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Win the Race for Warehouse Efficiency

Does Your Wireless Network Support the Speed of Business?

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The pressure is on for warehouses and other industries where mobility is mission-critical, to move faster and with fewer errors. But as throughput increases, existing wirelesses networks — the backbone of your communication technology — are being stressed to the point of failure.

Seven of 10 warehouses experience issues with their wireless networks, and these issues ripple out affecting the performance of mobile devices to function as designed. This ultimately erodes the productivity expected from mobility applications and can lead to consistent bouts of downtime.

As companies working towards optimal enterprise mobility have transitioned from legacy mobile devices to modern Android-based handheld technology, often network infrastructure upgrades have been neglected. For today's Android devices to perform at optimal efficiency, assessing, and then investing in the proposed upgrades to your wireless network is critical to increasing the speed of business.

This e-book is for anyone who:

- Is experiencing inefficiencies in their wireless infrastructure
- Has exhausted every possible solution with no tangible results
- Is looking for an upgraded wireless network
- Is seeking guidance on deploying a new network

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Commercial Environments Present Unique WiFi Challenges

Achieving optimal performance of your wireless network hinges on selecting a system integrator that has a deep understanding of the challenges unique to your commercial environment.

For the warehouse environment, wireless networking challenges include:

- Warehouses are vast spaces. Wireless networks in warehouses need more power to reach every device.
- Shelves, pillars and stored inventory create performance challenges for wireless networks. Dead spots are common problems, and some areas of the warehouse may not get coverage.
- Warehouse employees are constantly on the move, so wireless network design must accommodate mobility.

When planning a wireless network, logistics leaders are wise to draw on the expertise of an experienced vendor that knows a specific industry environment and its challenges, and has a track record in meeting in delivering proven solutions. Poorly performing network solutions generally stem from a system integrator's lack of knowledge in a particular environment and the poor planning that result.

Risky Business: Does Your Network Security Leave you Vulnerable to Threats?

In addition to connectivity issues that impede productivity, neglecting your wireless infrastructure increases the risk of a security breach. Legacy wired and wireless networks were created before the proliferation of IoT devices and enterprise mobility, so they inherently lack the ability to secure these endpoints—particularly with domain authentication becoming the norm. Trying to secure today's devices with yesterday's networking technology is cumbersome and time consuming for IT professionals—not to mention at times ineffective in preventing a breach. If your sensitive data is at risk, it's time to crack down on your wireless networking.

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The Road to Rock-Solid WLAN

As the number of IoT devices explodes, and the popularity of BYOD expands, WiFi is becoming the primary network backbone. Designs for new networks, and enhancements to existing networks, should be focused on maximizing the effectiveness of the WiFi system, which will lead to improved efficiency in all areas of the business. **For example:**

- IT will spend less time maintaining, troubleshooting and fixing network problems
- ERP systems will have reliably fresh data at all times, allowing decision makers to have the data they need to move the enterprise forward
- Warehouse workers will be connected at all times, keeping the work moving

The first step on the path to a rock-solid WLAN is to do a wireless site assessment to troubleshoot an existing network, or a wireless site survey as a basis to build a new wireless infrastructure. Surveys and assessments provide integrators with valuable information that will be used to design a network that meets today's needs and is future proofed for the needs of tomorrow.

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Signs You Need a Wireless Site Assessment

Downtime eats profits, interrupts the flow of work and can erode employee morale, particularly if downtime is chronic. According to Gartner, the average cost of network downtime is around $5,600 per minute. That's around $300,000 per hour. For any business, that's a lot of money down the drain.

Here are some of the most common signs that your network should be evaluated through a wireless site assessment from a professional provider familiar with your industry.

Device Disconnections

Devices intermittently drop off the network. **The common causes are:**

- Poor planning and implementation
- Selecting the wrong wireless network, devices or other solutions
- Lack of equipment standardization and configuration

Sticky Devices

Devices don't roam when they should. **The common causes are:**

- Lack of wireless controllers to pass credentials between antennas
- System design is inadequate for the warehouse environment

Slow Performance

Devices run slowly, including new devices. **The common causes are:**

- TMS and WMS systems not designed for scalability
- Poor database performance that propagates down to devices

Serving Up Success: How Peak-Ryzex Helps Navigate Through the Process

A poor wireless network leaks money and increases downtime. For the successful implementation of the most mission-critical wireless business systems you can count on the planning, processes, products, and people of Peak-Ryzex. Our certified wireless engineers have the tools, talent and training to make certain that every WLAN infrastructure and networking solution we deliver operates as a robust and unified system.

Site Survey

For a site survey, an experienced engineer will tour your facility for a comprehensive evaluation of your physical environment to document possible sources of RF interference within the identified coverage area and test potential wireless access points for success. **The process includes:**

- Documenting racks, products, machinery and other potential RF obstructions
- Perform a spectrum analysis in the required frequency ranges
- Temporarily installing test access points and antennas at strategic locations to evaluate signal strength, signal-to-noise ratio, interference and other factors
- Test data throughput
- Document the number of wireless access points and types of antennas required to achieve the required coverage within the site
- Plot the coverage area for each access point in the facility
- This process is repeated throughout the facility to get an accurate read of how to get consistent coverage throughout the architectural footprint

Site Assessment

For a wireless network assessment, an experienced engineer will interview users and other stakeholders about common, recurring issues, such as the inability to roam, random device disconnections and persistent performance problems with data throughput. If possible, the engineer will observe the problems and attempt to recreate them to drill down to root causes.
The process also includes:

- Assessing wireless coverage to verify RF signal quality throughout the facility
- Check for interference with a spectrum analyzer
- Review configurations of access points such as wireless controllers
- Check for firmware upgrades for the data collection devices and update and test if possible

Take the Next Step and Download Our Checklist

The race for logistics speed and efficiency won't be won with technology designed for simpler expectations. The only way to position your company for future success is to ensure that your network infrastructure will provide the rock-solid foundation you need to optimize productivity today and tomorrow.

Peak-Ryzex is a wireless networking expert provider with deep experience in designing and implementing mobility solutions for commercial environments including warehouses, hospitals, schools, manufacturers, and business offices.

Download our Wireless Networking Troubleshooting Checklist to discover common pitfalls made by internal IT teams, and how to leverage the experts at Peak-Ryzex to optimize your network performance to meet today's demands and prepare for the demands of the future.

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