EPCIS

Sharing “Event Data” During a Product’s Lifecycle

What + When + Where + Why = Visibility

Electronic Product Code Information Services (EPCIS) is a GS1 Standard that enables trading partners to share information about the physical movement and status of products. It helps answer the “what, when, where, and why” questions for accurate and detailed product information.

The need for sharing detailed product information effectively—while finding opportunities for better supply chain visibility—is essential in today’s dynamic business environment. Evolving data-sharing technologies, like blockchain, bring into focus several key requirements:

- Importance of unique item and location identification
- Need for standardized data
- Interoperability between systems

EPCIS is the standardized data model that can help meet all these requirements and enable businesses to capture and share supply chain information about the movement and status of goods, both within their enterprise and with their business partners.

Sharing Physical Event Data With EPCIS

Movements or “events” comprise four dimensions

1. **What products are impacted?**
   - Global Trade Item Number® (GTIN®) (urn:epc:id:sgtin:0614141.000001.2)

2. **When did this time-stamped event occur?**
   - Date and Time Stamp (2017-10-02 10:00:00)

3. **Where was the product and where is it now?**
   - Global Location Number (GLN) (urn:epc:id:sgin:0614141.00300.0)

4. **Why was this observed and at which step?**
   - Business Step (urn:epcglobal:cbv:bizstep:receiving)
Why Standards Are the Key to Visibility

Standards give organizations the ability to share data across different systems and to speak the same language as their trading partners. This enables product and transaction information to be shared automatically—without having to do manual look-ups and conversions, or time-consuming follow-ups with customers and suppliers to check basic facts about orders, invoices, credits, delivery receipts, stock numbers, quantities, units of measure, PO numbers, etc.

Standards also complement the effectiveness of systems and processes that are used to provide visibility and run day-to-day operations. Some of the most common benefits to a standards-based approach to identify, capture, and share information include:

- The ability to integrate data throughout the supply chain to leverage technology investments
- Using data, transaction, and messaging standards to provide context for raw data to enable more granular decision-making
- Easier to maintain systems that are typically supported by a competitive vendor community
- Flexibility in implementing multi-vendor solutions
- The ability to integrate additional data collection and communication technologies into existing systems
- A migration path to future systems that protect existing investments

EPCIS Visibility

<table>
<thead>
<tr>
<th>What</th>
<th>Global Trade Item Number (GTIN), Electronic Product Code (EPC®), or other GS1 number identifies an object</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Manufacturing data, such as lot codes and expiration dates</td>
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<tr>
<td></td>
<td>Transactional data, such as a PO shipment or invoice numbers</td>
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<tr>
<td>When</td>
<td>Events can be date and time stamped</td>
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<tr>
<td></td>
<td>Elapsed time (e.g., time spent in frozen storage) can be recorded and reported</td>
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<tr>
<td></td>
<td>Electronic Proof of Delivery (EPoD) can be tracked and reported</td>
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<tr>
<td>Where</td>
<td>A location with unique location identification via a GS1 Global Location Number (GLN)</td>
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<td></td>
<td>Location history, using transaction records that document product movement or chain of custody/ownership</td>
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<tr>
<td>Why</td>
<td>The business process step that occurred (e.g., receiving, shipping)</td>
</tr>
<tr>
<td></td>
<td>State of the item (e.g., saleable, expired, in transit)</td>
</tr>
<tr>
<td></td>
<td>Current conditions (e.g., temperature)</td>
</tr>
</tbody>
</table>

For more information on EPCIS, visit www.gs1us.org/visibility