GS1 EPCIS

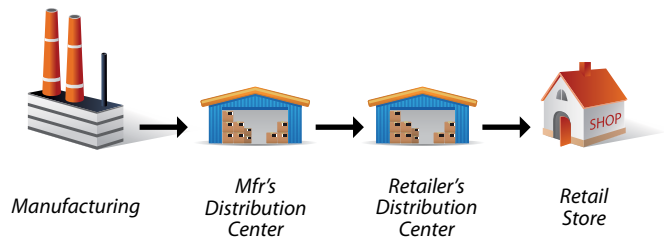## Enabling visibility with real time information on supply chain events

Companies and organizations operating in today's global environment are faced with a growing complexity of their supply chains, with multiple tiers of trading partners. To gain visibility into their operations and mitigate risks, increased collaboration with trading partners, third party logistic providers and customs is becoming critical.

> 78% of Chief Supply Chain Officers identified improving extended supply chain visibility as a top priority.
>
> *Aberdeen study (2011)*

EPCIS makes end-to-end supply chain visibility possible

EPCIS is a GS1 Standard for sharing real-time information about physical events in the supply chain between trading partners.

With the visibility provided by EPCIS, companies can improve their inventory management by real-time tracking of their products, they can see where their shipments are stuck and if they have been delivered, they can combat counterfeiting by identifying where products came from, and more...

EPCIS enhances business intelligence

EPCIS provides information about physical events concerning products and other assets in the supply chain. It allows organizations to share data about the location of products or assets within their company and across multiple stakeholders, making it possible to understand what actually happened in the physical world as products and other assets were handled during operations taking place in factories, warehouses, retail stores, and other facilities.

Manufacturing → Mfr's Distribution Center → Retailer's Distribution Center → Retail Store

EPCIS documents real-life events

EPCIS data comprises a series of "events". Each event documents at business-level something that happened in the physical supply chain.

Each EPCIS event has four dimensions of information:

- **WHAT** (object identified by a GS1 Key)
- **WHERE** (event location identified by an SGLN)
- **WHEN** (date & time of event)
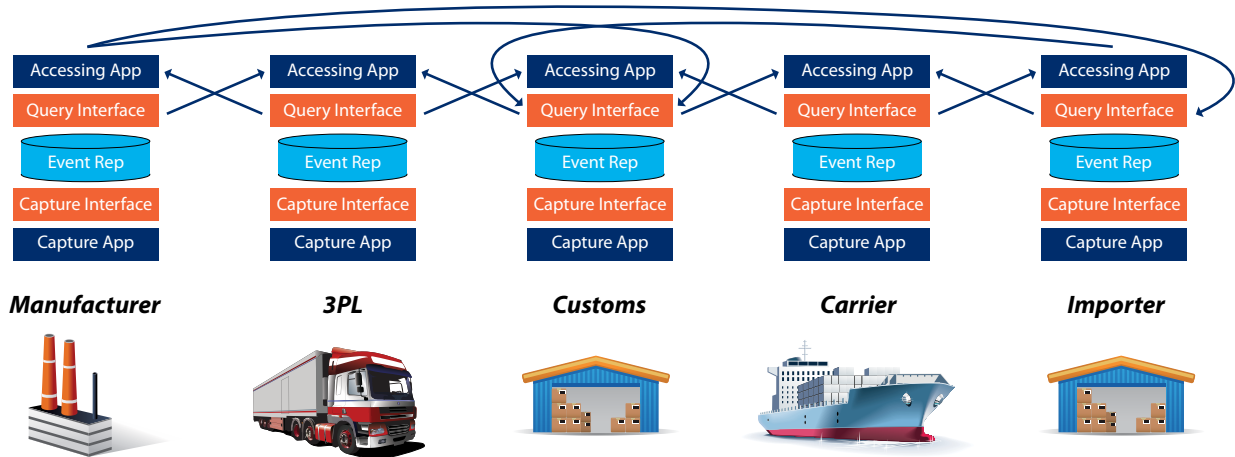- **WHY** (business context and object status)

EPCIS ensures that event data is understood

The Core Business Vocabulary (CBV) is a GS1 Standard that defines specific data values to populate the EPCIS data model. This ensures that all parties who exchange EPCIS data have a common and consistent understanding of the semantic meaning of that information.

EPCIS complements GS1 eCom and GDSN

By documenting supply chain events, EPCIS data complements other types of data exchange in the supply chain, such as business transaction data (exchanged with GS1 eCom) and master data (exchanged with GS1 Global Data Synchronisation Network or GDSN).

Accessing App	Accessing App	Accessing App	Accessing App	Accessing App
Query Interface	Query Interface	Query Interface	Query Interface	Query Interface
Event Rep	Event Rep	Event Rep	Event Rep	Event Rep
Capture Interface	Capture Interface	Capture Interface	Capture Interface	Capture Interface
Capture App	Capture App	Capture App	Capture App	Capture App
Manufacturer	*3PL*	*Customs*	*Carrier*	*Importer*

Thanks to this, EPCIS events are designed to be understood by any business application, without the application needing to know how the process took place or how the data was captured.

EPCIS defines event-sharing interfaces

Besides defining the structure and meaning of physical visibility data, the EPCIS standard defines interfaces for the secure sharing of EPCIS events between business applications and between trading partners.

The EPCIS Capture Interface specifies a standard way for business applications that generate visibility data to communicate that data to applications that wish to consume it.

The EPCIS Query Interface specifies a standard way for internal and external systems to request business events from repositories and other sources of EPCIS data.

EPCIS works well with GS1 barcodes

EPCIS is data carrier neutral and can be used with GS1 barcodes and EPC/RFID tags alike.
For example:

(01)04012345678901 (21)ABCDEFG123456789

Event data
Object uniquely identified by (01)04012345678901
(21)ABCDEFG123456789
was received at dock door 11 of DC 4711
on 2012-02 01 at 15:41 UTC+1

EPCIS meets multiple industry requirements

The EPCIS standard has been developed to meet the requirements of multiple industries, from Consumer Goods & Retail, Transport & Logistics or Healthcare.

The EPCIS framework is extensible and therefore allows industry-specific requirements to co-exist alongside the core components of the standard. This extensibility allows for experimentation and new requirements development while still safeguarding interoperability.

EPCIS provides visibility on a "need-to-know" basis

A company implementing EPCIS can use the authenticated identity of a trading partner in conjunction with pre-defined business rules to determine which information is made available to that partner.

Business applications for EPCIS include…

- Shipment Tracking
- Inventory Management
- Product Authentication
- Pharmaceutical Pedigree
- Electronic Article Surveillance (EAS)
- Promotion Tracking
- Product and food traceability

Contact Information :

- Interested in exploring how EPCIS can bring visibility to your business, contact your local member organization at **www.gs1.org/contact**

- Or visit our website: **www.gs1.org/epcglobal**