

REGION
Global

 USE CASE
Retail

 COMPANY SIZE
Enterprise


The numbers

- 250K containers / pallets for fruits & vegetables tracked
- Each with 5 trips a year to the GSC for washing and repair
- Over 15 Global Service Centers

The ask

- Global, real-time, item-level visibility, with over 99% accuracy
- Gradual ramp up of assets and asset identification in the EU with RFID by 2023
- Ability to track not only the container but the payload
- Implement mobile tracking (in trucks)

The challenge

- Creating a unified inventory with mixed identification technologies
- Reliable data capture
- Reliable interfacing with the Asset Management platform

RFID-driven asset visibility cuts loss and boosts sustainability for Tosca

Tosca is a global leader in reusable plastic packaging and performance pooling solutions, purpose-built for their customers to eliminate food, labor, transportation waste, and improve performance at every turn. The portfolio of pooled, IoT-enabled reusable plastic assets is the most robust the market has to offer, including crates, pallets, bulk containers, and more. With their expansive wash network, and a unique capability to develop customized solutions through in-house R&D and manufacturing, Tosca is the provider of choice for retailers, growers, and suppliers worldwide.

Key to their success, along with the production and provision of the pooled containers, Tosca offers a large range of services via their Global Service Centres. They help keep the items circulating and in A1 condition, addressing the critical need to properly wash and repair containers for the food industry and beyond.

The Traceability Ambition

Always eager to adopt cost-saving and productivity-generating technologies to better serve their clients, Tosca was looking to improve processes at the Service Centers, reduce shrinkage due to loss, theft or damage to the containers, and generally achieve better and consistent stock levels throughout all of their sites.

Building upon this asset inventory accuracy, and thanks to an automatic pairing of the container with its payload, Tosca will later be able to offer visibility to their clients on the location of their stocks of merchandise, to prevent out-of-stocks, or overstocking references in certain locations. Overstocking generates important losses, and a heavy carbon footprint through the waste of perishable finished goods.

Another eco-friendly benefit, beyond the obvious reuse of materials, is the mitigation of lost crates and pallets in the environment and the efficient repair of these crates, targeting the longest possible lifecycle for each item.

“The value we can bring to our customers if we can accurately tell them a load carrier location is huge, not only from an asset management perspective, but more importantly, for their stock management and optimization. Having technology partners like Coriel and BarTender that we can trust to help us deliver is hugely important.”

RAF FONTEYN
Director of Technology EMEA
Tosca

Most importantly, Tosca aims to offer an even greater competitive advantage to their clients via traceability: the power of chargeback. Through the association of the container ID with its load's IDs, Tosca clients will have proof of responsibility in the case of damaged goods or losses of merchandise, and will be able to charge the right incumbent for these losses.

The Challenges

Critical to the success of the platform is the quality of data that is captured, which starts with the unique and accurate identification of every single container - the item. Two key challenges presented themselves to Tosca. First, there was a range of different identification technologies deployed on their containers across the world, from 2D barcodes to QR codes and RFID.

Tosca has grown both organically and through acquisition over the past few years, so there was much to integrate and new standards to set. Second, all these identifiers needed to read consistently and reliably every time, and the data set be securely interfaced with the Asset IQ platform.

Reliable Scanning

The first phase of the project involved one of Tosca's clients, a major European supermarket chain in Ireland and saw the reliable scanning of thousands of QR codes per minute (used as the asset identifier for packing crates) and digitally associating these to the pallets on which the crates were stacked. This was a complex challenge that required accurate data capture with a mobile device, and reliable transportation of the data back via the BarTender Track & Trace platform to Tosca's Asset IQ system.

Enhanced Visibility

In addition to the reliable identification and tracking of packages as they move around the supply chain, the team was also challenged with reliably digitally capturing damaged products and temporarily removing these from the available asset pool while they were being repaired. This allowed management to gain visibility on the number of damaged items out of circulation and where the damage had occurred – data which helps them to ensure that enough assets are still active in the pool, and work with their customers and logistics partners to understand how damage can be reduced in the future.

Project Success

BarTender and Coriel have, together with Tosca, created a reliable infrastructure that allows for the accurate tracking of returnable transit items throughout the supply chain, providing complete visibility to the business. Tosca are able to share this valuable traceability data with their customers.

The roll-out has generated dramatic improvements and optimisations in cycle time and a significant reduction in the number of damaged items in circulation. The reliable automatic identification technologies deployed by Coriel and BarTender are now providing Tosca with a significant competitive advantage, both internally and for their direct customers.

Furthermore, as “many retailers now recognise the connection between Scope 3 emissions (the result of activities from assets beyond a company's operations, such as vendors) and a global supply chain, they are accordingly reevaluating operations and ESG simultaneously to enhance resilience while decreasing their carbon footprint.”