



Sharing Data with GS1 standards benefits all parties

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Vision & Mission



Our **vision** is a world where **goods** and related **information** move **efficiently** and **securely** for the benefit of businesses and people's lives

Our **mission** is to be the **neutral** leader enabling communities to develop and implement **open global standards**



GS1: Global reach, local presence

GS1 is a not-for-profit organization dedicated to the design and implementation of global standards and solutions to improve the efficiency & visibility of the supply and demand chains globally and across sectors

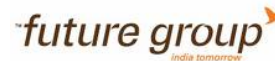


111 Member Organisations
1,5 million member
companies

- Countries with a GS1 Member Organisation
- Countries served directly by GS1 Global Office



Some of the world's best-known companies sit on our Board



...just to name a few!



GS1: A global system of **standards**

Share

Capture

Identify





GS1: A global system of standards

Identify



Capture

GS1 System Data Carriers
Barcodes and EPC-enabled RFID tags



Share

Electronic Commerce Information Flow

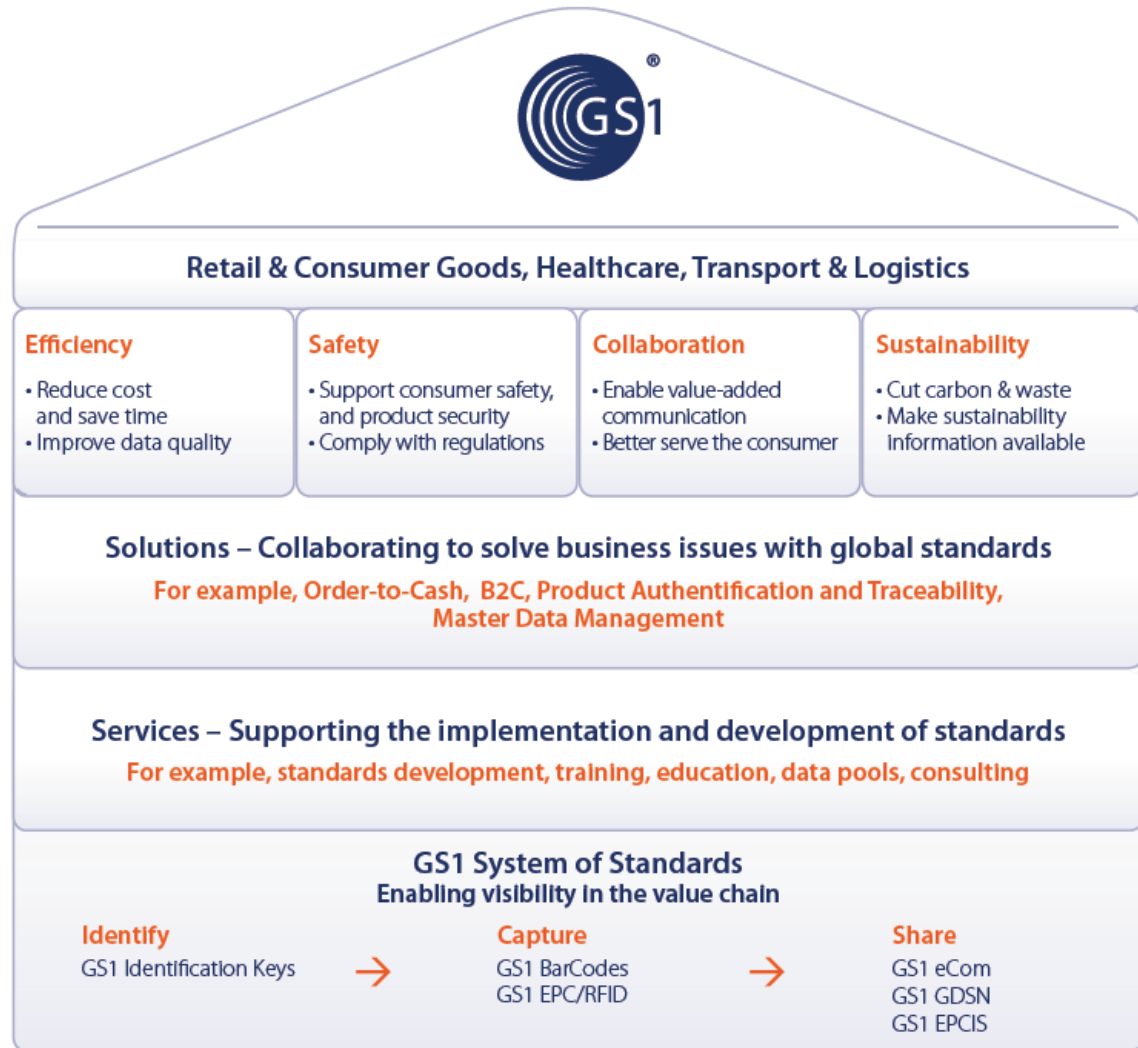
Master Data (GDSN) • Transactional Data (eCom) • Physical Event Data (EPCIS)





What GS1 offers

GS1 provides a **system of standards** and supporting **services** and **solutions**, to help companies in our **key sectors** solve together **business challenges** in the **value-chain**



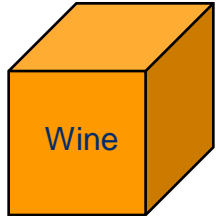


The main GS1 Identification keys

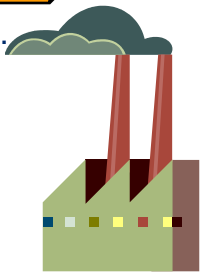




GS1 Identification Keys



GTIN 123...



GLN 456...



SSCC 1244..

GSIN 1879..



SSCC 1244..



SSCC 1245..

GTIN - Global Trade Item Number ...

GLN - Global Location Number ...

SSCC - Serial Shipping Container Code....

GSIN - Global Shipment Identification Number





The GS1 data carriers



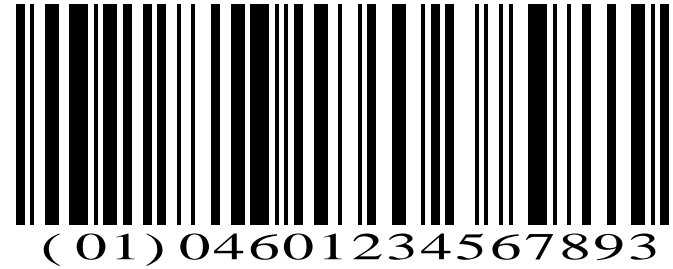


GS1 Data Carriers: Bar Codes & RFID

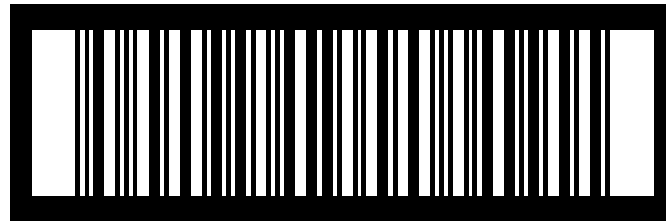


EAN/UPC

GS1-128



GS1 DataBar



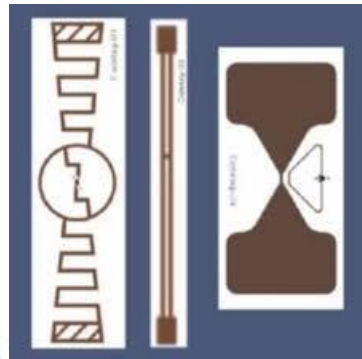
ITF-14



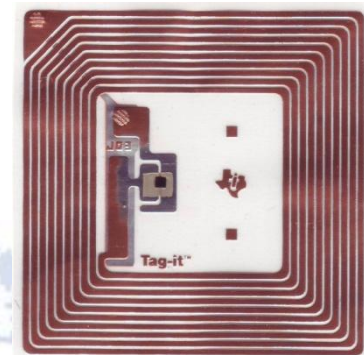
GS1 DataMatrix



GS1 QR Code



EPC UHF Gen 2



EPC HF

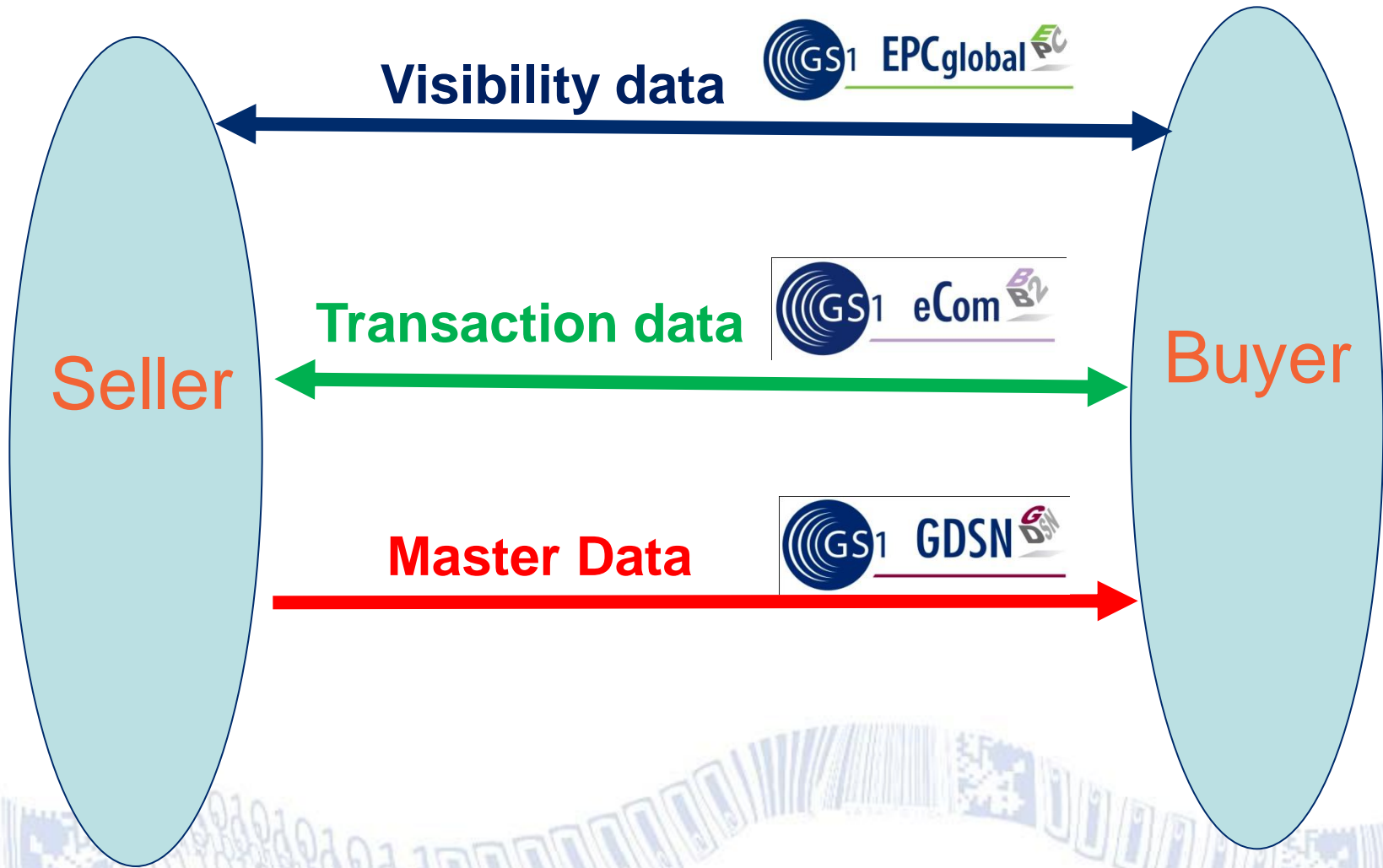


The GS1 data sharing standards





Forms of Data Exchange





Global Visibility

Using GS1 keys, EPCIS
and data sharing
standards





Global Visibility



- **Challenge** -- knowing exactly where a given object is at any point in time, and why. (What, when, where, why)

Global Visibility -- having visibility everywhere in the supply chain where an organization has a legitimate interest and right to know





What is EPCIS?

- **EPCIS = Electronic Product Code Information Service**
- Provides standard interfaces to **obtain and share data** about individual objects within and across enterprises
- Is a **supplement** to, not a replacement of, existing enterprise systems
- Answers the **What, Where, When and Why** by capturing events data





Visibility

Tracking

- Where are my objects?

Tracing

- Where were my objects last Tuesday afternoon?

Pedigree

- Which parties were involved?
- Where has my object been along the way?

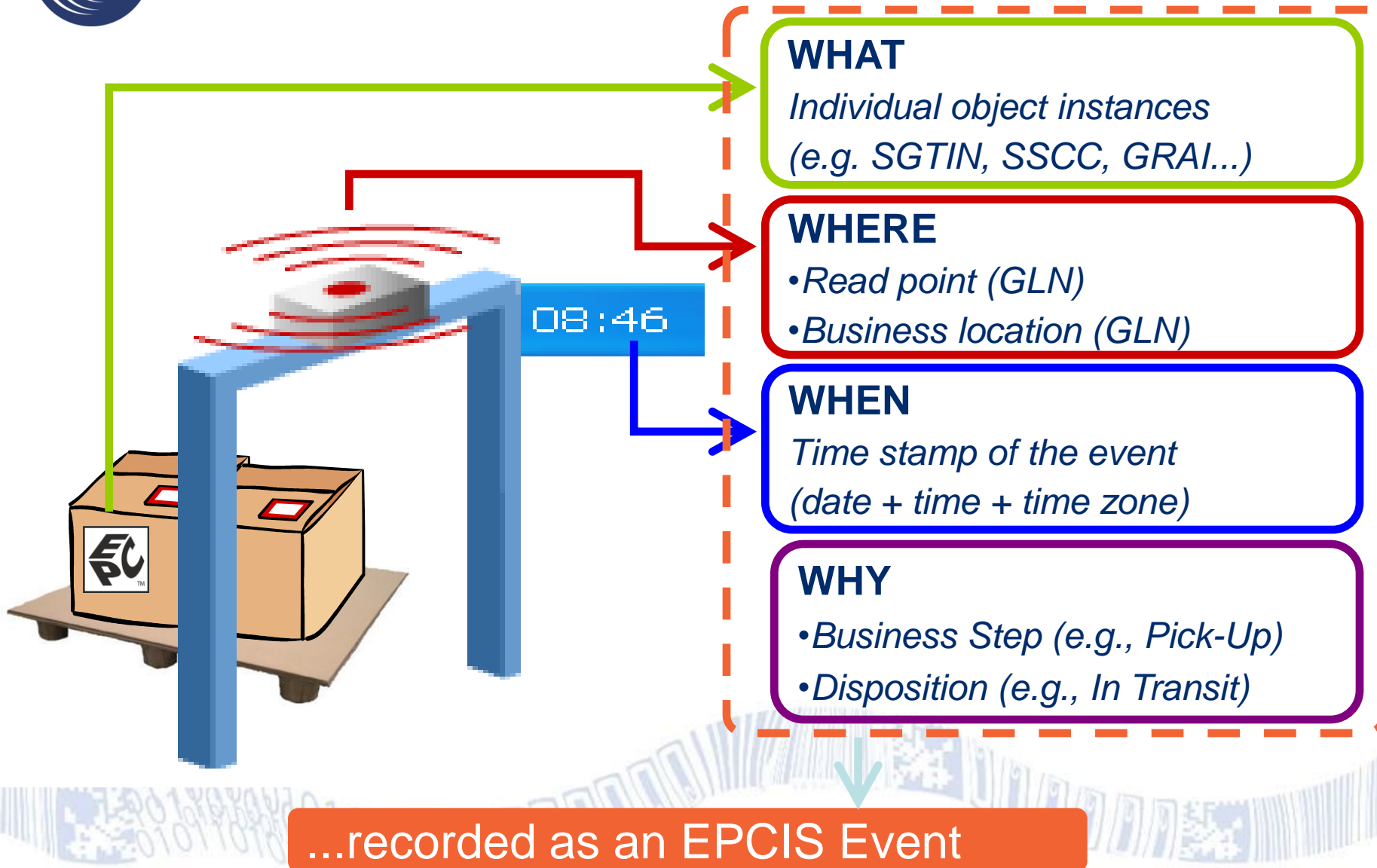
Authentication

- Are my objects likely genuine?





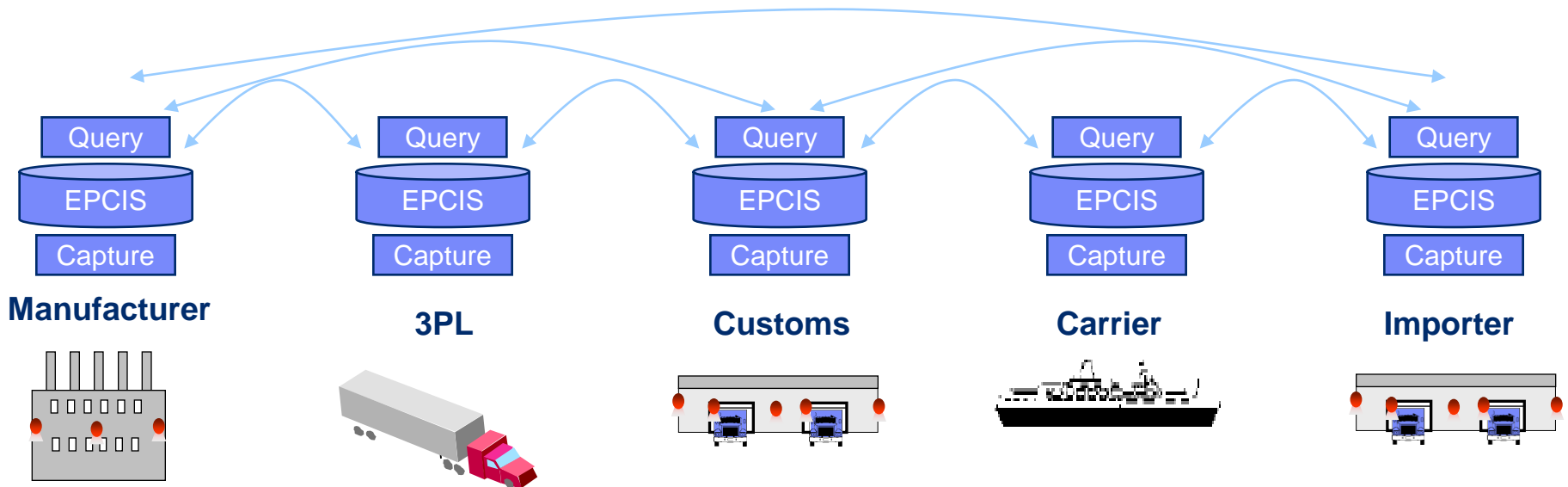
EPCIS Events at supply chain read points





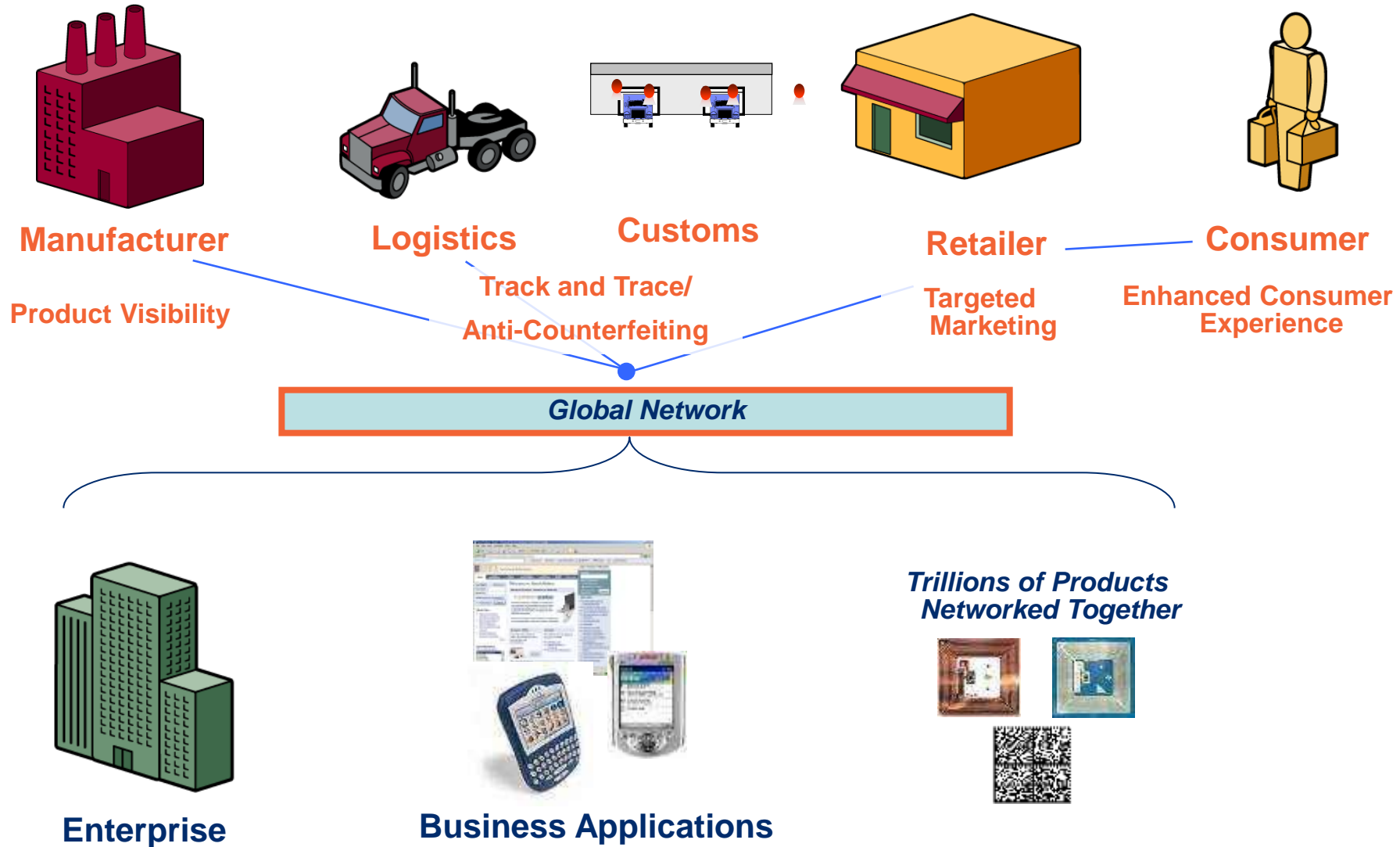
How does EPCIS Data Sharing work?

- Each company controls their own data – share via EPCIS Query Interface, subject to access rights





Vision: An Interconnected World





Royal Malaysian Customs RFID Initiative - Security & Trade Facilitations Project Overview

History

- An ETP Project approved by Prime Minister Dato' Seri Najib Tun Razak
 - Building a system with security feature to facilitate the faster movement of container/ lock vans automatically in between Customs checkpoint.
 - It provides paperless auto identification of container/lock van to facilitate faster container clearance at checkpoints.
- This is a **total privately-funded** project by a private sector

Objectives

- Having visibility in the supply chain where Customs has a legitimate interest and right to know.
- To replace older mechanical seals to provide higher security
- Sharing of data for Customs enforcement purposes



Outgoing/Sending Form K8



Electronic Declaration

CUSTOMS REG NO.	NO. OF ITEMS	CONSIGNOR	CO
K122011D08001474	26	NIL - CP-MELJI COMPANY LIMITED	S608558K - SWI
K122011D08001475	2	NIL - CP-MELJI COMPANY LIMITED	S608558K - SWI
K122011D08001508	4	NIL - WESTERN DIGITAL (THAILAND) CO LTD	Z237314M - WOSDN
K122011D08001509	1	NIL - WESTERN DIGITAL (THAILAND) CO LTD	Z237314M - WOSDN
K122011D08001510	1	NIL - WESTERN DIGITAL (THAILAND) CO., LTD	Z016351W - WESDN.BHD.
K122011D08001511	1	NIL - WESTERN DIGITAL (THAILAND) CO., L	Z237314M - WOSDN
K122011D08001512	1	NIL - WESTERN DIGITAL (THAILAND) CO., LTD	Z016351W - WESDN.BHD.
K122011D08001513	1	NIL - NARAPARA CO.,LTD.	S703181T - DOI
K122011D08001514	1	NIL - GUANGKEN RUBBER (SATUN) CO.,LTD	S703181T - GU/GUANGKEN P
		NIL - GUANGKEN RUBBER	S703181T

CIS registers & send to RFID Sys.



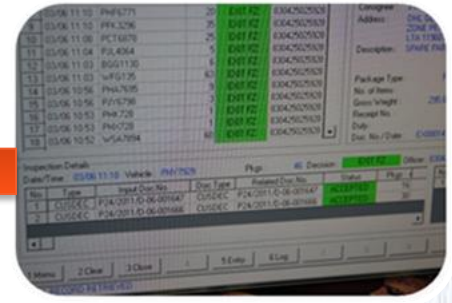
Agent initialize RFID seal



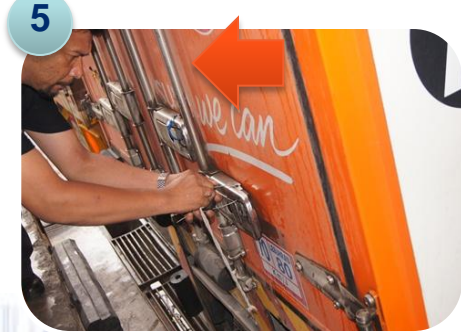
RFID Info printed



Depart - CCTV Surveillance



CIS sends approval to RFID Sys.



Seal Container

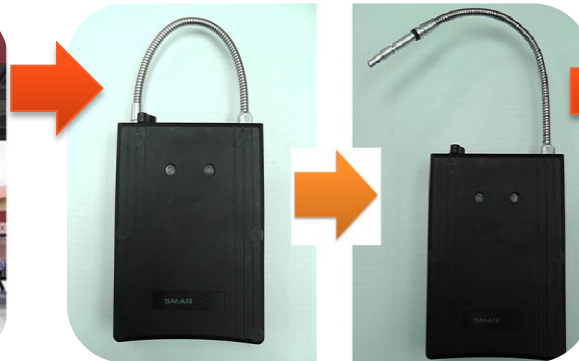




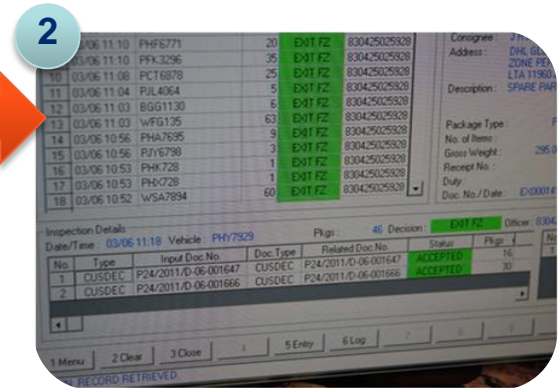
Incoming / Receiving Form K8



1 Reader scans RFID Seal



2 Check if SEAL tempered



3 Auto Complete and Update to CIS



Seal collected back





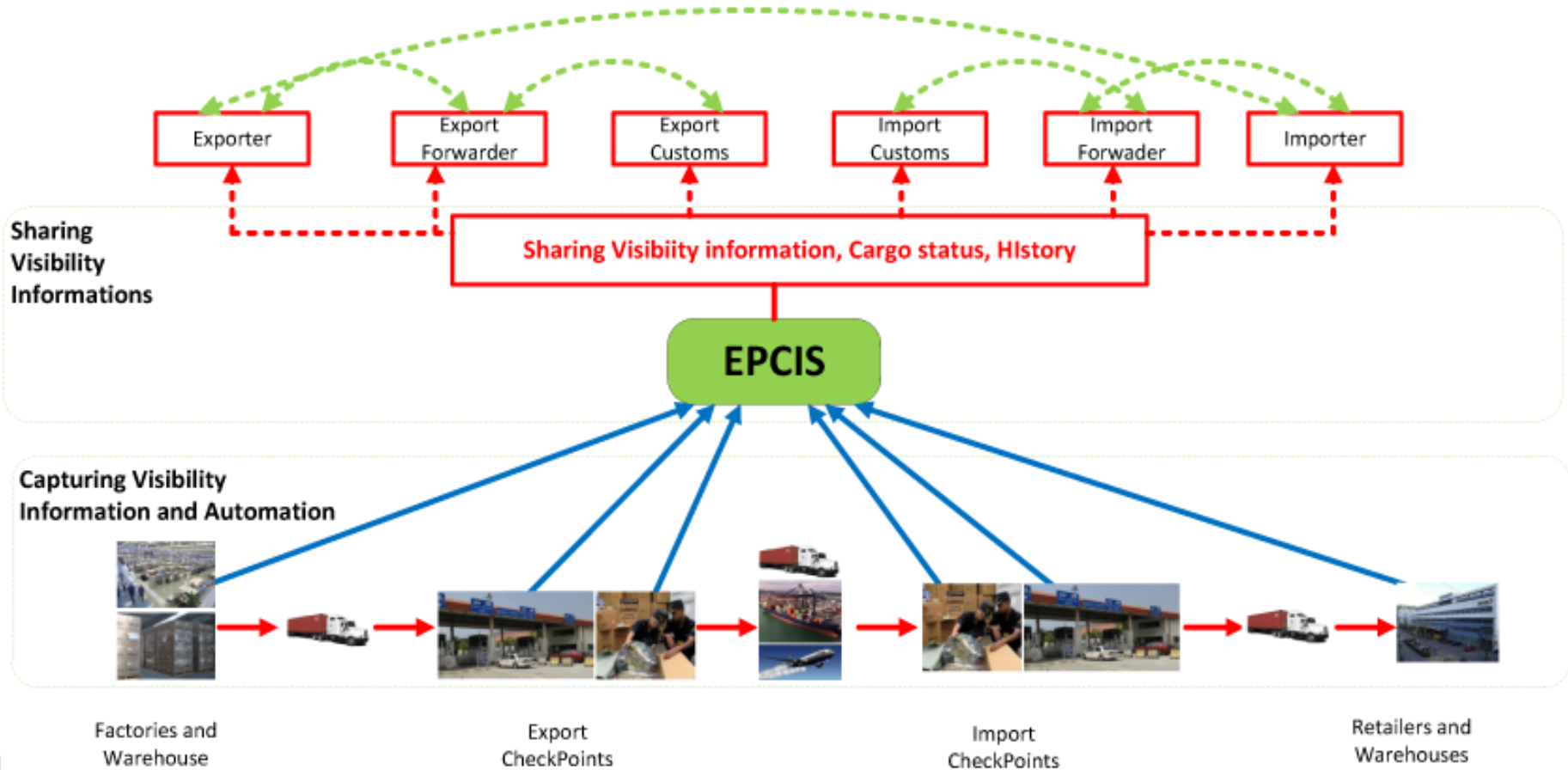
What is EPCIS?

- **EPCIS = Electronic Product Code Information Service**
- Provides standard interfaces to **obtain and share data** about Customs movement within and across countries
- Focuses primarily on capturing & share data **for visibility**
 - Take necessary actions





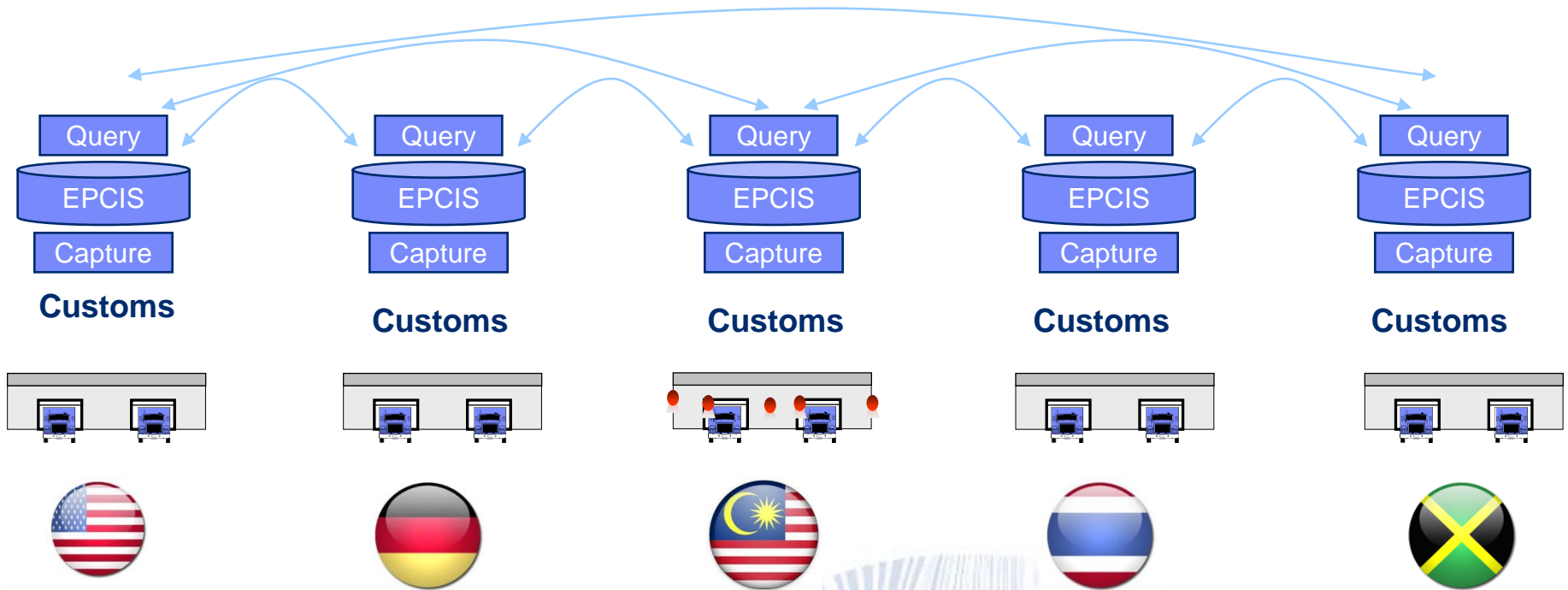
EPCIS Data Sharing Plan





EPCIS Data Sharing

- Each Customs controls their own data – share via EPCIS Query Interface, subject to access rights agreement between countries





Benefits of Sharing Data

- Ability to track and acquire information at origin before the arrival of cargo.
 - Cargo declaration
 - Port of Origin
 - HS Code
- Help Customs in identifying high-risk container, by providing intelligence info.
 - To warrant full or partial check upon arrival.
- Eg: Origin – Wine ; Destination – Soda Water





Summary

SECURITY



RFID seal

VISIBILITY

What: What was declared

When: Date / time of declaration

Where: Location /Port of origin

Why: Export/Import ,etc..



EPCIS

SHARE

Customs



Customs



Customs



Customs



Customs





Moving Forward

- In discussions with Royal Thai Customs, Singapore Customs for sharing of information across borders.
- Welcome many more Customs to work together on the EPCIS platform for data exchange:
 - Facilitate Trade
 - Higher Security
 - Customs Enforcement





Thank you

