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EU Meat and Poultry Traceability Implementation Guideline

Physical Product and Information Flow

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GS1 in Europe is a collaboration of 46 GS1 Member Organisations and leads the creation and implementation of harmonised, user-driven solutions for improving the supply and demand chains of European companies. Further information on GS1 in Europe and the activities in the area of fruit and vegetables can be obtained from www.gs1.eu.

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1. Introduction

The identification of the origin of feed and food ingredients and food sources is of prime importance for the protection of consumers, particularly when products are found to be faulty. Traceability facilitates the withdrawal of foods and enables consumers to be provided with targeted and accurate information concerning implicated products.
(European Commission, 2007)

It is a challenge for farmers, slaughterhouses, processors, retailers and third party logistics providers (3PL) to create efficient and effective traceability of their physical products and associated data flows.

This guideline addresses the traceability needs within the European meat and poultry supply chain. It demonstrates how to apply the GS1 system in this sector so that stakeholders are able to exchange data and create a tightly connected information flow of traceability data.
The objective of this guide is to create industry recommendations that are built on the global GS1 standards whilst adhering to European legislation in the EU Member States. This guide shows how to apply the GS1 tools to create product and information visibility for end users and simplify the traceability process between food value chain participants.

There are three drivers behind the creation of this guideline:
- The EC regulatory framework which mandates tighter controls on products' traceability pedigree.
- A requirement from industry to have clarification on how to apply the GS1 system to minimise national and intra-community divergent traceability business practices.
- To improve the availability of information to the end consumer through better supply chain management (SCM).

A priority of SCM is to protect the consumer through faster and more precise product identification and information. This is especially critical if the product needs to be withdrawn from the supply chain. The focus of the guide therefore is on the implementation of product identification and digital information exchange based on the global GS1 standards for supply chain management. These standards have been developed by industry to optimise business practices across the open supply chain. If implemented as prescribed in this guideline, the GS1 standards will address all three drivers above. It will ensure that stakeholders in the meat and poultry sector are able to adhere to EU regulations and EU directives.
The GS1 system allows an efficient track and trace infrastructure which will provide safe, reliable and comprehensive information on the product to the partners in the supply chain as well as to the end consumer.
This guideline gives an overview of the main legal requirements applying to the meat industry. It is not exhaustive and companies in this sector are advised to make themselves aware of the full details of current legal requirements. Since the guideline is primarily related to origin labelling and traceability, further relevant requirements are described in the annex.

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1.1. Process and Regulation Disclaimer

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1.2. Intention and Focus of the document

This GS1 in Europe EU Meat and Poultry Traceability Guideline is intended to help all actors in the meat value chain, especially within the European Union, to become compliant with European Union labelling and traceability regulations as well as with customer requirements on meat and poultry. The best practices recommended are based on GS1 global standards and services for supply chain management and product identification. The document focuses on the entire meat value chain throughout the EU comprising of meat and poultry imported from third countries into the EU.

1.3. Basis of this Guideline

This European Guideline is related to the GS1 Global Meat & Poultry Guideline describing the implementation of GS1 standards in fresh meat on a global level. This series of documents deals not only with meat and poultry, but as well with all other kinds of meat products and it is not geographically restricted. It is therefore intended to be an appendix to the global guidelines. For additional information, please refer to:
- GS1 Industry Guideline – Global Meat and Poultry Traceability, Part 1. The GS1 System
- GS1 made easy – Global Meat and Poultry Traceability Guideline Companion Document
- GS1 Industry Guideline – Global Meat and Poultry Traceability, Part 2. Beef Supply Chain
- GS1 Industry Guideline – Global Meat and Poultry Traceability, Part 3. Lamb and Sheep Meat Supply Chain
- GS1 Industry Guideline – Global Meat and Poultry Traceability, Part 4. Pork Supply Chain
- GS1 Industry Guideline – Global Meat and Poultry Traceability, Part 5. Poultry Supply Chain
- GS1 Industry Guideline – Meat and Poultry Glossary

1.4. Who can use this Document?

This practical guide addresses those responsible for implementing legal or customer requirements related to meat and poultry labelling or traceability as well as GS1 standards in their company's operations and across company supply chains. The document provides a guide for slaughterhouses, cutting and processing plants, importing / exporting companies and distributors as well as wholesalers, retailers and food service companies. Individual organisations may perform any combination of these roles. As this implementation guide cannot address all target market legal and regulatory requirements, the party responsible for fulfilling labelling and traceability requirements should be acquainted with and consider additional requirements, e.g. on a national level within their target markets.

Notes to users and examples are used within this implementation guide as an aid to identify where additional mandatory and optional requirements may apply. They are identified using the following icon:

✔ Readers requiring additional information or instruction should contact their local GS1 Member Organisation (http://www.gs1.org/contact).

1.5. Content and Scope

The purpose of this document is to describe best practice recommendations on the labelling and traceability of products in scope. They rely on identification and communication standards already implemented in the market, like the globally unique identification of products (Global Trade Item Number – GTIN) encoded in an EAN/UPC (or GS1 DataBar) symbol on a consumer unit or in a GS1-128 (or GS1 DataBar) symbol on a trade unit. Though the meat sector has been a pioneer in traceability it is confronted with new challenges, especially with regard to legal requirements stipulated by the European Union.

✔ Not all requirements refer to all product groups in scope. Labelling of origin or the first freezing date are, for example, just required for fresh meat without any further treatment such as seasoning.

However, declaration of nutritional information or allergens in turn are mandatory for meat products and preparations.

1.5.1. In Scope
This guideline takes into consideration unprocessed fresh meat as well as meat preparations. The scope is as follows:
- The guideline is focused on fresh red meat and poultry, meat products and meat preparations for human consumption.
- The meat supply chain is considered as a whole.
- Logistic units, trade items and consumer items are considered.
- The process scenarios in the meat and poultry supply chain include:
  - Normal business (business weeks)
  - Auction business and seasonal events (e.g. turkey at Easter, goose for Christmas…..)

1.5.2. Out of Scope
Out of scope of the guideline is processed meat (e.g. sausage products like sausages, ham, salami …).

1.6. Processes and Actors in the Meat Supply Chain

A generic supply chain typically consists of manufacturers, carriers, distributors, retailers and consumers like illustrated in the following figure:

FARMER   TRANSPORT   MANUFACTURER   TRANSPORT   DISTRIBUTOR   TRANSPORT   DISTRIBUTION CENTRE   TRANSPORT   RETAILER   CONSUMER

Figure 1 – Generic Supply Chain

Broken down for the supply chain of fresh meat & poultry and meat products we get the following deeper insight including single process stages, actors, critical tracking and tracing events as well as relevant key data elements:

	LIVESTOCK BIRTH / LIVESTOCK FATTENING	SLAUGHTER-HOUSE	PROCESSOR 1 / PROCESSOR 2	WHOLESALER RETAIL DISTRIBUTOR	RETAILER AND FOOD SERVICES
CRITICAL TRACKING TRACING EVENTS	• Breeding • Birth • Batch/lot creation • Unique animal identification • Fattening / rearing • Batch/lot creation	• Slaughtering • Classification • Cutting • Deboning • Batch/lot creation	• Cutting • Processing • Freezing • Packaging • Weighing • Labelling • Batch/lot creation	• Picking / cross docking • Aggregation	• In-store processing • Packaging • Displaying • Selling / Replenishing
KEY DATA ELEMENTS	• Place & date of birth • Batch/lot or serial number • Place of Fattening • Fattening period • Supplier ID batch/lot or serial number	• Slaughter date & place • Approval number • New product ID & new batch/lot or serial number	• Production date & place • First freeze date • Best before / expire date • Approval number • New product ID & new batch/lot or serial number • Logistic unit ID	• Storing location • Supplier ID • Product ID & batch/lot or serial number • Logistic unit ID	• Sales period • Storing location • Supplier ID • Product ID & batch/lot or serial number • Logistic unit ID

• Auctioneer / broker
• Importer / exporter

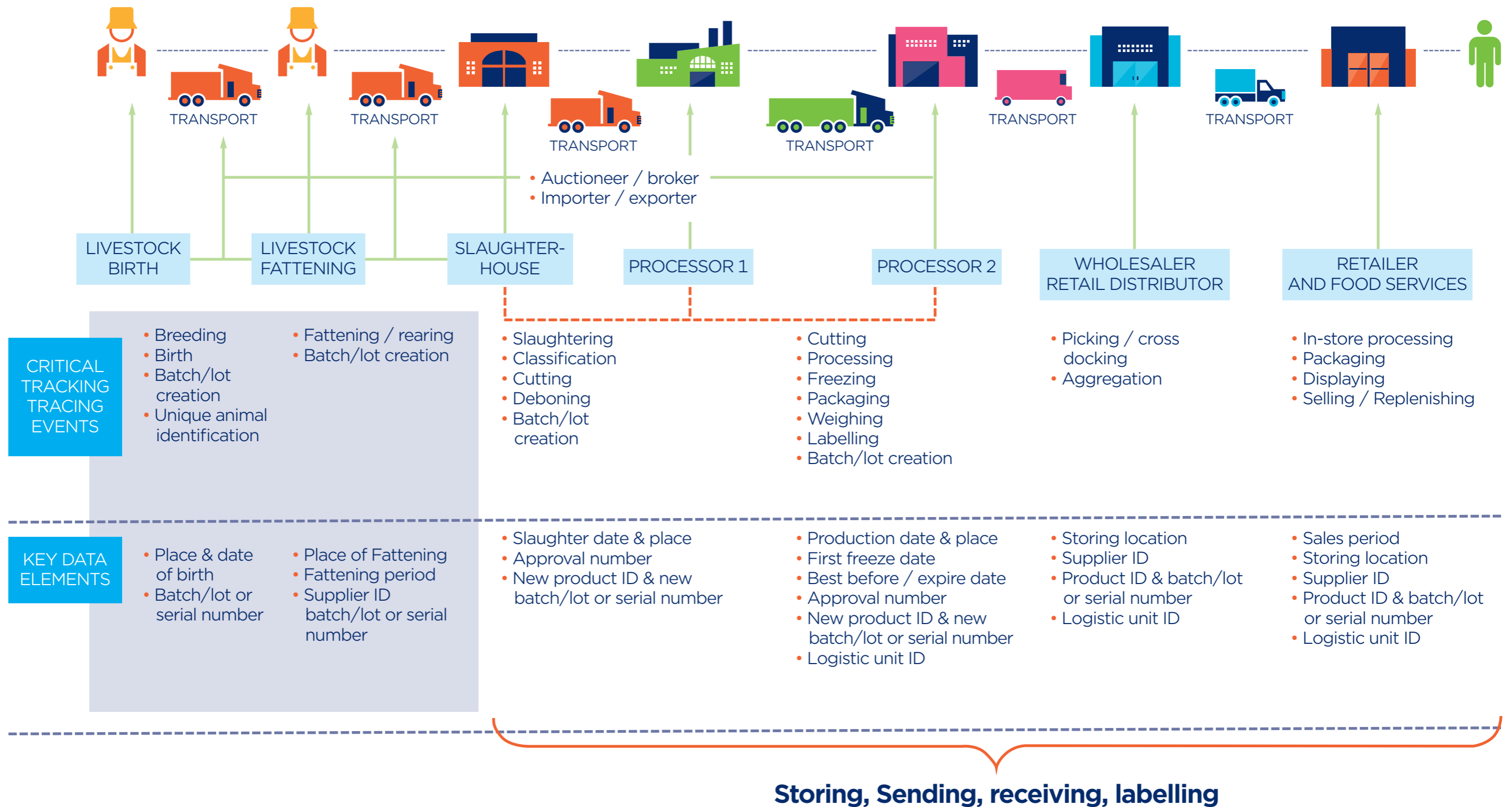**Storing, Sending, receiving, labelling**

Figure 2 – Meat Supply Chain

1.7. Overview of the Meat Supply Chain

Farms must provide identification data to the slaughterhouse on animals being sent for slaughter at least 24 hours before delivery. Corresponding data on those animals must then be used to communicate downstream; this data should be used throughout the B2B2C supply chain up to and including the final labelling of the consumer unit.

For beef and pork, slaughtered animals are typically processed into half- or quarter-carcasses before any further-processing. Other species such as lamb, goat and poultry remain as whole carcasses post-slaughter before moving to the next processing stage. In all cases, whole or part carcasses are usually hung on hooks while being transported or stored.

Within the EU, fresh meat is consistently traceable by batch/lot, or by individual animal identification (serial number / ear tag) starting with the carcass. Since the BSE crisis in the beef industry, it is obligatory to label each beef product with a label containing all legally mandated information starting with half-/quarter-carcasses. For other animal species, either similar labelling solutions are in place, or companies have implemented appropriate systems based on automated processes in combination with Enterprise Resource Planning (ERP) Systems.

The next processing stage is for the carcass to be butchered into defined primary meat cuts. These primary cuts are of variable weight. They will be placed in reusable crates or cartons and either stored at that production unit or transported to another site for further processing.

There are many different scenarios for the subsequent processing stages, both in terms of what further processing is undertaken and how many processors are involved downstream. During these subsequent process stages, be they within or between actors in the supply chain, products are labelled with several human readable pieces of information, often in combination with data encoded in a barcode. However, the range of information differs from company to company.

✔ There are different GS1 data carriers accepted globally by GS1 that are used for logistics applications. Today, the GS1 Application Identifier Standard (AI Standard) encoded in a GS1-128 symbol is widely used on trade items in the supply chain all over Europe.

2. Regulatory Framework

Depending on the animal type regarding traceability, marking and labelling, different legal requirements apply with respect to B2B and B2C information.
In the EU, a variety of both horizontal and vertical regulations are in force related to the meat sector. Some EU regulations and EU directives (with corresponding national implementation regulations) apply to all member states and importing companies, whereas other, national laws only apply in that country.

✔ Companies are being recommended to inform themselves in detail about the current national legal requirements in the respective country of destination.

2.1. List of Most Relevant EU Regulations

The list below lists the most relevant EU regulations regarding the meat sector:

- REGULATION (EC) No 1760/2000 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 July 2000
  establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products and repealing Council Regulation (EC) No 820/97

- COMMISSION REGULATION (EC) No 1825/2000 of 25 August 2000
  laying down detailed rules for the application of Regulation (EC) No 1760/2000 of the European Parliament and of the Council as regards the labelling of beef and beef products

- REGULATION (EC) No 178/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 28 January 2002
  laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety

- REGULATION (EC) No 21/2004 of 17 December 2003
  establishing a system for the identification and registration of ovine and caprine animals and amending Regulation (EC) No 1782/2003 and Directives 92/102/EEC and 64/432/EEC

- REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004
  on the hygiene of foodstuffs

- REGULATION (EC) No 853/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004
  laying down specific hygiene rules for on the hygiene of foodstuffs

- REGULATION (EC) No 854/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004
  laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption

- COMMISSION REGULATION (EC) No 275/2007 of 15 March 2007 amending Regulation (EC) No 1825/2000
  laying down detailed rules for the application of Regulation (EC) No 1760/2000 of the European Parliament and of the Council as regards the labelling of beef and beef products

- COMMISSION IMPLEMENTING REGULATION (EC) No 931/2011 of 19 September 2011
  on the traceability requirements set by Regulation (EC) No 178/2002 of the European Parliament and of the Council for food of animal origin

- REGULATION (EC) No 1169/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2011
  on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004

- COMMISSION REGULATION (EC) No 16/2012 of 11 January 2012
  amending Annex II to Regulation (EC) No 853/2004 of the European Parliament and of the Council as regards the requirements concerning frozen food

- REGULATION (EU) No 1308/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 December 2013
  establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007

- COMMISSION IMPLEMENTING REGULATION (EU) No 1337/2013 of 13 December 2013
  laying down rules for the application of Regulation (EU) No 1169/2011 of the European Parliament and of the Council as regards the indication of the country of origin or place of provenance for fresh, chilled and frozen meat of swine, sheep, goat and poultry

- REGULATION (EU) No 653/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014
  amending Regulation (EC) No 1760/2000 as regards electronic identification of bovine animals and labelling of beef

2.2. Mapping table for key data elements and legal requirements

The requirements derived from these EU Regulations can be covered with 22 attributes as listed in the following table:

Table 1: Attributes and their Associations to relevant EU Regulations

	Attribute / Key Data Element	Regulation
1	**GTIN**	**Art. 3 Reg. (EU) No 1337/2013**
2	**Lot**	**(1)** 2: identification and registration system **(a)** a link between the meat and the animal or group of animals **(b)** transmission of the information together with the meat, to the operators at the subsequent stages of production and distribution All packs with the same batch code shall correspond to the same indications **Art. 5 (Reg. (EU) No 1337/2013):** Labelling **1:** minimum labelling and information requirements **(c)** the identification number of each lot **Art. 3 (Reg. (EC) No 931/2011)** Traceability requirements **1:** traceability information **(g)** a reference identifying the lot, batch, or consignment, as appropriate **Article 26 (2) Reg. (EU) No 1169/2011**
3	**Quantity or Net Weight**	**Art. 9 (Reg. (EU) No 1169/2011)** Mandatory Consumer Information **1:** appropriate marking or labelling **(e)** the net quantity of the food **Art. 3 (Reg. (EU) No 931/2011)** Traceability requirements **1:** traceability information **(b)** the volume or quantity of the food
4	**Best Before Date or Expiry Date**	**Art. 9 (Reg. (EU) No 1169/2011)** Mandatory Consumer Information **1:** appropriate marking or labelling **(f)** The date of minimum durability
5	**Name of the food**	**Art. 9 (Reg. (EU) No 1169/2011)** Mandatory Consumer Information **1:** appropriate marking or labelling **(a)** The name of the food

	Attribute / Key Data Element	Regulation
6	**Country of Origin**	**Art. 13 (Reg. (EU) No 1760/2000)** Labelling **5:** appropriate labelling **(b)** Origin: Name of Member State/ third country **Art. 5 (Reg. (EU) No 1337/2013)** Labelling **2:** appropriate labelling **(a)** Origin: Name of member State/ third country **Art. 9 (Reg. (EU) No 1169/2011)** Mandatory Consumer Information **1:** appropriate marking or labelling **(i)** Country of Origin or place of provenance **Art. 26 (Reg. (EU) No 1169/2011)** Mandatory Consumer Information **2:** appropriate marking or labelling **(b)** Country of Origin or place of provenance
7	**Country of Birth**	**Art. 13 (Reg. (EC) No 1760/2000)** Labelling **5:** appropriate labelling **(a)** Member State or third country of Birth **Art. 26 (Reg. (EU) No 1169/2011)** Mandatory Consumer Information **9:** appropriate marking or labelling **(a)** Place of Birth
8	**Country of Rearing/Fattening**	**Art. 13 (Reg. (EU) No 1760/2000)** Labelling **5:** appropriate labelling **(a)** Member States or third countries where fattening took place **Art. 26 (Reg. (EU) No 1169/2011)** Mandatory Consumer Information **2:** appropriate marking or labelling **(b)** Place of rearing **Art. 5 (Reg. (EU) No 1337/2013)** Labelling **1:** appropriate labelling **(a)** Member States or third countries where rearing took place
9	**Country of Slaughtering**	**Art. 13 (Reg. (EU) No 1760/2000)** Labelling **5:** appropriate labelling **(a)** Member States or third countries where slaughter took place **Art. 26 (Reg. (EU) No 1169/2011)** Mandatory Consumer Information **9:** appropriate marking or labelling **(a)** Place of Slaughter

	Attribute / Key Data Element	Regulation
		Art. 5 (Reg. (EU) No 1337/2013) Labelling **1:** appropriate labelling **(b)** Member States or third countries where slaughter took place
10	**Approval number of the slaughterhouse**	**Art. 13 (Reg. (EU) No 1760/2000)** Labelling **2:** appropriate labelling **(b)** Approval number of the slaughterhouse
11	**Country of Deboning/Cutting (Processing)**	**Art. 13 (Reg. (EU) No 1760/2000)** Labelling **2:** appropriate labelling **(c)** Member States or third countries where cutting/ processing took place
12	**Approval number of the cutting hall**	**Art. 13 (Reg. (EU) No 1760/2000)** Labelling **2:** appropriate labelling **(c)** Approval number of cutting hall
13	**Reference number or reference code ensuring the link between the meat and the animal or a group of animals**	**Art. 13 (Reg. (EU) No 1760/2000)** Labelling **2:** appropriate labelling **(a)** A reference number or reference code ensuring the link between the meat and the animal or a group of animals
14	**Date of production**	**Annex (Reg. (EU) No 16/2012)** Definition of the term "production" **2:** information for frozen food of animal origin intended for human consumption **(a)** Date of production
15	**Date of slaughtering**	**(Reg. (EU) No 853/2004)** Hygiene during and after production **Annex III, Section V, Chapter 3** **2:** Regulation for the production of minced meat **(b)** deadlines for production of minced meat
16	**Date of freezing**	**Annex (Reg. (EU) No 16/2012)** Information availability **2:** information for frozen food of animal origin intended for human consumption **(b)** Date of freezing, if different from date of production
17	**Food business operator from which the food has been despatched** Name Address	**Art. 3 (Reg. (EU) No 931/2011)** Traceability requirements **1:** traceability information **(c)** the name and address of the food business operator from which the food has been despatched

	Attribute / Key Data Element	Regulation
18	**Consignor (owner)/ Supplier** Name Address	**Art. 3 (Reg. (EU) No 931/2011)** Traceability requirements **1:** traceability information **(d)** the name and address of the consignor (owner), if different from the food business operator from which the food has been despatched **Art. 9 (Reg. (EU) No 1169/2011)** Mandatory Consumer Information **1:** appropriate marking or labelling **(h)** The name and address of the supplier
19	**Food business operator to whom the food is despatched** Name Address	**Art. 3 (Reg. (EU) No 931/2011)** Traceability requirements **1:** traceability information **(e)** the name and address of the food business operator to whom the food is despatched
20	**Consignee (owner)** Name Address	**Art. 3 (Reg. (EU) No 931/2011)** Traceability requirements **1:** traceability information **(f)** the name and address of the consignee (owner), if different from the food business operator to whom the food is despatched
21	**Date of Despatch**	**Art. 3 (Reg. (EU) No 931/2011)** Traceability requirements **1:** traceability information **(h)** the date of despatch
22	**Ear tag Number**	**Art. 3 (Reg. (EU) No 1760/2000)** **(a)** Ear tag **Art. 4** **(1)** Identification code of the ear tag of an individual animal and the holding on which it was born **Art. 4 (Reg. (EU) No 21/2004)** **(1)** Animals shall be identified **ANNEX** A: Ear tags **Art. 3 (Reg. (EU) No 1337/2013)** **2:** Traceability system **(a)** the link between the meat and the animal or group of animals from which it has been obtained, at the slaughter stage

✔ Within the previously listed relevant regulations the legislative body refers to several definitions related to **"food business operators"**. There are different roles and responsibilities for companies to be respected depending on physically owning and / or sending (consignor) a product, being legally in charge / responsible, a receiver (consignee) or even the importer.

There are different Application Identifiers available (AI 410-415; see annex 11.3 / table 3) to be used depending on the role(s) of the respective food business operator.

2.3. Labelling Requirements

2.3.1. General Labelling Elements

With the Food Information Regulation (EU) No 1169/2011 (FIC), it is the first time uniform labelling requirements have been applied across the EU. The majority of the requirements of the legislation apply to prepacked foods from 13th December 2014. In addition mandatory nutrition declarations for most prepacked foods are coming into force on 13th December 2016. According to the Implementing Regulation (EU) No 1337/2013 additional new rules on country of origin information for meat from sheep, pigs, goats and poultry applies from the 1st April 2015.

- For prepacked foods, allergen information must be emphasised in the ingredients list.

- For non-prepacked foods (including catering), allergen information must be made available to consumers.

- Nutrition labelling will be required for most prepacked foods (excluding single-products) and this must be presented in a consistent format.

- A minimum font size for the mandatory information on food labels e.g. name of the food, ingredients lists, date marks etc. This also extends to voluntary front-of-pack (FOP) nutrition information.

- Country of birth and rearing information will be required for fresh, chilled and frozen meat of sheep, pigs, goats and poultry. Implementing Regulation (EU) No 1337/2013 lays down the rules for this requirement and will apply from 1st April 2015. Meat already packed may be sold after this date until stocks are exhausted.

- Country of birth, rearing, slaughtering (alternatively "country of origin") and country of disassembly as well as approval number of slaughterhouse and cutting hall. Regulation (EU) No 1760/2000 supplemented by several implementing regulations lays down the rules for this requirement applied already in the year 2000.

- Date of freezing (or first freezing where products have been frozen more than once) will be required for fresh meat as well as frozen meat / frozen meat preparations sold as such to consumers.

- Mandatory particulars accompanying the name of the food according Regulation (EU) No 1169/2011 applying for meat and meat products.
E.g. Compositional standards for minced meat: under the conditions laid down in Regulation (EU) No. 1169/2011, minced meat designations may only be used where the minced meat complies with certain compositional standards relating to fat content and collagen: meat protein ratio (see Annex VI Part B of Regulation).

 "The Member States may allow the placing on their national market of minced meat which does not comply with the criteria Added water of more than 5% must be declared in the name of the food for meat products and meat preparations which have the appearance of a cut, joint, slice, portion or carcass of meat."

- Added protein of animal origin has to be declared in the name of food for meat products and meat preparations.

- In addition to the Food Information Regulation there is another EU regulation for origin labelling of beef (**Reg. (EU) No 1760/2000**) driven by BSE crisis in place since 2000.

Mandatory labelling: Country of birth, rearing, slaughtering (alternatively "country of origin") and country of disassembly as well as approval number of slaughterhouse and cutting hall.

▪ According to **Reg. (EU) No 853/2004** there is a maximum period between slaughtering and production for trimmings used for preparation of minced meat (poultry: max. 3 days after slaughtering, beef and veal: max. 15 days after slaughtering, other species: max. 6 days after slaughtering).

▪ In case where mechanically recovered meat has been used as ingredient for production, this has to be labelled on the product.

✔ The regulation do not mandate to encode all this information in barcode symbols – for enabling the automated traceability, it should be encoded. GS1 helps you for solving these needs.

✔ If products upstream have been protected against contamination by a cover (e.g. vacuumized), they have to be treated just as prepacked products and must carry a label according to Food Information Regulation.

✔ Before Food Information Regulation came into force, labelling requirements mainly applied to prepacked products sold at POS. According to the Food Information Regulation labelling becomes mandatory for all distribution channels and includes distance selling.

2.3.2. *Origin Labelling according to Food Information Regulation*
Within the framework of the Food Information Regulation and its Implementation Regulation for fresh meat, there are three different business cases, where the origin labelling will be mandatory.

2.3.2.1. Case 1: Avoiding Misleading Information on Country of Origin Labelling
Where failure to indicate the country of origin may mislead the consumer as to the true country of origin or place of provenance of the food, then the country name needs to be stated.

✔ The place of origin of a packet of sliced chicken reads Great Britain on the label since the finished product was produced in Great Britain. Since the poultry was born and raised in Poland this country must also be stated on the label as origin of the animals.

2.3.2.2. Case 2: Origin of Fresh Meat (Implementation Reg. (EU) No 1337/2013)
▪ Applies for pork (including wild boar), poultry, lamb and goat
▪ The statement on rearing is based on the "last rearing period" and varies depending on animal species, age at slaughtering and if so weight
▪ Out of scope: offal, bones, meat preparations and processed meat products

Mandatory for the statement on "origin" are
▪ The "place of last rearing" (country, name) or in case the last rearing period occurred in more than one country
  ▫ "several EU member states" or "list of member states"
  ▫ "several non-EU countries" or "list of non-EU countries"
  ▫ "several EU member states and non-EU countries" or "list of member states and non-EU countries"
▪ The "place of slaughtering" (country name)
▪ A reference number

In summary the following statements on "rearing" are possible
▪ Statement on "origin"

EU member state or non-EU country in which the animal was "born, reared, slaughtered"
▪ Statement "reared in"
  a. Different member States of EU
  b. In different non-EU countries
  c. Different EU/non-EU countries/states
  d. List of EU/non-EU states/countries

✔ For animals which do not reach the minimum time period of the last rearing period in just one EU member state / third country, all EU member states / third countries where the rearing of the animal occurred must be declared.

Exception: minced meat and trimmings
Regarding minced meat and trimmings the regulation allows the declaration of the origin of fresh meat to just be stated as, "EU" or "non EU":
▪ "origin EU" or
▪ "reared and slaughtered in EU"
▪ Reared and slaughtered outside EU
▪ Reared outside EU, slaughtered inside EU
▪ Reared and slaughtered inside and outside EU

For the declaration of the "place of rearing" relevant time periods have to be respected, depending on the animal species. The time period always refers to the last rearing period. For poultry, sheep and goat the relevant rearing period is limited to the last month of rearing. For pigs the relevant rearing period differs depending on the age and weight at slaughtering.

✔ For both regulations, Beef Labelling Regulation as well as Food Information Regulation, it is possible to declare "origin" instead of "raised in" and "slaughtered in". In this case all events including birth" must take place in the same EU member state/ third country.

Exception: wild boar
Statement on "origin" (country in which animal has been shot)"

2.3.2.3. Origin Labelling of Primary Ingredients
At the time of finalising this guideline the applicable Implementation Regulation for these products had not been published.

2.3.2.4. Origin Labelling according to Beef Labelling Regulation
The requirements for origin labelling according to Beef Labelling Regulation (Reg. (EU) No 1760/2000) are largely similar to the requirements of FIC.
▪ Applies for meat falling within the Combined Nomenclature ('CN') codes listed in the regulation (including calf, water buffalo, bison/wisent)
▪ Out of scope: offal, bones, meat preparations and processed meat products

In difference to the latter case beef labelling requirements are mandatory for:
▪ the "place of birth"
▪ the "place / places of rearing"
▪ the "place of slaughtering" and the approval number of the slaughterhouse
▪ or alternatively "origin"
▪ the place/ places of cutting and the approval number(s) of the cutting hall(s)
▪ a batch number / individual number for each animal

Exception: minced meat and trimmings
- Possible to mix countries of birth and rearing (born and raised in: list of country names
- Instead of "cutting"
  - For minced meat: produced in/production: name of country
  - For trimmings: produced in / production: name of country + approval number of the production site
  - in case of labelling of meat pieces 3+3 rule ("prepacked product"):
    - animals of the group "slaughtered in": country name and approval number of up to 3 slaughterhouses
    - meat of the lot "cut in": country name + approval number of up to 3 cutting halls

3. The GS1 System and Traceability

- Please read "GS1 Made Easy - Global Meat and Poultry Traceability Guideline Companion Document" for a detailed overview of the GS1 system.
- An overview of the options available to automate the traceability process in the entire supply chain is described in "GS1 Industry Guideline - Global Meat and Poultry Traceability, Part 1 The GS1 System".

Below, you will find additional remarks to the Global Guidelines from the European perspective.

3.1. Additional Remarks to the Global Guidelines from the European Perspective

3.1.1. RCNs (Restricted Circulation Numbers)
RCNs are widely used throughout Europe for consumer units - especially for variable weight products. RCNs do not allow any traceability – neither manually nor automated. Therefore, we suggest to move to GTINs (Global Trade Item Numbers) on consumer units.

3.1.2. B2C communication by means of GS1 DataMatrix and GS1 QR Code
With the development of GS1's Business-to-Consumer (B2C) standards, health and wellness data can be made available to consumers by scanning a product URL encoded in a GS1 QR Code or a GS1 DataMatrix symbol. Both symbologies allow for providing a means of linking to a company's website to brand owner authorised information or applications (Trade Item Extended Packaging).

GTIN and URL AI 8200 are encoded as separate data elements in the barcode but once decoded they are processed in a standard fashion by concatenating the following three strings: the contents of AI (8200), followed by a slash (/) character, followed by the GTIN expressed as 14 numeric digits. For example, where a trade item's GTIN expressed as 14 digits is 01234567890128, and the URL is http://example.com/01234567890128 this would be encoded in a GS1 QR Code or GS1 DataMatrix as 01012345678901288200http://example.com.

When processing the URL, a slash and the GTIN are combined to arrive at http://example.com/01234567890128. This is the URL for accessing the information on the brand owner's website.

When scanning a GS1 QR Code or a GS1 DataMatrix in order to be routed to product information in the web, the scanning application must be able to process the data structures as described above.

http://example.com/012345678901

Figure 3 – Example for product URL encoded in a GS1 QR Code

3.1.3. RTIs (Returnable Transport Items)

RTIs are identified by the GRAI (Global Returnable Asset Identifier). The GRAI is encoded in a GS1-128 symbol, GS1 DataMatrix or GS1 QR Code. A typical use of either symbology in the meat sector is to encode a GRAI on a returnable meat box.

(8003)0405151399998100451099

Figure 4 – Example for a meat crate containing a GRAI encoded in a GS1 DataMatrix

3.1.4. EPCIS – Visibility within the entire supply chain

Taking the example of a slaughtering process, EPCIS event data documents the specific animal which was slaughtered (what), the date and time of slaughter (when), the business step "slaughtering" (why), and the location of the slaughterhouse (where).

Each EPCIS event for sharing Visibility Data includes the following data:
- The **What** dimension identifies the product that is received; in this case, using the GTIN and serial number (or the lot/batch) of the product.
- The **When** dimension indicates when the receiving operation took place.
- The **Where** dimension says where the product was received, namely the goods output are 2 at distribution centre A.
- The **Why** dimension provides the business context. This includes identifying the step of the business process as "receiving," indicating that the state of the product is that it is progressing normally through the forward supply chain, linking to business transaction documents such as the governing purchase order and invoice, and identifying the parties to the transfer of ownership (i.e., the manufacturer and the retailer).

The four dimensions that describe what is happening to an object in the physical or virtual world are captured in one of the following four "**EPCIS event types**" **ObjectEvent, AggregationEvent, TransformationEvent** and **TransactionEvent**, which is a generic base for all event types.

✔ GS1 in Europe recommends the exchange of additional product related and traceability data by use of EPCIS based networks to make them available to any own IT system and that of the respective partner in the supply chain.

Today, product information between food business operators is being submitted increasingly by electronic means. In addition to unstructured bilateral data formats food business operators have come to use standardised data interchange (one-to-one). **For providing highest level of full chain visibility they are recommended to use EPCIS based networks.**

✔ According to a GS1 Research support for an informal expert group on product traceability the best in class approach for the future tends to be considered as traceability in network or "decentralised" and based on the concept of Critical Tracking Events like that of EPCIS[1]

[1] http://ec.europa.eu/consumers/archive/safety/projects/docs/20131023_final-report_product-traceability-expert-group_en.pdf

3.1.5. GS1 EPCglobal – the GS1 standard for RFID tags

Radio-**F**requency **Id**entification (RFID) is another method for **A**utomatic **I**dentification and **D**ata **C**apture (AIDC). EPC/RFID tags use Radio-Frequency Identification technology (wireless use of electromagnetic fields) to encode GS1 ID Keys in the GS1 Electronic Product Code (EPC). Unlike a barcode, the tag does not necessarily need to be within line of sight of the reader, and may be embedded in the tracked object.

Today the use of EPC/RFID in Europe is not very spread since there are very specific application environments in the meat business which are not sufficiently specified so far. Today RFID technology is being used in hooks and Returnable Transport Items (RTIs) as meat crates and big-boxes for efficient process management. Since most hooks and RTIs are used in open pool applications and do not get back appropriate equipment one to one, the use of RFID in day-today implementation in the meat business is mainly limited to internal use. Nevertheless RFID offers new opportunities for sharing information and trigger external communication.

3.1.6. Sharing master data via Global Data Synchronisation Network (GDSN)

The GS1 Global Data Synchronisation Network is an internet-based, interconnected network of interoperable data pools and a Global Registry, the GS1 Global Registry®, that enables companies around the world to exchange standardised and synchronised supply chain data with their trading partners (manufacturers, retailers, distributors, hospitals, wholesalers and group purchase organisations) . This connection is made via a network of interoperable GDSN-certified data pools.
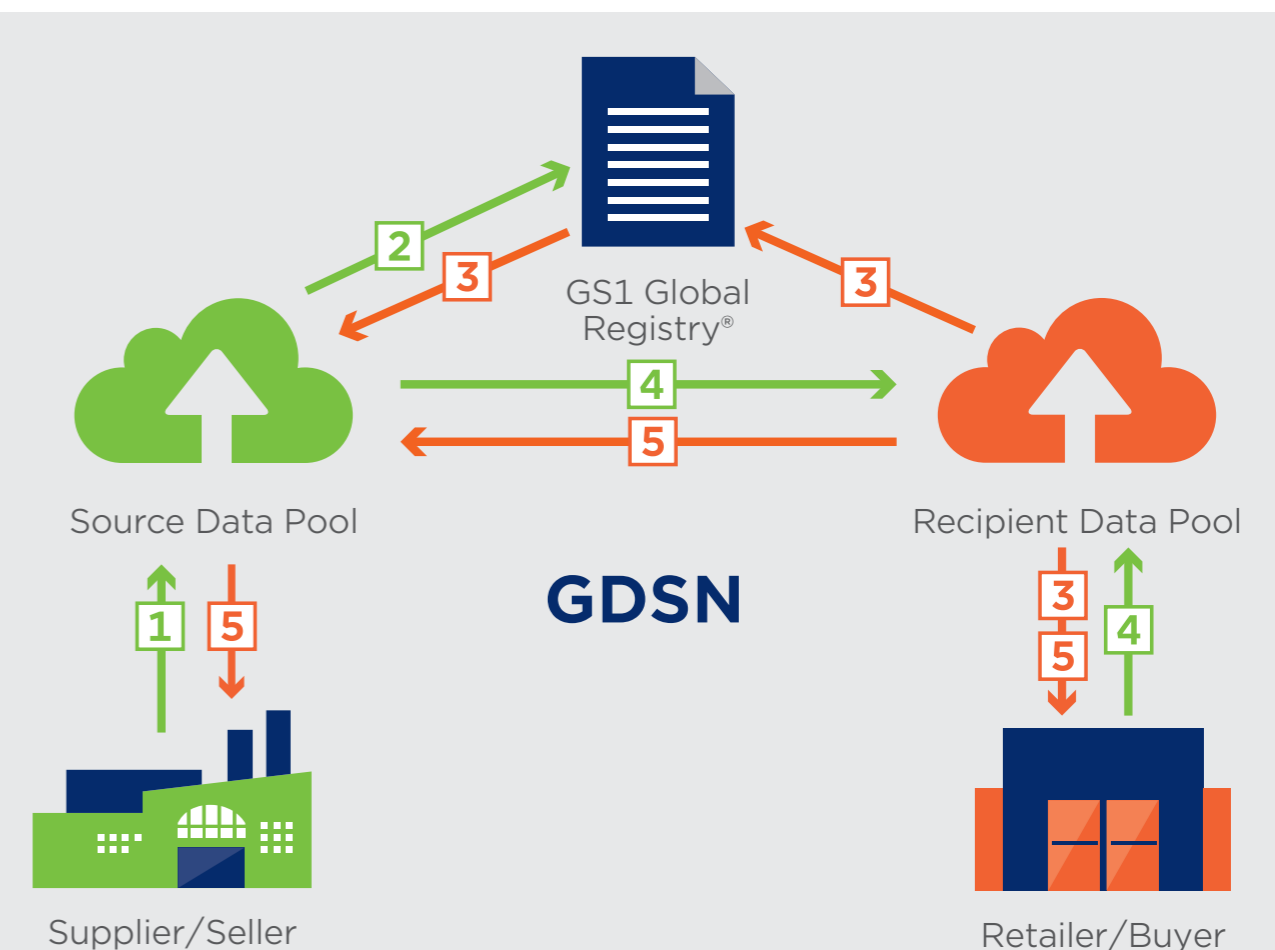

Figure 5 – Interaction in the Global Data Synchronisation Network

GS1 certified data pools are electronic catalogues of standardised item data. They serve as a source and/or a recipient of master data. Data pools can be run by a GS1 Member Organisation or by a solution provider.

In order to identify the trade items – within this network – the GS1 Identification Keys come into play. Their role is to support the identification of items, services, locations, logistic units, returnable containers, etc.

Specific to GDSN are three ID keys. These keys are used to help identify the trade items: the Global Trade Item Numbers (GTIN), the Global Location Numbers (GLN) and the Global Product Classification (GPC).

Cut down administrative time and resources, strengthen data quality by reducing errors and, providing real-time master data (e.g. list of ingredients, allergen information …).

3.2. Attribute Implementation within GS1 System Components

This table lists up all possible solutions to the information requirements of table 1 in the field of Automatic Identification and Data Capture (AIDC) and Data Sharing. To retrieve the most suitable solution for each data element please refer to the animal type related recommendations in chapter 8.

Table 2: Attribute implementation within GS1 System Components

	Attribute / Key Data Element	AIDC	EANCOM® 2002 DESADV EANCOM® 2007	GS1 XML Despatch Advice 3.1	EPCIS 1.11	GDSN 2.8.5
1	GLN Consignee	AI (410) SHIP TO LOC	SG2_NAD 3035 = BY SG2_NAD 3039 = GLN	buyer/gln	(destination) urn:epc:id:sgln	
2	GLN Consignor/ supplier	AI (412) PURCHASE FROM	SG2_NAD 3035 = SU SG2_NAD 3039 = GLN	shipFrom/gln	(source) urn:epc:id:sgln	
	Supplier Name	GLN master data	SG2_NAD	seller/address/name	GLN master data	
	Supplier Address	GLN master data	SG2_NAD	seller/address	GLN master data	
3	Serial Shipping Container Code	AI (00) SSCC	SG15_GIN DE 7405 =BJ; GIN 7402=SSCC	logisticUnitIdentification/sscc	urn:epc:id:sscc	
4	GTIN	AI (01) GTIN or AI (02) CONTENT	SG17_LIN_7140	transactionalTradeItem/gtin	urn:epc:idpat:sgtin	tradeItemIdentification.gtin
5	Lot/Batch[3]	AI (10) BATCH/LOT	SG17_PIA 7143=NB (Batch Number)	transactionalItemData/lotNumber or batchNumber	epcClass (urn:epc:class:lgtin: CompanyPrefix. ItemRefAndIndicator.Lot)	
	Serial number[4]	AI (21) SERIAL	SG17_PIA 7143=SN (serial number)	transactionalItemData/serialNumber	urn:epc:id:sgtin	
6	Ear tag Number	AI (251) REF. TO SOURCE	SG17_PIA 7143=X2 (ear tag number)	animalIdentification Number (MeatDespatchAdviceLineItem Extension)		–
7	Quantity or Net Weight[5]	AI (30) VAR.COUNT AI (310x) NET WEIGHT (kg)	SG17_QTY	transactionalTradeItem/tradeItemQuantity	QuantityElement/quantity + uom	netContent or netWeight

[1] ILMD details: see list of EPCIS attributes in Annex A.4.

[2] (GDSN 2.8.5) GDSN is for data connected to one GTIN (GTINs in one standard hierarchy) and is called as static or product master data. Data connected to one batch/lot is called as dynamic or transactional data or traceability data. Master Data should be exchanged between supplier and customer in advance.

[3] (Lot/Batch) In GDSN there is a yes/no attribute to indicate whether the product has a batch number or not.

[4] (Serial Number) In GDSN position of serial number on the packaging can be communicated. For cattle AI 251 (Reference to Source Entity / Ear Tag Number) can be used likewise.

[5] (Quantity or Net Weight) In GDSN fixed weight connected to a GTIN can be communicated.

	Attribute / Key Data Element	AIDC	EANCOM® 2002 DESADV EANCOM® 2007	GS1 XML Despatch Advice 3.1	EPCIS 1.11	GDSN 2.8.5
8	Best Before Date or Expiration Date	AI (15) BEST BEFORE DATE or AI (17) USE BY OR EXPIRY	SG17_DTM 2005=361 (Best Before Date) SG17_DTM 2005=36 (Expiry Date)	transactionalItemData/bestBeforeDate transactionalItemData/itemExpirationDate	ilmd bestBeforeDate (YYYY-MM-DD) expirationDate	
9	Name of the Product	GTIN master data	SG17_IMD 7008	transactionalTradeItem/tradeItemDescription	GTIN master data	• brandName • descriptionShort • functionalName • **tradeItemDescription** • additionalTradeItemDescription • subBrand • tradeItemFormDescription • variant
10	Slaughterhouse Approval No[6]	AI (7030) PROCESSOR	SG20_LOC 3227=246 (Slaughterhouse)	meatProcessingParty/MeatProcessingPartyIdentification/gln meatProcessingParty/MeatProcessingPartyIdentification/approval number (MeatDespatchAdviceLineItemExtension)	ilmd	partyRoleListType: SLAUGHTERER
11	Slaughterhouse Name	GLN master data				
12	Deboning Plant Approval No[11]	AI (7031) PROCESSOR	SG20_LOC 3227=19 (Factory/plant)	meatProcessingParty/MeatProcessingPartyIdentification/gln meatProcessingParty/MeatProcessingPartyIdentification/approval number (MeatDespatchAdviceLineItemExtension)	ilmd	partyRoleListType: CUTTER
13	Deboning Plant Name	GLN master data				
14	Processing Plant Approval No[12]	AI (7032) PROCESSOR	SG20_LOC 3227=19 (Factory/plant)	meatProcessingParty/MeatProcessingPartyIdentification/gln meatProcessingParty/MeatProcessingPartyIdentification/approval number (MeatDespatchAdviceLineItemExtension)	ilmd	partyRoleListType: MANUFACTURING_PLANT

[6–12] (Approval numbers) In case of information on companies approval numbers and origin is invariable, they can be depicted as well as part of GDSN master data instead of ilmd. Given attributes might be populated using Basic Party Registration message.

	Attribute / Key Data Element	AIDC	EANCOM® 2002 DESADV EANCOM® 2007	GS1 XML Despatch Advice 3.1	EPCIS 1.11	GDSN 2.8.5
15	Processing Plant Name	GLN master data	SG_LOC 3224	meatProcessingParty/ address/name (MeatDespatchAdvice LineItemExtension)	ilmd	
16	**Further Processing Plants/Slaughterhouses Approval No**[13]	AI (7033-7039) PROCESSOR#s	SG20_LOC 3227=19 (Factory/plant)	meatProcessingParty/ MeatProcessingPartyIdentification/gln meatProcessingParty/ MeatProcessingPartyIdentification/approval number (MeatDespatchAdvice LineItemExtension)	ilmd	partyRoleListType: SLAUGHTERER partyRoleListType: MANUFACTURING_ PLANT
17	Further processing Plants/Slaughterhouses Name	GLN master data	SG_LOC 3224	meatProcessingParty/ address/name (MeatDespatchAdvice LineItemExtension)	ilmd	
18	**Date of Slaughtering**	AI (7007) HARVEST DATE	SG17_DTM 2005=X20 (Slaughter date/time)	meatSlaughteringDetails/ dateOfSlaughtering (MeatDespatchAdvice LineItemExtension)	eventTime	–
19	**First Freeze Date**	AI (7006) FIRST FREEZE DATE	SG_17 DTM 2005 = 91E SG_17 DTM 2380 (value)	–	ilmd	–
20	**Date of Production**	AI (11) PROD DATE	SG_17 DTM 2005 = 94 SG_17 DTM 2380 (value)	transactionalItemData/ productionDate	eventTime or ilmd	–
21	**Date of Packaging**	AI (13) PACK DATE	SG_17 DTM 2005 = 365 SG_17 DTM 2380 (value)	transactionalItemData/ packagingDate	eventTime or ilmd	–
22	**Country of Birth**[14]	AI (422) ORIGIN *)	SG20_LOC 3227 = 241	countryOfActivity (MeatDespatchAdvice LineItemExtension)	ilmd	placeOfBirth
23	**Country of Rearing/ Fattening**[15]	AI (423) COUNTRY – INITIAL PROCESS. +)	SG20_LOC 3227 = 242	countryOfActivity (MeatDespatchAdvice LineItemExtension)	ilmd	placeOfRearing
24	**Country of Slaughtering**[16]	AI (424) COUNTRY – PROCESS. +)	SG20_LOC 3227 = 243	countryOfActivity (MeatDespatchAdvice LineItemExtension)	ilmd	placeOfSlaughter
25	**Country of Deboning**	AI (425) COUNTRY – DISASSEMBLY +)	–	countryOfActivity (MeatDespatchAdvice LineItemExtension)	ilmd	
26	**Country Covering full Process Chain**	AI (426) COUNTRY – FULL PROCESS *)	–	–	ilmd	
27	**Date of Despatch**	---	DTM (header) 2005 =11 (despatch date) DTM (header) 2380 (value)		eventTime	–

*) in the meaning of Reg. (EU) No 1760/2000 and Reg. (EU) No 1337/2013 the statement on "origin" can be used in case the events of birth, rearing and slaughtering take place in the same EU member state or third country.
Following this AI 422 in the meat business has to be used for "country of birth", and AI 426 alternatively as "origin" in case birth, rearing and slaughtering took place in the same country.
It is the responsibility of the supplier to allocate the correct country code.

If there is no approval number available, the GLN of the production site should be used instead.

As of May 2016 GDSN v3.x i (actually GDSN v2.8.5) is going to be implemented which could have significant changes for environment. Companies concerned with this topic are recommended to inform themselves in advance of the upcoming changes.

[13] (Approval numbers) In case of information on companies approval numbers and origin is invariable, they can be depicted as well as part of GDSN master data instead of ilmd. Given attributes might be populated using Basic Party Registration message.
[14] In case of information on country of birth is invariable, they can be depicted as well as part of GDSN master data instead of ilmd.
[15] In case of information on country of rearing/fattening is invariable, they can be depicted as well as part of GDSN master data instead of ilmd
[16] In case of information on country of slaughtering is invariable, they can be depicted as well as part of GDSN master data instead of ilmd

4. Sector Specific Implementation of GS1 Standards – From Slaughterhouse to Consumer

This chapter gives guidance on what pieces of information must be provided, depending on the position within the supply chain, starting from live animal transport to the slaughterhouse. The data requirements are independent of the technology used to communicate the data.
The data required differs according to the meat type (beef, pig, poultry, lamb and goat). In terms of product labelling, companies should take note that space requirements for a barcode will increase the more data that is encoded within it.

✔ As mentioned earlier in this guideline, information exchange based on EPCIS is considered as best practice for full chain visibility purposes. If EPCIS or DESADV are used, GTIN and serial number or GTIN and batch/lot number are minimum barcode requirements.

✔ Companies should take note that space requirements for a barcode on the label increase the more data are encoded in barcode.

All companies are advised to ensure they know exactly what EU and local legislation applies in their local market and what they need to do to comply.

4.1. Livestock

Scope: Food business operators delivering to a slaughterhouse (e.g. farmer, livestock dealer)

There are several regulations in EU law, as well as country specific regulations, with relevance to livestock that must be observed. The relevant information includes:
- Approval number of farmer
- Identification of a single live animal (e.g. ear tag number of beef) or group of animals depending on the animal type
- Age of animal (relevant for differentiation between calf and beef according to beef Labelling Regulation or to determine the place of rearing (last rearing period) in terms of Food Information Regulation)
- Statement on country of birth and rearing
- Health status of the animal
- The drug administered to the animal/group of animals or other treatments
- Presence of diseases that can bring out the animal in jeopardy
- If applicable: results of the analyses of the samples taken from the animals to diagnose diseases
- Knock number (pigs)
- Roaster: density (e.g. poultry)
- Name and address of the veterinarian
- Scheduled date of the cattle will be sent to the slaughterhouse
- Number of animals being sent to the slaughterhouse (at least 24 hours before the live animals arrive at the slaughterhouse)
- In case of export: names of third countries

- Information for implementation of origin labelling for pork, poultry, sheep and goat: slaughterhouses need to get appropriate origin information for each animal/a group of animals from the farmer or other supplying food business operator in writing. Usually the documentation for animals intended for slaughter are already being supplemented with this origin information. In some countries, national trade associations have already made relevant recommendations for the provision of this information.

✔ All companies are advised to ensure they know exactly what EU and local legislation applies in their local market and what they need to do to comply.

✔ The allocation of GTIN for live animals has not been implemented in the livestock sector so far. However it is advisable to allocate GTINs to live animals. When combined with the batch number to animals belonging to the same rearing group or with the serial number EPCIS can be properly used. This also applies to the allocation of GLNs for locations relevant for traceability like knocks or pastures.

Companies which today are technical low equipped can also apply sole barcode based solution to encode additional product data in a GS1-128 or GS1 DataBar.
However, companies should be aware, that they might have additional costs implementing this immediate step.

4.2. Meat Supply Chain

The Meat Supply Chain starts with slaughtering of animals and ends with selling of products by retailers or provision of food by mass caterer to the final consumer.
According to Beef Information Regulation it is obligative to place the relevant information directly at the product (e.g. label on the product or nearby on a crate or carton). In contrast, Food Information Regulation permits providing information on accompanying documents as well.

✔ Mandatory within the meaning of food law in all cases just means clear-written information. However, GS1 recommends the use of GS1 identification and communication standards for most efficient capturing and sharing of relevant product and traceability data; electronically and seamlessly.

The following tables are showing the relevant product data to be provided by a food business operator downstream to a receiver on the process stage differentiated by animal types and relevant legislation based on **A**utomatic **I**dentification and **D**ata **C**apture (AIDC).
They are using the subsequent acronyms:

M Mandatory information to ensure product identification and traceability **by use of GS1 standards**

In case companies are sharing origin data by standardised electronic means (e.g. EDI, EPCIS), it is sufficient to encode GTIN /batch in a barcode printed on a label as access key to ensure traceability.

C Optional information; should be shared **by use of GS1 standards** due to legal "origin labelling requirement"

(C) Optional information; if GS1 DataBar is used instead of EAN-13 on consumer items

√ Provision of the information mandatory **by law** (clear-written)

NA Not Applicable

1) Optional information; selection of AI 410 – AI 415 depending on the role of the food business operator

2) "Food business operators shall not place on the market a product of animal origin handled in an establishment subject to approval in accordance with Article 4(2) unless it has either a health mark …". In addition for beef it is mandatory to bring a statement regarding the approval number of the slaughtering/cutting/processing plant in conjunction with the statement on the respective country on the label.

3) Optional information; should be shared by use of GS1 standards due to specific legal "origin labelling requirement" (e.g. 3+3 batch formation for prepacked beef)

* Use of EAN-13, EAN-8 or country specific RCN at POS

4.2.1. Slaughterhouse

Scope: Food business operators delivering carcases to a cutting plant (e.g. slaughterhouse)

	GS1 Attribute / Key Data Element	AIDC	Beef	Information mandatory by law (plain writing)	Pork	Poultry	Lamb	Goat	Information mandatory by law (plain writing)
1	GLN Consignor/ Supplier 1)	AI (412) PURCHASE FROM	C		C	C	C	C	
	Supplier Name	GLN master data		√					√
	Supplier Address	GLN master data		√					√
2	GLN Consignee 1) Consignee Name Consignee Address	AI (410) SHIP TO LOC	C		C	C	C	C	
3	SSCC	AI (00) SSCC	C		C	C	C	C	
4	GTIN	AI (01) GTIN or AI (02) CONTENT	M		M	M	M	M	
	Name of the Product	GTIN master data		√					√
	Product Category (e.g. calf, bull, heifer) instead of "beef"			√					
5	Lot/Batch or Serial Number or	AI (10) BATCH/LOT AI (21) SERIAL	M	√	M	M	M	M	√
6	Ear Tag No (beef)	AI (251)	M	√	M	M	M	M	–
7	Quantity or Net Weight	AI (30) VAR.COUNT AI (310) NET WEIGHT (kg)	C	√	C	C	C	C	√
	Carcase Classification			√					√ (pork and lamb)
8	Best Before Date or Expiration Date	AI (15) Best Before Date AI (17) USE BY OR EXPIRY	NA		NA	NA	NA	NA	
9	Slaughterhouse Approval No 2)	AI (7030) PROCESSOR	C	√	C	C	C	C	
	Slaughterhouse Name								
10	Cutting/Deboning Plant Approval No 2)	AI (7031) PROCESSOR	NA		NA	NA	NA	NA	
	Cutting /Deboning Plant Name	GLN master data							
11	Processing Plant Approval No 2)	AI (7032) PROCESSOR	NA		NA	NA	NA	NA	
	Processing Plant Name	GLN master data							
12	Further Processing Plants/ Slaughterhouses Approval No 2) 3)	AI (7033-7039) PROCESSOR#s	NA		NA	NA	NA	NA	
	Further Processing Plants/ Slaughterhouses Name	GLN master data							

	GS1 Attribute / Key Data Element	AIDC	Beef	Information mandatory by law (plain writing)	Pork	Poultry	Lamb	Goat	Information mandatory by law (plain writing)
13	Date of Slaughtering	AI (7007) HARVEST DATE	C		C	C	C	C	
14	First Freeze Date (where applicable)	AI (7006) FIRST FREEZE DATE	C	where applicable	C	C	C	C	where applicable
15	Date of Production	AI (11) PROD DATE	NA		NA	NA	NA	NA	
16	Country of Birth	AI (422) ORIGIN +	C	√	C	C	C	C	conditional
17	Country of Rearing/Fattening	AI (423) COUNTRY – INITIAL PROCESS. +	C	√	C	C	C	C	√
18	Country of Slaughtering	AI (424) COUNTRY – PROCESS. +	C	√	C	C	C	C	√
19	Country Covering full Process Chain (where applicable)	AI (426) COUNTRY – FULL PROCESS +	C	√	C	C	C	C	√
20	Country of Cutting /Deboning	AI (425) COUNTRY – DISASSEMBLY +	NA		NA	NA	NA	NA	

4.2.2. Cutting Plant(s)

Scope: Food business operators delivering meat cuts to a processor (e.g. mincing plant, butchery, disassembling and packaging plant, wholesaler)

	GS1 Attribute / Key Data Element	AIDC	Beef	Information mandatory by law (plain writing)	Pork	Poultry	Lamb	Goat	Information mandatory by law (plain writing)
1	GLN Consignor/ Supplier 1)	AI (412) PURCHASE FROM	C		C	C	C	C	
	Supplier Name	GLN master data		√					√
	Supplier Address	GLN master data		√					√
2	GLN Consignee 1) Consignee Name Consignee Address	AI (410) SHIP TO LOC	C		C	C	C	C	
3	SSCC	AI (00) SSCC	C		C	C	C	C	
4	GTIN	AI (01) GTIN or AI (02) CONTENT	M		M	M	M	M	
	Name of the Product	GTIN master data		√					√
	Product Category (e.g. calf, bull, heifer) instead of "beef"			√					
5	Lot/Batch or Serial Number or	AI (10) BATCH/LOT AI (21) SERIAL	M	√	M	M	M	M	√
6	Ear Tag No (beef)	AI (251)							–
7	Quantity or Net Weight	AI (30) VAR.COUNT AI (310) NET WEIGHT (kg)	C	√	C	C	C	C	√
8	Best Before Date or Expiration Date	AI (15) Best Before Date AI (17) USE BY OR EXPIRY	C	√	C	C	C	C	√
9	Slaughterhouse Approval No 2)	AI (7030) PROCESSOR	C	√	C	C	C	C	
	Slaughterhouse Name								
10	Cutting/Deboning Plant Approval No 2)	AI (7031) PROCESSOR	C	√	C	C	C	C	
	Cutting /Deboning Plant Name	GLN master data							

	GS1 Attribute / Key Data Element	AIDC	Beef	Information mandatory by law (plain writing)	Pork	Poultry	Lamb	Goat	Information mandatory by law (plain writing)
11	**Processing Plant Approval No** 2)	AI (7032) PROCESSOR	NA		NA	NA	NA	NA	
	Processing Plant Name	GLN master data							
12	**Further Processing Plants/ Slaughterhouses Approval No** 2) 3)	AI (7033-7039) PROCESSOR#s	NA		NA	NA	NA	NA	
	Further Processing Plants/ Slaughterhouses Name	GLN master data							
13	**Date of Slaughtering**	AI (7007) HARVEST DATE	C		C	C	C	C	
14	**First Freeze Date** (where applicable)	AI (7006) FIRST FREEZE DATE	C	where applicable	C	C	C	C	where applicable
15	**Date of Production**	AI (11) PROD DATE	C		C	C	C	C	
16	**Country of Birth**	AI (422) ORIGIN +)	C	√	C	C	C	C	conditional
17	**Country of Rearing/Fattening**	AI (423) COUNTRY – INITIAL PROCESS. +)	C	√	C	C	C	C	√
18	**Country of Slaughtering**	AI (424) COUNTRY – PROCESS. +)	C	√	C	C	C	C	√
19	**Country Covering full Process Chain** (where applicable)	AI (426) COUNTRY – FULL PROCESS +)	C	√	C	C	C	C	√
20	**Country of Cutting /Deboning**	AI (425) COUNTRY – DISASSEMBLY +)	C	√	C	C	C	C	conditional

4.2.3. Processors

Scope: Food business operators delivering logistic items/trade items to companies selling to final consumer and mass caterer (e.g. retailer, wholesaler, butchery, restaurants, canteens, catering industry)

	GS1 Attribute / Key Data Element	AIDC	Beef	Information mandatory by law (plain writing)	Pork	Poultry	Lamb	Goat	Information mandatory by law (plain writing)
1	**GLN Consignor/ Supplier** 1)	AI (412) PURCHASE FROM	C		C	C	C	C	
	Supplier Name	GLN master data		√					√
	Supplier Address	GLN master data		√					√
2	**GLN Consignee** 1)	AI (410) SHIP TO LOC	C		C	C	C	C	
	Consignee Name								
	Consignee Address								
3	**SSCC**	AI (00) SSCC	C		C	C	C	C	
4	**GTIN**	AI (01) GTIN or AI (02) CONTENT	M		√	√	√	√	
	Name of the Product	GTIN master data		√	√	√	√	√	√
	Product Category (e.g. calf, bull, heifer) instead of "beef"			√					
5	**Lot/Batch or Serial Number or**	AI (10) BATCH/LOT AI (21) SERIAL	M	√	M	M	M	M	√
6	**Ear Tag No** (beef)	AI (251)							-
7	**Quantity or Net Weight**	AI (30) VAR.COUNT AI (310) NET WEIGHT (kg)	C	√	C	C	C	C	√
8	**Best Before Date or Expiration Date**	AI (15) Best Before Date AI (17) USE BY OR EXPIRY	C	√	√	√	√	√	√

	GS1 Attribute / Key Data Element	AIDC	Beef	Information mandatory by law (plain writing)	Pork	Poultry	Lamb	Goat	Information mandatory by law (plain writing)
9	**Slaughterhouse Approval No** 2)	AI (7030) PROCESSOR	C	√	C	C	C	C	
	Slaughterhouse Name								
10	**Cutting/Deboning Plant Approval No** 2)	AI (7031) PROCESSOR	C	√	C	C	C	C	
	Cutting /Deboning Plant Name	GLN master data							
11	**Processing Plant Approval No** 2)	AI (7032) PROCESSOR	C	√	C	C	C	C	
	Processing Plant Name	GLN master data							
12	**Further Processing Plants/Slaughterhouses Approval No** 2) 3)	AI (7033-7039) PROCESSOR#s	C	where applicable	C	C	C	C	where applicable
	Further Processing Plants/ Slaughterhouses Name	GLN master data							
13	**Date of Slaughtering**	AI (7007) HARVEST DATE	C		C	C	C	C	
14	**First Freeze Date** (where applicable)	AI (7006) FIRST FREEZE DATE	C	where applicable	C	C	C	C	where applicable
15	**Date of Production**	AI (11) PROD DATE	C		C	C	C	C	
16	**Country of Birth**	AI (422)ORIGIN +)	C	√	C	C	C	C	conditional
17	**Country of Rearing/Fattening**	AI (423) COUNTRY – INITIAL PROCESS. +)	C	√	C	C	C	C	√
18	**Country of Slaughtering**	AI (424) COUNTRY – PROCESS. +)	C	√	C	C	C	C	√
19	**Country Covering full Process Chain** (where applicable)	AI (426) COUNTRY – FULL PROCESS +)	C	√	C	C	C	C	√
20	**Country of Cutting /Deboning**	AI (425) COUNTRY – DISASSEMBLY +)	C	√	C	C	C	C	conditional

4.2.4. Retail

Scope: Food business operators either selling centralised packed and labelled consumer items (by a processor) or decentralised prepacked and labelled consumer items (in-store) for direct sale to final consumer (e.g. supermarkets, cash and carry markets, butchery)
The following mandatory labelling information just apply for ready case products, but not for the food service sector. Nevertheless, supplier of mass caterer (e.g. restaurants, canteens) are obligated to provide appropriate information on origin (according to Regulation (EC) 1169/2011 to their customer as well. Please notice, that

✔ In case there is a GS1 DataBar instead of an EAN-13 placed on the label, the barcode can contain more information than just GTIN or a Restricted Circulation Number for variable weight products; e.g. Lot, Net Weight, Best Before Date. Thus, EPCIS based IT systems can be used up to the checkout at POS.

	GS1 Attribute / Key Data Element	AIDC	Beef	Information mandatory by law (plain writing)	Pork	Poultry	Lamb	Goat	Information mandatory by law (plain writing)
1	**GLN Consignor/ Supplier** 1)	AI (412) PURCHASE FROM	NA		NA	NA	NA	NA	
	Supplier Name	GLN master data		√					√
	Supplier Address	GLN master data		√					√
2	**GLN Consignee** 1)	AI (410) SHIP TO LOC							
	Consignee Name								
	Consignee Address								
3	**SSCC**	AI (00) SSCC	NA		NA	NA	NA	NA	
4	**GTIN ** *	AI (01) GTIN	M		M	M	M	M	
	Name of the Product	GTIN master data		√					√
	Product Category (e.g. calf, bull, heifer) instead of "beef"			√					
5	**Lot/Batch or Serial Number or**	AI (10) BATCH/LOT AI (21) SERIAL	(C)	√	(C)	(C)	(C)	(C)	√
6	**Ear Tag No** (beef)	AI (251)							NA
7	**Quantity or Net Weight**	AI (30) VAR.COUNT AI (310) NET WEIGHT (kg)	(C)	√	(C)	(C)	(C)	(C)	√
8	**Best Before Date or Expiration Date**	AI (15) Best Before Date AI (17) USE BY OR EXPIRY	(C)	√	(C)	(C)	(C)	(C)	√
9	**Slaughterhouse Approval No** 2)	AI (7030) PROCESSOR	NA	√	NA	NA	NA	NA	√
	Slaughterhouse Name								
10	**Cutting/Deboning Plant Approval No** 2)	AI (7031) PROCESSOR	NA	√	NA	NA	NA	NA	√
	Cutting /Deboning Plant Name	GLN master data							
11	**Processing Plant Approval No** 2)	AI (7032) PROCESSOR	NA	√	NA	NA	NA	NA	√
	Processing Plant Name	GLN master data							
12	**Further Processing Plants/Slaughterhouses Approval No** 2) 3)	AI (7033-7039) PROCESSOR#s	NA	√	NA	NA	NA	NA	√
	Further Processing Plants/ Slaughterhouses Name	GLN master data							
13	**Date of Slaughtering**	AI (7007) HARVEST DATE	NA		NA	NA	NA	NA	
14	**First Freeze Date** (where applicable)	AI (7006) FIRST FREEZE DATE	NA	√					√
15	**Date of Production**	AI (11) PROD DATE	NA		NA	NA	NA	NA	
16	**Country of Birth**	AI (422) ORIGIN +	NA	√					conditional
17	**Country of Rearing/Fattening**	AI (423) COUNTRY – INITIAL PROCESS. +	NA	√	NA	NA	NA	NA	√
18	**Country of Slaughtering**	AI (424) COUNTRY – PROCESS. +	NA	√					√
19	**Country Covering full Process Chain** (where applicable)	AI (426) COUNTRY – FULL PROCESS +	NA	√	NA	NA	NA	NA	√
20	**Country of Cutting /Deboning**	AI (425) COUNTRY – DISASSEMBLY +	NA	√	NA	NA	NA	NA	conditional

5. Special Challenges

5.1. Mixed Products (containing more than one animal species)

For prepacked fresh meat products such as minced meat or mixed grill plates containing meat originating from more than just one animal type it becomes mandatory to give a statement on "origin" for each type according Regulation (EC) No 1169/2011 resp. 1337/2013. As a consequence the country of slaughtering must be specified for each animal type on a label in human readable form. In case a product contains other meat products than beef the label must comply with both Regulations (EC) No 1169/2011 resp. 1337/2013 and 1760/2000.
Application identifiers (AI) are generic and, to guarantee information encoded in a barcode is unique and cannot be misinterpreted, each AI can once be used once on a label.
For this reason it is recommended to encode GTIN (AI 01), batch number (AI 10), weight (AI 310x) and best before date / use-by date (AI 15 / 17) on the package in combination with human readable origin information as listed above.

✔ Best practice for the communication of prepacked fresh mixed products data is to use EPCIS (see 7.3.2) or the electronic despatch advice DESADV in EANCOM® or GS1 XML format. This requires at least GTIN and Serial number or lot resp. the SSCC on the label. Other relevant information is applied in human readable format on the physical item.
In case a partner within the supply chain is not capable of using EPCIS or GS1 eCom messages it is possible to use Application Identifiers (91 to 99) assigned for company internal or bilaterally agreed information.

5.2. Origin Statement EU / Non-EU

In some cases it is possible to apply the origin statement "EU" or "non-EU" instead of stating a specific country of origin. Since there are no 3 digit numerical codes for these two statements available according to the ISO-3166-1-code list, the numeric codes 900 to 999 might be used under bilateral agreement.

5.3. Labelling of multiple origins

According to EU Beef Labelling Regulation and Food Information Regulations on some products require a statement on "reared in" for more than just one EU/Non-EU member state / non-EU country (or combination of both). This applies for instance in case the rearing of a homogeneous batch of animals (after birth) initially took place in Belgium and the animals were then sold to a farmer in the Netherlands for the finishing period. This is covered by Application Identifier 423 "Country of Initial Processing" which is associated with country/countries of rearing in the meat business and allow up to 5 different countries to be encoded in a single barcode.

6. Annex

Further Requirements for the Meat Business (not related to traceability)
There are various additional legal requirements for the meat sector based on present EU food law. These requirements are not related to traceability, however the use of GS1 Standards can support them from the perspective of supply chain efficiency.

6.1. EU Regulation 1169 / 2011 on Food Information to Consumers

6.1.1. The "Mandatory Particulars" of Regulation (EU) No 1169/2011
The following product data must be shown on the labels of pre-packaged foods since 13th December 2014:
1. the name of the food;
2. the list of its ingredients;
3. any ingredient or processing aid causing allergies or intolerances used in the manufacture or preparation of a food and still present in the finished product, even if in an altered form (A list of allergens that must be declared is given in an annex to the regulation.);
4. the quantity of certain ingredients or categories of ingredients;
5. the net quantity of the food;
6. the date of minimum durability or the "use by" date;
7. any special storage conditions and/or conditions of use;
8. the name and address of the food business operator under whose name the food is marketed (or the importer's name if the food business operator is outside the EU);
9. the country of origin or place of provenance where provided for in Article 26;
10. instructions for use where it would be difficult to make appropriate use of the food without such instructions;
11. with respect to beverages containing more than 1,2 % by volume of alcohol, the actual alcoholic strength by volume;
12. a nutrition declaration

✔ Many products in the meat sector, either further up the retail supply chain or being supplied to food service companies, are not consumer trade items designated for sale but are provided with transit packaging to protect them against contamination. These items are liable to the same labelling requirements as prepacked goods.

6.1.2. Distance Selling
Article 14 of the regulation states that if prepacked foods are offered for sale by means of distance selling (usually on a website), the same mandatory particulars, except use by date, must be available:
- in the material supporting the distance selling before the purchase is concluded;
- and at the moment of delivery.

The business whose name is used to market the food should provide the necessary data to the online retailer in advance (although this is not a legal requirement), so that web-pages including the information can be designed.
Communication of GS1 master data between trading partners through the channels recommended by GS1 (see below) normally ensures the data is available appropriately.
The regulation holds the business whose name is used to market the food responsible for the pres-

ence and accuracy of the required information, but others such as suppliers to food manufacturers, suppliers of food in bulk and food retailers also have responsibilities. This requires effective communication of product data along the supply chain. All mandatory particulars in the regulation can be communicated using GS1 master data and this is the best way to ensure that all companies in the supply chain can understand and use each other's information.

In addition to master data GS1 provides a number of "share" technologies to effect the communication:
- The preferred mechanism for communicating the information is via the Global Data Synchronisation Network (GDSN). A supplier who provides data to a certified data pool can make it available to any or all of his trading partners connected to the network and data validations are integrated.
- Some retailers are not connected to GDSN but are able to get product information relevant to consumers (as opposed to business-to-business data) from GS1 Source (Trusted Source of Data).
- GS1 also has a standard electronic data interchange (EDI) message for communicating product master data. This is the EANCOM® Price-Catalogue message (PRICAT) that also includes all mandatory data according to EU 1169/2011.

✔ GS1 has published an advisory table showing how the GTIN allocation rules relate to the mandatory information in EU 1169/2011 and suggested interpretations of the rules. Accordingly the brand owner is responsible for deciding whether or not to change the GTIN. The table shows how mandatory information of EU 1169/2011 corresponds to the GS1 master data in GDSN, GS1 Source and the PRICAT message.

6.1.3. Managing product changes
A difficulty arises when a food is changed in such a way as to require a change to the mandatory data shown on the label. In these circumstances there will be a period of time when the old version of the product and the new version coexist in the supply chain. During this period it is not possible for the retailer to know whether the version of the product ordered on a website will be available at the time and place the order is picked.

Significant changes to a product require allocation of a new GTIN, which increases the possibility that the correct variant can be made available for picking and, even if it is not, the retailer can recognise automatically whether the version being picked is different from the version that was ordered and notify the consumer.

However some minor changes in the mandatory product data in the regulation do not require a new GTIN to be given to the changed item. In this situation it is not possible for the retailer to use the GTIN to distinguish between the two versions at the pick point. In these cases the consensus in the food industry is that the GTIN allocation rules should still be followed. Process controls and/or manual intervention could be used to minimise instances of mismatches between variants ordered and delivered and some enforcement agencies might show some tolerance, even though this might result in deviation from a strict interpretation of the regulation, during temporary transitions from one variant to another. If new GTINs were to be allocated to every minor variant the result was costs, errors and inefficiencies, many of which would damage consumers' interests. It is important to emphasise that not changing the GTIN is restricted to minor variations and if there is a chance that mistaking one variant for another could have health risks then the new variant must have a new GTIN to distinguish it.

GS1 is developing new ways of working so that in future it will be possible to distinguish product variants without disrupting the supply chain.

In difference e.g. to the list of ingredients origin information are almost always not related to instant lot master data. The origin for a single product might vary from one to another shipping or even one shipping contains more than just one homogenous origin information. Therefore they are not relevant for GDSN. Nevertheless in some cases where origin information for a product are static they can be declared within the scope of GDSN.

In difference e.g. to the list of ingredients origin information are almost always not related to instant lot master data. The origin for a single product might vary from one delivery to another, or one delivery may contain product from more than one origin. Therefore they are not relevant for GDSN. Nevertheless in some cases where origin information for a product is static, it can be declared within the scope of GDSN.

According to the regulation, the statement of origin for distance selling has to be available before the customer places the order. According to the FAQ List of the EU Parliament it is possible to declare a specific range of countries. This statement has to be verifiable and a disclaimer is mandatory.

✔ GS1 has published an advisory table showing how the GTIN allocation rules relate to the mandatory information in EU 1169/2011 and suggested interpretations of the rules. The brand owner is responsible for deciding whether or not to change the GTIN.

6.1.4. Allergen Labelling
Since 13th December 2014 any ingredient or processing aid listed in Annex II or derived from a substance or product listed in Annex II causing allergies or intolerances used in the manufacture or preparation of a food and still present in the finished product, even if in an altered form, has to be listed in the list of ingredients. The allergen has to be specified directly following the particular ingredient. Unlike other requirements food allergens in non prepacked products sold over a counter must to be declared.

Substances or products causing allergies or intolerances in the meaning of Food Information Regulation are:
1. Cereals containing gluten*, namely: wheat, rye, barley, oats, spelt, kamut or their hybridised strains, and products thereof;
2. Crustaceans and products thereof;
3. Eggs and products thereof;
4. Fish and products thereof`*;
5. Peanuts and products thereof;
6. Soybeans and products thereof;
7. Milk and products thereof (including lactose)*;
8. Nuts, namely: almonds (Amygdalus communis L.), hazelnuts (Corylus avellana), walnuts (Juglans regia), cashews (Anacardium occidentale), pecan nuts (Carya illinoinensis (Wangenh.) K. Koch), Brazil nuts (Bertholletia excelsa), pistachio nuts (Pistacia vera), macadamia or Queensland nuts (Macadamia ternifolia), and products thereof*;
9. Celery and products thereof;
10. Mustard and products thereof;
11. Sesame seeds and products thereof;
12. Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/litre in terms of the total SO2 which are to be calculated for products as proposed ready for consumption or as reconstituted according to the instructions of the manufacturers:
13. Lupin and products thereof;
14. Molluscs and products thereof.

✔ Many meat products and meat preparations contain further ingredients such as spices, food additives or processing aids and require comprehensive product labelling including allergens in the upstream supply chain.

6.1.5. First Freeze Date
For frozen meat and frozen meat preparations the Regulation requires a statement of the date of freezing or the date of first freezing in cases where the product has been frozen more than once. The requirement applies as well for meat which has been thawed subsequently and is being sold unfrozen.
The date of freezing or the date of first freezing shall be indicated as follows:
  a. It shall be preceded by the words 'Frozen on …';
  b. The words referred to in point (a) shall be accompanied by:
    ▫ the date itself, or,
    ▫ a reference to where the date is given on the labelling.
  c The date shall consist of the day, the month and the year, in that order and in uncoded form.

✔ For many products it is not determined at the beginning of the process chain, whether they will eventually be sold to the consumer, or into the food service sector, or will be used for processing. Hence companies are recommended to give a corresponding statement in case of "previous freezing" for all products.

6.1.6. Declaration of Added Water
With regard to meat products and meat preparations which have the appearance of a cut, joint, slice, portion or carcase of meat, the name of the food shall include an indication of the presence of added water if the added water makes up more than 5 % of the weight of the finished product (e.g. cooked ham).
In terms of this regulation the rule does not apply to products with added water for technological reasons (e.g. ice added to sausage meat for cooked sausages).

6.1.7. Protein of different animal origin
In the case of meat products and meat preparations containing added proteins as such, including hydrolysed proteins, of a different animal origin, the name of the food shall bear an indication of the presence of those proteins and of their origin.
Added foreign animal protein shall be stated in the list of ingredients and additionally to the name under which a foodstuff is sold. Furthermore the indication on animal protein has to be stated correspondingly as part of the master data.

6.1.8. Definition of the relevant rearing section
To food originating from animals born in a country differing from the country of rearing / slaughtering the countries of rearing must be stated as follows:
▪ pig
  ▫ slaughter age > 6 months: last 4 months
  ▫ slaughter age < 6 months
    - and live weight > 80 kg: rearing time as of 30 kg live weight
    - and live weight < 80 kg: entire rearing time
▪ sheep and goat
  ▫ slaughter age > 6 months: last 6 months
  ▫ slaughter age < 6 months: entire rearing time
▪ poultry:
  ▫ slaughter age > 1 months: last month
  ▫ slaughter age < 1 months: rearing time from beginning of rearing

6.2. Regulation (EC) No. 853 / 2004 Laying Down Specific Hygiene Rules for on the Hygiene of Foodstuffs

Certain foodstuffs may cause specific hazards to human health, requiring the setting of specific hygiene rules. This is particularly the case for food of animal origin, in which microbiological and chemical hazards have frequently been reported. With regard to public health, these rules contain common principles, in particular in relation to the manufacturers' and competent authorities' responsibilities, structural, operational and hygiene requirements for establishments, procedures for the approval of establishments, requirements for storage and transport and health marks.

Amongst others this regulation defines the rules for the production of minced meat and meat preparations. When prepared from chilled meat, minced meat must be prepared
a. in the case of poultry, within no more than 3 days from slaughter date;
b. in the case of animals other than poultry, within no more than 6 days from slaughter date;

or in the case of boned, vacuum-packed beef and veal within no more than 15 days from the slaughter date of the animals.

In this context the use of AI (7007) "date of slaughtering" enables companies to produce minced meat monitoring and documentation of compliance with this requirement in an appropriate way.

6.3. Glossary and Definitions

You will find the complete GS1 glossary under the following link:
http://apps.gs1.org/GDD/glossary/Pages/Home.aspx

Table: Glossary and Definitions

Term	Description and definition
Actor	An actor is a role that a user plays with respect to a system
Agreements	Arrangement(s) undertaken by and legally binding on parties
Application Identifier (AI)	The field of two or more characters at the beginning of an Element String that defines its format and meaning
Approval number	Registration number by local authority for the establishment where these operations take place.
Batch / Lot	The batch or lot number associates a trade item with the manufacturer considered relevant for traceability of the item. The data may refer to the trade item itself or to items contained in it. GDD Implementation Notes: A typical batch/ lot code might include a plant location, production line, date of production and shift. The format and structure will vary by organisation.
Business requirement	Is a statement of need concerning the business area or business process under study. It is something that the system must do or a quality that the system must have. A requirement exists either because the type of product demands certain functions or qualities, or the client wants the requirement to be part of the delivered product.
Buyer	An entity that purchases the product from the Brand Owner or its agent.
Batch linked meat cutting	Meat arising from the cutting of parts of multiple carcasses. (KB 09-06-1999 Art 2[2b]).

Term	Description and definition
Critical Tracking Events / CTEs	Specific points in the supply chain where a product is moved between premises or is transformed in some way; these can also be points/locations where data capture is necessary to maintain the ability to trace products. This includes any event involving an item within the supply chain, at a specific location and time, that is associated with the collection and storage of data which is useful for associating another item, or related items, to that specific event at a later time and which is regarded as being necessary for identifying the specific path of the item through the supply chain.
EPC Global	EPCglobal® was a GS1 initiative to develop industry-driven standards for the Electronic Product Code™ (EPC) to support the use of Radio Frequency Identification (RFID) in today's fast-moving, information rich, trading networks.
EPCIS	GS1 Electronic Product Code Information System.
Food Business Operator	Food business operators means the natural or legal persons responsible for ensuring that the requirements of food law are met within the food business under their control.
GLN	The GS1 Identification Key used to identify physical locations or parties. The key comprises a GS1 Company Prefix, Location Reference and Check Digit.
GTIN	The GS1 Identification Key used to identify trade items. The key comprises a GS1 Company Prefix, an Item Reference and Check Digit.
Harvest Date (Slaughter date)	In the meat business as date on which the slaughter of the animal took place.
Individually cut meat (single animal meat cuts)	Meat resulting from the cutting of parts of the same carcass (KB 09-06-199 art 2 [2a]). Instance / Lot master data Instance/Lot Master Data (ILMD) is data that describes a specific instance of a physical or 1183 digital object, or a specific batch/lot of objects that are produced in batches/lots.
Key Data Elements / KDEs	The essential data values captured for a Critical Tracking Event to identify and maintain a chain of custody for an item as it is transformed through the supply chain.
Labelling	Affixing a label on a piece or pieces of meat or packaging.
GTIN + Batch/Lot LGTIN	The GTIN+ Batch/Lot scheme is used to denote a class of objects belonging to a given batch or lot of a given GTIN.
Minced Meat	Boned meat but into small fragments and contains less than 1 % salt. (EG 853/2004 Bijlage I, art. 1.13).
Meat Preparation	Fresh meat, including meat that has been minced into fragments, which has had foodstuffs, seasonings or additives added to it or which has undergone processes that is not sufficient to modify the internal muscle fibre structure of the meat. (For example: ham, skewers, etc.). According to the AFSCA governs all types of prepa-rations that contain more than 50 % meat (Reg. EG 853/2004).
Meat Product	Processed products resulting from the processing of meat or from the further processing of such processed products, so that the cut surface shows that the product no longer has the characteristics of fresh meat.
Origin (place of)	In the meaning of GS1 Application Identifier the date of origin in general is defined as a country in which the trade item has been produced or manufactured. According to Reg. (EC) No 1760/2000 and Reg. 1337/2013 the Origin means, that the birth, rearing/raising and slaughtering took place in the same country.
Serialised Global Trade Item Number (SGTIN)	The Serialised Global Trade Item Number EPC scheme is used to assign a unique identity to an instance of a trade item, such as a specific instance of a product or SKU.
Slaughter date	The date on which the slaughter of the animal took place.
RTI	Returnable Transport Items (RTI) are used for moving or transporting goods. RTIs are often managed as exchangeable items rather than as individual assets.
SSCC	The GS1 Identification Key used to identify logistics units. The key comprises an Extension digit, GS1 Company Prefix, Serial Reference and Check Digit.

6.4. GS1 Application Identifier

Your will find the complete list of GS1 application identifiers under the following link:
http://www.gs1.org/sites/default/files/docs/barcodes/GS1_General_Specifications.pdf

Table 3: List of Application Identifiers with relevance for the meat sector (extract)

AI	Data Content	Format*	FNC1 Required
00	SSCC (Serial Shipping Container Code)	n2+n18	
01	Global Trade Item Number (GTIN)	n2+n14	
02	GTIN of Contained Trade Items (in combination with AI 37 and 00)	n2+n14	
10	Batch or Lot Number	n2+x..20	(FNC1)
11 (**)	Production Date (YYMMDD)	n2+n6	
13 (**)	Packaging Date (YYMMDD)	n2+n6	
15 (**)	Best Before Date (YYMMDD)	n2+n6	
17 (**)	Expiration Date (YYMMDD)	n2+n6	
21	Serial Number	n2+x..20	(FNC1)
251	Reference to Source Entity (e.g. No. of Ear-Tag)	n3+x..30	(FNC1)
254	GLN Extension Component	n3+x..20	(FNC1)
30	Count of Items (Variable Measure Trade Item)	n2+n..8	(FNC1)
37	Count of Trade Items (in combination with AI 02 and 00)	n2+n..8	(FNC1)
310 (***)	Net weight, kilograms (Variable Measure Trade Item)	n4+n6	
320 (***)	Net weight, pounds (Variable Measure Trade Item)	n4+n6	
330 (***)	Logistic weight, kilograms	n4+n6	
392 (***)	Applicable amount Payable, single monetary area (Variable Measure Trade Item)	n4+n..15	(FNC1)
410	Ship to – Deliver to Global Location Number	n3+n13	
411	Bill to – Invoice to Global Location Number	n3+n13	
412	Purchased from Global Location Number	n3+n13	
413	Ship for – Deliver for – Forward to Global Location Number	n3+n13	
414	Identification of a Physical Location – Global Location Number	n3+n13	
415	Global Location Number of the Invoicing Party	n3+n13	
422	Country of Origin of a Trade Item (associated with country of birth)	n3+n3	(FNC1)
423	Country of Initial Processing (associated with country/countries of rearing)	n3+n3+n..12	(FNC1)
424	Country of Processing (associated with country of slaughtering)	n3+n3	(FNC1)
425	Country of Disassembly	n3+n3	(FNC1)
426	Country Covering full Process Chain (alternative to AI 422-424)	n3+n3	(FNC1)
7002	UN/ECE Meat Carcasses and Cuts Classification	N4+X..30	(FNC1)
7006	First Freeze Date	N4+N6	(FNC1)
7007	Harvest Date (for the Meat Business: Date of Slaughtering)	N4+N6..12	(FNC1)
7030	Approval Number of Processor with ISO Country Code (Slaughterhouse)	N4+N3+X..27	(FNC1)
7031	Approval Number of Processor with ISO Country Code (first deboning/cutting hall)	N4+N3+X..27	(FNC1)
7032-7037	Approval Number of Processor with ISO Country Code (second through seventh processing location (cutting hall)	N4+N3+X..27	(FNC1)
7038	Approval Number of Processor with ISO Country Code (slaughterhouse)	N4+N3+X..27	(FNC1)
7039	Approval Number of Processor with ISO Country Code (slaughterhouse)	N4+N3+X..27	(FNC1)
8003	Global Returnable Asset Identifier (GRAI)	N4+N14+X..16	(FNC1)
8200	Extended Packaging URL	N4+X..70	(FNC1)

NOTES:

(*)	The first position indicates the length (number of digits) of the GS1 Application Identifier. The following value refers to the format of the data content. The following convention is applied:
N	numeric digit
X	any character
N3	3 numeric digits, fixed length
N..3	up to 3 numeric digits
X..3	up to 3 characters in Figure 7.11-1
(**)	If only year and month are available, DD must be filled with two zeroes.
(***)	The fourth digit of this GS1 Application Identifier indicates the implied decimal point position.
(****)	All GS1 Application Identifiers indicated with (FNC1) are defined as of variable length and shall be delimited unless this Element String is the last one to be encoded in the symbol. The delimiter shall be a Function 1 Symbol Character in GS1-128 Symbology, GS1 DataBar Expanded Versions and GS1 Composite Symbology and should be a Function 1 Symbol Character in GS1 DataMatrix and GS1 QR Code Symbology.

Example:
- 3100 Net weight in kg without a decimal point
- 3102 Net weight in kg with two decimal points

6.5. EPCIS attributes

O = Optional, M = Mandatory

Dim	Data Element/ Product category	Meat raw	Meat processed	Intermediate Perishables (Generic)	Finish Perishables (Generic)
	Description	Manufacturing raw product (slaughtering)	Manufacturing processed product (e.g. cutting, mincing, preparing)	Manufacturing intermediate product (e.g. gutting, splitting preserving)	Manufacturing final product (e.g. creating consumer item)
	Event Type	Object Event	Object Event	Transformation Event	Transformation Event
	Action	ADD	ADD		
What	**EPC Quantity List**	M: GTIN A, Lot 12, 20 kg M: GTIN B, Lot 99, 15 kg	M: GTIN A, Lot 12, 20 kg M: GTIN B, Lot 99, 15 kg		
	Input Quantity List			M: GTIN A, Lot 12, 20 kg M: GTIN B, Lot 99, 15 kg	GTIN D, Lot 555, 30 kg
	Output Quantity List			GTIN D, Lot 555, 30 kg	GTIN E, Lot 4321, 950 units
When	**Event Time**	M: slaughteringStart Date	M: slaughteringStart Date	M: processingDate	M: processingDate
Where/ Who	**Read Point**	M: GLN of slaughtering plant	M: GLN of cutting/ processing plant	M: GLN of processor's manu-facturing plant	M: GLN of final processor's manu-facturing plant
Why	**Business Step**	M: Commissioning (CBV)	M: Commissioning (CBV)	M: Commissioning (CBV)	M: Commissioning (CBV)
	Business Transaction List	O: Type po, inv, desadv (CBV) (optional)		O: Type po, inv, desadv (CBV) (optional)	
	ILMD: bestBeforeDate		M	M	M
	ILMD: expirationDate		O	O	O
	ILMD: eventPeriodEnd	O	O		
	ILMD: firstFreezeDate	O	O	O	O
	ILMD: preStageDetails	M	M		
	ILMD: agricultureDetails	M	M		
	ILMD: farmIdentificationNumber	(M), alternatively address	(M), alternatively address		
	ILMD: proportionPercentOfLot	M (calculated in DEW)	M (calculated in DEW)		
	ILMD: proportionRankingOfLot	M (calculated in DEW)	M (calculated in DEW)		
	ILMD: address[2]	(M), alternatively farmIdent, Number	(M), alternatively farmIdent, Number		
	ILMD: name	O	O		
	ILMD: streetAddressOne	O	O		
	ILMD: postalCode	O	O		
	ILMD: state	O	O		
	ILMD: countyCode	(M), if address	(M), if address		
	ILMD: countriesOfBirth[3]	O	O		
	ILMD: countryCode	O	O		
	ILMD: animal	O	O		
	ILMD: animalID	(M), if animalDetails	(M), if animalDetails		
	ILMD: identType	(M), if animalDetails	(M), if animalDetails		
	ILMD: farmBirthID	(M), if animalDetails	(M), if animalDetails		
	ILMD: crossBreedingIndicator	O	O		
	ILMD: breed	O	O		
	ILMD: eartagIDFather	O	O		
	ILMD: eartagIDMother	O	O		
	ILMD: fatherBreed	O	O		
	ILMD: motherBreed	O	O		
	ILMD: dateOfBirth	(M), if animalDetails	(M), if animalDetails		

[1] Complex type element containing 1...n farm elements

[2] Complex type element containing name, streetAddressOne, postalCode, city, countyCode, state, countryCode

[3] Complex type element containing 1...n country codes

6.6. Labelling examples

Figure 6 – Label for pre-packed variable/fixed weight product sold at PoS with RCN

Figure 7 - Label for pre-packed variable/fixed weight product sold at PoS with GS1 DataBar

CHICKEN BREAST

Lot/Batch: 4711
Raised in: Italy
Slaughtered in: Italy

IT
...
CE

(01)94055725000094(3102)000857(17)151231(10)4711

(423)380(424)380

Used by: 31/12/2015

keep refrigerated under x°C

Thorough cooking prior to consumption

Brand label

GTIN:4055725000091

Weight: 8,57 kg

Company ABC · Strada Stazione 54 · 20100 MILANO

Figure 8 – carton/crate label with GS1-128-barcode

BEEF HINT QUARTER

category: young bull

Ear Tag No: IE1234567890
Born in: Ireland
Raised in: Ireland
Slaughtered in: Ireland >> approval no slaughterhouse <<

IE
...
CE

Date of slaughtering:
31/12/2015

(01)94055725000025(3102)000865(251)UK1234567890

(422)372(423)372(424)372IEXXXXXXX(7030)372IEXXXXXXX

Brand label

GTIN:4055725000022

Slaughter weight:
86,5 kg

Company ABC · 54 Station Road · D2 Dublin

Figure 10 – Label for beef carcase

HEART OF RUMP FROM VEAL

slaughter age less than 8 months

Lot/Batch: 4711
Origin: France >> approval no slaughterhouse <<
Deboned in: France >> approval no deboning hall <<

FR
...
CE

Best before: 31/12/2015

keep refrigerated under x°C

(01)94055725000018(3103)002495(15)151231(10)4711

(425)250(426)250(7030)250FRXXXXXXX(7031)250FRXXXXXXX

Brand label

GTIN:4055725000015

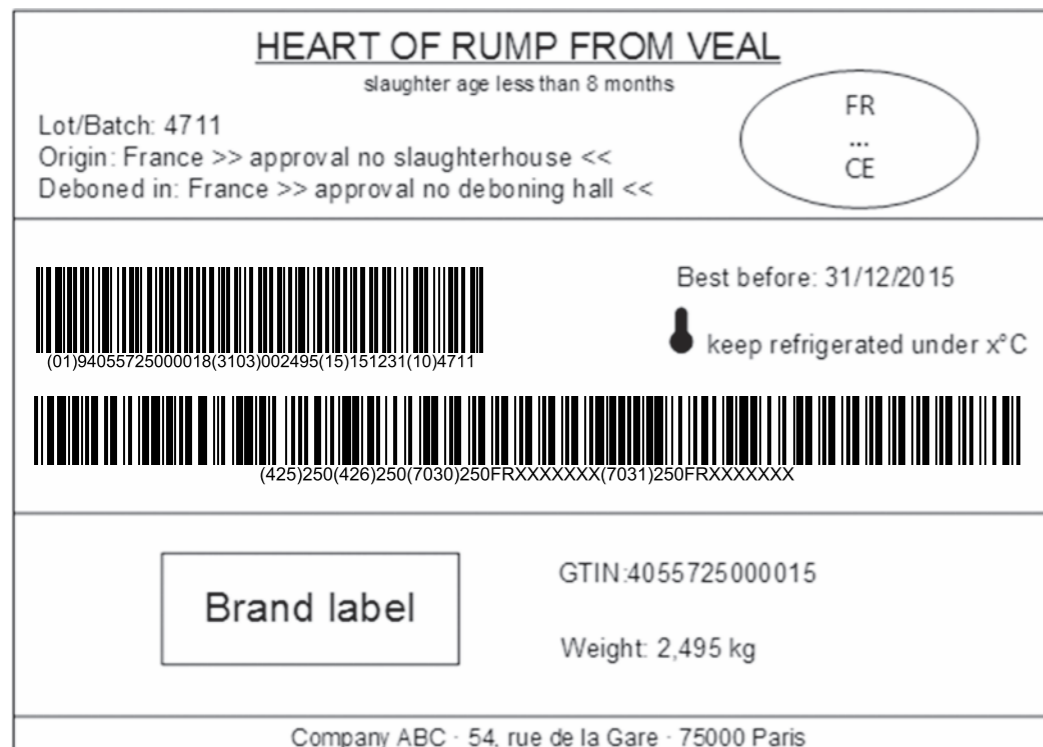Weight: 2,495 kg

Company ABC · 54, rue de la Gare · 75000 Paris

Figure 9 – product label with GS1-128-barcode

7. References

- European Commission (2007, July 7) General Food Law Traceability. Retrieved November 18, 2014, from DG Health and Consumers:
  http://ec.europa.eu/food/food/foodlaw/traceability/index_en.htm

- GS1 General specification: http://www.gs1.org/barcodes-epcrfid-id-keys/gs1-general-specifications EPC Information Services (EPCIS) Version 1.1 Specification:
  http://www.gs1.org/docs/epc/epcis_1_1-standard-20140520.pdf

- GDSN Package Measurement Rules:
  http://www.gs1.org/docs/gdsn/3.1/GDSN_Package_Measurement_Rules.pdf

- Global Data Dictionary:
  http://apps.gs1.org/gdd/SitePages/Home.aspx

- GS1 Industry Guideline – Global Meat and Poultry Traceability, Part 1. The GS1 System

- GS1 made easy – Global Meat and Poultry Traceability Guideline Companion Document

- GS1 Industry Guideline – Global Meat and Poultry Traceability, Part 2. Beef Supply Chain

- GS1 Industry Guideline – Global Meat and Poultry Traceability, Part 3. Lamb and Sheep Meat Supply Chain

- GS1 Industry Guideline – Global Meat and Poultry Traceability, Part 4. Pork Supply Chain

- GS1 Industry Guideline – Global Meat and Poultry Traceability, Part 5. Poultry Supply Chain

- GS1 Industry Guideline – Meat and Poultry Glossary

- GS1 Global Traceability Standard:
  http://www.gs1.org/sites/default/files/docs/traceability/Global_Traceability_Standard.pdf

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