

## Live Enterprise – Sensor Driven Replenishment

**Function:**  
Distribution

**Processes:**  
Order management and inventory

**Industry:**  
Consumer & Industrial Products, Healthcare

### Business Driver

Many retailers are facing inventory stocking problems, such as:

- Restricted shelf storage capacity
- A need for real-time stock monitoring to avoid stock outs
- Restricted shelf life and a need for accurate replenishment signals based on consumption pattern analysis to help reduce waste and maximize sales



### Solutions Overview

“Sensor Driven Replenishment” monitors the inventory and shelf level of various SKUs at the retailer in real-time while providing global visibility of inventory for each store to the supplier. When the stock level depletes below a threshold level, a replenishment order is automatically generated, optimized by demand pattern analysis. The system also notifies the retailer when a SKU’s inventory is nearing shelf life expiry and when it is time to place promotion on the item.

### Features

#### Sensors embedded in the storage bins / shelves of the retailer

- These sensors keep track of the inventory level and consumption rate while feeding data to the digital core of the supplier

#### Predicts demand and automatically places replenishment orders

- Increases accuracy of creating replenishment orders while reducing costs of manual reorders

#### Provides a dashboard view to the retailer displaying SKU inventory levels and creates “soft” alerts for pre-ordering at a single click

- Supplier has geo visibility of inventory at various retail sites
- Applies algorithms available in SAP® Predictive Analytics Library to predict the inventory level to be maintained at a distribution center based on real-time data

### Potential Benefits

- Reduces waste
- Avoids customer shelf stock outs by sending timely signals to replenish from back storage
- Suppliers can monitor and replenish small retail players
- Improves on-time delivery while taking shelf life into consideration
- Eliminates the time lag typically associated with the exchange of POS data from retailer to supplier and possible bullwhip effects
- Replenishment-as-a-service as a new business
- Increases sales
- Provides real-time data to predict the inventory levels to maintain
- Improves service level and order fill rate



**IoT**

- Connected sensors/telemetry
- Historian integration
- Real-time streaming & big data storage



**Core SAP**

- Inventory management and control
- Order Management
- Finance integration
- Demand forecasting



**Analytics**

- Geographical dashboarding
- History and trend analysis
- Real-time reporting

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