EPCIS

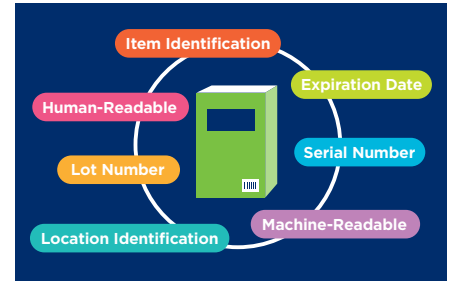# Sharing "Event Data" During a Product's Lifecycle

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.
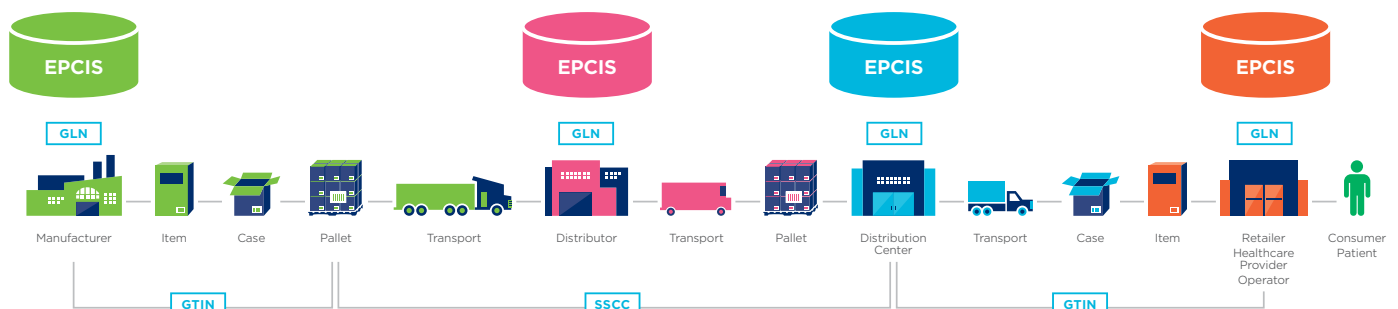

Item Identification · Expiration Date · Human-Readable · Serial Number · Lot Number · Machine-Readable · Location Identification
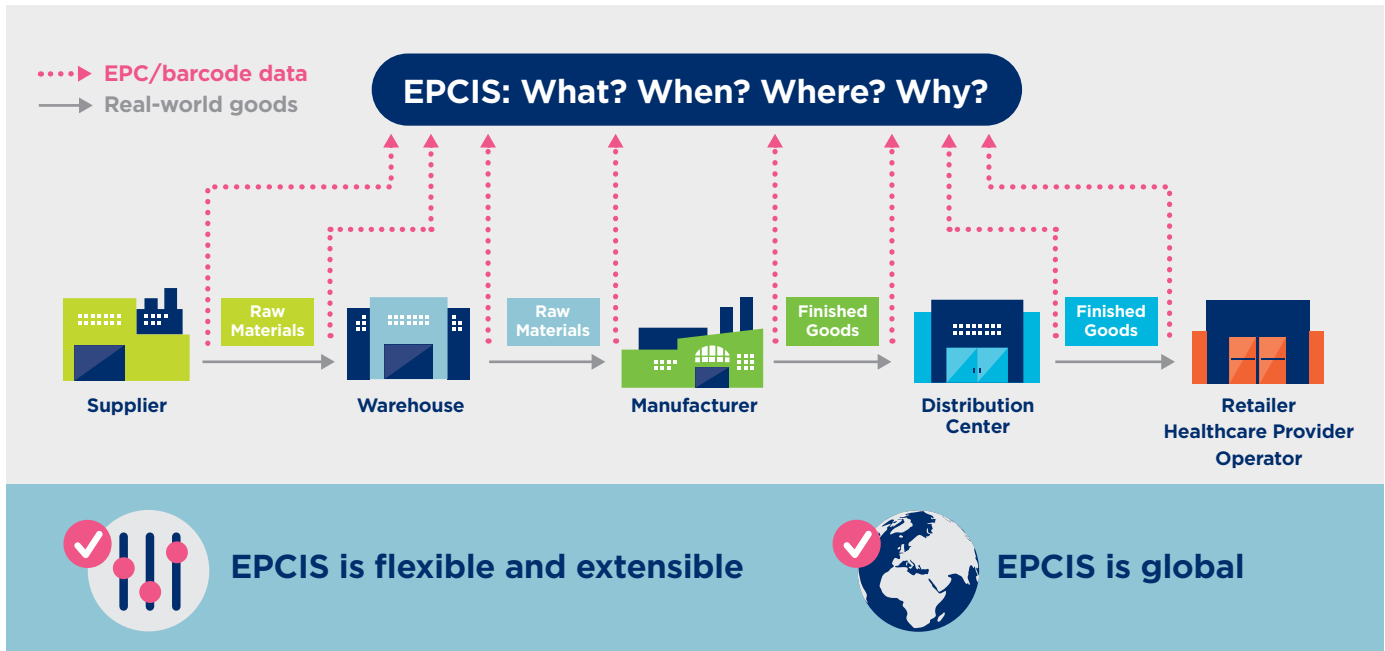
Visibility Helps

1 **Improve materials and inventory management,** production and logistics optimization, forecasting, replenishment, promotions execution, and other store operations.

2 **Enable track-and-trace processes,** such as First In First Out (FIFO) management, pedigrees, returns authorization, chain of custody/ownership, and recalls.

3 **Enhance business analytics** by applying visibility data to supply chain network planning, asset utilization analysis, and other operations.

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:sgln:0614141.00300.0)
4 **Why** was this observed and at which step?	**Business Step**	(urn:epcglobal:cbv:bizstep:receiving)

EPCIS · GLN · Manufacturer · Item · Case · Pallet · Transport · Distributor · Transport · Pallet · Distribution Center · Transport · Case · Item · Retailer Healthcare Provider Operator · Consumer Patient

GTIN · SSCC · GTIN

EPCIS: What? When? Where? Why?

Legend:
- ···▶ EPC/barcode data
- ──▶ Real-world goods

Supply chain flow: Supplier → (Raw Materials) → Warehouse → (Raw Materials) → Manufacturer → (Finished Goods) → Distribution Center → (Finished Goods) → Retailer / Healthcare Provider / Operator

✓ **EPCIS is flexible and extensible**   ✓ **EPCIS is global**

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

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

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

Connect With Us

6 14141 02676 0