

# Smart Sensing Agri Care Inventory Solutions for Assets, Warehouses & Stores.



Bluetooth™  
**4.0**  
Low Energy



CREATING SMARTER AGRI  
LOGISTICS, ENHANCING QUALITY  
OF PRODUCT. SAVING RESOURCES



## **Smart Sensing RFID Technology and Management Consultancy**

Every day, our work helps business run smarter and improve processes, people's lives by bringing together the diverse range of Smart Sensing digital world. You get the benefit of working with industry experts who have a real understanding of your business.

You get the benefit of working with industry experts who have a real understanding of your business, we make it our business to conquer any logistical challenges you may be facing.



## Services:

Smart digital technology is a key enabler in any business process to reduce costs, make faster and better decisions, and to increase workforce productivity. Innovation and transformation are often used synonymously, but they are different in the digital world. We evangelize innovation and learning, and help you apply it across your organization.



We offer smart pragmatic tools and insights that help resolve business problems, thus enabling organizations to achieve the competitive edge amid digital disruption.



# Entrack Applications

- Supports hybrid technologies (Barcode, Passive & Active RFID, BLE, NFC, GPS)
- Support on multiple mobile devices OS including Windows Mobile 5+, Android, iOS
- Architecture allows for easy extensibility and integration
- Strong data presentation and reporting tool
- Granular security for greater control

COMPANY\* african+ eastern (ne) (bv) Ltd

DATE FROM\* 18/10/14

DATE TO\* 18/10/14

SHOW

1 of 2 75%

### Customer Summary Report

Date/Time : 18/10/14 4:03 pm

Company Name : african+eastern (ne) (bv) Ltd

From Date : 18/10/14 To Date : 18/10/14

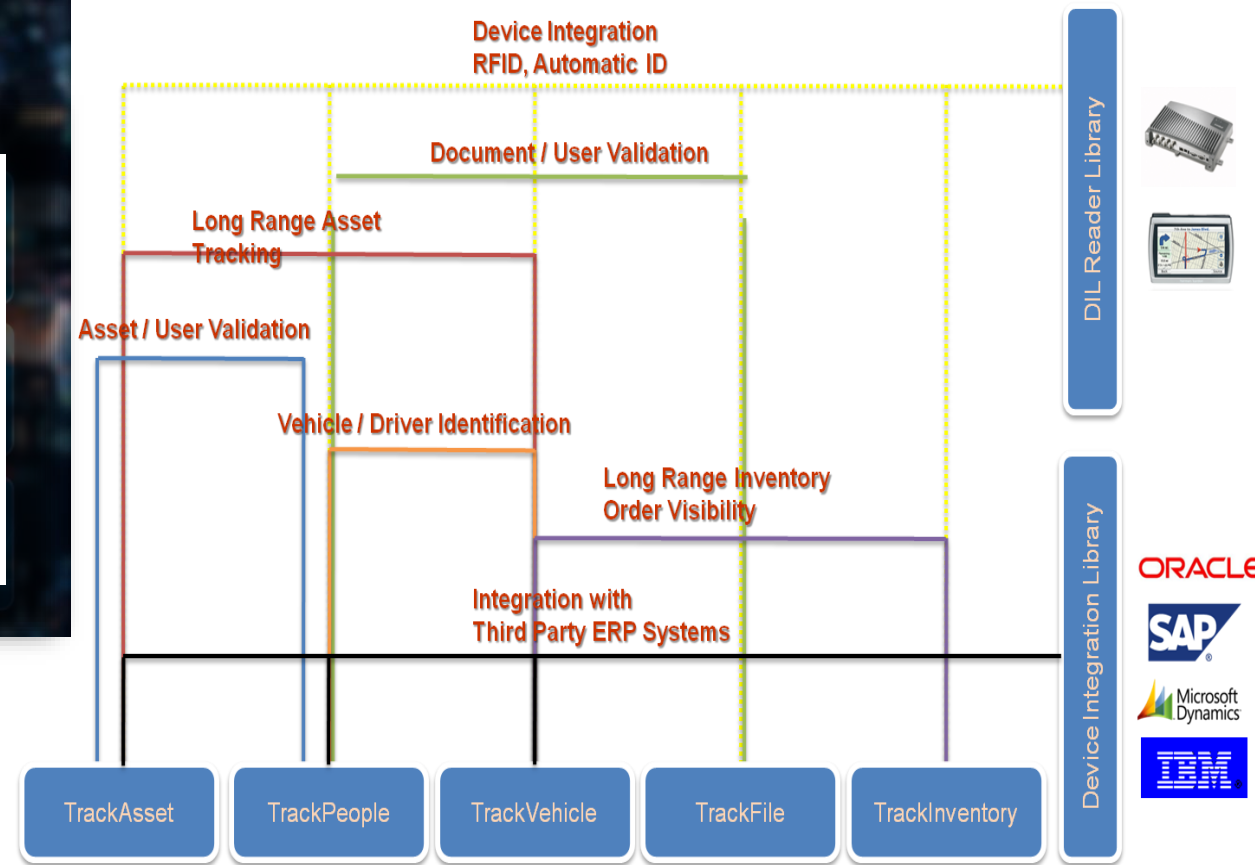
Customer Code	Customer Name	Opening Balance	Total Dispatch	Total Collected	Outstanding
200131	AMBASSADOR HOTEL	108	0	7	101
200141	BARRACUDA BEACH RESORT - UAQ	43	12	0	55
200169	JUMEIRA ROTANA HOTEL	(27)	0	7	(34)
200170	GOLDEN TULIP HOTEL	27	0	8	19
200178	DIAMOND SPORTS CLUB (FIBBERS)	275	14	0	289
200187	Chelsea Plaza Hotel	4	0	6	(2)
200201	LE MERIDIEN MINA SEYAH	(1036)	100	22	(958)
200207	NEW PENNINSULLA HOTEL	(11)	0	17	(28)
200223	KEMPINSKI HOTEL	(17)	0	4	(21)
200238	PRESIDENT HOTEL	6	0	4	2
200239	MARCO POLO HOTEL	181	0	33	148





TrackAsset	TrackPeople Short & Long range	TrackInventory
TrackVehicle With RFID&GPS	TrackService Field Service	TrackFile-Tracking Files & RFID Enabled Documents
TrackMail	TrackFuel	AVIATION INDUSTRY RFID SOLUTIONS

# Application Suite



Hybrid, Bi-Lingual, Modular Architecture



# Client List (to mention a few)



# Why EnTrack Asset?

- EnTrackAsset offers a strong asset tracking platform to build and maintain accurate **Master Asset Registry**.
- EnTrackAsset enables organizations **gain visibility and control** over their assets, for effective physical asset management.

## Benefits recognized across multiple departments:

- Accounting & Finance: Enable true cost control and **audit-proof inventory**. Improve asset accounting with customized and ad-hoc reports of asset locations, physical verification, status, and history.
- IT: Support **life cycle management and scale** more efficiently.
- Facilities & Security: Protect critical information on devices. Improve **physical security** by preventing assets from leaving premises and keeping designated assets out of unauthorized areas
- Operations: **Quickly locate** critical equipment and achieve **real-time physical asset inventory**.







# Barcode Infrastructure

Applying integrated Smart Sensing RFID Technology

where it matters the most – **Agri Care Inventory Solutions for Assets, Warehouses & Stores.**

# Barcode Labels & Readers

## Tags

- Multiple label
- Multiple polymer materials for long lasting labels
- Metal mount tags – different form factors
- For Metallic assets/Laptops etc.



## Handheld Readers

- **Integrated Mobile Barcode Reader**
  - Barcode reading or Imaging
  - 4G HSPA+, 802.11a/b/g/n, Bluetooth
  - IP65 and IP67 per IEC specification
- **Features**
  - Windows Embedded Handheld 6.5 Professional
  - Compact Handheld and Easy to handle
  - High Performance, Multi-Modal hand held
  - DRM Support
  - 8 ft./2.4 m drops per MILSTD 810G





# Passive RFID Infrastructure

Applying integrated Smart Sensing RFID Technology

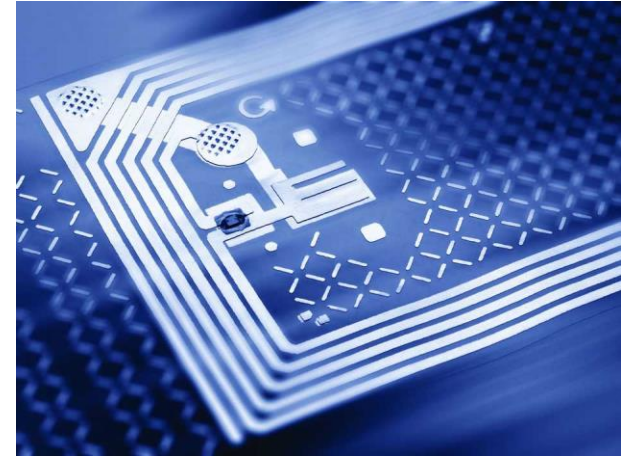
where it matters the most – **Agri Care Inventory Solutions for Assets, Warehouses & Stores.**



# Passive Tags/Labels & Readers

## Tags

- Multiple label sizes (2x1, 2x2 inch, etc.)
- Multiple label/ Tag types based on Asset surface and other factors



## Handheld Readers

### RFID PERFORMANCE

- Standards Supported: EPC Class 1 Gen 2; EPC Gen2 V2
- RFID Engine: Zebra Proprietary Radio Technology
- Fastest Read Rate 600+ tags/sec
- Batch Mode Memory: Store 40,000+ RFID Tags, 500 barcode
- Operating Temp. -10°C to 40°C / 14°F to 104°F
- Storage Temp. -40°C to 70°C / -40°F to 158°F



# Passive Tags/Labels & Readers

## Fixed Antenna & Readers

- **Fixed UHF RFID Readers & Antennas**
  - Selectable: 4 Bi-static or 4 mono-static antenna ports on one platform
  - Enhanced security features (SSH/SSL) for data transmission
  - Protocol Support - LLRP, Bytestream
  - Tag Protocol – EPC Gen2, ISO18000-6C
  - Extended Gen 2 memory support
  - EN 302-208 v1.2, RoHS compliant
  - External Interfaces – 10/100 Base T Ethernet, RS232 (console), USB Host – Type A, USB Client – Type B, Digital 12 GPI/O
  - OS – Windows CE 5.0
- **Features**
  - *Enterprise-Class*
  - Performance - Delivers high-performance RFID data capture and communication in dense reader environments
  - Construction – Aluminum Die Cast
  - Manageability – SNMP, Air-beam
  - *Application Hosting*



# Bluetooth



*Low Energy*

## Real-time Tracking with BLE

Applying integrated Smart Sensing RFID Technology

where it matters the most – **Agri Care Inventory Solutions for Assets, Warehouses & Stores.**



# Solution Components

## BLE Readers

- For Real-time zone based visibility
- Deployment of BLE fixed readers at Entry/ Exit points
- Critical zones identified



## Mobile Reader Application

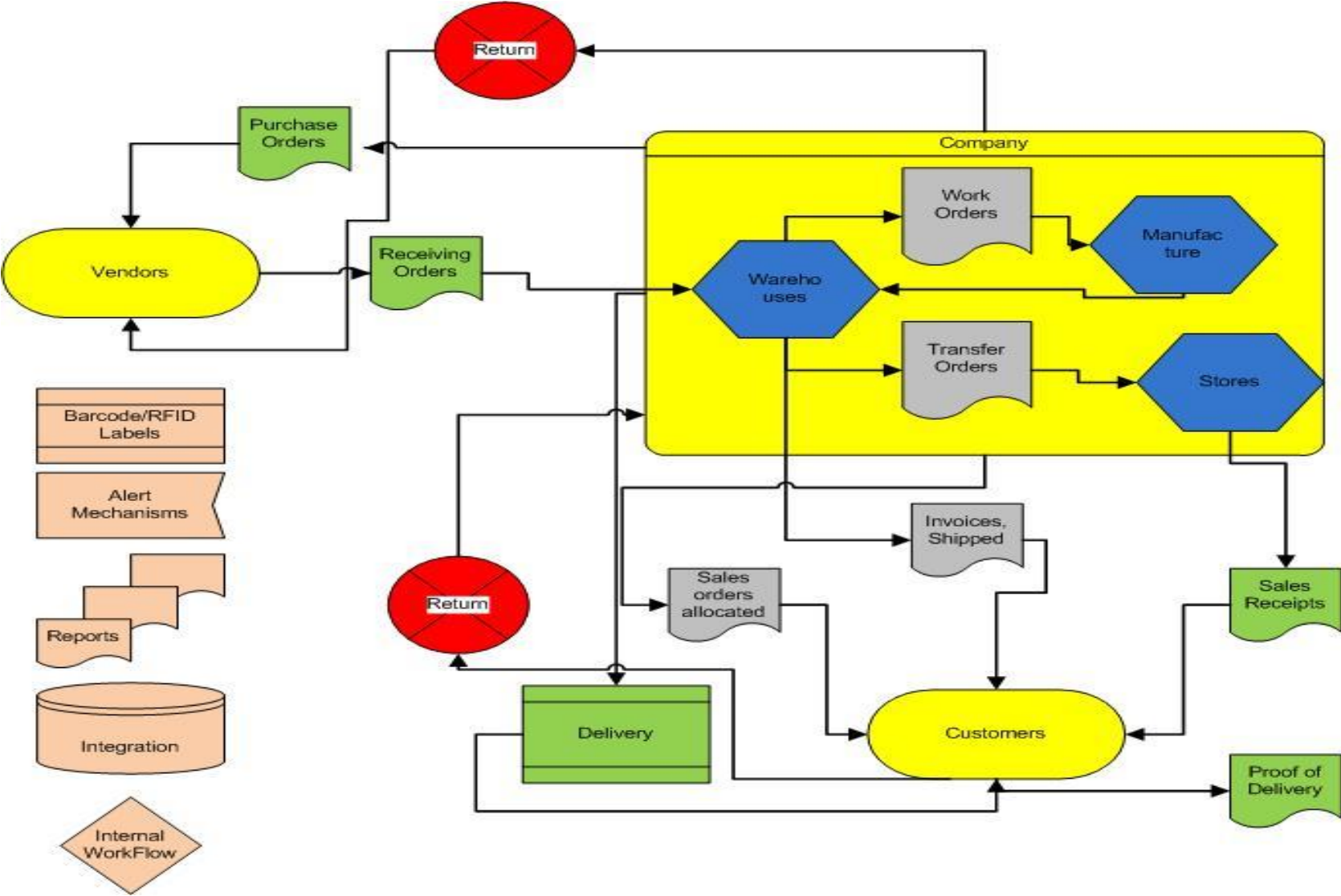
- Check in/out
- Stock taking & location



## Tags



# Inventory System - Workflow



# TrackInventory in Warehouse & Stores

## Warehouse Management

Combination of fixed and hand held terminals along with printer are placed at the warehouse area to tag the items upon its arrival in the warehouse. With put-away and transfer management in place, warehouse inventory management and intra item transfers are managed effectively



## Exit Monitoring – Adding Loss Prevention

Fixed readers are installed at all entrances/exits, including the dock doors and the doors between the back store and the sales floor. The readers detect when items enter or leave the store, and when transition happens between the back and the front of the store.



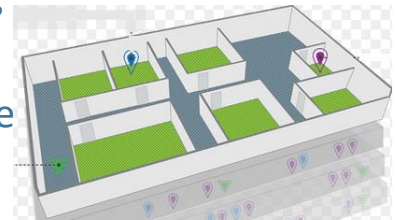
## Handheld Readers

Retailers tag certain categories of items with RFID, Barcode or Serial Number and then the store associates walk around and take inventory using handheld readers.



## Whole Store/Area Illumination

Readers are optionally be placed throughout the whole store, often mounted in the ceiling and continuously read the items in the store. This can not only tell you that an item is in the store, but where in the store each item is located. This has the potential for extremely precise locating and counting, but at a high cost.





# Warehouse & Retail Tracking System

## Warehouse

## Retail

Real time data capture at the point of item receive

Put-away process based on the location identification algorithm

Real time data capture at the point of item exit to retail

Real time data capture and verification at the point of item receive at retail

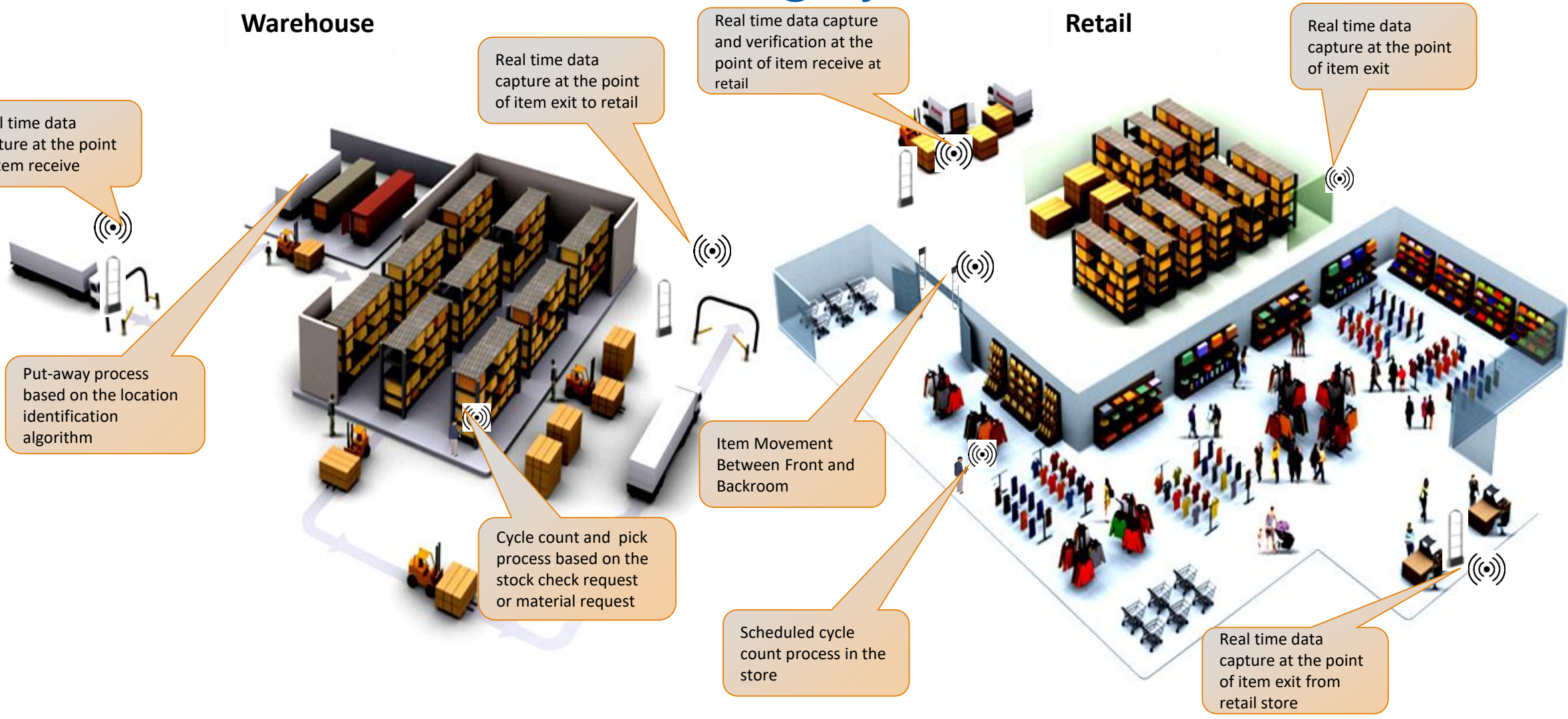
Real time data capture at the point of item exit

Item Movement Between Front and Backroom

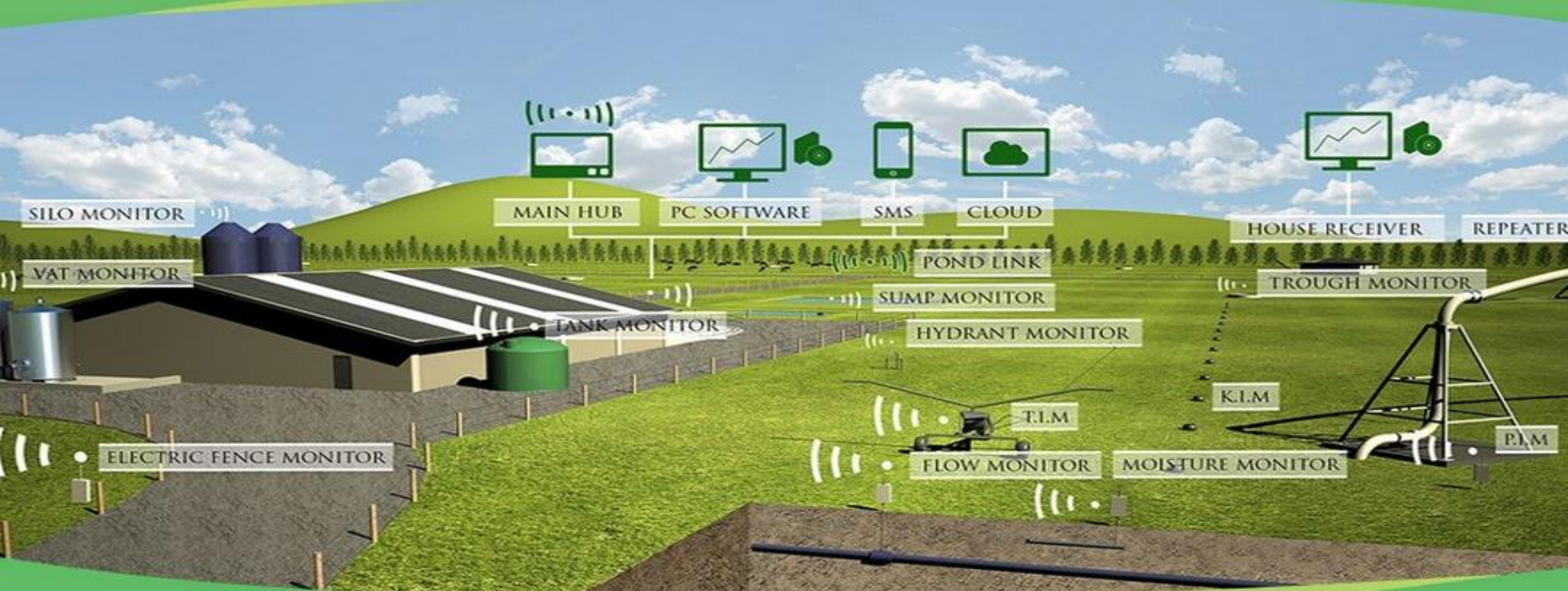
Cycle count and pick process based on the stock check request or material request

Scheduled cycle count process in the store

Real time data capture at the point of item exit from retail store







# ENTRACK INVENTORY

SOLUTION COMPONENTS – Warehouse – Operations - Stores – MIS Dashboard

## Warehouse Module

- Setting up Master Data
- Hardware Definition and Mapping
- Purchase Order Data Import
- Unique ID Generation
- PO Scanning and Verification
- Item Put Away Process
- Periodic Cycle Count
- Transfer Order Data Import
- Item Picking Process
- Item Verification at W/H Exit

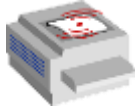
## Print/Date Presentation Component

- Label Print
- Label Reprint
- On Hand Report
- Cycle Count Reporting
- Purchase/Transfer Order Details
- Verification Report
- On-hand inventory dashboard

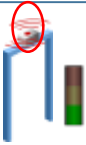
## Store Module

- Item Receive at the Entrance
- RFID Fixed Portal – Item Verification (optional)
- Internal Item Transfer – Front room and back room
- Periodic Cycle Count (Stock Check)
- Item Search
- Data Export to third party system


**RFID Label  
Print Stations**




**RFID Enabled  
Dock Door**



**RFID Enabled  
HHT**




**Alert Generation  
Peripherals**



**ENTRACKINVENTORY**

(Optional)

**ERP  
WMS**




**Visibility  
Dashboards**

Supplier ID	43979	
Supplier ID	43979	
Supplier ID	43979	
Supplier Name	Jack & Tobbs	
Report Date	1/6/2007 to 31/6/2007	
Checked Out Date	Container ID	Days Outstanding
1/3/2007	J-90440403	81
4/5/2007	J-90440413	10
7/5/2007	J-91034402	1
8/5/2007	J-09791888	23
13/5/2007	J-90891066	2
20/6/2007	J-09906597	45
3/7/2007	J-90770555	56
10/7/2007	J-77975041	5
23/7/07	J-77953292	7
15/8/07	J-95584221	9

**Reports**



# SOLUTION HARDWARE & PERIPHERAL COMPONENTS

## RFID Printer



Used for encoding and printing RFID tags which will be used to stick on to the apparels. The input data to the printer is fed from EnTrackInventory application. With thermal transfer option, this generally uses RFID labels and thermal ribbons as consumables for print purpose.

## RFID Fixed Readers



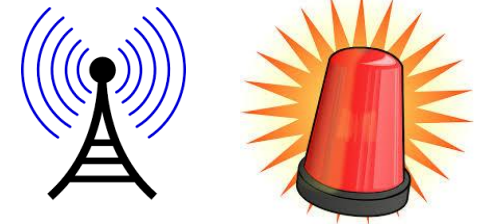
Fixed readers can be placed at different location based on the tracking accuracy to be achieved. Normally, the reader and antennas will be placed at the entry and exit gates. It may also be placed at locations which demands automated RFID readings.

## RFID Hand Held Terminals



RFID HHTs will be used in warehouses and stores for all major processes which includes receive, put-away, picking, cycle count and item search. Mobile application will be running on this devices which helps in performing the processes.

## Wi-Fi Setup and Optional Alarms



The infrastructure might optionally require the Wi-Fi/3G set up at different locations to enable real time connectivity of HHT's to central server. Optional alarm can be deployed to alert if any unauthorized movement happens through the gates.

# THANK YOU



Smart Sensing RFID Technology & Management Consulting  
(Marketing & Supply Chain)

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