How to Make SAP Returnable Container Tracking 'Real Time?'

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Are you using an ERP like SAP in your organization to keep track of your pallets? Want to upgrade the Returnable Packaging Module function of your SAP or ERP to support real time tracking? Learn how you can achieve this by using a hybrid IoT technology platform and APIs.

Let's begin by analyzing the possibilities of the existing reusable packaging process in SAP or any ERP, study its limitations in terms of holistic visibility, and finally conclude with how you can use a hybrid IoT technology using GPS/GSM/BLE/Wi-Fi to upgrade your ERP to support real-time tracking of reusable containers within your own warehouse, when they are being transported, as well as at your customer locations.

Power of the SAP Returnable Packaging Module

The returnable packaging tracking functionality in SAP, or any other ERP for that matter, is built to help you better manage your returnable packaging, containers, pallets, racks, crates, bins or tubs.

Returnable shipping containers can contribute heavily to your supply chain cost if poorly managed. 10-40% of reusable shipping typically containers don't make it back[1]. Therefore, it becomes important to track and manage these returnable containers effectively.

> **The Returnable Packaging Module in SAP, or in any ERP for that matter, helps you track your returnable shipping containers. It enables you to:**
>
> - **Create and identity your returnable shipping crates, tubs, or bins.**
> - **Locate them by warehouse**
> - **Assign custodians for pallets at a location**
> - **Tie goods to a pallet on the ERP, so you know which items went on which pallet, and ultimately pallet utilization**

By marking an item as a Non-Ordered Item on the ERP, you can segregate it from an order that is shipped, and still tie it to which order it carried.

What the SAP Returnable Packaging Cannot Do?

The Returnable Transport Packaging (RTP) Process in SAP or other ERPs has major drawbacks in its native form:

Manual identification of pallets is still necessary. Someone needs to feed the data into the ERP. Data entry error could cause issues in tracking down an RTP when needed, leading to ageing or loss of RTPs.
SAP offers the ability to manage pallets, but it does not support automated data capturing and real-time tracking.

How to Track Pallets in Real Time?

To monitor pallets, returnable containers or RTPs in real time, you need an IoT device which can be attached to pallets and an IoT platform that you can integrate with your SAP using an API.

For best results, you require a hybrid IoT solution that works using all of these technologies: GPS/GSM/BLE/Wi-Fi.

1. Tag the BLE beacons onto your pallets.

2. Use a GSM/Wi-Fi (Wi-Fi helps when there is no cellular connectivity) based portable gateway hotspot to sense the BLE beacons (pallets) in its vicinity.

Portable gateway hotspots help monitor your pallets in your own warehouse, when in transit on a shipment, and in your customer's warehouses – providing end to end visibility across your supply chain

Learn how to setup a reliable BLE/GSM/GPS/Wi-Fi based IoT solution for pallet tracking.

Why RFID technology is ineffective for real time pallet tracking?

RFID needs infrastructure setup such as LAN connections and a power source, which means that your visibility is limited to your own warehouses. Most of the loss or ageing takes place when the returnable containers are in transit or when they are lying idle at your customers' or suppliers' warehouses.

3. Integrate SAP or your ERP to the IoT platform using APIs or web hooks.

See how Roambee's IoT hybrid technology platform can help you add real time tracking of pallets to SAP or any ERP.

IoT Integrated SAP Returnable Packaging Process Flow with Roambee

1. Tag the pallets with Roambee's BLE tags called "BeeBeacons."

2. Setup BeeZones in your warehouse. For in-transit monitoring, send a gateway hotspots (called "Bee") along with your consignment note or lorry receipt (LR).

3. Link the BeeBeacon ID with the pallet ID on your SAP or ERP. This can be a one-time exercise.

4. Assign your pallet as usual to your shipment as a Non-Ordered Item as per your standard process on SAP (as shown here) or your ERP.

5. Use your SAP or ERP to identify precisely whether a pallet is in-transit or located in which zone in which warehouse.

6. Create custom reports on your ERP to monitor,

   a. Ageing data
   b. RTP stock by warehouse
   c. RTP stock by zones in your warehouse
   d. Alerts for pallets that have moved outside your chain of custody

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