RFID in the Supply Chain

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Omni-ID
Identify with innovation
Supply Chain Management

Optimal Cyclic Processes:
• Are simple (automatic) for operators
• Provide key data items to management
  • Allows tuning of triggers, timing & quantity
• Catch exceptions/problems early
  • Must provide opportunities for recovery

SCM is ultimately about improving quality and cost
Returnable Transport Items (RTI)

- Most common use of hard RFID tags
  - Tags persist through multiple cycles
- RTI is refilled and tracked each cycle

**Images:**
- Totes
- Racks
- Containers
- Skids/Lids
Example: Auto Assembly Supply

- More than 50 million RTI cycle annually in automotive assembly alone
  - Labelling costs are high
  - Tracking is largely manual
- Shrinkage (loss/theft) and lack of data are very common
  - early RFID tagging has begun
Case 1: Daimler AG - Berlin

Manufacturing RTI (racks)
- Transporting engine blocks between plants
  - Transatlantic supply chain
- Rack itself is a valuable asset in the process
  - Missing racks cause delays
  - Replacement cost/rack high
Full system implementation

• Automated gates and readers
  • Tracking racks in and out of plant
• Global software platform

“Utilizing RFID in our supply chain gives us certainty.”

Axel Killian
Senior Logistics Manager
Daimler AG - Berlin werk
Example: Mobile Device Logistics

- Carts, lifts, trolleys
- Medical equipment
- Trucks, Tugs and Forklifts

Mobile equipment calls for automated tracking systems
USMC – Rolling Asset Logistics

Use Case:

• Rolling stock returning from Afghanistan
• Large marshalling yards (450 acres+) make inventory difficult

Even the best generals cannot deploy an asset if they do not know where it is!
USMC – Rolling Asset Logistics

- Solar powered gate systems for mobility
  - Mobile readers also deployed on docks, beaches
- Each vehicle double tagged for the two main use cases
- Check-in/out fully automated enabling rapid deployment
USMC – Rolling Asset Logistics

- On-metal tag performance critical (read ranges of 50’)
- Durability, environment, paint tests are important
- Passive RFID chosen for reliability and security

“We expect to achieve a 50-75% increase in throughput, reduce search time and completely change the manual processing of assets coming back from theatre.”

Marine Corps Logistics Command
Enabling Intelligent Supply Chains

RFID Provides:

• Automatic data collection and distribution
  • “no touch” tracking, messages & events

• Security and ruggedness
  • Battery free, physically hardened, electrically linked or encrypted for excellent security

• Operator signals and interaction
  • Visual signals on assets or line side
Come see the presentation by the US Marine Corps at RFID Journal Live May 1, 2013