It all depends on the right GLN

Guideline to Location Identification in the Fruit and Vegetable Supply Chain
Why should I use a unique Global Location Number?

Legislations and regulations for food safety and traceability increasingly demand the identification of the producer (grower, packer, processor, etc.) and/or the supplier (distributor, trader, importer, broker, dealer, etc.). More and more trading partners, customers, certification bodies, quality organisations and government agencies want to know who is responsible for certain acts in the chain or the place where the operation occurred (cultivation field, glasshouse, packaging station, distribution centre, loading platform, etc.).

Any company may design its own internal system and code structure to identify all the locations covering its operating requirements. Although an internal solution might seem to be the easiest and fastest way forward when information is exchanged between computers of distinct companies, this may present several problems, if internal numbering systems are used instead of GLNs.

By using the GS1 GLN you can avoid:

- **Duplication:** two or more trading partners may use the same code to identify their locations.
- **Complexity:** internal codes will have a variety of structures and formats, making application programming more complex and application changes costly.
- **Problems due to significance:** location codes that contain information related to the location in the code structure itself, will become difficult to handle as the coding structure evolves to incorporate new meanings.
- **Problems in packaging and labelling:** the space on packaging is limited.

The solution lies in a single number that can be used for different bodies and processes. The most obvious is to use the GS1 GLN, a worldwide used standard for location identification which is one of the fundamental pillars in using the GS1 System. It is also recognised by several other organisations and in this case replaces their internal numbering system.

As the name implies, the GLN is the GS1 Identification Key for Locations. The GLN can be used to identify physical locations and legal entities where there is a need to retrieve pre-defined information to improve the efficiency of communication with the supply-chain. Global Location Numbers are a prerequisite for electronic communication or for accessing information from the Global Data Synchronisation Network for product master data.

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Customers use their GLNs whenever they communicate business transactions with suppliers and other trading partners outside of their organisation. The GLN is an identification number for business communications because it uniquely identifies your organisation across the entire supply chain with all suppliers, group purchasing organizations (GPOs), etc. Here are some more specific examples of when it is used:

- Ordering and delivering products;
- Processing supply-related order and invoicing inquiries;
- Claiming manufacturer rebates;
- Corresponding with trading partners;
- For all other standard business transactions with producers, cooperatives, suppliers, distributors, wholesalers and retailers.

Any party with a role or activity in the Fruit and Vegetable Chain can use GS1 Global Location Numbers for identification purposes.
The GLN in the Fresh Produce Supply Chain

Each location is identified by a unique identification number. GLNs are reference keys for retrieving information from databases such as:

- Activity/Role and relevant associated data of business partners like Grower; (Re)Packer; Trader; Importer; Exporter; Seller; Broker; Retailer; Buyer; Transporter; Delivery Point / Address; Buyer; Seller.
- Type of location (cultivation field, glasshouse, packaging station, distribution centre, loading platform, manufacturing centre, warehouse, headquarters, etc.);
- Bank account information;
- The information provider (e.g., in a Data Synchronisation Network).

What is a Global Location Number?

- The GLN is designed to improve the efficiency of communication with trading partners and add value to the trading partners involved, as well as to consumers. The Global Location Number (GLN) is a 13-digit number for supply chain parties and/or locations. The associated name, address, and class of trade are “tied” to each unique number and are specific to only one exact and very precise location in the world. The GLN is a unique number that identifies any physical location or party that has meaning within a business scenario.

  - **Physical locations**: a single point of access with a physical address, such as a greenhouse, growing field, packing station, packing line, particular room in a building, warehouse, warehouse gate, loading dock, delivery point, etc.
  - **Parties**: This can be a legal entity and/or a specific role or activity that needs to be identified in a business scenario. Examples are:
    - whole companies, subsidiaries or divisions, cooperative, traders, distributors, freight carriers, wholesalers, retailers etc. as well as purchasing departments within legal entities, accounting departments, returns departments, cleaning stations, wards, etc.;
    - Roles like grower, packer, trader etc.;
    - Specific roles based on business processes and reflected in EDI communication: e.g. Invoice Issuer/Recipient, Payer, Payee, Ship-to/Ship-from, Message Sender/Receiver.

You can find more detailed information about the GS1 Global Location Number and how to assign GLNs at the website of GS1 (www.gs1.org/1/glnrules).
How is the structure of a GLN?

The GS1 GLN’s have special features that ensure they are not confused with any identification key, for example on a barcode label. The GLN has a 13-digit numeric data structure and is usually composed of:

- **GS1 Company Prefix**: assigned by your local GS1 Member Organisation
- **Location Reference**: allocated by the company to a specific location
- **Check Digit**: calculated according to the standard algorithm

The management of the GS1 GLN is carried out locally by GS1 Member Organisations established in 111 countries. GS1 Member Organisations use their assigned prefix to allocate GS1 Company Prefixes to their member companies to enable them to create GS1 Identification Keys.

The general structure of a GLN is as follows:

![Diagram of GLN structure](image)

**Note**: The length of the company prefix varies according to the desired numbering capacity and country. Only the complete 13-digit code is unique. Also in some countries so-called One-off GLNs are issued, meaning a single 12-digit GLN is issued to a company. These numbers do not have the possibility for self-assigning GLNs, but for example serve for small companies which only need one GLN to identify their business.

What are the advantages of using GLNs?

The use of GS1 Global Location Numbers (GLNs) provides companies with a method of identifying locations, within and outside their company, that is:

- **Simple**: An easily defined data structure with integrity checking that facilitates processing and transmission of data.
- **Unique**: GLNs are globally unique if used according to the GS1 GLN Allocation Rules.
- **Multi-sectorial**: The GLN allows any location to be identified for any company, regardless of its activity anywhere in the world. This allows for the GLN to be used across many industry sectors.
- **Global**: Implemented around the world and supported by the international network of the GS1 Member Organisations covering more than 111 countries.

Actors and Roles in the Fruit and Vegetable Supply Chain

We distinguish different responsibilities in the Fruit & Vegetable Supply Chain, i.e. the main responsibilities are reflected in the roles, specialised responsibilities are reflected by the different actors. An organization may carry out its activities in a combination of the above mentioned roles.

The graphic below shows the main responsibilities on the left, on the right side typical examples of actors are displayed. Each organisation in the fruit and vegetable supply chain fulfils one or more of the defined four roles.

<table>
<thead>
<tr>
<th>Main Responsibilities (Roles)</th>
<th>Specialised Responsibilities (Actors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Grower</td>
<td>• Agricultural Cooperative</td>
</tr>
<tr>
<td>• Packer</td>
<td>• Broker</td>
</tr>
<tr>
<td>• Trader</td>
<td>• Distributor</td>
</tr>
<tr>
<td>• Retailer</td>
<td>• Importer/Exporter</td>
</tr>
<tr>
<td></td>
<td>• Logistic Service Provider</td>
</tr>
<tr>
<td></td>
<td>• Cash &amp; Carry</td>
</tr>
<tr>
<td></td>
<td>• Food Service Distributor</td>
</tr>
<tr>
<td></td>
<td>• Terminal Market</td>
</tr>
<tr>
<td></td>
<td>• eTailer</td>
</tr>
</tbody>
</table>
As mentioned above, the Global Location Number (GLN) is the globally unique GS1 System identification key used to identify physical locations as well as parties (legal entities and/or activities/roles) within a business or organisational entity. Each location/party is allocated a unique identification number. One GLN can identify different roles/functions if there is no need to distinguish it in the business process.

How many GLNs are needed depends on your business needs, on your role, on your position in the supply chain and the agreements with your business partners. When you are an SME in the Fruit and Vegetable Supply Chain with only one or two roles on one location, you can decide (and agree) that one GLN is enough to identify your organisation. But if you want to distinguish your quality activities from your logistics activities, you might decide to use two or more GLNs. In a complex scenario, it is recommended that each role and activity be identified with its own GLN.

**Scenario 1: Small or Medium Enterprise (SME) with one Role**

**SME - GROWER**

One physical location – One role – One GLN

- One legal entity
- One physical location
- One role
- Growing (production unit including harvesting and sorting)
- No packing activities
- Results in: One GLN

**ONE PHYSICAL LOCATION**

1

**ONE ROLE**

2

**ONE GLN**

5012345000008
Guideline to Location Identification in the Fruit and Vegetable Supply Chain

Scenario 2: Small or Medium Enterprise (SME) with two Roles

**SCENARIO 2**

**SME - GROWER & PACKER**
One physical location – Two roles – One GLN

- One legal entity
- One physical location
- Two roles
  - Role A - Growing (production unit including harvesting and sorting)
  - Role B - Packing
- Results in: One GLN, because they are not doing any packing activities for other SME’s

**ONE PHYSICAL LOCATION**

**TWO ROLES**

**ONE GLN**

1A + 1B

GLN
8400001000009

Scenario 3: Small or Medium Enterprise (SME) with three GLNs

**SCENARIO 3**

**SME - GROWER & PACKER**
One physical location – Two roles – Three GLNs
Each GLN is based on the same Global Company Prefix (GCP)

- One legal entity
- One physical location
- Two roles
  - Role A - Growing (production unit including harvesting and sorting)
  - Role B - Packing
- Results in: Three GLNs, because they are also doing packing activities for other SME’s

**ONE PHYSICAL LOCATION**

**TWO ROLES**

**THREE GLNs**

<table>
<thead>
<tr>
<th>GLN no. 1 (main)</th>
<th>GLN no. 2</th>
<th>GLN no. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>3027000001001</td>
<td>3027000001018</td>
<td>3027000001025</td>
</tr>
</tbody>
</table>
**Scenario 4: Small or Medium Enterprise (SME) with four GLNs**

**SCENARIO 4**

**SME - GROWER & PACKER**

Two physical location – Two roles – Four GLNs

Each GLN is based on the same Global Company Prefix (GCP)

- One legal entity
- Two physical locations
- Two roles

Role A: Growing (production unit including transplanting and sorting)
Role B: Packing

There are no packing activities at physical location no. 2

- Results in: Four GLN’s, because they are doing packing activities for other SME’s

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**One Legal Entity**

**GLN no. 1 (main)**

8712345000004

**Two Physical Locations**

1

2

**Two Roles**

3

4

**Four GLNs**

GLN no. 2
8712345000011

GLN no. 3
8712345000028

GLN no. 4
8712345000035

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**Scenario 5: Complex Scenario for bigger organisations**

**SCENARIO 5**

Organisation tree for more roles. Each GLN is based on the same Global Company Prefix (GCP).

**COOPERATIVE/TRADER**

GLN no. 1 (main)
4012345600001

**Multiple Roles - Physical Locations - Legal Entities**

- GLN no. 2
  4012345600100

- GLN no. 3
  4012345600299

- GLN no. 4
  4012345600308

- GLN no. 5
  4012345600407

- GLN no. 6
  4012345600506
Internet Resources

The following links provide additional resources regarding GLN allocation as well detailed information on the referenced food marketing standards.

- GS1 in Europe
  http://www.gs1.eu/
- GS1 Member Organisations in Europe
- GS1 Global Office
  www.gs1.org
- GLN Allocation Rules
  http://www.gs1.org/1/glnrules/
- Check Digit Calculator
  http://www.gs1.org/barcodes/support/check_digit_calculator
- GS1 Identification Keys (ID Keys)
  http://www.gs1.org/barcodes/technical/id_keys#gln
- GEPIR – GS1 Global Electronic Party Information Registry
  http://www.gepir.org
- UNECE Standards for Fresh Fruits and Vegetables (FFV)
  www.unece.org/trade/agr/standard/fresh/FFV-StandardsE.html
- UNECE Standards for Dry and Dried Produce (DDP)
  www.unece.org/trade/agr/standard/dry/DDP-Standards.html
- EU Regulation on Fruit & Vegetables EU 543/2011

Where can you request a GLN?

- To get your own GLN or GS1 Company Prefix contact your local GS1 organisation [http://www.gs1.eu/index.php?europian]

A GS1 Company Prefix not only allows you to create your GLNs. It gives access to all the applications using GS1 identification keys, i.e. identification of items (GTIN e.g. for consumer or trade units (see brochure "It all depends on the right GTIN")), services, locations, logistic units, returnable containers, etc. The GS1 Company Prefix is the part of the GS1 data structures and consists of the GS1 Prefix (allocated by GS1 Global Office to a GS1 Member Organisation) and a Company Number allocated by the GS1 Member Organisation to a respective user company.
Contact GS1 in Europe locally:

GS1 Albania
+355 4 232 073
info@gs1.al
www.gs1.al

GS1 Armenia
+374 1 021 622
gs1.am@am.org
www.gs1.am

GS1 Austria
+43 1 495 96 01
office@gs1.at
www.gs1.at

GS1 Azerbaijan
+994 12 498 7405
ean@gs1az.org
www.gs1az.org

GS1 Belarus
+375 17 298 0660
info@gs1by.by
www.gs1by.by

GS1 Belgium & Luxembourg
+32 2 229 18 80
info@gs1belu.org
www.gs1belu.org

GS1 Bosnia-Herzegovina
+387 33 258 646
info@gs1bih.com
www.gs1bih.com

GS1 Bulgaria
+359 2 988 3139
gs1bulgaria@gs1bg.org
www.gs1bg.org

GS1 Croatia
+385 1 48 95 000
info@gs1hr.org
www.gs1hr.org

GS1 Cyprus
+357 2 889 800
info@gs1cy.org
www.gs1cy.org

GS1 Czech Republic
+420 234 633 145
info@gs1cz.org
www.gs1cz.org

GS1 Denmark
+45 39 67 00 27
info@gs1.dk
www.gs1.dk

GS1 Estonia
+372 660 5335
info@gs1.ee
www.gs1.ee

GS1 Finland
+358 766 3500
asukaspalvelu@gs1.fi
www.gs1.fi

GS1 France
+33 1 409 554 10
infos@gs1fr.org
www.gs1.fr

GS1 Georgia
+995 32 29 4724
info@gs1ge.org
www.gs1ge.org

GS1 Germany
+49 221 947 14-0
info@gs1-germany.de
www.gs1-germany.de

GS1 Greece
+30 210 990 4260
info@gs1greece.org
www.gs1greece.org

GS1 Hungary
+36 1 412 3954
info@gs1.hu
www.gs1.hu

GS1 Iceland
+354 81 30 011
info@gs1.is
www.gs1.is

GS1 Ireland
+353 1 209 0660
info@gs1.ie
www.gs1.ie

GS1 Israel
+972 3 510 88 39
info@gs1il.org
www.gs1il.org

GS1 Italy
+39 02 777 21 212
info@indicod-ecr.it
www.indicod-ecr.it

GS1 Kazakhstan
+7 7272 215 578
+7 7272 215 538
info@gs1.kz
www.gs1.kz

GS1 Kyrgyzstan
+998 312 900 521
info@gs1.kg
www.gs1.kg

GS1 Latvia
+371 678 3500
gs1@gs1lv.org
www.gs1.lv

GS1 Lithuania
+370 5 261 4532
gs1@gs1lt.org
www.gs1lt.org

GS1 Luxembourg
+352 2 966 8250
info@gs1.lu
www.gs1.lu

GS1 Macedonia
+389 2 32 25 400
info@gs1.mk
www.gs1.mk

GS1 Moldova
+373 22 21 46 69
info@gs1.md
www.gs1.md

GS1 Netherlands
+31 20 511 3819
info@gs1.nl
www.gs1.nl

GS1 Norway
+47 22 97 13 30
firmoper@gs1.no
www.gs1.no

GS1 Poland
+48 61 804 0777
GS1pl@gs1.pl
www.gs1.pl

GS1 Portugal
+351 21 752 07 40
info@gs1pt.org
www.gs1pt.org

GS1 Romania
+40 21 31 78 031
office@gs1.ro
www.gs1.ro

GS1 Russia
+7 958 730 7103
info@gs1ru.org
www.gs1ru.org

GS1 Serbia
+381 1 1132 312
office@gs1.yu
www.gs1.yu

GS1 Slovakia
+421 41 566 11 85
info@gs1.sk
www.gs1.sk

GS1 Slovenia
+386 1 989 8300
info@gs1.si
www.gs1.si

GS1 South Africa
+27 11 769 8777
info@gs1za.org
www.gs1za.org

GS1 Spain
+34 91 252 39 00
info@gs1.es
www.gs1.es

GS1 Sweden
+46 8 50 10 40 00
info@gs1.sv
www.gs1.sv

GS1 Switzerland
+41 61 218 31 40
gs1.switzerland@gs1.ch
www.gs1.ch

GS1 Turkey
+90 212 218 20 00
gs1.tr@gs1.tr
www.gs1.tr

GS1 UK
+44 207 692 3600
info@gs1uk.org
www.gs1uk.org

GS1 Ukraine
+380 1 466 07 34
info@gs1ua.org
www.gs1ua.org

GS1 Uzbekistan
+998 71 252 6604
info@gs1uz.org
www.gs1uz.org

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