Case Study

How one of the largest package delivery companies in the world uses iBwave to deploy & manage their Wi-Fi networks across thousands of sites.
INTRODUCTION
As one of the largest package delivery and logistics companies in the world, one of our newest iBwave customers came to us wondering how our software could improve their existing process for deploying and managing their many Wi-Fi networks across tens of thousands of facilities around the world.

WHAT WERE THE KEY CHALLENGES?
From the start, it became clear that the biggest challenge they were facing was just the sheer number of sites they had to manage around the globe. With tens of thousands of facilities, all ranging in size, type and location, logistical and process challenges were proving to be costly.

Here are the four main challenges they were experiencing prior to iBwave.

1. Managing Thousands of Sites and Sharing Survey Information
How to design, deploy, and manage the Wi-Fi networks for the thousands of facilities they had around the world, in an efficient and cost-effective way? And how can documentation be better shared and accessed by the teams on the ground at all of those facilities to reduce troubleshooting time and costs?

2. Streamlining Site Surveys & Enabling Convergence
How to reduce the time it takes to complete site surveys and store the information in a central repository to reduce the need to do multiple types (Cellular/Wi-Fi) of site surveys at one facility.

3. Network Design Quality & Optimization
How to optimize designs to reduce costs and improve the quality of designs to reduce troubleshooting post-installation?

4. Designing Reports & Documentation
How to reduce the amount of manual labor and time put into tracking costs associated to the Wi-Fi networks?
WHAT WAS THE SOLUTION?

The good news is, we’ve helped many other companies with the exact same issues, especially when it comes to managing multiple sites. It’s an aspect of our software solution that sets us apart from any other competitor on the market.

Here is how we did it.

The iBwave Design Suite is a powerful combination of our robust mobile app for surveying, our powerful network design software for design optimization, and iBwave Unity, our SaaS-based enhanced cloud solution that connects them both and provides a simple way to monitor, manage and access all of your sites and documentation from one place.

To give you a quick high-level overview of how they all work together, here is a visual of how they interact with one another through the lifecycle of a Wi-Fi network design project from survey to design, deployment and maintenance.
SOLVING THE CHALLENGES

Here is how the iBwave software suite specifically helped this customer to overcome the key challenges outlined above.

Managing Multiple Sites

An Overview of the Challenge

Managing multiple sites is a big challenge for many large Enterprise companies and this customer was no exception. With tens of thousands of facilities located across the United States, the biggest challenge was how to manage the design documentation in a single location to simplify the maintenance and troubleshooting of the network for the ‘Corporate Technical Support Group’ technicians located at the facilities across the globe.

Previously when using Air Magnet, survey and design documentation and reports were not centralized in a place where the technicians at the different facilities could access them when troubleshooting or validating a network’s performance.

There was also the issue of having to ship a Netscout device out to the facilities whenever a troubleshooting issue arose—often a time consuming and expensive cost.

To solve these issues, the powerful combination of iBwave Mobile Planner, and iBwave Unity were implemented.

How the Challenge was Resolved

iBwave Unity is our advanced cloud-based site and project management software that gave this customer a single repository to keep all of their documentation — designs, survey data, site documentation — centralized and synchronized. For the technicians on-site this means they can now easily access previous design and survey data, to have a baseline and test against.
The problem of having to ship a technician a testing tool each time was solved with our mobile app, iBwave Mobile Planner. With no dongle licensing to worry about, various sites can now keep their own mobile app (usable on any Android mobile device) and use it to survey and test each of the facilities when there was an issue.

The Business Impact
While no exact number can be given because every site and every troubleshooting effort varies, it’s been seen by our customer that this solution saves them an estimated 50 hours for the average site/troubleshooting effort.

50 HOURS SAVED
- Site Surveys
- Network Tests
- Troubleshooting
- Design/Redesign
- Sharing Documentation

How?
Breaking it down, the estimate stems from the following:
→ Having baseline design and survey documentation to start the troubleshooting
→ Not having to ship a testing tool/train users on it
→ Easily sharing data and information post-troubleshooting survey

Next, let’s look at the challenges of being able to consider the LTE network while doing their Wi-Fi site surveys.
Converged Site Surveys (Cellular + Wi-Fi)

An Overview of the Challenge
Convergence—a word we are hearing more and more from our large Enterprise customers when it comes to managing their network and for this particular customer, an important requirement for doing site surveys.

Why so important?
While the size of their many facilities varies, the largest and most active facilities (storage and shipping warehouses), can often span more than two million square feet and many of their apps rely on the cellular network to perform.

For that reason, it was important for this customer to understand not only their Wi-Fi coverage, but also their cellular coverage inside and outside their venues and the impact of it on their Wi-Fi network.

Prior to iBwave, to collect the data for the cellular network it was a complicated and costly process, with two main challenges:

1. Since they did not have the right tools or training, they had to outsource the collection of the cellular data to a third party company, leading to high costs and very long delays, often taking weeks to complete.

2. Because the Wi-Fi and Cellular data couldn’t be collected at the same time, multiple site walks for the same facility would have to be performed, doubling the site survey time it could take if they just had one tool to do both.

3. Without a central repository for documentation, they would often have to repeat the surveys because data could not be shared properly.

How the Challenge was Resolved
These three issues were resolved with the use of our cloud-based site management software iBwave Unity, and our mobile app, iBwave Mobile Planner, to perform the surveys. Enabling full Wi-Fi active and passive surveys as well as cellular data collection with all major cellular survey tools, collecting both the Wi-Fi and cellular site data at the same time became
simple to do. And with the implementation of the iBwave Unity cloud solution, all survey data collected could now be stored in a central repository, eliminating any risk of lost data that needs to be re-collected.

By having one tool to now collect both sets of data, it also eliminated the time delays and costs associated to having to use a third party tool to conduct the cellular survey.

**The Business Impact**

While not able to put an exact number on it, the time and cost savings are significant now that there is no need to outsource a piece of the work, and all data that is needed for a complete design is documented. A survey that may have taken weeks before to gather all data can now be done in days.

> “The ability to gather both cellular and Wi-Fi network data ourselves at the same time, in one tool without the help of a third party, is invaluable to us in terms of time, cost and documentation.” – Senior WLAN Design & Support Engineer

Finally, let’s look at the last challenge resolved by using iBwave software—design optimization and quality.

**Improving Design Quality & Optimization**

**The Challenge**

When it comes to any type of wireless network design, if the design is not done well from the start, then it can lead to two things: 1) costly troubleshooting and re-design later, and 2) a design that is not optimized and therefore more expensive than it needs to be.

These two issues are the main reasons our iBwave software is so focused on enabling design optimization and network performance prediction accuracy. We pride ourselves on making sure our customers have the best wireless network design software to deliver the highest quality of designs to their end-users in the most cost-effective way possible.

For this customer, the quality of the designs they were getting from AirMagnet, and the level of troubleshooting they had to dedicate their resources post-installation, was proving to be a costly challenge. As was the over-designing of the networks – why add more Access Points if coverage and capacity can be maximized for less?

**The Resolution**

Both of these challenges are ultimately resolved by the powerful features and prediction capabilities in iBwave Design. With features like 3D modeling, inclined surface modeling, propagation through floors, and prediction calibration, the quality and accuracy of the designs will improve significantly.

**The Results**

Accurate prediction results leads to high-quality optimized designs and ultimately less troubleshooting post-install.
Simplifying Reports & Documentation

The Challenge
Reports and documentation are part of almost any wireless network design project and it is no different for this large Enterprise customer.

Of importance for them are accurate costing reports. Prior to iBwave the process to produce these types of reports was manual, tedious and time consuming, often taking almost an hour to put one together, and often at the risk of human error as there was no way to automatically generate them.

The Resolution
With iBwave now in place, that time previously spent on manually creating reports is eliminated and costing reports are generated in a matter of seconds with one click.

Additionally, costing reports can now be generated at both the individual project basis, or across several different projects, using iBwave Unity. For example, if they want to track costs across particular building types (warehouses, depots, etc) or for a certain region, that is now simple to do in either a report or dashboard.

Here are some costing report examples.

Conclusion
By using the powerful solution of iBwave Unity + iBwave Mobile Planner and iBwave Design, this large Enterprise customer is now able to manage the thousands of sites across the world from a single location – resulting in higher-quality Wi-Fi networks and less time and money spent troubleshooting them.