



Case Study

Benefits of Wireless Assessment Service Over Predictive Wireless Design

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Better wireless networks at a lower cost

CIT's wireless assessment service helps businesses like yours get the most out of your wireless network. Through this case study, we'll demonstrate how our survey driven approach outperforms predictive designs. By combining testing with expert analysis, we deliver personalized recommendations that optimize access point (AP) placement, reduce hardware needs, and elevate network performance. The best part? You'll achieve all this while enjoying significant cost savings.

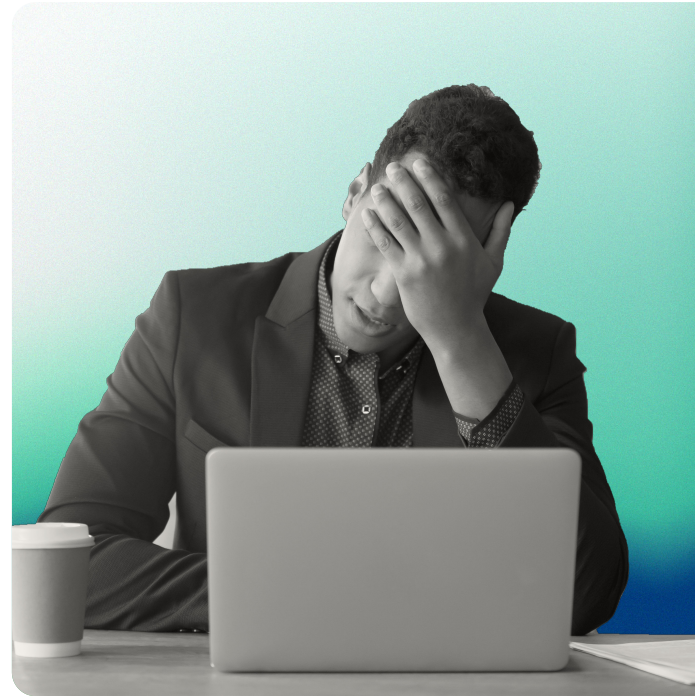
Join us as we take you from predictions to a wireless network that helps your business succeed.

Survey driven optimization: The key to wireless success

Predictive designs: A foundation with room for improvement

When planning wireless network deployments, organizations often begin with predictive designs which are computer generated models that estimate coverage based on floor plans and theoretical signal propagation. Although this approach offers a starting point, it heavily depends on assumptions about building materials, layout, and Radio Frequency (RF) behavior that often significantly differ from real world conditions. Predictive models fail to consider numerous environmental factors that impact wireless performance, including:

- Dynamic interference sources
- Building materials
- Furniture placement
- Occupancy patterns



As a result, predictive designs typically lead to two scenarios, both costly in different ways:

1 | Overestimation

- Unnecessary hardware purchases
- 15-30% increase in capital expenditures
- Potential interference that degrades network performance

2 | Underestimation

- Coverage gaps and capacity shortfalls
- Emergency purchases and unplanned installation work
- Up to 40% increase in total costs
- Deployment timelines extended by weeks or months

Predictive design vs. wireless survey assessments

Which approach will elevate your network performance?

Predictive Design

Limitations & Pitfalls

- Relies on theoretical models without real world validation
- Cannot account for dynamic interference sources
- Discrepancies between assumed & actual building materials
- Fails to capture real world multipath behavior & signal reflections
- Tends to overestimate or underestimate access point requirements

Wireless Survey Assessments

Unlocking Your Network's Potential

- Captures the actual RF environment with precise signal measurements
- Identifies physical obstructions & interference sources
- Enables data driven access point placement decisions
- Optimizes channel planning based on real world spectrum usage
- Typically reduces hardware requirements by 20-25%, saving you money



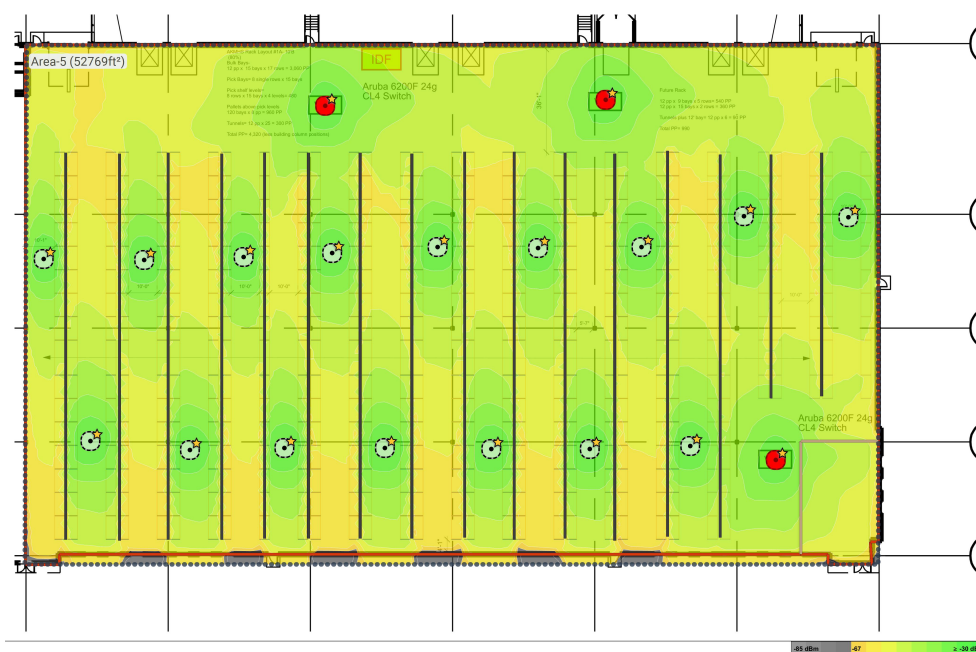
Wireless survey assessments: Real world success stories

To see CIT's wireless survey assessments in action, turn to the following pages. You'll find a series of case studies that showcase how our approach & expertise have helped businesses just like yours optimize their wireless networks for peak performance, reliability, & cost efficiency.

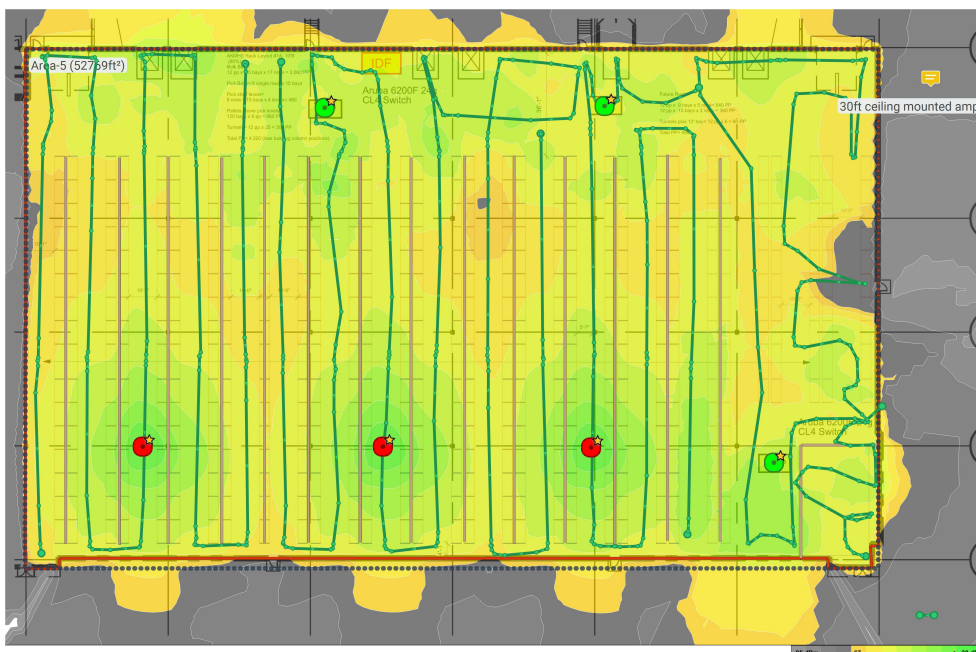
On the next pages, you'll discover real world examples of how we've empowered companies across industries to unlock the true potential of their wireless infrastructure.

Visualizing the Difference: Area 1 – Warehouse/Open Office

Compare the following site maps, which showcase the initial predictive design and the optimized, survey driven results for a expansive warehouse & open office area. Observe the significant difference in Access Points (APs) required post assessment - dropping from 19 APs in the predictive layout to a lean 6 in the optimized design.



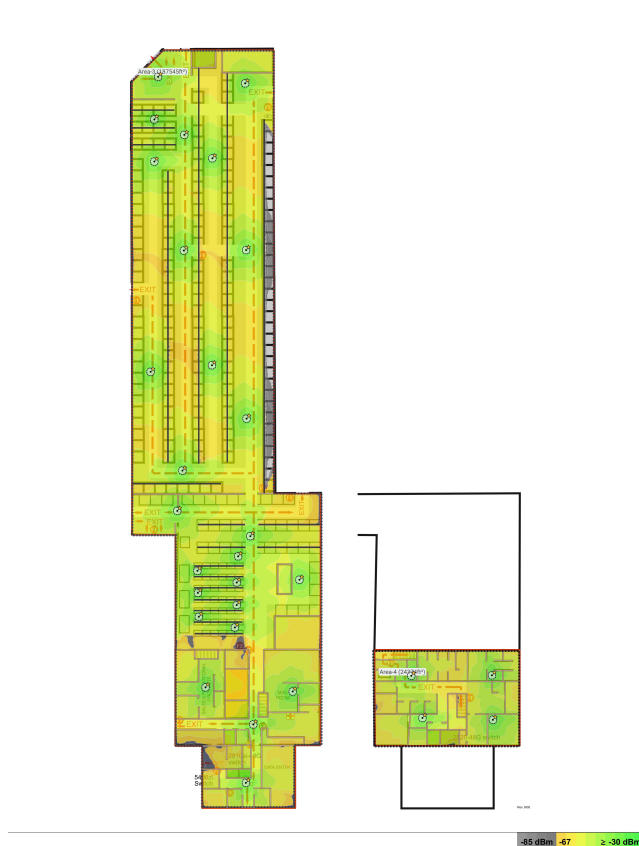
Initial Predictive Design: This map depicts the theoretical AP placement based purely on floor plans. Witness the dense array of proposed APs, aiming to flood the space with coverage while ignoring real world interference factors.



Survey Driven Optimization: After an on site wireless assessment, CIT charted the actual RF environment. This intelligent design boasts a 68% reduction in APs, yet still guarantees optimal coverage & performance. Follow the green lines to trace the precise survey path taken during the assessment.

Visualizing the Difference: Area 2 – Multi Zone Office/Retail

Next, we'll explore a scenario that businesses with complex floor plans often face. In this section of the facility, featuring varied room sizes & potential obstructions, the initial predictive model called for a high density of APs - 30 in total.



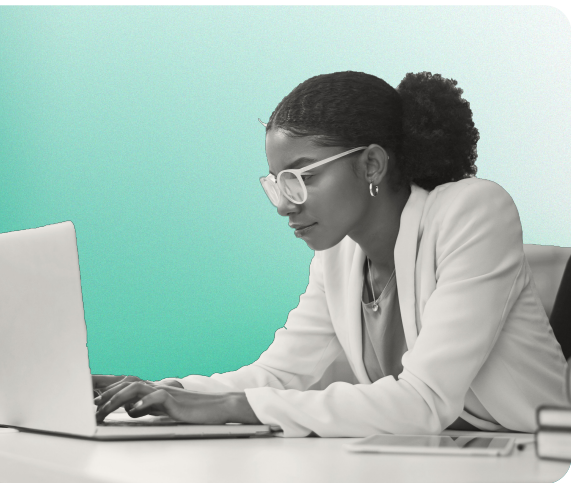
Initial Predictive Design: This theoretical model proposed a substantial number of APs to cover the elongated space, assuming perfect signal propagation through various interior structures. However, real world performance often differs from these idealizations.



Survey Driven Optimization: After conducting an on site assessment, CIT discovered that just 9 APs were needed to deliver strong coverage & performance, which is a 70% reduction. By precisely measuring signal attenuation caused by the building's unique features, we created a far more efficient & cost effective deployment.

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Unlocking precision with CIT's wireless survey expertise



A comprehensive wireless survey by CIT transforms guesswork into precision by collecting empirical data about your actual RF environment. Our professional survey teams use specialized equipment to measure signal propagation, identify physical obstructions, & detect sources of interference across the entire deployment area. This process includes advanced spectrum analysis to reveal both Wi-Fi & non Wi-Fi interference sources that would otherwise remain invisible until they disrupt your network post deployment.

From Predictive to Precise: The Survey Transformation

Predictive Design

Initial designs rely on theoretical models that often overestimate hardware needs by 20-25%.

Professional Assessment

CIT's on site surveys capture real world signal propagation, interference sources, & physical obstacles.

Optimized Results

Survey driven deployments by CIT reduce hardware by 25% & installation time by 40%.

Measurable ROI

Average deployment savings of \$16,000 plus \$3,200 annually in operational costs.



Ready to transform your wireless deployment?

Contact our assessment team today to schedule your professional survey and unlock immediate cost savings.

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