Item Level RFID Tracking – Where suppliers can look for benefits
Introduction

• What challenges do suppliers currently face?
• What benefits can they expect from Item Level RFID?
• What does an Item Level RFID solution look like?
• Brand Owner Case study – Levi Strauss
• Who is Ramp and what is our approach?
Suppliers face a range of challenges dealing with retail customers

- Transactional relationships with customers
- Lack of visibility as to downstream activities including on-shelf availability
- Sporadic and reactive production and replenishment processes based on inaccurate data
- Highly labour intensive processes for picking, receiving and stocktaking
- Poor shipping accuracy and expediting costs
- Excess inventory holdings
- Lost sales due to factors above
- Poor Omni-Channel fulfillment (brand suppliers are typically also retailers)
- Shrinkage
Item Level RFID can provide significant benefits to suppliers in the retail supply chain

- Can form strategic relationship with retailers through enhanced data sharing
- Increased customer satisfaction
- Increased sales through improved on-shelf availability and optimized omni-channel offering
- Reduced operational and working capital costs

<table>
<thead>
<tr>
<th>Business Case Area</th>
<th>Bar Code Systems (Today)</th>
<th>Item Level RFID Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory Accuracy</td>
<td>~80%</td>
<td>&gt;98%</td>
</tr>
<tr>
<td>Inventory Cycle Count</td>
<td>1x per year</td>
<td>12x to 24x per year</td>
</tr>
<tr>
<td>Receive Audits</td>
<td>Sample 1% to 1%</td>
<td>100% Every Container, Cases, Item</td>
</tr>
<tr>
<td>Shipping Audits</td>
<td>Sample 1% to 1%</td>
<td>100% Every Container, Cases, Item</td>
</tr>
<tr>
<td>Documented Shipping Errors</td>
<td>&gt;1%</td>
<td>0%</td>
</tr>
<tr>
<td>Estimated Excess Inventory</td>
<td>10% to 20%</td>
<td>3% to 5% Lean Principles Apply</td>
</tr>
</tbody>
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Lean Principles Apply
<table>
<thead>
<tr>
<th>MANUFACTURER</th>
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<tbody>
<tr>
<td><strong>Elimination of Mis-shipments &gt;99%</strong></td>
</tr>
<tr>
<td><strong>Faster Inventory Stock Taking &gt;99%</strong></td>
</tr>
<tr>
<td><strong>Greater Inventory Accuracy &gt;50%</strong></td>
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</tbody>
</table>
DISTRIBUTOR

- Faster Shipping Verification > 90%
- Decreased Mis-shipments to Store from Retailers > 50%
- Decreased Claims Against Mfg > 30%
- Shrink Reduction > 20%
- Reduction of Inventory (Lean Principles) > 10%
- Grey Market Reduction > 20%
What does an Item Level RFID solution look like?
RFID Transforms Factory Inventory Management

RFID Retail 3.0 at the Manufacturer

1. Clarity™ EPC Encoding
2. Clarity™ WIP Tracking
3. Clarity™ Cycle Counting
4. Clarity™ Pick-Pack-Ship
5. Clarity™ QC Audit
6. Clarity™ Shipping Verification
RFID Transforms Distribution Centre Inventory Management

RFID Retail 3.0 in the Supply Chain

1. Clarity™ Shipment Receiving
2. Clarity™ Mis-shipment Verification
3. Clarity™ Cycle Counting
4. Clarity™ EPC Encoding
5. Clarity™ Pick-Pack-Ship
6. Omnichannel Order Audit
7. Clarity™ Shipping Verification
RFID Transforms In-Store Inventory Management

RFID Retail 3.0 In-Store

1. Clarity™ Shipment Receiving
2. Clarity™ Stock Replenishment
3. Clarity™ Cycle Counting
4. Clarity™ Product Locator
5. Clarity™ Fast POS Checkout
6. Clarity™ Loss Prevention
RFID Brand Owner Case Study – Levi Strauss

- Initiated RFID in 2004/2005 with a pilot in Mexico and with one customer in US
- Levi Strauss S Mexico deployed to all stores and currently ~67 stores are enabled with RFID including O&O and Franchises
- In 2010/2011 started pilots with multiple wholesale customers
- Developed capabilities to print and encode at US DCs
- Defined strategy for upstream application in 2012 to support customer compliance requirements
- Currently tagging around 60M units/year.
- Late 2013 started to evaluate supply chain benefits and capabilities:
  - Inbound and Outbound verification
  - Inline encoding
  - Inventory counting/verification
RFID Brand Owner Case Study – Levi Strauss

Item-Level Tagging Scope

United States

• Upstream application for Levi’s® and Dockers® men’s long bottoms for shared inventory between wholesale and retail
• Downstream application at US distribution centers for other categories based on customer compliance requirements
• Tagging for O&O will be phased-in with retail deployments

Mexico

• Downstream application at distribution center
• All products shipped to O&O, Franchisees, and select doors for department store Liverpool® de Mexico

Canada

• In-process to implement downstream capability and evaluating upstream to meet customer requirements
RAMP use a thorough approach in conducting a RFID Proof of Concept

1. Understand the Business
   - Products
     - Price, margin
     - Ranges and complexity (size, colour)
     - Seasonal vs repeat
   - Sales channels (and strategy)
   - Store and warehouse labour
   - Shrink challenges
   - Supply chain/product flow
   - Systems & data availability

2. Plan for Success
   - Establish PoC governance (including executive sponsorship)
   - Agree PoC metrics and data sources
   - Determine use case (high RFID impact) – establish volume, range
   - Identify control vs PoC store
   - Establish roles & responsibilities and confirm/train resources

3. Learn and Refine
   - Collect and analyse data
   - Refine processes and capture lessons learned
   - Build business case and confirm executive endorsement
   - Identify issues and risks and develop mitigation strategies
   - Create implementation plan
Australian owned and operated for over 10 years by a team of trusted, innovative professionals, RAMP specialises in tailored Intelligent Tracking solutions facilitating smarter, leaner business processes

<table>
<thead>
<tr>
<th>Proposed Team</th>
<th>Clients</th>
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<tbody>
<tr>
<td>**Andy Dobosz</td>
<td>CEO**</td>
</tr>
</tbody>
</table>
| • Over 15 years of supply chain experience in both consulting and industry  
• Worked with many top retailers to improve their operational performance including Speciality Fashion Group, Rebel Sport  
| **Kevin Cohen | Business Development Director**  |  |
| • Founded Australia’s leading specialist RFID solution provider over 10 years ago  
• Implemented large scale RFID solutions for companies including Qantas, DP World, Sydney Ports Corporation and Woodside  
| **Alastair McArthur | Engineering Director**  |  |
| • Australia’s leading RFID specialist with 20 years experience globally  
• Is an acknowledged pioneer and world authority on RFID  
• Contributed to RFID standardisation as a former Working Group Chairman at EPC Global.  
| **Mark Beacroft | Solutions Engineer and Engineering Manager**  |  |
| • Over 10 years’ Automation and Solution Architecture experience  
• Implemented large scale RFID asset and inventory tracking solutions over the past 3 years  

Ramp are partners with SML

- Proven results for many of the world’s most successful retail RFID projects
- Global footprint and a full-service RFID technology solution
- Operate tag bureaus globally (17)
- Significant deployment and business case expertise including American Apparel, Tesco and more