Transport & Logistics: Key to Customer Experience

Delivery process often cause for Customer Disappointment;
Industry is learning to improve its performance

Jaco Voorspuij, Senior Manager Transport & Logistics
12th September 2019
Welcome & Agenda

• Schedule for this workshop
• Housekeeping
• Presentations and discussions
  • Setting the scene
  • T&L initiatives – heads up and updates
  • FENIX pan-European federated networks
  • SMILE project – involving the Consumer
  • Questions, Answers and discussion
• Closing
• Lunch
Anti-Trust Caution

• GS1 operates under the GS1 anti-trust caution. Strict compliance with anti-trust laws is and always has been the policy of GS1.
• The best way to avoid problems is to remember that the purpose of the group is to enhance the ability of all industry members to compete more efficiently.
• This means:
  - There shall be no discussion of prices, allocation of customers, or products, boycotts, refusals to deal, or market share.
  - If any participant believes the group is drifting toward impermissible discussion, the topic shall be tabled until the opinion of counsel can be obtained.
• The full anti-trust caution is available via the link below, if you would like to read it in its entirety: http://www.gs1.org/gs1-anti-trust-caution.
Meeting etiquette

• Meetings will begin promptly as scheduled
• Be present – avoid multi-tasking
• Avoid distracting behaviour:
  - Place mobile devices on silent mode
  - Avoid sidebar conversations
• Be considerate
  - Avoid monologues
  - Keep comments concise
• Collaborate in support of meeting objectives
  - Ask questions
  - Be open to alternatives
WiFi internet access

- Select network "Sheraton Lisboa" and connect
- User and Password both: GS1events
Setting the scene

T&L is transforming itself to better meet the needs of its Clients; GS1 is making sure we are an integral part of the transformation

Jaco Voorspuij, Senior Manager Transport & Logistics
12th September 2019; Industry & Standards Event; Lisbon
Supporting ALL sectors

T&L is an **integral** part of every Sector’s **Value Chain**.

T&L **follows the business** needs in every Value Chain.

Sector variations pose risks to efficiency, reliability and effectiveness
Changing T&L landscape

1. Convergence of physical and digital
2. E-commerce and consumers
3. B2B commerce
4. Globalisation
5. Urbanisation
6. Technology and innovation

By 2019, B2B firms will spend more on e-commerce technology than online retailers do.

E-commerce is likely to reach more than 20% of all retail sales.

70% of the world’s population will move to an urban area by 2050.

Inefficient cross-border delivery is consistently one of the top-three biggest barriers for online merchants.

Source: 10 Ecommerce Trends for 2018
Source: 2016 CGF Collaborative Logistics Report
Source: 2016 CGF Collaborative Logistics Report
Source: Cross-border E-commerce Barometer 2016
Insights from our customers

Technology is significantly impacting T&L.

"Digitisation of the maritime supply chain system will help solve the majority of the problems we have today and it will bring a lot of improvement into our day-to-day activity".

Today’s operations are not sufficient to meet current trends and customer demand.

"Facilities and transport networks are not built to support the current trends of smaller packages and high volumes. They were built to support retail fulfilment, not direct-to-customer".

GS1 can support collaboration between the different logistics partners.

"In interconnectivity, it’s important that this language is there across different parties so that the platform is more like a virtual layer that brings everyone together".

GS1 has an opportunity to develop standards for new technology.

"Focus on standards and expand to meet whatever new technology needs can be met".
GS1 T&L strategy milestones & timeline

**Vision**
End-to-end visibility throughout the supply chain—from source to **CUSTOMER**

**3-5 years**
Real-time business processes powered by standardised web APIs, interconnected platforms & registries

**0-2 years**
Development efforts, pilots and partnerships for standardised web APIs, **interconnected platforms** & registries

**Today**
Do more with GS1 standards, services and solutions by telling new stories to new audiences; focus on last mile, **Maritime & Ports**, cross-border & traceability
Every second receiver is dissatisfied

81% of the interviewed people would like to be delivered at home in future as well.

82% of the interviewed people would like to receive their parcel in future at home within a preferred time slot.

85% of the interviewed people would provide all necessary information.
What are Industry Stakeholders doing?

- **Amazon** has purchased its own fleet of airplanes and has obtained a license to operate as NVOCC (Freight Forwarder) in order to take control over their critical Supply Chain elements;
- FedEx is cutting its ties with Amazon (not wanting to make a competitor stronger or being handed bad left-overs for transportation);
- UPS appears to be getting closer to Amazon;
- Alibaba and Maersk have a strategic alliance in place to carry (Ecommerce) Orders from China to European and American markets;
- Freight Marketplaces (like FreightOS) are taking significant portions of the market between Logistic Service Providers and Logistic Service Providers;
- Traditional business models for Freight Forwarders and carriers are being challenged.
What is GS1 doing?

- GS1 T&L have engaged in a number of long term initiatives with several stakeholder groups most affected by the on-going transformations;
- Following slides will go into more detail;
- GS1 is successfully positioning itself in large scale innovation projects that aim to **make Transport & Logistics fit for next level of Customer Expectation**;
- We have two presentations today on GS1 engagement in these large scale innovation projects;
- We feel that there are unique opportunities here for also the smaller MOs to participate.

**GS1 is taking FRONT ROW SEAT to help drive innovation in Transport & Logistics for the benefit of ALL Value Chains**
Transport & Logistics initiatives

Longer-term engagements coming to fruition; positioning GS1 as **THE** standards for Supply Chain improvements

Jaco Voorspuij, Senior Manager Transport & Logistics, GS1 Global Office
12th September 2019; Industry & Standard Event; Lisbon
Two Foundational Standards Efforts

• Maritime & Ports
• Scan4Transport
Maritime mode crucial for all sectors

Maritime responsible for over 2/3 of ALL cargo carried by any mode anywhere in the world

Projected growth in freight movement worldwide between 2015 and 2050

standard measure of freight movement

Maritime

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Maritime & Ports Achievements & Opportunities

• “Port Information Manual” final edition ready in December 2019; published together with
  • “Mariners’ Handbook” of UKHO and
  • “Just-In-Time Arrival Guide” of IMO GIA.
• M&P community is driving awareness and adoption of these publications very hard
• “Port Information Manual” is on the agenda of many seminars and congresses in the coming months.
  • GO will share list when available, so we may plan to attend / co-present (if feasible).
  • GO will also post this document shortly.
• For supply chain standards GS1 is the authority to advise on these existing standards.

• Because ports act as a node in the supply chain, and their customers need more and more end to end visibility, connectivity to supply chain standards is important.

Therefore GS1 has been adopted in this publication as the most global and robust standardization body spanning the broader supply chain.

• For indirect references of port areas and lines, waypoints and sections the **Global Location Number (GLN)** is an existing ISO standard (ISO/IEC 6523). It is the only guaranteed globally secure, unique number and can be used in combination with local identification numbers.

**NOTE:** M&P Community is planning Information Exchange tests using GLN among a dozen or so orts worldwide with GS1 GO support.
EPCIS is encapsulated in an existing ISO standard (ISO/IEC 19987:2017) and is a global GS1 standard, which has been used for over a decade in global supply chains for representation of events. **Events may be recorded for any location and any object or entity.**

EPCIS uses non-significant ID keys where available insulating against future changes to attributes.

- Ports may use any EPCIS element as needed, with no obligation to use irrelevant elements.
- **EPCIS has a rich pre-existing vocabulary with extensions possible for mode, sector or trade specifics.**
IMO Vessel Number
Closing the gap in Global Traceability

- Goods are loaded into Container by Shipper. Link GTIN to Container ID (BIC); link Container ID to GSIN in EPCIS events
- Container transported to origin port terminal and offloaded there. Container BIC and port terminal GLN used in EPCIS event
- Terminal **loads Container onto vessel**; Need to link Container ID (BIC) to **IMO vessel number** in EPCIS event/s - Currently not feasible in EPCIS
- Vessel transports container/s to destination port; Currently not feasible to send EPCIS **events for vessel** leaving origin port, in transit and arrival at destination port
- Containers offloaded at destination port terminal Currently not feasible to create EPCIS events for **offloading from vessel**
- Container temporarily stored at port terminal Linking container ID to GLN for port terminal
- Container transported to Receiver
- Receiver confirms delivery of the Container
So what is the IMO Vessel number?

- **The IMO Vessel Number (IMO VN)** is a unique LIFETIME identification for a vessel.
- The name may change many times; the IMO VN cannot change.
- IMO VN is **mandated** by Maritime Regulation for all vessels under the SOLAS convention.
- IMO VN are recorded in a global registry along with essential master data for the vessel.
- Many maritime applications and solutions rely on the IMO VN including global vessel tracking applications.
### IMO Vessel Number
Closing the gap in Global Traceability

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IMO Vessel Number
Closing the gap in Global Traceability

✓ Goods are loaded into Container by Shipper. Link GTIN to Container ID (BIC); link Container ID to GSIN in EPCIS events.
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✓ Containers offloaded at destination port terminal. Currently not feasible to create EPCIS events for offloading from vessel.
✓ Container temporarily stored at port terminal. Linking container ID to GLN for port terminal.
✓ Container transported to Receiver.
✓ Receiver confirms delivery of the Container.

We are now ready to support Global Traceability.
ALSO NOTE:

• The current applications and solutions based on IMO Vessel Number can now connect to EPCIS infrastructures to easily exchange vessel tracking information with any and all stakeholders requiring or desiring that information.

• Synchronisation of operations across modes (through the ports) becomes much easier to achieve via such an infrastructure As also highlighted in the Port Information Manual.

“Because ports act as a node in the supply chain, and their customers need more and more end to end visibility, connectivity to supply chain standards is important.”
Scan4Transport
2D barcode content standard for Transport Information
Enabling effective and efficient delivery even when connectivity is not available
The GS1 Vision for Transport
Harmonised label Used by ALL end-to-end

Created and attached by SHIPPER at origin

Label design according CEN/TS 17073
Assumptions / Pre-requisites

• Information exchanged among stakeholders before parcel hand-over to next stakeholder handling the parcel.

• Use of common ID Key (SSCC) end-to-end to link to all data relevant to correctly handle the parcel.

Unfortunately these **pre-requisites are NOT met in very large areas of Transport & Logistics environments** for two main reasons:

• Reliable cost-effective Network Connectivity is NOT a given in large portions of the worlds landmass.  
  In Australia coverage is less than 30%; globally coverage likely less than 50%

• Between 5 and 15 million MSME LSP cannot establish economically viable EDI connections with their LSC (for lack of sufficient transaction volume).
How to ensure effective Customer Delivery?

- Customer Delivery is Key to Customer Experience.
- It’s imperative GS1
- **Enable these Transport & Logistics environments to do their jobs well,**
- **Ensure all the data necessary for effective delivery is easily accessible on the parcel itself.**
- Scan4Transport (S4T) will deliver the Application Standard to help achieve exactly that.
- It will **leverage the GS1 Digital Link standard** to describe exactly what the 2D barcode content may be.
- Once the 2D barcode is created compliant with S4T all stakeholders can process the barcode easily in whatever devices they carry when handling the parcels.
Where are we now?

- We have a **large Mission Specific Work Group** with representation from all kinds of stakeholders (Postal, Courier/Express/Parcel, Solution Providers, shippers)
- We have a draft Application Standard Still a Work in Progress.
- We are **leveraging existing global standards** (e.g. Universal Postal Union standards and knowledge regarding addresses all over the world).
- Things are **progressing well**
- We would still appreciate participants joining the on-going effort.
  - Ensuring the Scan4Transport is as good as it can be when published (before end of this year)
  - Ensure implementation of the Application Standard when ready.
FENIX - A European FEderated Network of Information eXchange in Logistics".

Building an interconnected IT ecosystems for Logistics

Sandra Wagner, FENIX Project Lead, GS1 Germany
12th September 2019; Industry & Standard Event; Lisbon
Overview EU Project FENIX

- **Consortium leader:** ERTICO – public-private Partnership of 120 companies and organizations
- **Main topic:** IoT in European logistics networks
- **Project partners:** approx. 40 Partners (next Slide)
- **FENIX project value:** approx. 60,000,000 €
- **Funding amount for FENIX:** approx. 30,000,000 €
- **Funding volume of GS1 Germany:** 1,053,750 €
- **Start of project:** April 2019
- **Project duration:** 36 months
FENIX Test sites -> GS1 User engagement

**B1: AirCargo** pilot site (Be)- implement/pre-deploy/deploy specific use cases for the air cargo community linked to the other transport modes across TEN corridors

**B2:** Multimodal inland Hub- Procter & Gamble- Mechelen-Willebroek pilot site across TEN-T corridors

**F:** Multi Modal Transport T&L services interoperability on the Mediterranean and the North Sea - Mediterranean TEN-T corridors

**G:** Multiple test sites across on Rhine-Alpine in Holland, Germany, Switzerland, Italy

**H:** Smart door-to-door multimodal T&L services across TEN-T

**A:** Customs corridor services for T&L: Fürnitz Pilot Site (South Austria) on the Baltic-Adriatic corridor

**E:** Data visibility T&L services across the Spanish-Atlantic corridor between the main nodes and actors

**I1:** Mediterranean and Baltic- Adriatic and the Motorway of the Sea of South-east corridors

**I2:** The Italian Rhine Alpine pilot site - Dynamic Synchro-modal for sustainable multimodal logistic planning and operations

**SL:** Mondelez T&L multimodal services across TEN-T corridors

**GR:** Greece Balkan-TEN-T network, Adriatic-Ionian Corridor-Cyprus multimodal T&L services
EU funding programmes and initiatives make available financial support to projects implementing the Trans-European Networks - Transport

GS1 Strategy in FENIX

Grant

€ 30 million 1 for GS1

Involvement

GS1 MO

Pilot sites: further development and implementation of GS1 Services in corridor information systems

Sub Activity:
"Standardisation and interoperability"

- Creating innovative IoT Logistics solutions for efficient data exchange
- Use of GS1 standards in digital information systems for multimodal traffic management
- **Enhancement of**
  - GS1 Know-how in new technologies
  - collaborations with customers (e.g. Mondelez, P&G)
  - collaborations with other (standardisation) organisations (e.g. UN/CEFACT, IMO, IALA, WZO, ISO, FIATA)
- Improvement of the GS1 position in EU-funding networks

Strategic alliances among GS1 MOs
„Who does not know where he wants to go should not be surprised if he arrives somewhere else.“  
Mark Twain
Where do we want to go? Let’s create

- **Pilot Sites**

- **GS1 Standards, e.g.**
  - GLN
  - SSCC
  - GRAI/GIAI
  - Digital Link

- **GS1 Implementation**

- **Future Scenarios**
  - Identification of possible GS1 Standards beyond the obvious
  - IoT in projects and beyond

- **FENIX needed:**
  - Sensor technology, REST (de-facto API - in IoT), ISO IEC

- **Vision**
  - EPCIS 2.0 Testbed EU together with GO and MOs
Role of GS1 MOs within FENIX

01
Working with pilot sites on local basis

02
Creating value with country-specific experience for the use of standards

03
Support for the implementation of standards in corridors

04
Being part of Sub-activity “Standardisation and Interoperability”

Representing GS1 in the regional market
Role of GS1 MO

- When an MO does work for FENIX, that work may be partly paid for by the EC.
- The MO would act as subcontractor for GS1 Germany who are the official consortium member representing GS1.
- Any MO as well as GO would work on the FENIX project under the same Terms & Conditions as GS1 works under according to the Grant Agreement with the EC.

Subcontracting agreement must be made, Amendment of GA necessary – by End of 2019
In case you would like to know more

Sandra Wagner, project lead, GS1 Germany
Jaco Voorspuij, sr. manager Transport & Logistics, GS1

sandra.wagner@gs1.de
jaco.voorspuij@gs1.org
SMILE – Project
GS1 Germany
Involving the Consumer in the Delivery Process

Oliver Püthe, NNNN, GS1 Germany
12th September 2019; Industry & Standards Event; Lisbon
SMile -
Smart Last-Mile in urban and rural areas

12.09.2019

Oliver Püthe & Sarah Leick, GS1 Germany
Last Mile Challenge in Germany

2012  
2.5 billion

2017  
3.5 billion

2022  
4.3 billion

- Complex customer needs
- Overloaded infrastructure
- Precarious employment conditions
- Increasing costs
- High traffic load

www.smile-project.de
Every second receiver is not satisfied

81% of the interviewed people would like to be delivered at home in the future as well.

82% of the interviewed people would like to receive their parcel in the future at home within a preferred time slot.

85% of the interviewed people would provide all necessary information.
More service - higher willingness to pay

- 40% of the interviewed people who would pay a mark-up would pay at least one euro.
- 58% would pay 1.99 euros for an important delivery in a preferred two-hour time slot.
- 95% of the respondents who would not accept a mark-up are satisfied.
You can find the study results here!
The Smile Consortium

3 years

5 partner

1 platform

www.smile-project.de
It's a Match!
You guys liked each other.

Sarah, E-Commerce Retailer
- happy customers
- customised service
- 5-star rating,
- unique selling point...

Jens, Bicycle Courier
- additional volume,
- on my terms,
- flexibly managed,
- without IT investment ...

Paula, Online Shopper
- all my parcels,
- at my home,
- on my preferred time slot
- independent of the logistics service provider...
Use Case – Preferred Time Slot

Pickshare registration – Online shopping – Micro Depot provide preferences – Courier – Preferred Time Slot receive the parcel

100% delivery rate in first attempt

One pick-up, all parcels

100% delivery rate in first attempt

www.smile-project.de
Use Case – Preferred Time Slot

open and independent platform ensuring event based end2end visibility for the exchange of parcel information based on the GS1 Identifier SSCC

1. commissioning
2. arriving
3. shipping
4. receiving

User eCom Retailer Micro Depot Courier User

www.smi
Receive your Parcel
Book your Preferred Time Slot
Tobias
Roadmap

03/2018
Project Start

12/2019
Developments

02/2020
Partnerships

05/2020
Pilots

03/2021
End of Project
Wrap-up

- cooperative white label platform based on GS1 Standards
- open, interoperable shipment information system
- access to the parcel market for companies of all sizes
- more customer orientation through innovative, service provider-independent delivery concepts
- multiplication of micro-depot options
- securing the delivery success
- consolidate deliveries and plan routes efficiently
- optimize distribution structures with dynamic depots
Contact

University of Leipzig
Michael Glöckner
Grimsaiche Str. 12
04109 Leipzig
T +49 341 97-33704
E gloeckner@wifa.uni-leipzig.de

Hasso-Plattner-Institut
Dr. Luise Pufahl
Prof.-Dr.-Helmert-Straße 2 – 3
14482 Potsdam
T +49 331 5509 195
E Luise.Pufahl@hpi.de

Goodstag GmbH
Oliver Schwarz
Kitzingerstr. 15-19
12277 Berlin
T + 49 173 6040000
E o.schwarz@goodstag.com

Parcelbox GmbH
Björn Paulus
Aspastraße 24
59394 Nordkirchen
T +49 2596 8874424
E bjoern@pickshare.de

GS1 Germany GmbH
Oliver Püthe
Maarweg 133
50825 Köln
T +49 151 14793141
E oliver.puethe@gs1.de

To get more information about us and SMile

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