# Track and Trace for Manufacturing and Warehouses

## Smart | AI-powered | IoT-driven

Powered by: HCLTech Integrated Asset Tracking and Management platform

# Overview

A recent study on the importance of track-and-trace of materials in supply chains showed that:

There are unpredictable order-to-cash (O2C) cycles, impacting financial performance

Inadequate inventory control causes outdated visibility into material movement

Accurate access to asset information is difficult

There are increased stockouts and suboptimal inventory levels

RFID chips and other technologies are appearing on more and more products, establishing important roles in track-and-trace solutions

Today, manufacturing organizations face the ongoing challenge of a lack of real-time visibility of their raw materials, sub-assemblies and finished product inventories with no traceability of the materials.

# Our Solution

**Track and Trace for Manufacturing and Warehouses** is an advanced IoT-based track and trace solution designed for industries with significant material movement. It addresses the challenges of material visibility and manual tracking errors by providing automated tracking and a consolidated inventory view.

Powered by HCLTech's IATM platform – the solution is smart, AI and IoT-driven, and is available on multi-cloud platforms like Microsoft Azure and AWS Marketplace and can also be deployed on-premises. The solution enhances productivity, reduces wastage, and lowers capital costs by improving asset location accuracy and operational efficiency. It is scalable to track up to 1,000,000 assets, integrates with third-party systems via application programming interface (APIs) and offers flexible commercial models.

# Awards and Recognitions

**IoT Evolution**
**Business Impact of the Year Award, 2023**

Know more

**IoT Evolution**
**Asset Tracking of the Year Award, 2023**

Know more

# Features

**Real-time asset traceability**

Enables zone-wise traceability of materials between different areas in large manufacturing facilities

**Consolidated floor layout view**

Enables inventory visibility and location across the facility as a single pane of glass and facilitates operators in finding and locating materials and assets

**FEFO/FIFO search capabilities**

Prioritizes movement of materials based on First Expired First Out (FEFO) or First In First Out (FIFO)
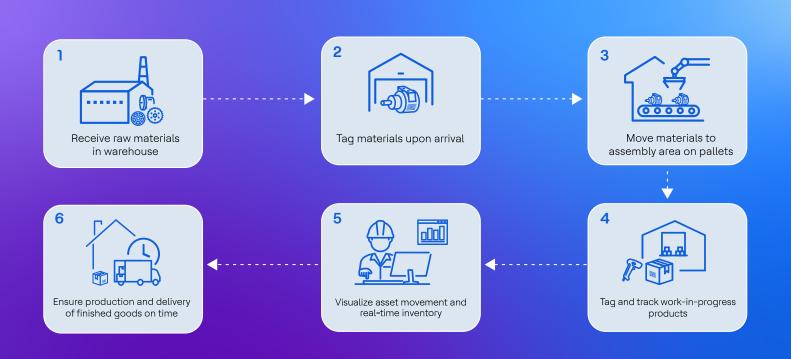
**Automated audit and stock check**

Reduces need for manual counting

**Open APIs for enterprise application integrations**

Seamless integration to customer's existing Enterprise Resource Planning (ERP) and other third-party systems

# Solution Workflow

**1** Receive raw materials in warehouse

**2** Tag materials upon arrival

**3** Move materials to assembly area on pallets

**4** Tag and track work-in-progress products

**5** Visualize asset movement and real-time inventory

**6** Ensure production and delivery of finished goods on time

# Key Benefits

With a strong focus on materials management and resource optimization, the solution empowers data-driven decisions with streamlined real-time asset tracking and cost reduction.

**+ 85% Reduction** in time to locate assets

**+ 80% Improvement** in cycle count time

**+ 75% Improvement in** inventory accuracy

**+ 50% Reduction in** material wastage

**+ 50% Reduction in** inventory holding costs

# Case Studies

## Success story

**The objective:**

A healthcare industry leader sought to boost efficiency by digitalizing material handling processes, enhancing inventory visibility and minimizing manual tracking. The further wanted to reduce inventory wastage and optimize operations with data driven intelligence.

**The solution:**

The customer adopted Track and Trace for Manufacturing and Warehouses solution for real-time material tracking across manufacturing & warehouse zones. Integrated reports and ERP integration ensured accurate inventory management and streamlined processes.

**The impact:**

- 83% improvement in inventory accuracy and elimination of discrepancies

- 15% improvement in operational efficiency

- Automated audit and reconciliation process and reduced wastage through the solution's unique FEFO/FIFO feature



## Success story

**The objective:**

An oil and gas giant aimed to enhance remote accessibility to equipment, streamlining manual inspection processes and automating data entry and reconciliation.

**The solution:**

HCLTech implemented an omni-technology track and trace solution combining RFIDs, barcodes, and BLE, including RFID readers on trucks for tracking assets within 20 meters, ATEX-certified tags and integration with various management systems that optimized reader placement, validated performance and developed a custom application for processing RFID data.

**The impact:**

- 90% reduction in time in on-site inspections

- Enhanced workforce safety by reducing worker exposure to hazardous environments

- Increased operational efficiency by achieving higher productivity through streamlined processes

## Success story

**The objective:**

A global leader in technology, with operations over 175 research labs globally was looking to improve asset tracking, utilization visibility and gain faster insights into movement management to streamline operations and optimize asset efficiency across labs.

**The solution:**

HCLTech's lab asset track and trace solution leveraged fixed RFID readers for movement tracking and notifications. Regular automated inventory audits improved accuracy and enabled enhanced asset location even in cluttered environments.

**The impact:**

• 100% tracking of assets at lab entry and exit points

• 20% reduction in missing or lost assets

• 90% increased operational efficiency of planned audits

• Improved data quality in ServiceNow

• Enabled the generation of detailed asset utilization reports



## Success story

**The objective:**

The customer. A large multinational technology giant was looking to enhance operational efficiency by automating manual inventory tracking, improving traceability of misplaced devices and obtaining real-time data on device status and utilization across their 60 labs and 5 stores.

**The solution:**

HCLTech's lab asset track and trace solution leveraged fixed RFID readers for movement tracking and notifications. Regular automated inventory audits improved accuracy and enabled enhanced asset location even in cluttered environments.



**The impact:**

• 100% tracking of assets at entry and exit points

• 20% reduction in missing or lost assets

• Enabled the upgrade of firmware /software and triggered OTA updates for connected devices

# HCLTech | Supercharging Progress™