Agenda

• Serialization Benefits
• Identification Systems
• Aggregation – Logistics Labels
• Manual Solution
• Serialization Building Blocks
• Automated Solution
  – IT Infrastructure
  – Carton Coding
  – Bundling – Case packing
  – Video
• Main Partners
• Key Success Factors
• Challenges / Next Steps
Serialization Benefits

• Detect counterfeit and stolen products
• Prevent products from re-entering the distribution channel
• Control the Supply Chain
• Ensure preservation, authenticity, integrity and quality of the product
• Generate audit information
• Improve productivity of the Supply Chain
• Facilitate product recall
• Provide real time track & trace information
Identification Systems

Manual (Phase I)
- Pre-printed labels
- 1 Dimensional Barcode
- GS1 Databar
- “Scratch off” ID code
- Human readable data
  - GTIN
  - Serial Number

Manual (Phase II)
- On-site printed labels
- 2 Dimensional Barcode
- GS1 DataMatrix
- Human readable data
  - GTIN
  - Serial Number
  - Expiration Date
  - Batch/Lot Number

Automated
- Direct Printing
- 2 Dimensional Barcode
- GS1 DataMatrix
- Human readable data
  - GTIN
  - Serial Number
  - Expiration Date
  - Batch/Lot Number
Aggregation - Logistics Labels

SSCC
- Product
- Lot/Batch
- GTIN
- Expiration Date
- Units

SSCC
- Product
- Lot/Batch
- GTIN
- Expiration Date
- Units
Manual Solution
# Serialization Building Blocks

<table>
<thead>
<tr>
<th>ISA-S95</th>
<th>Level 4</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
<th>Level 0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enterprise Control</td>
<td>Site Control</td>
<td>Line Control</td>
<td>Device Control</td>
<td>Devices</td>
</tr>
<tr>
<td></td>
<td>ERP</td>
<td>Site Serialization Controller</td>
<td>Line Serialization Controller</td>
<td>P/V, A/P/V, A/P/V</td>
<td>Cartoner, Case Packer, Palletizing</td>
</tr>
</tbody>
</table>

- **ERP**: Enterprise Resource Planning
- **Site Serialization Controller**
- **Line Serialization Controller**
- **P/V, A/P/V, A/P/V**: Production, Assembly, Packaging, Verification
- **Cartoner**, **Case Packer**, **Palletizing**

---

**Logo**: Pfizer
Automated Solution
IT Infrastructure

Diagram showing components of an IT infrastructure including local DB servers, web services, internet connectivity, Pfizer LAN, line switch, re-process station, pallet ID (SSCC), Wolke T. Inkjet, Lixis Camera, Lixis 2D Scanner, Lixis 1D Scanner, Label Pack Appl., Lixis Control Panel, WiFi, and handheld device.
Automated Solution
Carton Coding

Traceability System

Tamper Evident  Printing  Verification  Rejection  Data Transference
Automated Solution
Bundling – Case Packing

Data Verification
Pack Label Printing / Application
Pack Label Verification

Traceability System
Aggregation Data Transference
Automated Solution
Main Partners

- Standards provisioning
- Codification validation

- Printing control
- Data verification (OCV/OCR)
- Secondary packaging control

- Serial number provisioning
- Regulatory agency interface
- Logistic Service Providers Interfaces
Key Success Factors

- Multidisciplinary team
  - Logistics + Regulatory + Engineering
  - Manufacturing + TS + Quality + IT
- Partnership with local vendors
- Corporate Serialization Team guidance
- Flexible solution to operate in different sites
  - Manufacturing facility
  - LSPs
- Easy deployment (Software as a Service)
Challenges / Next steps

- Keep packaging lines rejection rate under control
- Continue roll out on automatic packaging lines
- Identification from the source (Imported products)
- Integration with Global Core Solution (SAP Auto-ID)
- RFID technology assessment
- Data standardization throughout the Supply Chain
Thank You!

Ezequiel Ceballos

ezequiel.ceballos@pfizer.com

IT Manager - Pfizer Global Supply