

Wireless Site Surveys



In today's digital landscape, seamless wireless connectivity is crucial for businesses to ensure productivity, efficiency, and customer satisfaction. TPx's approach to providing best-in-class wireless networking solutions combines a software-based predictive component with real-world, on-site validation.

To accurately plan and optimize a wireless LAN deployment, our team employs a cutting-edge predictive modeling approach based on industry-leading simulation software. By leveraging advanced algorithms and an extensive database of access point (AP) vendor models and their associated Wi-Fi characteristics, we can accurately simulate wireless coverage,

identify potential interference sources, and predict signal propagation in diverse environments.

The simulation considers factors such as antenna power, channel interference, signal overlap, and physical factors including AP heights, attenuation due to varying building materials, and other known sources of interference. TPx combines these detailed models with its own engineering expertise to develop a high-fidelity network design capable of meeting the network and application performance requirements of your specific deployment.

With a predictive plan in place, TPx then performs a thorough site survey prior to deployment of your wireless LAN. We recognize that failure to do so introduces risks such as inadequate coverage, performance issues, capacity limitations, security vulnerabilities, and

increased costs. To mitigate these risks and ensure a reliable, high-performing wireless network, conducting a comprehensive site survey is crucial.

Key Features and Benefits

- Accurate Coverage Planning of 2.4 | 5 | 6 GHz bands
- Interference Analysis
- Capacity Planning
- Real-World Performance Assessment
- Interference Identification & Mitigation
- User Experience Optimization
- Switching Infrastructure Validation

On-Site Validation

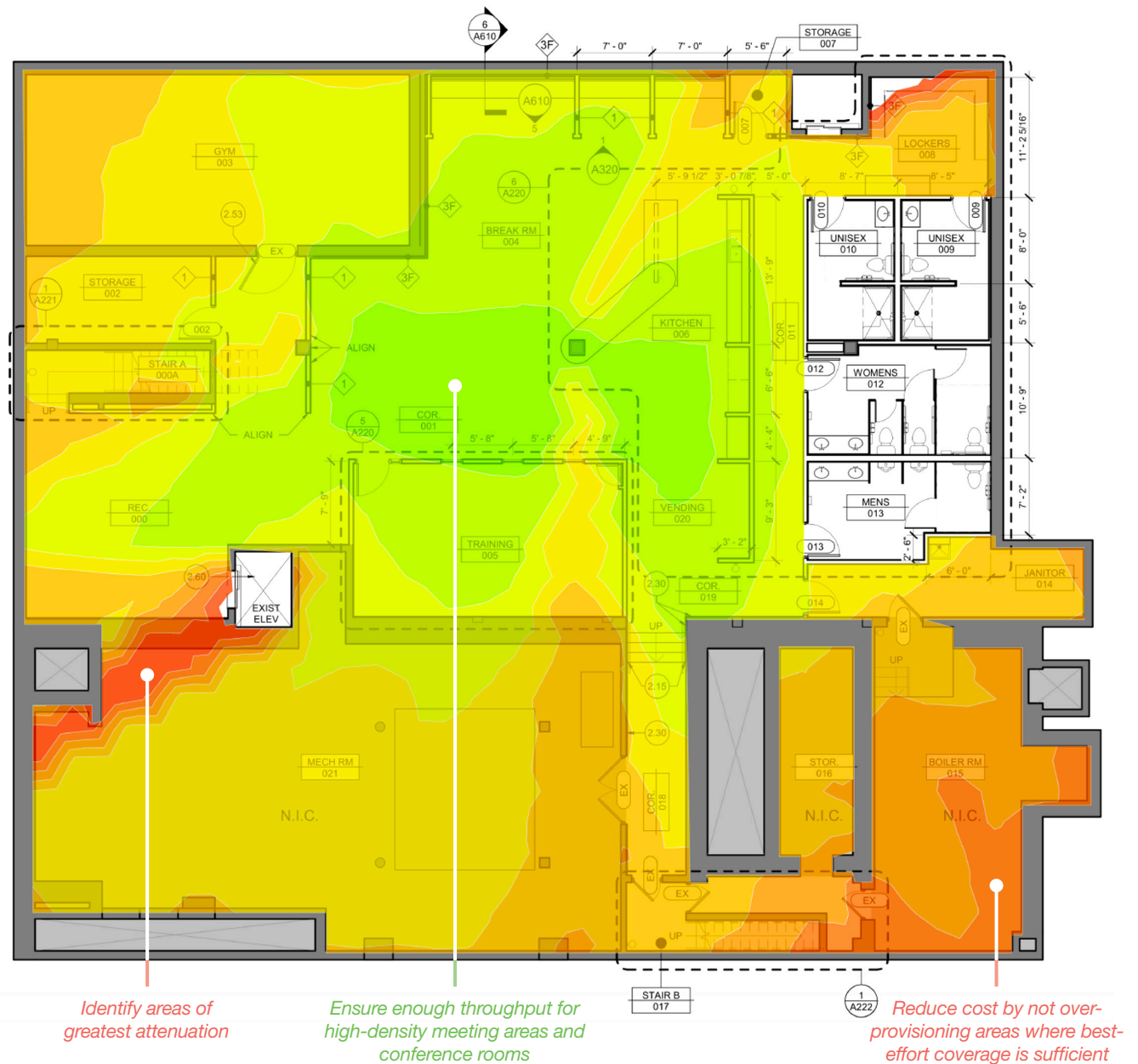
While predictive modeling provides valuable insights, on-site validation is critical to fine-tune the wireless LAN deployment and ensure its real-world performance aligns with the predicted results. Our team collects real-world observational data to validate the wireless network's coverage, signal strength, and interference levels. During the on-site survey, TPx takes measurements from strategic locations throughout the facility using an actual access point to evaluate the proposed network's coverage, signal strength, and interference levels. The AP's physical placement aims to mimic the intended AP deployment locations determined in the predictive modeling phase.

As part of the survey, TPx also evaluates your existing switching infrastructure to ensure it can support the demands of the as-designed AP configuration. Whether your environment is greenfield, brownfield, or rip-and-replace, including specific AP models, placement, and channel configuration. The result will be a resilient wireless infrastructure designed to support your business's specific requirements.

Real-World Performance Assessment This empirical data validates the accuracy of the predictive model and helps identify any discrepancies or adjustments needed.

Interference Identification and Mitigation On-site validation detects unforeseen sources of interference that may not have been accounted for during the predictive modeling phase. By analyzing the real-time data, we optimize AP placement, channel allocation, and power settings to eliminate interference and ensure a robust wireless network.

User Experience Optimization By testing the wireless network under realistic conditions, we gain insights into the end-user experience, such as signal strength, roaming behavior, and overall network



Identify areas of greatest attenuation

Ensure enough throughput for high-density meeting areas and conference rooms

Reduce cost by not over-provisioning areas where best-effort coverage is sufficient

performance. This allows us to fine-tune the deployment to meet the specific requirements of the site, ensuring an exceptional wireless experience for users.

At TPx, we understand the critical importance of a well-designed and properly deployed wireless LAN. Our comprehensive site survey approach ensures maximum wireless connectivity, minimal interference, and a superior

user experience. Partner with us to unleash the full potential of your wireless network and drive your business forward.

Interested?
Contact your account manager or sales at 866-705-7782.

