The Serialized Warehouse –
DISCOVER VALUE BEYOND COMPLIANCE
TAKING SERIALIZATION TO THE NEXT STEP

If you are like most pharmaceutical manufacturers, you have fulfilled the batch-level reporting requirement of the Drug Supply Chain Security Act (DSCSA). But that is only the first step.

As you begin the task of outfitting your packaging lines and distribution centers with serialization capabilities, it’s time to think about how you are going to manage your serialization data across the broader supply chain.

Manually tracking (or doing it effectively through a hodgepodge of systems) the millions of serialization data points generated each day across cases, pallets, shipments and orders is impossible. And, because the majority of distribution centers still need to support both serialized and non-serialized data, the process of managing the association and integration of all data (serialized and non-serialized) starting at the packaging line and continuing through the distribution process is more complex than ever.

In order to ensure DSCSA compliance AND maximize the value of your serialization investment, you need the capabilities to:

1. Capture and aggregate serialization data from your packaging lines through the “serialized warehouse” and
2. Seamlessly integrate that serialized data with the business systems you use every day (ERP, EPCIS, etc.)

Are you ready for the next step of serialization? When we surveyed attendees of the HDMA Traceability Seminar, we found that most companies are not.

KEY BENEFITS

With Acsis Edge in your serialized warehouse, you’ll be able to:

• Achieve granular, real-time visibility and control of all product moving through your supply network
• Ensure shipping accuracy to your customers by leveraging serialization data at all points within the pick, pack and ship process
• Utilize the serialization data to assist in the resolution of shipment discrepancies
• Leverage serialization data to automate additional tasks, such as production confirmation, creation of inventory movements, etc.
• Provide your business with a foundation for efficient returns management, accurate recall management and brand protection

Are you familiar with warehouse Edge solutions, a cost effective way to process serialized orders?

Have you assessed your existing distribution/warehouse software and its readiness for serialization?

Have you upgraded your packaging lines to meet the DSCSA serialization requirements?

Have you chosen and implemented an enterprise serialization repository (EPCIS)?

Have you addressed your third party packaging and distribution partners for serialization readiness?

2015 ACSIS Serialization Readiness Survey Results

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes (%)</th>
<th>No (%)</th>
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<tbody>
<tr>
<td>Are you familiar with warehouse Edge solutions, a cost effective way to</td>
<td>70</td>
<td>30</td>
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<tr>
<td>process serialized orders?</td>
<td></td>
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<tr>
<td>Have you assessed your existing distribution/warehouse software and its</td>
<td>50</td>
<td>50</td>
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<tr>
<td>readiness for serialization?</td>
<td></td>
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<tr>
<td>Have you upgraded your packaging lines to meet the DSCSA serialization</td>
<td>50</td>
<td>50</td>
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<td>requirements?</td>
<td></td>
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<tr>
<td>Have you chosen and implemented an enterprise serialization repository</td>
<td>50</td>
<td>50</td>
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<tr>
<td>(EPCIS)?</td>
<td></td>
<td></td>
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<tr>
<td>Have you addressed your third party packaging and distribution partners</td>
<td>60</td>
<td>40</td>
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<tr>
<td>for serialization readiness?</td>
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Edge Serialization
Granular application from production line to warehouse edge
ACSIS EDGE: Serialization Control at Item-Level for All Warehouse Activities

With Acsis Edge, pharmaceutical companies can automatically capture and integrate the data that tracks the movement of product through the serialized warehouse, turning compliance with the DSCSA requirements into opportunities for a true ROI from accurate, robust serialization data.

For example, if during the order picking process, an associate needs to open a full case of one product to create a mixed case or pallet for a customer order, it is no longer necessary to go through the process of using multiple transactions to de-aggregate the unit from its case, re-aggregate it to the new one, and report this change to the ERP and EPCIS systems. With Acsis Edge, a single scan of the item will ensure that the necessary updates to the EPCIS are done in order to ensure that the associations between the serialized items are updated, and all changes are captured and integrated in the ERP and EPCIS systems. The time and effort involved is slashed dramatically and order accuracy and regulatory compliance are ensured. And because Acsis also captures and integrates data from non-serialized items, you have a single system to manage all of your processes in the warehouse.

Acsis provides more granular serialization of products and clearer visibility, so you are meeting required mandates, but can also move beyond compliance to actual process improvement. As a result, you can take advantage of your serialization data to better manage two of the areas that can provide significant ROI (or significant risk if not done properly) – product returns and recalls.

Acsis captures and integrates granular context data that you won’t find in standard serialization solutions. Here are just a few examples:

- Date of manufacture
- Date of order
- Unit price at sale (critical for ensuring accurate returns)
- Customer (next stop in the supply chain)
- Order number
- Ship to location
- Special handling conditions such as temperature or other important product characteristics

Report/Analytics

Utilities

Picking

Integration

Serialization

Information

Shipping Station

Go beyond EPR & EPCIS – verify the picked items are correct, perform freight ratings, create shipping labels, print export documentation, 222 forms and manifests – all in a streamlined process.

Reporting/Analytics

Real-time analytics provide visibility across the entire process.

Product Point of Entry: Inbound Delivery
Utilize the Edge receiving transactions to receive inbound product via a Purchase Order or Advanced Ship Notice.

Receiving/Packaging

Product Point of Entry: Production
Receive product against a production order.

Distribution Center – Acsis Edge
Wired and Wireless Devices

Acsis Platform

SAP

Microsoft

Oracle

Warehouse Transactions

Inventory movements.

Serialization

Information
In addition, Acsis Edge provides the transactions and workflows you need to manage all serialization and traceability actions, including:

- **Goods Receipt**, from purchase orders to production orders of serialized and non-serialized product
- **Packing and Shipping** of serialized and non-serialized product
- Full serialization aggregation and disaggregation utilities, allowing you to manage serialized product in the warehouse
- Ability to collect and integrate additional business data, such as shelf life, expiration date and unit price data for analysis on the impact on inventory and profitability

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