

Creating the first connected warehouse

Accenture empowers Singtel and Zuellig Pharma to innovate with Ericsson 5G





Call for change

Revolutionising how warehouses work

We take fast, frictionless mobile connections for granted, but as 5G ushers in new and improved experiences, it promises much more than just personal convenience: It is fundamentally transforming how industries function and compete.

[Research shows](#) that in just the next few years, 5G will drive significant sales growth, add to the US GDP and create millions of jobs. And by 2025, more than [36.8 billion connected devices](#) will tap into 5G's data gold mine.

As communications service providers [shift their focus to B2B](#), Singtel—the largest telecommunications company in Singapore—recognized 5G's vast potential in the manufacturing space. The company joined forces with Accenture to create a “5G warehouse” proof of concept for Zuellig Pharma, a \$13B healthcare services company.

Zuellig Pharma, which has enjoyed tremendous growth in recent years, needed to implement automated solutions in its warehouse to improve

efficiency, inventory visibility, worker safety and, crucially, throughput (how many orders the company fulfills from a single warehouse at any point in time).

For instance, “picking”—the process of manually selecting items for shipping—was labor-intensive, especially as orders increased in volume and variety.

With a proven infrastructure network and deep experience, Singtel wanted to explore 5G's potential to unlock the power of the connected devices required for cutting-edge automation, inventory management and analytics. If the experiment proved successful, Zuellig Pharma could completely reimagine its warehouse operations for the future.

Zuellig Pharma embraced the idea of tapping into automation and 5G to improve both picking and inventory counting and called on Accenture and Singtel to design the right solution.

When tech meets human ingenuity

Automation = efficiency + accuracy

Accenture and Singtel's expertise in 5G, end-to-end capabilities and vast ecosystems made them the ideal partners for Zuellig Pharma.

5G can deliver more data at greater speed and lower latency, transmitting information in real time and enabling the kind of automation Zuellig Pharma needed. And Singtel's GENIE, the world's first portable 5G platform, makes experimentation possible. GENIE, powered by Ericsson, comes in a suitcase-sized container and can be installed in under an hour, enabling companies to experience 5G's capabilities and test use cases on-premises.

The team's vision for a 5G warehouse centered around using GENIE to test smart solutions for picking (through augmented reality) and inventory counting (through drones).

In AR Vision Picking, workers wear custom augmented reality vision goggles that display information in real time. And rather than carrying a traditional hand-held scanner, pickers wear a special ring

scanner, making the entire process completely hands-free and creating a safe, seamless experience.

The solution improves picking productivity, increasing the throughput for the workers, while real-time analytics and insights offer a bird's-eye view of the entire process.

As for inventory counting, a 5G-enabled drone flies across different levels of the warehouse with ease. A wall-to-wall inventory count takes just 20 minutes, allowing for more frequent and accurate tallies. This helps automate inventory management and frees up employees to do more specialised tasks.

Since warehouse space is finite, optimising it is essential for a growing company like Zuellig Pharma. Drones can also be used to map the entire warehouse and calculate the utilisation rate of space to ensure that products are distributed efficiently. They can also conduct quality control.

A valuable difference

The possibilities are endless

The entire end-to-end solution demonstrates the unique power of Accenture’s scale and reach, with diverse groups of specialists collaborating to create innovative solutions at every step, from conception to delivery.

In addition, AR Vision Picking and Drone Inventory Management made Zuellig Pharma’s warehouse operations more data-driven and automated. The solution improved efficiency, throughput and inventory visibility and was well-received by Zuellig Pharma’s pickers on the front lines in the warehouse.

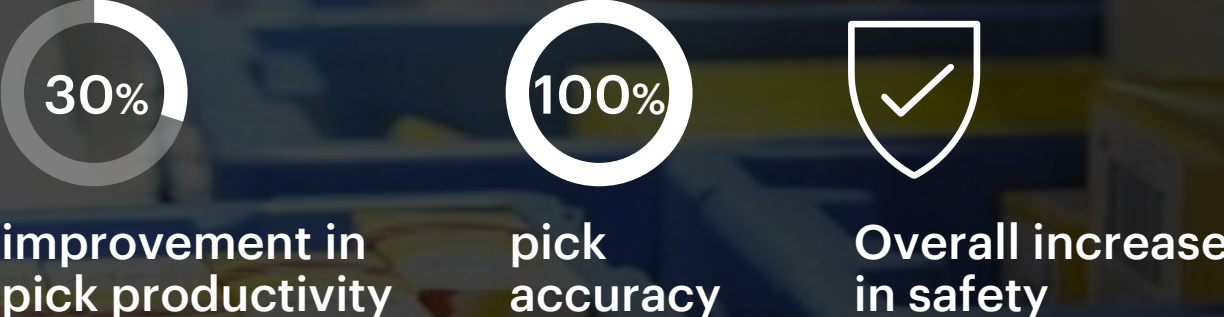
The success of this proof of concept laid the foundation for Singtel and Accenture to continue to experiment with 5G automation projects for other clients in supply chain, logistics and manufacturing.

The true power of the 5G warehouse lies in its potential to be customised to meet different and changing needs across industries. Because 5G networks can prioritise essential applications, the solution is highly adaptable. For instance, AR Vision Picking could be used to develop a system that assigns the qualified worker nearest to the site to perform an urgent pick by sending a notice to their AR headset.

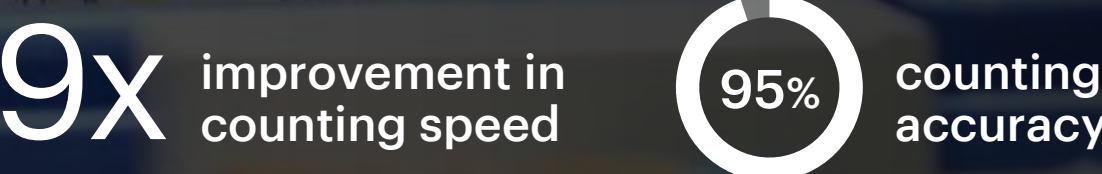
Drone video analytics can be used for warehouse perimeter security and warehouse safety improvements (such as ensuring storage location compliance for flammable or hazardous materials). Drones could also perform predictive and preventive maintenance, through screening of hard-to-reach areas (ceilings, roofs, AC ducts) and identifying damage.

More efficient, more productive and more accurate warehouse operations are essential to manufacturing’s future. And just as assembly lines and steam engines revolutionised industries of the past, 5G warehouses, with their AR goggles, drones and endless possibilities, are changing the game for businesses of today.

AR Vision Picking delivered:



Drone inventory counting delivered:





5G has enabled our warehouse operations to be more efficient, productive, transparent and flexible. Its adaptability can help to support Zuellig Pharma's evolving needs as we continue to make healthcare more accessible to the communities we serve."

Maikel Kuijpers

Executive Vice President Distribution at Zuellig Pharma



There's no question that 5G is the key to truly transforming manufacturing and warehouse operations for the future. This is just the beginning."

Dennis Wong

Vice President, Enterprise 5G & Platforms, Singtel



GENIE's ability to upend industries can't be overstated. Its portability means that any company can experiment...and experience the true power of connected operations for themselves."

Martin Wiktorin

President & Country Manager for Ericsson Singapore, Brunei, Philippines & Pacific Islands



The results of this 5G powered 'warehouse of the future' proof of concept speak for themselves, but at the end of the day, there's nothing more rewarding than when innovation is the result of true collaboration with our clients and partners."

Pankaj Chopra

Managing Director, Global Accenture Partner for Singtel Group

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