

CASE STUDY

Americold Positions Itself for Future Growth

Transforming cold chain operations with upgraded wireless connectivity, voice-picking, and RF devices from Dematic



▶ **Americold is one of the world’s largest owners and operators of temperature-controlled infrastructure, managing 239 warehouses globally. With more than 300,000 pallet positions across Australia and New Zealand, Americold plays a crucial role in connecting food producers, processors, distributors, quick-serve restaurants, and retailers to consumers through its integrated global supply chain network.**

“We provide temperature-controlled warehousing for our customers in this region, from your local supermarket, your local restaurants, major manufacturers, or food producers. We support them all in Australia,” said Aishling O’Brien, Vice President, Information Technology, APAC, Americold Logistics. “We currently operate 13 sites in Australia, ensuring operational efficiencies and the timely distribution of goods across the country.”

To maintain its position as a leader in temperature-controlled logistics and meet increasing operational demands, Americold partnered with Dematic to optimise its cold chain operations technology in Australia. This collaboration has upgraded Americold’s existing Dematic wireless connectivity, voice-picking systems, and Radio Frequency (RF) devices with the latest technologies, further boosting efficiencies and productivity while preparing for future growth.



THE OPPORTUNITY: MODERNISING TECHNOLOGY AND IMPROVING OPERATIONAL PERFORMANCE DISRUPTIONS

Americold's 24/7 cold storage facilities rely on seamless operations, with staff using voice-guided wearable technology in sub-zero temperatures. Manual picking and scanning processes, combined with the challenge of wearing protective gloves, make voice-enabled technology a key driver of productivity and worker comfort.

In addition, the dense racking systems and high product volume pose a challenge to reliable wireless network design. Metal shelving and tightly packed items can interfere with connectivity. Americold sought to ensure that its network design addressed these current and future needs, delivering reliable and scalable wireless connectivity for enhanced operations.

"The limitations of the old technology meant we weren't operating as efficiently as we could," explained Steven Holiday, Prospect Site General Manager, Americold Logistics. "We needed to modernise not just for today, but to ensure we could continue to meet growing demand in the future."

THE SOLUTION: DRIVING OPERATIONAL IMPROVEMENTS WITH ADVANCED TECHNOLOGIES

By partnering with Dematic, Americold aimed to optimise its operational systems while also future-proofing its facilities to support sustained growth in the temperature-controlled supply chain.

WLAN

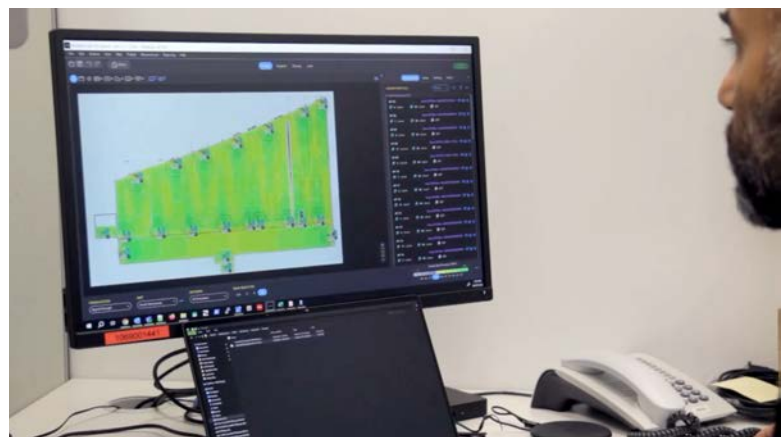
The project focused on enhancing wireless connectivity at Americold's major distribution centres. Dematic collaborated closely with Americold to design a WLAN (wireless local area network) infrastructure that ensured reliable coverage throughout the facilities, even in challenging cold storage environments where metal racking and dense product stacks can disrupt signals.

Americold's facilities presented unique technical challenges for setting up the wireless network, especially in cold storage areas like freezers. This required careful planning for access point placement and antenna technology to optimise performance.

Glenn Batten, Senior BDM ANZ at Dematic, highlighted the challenges of designing a robust wireless network in Americold's complex layout and storage conditions. "The network comprises mainly of industrial-grade access points that can be mounted both inside and outside freezers. But getting the best coverage can be tricky, especially with the racks, aisles, and the density of products. That's why designing a robust 'next gen' wireless coverage network and selecting the right technology is so important to ensure reliable connectivity," he said.

Dematic has developed a range of custom mounting brackets that position specific antennas in an optimal spot to balance reflections and minimise signal interference.

"The density of our product, the racking, the type of product we've got in it, the temperature of the room—all of these are factors in how well the whole network works," explained O'Brien. "Dematic supported us in that by conducting surveys and checking the deployment of new networks to ensure everything was optimised before we made the switch."





The installation of Cisco industrial-grade access points with Dematic's specialised antennas has ensured that even in dense, challenging environments, wireless connectivity remains strong.

“Dematic worked with Americold by providing on-site support, not only introducing the equipment, but they also helped align the equipment with Americold systems, connecting to the Wi-Fi and the access points.”

Steven Holiday, Prospect Site General Manager, Americold Logistics

Voice-Picking for Improved Efficiency and Productivity in Cold Storage

As part of a broader technology upgrade, Americold focused on enhancing its voice-picking systems alongside WLAN improvements. Americold was the first company in Australia and New Zealand to implement voice technology in its supply chain operations, beginning with Dematic's rollout in 2002. Since then, the company has continuously refreshed and upgraded its voice-picking technology to maintain a competitive edge.

Voice-picking technology is crucial in Americold's cold storage environments, where workers must remain hands-free while wearing protective gloves and bulky gear. This system provides workers with voice-guided instructions, allowing them to perform tasks like picking, replenishment, and stocktaking without the need for paper or handheld devices. By integrating seamlessly with warehouse management systems, voice-picking ensures real-time data collection, greater accuracy, and improved safety across operations.

The hands-free approach not only enhances worker efficiency but also reduces errors, making it especially valuable in cold storage settings. In environments where manual input is challenging, voice technology can deliver up to a 35% increase in productivity compared to manual or other technological processes.

Each worker personalises the system by training it to recognise their voice in just a few minutes. This simple training process allows operators to quickly become productive, reaching peak efficiency faster than with alternative methods.

The latest upgrades to Americold's voice technology have further improved scalability, flexibility, and visibility across its operations, enabling management to optimise workflows and enhance overall operational performance.

“Voice is key for us in those cold environments where people don't need to use their hands,” said O'Brien. “It's much better for our team; it just allows them to do their job quickly and get out of that freezer and out of the cold.”





RF Devices for Real-Time Product Handling and Communication

In addition to upgrading its Voice technology, Americold enhanced its RF freezer-grade devices. Dematic introduced new Android RF devices equipped with a future-proof Android operating system and a faster processor. These devices not only meet stringent IT security requirements but also efficiently handle higher data volumes while enabling real-time communication between the warehouse management system and operators. Furthermore, the implementation of Mobile Device Management (MDM) software allows for seamless deployment, remote security updates, and ongoing support, ensuring a more streamlined and secure operation.

The new RF devices have streamlined the product-handling process, providing real-time communication between operators and the warehouse management system (WMS). This has resulted in more accurate inventory tracking and faster order fulfilment.

“The new RF devices have made it much easier to handle products, and the system is much faster than it was before. So, if 10 cartons are picked, the system immediately knows,” explained Holiday. The real-time tracking provided by the new RF devices allows for more accurate inventory management, reduced errors, and improved communication throughout the facility.

“It’s much easier for the operator to scan instead of type,” Holiday added.

THE BENEFITS: INCREASED EFFICIENCY, ACCURACY, AND CONNECTIVITY

With continued investment by Americold into new technology and the latest wireless network capability, it has delivered positive outcomes on operational productivity and its ability to serve its customers.

Future-Proofing for Growth

Overall, the upgrades have positioned Americold to better handle future demands in the temperature-controlled supply chain industry. The improved systems offer flexibility for future technology migrations and potential for further scalability as the company grows.

“As their technology changes, there’s been some migration requirements to move Americold to new operating systems like Android. That has now given them openness to other software tools for management, visibility for maintenance, compatibility, and security,” said Batten.

A STRONG PARTNERSHIP FOR THE FUTURE

The partnership between Americold and Dematic has been crucial to the success of the upgrade project. Dematic provided on-site support from the initial planning stages through to the final deployment of new technology, and its ongoing involvement has ensured that Americold’s systems continue to operate smoothly.

“Dematic understands our business and brings solutions that are relevant to our needs. They have a wide customer range themselves and are well positioned to tell us what’s happening in the market and where they can see further efficiencies for Americold.”

Aishling O’Brien, Vice President, Information Technology, APAC, Americold Logistics

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▶ If you are interested in learning more about this topic and how we can help, please contact us.

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