DHL is present in over 220 countries worldwide. This, it says, makes DHL the most international company in the world. With a workforce exceeding 350,000 employees, it provides solutions for an almost infinite number of logistics needs. The business has ambitious growth plans; it wants to expand into new markets and take a leadership position in the vibrant e-commerce sector.

Yet, in spite of the scale and global reach, every DHL process is focused on one thing: a customer waiting for a parcel. To succeed, DHL wants to be the most efficient parcel delivery business in the world. Every time.

**A FOCUS ON PROCESS EFFICIENCY**

In Germany, the 35 DHL parcel sorting offices sort and dispatch up to 50,000 parcels every hour. These centres, the size of 200 football pitches, operate 24/7. They are the height of modern business process efficiency.

But it is not enough. DHL wants to examine every step in the process, automating wherever possible. It wants to ensure no package is misplaced, damaged or delayed. It wants to lead the market not just in terms of scale but in innovation.

“Ultimately we want to build a sorting centre that is entirely automated, with no people,” says Hendrik Stiefel, Information Security Officer, DHL. “This would allow us to build smaller centres, closer to end customers. The closer we are, the faster our deliveries.”

**PAVING THE WAY TOWARDS FULLY-AUTOMATED SORTING CENTRES WITH ARUBA MOBILE FIRST ARCHITECTURE**

**REQUIREMENTS**
- Enable the use of mobile handheld scanners and data entry devices
- Simplify network management and control
- Support greater process automation
- Secure network access for vendors remotely maintaining machines and equipment
- Secure contractor network access
- Migrate surveillance cameras to the Wi-Fi network

**SOLUTION**
- Aruba Wi-Fi Instant APs for all sorting centres
- AirWave Network Management
- Aruba ClearPass for Network Access Control
- ClearPass integration with DHL’s Firewall

**OUTCOMES**
- Uninterrupted connectivity in 35 sorting centres, running 24/7
- Greater mobility supports improved communication and data sharing
- Wi-Fi is the new enterprise communication platform
- Simplified remote deployment of new sorting centres
- Creates roadmap to IoT, location-based services and automated asset tracking
- Establishes a connectivity and business process blueprint for international sorting centres
- Improved communication and tracking
- Streamlined and automated processes

Logistics relies on mobility

To begin, DHL wanted to overhaul the wireless connectivity at the 35 sorting centres. By upgrading the network, each centre would immediately support handheld scanners; longer term, the goal is to integrate CCTV, location-based services and IoT.

“Today, technology is mobile. Staff need access to smartphones, laptops or handheld scanners and drivers arriving at the centres need to connect. Everyone needs Wi-Fi.”

HENDRIK STIEFEL
INFORMATION SECURITY OFFICER, DHL

“The existing Wi-Fi was 10 years old. Because of the amount of machinery and steel in the centres, we had poor connectivity. It was unreliable and not easy to manage,” says Hendrik Stiefel.

With more devices needing to connect to the network, the issue was threatening to negatively impact performance. “Today, technology is mobile,” says Hendrik Stiefel. “Staff need access to smartphones, laptops or handheld scanners and drivers arriving at the centres need to connect. Everyone needs Wi-Fi.”
Reliable high-performance, easier management
The solution is entirely based on the Aruba Mobile First Architecture. It features Aruba ClearPass Network Access Control and Aruba AirWave Network Management. Over 1,500 Aruba Instant Access Points have been deployed in the 35 sorting centres. The project was designed and implemented by Gigahertz, a local Aruba partner. Gigahertz also remotely manages the infrastructure using AirWave.

“We considered options from Aruba and its largest competitor,” says Hendrik Stiefel, “and the Aruba solution was better. In particular, the Aruba solution doesn’t need an onsite controller infrastructure. The controller is inside the access point. It’s safer, more reliable and easier to control.”

In addition, Hendrik Stiefel had worked with Gigahertz previously: “We’d had a good experience with Gigahertz – it was the right solution and the right project management.”

IMPROVED COMMUNICATION, SIMPLER ACCESS TO DATA
The upgrade allows DHL to roll-out mobile devices across its parcel sorting centres across Germany. Consistent, high-performance connectivity means it can be confident these devices are being used effectively.

“For instance, staff can use their smartphones to take a picture of a damaged parcel, and immediately send it to a central mailbox,” says Hendrik Stiefel. “Staff can carry out updates without needing a physical connection; they can access data on the go, without needing to go back to the office.”

It means drivers arriving at the centres (there are up to 250 delivery docks at each location) can connect through guest access. Communication and tracking are improved. It is easier to contact staff, and for teams to share information. CCTV cameras can connect to the wireless network, allowing DHL to record parcel movements from new locations without worrying about cabling constraints.

Future asset tracking and location-based services
Additionally, the Aruba Mobile First Architecture provides an easily scalable platform on which to add new devices and applications. Effective asset tracking is a huge challenge. DHL wants to know the status of each element in the logistics chain, including the contents of every truck that arrives or that of the pallets in the depot. The future will involve more sensors and more IoT elements to create a smarter and more data-rich environment for DHL.

“What we’re trying in the future is to use the Wi-Fi for location services. We need to know where the transport systems are inside the building and outside,” says Hendrik Stiefel. “GPS is good for outside, but it may be more advantageous to the Wi-Fi for this as there will be thousands of users.”

The Aruba access points have become a platform that supports a broad range of IoT devices including asset tags, Bluetooth beacons, sensors, actuators, and mobile and worker safety devices. Specifically, Aruba and its ecosystem partners can help us develop asset tracking solutions that can be economically, reliably, and securely deployed over a site’s Aruba wireless network.