

WAREHOUSE CASE STUDY

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OBJECTIVES

A major supplier of popular manufactured goods implemented a wireless design provided by an external source, which outlined the Access Point (AP) model, quantity, and placement. However, the warehouse reported extremely poor wireless performance and frequent dropouts. Frustrated with the warehouse management system (WMS) and Android barcode scanners, staff reverted to paper tracking. The warehouse IT team engaged Akomplished to carry out a troubleshooting report.

APPROACH

Understanding the Issue: Once onsite, Akomplished was briefed by the IT team about the issues they were facing. We walked the warehouse with a barcode scanner to replicate the problems and gain a better understanding of the situation.

Coverage Check: Using the Ekahau Sidekick II and an iPad, we conducted a comprehensive coverage check across the warehouse to ensure that all areas had adequate coverage and were configured correctly.

Access Point Locations: We identified and documented all Access Points, noting their model, location, and mounting setup.

Barcode Scanners: A detailed review of the barcode scanners' configuration and setup was also conducted.

FINDINGS

- The Access Point model was not suitable for a warehouse environment (not best practice).
- Access Point placement was poorly designed.
- 50% of Access Points were mounted incorrectly.
- There were too many Access Points for the required solution.
- Large areas of the warehouse had no wireless coverage.
- Access Point transmission (TX) power was configured incorrectly.
- Barcode scanners were configured to use only the 2.4GHz band, limiting their performance.



AT A GLANCE

CHALLENGES

- Poor coverage
- Incorrect setup
- Scanner issues

BENEFITS

- 100% coverage
- Boosted productivity
- Optimised scanners



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.”

CHALLENGES

Due to budget constraints, the current Access Point models and locations had to be retained.

SOLUTION

We provided a detailed report, including the recorded results and recommendations:

- Power down 15 Access Points.
- Decommission specific Access Points and provide an improved design tailored to the warehouse.
- Out of the 17 remaining Access Points, 8 needed adjustments to their mounting. Detailed locations and sample images of correctly installed Access Points were provided.
- Reconfigure the Access Points, including setting minimum and maximum TX power ranges to ensure full coverage.
- Implement additional configuration changes, such as adjusting channel bandwidth.
- Reconfigure barcode scanners to use the 5GHz band for improved performance.

IMPLEMENTATION

After reviewing the report, we scheduled a meeting with the IT team to outline the necessary steps and process. The changes were implemented in stages, and Akomplished returned a month later to confirm that the issues had been resolved.

OUTCOME

The second site visit showed a significant improvement in productivity. Warehouse staff were able to fully utilise the WMS, and the site had complete wireless coverage, performing as expected. No complaints had been reported since the changes were made, and staff were highly satisfied.

RESULTS



100%

Coverage



100%

Increase In
Productivity



50

Barcode Scanners
Optimised
