Building Safer and Smarter Supply Chains

Vish Ganti, IBM
Supply Chains are fraught with gaping inefficiencies

8-10% of worldwide drug supply is counterfeit

Manufacturers carry up to 10% in safety stock

4.5% of revenue is lost due to supply chain inefficiencies.
posing huge risks to consumers, industries and governments

- Consumer product and retail industries lose about $40 billion annually, or 3.5% of their sales, due to supply chain inefficiencies.
- In The U.S. a typical carrot has traveled 1600 miles, a potato 1200 miles and a meat roast 600 miles.
- 30% of all food purchased in the developed world is thrown away.
Trusted Information is key to building Smarter and Safer Supply Chains

Visibility Across the Total Supply Chain

TRUSTED INFORMATION

Harvest  Livestock  Food Processor  CP Manufacturer  Distribution Center  Retailer
Traceability technologies lie at the core of providing trusted information.

Networked devices deliver new data & act upon insights.

- Improved Efficiency
- Increased Effectiveness
- New Business capabilities

New Data → New Insights → Process Innovation
Traceability
The ability to obtain and verify the location, status and history of an item

Pharmaceuticals:
Can I be sure my prescription drugs are not counterfeit?

Parts:
Which parts were assembled in my car and are they authentic?

Food:
Where does my food come from?

Returnable Containers:
Do my suppliers have enough containers to meet my production needs?
How Traceability Works

What, Where, When, Why, Who

Manufacturing Plant

Distribution Center

Distribution Center

Retail Location
# Types of Information

**WHAT**

- Manufacturing Data
  - Lot/Batch
  - Expiration
- Environment Data
  - Temperature
- Transactional Data
  - PO
  - Invoice

**WHERE**

- Location
  - City/State
  - Country/Region
  - Store #
  - Dock #
  - Port #

**WHY**

- Business Process
  - Receipt
  - Ship

**WHEN**

- Timestamp
Supply Chain Visibility
Enabled Through New Serialization Data

Information Flow

Manufacturer
Manufacturer Distribution Center
Distributor
Retail

Product Flow

Benefits

Authentication
Reduced In-transit loss
Shipment Verification

Reduced Diversion

Targeted Recall
Reduced Product Expiration
Chargeback Accuracy

Improved Inventory Management
Demand Forecasting
Expected Business Benefits from Traceability

- Achieve greater inventory visibility: 41%
- Improve our returns process: 40%
- Detect and eliminate counterfeiting: 39%
- Detect and reduce "gray market" activity: 39%
- Access to more timely and accurate sales data: 39%
- Speed up and reduce the cost of our recall process: 38%
- Achieve more accurate order fulfillment and shipping: 35%
- Enhance our reputation with customers and the public: 33%
- We don’t intend to reap any business benefits beyond compliance: 1%

Source: AMR Research, 2009
**IBM InfoSphere Traceability Server Addresses Multiple Business Use Cases**

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*Images representing various use cases are included.*
German Auto Manufacturer Gains New Insights

40% reduction in container inventory

German Auto Manufacturer
Reduces returnable container inventory by 40% by using RFID-based traceability to gain full visibility into supply chain
Matiq
From Farm to Fork Traceability

Increases consumer confidence in the quality of pork they purchase

Matiq
A subsidiary of Norways’ largest food supplier uses IBM’s solution to deliver the country’s first of a kind farm to fork traceability
Compliance with U.S. legislation requiring an electronic pedigree for pharmaceuticals

AmerisourceBergen
Leverages IBM’s Traceability platform to improve business processes such as supply chain performance, product authentication and diversion detection.
Bilcare

Preventing counterfeiting of pharmaceutical drugs

Helping pharmaceutical companies detect counterfeit goods, potentially saving millions of lives

BILCARE
Developed a solution based on IBM Product Track-and-Trace framework that incorporates Electronic Product Code Information System into the Bilcare non-clonable authentication technology that can seamlessly integrate into any supply chain system, providing real-time product authentication.
Thank You
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