Data Pipelines, and Transport Domain Deliverables for Traceability and Transparency in the Supply Chain

David Roff
T&L Domain Co-Ordinator, UN/CEFACT
david@cif-consulting.co.uk
What is a Data Pipeline?

- Electronic **record of data** about the goods and movement built up from the supply chain
- Data can be provided in ‘snippets’ at various **waypoints**
- The person **who knows the information to be true** should provide the data
- Those who need the information should have **access to those data fields** to perform their role
- Capture tracking data to satisfy supply chain visibility requirements
Right Data, Right Place, Right Time

Data Pipeline (PDES)

- Load Site
- Haulier Site
- PCS/Port Site
- PCS/Port Site
- Haulier Site
- Delivery Site

Data Flow:
- PDES from Load Site to Haulier Site
- PDES from Haulier Site to PCS/Port Site
- PDES from PCS/Port Site to Delivery Site
- PDES from Delivery Site to Border Agencies

- Purchase Orders
- Shipment Updates
- Waypoint Data

Exporter / Importer

Carrier/Portals
Timing and Availability of Data

**Pipeline Data**
- Available Much Earlier (at point of loading -30 days)
- Accurate, as used in the supply chain to automate process and create efficiency
- Complete, contains sales contract data such as:
  - Buyer
  - Seller
  - HS Code
  - Country of Origin
  - Description of Goods

**Manifest Data**
- Available 48 hours prior to arrival (or less)
- **Poor Quality**, has typically been ‘watered down’ to reduce work, satisfy insurance requirements (S.T.C), hide data from prying eyes
- **Incomplete**, doesn’t always contain key data for risk analysis
Business Case

• Hazelnuts from Azerbaijan (HS:08022100) – 100% document check, 10% physical inspection requirement.
• Description of goods (Nuts) and short HS code on manifest.
• **ALL** ‘nuts’ from Azerbaijan stopped as description is not clear enough
• £1 million year saving for this case alone
• Correct data **de-risks** trade route, allows resource to focus on unknown
Identification of Goods (MUCR, DUCR, TUCR)

Customs View of trade and transport links (EU UCC)
Identification of Location(s)

ICC Incoterms could dictate the ‘place of payment’ i.e. DAP, FCA

Represented by the UN/LOCODE in electronic exchange of data, tracking messages report and can trigger automated invoicing as an example.

UN/LOCODE Child Codes provide more granular detail (terminal or container facility)

Example: Arrival at an ocean terminal (SMDG) starts the ocean movement, container return at a inland container facility (BIC) closes the container cycle for that journey.
eCMR – International Convention

Greater Transparency

- Accurate data during transport
- Control and Monitoring of Shipment
- Access to Proof of pickup and Delivery
- Can be linked to eCall system for safety
**Event Data**

- Physical event takes place that is reported i.e. Loaded on Vessel
- Attestable events often used in contracts and letter of credit or KPI reports.
- Accurate, as used in the supply chain to automate process and create efficiency
- Gaps between the Events don’t highlight what’s happening between

**Dynamic Data**

- Smart Containers give certainty
- Reported **continually** from IoT devices
- Can be used to forecast or predict
- Useful for Temperature Sensitive Products (i.e. Cheese or Fish)
- Report concerns or identify early on to avoid issues i.e. Reefer temperature falling out of range

1 provider alone had **39 million tracking (IFTSTA)** events per month
Transport and Logistics

- **Data Pipelines** to provide transparency between buyer and seller and improve timing, availability and accuracy
- Origin and Destination regulatory compliance through transparency and tracking
- **Unique Identifiers** for goods and locations
- **eCMR** demonstrating traceability and transparency
- Actionable **tracking data** from pickup to delivery
Thank You

David Roff

Building data driven supply chains, UN/CEFACT Transport and Logistics Domain Co-Ordinator

Contact Details
david@cif-consulting.co.uk
+447811169371
https://www.linkedin.com/in/davidroff