



## Insider Profile

# Coca-Cola Amatil Automates Distribution Center Operations and Vehicle Load Planning

*Logistics planners leverage SAP EWM and SAP TM to optimize order fulfillment*

by Pierce Owen, VP of Research and Publishing, SAPinsider | January 2020



Only 7% of SAP supply chain customers currently use both SAP Extended Warehouse Management (EWM) and SAP Transportation Management (TM), according to SAPinsider's [Transforming the Intelligent Supply Chain](#) research; however, one of those customers, [Coca-Cola Amatil Limited](#), has found significant benefits in integrating both products with SAP ECC.

SAPinsider recently interviewed Keith Harrison, Solution Delivery Manager for Supply Chain Applications at Amatil, one of the largest bottlers and distributors of both non-alcoholic and alcoholic ready-to-drink beverages in Asia Pacific, and one of the world's largest bottlers for The Coca-Cola Company. Coca-Cola Amatil has around 14,000 employees working in Australia, Indonesia, New Zealand, Fiji, Papua

New Guinea, and Samoa with its headquarters located in North Sydney, Australia.

This research brief shares the story of how Amatil has integrated SAP EWM with its automated guided vehicles (AGVs) in its distribution center to automate operations and improved truck load planning with SAP TM to save time and money.

## Disparate and Disjointed Systems Cause Compliance Issues

Australia has approximately the same land area as the forty-eight contiguous United States and Washington, D.C., occupying an area of about 3 million square miles, albeit with a population of less than 10% of the US. Amatil delivers products to 95% of Australia's post codes every two weeks through ten freight and delivery networks that it operates. With the scale of its operations, even incremental improvements can lead to massive savings. Harrison shared, "We don't need significant improvements in our planning to get significant payback."

Until recently, Amatil had relatively disparate and disjointed solutions for warehouse and transportation management. The legacy systems lacked integrations with spreadsheets and SAP ERP. "Our legacy tools didn't have the needed complexity, and they weren't dynamic enough," said Harrison.

On the warehouse side, Amatil has built a new distribution center (DC) complete with connected AGVs that drive products from the production line in the manufacturing plant next door to various parts of the new DC. The new DC combined and replaced three older warehouse facilities to better utilize existing land and build economies of scales. With this new facility and automation capabilities, Amatil needed to assess its warehouse management strategy.

On the transportation management side, Amatil had room for significant productivity improvement. Prior to implementing SAP TM, the company used spreadsheets to plan truck loads based on orders. It would take hours to check orders and stock and then plan the pallets and trucks on the spreadsheets.

Amatil moves over 500 trucks each day and to comply with Australia's chain of responsibility (COR) policies, the company must plan every truck load properly, with weight distributed evenly across the truck axles. If they fail the test at a weighbridge, the driver must take the truck back to the warehouse and rearrange the pallets before going back to the weighbridge to try again.

Taking time out of their day to drive back to the warehouse to rearrange pallets prevents drivers from completing their routes, not to

mention they must schedule times at the weigh station beforehand.

Additionally, drivers cannot work more than ten hours without a twelve-hour break. This means Amatil must plan journeys relatively precisely but could benefit from dynamic changes and reactions to traffic to meet demand and avoid delays.

"We have strict requirements for customer demands that we cannot meet if our trucks fail to pass the weighbridges," said Harrison.

## Automating the Distribution Center

As an SAP shop running SAP ECC, SAP EWM emerged as a key option for a new warehouse management system. "A lot of automation systems are black boxes, but SAP EWM grants visibility into operations and products in automatic storage retrieval to manage picking movements out of different storage areas," said Harrison.

Amatil implemented SAP EWM with Icon Integration as a partner to automatically orchestrate the movement of pallets from production lines to storage areas and then to loading docks through SSI SCHAEFER's Automatic Storage & Retrieval System (ASRS). SAP EWM empowers managers on the shop floor and planners in the office to know where products are and when they need to move. The planners run simulations daily to test the automated orchestration. "They still run the simulations, but SAP EWM is always accurate," said Harrison.

If Amatil receives an order, it might require mixed pallets with different products from the ASRS, manual pick area, bulk storage, and direct from the production lines. SAP EWM orchestrates orders with the required lead times based on where the products are and then sets the path for the AGVs and employees so that all the products come together at the correct loading dock at the correct time. The system sends the AGVs their tasks, and they execute.

The AGVs also collect products from the production line. As soon as they do, the products become visible in EWM. Previously, inventory did not transition to the distribution center until someone scanned it into the warehouse. If products are not racked correctly, the AGVs move them to a quality assurance area for re-racking, re-wrapping, or a new pallet. After it passes a quality inspection, the product goes back into SAP EWM, and it sends a task to an AGV to recollect the products.

Amatil will scale SAP EWM to its other sites as existing leases on legacy warehouse management systems (WMS) expire. In addition to the DC in Australia, it has already rolled out to multiple sites in Indonesia.

## Optimizing Truck Loads and Routes

Amatil started implementing SAP TM in 2017 with Novigo as a partner and won't complete the full deployment for another two years.

Two major grocery store chains cover 90% of the Australian market, and Amatil must efficiently plan truck loads and deliveries for all

their stores. In phase one of the project in 2017-2018, Amatil implemented SAP TM to handle the orders for these two grocers and transportation between its own sites.

Planning for all truck loads must integrate with SAP ECC. "It used to take over an hour to plan vehicles, but now it takes a couple minutes and happens as soon as the orders come in based on planning profiles," said Harrison.

Amatil has gone from about 90% truck space utilization to almost 100% because SAP TM provides improved visibility of the load plans, flags underutilized equipment, and automatically builds loads within predetermined constraints such as a limit on cost per pallet. When dealing with over 500 trucks per day, this leads to significant savings.

Also, since completing phase one of the SAP TM implementation, Amatil has achieved 100% weight compliance in Australia on weighbridges. "Our data is 100% accurate, and after staying at zero failures over a long enough time, we can get exemptions at the weighbridges, which will save us even more time and money," said Harrison.

In phase two, Amatil will automate the pallet planning and routes for small retailers and shops. These customers require mixed pallets with smaller quantities of each product.

The second phase will also include optimized and dynamic routes based on demand and traffic for faster and safer deliveries. "Only a little savings per route will add up quickly for us," concluded Harrison.

## What Does This Mean for SAPinsiders?

Based on our research and the interview with Keith Harrison, the following considerations can help SAP customers improve warehouse and transportation management:

- **Involve business users and transportation providers to measure the costs your organization faces to plan truck loads and comply with local regulations.**

Amatil justified its investment in SAP TM because it knew how much it could save by planning its truck loads faster and more accurately with help from its business users and transportation providers.

- **Work with a dedicated SAP TM implementation partner to stagger SAP TM implementations for quick wins with scalability.**

Amatil took care of its biggest but simplest customer orders first with the help of Novigo. This led to significant savings. Now, they have plans to better service their smaller customers with more complicated, mixed pallet orders.

- **Ensure automation solutions integrate with the core ERP.**

Amatil maximized the value of its investments in connected AGVs and a new distribution center by implementing a WMS (SAP EWM) and TMS (SAP TM) that integrated deeply with its core ERP (SAP ECC). This required professionals with skills in SAP EWM and SAP TM.

- **Choose a WMS that offers high levels of visibility and considerations for quality control.**

Amatil chose SAP EWM largely because it improved visibility into real-time

operations, which empowered shop floor managers to make more dynamic changes and redirect pallets to QA when necessary. Of course, this only worked because Amatil had accurate operational data.

Following this strategic guidance should help SAP customers get the most out of SAP EWM and SAP TM in a way that saves time and money in operations.

Pierce Owen, VP of Research and Publishing, SAPinsider, can be reached at [Pierce.Owen@wispubs.com](mailto:Pierce.Owen@wispubs.com).

## About SAPinsider

SAPinsider comprises the largest and fastest-growing SAP membership group worldwide, with more than 350,000 members across 45 countries. It provides SAP professionals with invaluable information, strategic guidance, and road-tested advice, through events, magazine articles, blogs, podcasts, interactive Q&As, benchmark reports and webinars.

SAPinsider is committed to delivering the latest and most useful content to help SAP users maximize their investment and leading the global discussion on optimizing technology.

For more information, visit <http://SAPinsiderOnline.com>.

© 2020 SAPinsider, all rights reserved. All print and electronic rights are the property of SAPinsider.