



Internet of goods - capturing container movements

report from Amsterdam

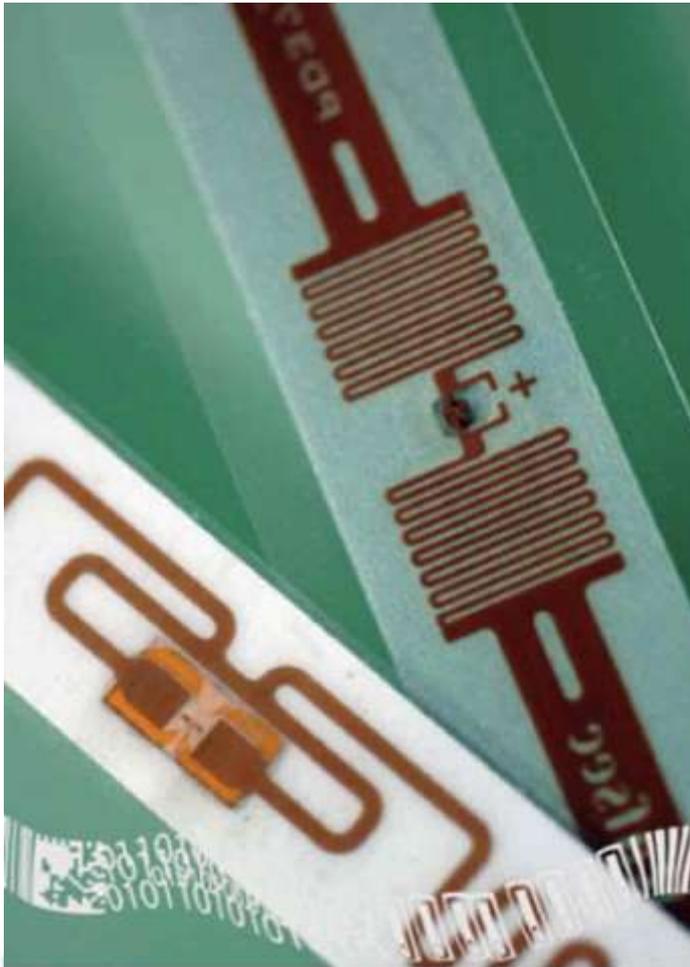
Hein Gorter de Vries
GS1 Netherlands

Stockholm
5 November 2009





Better visibility with help of RFID



GS1 EPCglobal® standards put RFID technology to work.

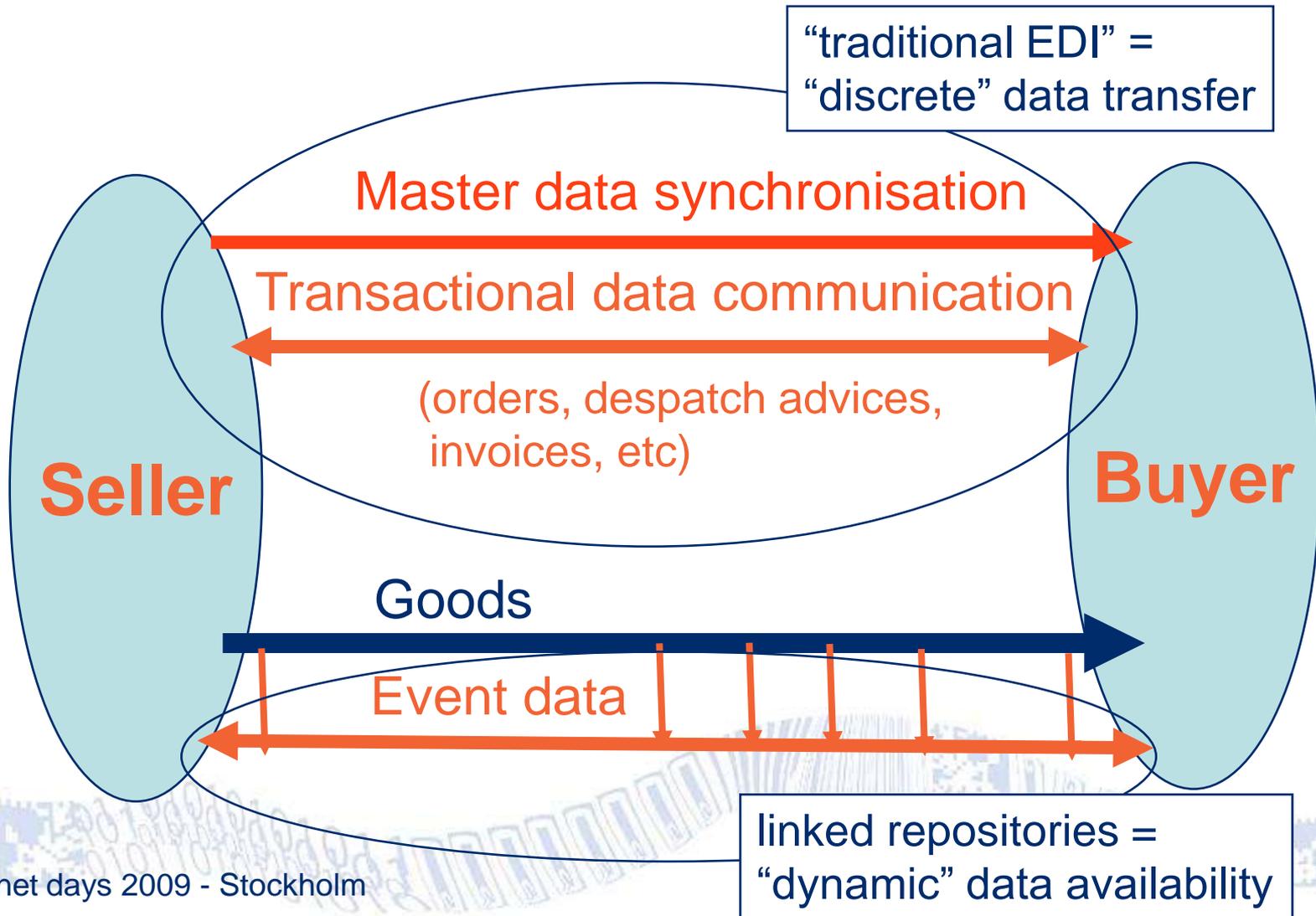
With GS1 standards encoded onto RFID tags, you can know not only **what** an item is, but also **where** it is now and where it has been **before**:

relevant **events** are registered in distributed registries and can be retrieved over the internet

PS this can be done with barcodes as well, but this requires “in line of sight”



Electronic Communication





Overview of TLS (Transport & Logistics) pilots

Phase 3

Tokyo → Amsterdam
Electronic Goods
Ocean
February 2009

- Fully automated reading of tags (fixed readers).
- Use of electronic seals on container (proof of closure).
- Parties involved are AEO (Authorized Economic Operator).
- Involvement of Customs (use of UCR; draft of “green lane”).



Internet days 2009 - Stockholm

Phase 1

Hong Kong → Tokyo
Footwear
Ocean
February 2007

- Handheld readers.
- Connected EPCIS's in several countries.



Phase 2

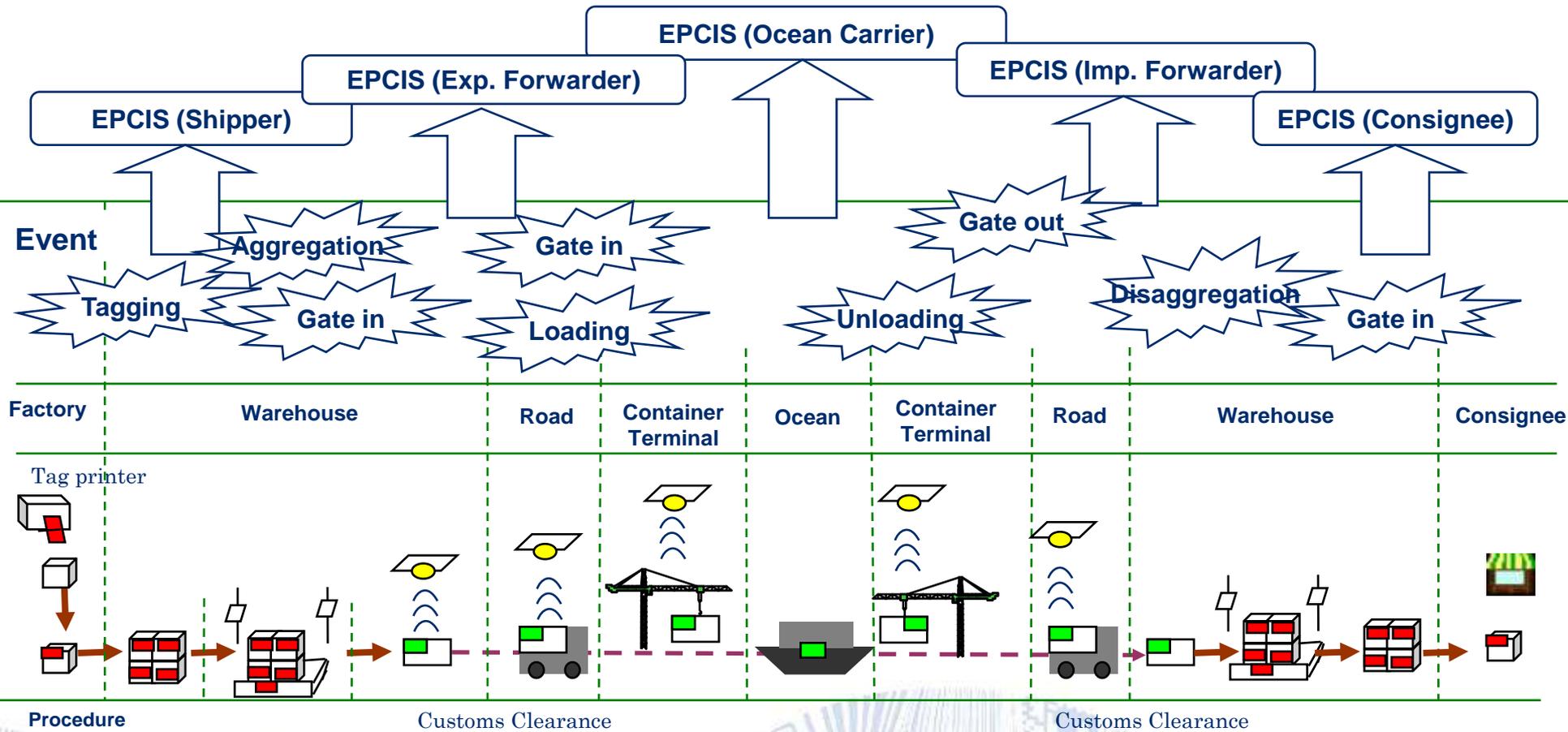
Shanghai → LA
Electronic Goods
Agricultural Machinery
Air, Ocean, Overland
February 2008

- Handheld readers.
- Hibernating active tags in plane.
- Connect EPCIS's in several countries between different industries.



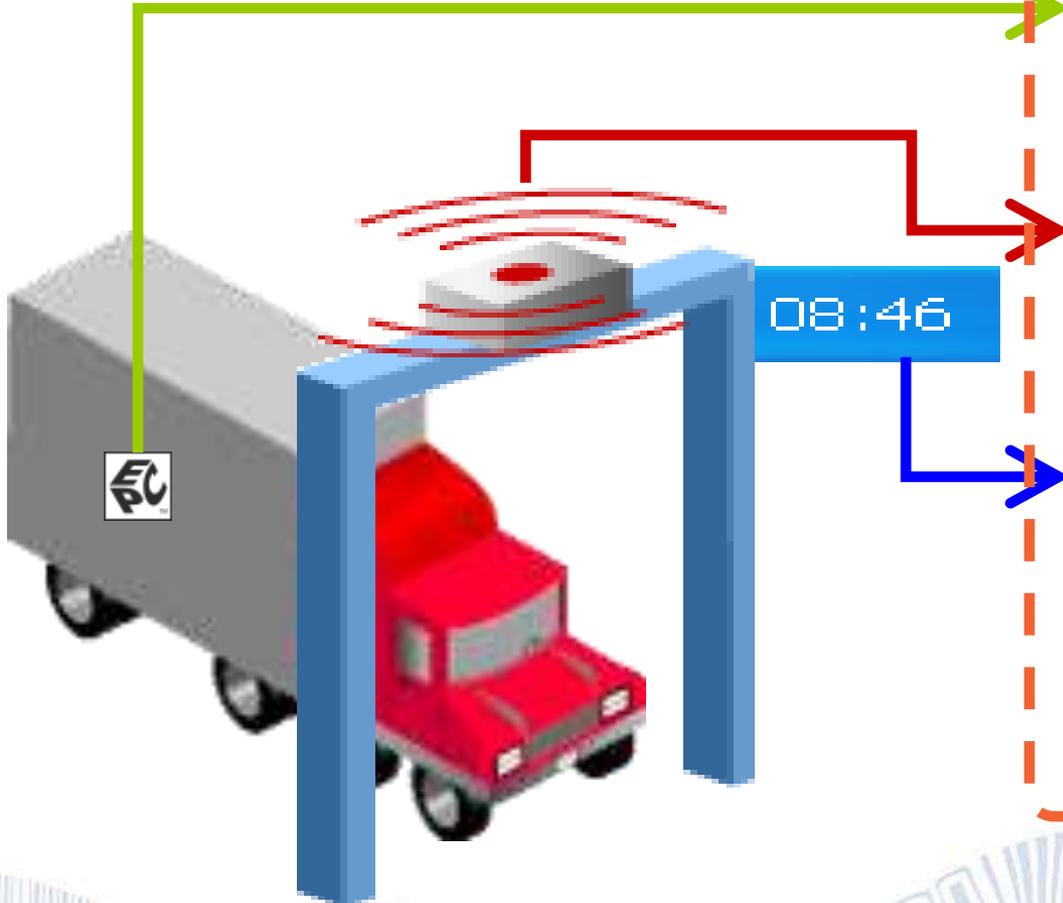


Phase 3: Visibility made visible





EPCIS Event at TLS Read Points



WHAT

*Container EPC1, EPC2,..., etc.
(GIAI)*

WHERE

*Ceres Paragon container Yard
(SGLN)*

WHEN

17.02.2008 08:46:00 UTC+1

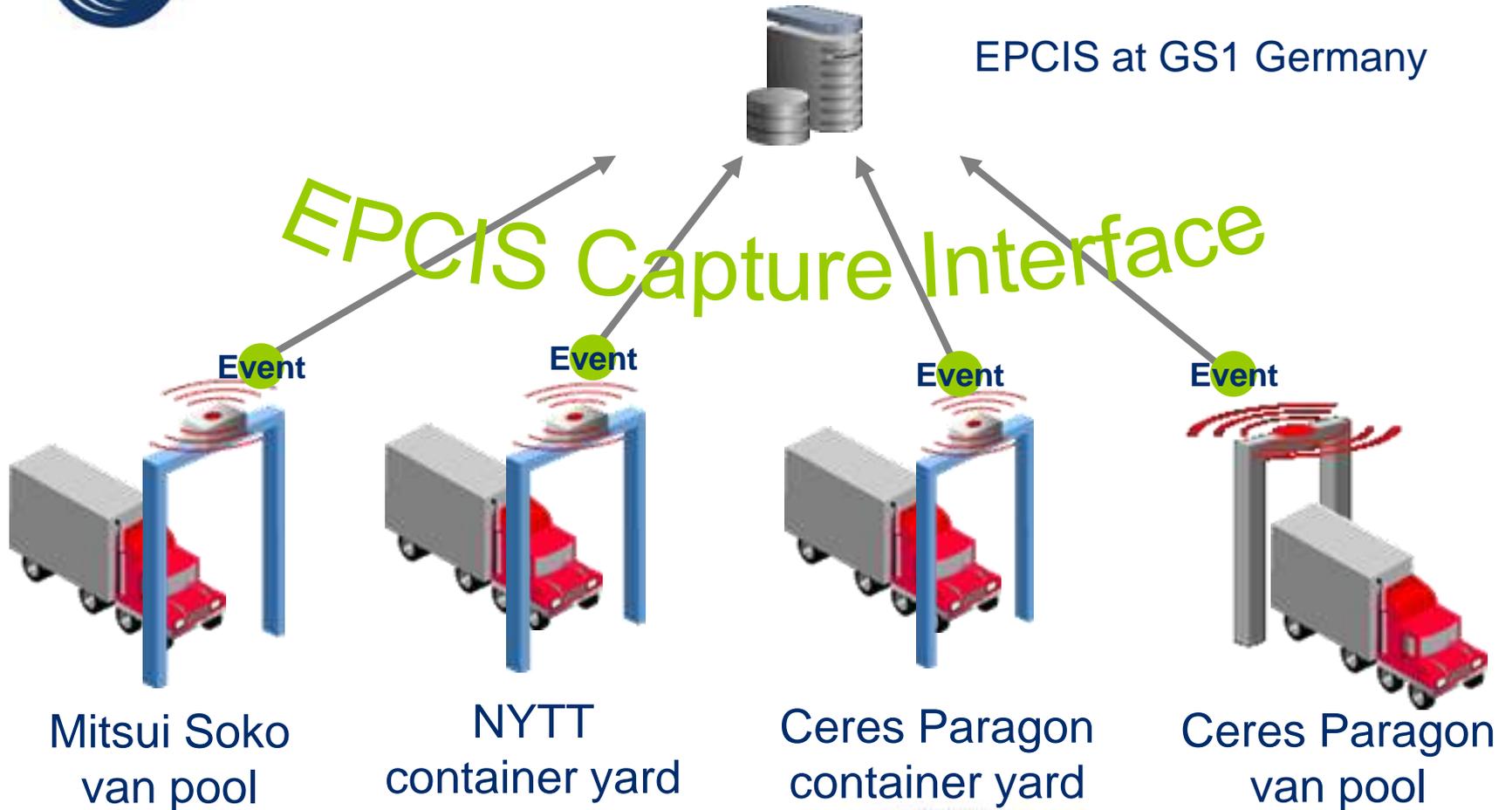
WHY

Arriving

**...recorded as an
EPCIS Event**



EPCIS capture of supply chain events



WHAT: GIAI 4912345.0101401CAXU8052010

WHERE: SGLN 8712345.67813.213

WHEN: 16.02.2008 09:25:00 UTC+1

WHY: Inspecting

XU8052010

9

UTC+1

AXU8052010

L3

UTC+9



EPCIS query of supply chain events

EPCIS at GS1 Germany

EPCIS Query Interface



manufacturer



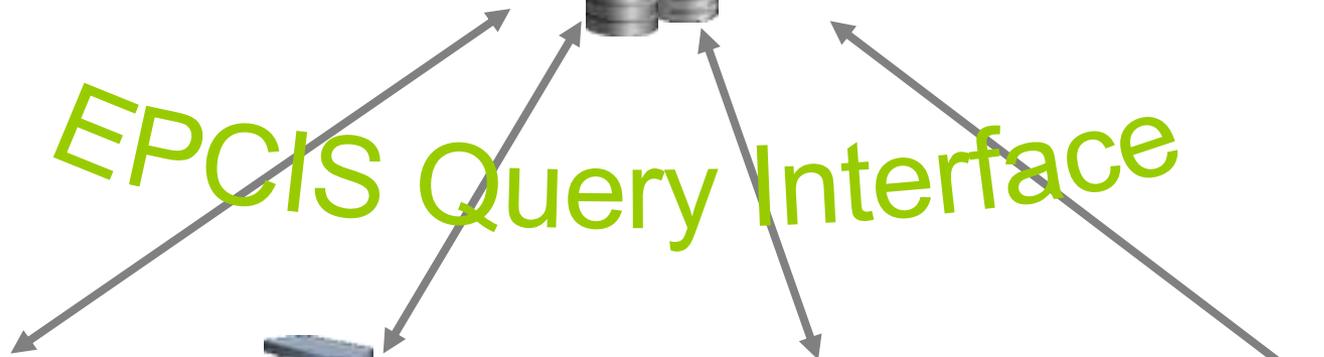
logistics provider



distributor



Dutch Customs



“What is the current status of my order?”

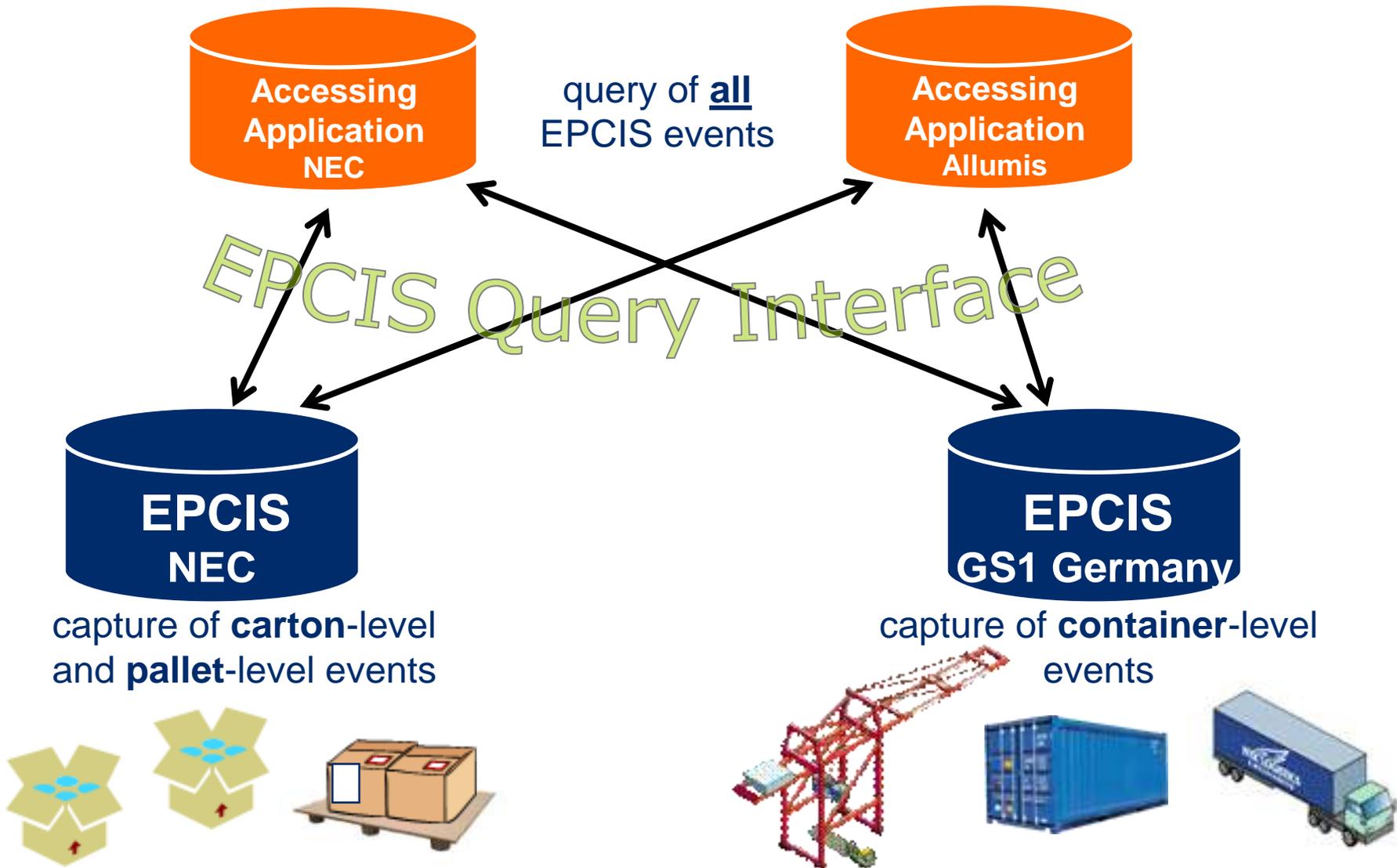
→ “How many containers do I need to pick up today?”

→ “Which products arrived at the Port of Amsterdam today?”

“What does the shipment history look like?” ←



Retrieval of EPCIS event data gives stakeholders supply chain transparency





EPCglobal









Business rationale / benefits (1)

All:

- Gain experience (“learning by doing”)

Shipper:

- Improve control of stock in transit
- Link logistical information with transactional (commercial) information
- Comply with AEO requirements and take advantage of this
- Improve compliance with customs clearance requirements
- Improve information to consignee / customer

Consignee:

- Improve stock control by better knowing when ordered goods will arrive



Business rationale / benefits (2)

Logistical Service Provider (“3PL”):

- Provide visibility of cargo to shipper and consignee
- Improve quality of service while reducing time needed
- Improve compliance with customs clearance requirements
- Improve management of transport assets (container, pallet)

Dutch Customs:

- Test applicability of GS1 codes as UCR
- Explore green lane concept (procedures of simplified customs control), to improve customs clearance (faster with higher reliability)

Solution providers:

- Test concepts, hard- & software
- Be known





Business rationale / benefits (3)

Port of Amsterdam:

- Enhance logistical service profile (speed & quality)
- Explore green lane concept (faster transit with higher reliability)
- Get input for design of PortInfoNet
- Get ideas for multimodal co-operation with air (Schiphol airport), inland water (rivers to “hinterland”) and road transport





Business rationale / benefits (4)

Ceres Paragon terminal:

- Improve quality of service while reducing time needed
- Improve compliance with customs clearance requirements
- Explore green lane concept (faster transit with higher reliability)

GS1 Nederland:

- Explore added value of GS1 in import/export





Conclusion: some quotes

- “It’s all about speed, efficiency and security, with a clear customer focus”
- “RFID will bring more supply chain control and more visibility”
- “Avoid unnecessary trade restrictions, while enhancing security”
- “Creating green lanes requires trusted co-operation between exporting and importing customs”
- “Hopefully there will be a 4th pilot program”
- “Step-wise implementation to gain experience”
- “Roll-out to other transport hubs?”
- “Implementation is a collaborative effort”

=> *Let’s get on with it!*



Hein Gorter de Vries

GS1 Nederland

T + 31 20 5113 820

E hein.gorterdevries@gs1.nl

