Identify & Capture

Identification Keys & Barcodes

Stefanie De Rocker, Lead Barcodes & ECR Manager, GS1 Belgilux
March 8th 2016
Identify unique worldwide

Trade units, locations, logistic units...
Identify

Trade units

Jar Tunella, 3 kg

Locations

Chez Jean
Koningsstraat 76, b1
1000 Brussels
Belgium

Logistic units

Transport trolley with 6 trays, each containing 2 jars Tunella of 3 kg
Identify

Trade units

Jar Tunella, 3 kg
Identify

Trade units – What?

Products or services that are priced, ordered or invoiced at any point in the supply chain.
Identify

Trade units – How?

• **GTIN** (**G**lobal **T**rade **I**tem **N**umber)
• E.g. GTIN Jar Tunella 3kg = 5453001721163

GS1 Company Prefix Reffero = Brand owner
Article Number
Check Digit
Identify Trade units – How?

Jar Tunella, 3 kg
GTIN: 5453001721163
Brand owner: Referro

Tray Tunella, 2 x 3 kg
GTIN: 5453001722429
Brand owner: Referro

Tray gherkins, 6 x 2 kg
GTIN: 8710553980200
Brand owner: Keuhne Benelux
Identify

Locations

Chez Jean
Koningsstraat 76, b1
1000 Brussels
Belgium
Identify

Locations – What?

Hotel

Factory

Warehouse

Any type or level of location required.
Identify

Locations – How?

- **GLN** *(Global Location Number)*
- E.g. GLN Chez Jean Antwerp = 5410000000248

```
5410000 00024 8
```

GS1 Company Prefix Chez Jean
Location Number
Check Digit
Identify

Locations – How?

Chez Jean Antwerp
GLN: 5410000 00024 8

Chez Jean Brussels
GLN: 5410000 00025 5

Distribution center Javest Metrolucious
GLN: 5415103 00003 4
Identify

Logistic units

Transport trolley with 6 trays, each containing 2 jars Tunella of 3 kg
Logistic units – What?

Any combination of trade items packaged together for storage and/or transport purposes
Identify

Logistic units – How?

• SSCC (Serial Shipping Container Code)
• E.g. Trolley 6 crates with each 2 trays of Tunella, delivered today:

```
1 5415103 000001512 7
```

Extension digit serial number
GS1 Company Prefix Javest Metrolucious (distributor)
Serial Number
Check Digit
Identify

Logistic units – How?

New delivery = new SSCC = traceability!

Delivered 2 weeks ago

Delivered today

Delivery in two weeks
Identify

Logistic units – How?

Trolley with trays delivered by Javest Metrolucious
SSCC: 1 5415103 000001512 7
GS1 Company Prefix of Javest Metrolucious

Parcel delivered by GS1 Post
SSCC: 1 5410026 000042315 7
GS1 Company prefix of GS1 Post
Identify

With GS1 Identification Keys

• Trade Units: GTIN
• Locations: GLN
• Logistic Units: SSCC
• Returnable Assets: GRAI
• Documents: GDTI
• Coupons: GCN
• And more...

They all use the GS1 Company Prefix, hence unique
Translate your identification keys into barcodes
Capture

GTIN

GTIN: 5453001721163
Capture

**GTIN + additional data**

GTIN: 5453001722429
Best Before Date: 03/03/2017
Capture

SSCC: 154151010000015127
Lotnumber: C2OK73
Capture

And many more...
Capture

Why?

So they can be scanned.

To automatically identify and track products as they move through the supply chain.
SSCC: 1541510300000015127

GTIN: 054100009999993
Share

GDSN & trustbox

Joke Op Den Acker, Lead Data Manager, GS1 Belgilux
March 8th 2016
Exchanging master data is key!
Data Exchange Standards

From a situation where...
Data Exchange Standards

To **ONE** access point

**GDSN data pool**
Global Data Synchronisation Network

An interconnected network of interoperable data pools and a global registry that enables companies around the globe to exchange standardised and synchronised supply chain data with their trading partners.

Synchronise all your data in one movement

To everybody Anywhere
How does GDSN work?

1. Load data
2. Register data
3. Release and publish
4. Subscription
5. Pub/sub match = synchronise data
4. Subscription
5. Data flows
How can I upload data in CDB?

- Manually via the WEB interface
- Via Excel, upload into the WEB interface
- Machine to machine (M2M – XML messages)
Which data can be exchanged via GDSN?

- **GTIN**: 08000500161968
- **GLN InformationProvider**: 5413548105000
- **TradeItemDescription**: Referro Tunella Professional line 3kg
- **TradeItemTaxRate**: 6%
- **Height**: 180 millimeter
- **Width**: 160 millimeter
- **Depth**: 160 millimeter
- **NetContent**: 3000 gram
- **PackagingTypeCode**: jar
- **IsTradeItemAnOrderableUnit**: False
Benefits of GDSN

- Common definitions and standard messages
- Ensure data quality via technical validations
- Fast and accurate data exchange
- Automatic updates
- Backbone for EDI

Save money by synchronising all your data in one movement
Trustbox and GDSN

How do they interconnect?
Situation in Belgium & Luxembourg

CDB / GDSN

• Global Data exchange
• Logistical and Label Information (and many other types)
• More than 240 suppliers (GDSN Europe: 7400 companies)
• 1 item = 1 hierarchical level
• Built in validations

trustbox

• Local solution in Belgium & Luxembourg
• Food label data (EU1169/2011 regulation)
• More than 1700 suppliers
• More than 40 data recipients
• More than 80,000 items (consumer units)
Situation in Belgium & Luxembourg

BRANDS

GDSN as a source for trustbox

2015
2016

SUPPLIERS

PLATFORMS

RECIPIENTS

B2B2C

B2C
Situation on international level

And many more!
No restriction due to borders
**Global Trade Item Number (GTIN)**: 0510000999993

**Target Market Country Code**: BELGIUM (056)

**Is Trade Item A Base Unit**: True (true)

**Is Trade Item A Consumer Unit**: True (true)

**Is Trade Item A Variable Unit**: False (false)

**Is Trade Item a Service**: False (false)

**Is Trade Item a Display Unit**: False (FALSE)

**Effective Date**: 2014/01/31

**Is Trade Item An Orderable Unit**: True (true)

**Is Packaging Marked Returnable**: False (false)

**Height**

<table>
<thead>
<tr>
<th>Height (No.:1 / 999)</th>
<th>190</th>
</tr>
</thead>
</table>

**Height UOM**: Millimeter (GDSN) (MM)

**Width**

<table>
<thead>
<tr>
<th>Width (No.:1 / 999)</th>
<th>180</th>
</tr>
</thead>
</table>

**Width UOM**: Millimeter (GDSN) (MM)

**Depth**

<table>
<thead>
<tr>
<th>Depth (No.:1 / 999)</th>
</tr>
</thead>
</table>

**URL naar de afbeelding van het product**: 
http://uat.trust-box.be

**Wijzigingen opslaan**

- **Naam**: GS1 Chocolux pasta 200g
- **Barcode/GTIN**: 0510000999993
- **GLN**: 5410000300010 - GS1 Belgilux TEST SUPPLIER
- **Doelmarkt**: België
- **Wettelijke naam**: ChocoPasta
- **Netto Inhoud**: 200g
- **Naam van de exploitant van het levensmiddelenbedrijf**: GS1 Chocolux
- **Contact GLN**: 5410000300010

**Adres van het bedrijf**: Chocostraat 76, Chocoland

**Nederlands**
GS1 Data Checker
How to ensure data quality?

Robin Goossens, Data Manager, GS1 Belgilux
March 8th, 2016
GS1 Data Quality strategy

Pillars for DQ improvement

- A Priori Quality checks for new members
- Monitoring via the GS1 Data Checker
- Physical B2C Audits
- Physical B2B Audits
- Third party Services (Data Capture Compliance label)
Current data flows

BRANDS

GDSN as a source for trustbox for B2B (2C) data

DQ Assurance
A Priori checks
Monitoring (DQ Checker)
Audits

RECIPIENTS

SUPPLIERS

PLATFORMS
GS1 Data Checker – what?

• Online solution
• To evaluate data quality
• Based on a series of predefined tests
• On data from GDSN and trustbox
GS1 Data Checker – what?
Data flows to the GS1 Data Checker

**PLATFORMS**

- B2B(2C)
  - GDSN as a source for trustbox for B2B (2C) data
  - Audit by GS1 BELUX

- B2C
  - Audit by GS1 BELUX

**BRANDS**

- GDSN as a source for trustbox for B2B (2C) data
  - Audit by GS1 BELUX
Evaluate data quality

It is a dashboard!

- Shows the results
- Shows the test failures
- Shows the entered values
- A supplier can TEST a correction

- But CAN’T correct the data in the Data Checker itself
  ➔ make the corrections in your data source
Based on a series of predefined tests

Consensus of the community:

- Belgilux GDSN & trustbox datamodels (Validity)
- Business rules Needs of community (Completeness)
- Logical rules (Dependency & Consistency)
- Label information (Comparison)
## Most Common Errors

### Logistical (B2B) Data

<table>
<thead>
<tr>
<th>Fails</th>
<th>DQ Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>6304</td>
<td>Tax Information Completeness</td>
</tr>
<tr>
<td>3975</td>
<td>Description Short de Completeness</td>
</tr>
<tr>
<td>3541</td>
<td>Functional Name de Completeness</td>
</tr>
<tr>
<td>3259</td>
<td>Product Description de Completeness</td>
</tr>
<tr>
<td>3163</td>
<td>Trade Item Country Of Origin Completeness</td>
</tr>
<tr>
<td>2774</td>
<td>Description Short nl Completeness</td>
</tr>
<tr>
<td>2404</td>
<td>Minimum Lifespan and Expiration Dependency</td>
</tr>
<tr>
<td>2386</td>
<td>Description Short fr Completeness</td>
</tr>
<tr>
<td>1188</td>
<td>Tax Agency Code Validity</td>
</tr>
<tr>
<td>987</td>
<td>Functional Name nl Completeness</td>
</tr>
</tbody>
</table>

### Audit B2C Data

| Fails | DQ Test                                                         |
|-------|                                                                |
| 548   | Ingredient Statement nl Comparison Case Sensitive              |
| 522   | ENER- KCAL Quantity Contained Comparison                       |
| 503   | Ingredient Statement fr Comparison Case Sensitive               |
| 486   | ENER- KJ Quantity Contained Comparison                         |
| 472   | SALTEQ Quantity Contained Comparison                            |
| 467   | Regulated Product Name nl Comparison                           |
| 445   | SUGAR- Quantity Contained Comparison                           |
| 427   | CHOAVL Quantity Contained Comparison                           |
| 426   | Regulated Product Name fr Comparison                           |
| 422   | FASAT Quantity Contained Comparison                            |
Who can see the scores?

**Suppliers**
- Personal access
- Data Checker
- Weekly reports

**GS1**
- Proactively monitors DQ and tries to help suppliers

**Data Recipients**
- Access to data checker
- Weekly GTIN reports
Data Quality Team

- Extra investment of GS1 Board in 4 FTEs

Robin Goossens
Data Manager

Jens Hoofteer
Management Assistant Data

Ana Topallaj
Management Assistant Data

Mary Mazyn
Management Assistant Data
Share

Link a transaction to a key and you’ve got EDI

Tom Depoorter, Lead EDI Manager, GS1 Belgilux
March 8th 2016
Commercial transactions
EDI = way to share transactional data
EDI-message = digital trade document
Master data vs. transactional data

1. Master data
   - Supplier
   - Retailer

2. Transactional data
   - EDI

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Use only ID-keys, no master data

Example: purchase order EDI-message

- **Global Location Number**
- Company name
- Company address
- ...

- **Global Trade Item Number**
- Product description
- Product weight/seize
- Number of pieces in package
- ...

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Use only ID-keys, no master data

Example: purchase order EDI-message

- Global Location Number
- Company name
- Company address
- ...

- Global Trade Item Number
- Product description
- Product weight/seize
- Number of pieces in package
- ...

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Trade in “trade units”

- “order unit” often ≠ “consumer unit”

Example: purchase order EDI-message
If you need 3 boxes
ORDER 3 X GTIN 2 instead of 12 X GTIN 1
EANCOM = common EDI-language
EANCOM = common EDI-language

ERP system

CDETEC;pkdb8501;0028362;WINSOFT 6.21
CDEFAC;pkdb8501;0028362;541111110007629;20
CDESG;pkdb8501;0028362;5447820705;10;
EANCOM = common EDI-language

EDI translator

Communication channel

ERP system

UNH+4103+ORDERS:D:01B:UN:
BGM+220+1202+9'
DTM+137:20141022:102'
DTM+2:20141026:102'
NAD+BY+5411111100002::9'
NAD+SU+5422222200008::9'
NAD+DP+5411111100076::9'
LIN+1++542222220101:SRV'
QTY+21:40'
UNS+S'
UNT+11+4103'

EDI translator

ERP system

CDETET;pkdb8501;0028362;MINSOFT 6.21
CDEFOU;pkdb8501;0028362;0564;;
CDELTIV;pkdb8501;0028362;;; 5422222200101;40;
CDEFAC;pkdb8501;0028362;;; 541111110007629;;20
CDELG;pkdb8501;0028362;2;5647820705;;;;

HD000001|TAILSOFT 32
HD000002|0564#
HD000003|5422222200101|||140#
DT000001|541111110007629;20#
DT000002|5647820705;10#
 +/- 50 message types
Order to Cash EDI-messages (O2C)
Supplier 5422222000005 (= GLN) will deliver 2 roll containers on 2016-03-08

- Rollcontainer 054100001234567903 (=SSCC) contains
  - 1 X 5422222001001 (= GTIN)
    - batch LOT545
    - BBD 2016-03-22
  - 3 X 5422222001001
    - batch LOT546
    - BBD 2016-07-01
  -...
- Roll container 054100001234567903 contains
  - ...
Advantages of EDI in a nutshell

- Less mistakes
- Faster transactions
- More transparency
- Better tracibility
- Less disputes
- Cost reduction
- ...
Harmonized O2C EDI-messages
To summarize

Identify
Identify each of your products using a unique identification key

Capture
Translate these identifiers and additional data in barcodes to enable automatic data capturing

Share
• Use GDSN, trustbox and data checker to share accurate product master data with your trading partners
• Use EDI for transactions with your trading partners
Our website is full of information: www.gs1belu.org

Register for our e-News
Online learning zone


Naast deze internationale cursussen, heeft GS1 België & Luxemburg een interactief spel - Dataville - ontwikkeld. Bart Code wordt uw gids en loodst u doorheen de verschillende stopplaatsen in Dataville. In elke locatie wordt u een aspect van de standaarden uitgelegd, gevolgd door een korte kennistest. Dit spel is beschikbaar in het Nederlands en in het Frans. Volg de instructies van Bart Code en worden een echte barcode expert! En dit vanachter uw eigen bureau!

Het gebruik van de e-Learn cursussen en gamification (Dataville) is inbegrepen in het lidmaatschap.
Use your personal login page

My GS1 – Register yourself!

- Overview of your GS1 products
- Access to all our manuals
- Easy registration for events and trainings
- ...

The Global Language of Business
Follow one of our many trainings

Included in your membership of GS1 Belgilux
We are here to help you!

Barcodes@gs1belu.org
For question about identifying and barcodes

Data@gs1belu.org
For questions about GDSN & trustbox

Quality@gs1belu.org
For questions about GS1 DataChecker

EDI@gs1belu.org
For questions about EDI