITS

- Increased Productivity
- Improved Transparency



NICKY MONK

Wireless Specialist
Akomplished Wi-Fi Solutions

“For over 5 years, our company has been improving the brand and company images to give a proper experience to our customers.”

SOLUTION

Our analysis revealed that the Access Points required significant configuration changes, including adjustments to channel bandwidth settings, TX power settings, and addressing channel interference. Additionally, enabling different RF zones/groups was necessary. We also recommended changes in AP placement, as some areas had too many APs while others had none.

These changes were implemented over a few weeks. Following the implementation, an additional coverage check was performed to ensure the wireless network was functioning optimally. This final step allowed us to confirm the improvements, gather any additional feedback, and resolve any remaining issues.

OUTCOME

The results from the coverage check after the changes showed that the Wi-Fi was performing above expectations. The stadium achieved full coverage with no wireless complaints, leading to happy staff and increased productivity.

RESULTS



0

Black Spots



0

Wireless
Complaints



1000+

Users

BENEFITS

1. Customer Knowledge

The report provided detailed coverage results, highlighting areas with poor coverage and aligning these findings with the reported wireless performance issues. This transparency helped the customer understand the root causes of the problems.

2. Interference Management

Given the stadium's large public area with numerous wireless devices, hotspots, and potential interferers, we ensured minimal interference from rogue devices to the stadium's wireless system. The spectrum analysis identified channels that were 100% utilised by non-Wi-Fi devices, leading to the disabling of these channels in specific areas, thus preventing the stadium APs from using them.

3. Optimum Configuration

The coverage check results offered comprehensive recommendations for fine-tuning the new wireless system, ensuring it operated at peak performance within the stadium's environment.

4. Increased Productivity

With the resolution of wireless issues, staff no longer needed to wait for devices to work, move to "better" locations, or experience frustration. This led to increased productivity and overall satisfaction among the staff.