GS1 Industry and Standards Event
3 – 7 October 2016 – Brussels

Transforming business together
Session: GS1 Standards: Creating Value for the Fresh Foods Sector Today and Tomorrow
Time: Wednesday, 5 October 2016 9.00-12.30 CET

Who may attend: Industry, GS1 Member Organisations
Welcome
As we begin, a special thank you
Dedication

Hanjörg Lerch, Head of Data Quality Management at METRO Systems GmbH and co-chair of the GS1 Fresh Foods Industry Group.
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.
Statement & reminder for seeking intellectual property information

- Relevant to the features of the specification that are being developed in this work group, if anyone has knowledge or information about intellectual property rights, such as, patents or patent applications; please promptly convey this information to the work group facilitator.

- The intellectual property rights can either be in development or owned by persons, companies or third parties within this work group or outside this work group.

- We do this under the guidance of the GS1 Intellectual Property Policy, so that GS1 can seek to avoid the uncertainty regarding intellectual property claims against the Specification.
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
• **Respect** work group decisions
  - Avoid re-opening decisions unless there is a significant quality impact

• **Collaborate** in support of meeting objectives
  - Ask questions
  - Be open to alternatives
• **Be representative**
  - Avoid personal remarks
  - Do not speak for your company or community if you do not clearly understand their needs
  - Votes should reflect the needs of your company or community
WiFi internet access

• Select Crowne-Plaza-Free-Internet”
• Open your browser and the Crowne Plaza splash page will appear, accept the general conditions
• Password: october2016
GS1 I & S Event App – How to get it

1. Scan the QR code on your badge or search your App store for: GS1 I & S Event 2016

2. Login with the email address you used to register for the event:

   Username: (your registered email)
   Password: october2016

If you have questions, ask your session leader or visit the GS1 registration desk
Two “To do’s”, please..

Use the GS1 Industry & Standards Event App to:

1. Check-in to this session

2. Rate this session

Your feedback drives our continual improvement. Thank you for your time!
Event App – How to “Check-in” to sessions

1. On the Main Menu, Select Schedule, Select your session

2. Enter session PIN or scan QR Code provided in your meeting room

3. Confirm check-in and a confirmation appears
Session Check-In QR Code and Pin

Session Name: Fresh Foods Workshop
Session Date & Time: Wednesday 2016-10-05 9:00 – 12:30
Session Location: Infinity + Lobby, 2nd Floor
User companies are changing and GS1 has to remain aligned to their changing needs.

- Local, regional and global economic conditions are placing enormous pressure on profitability on all sides of the trading relationship.
  - Now more than ever, costs are being scrutinised.
  - Activities that are not tied to a cost-reduction or revenue stream are being scaled back – or eliminated.

- At the same time, the Fresh Foods sector is growing driven by product demand from increasing numbers of health-conscious consumers and improved access to safe, fresh products through global trade.
Economic pressures, regulatory pressures AND consumer demand

GS1 Standards are as relevant today as they ever have been.

Opportunities for new adoption and “deeper” adoption of GS1 Standards – means rigorous industry engagement activity for GS1.
GS1 standards

GS1 standards are the global language of business—a language for identifying, capturing and sharing information automatically and accurately, so that anyone who receives that information can understand it, no matter who or where they are.
Session Purpose

A common global language of business does much more than just keep communication simple, clear and reliable.

GS1 Standards in the Fresh Foods sector:
• Transform how businesses share information with each other
• Help keep “doing business” simple - saving time and money
• Meet the needs of increasingly complex supply chains
• Help ensure the right products get to the consumer at the right time

Purpose of this session:
1. Communicate the vital role of GS1 Standards in the Fresh Industry
2. Share best practices
3. Discuss topics of local, regional and global importance
Engage, Inform, EXCITE and THANK
Today’s agenda

• Celebration: New implementation (and case study) of GS1 DataBar with an Italian Retailer
• Global Regulatory and Public Policy Update
• Featured Industry Presenter: Henk Zwinkels, CIO Floricode
  - Overview of the Floriculture industry
  - GS1 Standards use in the floriculture supply chain
  - Applicable learnings for Fruit & Vegetables and the cold chain
• Featured Auto-ID Lab Presenter: Professor Hao Min, Fudan University
  - Tracking and Tracing System for Food Safety in China
• Industry and regulatory engagement for new guidelines in Europe
  - GS1 in Europe Fruit & Vegetable Team
  - CALL for PARTICIPATION: European project for Fish and Fish products
• CALL for PARTICIPATION: Inventory of Fresh Foods engagements, pilots and implementations around the world
Global Focus in Fresh Foods
Business needs for GS1 standards are driven by the industry experts who use them.

- Our Standards only make a difference if they’re relevant in the real world. That’s why our members — over a million organisations — drive everything we do.

- From proposing new standards to updating existing ones, we operate as an association of businesses large and small. Together, we reduce costs and deliver better service to our customers — whoever and wherever they might be.
Focus areas

- Engagement – across the supply chain, with diverse stakeholders
- Adoption of GS1 Standards to solve business challenges
  - Starting with Identification (company, location, product etc.) and Capture (use of barcodes)
  - Context: Business Processes
  - Traceability – whole chain visibility
- Implementation – efficient, effective
GS1 Italy

Ms. Emanuela Casalini
New Case Study: GS1 DataBar

Iper, La grande i introduce il GS1 DataBar

Migliorano la codifica dei prodotti a costo variabile e il servizio al consumatore.

Challenge

The traditional data capture solution included labels with GS1 DataBar and GS1 DataBar format, which were quickly becoming outdated. New requirements included having a more reliable and efficient way to capture data on the move. In addition, the process needed to be more flexible and adaptable to changing market conditions.

Solution

Using GS1 DataBar, Iper introduced a new solution that allowed for faster and more accurate data capture. The solution included the use of mobile devices and software that could be customized to meet the needs of the retail environment.

Results

- Improved data capture speed and accuracy
- Reduced errors and cost savings
- Better customer service and satisfaction
- Increased efficiency in the supply chain
Iper and the adoption of GS1 DataBar

- Iper is a major player in the Italian retailing sector
  - 27 stores in Italy (hypermarkets)
- It is part of the Finiper Group
  - 9,000 employees
  - Turnover of around 2.6 billion euro in 2015

- In 2015, Iper started the project of adoption of GS1 DataBar on variable weight items labelled in store.
Business problem with variable measure items scanned at POS

National solution based on RCN and the EAN-13 barcode

Product code (7 digits),

Price of the trade item in € (5 digits)

In the Italian solution, the product codes starting with «20» are assigned by the National solution based on RCN and the EAN-13 barcode.

Check digit

Each Iper store adopted its own internal coding for variable weight products. To calculate the actual amount sold throughout the chain for each product it was necessary to decode centrally each code.

To know the amount - weight - sold for each product, it was necessary to recalculate sales prices based on the price per kilo causing obvious inaccuracies due to rounding.
Objectives of the project

• Adoption of GS1 DataBar Expanded Stacked
  - To give up using RCN internally assigned and allocate a GTIN to each product
  - To capture the exact weight of each variable weight trade item sold at POS
  - To recognise automatically expired products and to prevent selling them

• Focus on variable weight products labelled in store
The planning of the project

- February 2015: launch of the working group
  - Iper (EDP service, checkouts, traditional in store departments, HACCP department)
  - Solution Provider (suppliers of scales, scanners and information systems)
  - GS1 Italy
- July 2015: pilot in the first store
- September 2015: start of roll-out in the other stores, one by one
- April 2016: opening of a new store with the adoption of GS1 DataBar
- Summer 2016: all the 27 stores has adopted GS1 DataBar
Description of the project

• Categories involved in the project:
  - Meat
  - Poultry
  - Fish
  - Bread and pastry
  - Delicatessen
  - Cheese
  - Fruit & vegetables

• A GTIN has been allocated to each product

About **17000 new GTINs** have been allocated
The label with GS1 DataBar

• Products are marked with a GS1 DataBar Expanded Stacked, with these information:
  - GTIN → AI (01)
  - Net weight → AI (3103)
  - Amount payable → AI (3922)
  - Expiry date, if necessary → AI (17)
  - Lot number, if necessary → AI (10)

The scales need to be set to print the new symbology and to receive more information from the IT system.
The label with GS1 DataBar

Bigger labels are now used
Scanning the barcode

At the checkout, it’s possible to scan the barcode and collect all the data (traditional checkout, self-checkout, self-scanning).

The scanners must capture the new symbology and send the string they capture to the checkout system.

Cash register information system need to recognise the different information in the captured string:
- To capture sold quantity
- Not to sell expired products
In case of expired product

Non disponibile alla vendita. Rivolgersi all’Accoglienza.
= Not available for sale. Contact the customer service.
The experience of Iper

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Success factors</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Consistent product identification for variable weight products</td>
<td>• A cross-functional implementation plan across the organization</td>
<td>• Need to fit several hardware (scales, scanners) and information systems to the new simbology and to the need of managing more information</td>
</tr>
<tr>
<td>• Improved visibility of product throughout its internal supply chain, including point-of-sale</td>
<td>• Involvement of solution providers with experience and knowledge in the GS1 standards</td>
<td>• Coordination of different solution providers</td>
</tr>
<tr>
<td>• Improved safety for the consumer</td>
<td>• Hands-on and dedicated GS1 Italy support</td>
<td></td>
</tr>
</tbody>
</table>
Next steps

• Facilitating promotions of products near expiry date
  - Savings could motivate consumers to buy products near expiry date
  - Food waste reduction

• Allow traceability up to the final consumer, by capturing the batch number at check-out and recognizing the batches sold
  - Easier recall of a critical product

• Expanded the project to variable weight products not packaged in the store
  - Involvement of suppliers
Case study locations

- In Italian, on the website of GS1 Italy
  http://gs1it.org/content/public/c4/50/c4505a89-9b0e-41b2-82a5-70a095b9fa1f/iper_gs1databar_case-study.pdf

- In English, on the page of Fresh Food
  http://www.gs1.org/industries/fresh-foods/case-studies

AVAILABLE 10 October !!!
Contact information

Emanuela Casalini
Barcode Specialist

Via Paleocapa 7
20121 Milano
Italy

+39 02 777 21 21
+39 02 777 21 23 10
+39 377 55 00 043
emanuela.casalini@gs1it.org
The Global Public Policy Team: who we are

Elizabeth Board
Vice-President
Global Public Policy

Géraldine Lissalde-Bonnet
Director Public Policy, Healthcare

Francesca Poggiali
Director Public Policy Europe

Francesca Scassellati Sforzolini
Manager Public Policy

Patrik Jonasson
Director Public Policy International, Asia Pacific
The Global Public Policy Team: what we do

• Our objective is to promote a **globally consistent legislative framework** which supports the development and implementation of GS1 standards

• **Our team supports MOs and GO** in their engagement with policy makers and regulators to achieve this objective

• **You can reach out to us about any topics**
The Global Public Policy Team: platforms

- GS1 MO Global Public Policy Work Group
- GS1 LATAM Safety Authorities Work Group
- GS1 Europe External Relations Work Group
- GS1 Health Care Public Policy Work Group
The Global Public Policy Team: tools to support you

http://www.gs1.org/public-policy

http://mozone.gs1.org/public-policy/
1. Higher legislative & regulatory pressure
2. Increased global cooperation
ASIA PACIFIC

Patrik Jonasson
GS1 Director Public Policy Asia Pacific
Governments and Industry have a common need

For improved safety and supply chain efficiencies

Standards are vital to enable this

Work is ongoing for widening adoption of GS1 standards shaping the way of future trade in Asia-Pacific
GS1 is working with industry and Government in Asia-Pacific

GS1 is working with APEC to address supply chain efficiency and border clearance issues

We have been rewarded funding from the APEC Supply Chain Connectivity sub fund to execute cross-border pilot projects in the Asia-Pacific

pilots can show the efficiency, integrity and visibility benefits of using GS1 standards in international supply chains
## APEC GDS Pilots – Overview
Primarily focusing on food supply chains

### Trade Routes

<table>
<thead>
<tr>
<th>No.</th>
<th>Lead Economy</th>
<th>Product</th>
<th>Trade Routes</th>
<th>Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015 1</td>
<td>Hong Kong</td>
<td>Wine</td>
<td>Australia to HK</td>
<td>By Sea</td>
</tr>
<tr>
<td>2015 2</td>
<td>Australia</td>
<td>Boxed Beef</td>
<td>Australia to US</td>
<td>By Sea</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016 3</td>
<td>Malaysia</td>
<td>Durian (Fresh/Frozen)</td>
<td>Malaysia to HK &amp; China</td>
<td>By Air &amp; By Sea</td>
</tr>
<tr>
<td>2016 4</td>
<td>Peru</td>
<td>Asparagus</td>
<td>Peru to US</td>
<td>By Air</td>
</tr>
<tr>
<td>2016 5</td>
<td>Mexico</td>
<td>Tequila</td>
<td>Mexico to US</td>
<td>By Land</td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017 6</td>
<td>ABAC/LSIF</td>
<td>Pharma</td>
<td>TBC</td>
<td>TBC</td>
</tr>
</tbody>
</table>
Peruvian Asparagus to US

- Peru is the world's leading asparagus exporter
- Exports are preserved and fresh, both white and green
- Peru is the largest supplier to USA (main fresh green asparagus market)

- GS1 is working with BETA, the leading Peruvian exporter to improve their processes, targeting efficiency gains and visibility improvements in the supply chain

- GS1 Peru is in talks with Peruvian FDA (SENASA) on how added functionalities like inclusion of health/sps certificates and sharing of data with US GOV (APHIS) can further improve the processes
## Supply Chain Standards used

<table>
<thead>
<tr>
<th>GS1 standards</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTIN</td>
<td>Used on the product including Emerald Valley Fresh Asparagus (i.e. 0033383702209) Muchik Fresh Asparagus (i.e. 9336191000491)</td>
</tr>
<tr>
<td>SSCC - unique serial number – 18 numeric</td>
<td>Used on the pallet level for the above product</td>
</tr>
<tr>
<td>GIAI for truck id</td>
<td>Used for the identify the truck – include truck license plate number</td>
</tr>
<tr>
<td>GIAI for the flight number</td>
<td>Used for the identify the truck – include flight number (i.e. LA601 – LAN Airline flight 601)</td>
</tr>
<tr>
<td>GLN - unique umber – 13 numeric</td>
<td>Peru Asparagus Processing House Peru Asparagus Loading Bay Peru Airport Terminal</td>
</tr>
<tr>
<td>EPCIS 1.1</td>
<td>GS1 Hong Kong ezTRACK</td>
</tr>
</tbody>
</table>
KPI

• Increase supply chain visibility from 80% to 100%

• Reduce 10% cost in information searching time & cost

• Avoid 10% loss by temperature (cold chain) monitoring

• Reduce 20% response time in Acceptance/Reception of pallet, Truck attention and reduce 10% response time in Pallet assembly
Current status of the pilot

- Business steps and technical development finalized.
- 1st shipment sent 27 Sep 2016
- Interview with Peruvian & US border agencies on risk management carried out

- Shipment sent to Miami

- A total of seven shipments will be observed and improvements measures
EUROPE

Francesca Poggiali
GS1 Director Public Policy Europe
WHY HAS THE 2002 EU FOOD LAW NOT BEEN UPDATED?

• In 2014 the Commission launched a Fitness Check on the General Food Law Regulation:
  • Effectiveness (Have the objectives been met?)
  • Efficiency (What are the costs and benefits)
  • Coherence (Does the policy complement other actions or are there contradictions?)
  • Relevance (Is EU action still relevant?)
  • EU added value (Could similar changes have been achieved at national/regional level, or did EU action provide clear added value?)
Europe : update 1169/2011

NO MORE NUTRIENT PROFILES IN EUROPE?

• 12 APRIL 2016 the European Parliament voted against the concept of nutrient profiles in Europe in the framework of the Regulatory Fitness and performance Programme

• The UK has already put in place a 3 colour traffic light coding on the labelling, but the EC has opened an infringement procedure

• The WHO published its own nutrient profiles on February 2015 in reference to marketing to children
WHAT’S NEW ABOUT 1169?

• The obligation to provide labelling nutrition information will apply from 13 December 2016.
• New rules on country of origin information for meat from sheep, pigs, goats and poultry apply from 1 April 2015.
• Clearer and harmonised presentation of allergens (e.g. soy, nuts, gluten, lactose) for prepacked foods (emphasis by font, style or background colour) in the list of ingredients.
• Mandatory allergen information for non-prepacked food, including in restaurants and cafes.
• Specific information on the vegetable origin of refined oils and fats.
• Indication of substitute ingredient for 'Imitation' foods.
• Clear indication of defrosted products.
Europe : update 1169/2011

• Do you have kids? Are you on a diet?

• The Regulation (EU) No 609/2013 on food intended for infants and young children, food for special medical purposes, and total diet replacement for weight control ('Food for Specific Groups') applies from 20 July 2016.

• Establishes a single Union list of substances that can be added to these foods including minerals and vitamins.

• Requires the Commission to transfer rules on gluten-free foods and very low gluten under Regulation 1169/2011 on food information to consumers in order to ensure clarity and consistency.

• Establishes that meal replacement products for weight control should be regulated solely under Regulation (EC) No 1924/2006 on nutrition and health claims in order to ensure legal certainty.
### Fruits are better? Call RASFF
The EU Rapid Alert System for Food and Feed, annual report 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>Subcategory</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcoholic beverages</td>
<td>12</td>
<td>Feed additives</td>
<td>2</td>
</tr>
<tr>
<td>Bivalve molluscs and products thereof</td>
<td>61</td>
<td>Fish and fish products</td>
<td>297</td>
</tr>
<tr>
<td>Cereals and bakery products</td>
<td>122</td>
<td>Food additives and flavourings</td>
<td>7</td>
</tr>
<tr>
<td>Cocoa and cocoa preparations, coffee and tea</td>
<td>58</td>
<td>Food contact materials</td>
<td>152</td>
</tr>
<tr>
<td>Poultry meat and poultry meat products</td>
<td>176</td>
<td>Fruits and vegetables</td>
<td>634</td>
</tr>
<tr>
<td>Dietetic foods, food supplements, fortified foods</td>
<td>122</td>
<td>Herbs and spices</td>
<td>150</td>
</tr>
<tr>
<td>Eggs and egg products</td>
<td>14</td>
<td>Wine</td>
<td>5</td>
</tr>
<tr>
<td>Fats and oils</td>
<td>23</td>
<td>Ices and desserts</td>
<td>5</td>
</tr>
<tr>
<td>Meat and meat products (other than poultry)</td>
<td>159</td>
<td>Milk and milk products</td>
<td>59</td>
</tr>
<tr>
<td>Non-alcoholic beverages</td>
<td>26</td>
<td>Nuts, nut products and seeds</td>
<td>477</td>
</tr>
<tr>
<td>Pet food</td>
<td>30</td>
<td>Prepared dishes and snacks</td>
<td>30</td>
</tr>
</tbody>
</table>
UNITED STATES, LATAM , MEMA

Elizabeth Board
Vice President GS1 Global Public Policy
Food Safety and Modernization Act (FSMA)

- Inspection and Compliance
- Imported Food Safety
  - Foreign Supplier Verification Program
  - Certification of Compliance
  - Potential for Expedited Review
- Response
  - Mandatory Recall Authority
- Enhanced Partnerships
  - Federal, state, local and international
UNITED STATES

- **Updated Nutrition Facts Label**
  - Final Rule Issued May 20, 2016
  - Key initiative of the First Lady
  - Effective Date: Two Years After Publication (three years for small businesses)
UNITED STATES

NEW LABEL / WHAT’S DIFFERENT

- Serving sizes updated
- Calories: larger type
- Updated daily values
- Actual amounts declared
- New footnote

Nutrition Facts

8 servings per container
Serving size 2/3 cup (55g)

<table>
<thead>
<tr>
<th>Amount per serving</th>
<th>% Daily Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories</td>
<td>230</td>
</tr>
<tr>
<td>Total Fat</td>
<td>8g</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>1g</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>0mg</td>
</tr>
<tr>
<td>Sodium</td>
<td>160mg</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>37g</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>4g</td>
</tr>
<tr>
<td>Total Sugars</td>
<td>12g</td>
</tr>
<tr>
<td>Includes 10g Added Sugars</td>
<td>20%</td>
</tr>
<tr>
<td>Protein</td>
<td>3g</td>
</tr>
</tbody>
</table>

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.
UNITED STATES

FOOD SERVING SIZES GET A REALITY CHECK

Serving Size Changes
What's considered a single serving has changed in the decades since the original nutrition label was created. So now serving sizes will be more realistic to reflect how much people typically eat at one time.

CURRENT SERVING SIZE

NEW SERVING SIZE

Packaging Affects Servings
Packaging size affects how much people eat and drink. So now, for example, both 12 and 20 ounce bottles will equal 1 serving, since people typically drink both sizes in one sitting.
UNITED STATES

Other Key Issues Facing the Food Industry

- Menu labeling
- Federal GMO Labeling Bill signed into law
- Allergens, Ingredients – state interest
- Product Claims/Attributes
  - Organic, Natural
- Trans Fat – remove by 2018
- Sodium
- Dietary Supplements
- Antibiotics in Animals
LATAM brief regulatory developments

Mexico
• Regulations of the Federal Law on Animal Health
• Mexican Official Standard on hygienic practices for food processing, beverages, food supplements
• B to C labelling requirements
• Recall

Argentina
• Traceability System for honey
• Ovine and Deer Identification
• GMP for Food Services
• Fish processing guideline
• Sanitary Regs for Animal products
• B to C labelling requirements
• Recall
MEMA

- Trend continues for the most developed countries, like Saudi Arabia to align to European or US requirements.
- UAE is working on improving its recall platform for all products – not just food, but one issue is that GS1 standards are not used on enough products.
- Gulf Cooperation Council (GCC)
## Contacts

<table>
<thead>
<tr>
<th>Elizabeth Board</th>
<th>Patrik Jonasson</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:Elizabeth.board@gs1.org">Elizabeth.board@gs1.org</a></td>
<td><a href="mailto:Patrik.Jonasson@gs1.org">Patrik.Jonasson@gs1.org</a></td>
</tr>
<tr>
<td>Based in Washington, DC</td>
<td>Based in Kuala Lumpur</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Francesca Poggiali</th>
<th>Francesca Scassellati</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:Francesca.poggiali@gs1.org">Francesca.poggiali@gs1.org</a></td>
<td><a href="mailto:Francesca.Scassellati@gs1.org">Francesca.Scassellati@gs1.org</a></td>
</tr>
<tr>
<td>Based in Brussels</td>
<td>Based in Brussels</td>
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</tbody>
</table>
Mr. Henk Zwinkels
CIO, Floricode
To view the presentation and the link to the video

- Please download the presentation in PDF format titled:

  2016 Brussels Event_Industry Speaker_Fresh Foods_Floricode Presentatie GS1 Brussels_5-10-2016_
Contact Information

Henk Zwinkels
CIO, Floricode

Sotaweg 21 • 2371 GA Roelofarendsveen
T. 071 305 1584 • M. 06 51 50 81 93 • F. 071 305 1577
E. h.zwinkels@floricode.com

For more information:
www.floricode.com

https://www.gs1.nl/
Professor Hao Min
Director, Auto-ID Lab Fudan University
Import and export: China

Source: National Bureau of Statistics, P.R.China
Problems of imported/exported products

- Quality defect: for example, illegal additive, Excessive additives, relabeling of expired food.
- Unclear mark, package not meeting the requirements, specification unrecognizable or not understandable
- Inadequate quality and safety detection report
- Counterfeiting
- Contamination of microorganism
- Language barrier for imported product, not easy for the consumer to know the history, culture, the source and the environment of the product and how much effort have been paid by the providers.
- Inefficient recall
Reference Model of IoT for Food Tracking and tracing system
GLSR code in the system is also called the "trace code". It consists of GTIN, LOT, SERIAL, R sections.

- **GTIN**: 14 digital object type code
- **LOT**: 8 alphanumeric batch code
- **SERIAL**: 6 alphanumeric serial number
- **R**: 1 digit, manufacturer identifies the length of GTIN

Use the AI will be 4 different sections together, the total length of the combined for 37, as follows:

01 + GTIN  
10 + LOT  
21 + SERIAL  
91 + R

(01)XXXXXXXXXXXXXXXXX(10)XXXXXXXXX(21)XXXXXXX(91)X

Item Level code-GLSR
## Tagging strategy

<table>
<thead>
<tr>
<th>Enterprise Identification</th>
<th><a href="http://yashili.cniotroot.cn">http://yashili.cniotroot.cn</a></th>
<th>One tag for all products Easy to implement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Identification</td>
<td><a href="http://6902402030071.yashili.cniotroot.cn">http://6902402030071.yashili.cniotroot.cn</a></td>
<td>On tag for each product</td>
</tr>
<tr>
<td>Item identification</td>
<td><a href="http://9885480432456732.yashili.cniotroot.cn">http://9885480432456732.yashili.cniotroot.cn</a></td>
<td>On tag for each LOT or each item expensive</td>
</tr>
</tbody>
</table>
Enterprise-level Tracking & Tracing platform for food providers and food supply chain stakeholders

- IoT Name service
- Supervising platform
- Food safety report
- Consumer comments/reports
- Information query, pushing
- Enterprise food tracking and tracing database
- Product ID management
- Master data
- Event data
- Transaction data
- Tracking and tracing, value-added service interface
1 submit item ID, request DS address current ONS

2 submit the COMPANY PREFIX to the ROOT ONS, request DS address

3 query the ONS server, DS server address returned

4 query the IOTIS server address

5 query the item information in IOTIS
Traceability using mobile phone

Enterprise Information

ePedigree

GPS
Smart Scarecrow

- Software
Reader System-on-Chip
Applications in China

Up to August 2016, 4.8 Million products have been registered in the iosNS system.
# Food import at Yangshan Port

<table>
<thead>
<tr>
<th>Region</th>
<th>Shipping Lines to Shanghai</th>
<th>Shiping Lines to Yangshan</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>South America</td>
<td>68</td>
<td>66</td>
<td>97%</td>
</tr>
<tr>
<td>Europe</td>
<td>90</td>
<td>90</td>
<td>100%</td>
</tr>
<tr>
<td>North America</td>
<td>137</td>
<td>102</td>
<td>75%</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>124</td>
<td>16</td>
<td>13%</td>
</tr>
<tr>
<td>The Middle East</td>
<td>81</td>
<td>46</td>
<td>45%</td>
</tr>
<tr>
<td>Australia</td>
<td>36</td>
<td>5</td>
<td>15%</td>
</tr>
</tbody>
</table>

### Classification of Imported food

- **Wine**: 20.40%
- **乳制品**: 12.06%
- **其他**: 17.59%
- **果汁**: 5.43%
- **肉类**: 8.36%
- **谷物**: 4.62%
- **蔬菜**: 4.48%
- **蛋类**: 2.17%
- **水果**: 2.17%
- **干果**: 1.83%
- **橄榄油**: 1.72%
- **罐头**: 1.72%
- **其他**: 1.72%

### Volume of imported food through Yangshan Port

- **51.11% increase/year**

![Graph showing volume of imported food through Yangshan Port from 2009 to 2012](image)
GS1-enabled IoT system at Yangshan

- GS1-Enabled IoT System
  - Brand protection through Authentication, QR, RFID
  - Information service, iotIS
  - Advertisement
  - Other mobile applications

- O2O Sales Channel
  - Offline exhibition & sales in Yangshan Port
  - Online exhibition & sales platform
Contact Information

Hao Min
Director

Auto-ID Lab at Fudan, 825 Zhangheng Road, Shanghai China

+86 21 51355220
+86 21 51355219
+86 13801912787
autoidlab@fudan.edu.cn

www.autoidlabs.org
GS1 in Europe

Mr. Klaus Förderer
The GS1 in Europe project

- Full name: **GS1 in Europe Fruit & Vegetables GS1 Standards Deployment Project**
- Founded in 2013
- Co-project lead Klaus Förderer (GS1 Germany), Xavier Pujol (GS1 Spain). Project Sponsors: Jörg Pretzel, Pere Rosell
- Aims to build a common European framework to ensure alignment in the implementation of GS1 Standards and avoid divergences in the deployment of the GS1 System:
  - Common platform to gather and share European requirements
  - One European voice in global standardisation and coordination.
  - Participation of industry (Producer, supplier, retailer) and associations (GS1, Frug I Com, IFPS etc.).
  - Common implementation guidelines across Europe, based on Global results.
Fruit & Vegetable Project

**What we are dealing with?**
- Implementation of GS1 Standards in a harmonised way in Europe.

**What makes us unique?**
- Acting on local, European and Global level with direct participation from retailers and suppliers in Europe.

**What we are working on?**
- Guidelines and Brochures for GTIN, GLN, GDSN, Labelling and Processes.

**What is the benefit for industry?**
- Direct contacts and pilots of leaders in industry
- Harmonised approach as F&V business is global
- Benefit of usage of GS1 Standards for business.
Focus of our activities
Our focus: Fresh Fruit & Vegetables
Roadmap & Areas covered

Roadmap focusing on Supply Chain Management aligned with GS1 Global Fresh Food Group covering:

- Global Product Classification (GPC)
- Product Identification (GTIN)
- Location Identification (GLN)
- Master Data Alignment (GDSN)
- Labelling and Labelling Requirements
- Processes & EDI
- Traceability
Benefits for stakeholders

• Facilitate cross-border trading by avoiding national solutions.

• Providing a unique solution with GS1 Global Standards will decrease the period and costs of implementation.

• Build a better supply chain:
  - Increase the efficiency of your supply chain
  - Ensure fast end-to-end traceability in a cost effective way
  - Reduce spoilage of food
  - Meet the needs of the new consumer
Value proposition for the Fresh Produce Industry

Target: C-level executives in the companies.

Business language used, no technical GS1 notations.

GS1 – The Global Language of business applied to the Fruit & Vegetable Sector

The benefits of GS1 for the European Fruit & Vegetable industry and its Stakeholders
GTIN Brochure

GTIN is the GS1 Identification Key for trade items.

Business language used to facilitate the adoption.

A lot of pictures, little text...
The GLN is the GS1 Identification Key for Locations.

The GLN can be used to identify physical locations and legal entities where there is a need to retrieve pre-defined information to improve the efficiency of communication with the supply-chain.

Global Location Numbers are a prerequisite for electronic commerce messages or to access information from the Global data Synchronisation Network.
## Legal Labelling Requirements in Europe

### Unprocessed Fruit & Vegetables – Label Requirements for Consumer Items

<table>
<thead>
<tr>
<th>5.5 FINAL</th>
<th>Prepared crops</th>
<th>Prepared units per pack of different groups of Fruits &amp; Vegetables</th>
<th>Non prepared, loose</th>
<th>Additional notes</th>
<th>Relevant Regulation (EU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open pack</td>
<td>C, D</td>
<td>A, B</td>
<td>C</td>
<td></td>
<td>801/2004/EC (Packaging)</td>
</tr>
<tr>
<td>Closed pack</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2009/178/EC (Fruits)</td>
</tr>
</tbody>
</table>

### Legal Requirements for Labels on Fruit & Vegetables

**Guideline on legal requirements for consumer units and trade units in the European Union**

*in collaboration with Frugi Com*

---

**Legal Labelling Requirements in Europe**

*The Global Language of Business*
Methodology

- Distinguish between:
  - Consumer Units and Trade Units
  - Unprocessed and Processed
  - Loose, prepacked

- Topics to be covered:
  - Description, General, Nature of produce = Regulated product name, Language,
  - Minimum Fontsize, Country of Origin, Identification of packer or other relevant parties,
  - Quantity: Net content expressed as count or net weight,
  - Best Before Date / Expiry Date, Production/Lot number, List of Ingredients, Allergenic declaration
  - Declaration of nutritional value, Additives including waxes, Post Harvest Treatment
  - Protective Atmosphere, Product dependent information requirements

- Clear guidance with reference to the relevant EU regulation.
# Integrated Guideline

<table>
<thead>
<tr>
<th>Title</th>
<th>Publication</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part 1 Introduction</strong></td>
<td>Published 05-2014</td>
<td></td>
</tr>
<tr>
<td><strong>Part 2 Location Identification with GLN</strong></td>
<td>Published 05-2014</td>
<td></td>
</tr>
<tr>
<td><strong>Part 3 Product Identification with GTIN</strong></td>
<td>Published 05-2014</td>
<td></td>
</tr>
<tr>
<td><strong>Part 4 Barcodes &amp; Labelling</strong></td>
<td>2016/2017</td>
<td>Part 4a „Consumer Units“ published</td>
</tr>
<tr>
<td><strong>Part 5 GDSN</strong></td>
<td>2015</td>
<td></td>
</tr>
</tbody>
</table>
Current work
Fresh food specific attributes: species, genus, flesh colour, ...

Provide additional clarity on how to use specific GDSN attributes in the FF industry: packaging types, organic items, brands, country of origin, ...

It is ready to implement for test purposes.

Served as a basis for the GDSN pilots executed in 2014-2016.
Move forward with GDSN implementation!

GDSN pilots based on the draft guideline were executed in various countries and also cross-border scenarios. The learnings from the pilots were reflected in the GDSN guideline.

Updates for the final version:

- GS1 in Europe Guideline enhanced due to pilot experiences
- Adding EU 1169 requirements
- Migration to GDSN Major Release
- Broker scenarios
- Etc.

- The guideline is in line with the Global Guideline/TII
Substitution Scenarios

• Currently the GS1 in Europe group is working on recommendation on how deal with issues of time pressing deliveries and last-minute article substitutions.

• Substitutions are always based on bilateral agreements.

• The aim is to give guidance, based on the use of GS1 Standards, how to deal with article substitutions in an effective way.

• Takes into account GDSN, EDI, GPC
Labelling Guideline – Trade Unit & Logistic Unit

- Labelling Guideline on Consumer Units was published by GS1 in Europe in 2016 based on the Global Guideline. Main addition: legal labelling requirements in the EU

- Next step is trade unit (case) & logistic unit.

- Based on existing GS1 Standards, taking into account F&V business requirements. E.g. Returnable crates (size), what is really needed on a label? How to deal/avoid retailer-specific requirements?

- Potential collaboration with GS1 GO desired.

- Target: Q4/2017
Lessons Learned

• GTIN, GLN & GPC are base technologies for all processes in the supply chain. We have common global ground here now.

• GDSN & EDI can now be used an is proven through the pilots

• F&V is global and more and more retailers and actors in the supply chain demand GS1 Standards instead of bilateral solutions.

• GTIN is still not used in F&V products in a lot of European countries

• European and Global alignment is essential!!!

• Direct involvement of suppliers and retailers is essential!!

• Challenge to keep people on board and keep the pace.

• More countries/MOs need to be engaged in the group to spread the project
See you in Rotterdam?

Basics 3rd EU Forum...

www.eufreshforum.com
Contacts

• Klaus Förderer
  foerderer@gs1-germany.de

• Xavier Pujol
  xpujol@gs1es.org

• www.gs1.eu

• THANK YOU!!!
GS1 Norway

Mr. Terje Menkerud
Traceability of fish products - Have your say...

CEN/TC 225 WG4
- Labelling of fish and seafood products

Terje Menkerud, Senior Advisor AIDC

5. October 2016
Background information

• Traceability is the cornerstone for safe and healthy food. This is something the European Commission has as a priority and several legislations cover this purpose.

• We need to know everything about a product to be sure of its origin and how it has been handled through the supply chain.

• Automatic data capture through use of bar codes or RFID, master data, event data and transaction data is tools in our tool box that help us to obtain this.
Who are we?

- The European Committee for Standardization (CEN) is an association that brings together the National Standardization Bodies of 33 European countries.

- CEN Technical Committee 225 (AIDC technologies) has formed a working group (WG4), who is working on the standard for labelling of distribution units and pallets in the trade of fish and seafood products.
What do we do?

• There is a GS1 Guideline for this purpose and the development of this standard will complement the GS1 work.
  - GS1 Foundation for Fish, Seafood and Aquaculture Traceability Implementation Guideline

• This standard will only cover the requirements of the labelling of distribution units and pallets for the purpose of traceability, not the traceability itself.

• It is important that this standard is developed in close cooperation with the stakeholders in the seafood supply chain from catch/harvest to consumer.

• **For this reason we would like to invite all interested parties to take part in this process.**
Why do we do this?

- European Council regulations EC, 1224/2009, requires that all lots of fisheries and aquaculture products shall be traceable at all stages of production, processing and distribution, from catching or harvesting to retail stage.
Why am I here?

• We need more participants.
  - Producers
  - Transporters
  - Wholesalers
  - Retailers
  - System Integrators
  - GS1 MO’s

• We are
  - Germany, Ireland, Denmark, Finland & Norway
Call for Participation

- Ensure the voice of industry is included in this important work.
- Ensure that the work of industry to develop and adopt the GS1 System of Standards is leveraged in this Project.
Join today!

- Don’t miss this opportunity to move this industry forward.

- **Next meeting is scheduled in Dublin the 2nd of November 2016**

- **Please contact project manager Lars Erik Jensen, lej@standard.no TODAY to participate in this development.**
  - You may also request more information on the project from Lars Erik Jensen
Contact Information

Terje Menkerud
Senior Advisor, AIDC

M  +47 918 06 499
E  tm@gs1.no

GS1 Norway
Brynsveien 13
P. O. Box 454, Økern
NO-0513 Oslo

www.gs1.no
Next Step: Get involved

Europe: Fish & Fish Traceability
Global: Fresh Foods Groups, Traceability
The GS1 Global Fresh Foods Industry Group

**GS1 is committed to meeting the needs of user companies in this important sector.**

- The Global Fresh Foods Industry Group is a voluntary, collaborative industry effort seeking to address the most important industry challenges where GS1 Standards can have a positive impact.

- It provides a forum for businesses facing similar problems to work together to solve business problems by developing standards-based solutions to address them.

- Users from around the world share common business process challenges that cause inefficiencies and impede business growth. Together, we implement standards-based solutions that meet the unique needs of the Fresh Foods industry.
The GS1 Fresh Foods MO Interest Group

We have launched a new GS1 Member Organisation Interest Group. The Fresh Foods MO Interest Group will:

• Set the global priorities for the Fresh Foods Sector
  - Inventory of Fresh Foods engagements, pilots and implementations across the globe – via the monthly MO Interest Group Call
  - Identify areas of global priority and collaboration

• Current activities:
  - Traceability – via the GTS 2 Interest Group
  - Inventory of Food Safety regulations, MO activities related to Food Safety
  - Deploy new engagement materials requested by industry

• Co-chair volunteers from GS1 MOs are needed
Global Fresh Foods Interest Groups

- Join the conversation – join the Team!! Join in the Community Room

<table>
<thead>
<tr>
<th>GS1 Industry Engagement</th>
<th>(7 members, 2 documents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Traceability Co-Operation Forum (GTCF)</td>
<td>(16 members, 28 documents)</td>
</tr>
<tr>
<td>GS1 Healthcare</td>
<td>(2 members, no documents)</td>
</tr>
<tr>
<td>GS1 Healthcare Leadership Team</td>
<td>(41 members, 1500 documents)</td>
</tr>
<tr>
<td>GS1 Healthcare Members</td>
<td>(106 members, 240 documents)</td>
</tr>
<tr>
<td>GS1 Healthcare Provider Advisory Council (HPAC)</td>
<td>(76 members, 178 documents)</td>
</tr>
<tr>
<td>GS1 Healthcare Public Policy Work Team</td>
<td>(203 members, 1171 documents)</td>
</tr>
<tr>
<td>GS1 Healthcare Solution Providers Work Effort</td>
<td>(10 members, 3 documents)</td>
</tr>
<tr>
<td>GS1 Healthcare Strategy Extension Project - Evidence Documents</td>
<td>(76 members, 89 documents)</td>
</tr>
<tr>
<td>GS1 IE eCom Healthcare Harmonisation Group</td>
<td>(60 members, 308 documents)</td>
</tr>
<tr>
<td>GS1 IE Apparel</td>
<td>(68 members, no documents)</td>
</tr>
<tr>
<td>GS1 IE Apparel MO Interest Group</td>
<td>(85 members, 201 documents)</td>
</tr>
<tr>
<td>GS1 IE IGDG AFF EPC RFID ILT Guideline</td>
<td>(17 members, 16 documents)</td>
</tr>
<tr>
<td>GS1 IE Consumer Product Variant Discussion Group</td>
<td>(88 members, 2 documents)</td>
</tr>
<tr>
<td>GS1 IE CPG MO Interest Group</td>
<td>(4 members, no documents)</td>
</tr>
<tr>
<td>GS1 IE Foodservice MO Engagement Group</td>
<td>(58 members, 51 documents)</td>
</tr>
<tr>
<td>GS1 IE Fresh Foods Industry Group</td>
<td>(104 members, 63 documents)</td>
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<tr>
<td>GS1 IE Fresh Foods MO Interest Group</td>
<td>(7 members, no documents)</td>
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<tr>
<td>GS1 IE Maritime &amp; Ports Interest Group</td>
<td>(2 members, no documents)</td>
</tr>
<tr>
<td>GS1 IE Transport &amp; Logistics</td>
<td>(295 members, 185 documents)</td>
</tr>
<tr>
<td>GS1 IE T&amp;L GS1 MO Interest Group</td>
<td>(119 members, 256 documents)</td>
</tr>
<tr>
<td>GS1 in Rail</td>
<td>(71 members, 2 documents)</td>
</tr>
<tr>
<td>European Guide</td>
<td>(64 members, 57 documents)</td>
</tr>
<tr>
<td>GS1 in Rail EPCIS Implementation Guide</td>
<td>(62 members, 62 documents)</td>
</tr>
<tr>
<td>GS1 Omni-Channel MO Interest Group</td>
<td>(92 members, 68 documents)</td>
</tr>
</tbody>
</table>

Industry, Stakeholders & GS1 together

GS1 Member Organisations
Global Traceability Standard – GTS2

GTS2 – “ONE-UP, ONE-DOWN and WELL BEYOND”

GTS application standard needs to be enhanced to enable seamless full-chain traceability:

• GS1 Standards-based
• Industry-agnostic
• Simple and user-friendly methodology
• Inclusive of events (load, unload...)
• Inclusive of EPCIS
• Enables real time capacities and interoperability

EPCIS Database
Interested?

• Join the Traceability- **GTS 2 Interest Group** in GS1 Community Rooms

• Not registered in the GS1 Community Room platform? Do you have questions?
  • Contact Robert.Beideman@gs1.org or Diane.Taillard@gs1.org
Thank you
Two “To do’s”, please..

Use the GS1 Industry & Standards Event App to:

1. Rate this session

2. Particulate in the conversations – sign up to hear more...

Your feedback drives our continual improvement. Thank you for your time!
Event App – How to rate sessions

1. From Main Menu, Select Schedule, Select session, scroll down
2. Select your rating and enter comments
3. A confirmation appears

**Details**

Standards Development University General Session

Monday, October 3, 2016
08:00 - 09:00

Klimt, Ground Floor, Lobby level

**DESCRIPTION**

Standards Development University General Session

**SURVEYS**

Expires Oct 8, 2016 02:59

Session Survey 2016
4 Questions
Contact Information

Elena Tomanovich
Senior Director, Retail Industry Engagement

+01 609 557 4577
+ 01 585 613 1647
elena.tomanovich@gs1.org