The Global Language of Business

GS1 Global Location Number Data Model Solution Standard

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1 Introduction

Global business partners require a consistent, reliable experience in exchanging and using organisation/party and location information, no matter where they operate. Business, governments, and consumers all expect accurate and more detailed information on where products come from, are now, and will be; along with who they are interacting with.

Establishing industry standards based on real-world organisation and location-based use cases enables more timely, accurate, and consistent exchange of foundational master data across the stakeholder groups. Having globally aligned, interoperable attribution creates an ecosystem in which organisation and location data can be readily shared in a scalable, interoperable way across different sectors and markets.

1.1 Purpose

A set of global attributes for the Global Location Number (GLN) whether mandatory or non-mandatory are a requirement to ensure the data being shared between stakeholders is complete, interoperable, and aligned whilst being able to be scaled to meet all business needs, supporting the deployment of future GLN solutions and services.

2 References

Reference Name	Description
GS1 General Specifications - https://www.gs1.org/standards/barcodes-epcrfid-id-keys/gs1-general-specifications - release 21.0 [GEN SPECS]	The foundational GS1 standard that defines how identification keys, data attributes and barcodes must be used in business applications.
GS1 GLN Allocation Rules Standard - https://www.gs1.org/1/glnrules/en/	Normative reference for GLN allocation and management principles
GS1 Web Vocabulary - https://www.gs1.org/voc	The GS1 Web Vocabulary collects terms defined in various GS1 standards and data systems and made available for general use following Linked Data principles. It is designed as an extension to schema.org and, where relevant, mappings and relationships arising from that vocabulary are made explicit. The structured data about can then be used by search engines, smartphone apps, etc. to deliver a richer experience to the consumer.
GS1 Global Data Dictionary - http://apps.gs1.org/GDD/SitePages/Home.aspx	The GS1 Global Data Dictionary (GDD) is a repository of the data elements defined across all GS1 standards

3 Global Location Number (GLN) Overview

The Global Location Number (GLN) provides a global supply chain solution by uniquely identifying parties and locations that are involved in business transactions.

1. Party identification

A party is defined as an entity that needs to be represented in a business-related transaction. A GLN identifying a party answers the question of "***who***" is involved within the use case leveraging GS1 standards. This may be a legal entity or function that defines who is transacting in a scenario.

A **legal entity** is any business, government body, department, charity, individual, or institution that has standing in the eyes of the law and has the capacity to enter into agreements or contracts.

A **function** is an organisational subdivision or department that is most commonly segmented based on the specific tasks being performed, as defined by the organisation.

Examples of a party:

■ Corporation (legal entity)

■ Subsidiary or a holding company (legal entity)

■ Government body (legal entity)

■ An individual acting as a business entity (legal entity)

■ Accounting department (function)

■ Human resources department (function)

2. Location identification

GLN identifying locations are used to answer the question of "*where*" something has been, is, or will be. A location can be either physical or digital in nature.

A **physical** location is a tangible place that may be represented by an address, coordinates, or other means. A physical location within another physical location (sub-location) can be allocated its own GLN.

A fixed physical location is expected to main in the same location for its entire lifecycle while a mobile physical location is expected to change its place.

A **digital** location is an electronic (non-physical) address that is used for communication between computer systems.

Examples of a location:

■ Corporate headquarters (fixed physical location)

■ Warehouse or distribution centre (fixed physical location)

■ Hospital cafeteria (fixed physical location)

■ Grocery store (fixed physical location)

■ Dock door (fixed physical location)

■ Mobile blood donation van (mobile physical location)

■ API entry point (digital location)

3.1   Examples of GLN use

GLN is incorporated throughout GS1 standards and the service and solutions that leverage the standards. This section includes examples of how GLN is used. Note that this is not an exhaustive list of how GLN may be used.

3.1.1   Location identification

A physical location is a site (an area, a structure or group of structures) or an area within a site where something was, is or will be located. Examples of physical locations include a store, a warehouse, or a berth in a port.

3.1.1.1 GS1 Logistic Label

The GS1 Logistic Label allows users to identify logistic units uniquely so that they can be tracked and traced throughout the supply chain. The only mandatory requirement is that each logistic unit must be identified with a unique identifier, the Serial Shipping Container Code (SSCC), though GLN is used to note the location and parties involved in the shipment. - https://www.gs1.org/standards/gs1-logistic-label-guideline/1-3

3.1.1.2 Scan4Transport

Scan4Transport is a global standard for encoding transport data on a logistics label. The standard supports the encoding of ship-to and return-to information (e.g., company name, addresses, handling instructions, etc) as well as GLNs. This is to support the needs of companies across the

transport process to have access to the data they need in both on-line and off-line environments, especially when it is not possible to look-up reference keys such as a GLN in a system to enable first mile, sortation, and last mile activities. The B2C transport process often does not have a GLN for a residential address, subsequently the GS1 standards developed by the Scan4Transport work group, enables the transport industry to keep pace with the growing needs of their customers. - https://www.gs1.org/industries/transport-and-logistics/scan4transport

3.1.2   Identification of parties

A party is an organisation or a function thereof, which may or may not be associated with a physical location. The organisations and functions involved with supply chain transactions are known as parties, these include commercial parties to a transaction, third parties such as logistics service providers and regulatory and other public sector agencies.

3.1.2.1   GS1 EDI (Electronic Data Interchange)

GS1 EDI (Electronic Data Interchange) provides global standards for electronic business messaging that allow automation of business transactions commonly occurring across the entire supply chain. In EDI transactions organisations and functions involved in supply chain are identified. EDI covers master data alignment, order and delivery and financial settlement management, as well as transport and warehouse management. GLN is used to identify the parties and locations involved in the transactions. https://www.gs1.org/standards/edi

3.1.2.2   Global Data Synchronisation Network (GDSN)

The Global Data Synchronisation Network (GDSN) is the world's largest product data network. GDSN makes it possible for any company, in any market, to share high-quality product information seamlessly. GLN is used in GDSN to identify data source and data recipients, manufacturer, brand owners, and information providers. https://www.gs1.org/services/gdsn

3.1.2.3   Electronic Product Code Information Services (EPCIS)

EPCIS is a GS1 standard that enables trading partners to share information about the physical movement and status of products as they travel throughout the supply chain – from business to business and ultimately to consumers. The GLN can be used in Electronic Product Code Information Service (EPCIS). The 'Where' dimension of an EPCIS event (i.e., fields such as readPoint, bizLocation, source, destination) captures where the event physically took place and/or where things are following the event.

3.1.3   GS1 Web Vocabulary

The GS1 Web Vocabulary is designed to extend the work done by schema.org and makes use of similar concepts (Product, Offer, Organization, Place), extending them with many more detailed properties. The initial focus of the GS1 Web Vocabulary is consumer-facing properties for clothing, shoes, food beverage/tobacco and properties common to all trade items. - https://gs1.org/voc

3.1.4   GS1 Digital Link

The GS1 Digital Link standard extends the power and flexibility of GS1 identifiers by making them part of the web. That means that GS1 identifiers, such as the Global Trade Item Number (GTIN) and GLN, are now a gateway to consumer information that strengthens brand loyalty, improved supply chain traceability information, business partner APIs, patient safety information and more. - https://www.gs1.org/standards/gs1-digital-link

3.1.5   GLN in data carriers

The GLN can be encoded in either a barcode or EPC/RFID tag to automatically identify locations like storage places in a warehouse, the destination of a pallet, or the origin of a product.

3.1.6 GS1 Registry Platform (GRP)

The GS1 Registry Platform is a registry of GS1 keys, starting with the GS1 Company Prefix (GCP), Global Trade Item Number (GTIN), and Global Location Number (GLN). It includes the rules about data associated with the GS1 keys via the Global Data Dictionary (GDD). It is built on an infrastructure that supports API interfaces, analytics, and security. It provides a single mechanism for storage ("data in") and query ("data out") of basic key attributes for GS1 keys .
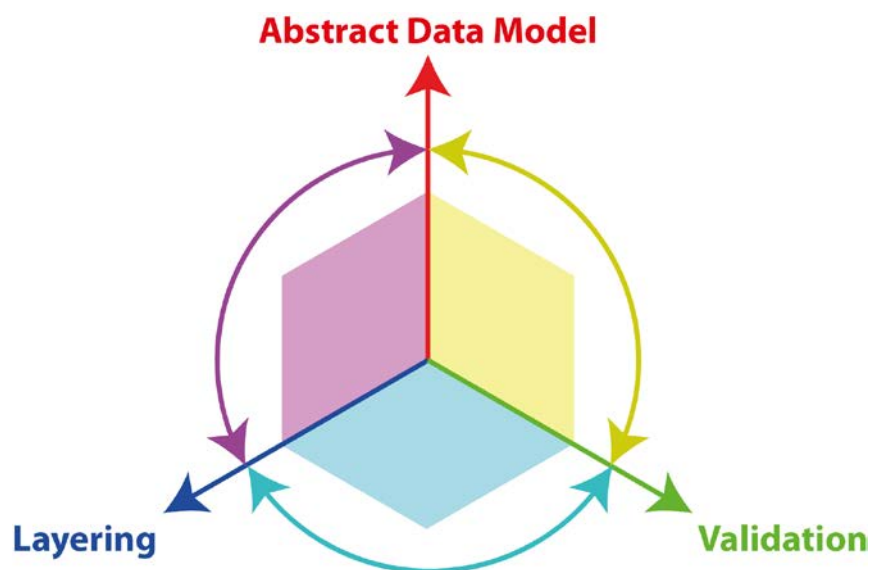
4 Global Location Number Data Model

There are at least three independent dimensions to the Global Location Number Data Model Standard, detailed in the following sections.

- Abstract Data Model
- Validation
- Layering

Global Location Number Data Model dimensions

4.1 Global Location Number data model dimensions

Figure 4-1 Data model dimensions

4.1.1 Abstract data model

A Unified Modeling Language (UML) class diagram expresses the GLN data model at an abstract level, defining it in a way that is independent of the data format/syntax (e.g., XML vs JSON vs JSON-LD), relevant classes, properties/attributes and code lists and can be used to describe organisations/parties and physical locations. The UML class diagram defines the available terms but does not attempt to specify which are mandatory, conditional, optional or any cardinality constraints. See Figure 5-1 UML Class Diagram.

Figure 4-2 Abstract data model
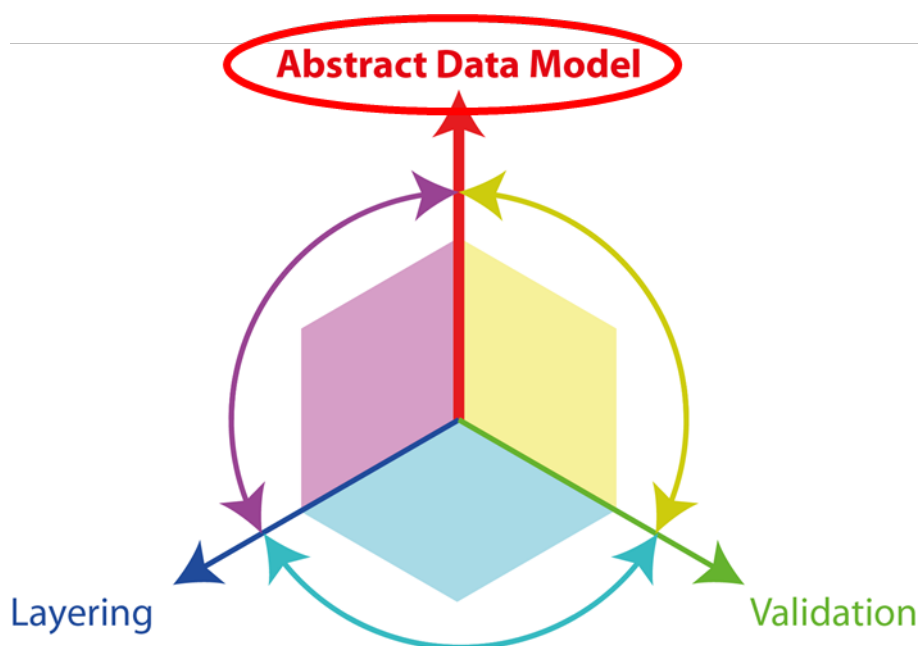
An abstract data model defines data classes, attributes/properties, code lists / enumerations. An abstract data model:

- includes definitions (and examples of usage)

- specifies expected data types for values

- supports hierarchical data structures and hierarchies of locations and organisations/parties

- supports re-use of the data model at any level in the location or organisation/party

- concerned with unambiguous semantic interpretation, not validation

- often documented in UML class diagrams

4.1.2   Validation

One or more validation layers that are used to express constraints on the data model about which properties/attributes are mandatory/conditional, which are repeatable, cardinality constraints etc. Note that there might be multiple validation layers (e.g., a core global multi-sector validation layer and additional regional or sector-specific validation layers). Depending on the chosen data format, validation rules can be expressed using XSD, JSON Schema or Shape Constraint Language (SHACL).

It is worth noting that there will be different validation constraints where there are different regulatory requirements, country of use, different sector use and the different application use.

Figure 4-3 Validation data model
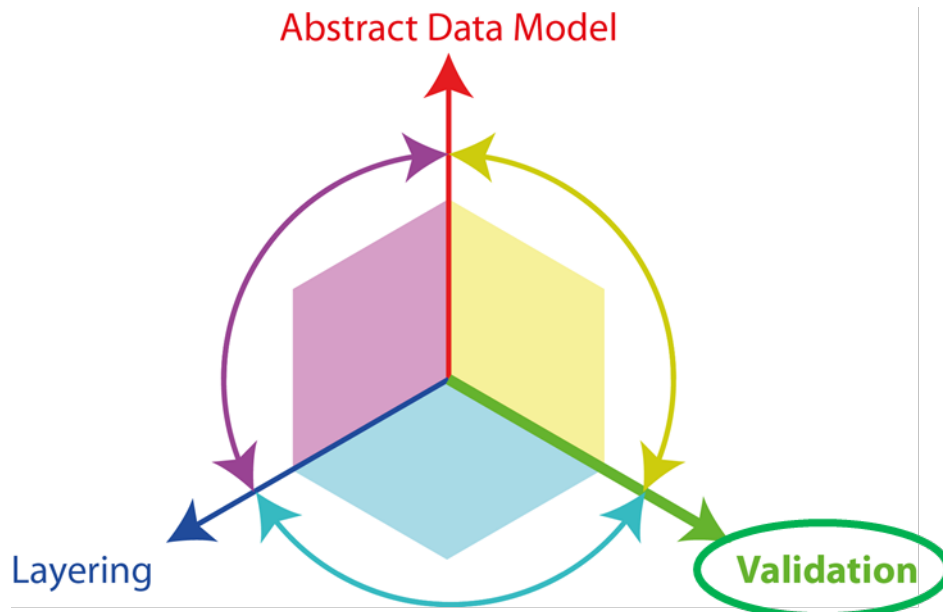
A validation schema checks that:

- mandatory data is present.

  - An example can be seen in Figure 4-3 where the "*locality (city)*" field is a mandatory field and cannot be left blank, if this is used in webform the submission of the date would take place until all mandatory fields have been completed.

- data is correctly formatted.

  - An example can be seen in Figure 4-3 where a "*country code*" is required and this field definition must comply to an agreed format, in this instance ISO 3166.

Validation schema checks need to comply with the six types of cardinality constraints. Cardinality validation may be more restrictive than noted in section 5 to meet the needs of specific applications.

- Mandatory one [1..1]: The attribute is mandatory. It cannot be repeated.

- Mandatory many limited [1..n]: The attribute is mandatory. It can be repeated up to n times.

- Mandatory many unlimited [1..*]: The attribute is mandatory. It can be repeated any number of times.

- Optional one [0..1]: The attribute is optional. It cannot be repeated.

- Optional many limited [0..n]: The attribute is optional. It can be repeated up to n times.

- Optional many unlimited [0..*]: The attribute is optional. It can be repeated any number of times.

Figure 4-4 An example of a conceptual validation

4.1.3 Layering

Layering of the data model and extensibility (represented by the onion model) as seen in Figure 4-6, showing a global, multi-sector core as well as outer layers that may have different levels of maturity or may have narrower scope (e.g., region-specific, sector-specific) as seen in Figure 4-7.

Figure 4-5 Layering data model
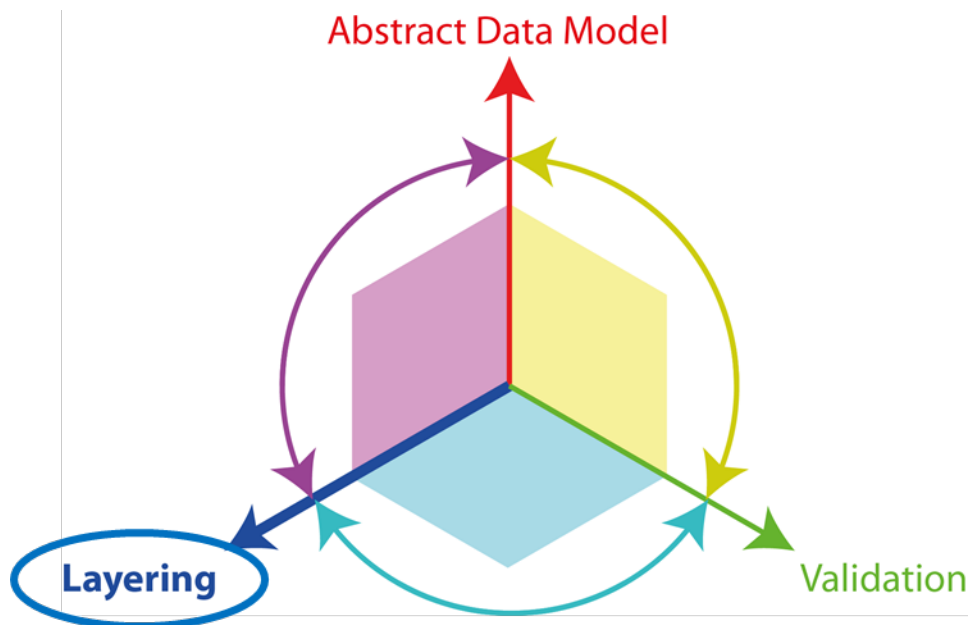
Figure 4-6 Data model layers
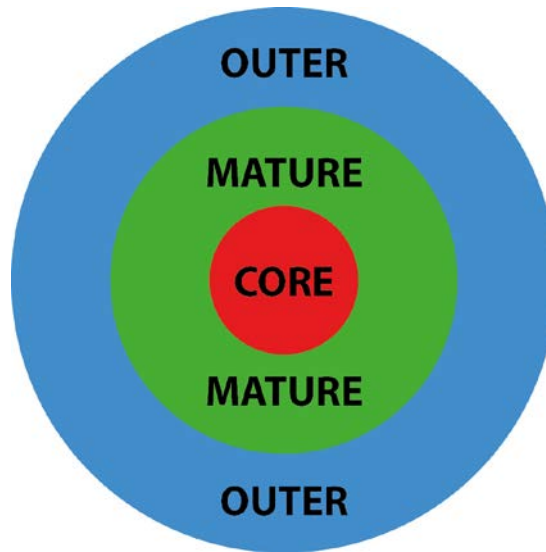
A layered 'onion' model defines core data and supports extensions by industry sector and/or geographic region and are typically implemented via use of multiple namespaces.

Figure 4-7 Data model scope elements

4.1.4   Logical connections

There are some logical connections and intersections of these three independent dimensions as shown in the following three illustrations: Figure 4-8, Figure 4-9, and Figure 4-10.

The validation schema reference the abstract data model and also depend on the contents of the layering. The schema can also go beyond what is defined in the abstract data model by adding validation constraints (e.g., mandatory properties, cardinality constraints etc).

Figure 4-8 Connections between abstract data model and validation example
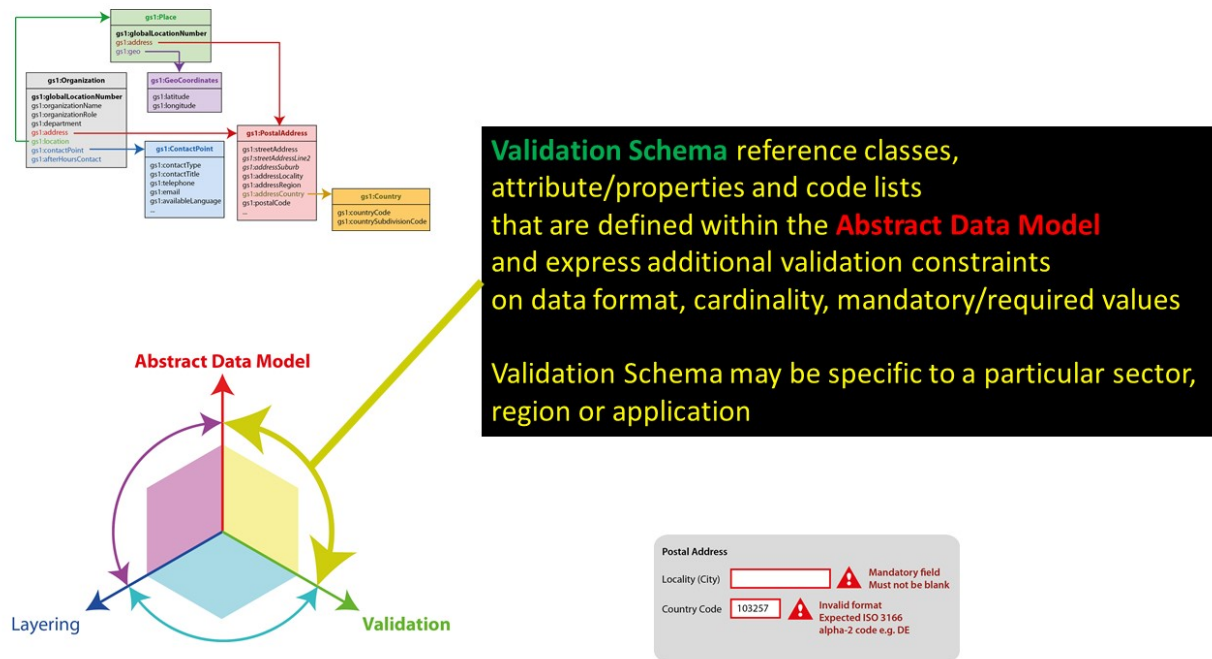
Since there can be multiple validation layers (e.g., core, global, multi-sector vs other validation layers for outer layers of the onion model), it is possible to be flexible about validating at each layer of the onion, even if for example, different regional or sector-specific layers have different requirements. Multiple validation layers are one way to support the onion model, to check that the data is correctly validated.

Figure 4-9 Connections between validation and layering example
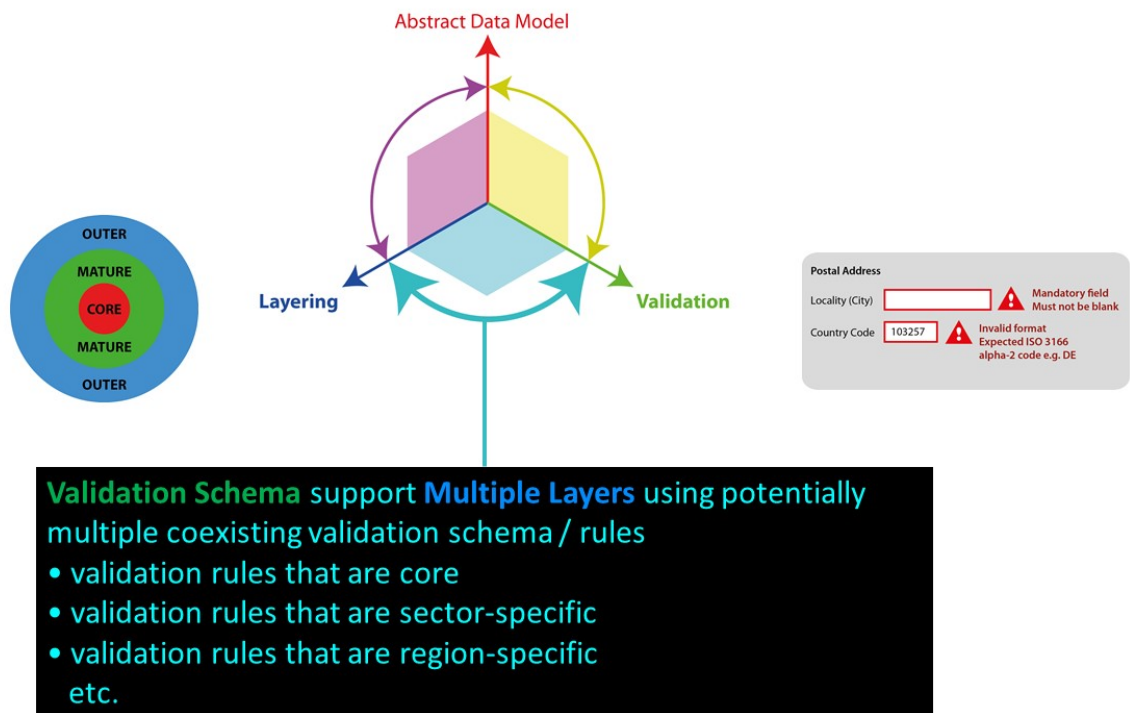
Use of multiple namespaces is the other way to support the flexibility of the onion model. It is expected to have a namespace for the core global multi-sector aspect of the data model. Anything outside of that (defined in the outer layers of the onion model) can be defined within its own

namespace, so that there is no conflict between different definitions in the outer layers and no ambiguity about where a particular class, property/attribute or code list is defined. Each region or sector defining its own 'extensions' to the global multi-sector core can do so within their own namespace and can make cross-references to the global multi-sector core but express how it is extending that in its own way, for its own needs (which might be to meet the needs of some specific legislation in a particular region or sector). It is not a problem for the data to make use of multiple namespaces. XML and JSON-LD support this natively. JSON does not - but JSON-LD context resources can be used to hide some of the namespace complexity from anyone who wants to consume the JSON-LD data as if it is just JSON, while preserving support for multiple namespaces for those who need those details.
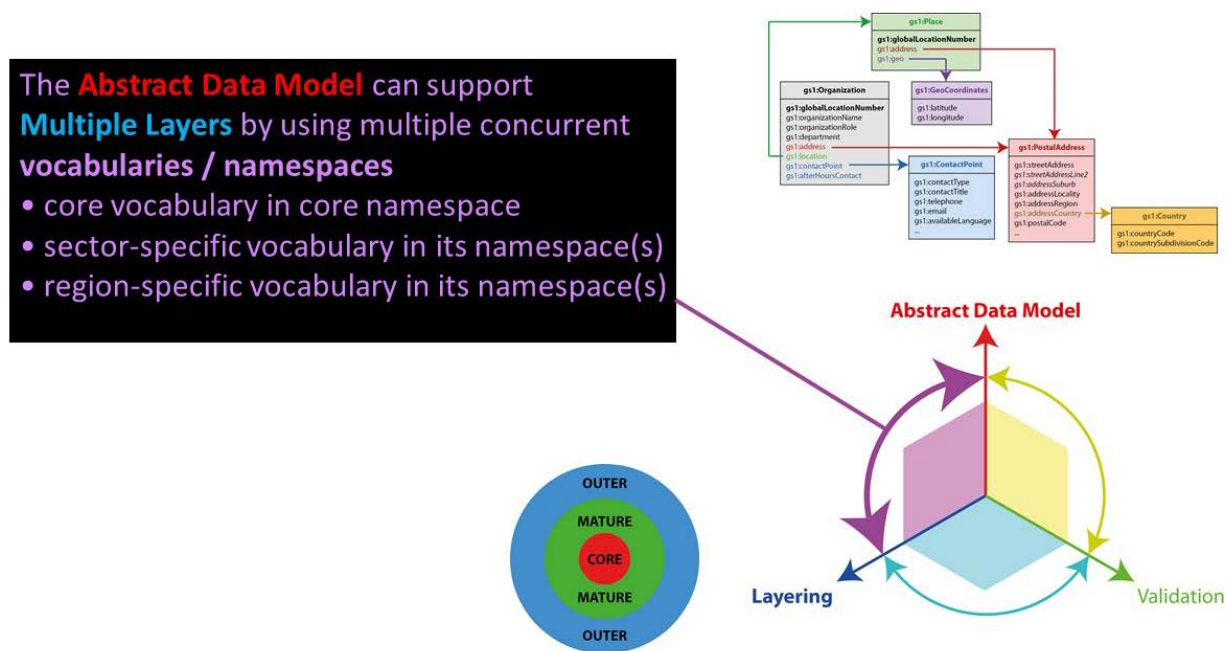
Figure 4-10 Connections between abstract data model and layering example

5 GLN data model attributes

Attributes contained in the GLN Data Model Standard may be a single attribute (e.g., gs1:partyGLN or gs1:organizationName) or a class (e.g., gs1:Place) consisting of multiple attributes and/or sub-classes.

The Global Location Number Unified Modelling Language (UML) class diagram defines data classes, attributes/properties, and code list enumerations included in this data model. Classes are depicted as boxes, within which properties are indicated with text.

The tables throughout section 5 contain both classes and individual properties. The value in the cardinality column applies to the object described in the row. Both attributes and classes may be repeated and or be mandatory as indicated by the cardinality.

Example: gs1:PostalAddress is a class and the rule described in the cardinality column applies to the class as a whole. The cardinality column included in the gs1:PostalAddress table applies to the attributes only when the gs1:PostalAddress class is being used.

Other attributes may be in optional classes.

Example: The gs1:GeoCoordinates class is optional, but when the gs1:GeoCoordinates are provided the cardinality rules for the properties will apply.

The UML class diagram and information in section 5:

- includes definitions and examples of usage

- specifies expected data types for values

- supports hierarchical data structures and hierarchies of locations and organisations/parties

- supports reuse of the data model at any level in the location or organisation/party hierarchy

- concerned with unambiguous semantic interpretation, not validation

Figure 5-1 UML Class Diagram
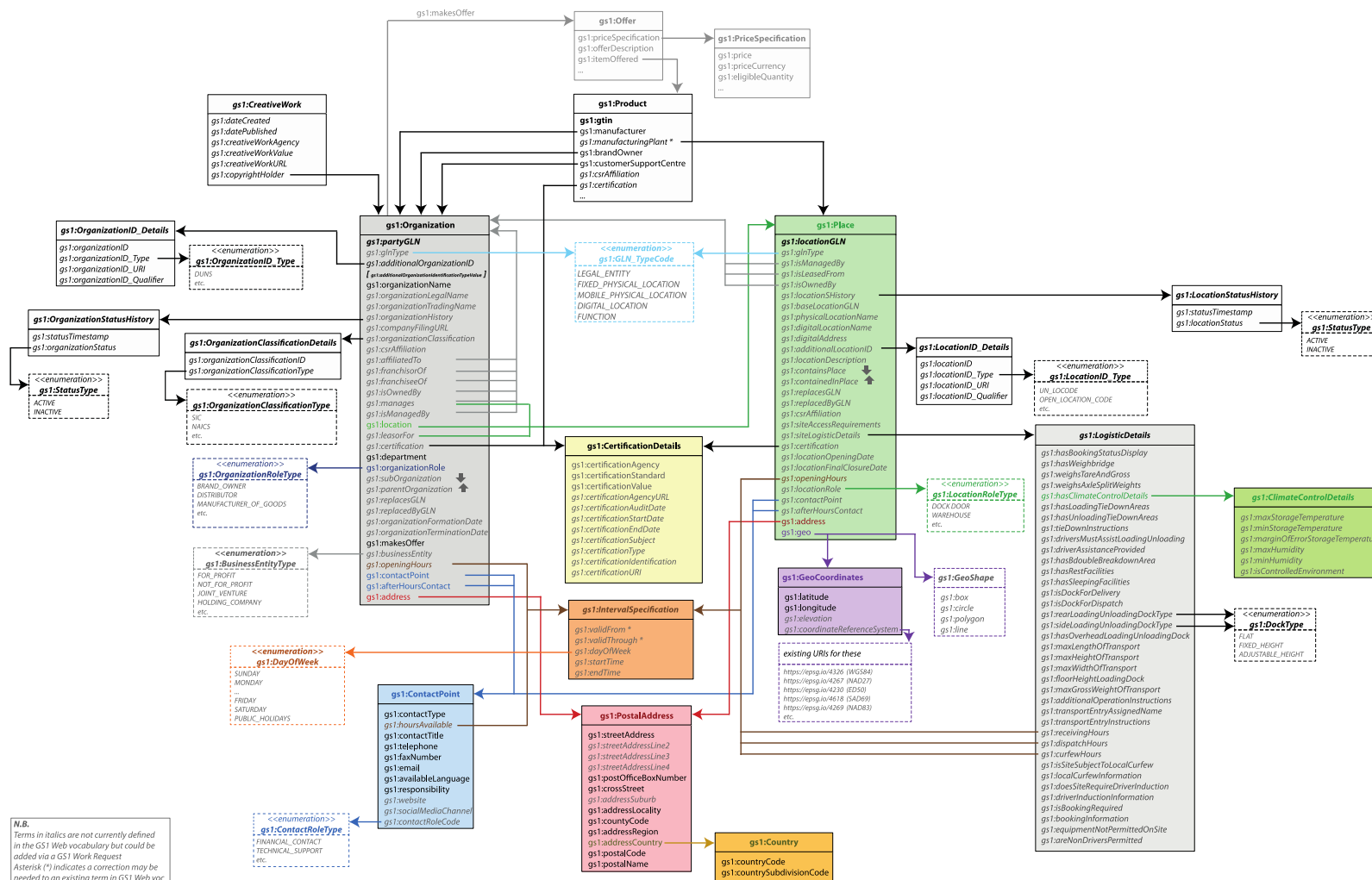
5.1 GLN Type

gs1:GLN_TypeCode designates what a specific GLN is being used to identify. What a GLN identifies will dictate how a GLN can be shared, what GLN Management Rules apply and whether additional attributes may be required for an application.

GLN Type value may be any combination of LEGAL_ENTITY, FIXED_PHYSICAL_LOCATION, DIGITAL_LOCATION, FUNCTION or LEGAL_ENTITY, MOBLE_PHYSICAL_LOCATION, DIGITAL_LOCATION, FUNCTION.

Important: gs1:GLN_TypeCode value selections SHALL NOT contain both FIXED_PHYSICAL_LOCATION and MOBILE_PHYSICAL_LOCATION.

Table 5-1 gs1:GLN_TypeCode code list table

Code Value	Name	Description
LEGAL_ENTITY	Legal Entity	Any business, government body, department, charity, individual, or institution that has standing in the eyes of the law and has the capacity to enter into agreements or contracts.
FUNCTION	Function	An organisational subdivision or department.
FIXED_PHYSICAL_LOCATION	Fixed Physical Location	A tangible place that does not change locations and may be represented by an address, coordinates, or other means.
MOBILE_PHYSICAL_LOCATION	Mobile Physical Location	A tangible place that is expected to change locations and may be represented by an address, coordinates, or other means.
DIGITAL_LOCATION	Digital Location	An electronic (non-physical) address that is used for communication between computer systems.

5.2 Organisation

gs1:Organization properties are associated to GLNs being used to identify an organisation/party (i.e., gs1:GLN_TypeCode = LEGAL_ENTITY and/or FUNCTION).

Code list values related to the following can be found https://www.gs1.org/docs/barcodes/GLN_DataModel_CodeValue_Nov2021.xlsx

- gs1:GLN_TypeCode (also see section 5.1)

- gs1: OrganizationID_Details

- gs1: OrganizationClassificationDetails

- gs1:OrganizationRoleType

- gs1:BusinessEntityType

✅ **Note**: The different spelling of organisation and organization is used in this document due to the alignment of the GS1 Web Vocabulary with https://schema.org/ which uses the spelling "organization". In other GS1 documentation, for example the GS1 General Specifications the spelling used is "organisation".

Table 5-2 gs1:Organization table

Property of gs1:Organization	Name	Expected Type	Example	Description	Cardinality
gs1:partyGLN	Party GLN	xsd:string	5425000030003	13-digit GLN that is being used to identify a legal entity or function. If gs1:glnType is present, gs1:partyGLN SHALL only be used when gs1:GLN_TypeCode includes LEGAL_ENTITY and/or FUNCTION	[1..1] if GLN_TypeCode = LEGAL_ENTITY or FUNCTION
gs1:glnType	Has GLN type	gs1:GLN_TypeCode	See section 5.1	Designation of what a GLN is being used to identify.	[1..*]
gs1:additionalOrganizationID	Has Additional Organization ID	gs1:OrganizationID_Details	See section 5.2.1	Party/organisation identifiers assigned and managed by government bodies, trade organisations, and other entities.	[0..*]
gs1:organizationName	Organization Name	rdf:langString	GS1 Global Office	The default name of the organisation expressed in text. To specify legal name, see gs1:organizationLegalName. For trade name, see gs1:organizationTradingName. To specify the name of a function, see gs1:department.	[0..*]

Property of gs1:Organization	Name	Expected Type	Example	Description	Cardinality
gs1:organizationLegalName	Organization Legal Name	rdf:langString	GS1 AISBL	The legal name used by an organisation for official purposes. There may be more than one legal name, particularly in countries with more than one official language. In such cases the language of the string should be identified. To specify a general name, see gs1:organizationName. For trade name, see gs1:organizationTradingName. To specify the name of a function, see gs1:department.	[0..*]
gs1:organizationTradingName	Organization Trading Name	rdf:langString	GS1 GO	A trading name or alternative forms of a legal entity's name as recognised by some jurisdictions. To specify a general name, see gs1:organizationName. For legal name, see gs1:organizationLegalName. To specify the name of a function, see gs1:department.	[0..*]
gs1:companyFilingURL	Company Filing URL	xsd:anyURI	http://www.example.com/	A URI value linking to information related to organisation filing details.	[0..*]
gs1:organizationHistory	Has Organization History	gs1:OrganizationStatusHistory	See section 5.2.5	Provides details on if and when an organisation/party is active or inactive.	[0..*]
gs1:organizationClassification	Has Organisation Classification	gs1:OrganizationClassificationDetails	See section 5.2.2	Method for associating organisations to open systems that classify industries, sectors and/or business activities.	[0..*]
gs1:csrAffiliation	Corporate Social Responsibility Affiliation	xsd:anyURI	http://www.example.com/	A URI value linking to information related to social responsibility activities and associations that an organisation/party is involved with.	[0..*]

Property of gs1:Organization	Name	Expected Type	Example	Description	Cardinality
gs1:organizationRole	Has Organizatio n Role	gs1:OrganizationRoleType	Operator	A party's (i.e., legal entity or function) role and/or purpose. Multiple values from gs1:OrganizationType code list may be associated to a single organisation/party.	[0..*]
gs1:department	Department	rdf:langString	Human Resources	The name of a division of an organisation dealing with a specific activity or set of activities.	[0..*]
gs1:address	Has Postal Address	gs1:PostalAddress	See section 5.4	The postal address for associated to an organisation/party.	[0..1]
gs1:location	Has Location	gs1:Place	See section 5.3	The place associated with an organisation.	[0..*]
gs1:suborganization	Sub-Organisatio n	gs1:Organization	See section 5.2	Designates the legal entity or function directly below the organisation/party being identified in a hierarchy. There may be multiple sub-organisations associated to a single GLN. To specify a parent organisation, see gs1:parentOrganization.	[0..*]
gs1:parentOrganization	Parent Organisatio n	gs1:Organization	See section 5.2	Designates the legal entity or function directly above the organisation/party being identified in a hierarchy. This is not defaulted to the highest-level entity in the hierarchy. Only one parent organisation SHALL be associated to a single GLN. To specify other affiliated organisations, see gs1:affiliatedTo, gs1:isManagedBy, gs1:manages, gs1:franchisorOf, gs1:franchiseeOf, gs1:isOwnedBy. To specify an organisation/party lower in the hierarchy, see gs1:subOrganization.	[0..1]

Property of gs1:Organization	Name	Expected Type	Example	Description	Cardinality
gs1:affiliatedTo	Affiliated to	gs1:Organization	See section 5.2	Method for associating an organisation/party affiliated to the identified organisation e.g., when engaged in an agent relationship (insurance, shipping, etc).	[0..*]
gs1:franchiseeOf	Franchisee of	gs1:Organization	See section 5.2	Method for associating the franchisor organisation to the franchisee.	[0..1]
gs1:franchisorOf	Franchisor of	gs1:Organization	See section 5.2	Method for associating franchisee organisation(s) to the franchisor.	[0..*]
gs1:isLeasedFrom	Leased from	gs1:Organization	See section 5.2	Method for associating the organisation/party that owns the location being leased to the location when identified by another organisation.	[0..1]
gs1:isManagedBy	Managed by	gs1:Organization	See section 5.2	Method for associating the organisation/party that manages the organisation/location on behalf of the owner.	[0..*]
gs1:leasorFor	Leasor for	gs1:Place	See section 5.3	Method for associating an organisation/party to the location it leases to others.	[0..*]
gs1:manages	Manages	gs1:Organization OR gs1:Place	See section 5.2 or section 5.3	Method for associating the organisation/party or location being managed by an organisation/party on behalf of the owner to location(s) when identified by another organisation.	[0..*]
gs1:isOwnedBy	Owned by	gs1:Organization	See section 5.2	Method for associating an organisation/party or location to the organisation who owns the organisation or is the of a location in full or in part. This includes joint ventures. For leased locations, see gs1:leasorFor and gs1:isLeasedFrom.	[0..*]
gs1:replacesGLN	Replaces GLN	gs1:partyGLN and / or gs1:locationGLN	5425000030003	13-digit GLN value that was used to identify the organisation/party /location prior to a different GLN.	[0..*]

Property of gs1:Organization	Name	Expected Type	Example	Description	Cardinality
gs1:replacedByGLN	Replaced By GLN	gs1:partyGLN and / or gs1:locationGLN	5425000030003	13-digit GLN value designating the which GLN is used in place of a prior GLN.	[0..*]
gs1:contactPoint	Has Business Contact	gs1:ContactPoint	See section 5.6	Contact information details. To specify a contact specifically designated for afterhours support, see gs1:afterHoursContact	[0..*]
gs1:afterHoursContact	Has After Hours Contact	gs1:ContactPoint	See section 5.6	Afterhours contact information relating to a legal entity or function. For general contact details, gs1:contactPoint SHALL be used.	[0..*]
gs1:openingHours	Opening Hours	gs1:IntervalSpecification	See section 5.7	Details on when an organisation/partyor location is available to be contacted or otherwise open.	[0..1]
gs1:additionalOrganizationIdentificationTypeValue	Additional Organization Identification Type Value	xsd:string	See section 5.2.1	The value associated with the Additional Organization Identification Type Value. Use of gs1:additionalOrganizationID is preferred over gs1:additionalOrganizationIdentificationTypeValue.	[0..*]
gs1:makesOffer	Makes Offer	gs1:Offer	N/A	Method to connect a gs1:Organization to a gs1:Offer class, typically to indicate that a retailer offers a product for sale at a particular price specification	[0..*]
gs1:organizationFormationDate	Organisation Formation Date	xsd:date	20210101 (YYYYMMDD)	Date in which an organisation was formed or otherwise established. Note that this is NOT the date when a GLN was allocated to identify the organisation. To designate when organisation was terminated, see gs1:organizationTerminationDate	[0..1]

Property of gs1:Organization	Name	Expected Type	Example	Description	Cardinality
gs1:organizationTerminationDate	Organisation Termination Date	xsd:date	20501231 (YYYYMMDD)	Date in which an organisation was disbanded or otherwise ended. Note that this is NOT the date when a GLN was deactivated. To designate when organisation formed, see gs1:organizationFormationDate.	[0..1]
gs1:businessEntity	Has Business Entity	gs1:BusinessEntityType	Private Enterprise	Method for noting business structure (e.g., Limited liability company, not for profit). Repeatable value from gs1:BusinessEntityType code list.	[0..*]
gs1:certification	Has Certification	gs1:CertificationDetails	See section 5.8	Information on certification.	[0..*]

5.2.1   Organisation identification details

Government bodies, trade organisations, and other parties issue identifiers that are associated to legal entities and/or functions. Linking these identifiers to GLN and one another supports consolidating records, mapping related, collaborative identifiers, enhances search ability and enables more efficient transitions between identifiers. gs1:OrganizationID_Details provides a method for connecting and sharing party identifiers.

Table 5-3 gs1:OrgnaizationID_Details table

Property of gs1:OrganizationID_Details	Name	Expected Type	Example	Description	Cardinality
gs1:organizationID	Organization ID	xsd:string	X12345-Q	Identifier value associated to an organisation/party. This value SHALL follow rules set forth by the administrating organisation designated in gs1:OrganizationID_Type.	[1..1]
gs1:organizationID_Type	Organization ID Type	gs1:OrganizationID_Type	EORI (Economic Operators Registration and Identification Number) CoC (Chamber of Commerce Number)	Organisation that administers the gs1:organizationID.	[1..1]

Property of gs1:OrganizationID_Details	Name	Expected Type	Example	Description	Cardinality
gs1:organizationID_URI	Organization ID URI	xsd:anyURI	LEI: https://search.gleif.org/#/record/52990034RLKT0WSOAM90 DUNS: https://www.dnb.com/business-directory/company-profiles.gs1.d2fd8d17216eb24c1dcf129f56ce3e66.html or https://www.bisnode.de/upik-profile/283432615/gs1/	A URI that links to information about the gs1:organizationID.	[0..*]
gs1:organizationID_Qualifier	Organization ID Qualifier	xsd:string	Retail A Partner Number Or Country/Region code related to CoC number	Secondary qualifier to supplement gs1:organizationID_Type meaning. May be used with proprietary ID code values to define identifier administrator.	[0..1]

5.2.2   Organisation classification

Government bodies, trade organisations, and other parties have developed taxonomies that classify business sectors, activities, and other organisational classifications. Different countries may require specific classification system values to be associated to an organisation and shared for taxation and other purposes. gs1:OrganizationClassificationDetails provides a method for associating the necessary classification systems and appropriate values to an organisation.

Table 5-4 gs1:OrganizationClassificationDetails table

Property of gs1:OrganizationClassificationDetails	Name	Expected Type	Example	Description	Cardinality
gs1:OrganizationClassificationID	Organization Classification ID	xsd:string	2052	Classification value that is administered by an organisation. This value SHALL follow rules set forth by the system designated in gs1:organizationClassificationType code list.	[1..1]
gs1:organizationClassificationType	Organization Classification Type	gs1:OrganizationClassificationType	SIC (Standard Industrial Classification)	Classification system name associated with gs1:OrganizationClassificationID.	[1..1]

5.2.3 Organisation status history

Over the lifetime of an organisation, it may go through periods of being active and inactive. gs1:OrganizationStatusHistory allows changes in status to be communicated in advance and tracked over time.

Note: Changes to organisation status is separate from when an organisation is officially formed or terminated and whether the GLN remains activated. To designate when an organisation formed or was formally terminated, see gs1:organizationFormationDate and/or gs1:organizationFormationDate.

Table 5-5 gs1:OrganizationStatusHistory table

Property of gs1:OrganizationStatusHistory	Name	Expected Type	Example	Description	Cardinality
gs1:organizationStatus	Organization Status	gs1:StatusType	See section 5.2.3.1	Designation of active/inactive status of an organisation/party.	[1..1]
gs1:statusTimestamp	Status Timestamp	xsd:dateTime	2021-09-01T06:00 (YYYY-MM-DDThh:mm:ss)	Date and time associated to gs1:organizationStatus. Timestamps may be future dated to provide advance notice of status changes.	[1..1]

5.2.3.1 Status type

gs1:StatusType is used to designate if a organisation/party or location is active.

Table 5-6 gs1:StatusType code list table

Code Value	Name	Description
ACTIVE	Active	Designating stating that an organisation/party or location is operating. Note that this is independent of whether or not the GLN is active.
INACTIVE	Inactive	Designating stating that an organisation/party or location is not operating. Note that this is independent of whether or not the GLN is inactive.

5.3 Place

gs1:Place properties are associated to GLNs being used to identify a location (i.e., gs1:GLN_TypeCode = FIXED_PHYSICAL_LOCATION, MOBILE_PHYSICAL_LOCATION, DIGITAL_LOCATION).

Code list values related to the following can be found https://www.gs1.org/docs/barcodes/GLN_DataModel_CodeValue_Nov2020.xlsx.

- gs1:GLN_TypeCode (also see section 5.1)
- gs1:LocationType
- gs1:LocationIDDetails

Table 5-7 gs1:Place table

Property of gs1:Place	Name	Expected Type	Example	Description	Cardinality
gs1:locationGLN	Location GLN	xsd:string	5425000030003	13-digit GLN that is being used to identify a physical or digital location. If gs1:glnType is present, gs1:partyGLN SHALL only be used when gs1:GLN_TypeCode includes FIXED_PHYSICAL_LOCATION, MOBILE_PHYSICAL_LOCATION, or DIGITAL_LOCATION	[1..1] if GLN_TypeCode = FIXED_PHYSICAL_LOCATION, MOBILE_PHYSICAL_LOCATION, or DIGITAL_LOCATION
gs1:glnType	Has GLN Type	gs1:GLN_TypeCode	See section 5.1	Designation of what a GLN is being used to identify.	[0..*]
gs1:physicalLocationName	Physical Location Name	rdf:langString	GS1 Global Office (Brussels)	The name of a physical place. To specify the name of a digital location, see gs1:digitalLocationName.	[0..*]
gs1:digitalLocationName	Digital Location Name	rdf:langString	GS1 GO ERP gateway	The name of a digital place. To specify the name of a physical location, see gs1:physicalLocationName.	[0..*]

Property of gs1:Place	Name	Expected Type	Example	Description	Cardinality
gs1:locationDescription	Location Description	rdf:langString	GS1 Global Office Corporate Headquarters (Brussels) – Blue Tower	The description of a place.	[0..*]
gs1:address	Has Postal Address	gs1:PostalAddress	See section 5.4	The postal address for an organisation or place.	[0..*]
gs1:digitalAddress	Has Digital Address	rdf:langString	https://api.example.com/mycojmpany/invoice	The location reference associated to a digital place. If gs1:GLN_TypeCode is present, SHALL only be associated to gs1:GLN_TypeCode = DIGITAL_LOCATION.	[0..*]
gs1:isManagedBy	Managed by	gs1:Organization	See section 5.2	Method for associating the organisation/party that manages the organisation/location on behalf of the owner.	[0..*]
gs1:isLeasedFrom	Leased from	gs1:Organization	See section 5.2	Method for associating the organisation/party that owns the location being leased to the location when identified by another organisation.	[0..1]
gs1:isOwnedBy	Owned by	gs1:Organization	See section 5.2	Method for associating an organisation/party or location to the organisation who owns the organisation or is the owner of a location in full or in part. This includes joint ventures. For leased locations, see gs1:leasorFor and gs1:lisLasedFrom.	[0..*]

Property of gs1:Place	Name	Expected Type	Example	Description	Cardinality
gs1:containsPlace	Contains Place	gs1:Place	See section 5.3	Designates a sub-location (e.g., floor, room, shelf) within the physical location being identified. There may be multiple sub-locations associated to a single, physical location. To specify the larger physical location the sub-location is located within, see gs1:containedInPlace	[0..*]
gs1:containedInPlace	Contained in Place	gs1:Place	See section 5.3	Designates the larger physical location a sub-location is located within. To specify sub-locations of a physical location, see gs1:containsPlace.	[0..1]
gs1:replacesGLN	Replaces GLN	gs1:partyGLN and / or gs1:locationGLN	5425000030003	13-digit GLN value that was used to identify the organisation/party or location prior to a different GLN.	[0..*]
gs1:replacedByGLN	Replaced by GLN	gs1:partyGLN and / or gs1:locationGLN	5425000030003	13-digit GLN value designating the which GLN is used in place of a prior GLN.	[0..*]
gs1:siteAccessRequirements	Site Access Requirements	xsd:anyURI	http://www.example.com/	A URI value linking to information related to requirements for accessing or visiting a place.	[0..*]
gs1:locationRole	Has Location Role	gs1:LocationType	Dock door, warehouse	A location classification based on the purpose, type of site and/or what occurs there. Repeatable value from gs1:LocationType code list.	[0..*]

Property of gs1:Place	Name	Expected Type	Example	Description	Cardinality
gs1:geo	Has GeoCoordinates or GeoShape	gs1:GeoCoordinates OR gs1:GeoShape	See section 5.3.1	Links to information about geocoordinates for a place.	[0..*]
gs1:contactPoint	Has Contact Point	gs1:ContactPoint	See section 5.6	Contact information. To specify a contact specifically designated for afterhours support, see gs1:afterHoursContact	[0..*]
gs1:afterHoursContact	Has After Hours Contact	gs1:ContactPoint	See section 5.6	Afterhours contact information relating to a legal entity or function. For general contact details, gs1:contactPoint SHALL be used.	[0..*]
gs1:siteLogisticDetails	Has Site Logistic Details	gs1:LogisticDetails	See section 5.3.5	Contains information used to support shipping, transport, and receiving. (e.g., max hight/width of transport, transport entry instructions)	[0..1]
gs1:locationStatusHistory	Has Location Status History	gs1:LocationStatusHistory	See section 5.3.3	Provides details on if and when a location is active or inactive.	[0..*]
gs1:additionalLocationID	Has Additional Location ID	gs1:LocationIDDetails	See section 5.3.4	Location identifiers assigned and managed by government bodies, trade organisations, and other identities.	[0..*]
gs1:csrAffiliation	Corporate Social Responsibility Affiliation	xsd:anyURI	http://www.example.com/	A URI value linking to information related to social responsibility activities and associations that a location is involved with.	[0..*]

Property of gs1:Place	Name	Expected Type	Example	Description	Cardinality
gs1:baseLocationGLN	Base Location GLN	xsd:string	5425000030003	A 13-digit GLN represent fixed physical location where mobile location most commonly resides. If gs1:glnType is present, gs1:baseLocationGLN SHALL only be used when gs1:GLN_TypeCode is MOBILE_PHYSICAL_LOCATION	[0..1]
gs1:certification	Has Certification	gs1:CertificationDetails	See section 5.8	Information on certification	[0..*]
gs1:openingHours	Opening Hours	gs1:IntervalSpecification	See section 5.7	Details on when an organisation/party or location is available to be contacted or otherwise open.	[0..*]
gs1:locationOpeningDate	Location Opening Date	xsd:date	20210101 (YYYYMMDD)	Date in which a location was opened or otherwise established. Note that this is NOT the date when a GLN was allocated to identify the location. To designate when location was closed, see gs1:gs1:locationFinalClosureDate	[0..1]
gs1:locationFinalClosureDate	Location Final Closure Date	xsd:date	20501231 (YYYYMMDD)	Date in which a location was closed. Note that this is NOT the date when a GLN was deactivated. To designate when location opened, see gs1:locationOpeningDate.	[0..1]

5.3.1 GeoCoordinates

A geographic coordinate system is a three-dimensional reference system that locates points on the earth's surface. The unit of measure is usually decimal degrees. A point has two coordinate values: latitude and longitude. The latitude is specified by degrees, starting from 0° and ending up with 90° to both sides of the equator, making latitude Northern and Southern. The equator is the plane with 0° latitude.

⚠ **Important**: If geodetic property is not expressed, then WGS84 is assumed to be the default.

Table 5-8 gs1:GeoCoordinates table

Property of gs1:GeoCoordinates	Name	Expected Type	Examples	Description	Cardinality
gs1:latitude	Latitude	xsd:string	50.8226469	Angular distance North or South from the earth's equator measured through 90 degrees. If gs1:latitude is populated, gs1:longitude SHALL also be populated. If gs1:coordinateReferenceSystem is not included, coordinates SHALL be expressed according to WGS84	[1..1]
gs1:longitude	Longitude	xsd:string	4.36898	The arc or portion of the earth's equator intersected between the meridian of a given place and the prime meridian and expressed in degrees. If gs1:latitude is populated, gs1:longitude SHALL also be populated. If gs1:coordinateReferenceSystem is not included, coordinates SHALL be expressed according to WGS84	[1..1]
gs1:elevation	Elevation	xsd:string	"85m or 278.9 ft" above sea level.	The elevation of a location (WGS 84). Values may be of the form 'NUMBER UNITOFMEASUREMENT' (e.g., '1,000 m', '3,200 ft') while numbers alone SHALL be a value in meters.	[0..1]

Property of gs1:GeoCoordinates	Name	Expected Type	Examples	Description	Cardinality
gs1:coordinateReferenceSystem	Has Coordinate Reference System	URIs already defined by the IOPG Geomatics Committee (https://epsg.org/)	https://epsg.io/4326 (WGS84) https://epsg.io/4267 (NAD27) https://epsg.io/4230 (ED50) https://epsg.io/4618 (SAD69) https://epsg.io/4269 (NAD83)	Open standard spatial reference systems or coordinate reference systems that provide coordinate-based local, regional or global system used to locate geographical entities.	[0..1]

5.3.2 GeoShape

A GeoShape is defined using several properties whose values are based on latitude/longitude pairs. Either whitespace or commas can be used to separate latitude and longitude. Whitespace should be used when writing a list of several such points.

Table 5-9 gs1:GeoShape table

Property of gs1:GeoShape	Name	Expected Type	Examples	Description	Cardinality
gs1:box	Box	xsd:string	Coordinate pairs of physical location that forms a cube or rectangular prism.	A box is the area enclosed by the rectangle formed by two points. The first point is the lower corner, the second point is the upper corner. A box is expressed as two points separated by a space character.	[0..1]
gs1:circle	Circle	xsd:string	Geofence or perimeter.	A circle is the circular region of a specified radius centred at a specified latitude and longitude. A circle is expressed as a pair followed by a radius in meters.	[0..1]

Property of gs1:GeoShape	Name	Expected Type	Examples	Description	Cardinality
gs1:polygon	Polygon	xsd:string	51.5061961 -0.0878934 51.5061961 -0.0905934 51.5037961 -0.0905934 51.5061961 -0.0878934	A polygon is the area enclosed by a point-to-point path for which the starting and ending points are the same. A polygon is expressed as a series of four or more space delimited points where the first and final points are identical.	[0..1]
gs1:line	Line	xsd:string	In the maritime and port community the concept of "berth" or "quay wall" is defined as exactly that "a straight line between two end-points.	A line is a point-to-point path consisting of two or more points. A line is expressed as a series of two or more point objects separated by space.	[0..1]

5.3.3 Location status history

Over the lifetime of a place/location, it may go through periods of being active and inactive. gs1:LocationStatusHistory allows changes in status to be communicated in advance and tracked over time.

Table 5-10 gs1:LocationStatusHistory table

Property of gs1:LocationStatusHistory	Name	Expected Type	Examples	Description	Cardinality
gs1:locationStatus	Location Status	gs1:Status_Type	See section 5.2.3.1	Designation of active/inactive status of a location.	[1..1]
gs1:statusTimestamp	Status Timestamp	xsd:dateTime	2021-09-01T06:00	Date and time associated to status designations.	[1..1]

5.3.4 Location identification details

Government bodies, trade organisations, and other parties issue identifiers that are associated to locations. Linking these identifiers to GLN and one another supports consolidating records, mapping related, collaborative identifiers, enhances search ability and enables more efficient transitions between identifiers. gs1:LocationID_Details provides a method for connecting and sharing location identifiers.

Table 5-11 gs1:LocationID_Details table

Property of gs1:LocationID_Details	Name	Expected Type	Examples	Description	Cardinality
gs1:locationID	Location ID	xsd:string	9F26R9F9+5H NLRTM NLRTM-0456	Identifier value associated to a location. This value SHALL follow rules set forth by the administrating organisation designated in gs1:LocationID_Type.	[0..1]
gs1:locationID_Type	Location ID Type	gs1:LocationID_Type	OPEN_LOCATION_CODE UN_LOCODE ISPS GISIS	Organisation that administers the gs1:locationID or the name of the ID itself. Value from gs1:LocationID_Type code list.	[0..1]
gs1:locationID_URL	Location ID URL	xsd:anyURI	https://plus.codes/9F26R9F9+5H https://unece.org/trade/cefact/unlocode-code-list-country-and-territory https://www.imo.org/en/OurWork/Security/Pages/SOLAS-XI-2%20ISPS%20Code.aspx https://gisis.imo.org/Public/ISPS/PortFacilities.aspx	A URI that links to information about the gs1:locationID.	[0..1]
gs1:locationID_Qualifier	Location ID Qualifier	xsd:string	Company A Store ID	Secondary qualifier to supplement gs1:LocationID_Type meaning. May be used with proprietary ID code values to define identifier administrator.	[0..1]

5.3.5 Logistic details

Sharing information on location capabilities and requirements can support proper planning and more efficient loading and unloading of transports. gs1:LogisticDetails provides options to communicate logistic details.

Table 5-12 gs1:LogisticDetails table

Property of gs1:LogisticDetails	Name	Expected Type	Examples	Description	Cardinality
gs1:hasBookingStatusDisplay	Has Booking Status Display	gs1:NonbinaryLogicCode	Yes / No	Designation of whether a booking status display is present.	[0..1]
gs1:hasWeighbridge	Has Weigh Bridge	gs1:NonbinaryLogicCode	Yes / No	Designation of whether a weigh bridge is present.	[0..1]
gs1:weighsTareAndGross	Weighs Tare and Gross	gs1:NonbinaryLogicCode	Yes / No	Designation of whether capability/requirement to weigh tare and gross is present.	[0..1]
gs1:weighsAxleSplitWeights	Weighs Axle Split Weights	gs1:NonbinaryLogicCode	Yes / No	Designation of whether capability/requirement to weigh tare and gross is present.	[0..1]
gs1:hasLoadingTieDownAreas	Has loading tie down areas	gs1:NonbinaryLogicCode	Yes / No	Designation of whether loading tie down areas are present. For unloading tie down, see gs1:hasUnloadingTieDownAreas.	[0..1]
gs1:hasUnloadingTieDownAreas	Unloading tie down areas	gs1:NonbinaryLogicCode	Yes / No	Designation of whether unloading tie down areas are present. For loading tie down, see gs1:hasLoadingTieDownAreas.	[0..1]
gs1:tieDownInstructions	Tie down instructions	rdf:langString	Tie down anchors available at…	Information on how to tie down at location.	[0..1]
gs1:driversMustAssistLoadingUnloading	Drivers must assist loading unloading	gs1:NonbinaryLogicCode	Yes / No	Designation of whether drivers are required to assist in loading and unloading processes.	[0..1]
gs1:driverAssistanceProvided	Driver assistance provided	gs1:NonbinaryLogicCode	Yes / No	Designation of whether drivers are provided assistance in loading and unloading processes.	[0..1]
gs1:hasBdoubleBreakdownArea	Has Bdouble breakdown area	gs1:NonbinaryLogicCode	Yes / No	Designation of whether breakdown area is available at location.	[0..1]

Property of gs1:LogisticDetails	Name	Expected Type	Examples	Description	Cardinality
gs1:hasRestFacilities	Has rest facilities	gs1:NonbinaryLogicCode	Yes / No	Designation of whether rest facilities are available at location.	[0..1]
gs1:hasSleepingFacilities	Has sleeping facilities	gs1:NonbinaryLogicCode	Yes / No	Designation of whether sleeping facilities are available at location.	[0..1]
gs1:isDockForDelivery	Is Dock for Delivery	gs1:NonbinaryLogicCode	Yes / No	Designation of whether dock is used for delivery.	[0..1]
gs1:isDockForDispatch	Is Dock for Dispatch	gs1:NonbinaryLogicCode	Yes / No	Designation of whether dock is used for dispatch.	[0..1]
gs1:hasOverheadLoadingUnloadingDock	Has Overhead Loading Unloading Dock	gs1:NonbinaryLogicCode	Yes / No	Designation of whether dock has overhead loading/unloading.	[0..1]
gs1:rearLoadingUnloadingDockType	Rear Loading Unloading Dock Type	gs1:DockType	Fixed Height	Designation of whether dock has rear loading/unloading.	[0..1]
gs1:sideLoadingUnloadingDockType	Side Loading Unloading Dock Type	gs1:DockType	Adjustable Height	Designation of whether dock has side loading/unloading.	[0..1]
gs1:maxLengthOfTransport	Max Length of Transport	gs1:QuantitativeValue	25 MTR	Designation of maximum length of transport able to use location.	[0..1]
gs1:maxHeightOfTransport	Max Height of Transport	gs1:QuantitativeValue	7 MTR	Designation of maximum height of transport able to use location.	[0..1]
gs1:maxWidthOfTransport	Max Width of Transport	gs1:QuantitativeValue	4 MTR	Designation of maximum width of transport able to use location.	[0..1]
gs1:floorHeightLoadingDock	Floor Height Loading Dock	gs1:QuantitativeValue	1.2 MTR	Height of loading dock at location.	[0..1]

Property of gs1:LogisticDetails	Name	Expected Type	Examples	Description	Cardinality
gs1:maxGrossWeightOfTransport	Max Gross Weight of Transport	gs1:QuantitativeValue	40000 KGM	Designation of maximum weight of transport able to use location.	[0..1]
gs1:receivingHours	Receiving Hours	gs1:IntervalSpecification	See section 6.7	Days and hours when location is able to receive transports.	[0..*]
gs1:dispatchHours	Dispatch Hours	gs1:IntervalSpecification	See section 6.7	Days and hours when location is able to dispatch transports.	[0..*]
gs1:curfewHours	Curfew Hours	gs1:IntervalSpecification	See section 6.7	Days and hours when location is impacted by curfew hours.	[0..*]
gs1:additionalOperationInstructions	Additional Operation Instructions	rdf:langString	N/A	Information on operation instructions relevant to logistics activities.	[0..*]
gs1:transportEntryAssignedName	Transport Entry Assigned Name	rdf:langString	Entry Point 1-A	Name associated to transport entry point at location.	[0..*]
gs1:transportEntryInstructions	Transport Entry Instructions	rdf:langString	Check in at guard gate prior to entry attempt.	Information on how to transport should enter location.	[0..*]
gs1:isSiteSubjectToLocalCurfew	Is Site Subject to Local Curfew	gs1:NonbinaryLogicCode	Yes / No	Designation of whether location is impacted by a curfew. If yes, gs1:curfewHours SHOULD be provided.	[0..1]
gs1:localCurfewInformation	Local Curfew Information	xsd:anyURI	http://www.example.com/	URI that links to information on curfew.	[0..1]
gs1:doesSiteRequireDriverInduction	Does Site Require Driver Induction	gs1:NonbinaryLogicCode	Yes / No	Designation of whether location requires drivers to complete instructional obligations.	[0..1]
gs1:driverInductionInformation	Driver Induction Information	xsd:anyURI	http://www.example.com/	URI that links to information on requirements transport drivers to begin interacting with a location.	[0..1]

Property of gs1:LogisticDetails	Name	Expected Type	Examples	Description	Cardinality
gs1:isBookingRequired	Is Booking Required	gs1:NonbinaryLogicCode	Yes / No	Designation of whether booking is required prior to arriving at a location. If yes, gs1:bookingInformation SHOULD be provided.	[0..1]
gs1:bookingInformation	Booking Information	rdf:langString	N/A	Information on how to book time, dock, etc at a location.	[0..*]
gs1:equipmentNotPermittedOnSite	Equipment Not Permitted Onsite	rdf:langString	Firearms not allowed.	Information on what equipment may not brought to a location.	[0..*]
gs1:areNonDriversPermitted	Are Non-Drivers Permitted	gs1:NonbinaryLogicCode	Yes / No	Designation of whether transport staff are allowed at a location that are not drivers.	[0..1]
gs1:climateControlDetails	Climate Control Details	gs1:ClimateControlDetails	See section 6.3.5.1	Details on a location's temperature and humidity ranges.	[0..*]

5.3.5.1 Climate control details

The temperature and humidity levels in a storage area can determine what types of objects can be stored there and for how long. gs1:ClimateControlDetails is used to share these details.

Table 5-13 gs1:ClimateControlDetails table

Property of gs1:ClimateControlDetails	Name	Expected Type	Example	Definition	Cardinality
gs1:maxStorageTemperature	Maximum Storage Temperature	gs1:QuantitativeValue	70 CEL	The maximum temperature of a storage location.	[0..1]
gs1:minStorageTemperature	Minimum Storage Temperature	gs1:QuantitativeValue	45 CEL	The minimum temperature of a storage location.	[0..1]

Property of gs1:ClimateControlDetails	Name	Expected Type	Example	Definition	Cardinality
gs1:marginOfErrorStorageTemperature	Margin of Error Storage Temperature	gs1:QuantitativeValue	2 P1	Amount of variance that may occur at a storage location.	[0..1]
gs1:maxHumidity	Maximum Humidity	gs1:QuantitativeValue	55 P1	The maximum humidity of a storage location.	[0..1]
gs1:minHumidity	Minimum Humidity	gs1:QuantitativeValue	45 P1	The minimum humidity of a storage location.	[0..1]
gs1:isControlledEnvironment	Is Controlled Environment	gs1:NonbinaryLogicCode	Yes / No	Designation of whether location is climate controlled.	[0..1]

5.4 Postal Address

A postal address designates the location to which mail and other parcels are delivered. The fields required to form a valid address will vary based on property type, market, and other factors.

Table 5-14 gs1:PostalAddress table

Property of gs1:PostalAddress	Name	Expected Type	Examples	Description	Cardinality
gs1:streetAddress	Street Address	rdf:langString	Avenue Louise 326	The street address expressed as free form text. The street address is printed on paper as the first lines below the name. For example, the name of the street and the number in the street or the name of a building. A total of four street address lines are available. gs1:streetAddress SHOULD be used before populating lines two through four.	[1..1]

Property of gs1:PostalAddress	Name	Expected Type	Examples	Description	Cardinality
gs1:streetaddressLine2	Street Address Line 2	rdf:langString	Blue Tower	The street address expressed as free form text. The street address is printed on paper as the first lines below the name. For example, the name of the street and the number in the street or the name of a building. A total of four street address lines are available. gs1:streetAddress SHOULD be used before populating lines two through four.	[0..1]
gs1:streetaddressLine3	Street Address Line 3	rdf:langString	Floor 19	The street address expressed as free form text. The street address is printed on paper as the first lines below the name. For example, the name of the street and the number in the street or the name of a building. A total of four street address lines are available. gs1:streetAddress and gs1:streetaddressLine2 SHOULD be used before populating lines three and four.	[0..1]

Property of gs1:PostalAddress	Name	Expected Type	Examples	Description	Cardinality
gs1:streetaddressLine4	Street Address Line 4	rdf:langString	Room 103	The street address expressed as free form text. The street address is printed on paper as the first lines below the name. For example, the name of the street and the number in the street or the name of a building. gs1:streetAddress, gs1:streetaddressLine2 and gs1:streetaddressLine3 SHOULD be used before populating gs1:streetaddressLine4.	[0..1]
gs1:postOfficeBoxNumber	PO Box Number	xsd:string	PO Box 84	The number that identifies a PO box. A PO box is a box in a post office or other postal service location assigned to an organisation where postal items may be kept.	[0..1]
gs1:crossStreet	Cross Street	rdf:langString	Vleurgat (Street in Brussels) intersecting with Avenue Louise (street in Brussels)	A street intersecting a main street (usually at right angles) and continuing on both sides of it.	[0..1]
gs1:addressSuburb	Address Suburb	rdf:langString	Ixelles (suburb of Brussels)	A suburb within a town or city.	[0..1]
gs1:addressLocality	Address Locality	rdf:langString	Brussels	Text specifying the name of the locality, for example a city.	[0..1]

Property of gs1:PostalAddress	Name	Expected Type	Examples	Description	Cardinality
gs1:countyCode	County Code	xsd:string	United Kingdom: CAMBS – Cambridgeshire or HANTS - Hampshire	A code that identifies a county. A county is a territorial division in some countries, forming the chief unit of local administration. In the US, a county is a political and administrative division of a state.	[0..1]
gs1:addressRegion	Province State Code	rdf:langString	NJ (New Jersey)	Text specifying a province or state in abbreviated format for example NJ.	[0..1]
gs1:addressCountry	Address Country	gs1:Country	See section 6.5	Code specifying the country (and country subdivision) for the address using ISO 3166-1.	[1..1]
gs1:postalCode	Postal Code	xsd:string	B-1050 (GS1 Global Office Corporate Headquarters)	Text specifying the postal code for an address.	[0..1]
gs1:postalName	Postal Name	rdf:langString	GS1 Global Office	The name of the recipient expressed in text. Note that this may be different than gs1:OrganizationName.	[1..1]

5.5   Country

Country and country subdivisions are used as part of a postal address and other location references and designations. gs1:Country properties leverage ISO 3166 and ISO 3166-2 values.

Table 5-15 gs1:Country table

Property of gs1:Country	Name	Expected Type	Examples	Description	Cardinality
gs1:countryCode	Country Code	xsd:string	AU (Australia)	A short text string code specifying the country the organisation/party or location is in. See values defined in ISO 3166.	[0..1]
gs1:countrySubdivisionCode	Country Subdivision Code	xsd:string	AU-VIC (Australia, Victoria)	A short text string code specifying the country subdivision the organisation/party or location is in. See values defined in ISO 3166-2	[0..1]

5.6   Contact point

Contact points provides information on an individual or department acting as point of contact for an organisation or location.

Table 5-16 gs1:ContactPoint table

Property of gs1:ContactPoint	Name	Expected Type	Examples	Description	Cardinality
gs1:contactType	Contact Type	rdf:langString	Customer support	The function or role of a contact. Use of gs1:ContactRoleCode is preferred over gs1:contactType.	[0..1]
gs1:hoursAvailable	Hours Available	gs1:IntervalSpecification	See Section 5.7	A structured value providing information about the opening hours of a place or a certain service inside a place.	[0..*]
gs1:contactRoleCode	Has Contact Role Code	gs1:ContactRoleType	Technical Support	The function or role of a contact. Value from gs1:ContactRoleType code list.	[0..1]
gs1:contactTitle	Contact Title	rdf:langString	Manager, secretary, HR Director etc.	The job title of the person that can be contacted for example Manager.	[0..1]

Property of gs1:ContactPoint	Name	Expected Type	Examples	Description	Cardinality
gs1:telephone	Telephone	xsd:string	+44 217 992 9999	A telephone number for example +44 217 992 9999.	[0..*]
gs1:faxNumber	Telefax	xsd:string	+44 217 992 9998	A fax number used for transmitting and reproducing fixed graphic material over telephone lines or other electronic transmission media.	[0..1]
gs1:email	Email	xsd:string	helpdesk@example.com	Creating/sending/receiving of unstructured free text messages or documents using computer network, a mini-computer or an attached modem and regular telephone line or other electronic transmission media.	[0..1]
gs1:website	Website	xsd:anyURI	www.example.com	A Website is a set of related web pages and other items typically served from a single web domain and accessible via URLs.	[0..1]
gs1:socialMediaChannel	Social Media Channel	xsd:anyURI	https://twitter.com/gs1	Social media are interactive technologies that allow the creation or sharing/exchange of information, ideas, career interests, and other forms of expression via virtual communities and networks.	[0..*]
gs1:availableLanguage	Available Language	xsd:string	zh (Chinese)	ISO 639-1 code specifying the language of a specified contact point.	[0..*]
gs1:responsibility	Responsibility	rdf:langString	Purchaser – responsible for sourcing saleable product.	Text further specifying the area of responsibility of the trade contact.	[0..*]

5.7 Interval Specification

gs1:IntervalSpecification properties provide information on when something occurs and how long that occurrence is to remain in place.

Table 5-17 gs1:IntervalSpecification table

Property of gs1:IntervalSpecification	Name	Expected Type	Example	Description	Cardinality
gs1:validFrom	Valid From	xsd:date OR xsd:dateTime	2028-06-01	The date from when the item becomes valid.	[0..1]
gs1:validThrough	Valid Through	xsd:date OR xsd:dateTime	2028-07-01	The date after which the item is not valid.	[0..1]
gs1:dayOfWeek	Day of Week	URI from within the https://schema.org/DayOfWeek enumeration	https://schema.org/Monday https://schema.org/Tuesday https://schema.org/Wednesday https://schema.org/Thursday https://schema.org/Friday https://schema.org/Saturday https://schema.org/Sunday https://schema.org/PublicHolidays	A week is a time unit equal to seven days - https://en.wikipedia.org/wiki/Week	[0..*]
gs1:startTime	Start Time	xsd:time	09:00	Time of opening.	[0..1]
gs1:endTime	End Time	xsd:time	23:00	Time of closing.	[0..1]

5.8 Certification

gs1:CertificationDetails is used to share information about the type of certification issued by a certifying body.

Table 5-18 gs1:CertificationDetails table

Property of gs1:CertificationDetails	Name	Expected Type	Examples	Description	Cardinality
gs1:certificationAgency	Certification Agency	rdf:langString	Organisation A	Name of the organisation issuing the certification standard or other requirement being met.	[0..1]
gs1:certificationAgencyURL	Certification Agency URL	gs1:Organization	http://www.example.com/	URL of the organisation issuing the certification standard or other requirement being met.	[0..1]
gs1:certificationStandard	Certification Standard	rdf:langString	2021-12-31	Name of the certification standard. Free text.	[1..1]
gs1:certificationValue	Certification Value	rdf:langString	4/5 stars, 95%, bronze	The certification reference value.	[0..1]
gs1:certificationURI	Certification URI	xsd:anyURI	http://www.example.com/	A URI for the certification.	[0..1]
gs1:certificationAuditDate	Certification Audit Date	xsd:date	2021-12-31	Date of completion of auditing for certification	[0..1]
gs1:certificationStartDate	Certification State Date	xsd:date	2021-12-31	First date of validity for the certification	[0..1]
gs1:certificationEndDate	Certification End Date	xsd:date	2021-12-31	Last date of validity for the certification. (After this date the certification lapses and would need to be renewed/replaced)	[0..1]
gs1:certificationType	Certification Type	owl:Thing	Safety certification	Indicates the type of certification	[0..1]
gs1:certificationSubject	Certification Subject	owl:Thing	Two sibling organizations O1 and O2 can process products P1 and P2 at locations L1 and L2: meaning that either organization can process either product at either location (OR); but the certificate holds for the combinations of organization (either O1 OR O2) AND product (either P1 OR P2) AND location (either L1 OR L2)	References the object (e.g., product, asset, container), organisation/party or location being certified. If multiple values are specified, the certification details apply to the logical conjunction (AND) of groups of different types, while a logical disjunction (OR) applies within each group of the same type.	[0..1]

Property of gs1:CertificationDetails	Name	Expected Type	Examples	Description	Cardinality
gs1:certificationIdentification	Certification Identification	Xsd:langString	XSC-C-12345	A reference (i.e., to a certificate instance) issued to confirm that a product, organisation/party or location has passed certification.	[0..1]

5.9 Creative Work

gs1:CreativeWork allows creative works, copyrights, patents, and other IP to be associated to an organisation.

Table 5-19 gs1:CreativeWork table

Property of gs1:CreativeWork	Name	Expected Type	Examples	Description	Cardinality
gs1:dateCreated	Date Created	xsd:date	2021-01-01	Date when the object was created.	[0..1]
gs1:datePublished	Date Published	xsd:date	2021-12-31	Date when the object was first officially published.	[0..1]
gs1:copyrightHolder	Copyright holder	gs1:Organization	See section 5.2	A "copyright owner" or "copyright holder" is a person or a company who owns any one of the exclusive rights of copyright in a work	[0..*]
gs1:creativeWorkAgency	Creative Work Agency	rdf:langString	United States Patent and Trademark Office	Name of the organisation issuing the patent, copyright, or other recognition.	[0..1]
gs1:creativeWorkValue	Creative Work Value	rdf:langString	ABC-123	Creative work reference as provided by gs1:creativeWorkAgency.	[0..1]
gs1:creativeWorkURL	Creative Work URL	xsd:anyURI	http://www.example.com/	A URI that links to information about the creative work.	[0..1]

5.10 Product

Products may need to be associated to an organisation or place.

Table 5-20 gs1:Product table

Property of gs1:Product	Expected Type	Examples	Description	Cardinality
gs1:gtin	xsd:string	09523000000005	A Global Trade Item Number (GTIN) is the GS1 Identification Key used to identify trade items.	[1..1]
gs1:manufacturer	gs1:Organization	See section 5.2	The organisation that produces the trade item.	[0..1]
gs1:manufacturingPlant	gs1:Place	See section 5.3	A physical location consisting of one or more buildings with facilities for manufacturing where the trade item is produced.	[0..1]
gs1:brandOwner	gs1:Organization	See section 5.2	The brand owner of the trade item. The organisation that is responsible for allocating the GTIN to the product.	[0..1]
gs1:customerSupportCentre	gs1:Organization	See section 5.2	The organisation which provides product support to the trading partner organisation to which merchandise is sold.	[0..1]