

Reimagining distribution centers using cloud-based distributed architecture

For an Australian retailing giant



Client description

The client is a leading Australian retailer, with over 2,500 retail outlets nationally. They have approximately 6.5 million customers and a staggering 33% of market share in the retail industry in Australia.



Business challenges

The client had many distribution centers where suppliers sent their products by truck. The truck drivers used to reach the distribution center, unload, and deliver the products from suppliers. The client followed many manual processes that used to take a considerable human effort and lead to hassles and unnecessary waiting.

The client had the following manual processes that needed automation to minimize human effort:



Booking verification during Check-in - Drivers scan the QR code or enter the booking reference and license no in the kiosk during check-in for validation

Office clerk approval - As the driver enters the booking verification details, a request goes to the clerk in the back office to approve to proceed to the next level

COR (chain of responsibility) questionnaire - The driver is requested to stop in between and asked to fill-up COR Questionnaire

Office clerk approval - Office clerk approves COR questionnaire

Gate and conveyor gate/belt assignation - Upon clerk approval, a gate is assigned to the driver to proceed

Check out - Once unload is completed, driver proceeds to check out and scans/enters details

Gatehouse approval - Gate keeper takes the weight of the truck, does manual verification, and approves in the system. The gate is then opened and the driver exits

Unload - Old manual process to unload a ll products

Admin module - MISC admin functionalities. E.g. change COR questionnaire.

Our Solution

HCL partnered with the client to create a paperless, more efficient system for their busy distribution centers. At a high level, the solution had the following important components:



Microservices based - Container-based, scalable, and resilient distributed architecture

Cloud neutral - Container-based, cloud-agnostic, and portable-deployment model

Experience driven - Micro-applications, function-specific, high-performing and progressive web application

Sustainable - Frictionless solution designed to deliver the best outcomes

Operating model - Agile delivery ownership, paperless-platform approach, DevOps-driven, and squad-led operating model

Automation - Seamless deployment of build, deployment, test and production rollout. Solution provisioning using ADC.Net

Our human-centric approach to design and technology implementation creates better experience, improves productivity, and builds lean operations. This approach provided the four key elements to the solution:

Intuitive - Simple, intuitive, and modern design aligned to users' needs.

Personalized - Personalized experience delivered through persona-based design and user journey analysis.

Mobile - Mobility solutions to assist the users with the full functionalities across devices.

Seamless - Well designed architecture enabling users to complete any task with minimum number of clicks/interaction possible.

Technologies Used: Angular, DotNet 3.1, AKS, One SQL Azure DB, Service Bus, APIM, Key Vault, App Insight, Serilog, SonarQube, Consul Security, Azure Devops CI CD, Kustomize

Business impact

An additional **7%** gain in market share by the client

Client achieved **70%** increase in productivity

Improved **customer experience** through innovative features such as **virtual waiting room** and **priority service delivery** for senior citizens

Client now had **25%** reduction in time to launch new features

30% decrease in operational cost was achieved by implementing the paperless system

The system availability bumped to **99.99%**

