

Business Message Standard (BMS)

for

**Align/GDSN/Catalogue Item
Synchronization**

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1 Business Solution

1.1 Business Domain View

1.1.1 Problem Statement / Business Need

The business landscape has undergone a rapid and complicated transformation. Globalization, converging supply chains, and the rapid pace of technology have added new costs and complexity to the way business is conducted in every industry. These issues have added significant expense to the cost of doing business.

This makes standards, which bring order and efficiency to business processes more important and challenging than ever before. The success and growth of the EAN·UCC System has been based, in part, on its strong legacy in Catalogue Item identification, linking together the physical flow of a Catalogue Item with the corresponding flow of electronic information. In order to maintain the value of this system, EAN·UCC has embraced Simple eb (Simple e-Business), a business practice that streamlines and simplifies the flow of business trade information enabling more efficient and effective supply chains. As its name implies, Simple eb is focused on simplifying the underlying communication of information that is applicable across multiple business processes.

One of the premises of Simple eb is that EC constructs (data and data structures) that are common across multiple business processes must be aligned. Some of the Core Data must be synchronized so it need not be sent in each transaction and it has the same value in the trading partners systems; such data has been referred to as Master Data.

To put this in the context of the EAN·UCC system, the EAN·UCC Business Message Standards (XML), UCS EDI Standards, VICS EDI Standards, and EANCOM are electronic data carriers within the Simple eb framework. Simple eb is dependent on the alignment of core data and the Synchronization of master data that is used in multiple business transactions. The most prevalent master data is Catalogue Item and party, which can be identified with EAN·UCC “Keys”, specifically the Global Trade Identification Number (GTIN) and Global Location Number (GLN).

The EAN·UCC system provides the standards to align data between trading partners; these are the foundation standards. The EAN·UCC system also defines a process by which trading partners can exchange this aligned data between them and synchronize master data across an entire community; these are the foundation processes.

This foundation allows for the simplification (Simple eb) of the basic trade processes of Plan, Order, Delivery, and Pay, which in turn form the basis for more complex processes such as CPFR, Micro-Merchandising, Scan-Based Trading (SBT), and any other future initiative.

Substantial effort has been made to develop a Global Data Synchronization process because master data sharing between partners is both complex and fundamental to all supply chain processes. Integrity and timeliness of master data is critical to the flow of goods, services and information throughout the chain. Sharing data effectively and efficiently relies on access to common data definitions, data accuracy and agreement on the processes used to exchange data.

This process is termed Master Data Synchronization. Throughout 2000-2002, with increased emphasis on global commerce, electronic trading communities and evolving Internet technology, it became obvious that global master data standards and processes

were essential to support simple e-Business transactions. As a precursor to the establishment of standards, GCI, UCC and EAN developed business requirements in parallel to address "What standard processes are required to enable Global Data Synchronization?"

In January 2002, EAN.UCC instituted the GSMP to create and maintain global standards. The GSMP Data Synchronization team was formed to align all business requirements associated with the Data Synchronization process, including the Global Registry.

1.1.2 Objective

To supply the detail design of the catalogue Item synchronization business transaction needed to meet the requirements of the referenced BRAD(s).

1.1.3 Audience

The audience of this standard is any participant in the global supply chain. This includes retailers, manufacturers, service providers and other third parties

1.1.4 Artifacts

Artifact name	State	Artifact / State description
BRD Catalogue Item Synchronization Version 1.8	Completed	

1.1.5 References

Reference Name	Description
<ul style="list-style-type: none">• GCI – Global Master Data Synchronisation Process, Business Requirements, Vision, Concept and Recommendations, Version V1.0, December 14, 2002• GCI - Global Master Data Synchronisation Process, Detailed Specifications of Global Registry, Global Search Functions and Flow of Messages, Version V0.4, December 14, 2002• GCI – Global Data Dictionary• Business Requirements Document for Core Item (EAN / UCC)• Business Requirements Document for Core Party (EAN / UCC)• Business Requirements Document for Core Price (EAN / UCC)• Business Requirements Document for Fast Moving Consumer Goods Item Extension	

<p>(EAN / UCC)</p> <ul style="list-style-type: none">• EAN / UCC Report: Global Data Alignment System (GDAS) – 21st January 2000• GCI Document: Amendment to GDAS – 31st July 2000• ECR Europe Report: Inter-Operability of EAN Compliant Data Pools – March 1999• What is Data Synchronisation?, Version 1.1, EAN/UCC – February 14, 2002• Simpl-eb Implementation Guide, EAN.UCC, Version 1.0, July 1st, 2001• EAN.UCC Business Message Standards Version 1.0 dated July 2001• Detailed Specifications of Global Registry, Global Search Function and Flow of Messages; Report 2 – Version 0.4 dated 14 December 2001• Global Master Data Synchronisation: Business Requirements, Vision, Concept and Recommendations; Report 1 – Version 1.0 dated 14 December 2001• Supporting material for GSMP CR 89 (UCCnet Synchronisation flow and DTDs)• The Unified Modeling Language User Guide, Booch, Rumbaugh and Jacobson, Addison-Wesley Longman, Inc. Copyright 1999. ISBN 0-201-57168-4• GCI, GTIN Guidelines• UCC –12 Guidelines• TIIC Guidelines• EAN/UCC Global General Specifications	
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1.1.6 Acknowledgements

(List of the individuals—and their companies—who participated in the creation, review and approval of this BMS.)

The GSMP Global Data Synchronization team would also like to acknowledge all those individuals who participated in both GCI-GDS and UCCnet teams whose hard work and documentation were invaluable to this team.

1.1.6.1 BRG Members

Function	Name	Company / organization
BRG Chair		
BRG Member		
BRG Member		
BRG Member		

1.1.6.2 Task/Project Group Participants *(where applicable)*

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1.1.6.3 Design Team Members

Function	Name	Organization
Modeler	Celeste Bob	Uniform Code Council
XML Technical Designer		
EANCOM Technical Designer		
Peer Reviewer		

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1.2 Business Context

(Note: The business context of the business)

Context Category	Value(s)
Industry	All
Geopolitical	All
Product	All
Process	GDSN
System Capabilities	EAN.UCC
Official Constraints	None

1.3 Additional Technical Requirements Analysis

1.3.1 Technical Requirements (optional)

Number	Statement	Rationale

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1.4 Business Rules

Req ID	Business Requirement Description	UC-3 Add Catalogue Item Hierarchy	UC-4 Change Catalogue Item Hierarchy	UC-5 Correct Catalogue Item Hierarchy	UC-6 Discontinue Catalogue Item	UC-25 Delete Catalogue Item Hierarchy	UC-7 Cancel Catalogue Item	UC-18 Register Catalogue Item	UC-19 Change Registered Catalogue Item	UC-20 Correct Registered Catalogue Item	UC-21 Delete Registered Catalogue Item	UC-23 Manage Catalogue Item Distribution Criteria	UC-24 Publish Catalogue Item Data	UC-34 Stop Publishing Catalogue Item Data	UC-27 Subscribe to Catalogue Item Data	UC-28 Remove Catalogue Item Subscription	UC-35 Distribute Subscription Data	UC-43 Distribute Confirmation Data	UC-37 Distribute Catalogue Item Data from SDP to RDP	UC-38 Distribute Catalogue Item Data from RDP to Recipient	UC-32 Validate Data Pool	UC-33 Validate Catalogue Item Data for Global Registry	UC-31 Global Search	UC-48 Request Catalogue Item Data
1	Party data must exist prior to a Catalogue Item is being registered.	x					xx																	
2	Catalogue Item data must be validated prior to registration.	x					xx														x			
3	Data Source must be able to add a Catalogue Item to the Source Data Pool.	xx																						
4	Data Source must be able to change Catalogue Item data in the Source Data Pool.		x					xx																
5	Data Source must be able to correct Catalogue Item data in the Source Data Pool.			x					xx															
6	Data Source must be able to delete Catalogue Item data in the Source Data Pool.				x					xx														

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Req ID	Business Requirement Description	UC-3 Add Catalogue Item Hierarchy	UC-4 Change Catalogue Item Hierarchy	UC-5 Correct Catalogue Item Hierarchy	UC-6 Discontinue Catalogue Item	UC-25 Delete Catalogue Item Hierarchy	UC-7 Cancel Catalogue Item	UC-18 Register Catalogue Item	UC-19 Change Registered Catalogue Item	UC-20 Correct Registered Catalogue Item	UC-21 Delete Registered Catalogue Item	UC-23 Manage Catalogue Item Distribution Criteria	UC-24 Publish Catalogue Item Data	UC-34 Stop Publishing Catalogue Item Data	UC-27 Subscribe to Catalogue Item Data	UC-28 Remove Catalogue Item Subscription	UC-35 Distribute Subscription Data	UC-43 Distribute Confirmation Data	UC-37 Distribute Catalogue Item Data from SDP to RDP	UC-38 Distribute Catalogue Item Data from RDP to Recipient	UC-32 Validate Data Pool	UC-33 Validate Catalogue Item Data for Global Registry	UC-31 Global Search	UC-48 Request Catalogue Item Data
7	If a Catalogue Item is deleted: - the links pointing down must be deleted - all links above must be deleted 7- all Items above must be deleted					X					XX													
8	EAN.UCC standards validation for GTIN and GLN format.	X	X	X				X	X	X												XX		
9	Uniqueness validation for Catalogue Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.	X	X	X				X	X	X												XX		
10	The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.	X	X	X				XX	X	X														
11	Corrections bypass the standard GTIN/GLN allocation rules.			X						XX														

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12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt - Success / Failure of processing (syntax and content) - Reason for failure, with a code number and text message unique assigned to each failure	xx	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
13	The Data Source grants visibility of item, party and partner profiles including party capabilities data to a given list of parties (identified by their GLNs) or to all parties in a given Target Market.											xx	x	x				x						

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14	A subscription must be able to be maintained on the following levels: - GTIN - GLN of Data Source - Target Market - Lowest level of EAN.UCC Classification Or any combination of these 4 elements.													xx	x	x								
15	With the set up of a subscription, a Data Recipient sets a profile to receive ongoing updates of the matching data (including all hierarchies, independently from the level subscribed on).													xx	x	x								
16	Subscription remains valid until it is deleted. Hence, it cannot be updated.												x	x	xx									
17	Subscriptions must be created by data recipients in their Recipients Data Pool and sent to the Global Registry.													xx		x	x							
18	A new Source Data Pool will get their relevant subscriptions as soon as they start registering their GTIN's.																xx	x						

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19	The system must maintain detailed subscription lists.													xx	x	x								
20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	x	x	x	x	x	x	x	x	x	x	xx	x	x	x	x	x	x	x	x				x
21	If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.			x	x	x	x			x	x	xx	x	x	x	x	x	x	x	x				
22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.			x	x	x	x			x	x	xx	x	x	x	x	x	x	x	x				
23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x

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	- Any successful matching process																							
	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation																							
24	- Registration of new Catalogue Item	X	X	X	X	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X		X		X
25	The Data Distribution, which is the movement of data from one entity to another, must be handled through a specific notification type.											X				X	X	XX	X					

Business Solution Design

Req ID	Business Requirement Description	UC-3 Add Catalogue Item Hierarchy	UC-4 Change Catalogue Item Hierarchy	UC-5 Correct Catalogue Item Hierarchy	UC-6 Discontinue Catalogue Item	UC-25 Delete Catalogue Item Hierarchy	UC-7 Cancel Catalogue Item	UC-18 Register Catalogue Item	UC-19 Change Registered Catalogue Item	UC-20 Correct Registered Catalogue Item	UC-21 Delete Registered Catalogue Item	UC-23 Manage Catalogue Item Distribution Criteria	UC-24 Publish Catalogue Item Data	UC-34 Stop Publishing Catalogue Item Data	UC-27 Subscribe to Catalogue Item Data	UC-28 Remove Catalogue Item Subscription	UC-35 Distribute Subscription Data	UC-43 Distribute Confirmation Data	UC-37 Distribute Catalogue Item Data from SDP to RDP	UC-38 Distribute Catalogue Item Data from RDP to Recipient	UC-32 Validate Data Pool	UC-33 Validate Catalogue Item Data for Global Registry	UC-31 Global Search	UC-48 Request Catalogue Item Data
26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	x		x	x	x	x					x							xx	x				
27	In case of an ItemLink correction, the entire hierarchy will be indicated as corrected in the notification.			xx								x							x	x				
28	The updated hierarchy always fully replaces the current hierarchy. This action is called "Full Refresh".	x		xx															x	x				
29	The confirmation process must take place in the home data pool of the data recipient.													x	x	x	xx							
30	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.	x	x	x	x	x	x	xx	x	x	x													
31	Validation acknowledgements are mandatory.	x	x	x	x	x	x	xx	x	x	x													
32	Acknowledgement Reason codes must be unique.	x	x	x	x	x	x	x	x	x	x	xx	x	x	x	x	x	x	x	x				x
33	ItemLinks are identified by the parent GTIN key + child GTIN key + quantity contained.	xx	x	x		x																		
34	ItemLinks are not registered or held within the Global Registry.	x	x	x	x	x	x	xx	x	x	x													
35	Changes have to comply with validation rules.		xx						xx													x		

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Req ID	Business Requirement Description	UC-3 Add Catalogue Item Hierarchy	UC-4 Change Catalogue Item Hierarchy	UC-5 Correct Catalogue Item Hierarchy	UC-6 Discontinue Catalogue Item	UC-25 Delete Catalogue Item Hierarchy	UC-7 Cancel Catalogue Item	UC -18 Register Catalogue Item	UC-19 Change Registered Catalogue Item	UC-20 Correct Registered Catalogue Item	UC-21 Delete Registered Catalogue Item	UC-23 Manage Catalogue Item Distribution Criteria	UC-24 Publish Catalogue Item Data	UC-34 Stop Publishing Catalogue Item Data	UC-27 Subscribe to Catalogue Item Data	UC-28 Remove Catalogue Item Subscription	UC-35 Distribute Subscription Data	UC-43 Distribute Confirmation Data	UC-37 Distribute Catalogue Item Data from SDP to RDP	UC-38 Distribute Catalogue Item Data from RDP to Recipient	UC-32 Validate Data Pool	UC-33 Validate Catalogue Item Data for Global Registry	UC-31 Global Search	UC-48 Request Catalogue Item Data
36	If the Catalogue Item was registered, updates impacting the Registry data must be reflected in the Global Registry.	X	X	X	X	X	X	XX	X	X														
37	Registration of Catalogue Item changes only needs to happen for changes that: - Impact fields stored in the Global Registry. - Are authorized according to the GTIN allocation rules. Note: Authorized ... the Data Recipient indicates to the Data Source that the Data Recipient is taking some action in the direction of full Synchronization. The status is informative and does not change any behavior on the part of any actor in the Data Synchronization environment.	X	X	X	X	X	X	XX	X	X														
38	The change function implies a full refresh of all attributes of the previously created Catalogue Item – this will be reflected in the subsequent notification, including a full refresh of the changed record of the full hierarchy.	XX						X																

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39	The ability to provide incremental updates is: - optional – not required for data pool certification - functionality provided between the recipient's data pool and its users																			xx				
40	Incorrect core data (i.e. attributes that cannot be updated according to allocation rules) can only be updated through a specific correction functionality.		xx							x														
41	Correct Item Hierarchy must: - trigger syntactical and content validation - skip GTIN allocation rules validation - set a flag on the GTIN data record to inform the data recipient of the correction (see data distribution / notification) - the correction (see data distribution / notification) - the correction will also be reflected in the Global Registry if it impacts Registry data			xx						x														

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42	If the correction impacts the hierarchy, then it must be handled by deleting the incorrect ItemLink and adding a new Item Link - Add/Delete Scenario's.			XX			X		X	X														
43	If the correction does not impact the hierarchy, then ItemLink attributes will be updated through the correction command.			X						XX														
44	Notification of the hierarchy must indicate it is a correction.			XX						X														
45	Data source is sending full Hierarchies to the Source Data Pool.	XX	X	X	X	X	X																	
46	New hierarchy replaces old hierarchy completely.	X	XX	X	X	X																		
47	The objective of the "Delete" Function is not to physically remove data from the data pool, but to "Flag for deletion", authorizing the deletion of the data.					X					XX													
48	The deletion needs to be validated against a number of criteria, e.g. Item is no longer published, item discontinued, retention limit (EAN/UCC specifications)...					XX				X														
49	Rules for archiving or physical deletes will be agreed with the data pools and in the scope of the certification process.			X	X					X										XX				

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50	Deletions need to be reflected in the registry (deletion flag + effective change date = deletion date in the Global Registry)				x					xx														
51	To protect data integrity within the data pool, the deletion of a child can only occur after the deletion of the parents.				x					xx												x		
52	Validation for deleted Items ensures the parents have been deleted before the deletion of the child is performed.				x					xx												x		
53	Validation is automatically triggered by the "Delete" command and does not require a specific message flow.				x					x												xx		
54	Deletion of a Catalogue Item must trigger the invalidation of any hierarchy links involving that Item, whether that Item is the parent or the child in the link. This is completed by the Refresh.ItemLink message. Ackn.ItemLink will be repeated for every link that was refreshed or invalidated.				x					xx												x		

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55	Deletion needs to be validated against : - Publication status - Availability Status (end availability + discontinued Y/N) - Hierarchy : parents have to be deleted before children				x					x											xx			
56	The discontinuation dates starts the standard retention period depending on the sector as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry).			xx																				
57	A deletion cannot be corrected – only the discontinuation can be reversed.		x	x	x				x	xx														
58	Deletes are not synchronized across data pools.				x					xx								x						
59	ItemLinks can only be deleted: - as the correction of an error - as the result of a delete.Item		x		xx					x														
60	The validity period of a ItemLink is defined by the validity period of the Parent Item and/or the Child Item.				xx					x														

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61	When either parent or child expire, the related ItemLink(s) have to expire as well.				xx					x														
62	Cancel Catalogue Item is achieved through the maintenance (using change function) of the cancel date.					xx		x																
63	Need cancel date in Catalogue Item data model.					xx																		
64	Cancel date needs to be stored in the Global Registry.					xx		x																
65	Communicate that product is no longer available: maintain end availability date.					xx							x											
66	When product is available again: update start/end availability date.					xx						x	x											
67	Communicate the product is no longer going to be manufactured: discontinued = Y + effective change date = discontinued date in the Global Registry.			xx																				
68	Communicate the product is no longer going to be available: maintain end availability date.			xx																				
69	Data recipient maintains subscription.													xx		x								

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70	Data recipient will continue to receive updates until he rejects the data.													x	xx	x								
71	For a synchronization list / subscription, the reject will remove that GTIN from the synchronization list.															xx	x							
72	Reject is optional: in the absence of confirmation & reject, the data recipient would still receive updates.													x	xx	x								
73	Confirmed GTIN: - subscription: go to synchronization list - synchronization list: no action required															xx	x							
74	Only new products matching the initial subscription will be distributed to avoid resending data that was previously rejected.													x		xx								
75	Updates for confirmed products will be distributed based on the synchronization list.																	xx						
76	Confirmation (accept or synchronized) will indicate the data recipient's commitment to synchronize the data in its internal systems.																	xx						

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77	Filtering out rejected data is a source data pool responsibility.														X		XX							
78	Subscription: for every matching GTIN, independently from its level, all hierarchies will be returned.													XX	X	X	X							
79	Synchronization list: - Includes every GTIN id (GTIN+GLN+TM) that needs to be synchronized - Can be a result of the Confirmation process - All GTIN's equal or lower in the hierarchy than the GTIN confirmed will be returned													X	X	X	XX							
80	Rejection at the highest level of a hierarchy will trigger the rejection of all GTIN's in the hierarchy of the rejected GTIN.														X	X	XX							
81	Synchronization List is only synchronized between the involved source and recipient data pools for applicable data: synchronization list is built based on confirmation received by a source data pool and nothing else.													X	X	X	X	XX						
82	Maintaining a publication is granting visibility and access to data.											XX	X											

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83	Publications are initiated by the Data Source in the source data pool, they do not need to be synchronized in the Global Data Synchronization Network (GDSN).											xx	x											
84	The Target Market where product is available is communicated in the product key (GTIN+GLN+TM) – this can be different from the Target Market for publication.											xx	x											
85	Data is either published: - to a Target Market: any GLN in the Target Market has access to the data (only applies to “public” Items) - to specific GLN’s: only these GLN’s have access to the data (only applies to “private” Items)											xx	x											
86	The purpose of the public/private flag is to provide information to the parties involved on the status of the Catalogue Item.											xx	x											
87	Notification is triggered by the matching process.											xx	x											

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88	The matching process is owned and developed by each source data pool in order to trigger data distribution based on publication and subscription data.											xx	x	x	x	x	x	x						
89	The matching process can be triggered either by publication, subscription or as a scheduled event. It is valid for all subscription types (including synchronization list) and all publication types.											xx	x	x	x	x	x	x						
90	For a given subscription (create/update): - the matching process identifies Items published to the GLN or TM of the subscription owner. - for each item, a notification is created including all dependent hierarchies. - for a synchronization list, the hierarchy information included in the notification, will be limited to the GTIN's maintained in the Synchronization list. - The notification is sent to the home data pool of the data recipient.													xx	x	x	x							

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91	For a given publication (create/update) : - the matching process identifies subscriptions with matching criteria (TM, GLN, category, GTIN...) - for each matching subscription, a notification is created including all dependent hierarchies - for a synchronization list, the hierarchy information included in the notification, will be limited to the GTIN's maintained in the Synchronization list. - The notification is sent to the home data pool of the data recipient.												xx	x										
92	"Single Data Source" Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	x	x	x	x	x	x	x	x	x	x	x												

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93	Although the notification process will physically move the data from one data pool to another, this data should not be stored permanently for the purpose of synchronization with any other user than the initial subscriber. If stored, access should be limited to the initial data recipient.											xx	x					x						
94	Confirmation is not mandatory and can provide 4 outcomes: 1. Synchronized: data is integrated, in synch 2. Accept: Data has been received by the data recipient, but no business decision has been made on the data. 3. Reject: data will no longer be synchronized or updates will no longer be provided 4. Review: request to the data source to review their data and take action (applies to adds & changes) because the data recipient has received discrepant data which they cannot synchronize. If no confirmation is sent, data updates will continue to be pro-																xx							

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	vided until the data recipient accepts, rejects or updates the subscription, or until the data source changes the publication. For a new Catalogue Item the same confirmation can be used.																							
95	The list of authorized values for the confirmation message does not imply a sequence in which the message has to be used.																xx							
96	The same “confirmation” message can be used to stop synchronizing a Catalogue Item. In that case, the “Reject” status will be used to remove the Catalogue Item of the synchronization list.																xx							
97	“Synchronized” status is sent once – parties are assumed to be in synch unless a reject/review status is exchanged.																xx							
98	Note : rejection should not remove data previously authorized, for instance in a different hierarchy.														x		xx							

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99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	X	X		
100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	X	XX		

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101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	x	x	x	x	x	x	x	x	x	x	x									x	xx		
102	Registry validation is a part of the registration process.	x	x	x	x	x	x	xx	x	x	x	x									x	x		
103	Data Pool Validation includes the validation according to any other EAN.UCC standard applicable to the synchronized data and not included in the Global Registry validation scope.																				xx			
104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	x	x	x	x	x	x	xx	x	x	x	x									x	x		

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105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	x	x	x	x	x	x	xx	x	x	x	x									x	x		
106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	x	x	x	x	x	x	xx	x	x	x	x									x	x		
107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is	x	x	x	x	x	x	xx	x	x	x	x									x	x		

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	<p>updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules.</p> <p>3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients.</p> <p>4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry).</p> <p>5. Cancel Catalogue Item: Communicates a trade item was never</p>																							

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	<p>manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date.</p> <p>6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period.</p> <p>Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.</p>																							
108	<p>Registry requirements for registration are :</p> <ul style="list-style-type: none"> - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. <p>- ItemStatus needs to be included in GTIN data model to reflect</p>	x	x	x	x	x	x	xx	x	x	x	x									x	x		

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	validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.																							
109	A Data Recipient requests that it receive a “notification” when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient’s access to information as controlled by the data source through its source data pool.											X	X	X	X	X	X	X	X	XX				
110	After a Subscription is created, the Global Registry will then disseminate relevant subscriptions to appropriate Source Data Pools (current and future new data pools).													XX	X	X	X							

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111	Registry requirements for subscription are: - Receive and store subscriptions - Provide subscription acknowledgement - Matching process of subscriptions with Source Data Pools - Forward subscriptions													xx	x	x	x							
112	The data pool validation is the compliance checking of new or changed data versus EAN.UCC Global Data Standards, principles and rules, including: - EAN.UCC Item and Party data model validation - Syntax checks (field formats...) - Consistency checks (pick lists, authorized values...) - Legal checks (local data requirements...) - Quality checks (measurements, hierarchy representation...) This will be handled through a validation engine.																			x	xx			

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113	The Global Registry provider will be expected to store and distribute what has been described as a "Validation Engine". This software module will be executed by the data pools to ensure common standards compliance.																			xx	x			
114	Additionally, EAN.UCC standards should be stored centrally – potentially in the Global Registry by version.																			xx	x			
115	We recommend the adoption of a solution for Global Search based on the population of a meta data index in the Global Registry.																						xx	
116	The Global Registry includes: - item data - party data - data pool profiles - attributes required to enable Global Search with the use of meta data database (to be defined) - global validation rules required for validation engine (to be defined)																					xx		

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117	<p>Catalogue Item:</p> <ul style="list-style-type: none"> - GTIN - GLN of Data Source - Unique Item Identification - Target Market - Country Code [3166-1] - Sub-division code [3166-2] - EAN.UCC Classification [brick level] - Address of the source data pool (GLN used to look up url in data pool profile) - Registration Date - Deletion Date (default : 31.12.9999) - Cancel Date (default : 31.12.9999) - Discontinued Date (default : 31.12.9999) - Date and Time of last change (system date for every action on the Catalogue Item) <p>- Item Validation Information (including validation engine Version,</p>							xx														x		

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	validation date Date & Certificate ID) – certificate ID only has to be maintained at item creation time, periodic maintenance does not affect the Global Registry but is ensured in the data notification (notified certificate needs to be equal or higher than registry certificate)																							
118	Changes/corrections applied to the Global Registry are effective immediately.	X	X	X	X	X		XX	X	X														
119	Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.	X	X	X	X	X		XX	X	X	X													

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120	Global Search: - Additional Product ID - Item Description(s) - Product Type - Item Effective Date - Non-public indicator																						xx	
121	Party: - GLN - Start Availability Date of the Party - Deletion Date of the Party - Registration Date - Source Data Pool Pointer [GLN used to] - GLN of Data Source (*Data Source is actually the 'owner' of the GLN data - Date and Time of last change - Party Validation Information (including Version, Date & Certificate ID)						xx				x										x	x		

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122	Data Pool Profile: <ul style="list-style-type: none"> - GLN of the data pool - Name of data pool - Address of the Data Pool (IP or URL) - Creation date of data pool provider [for audit of set-up predating certification] - Start availability date of the Data Pool - End availability date of the Data Pool - Certification Start Date - Certification Expiration Date - Certification Status - Identification of the Certification Body - Certification ID (with version) 																				xx			
123	Recipient maintains a subscription, including the "Reload" flag.													xx	x									
124	The notification triggered by a subscription must also carry the "Reload" flag value.													xx	x									

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125	The Source Data Pool is responsible to reset the "Reload" flag once it sends all requested data.																	xx						
126	If a new Reload is needed, the Recipient must delete the previous Reload Subscription, then create a new Subscription with the "Reload" flag set.													xx	x			xx						
127	The Global Registry must distribute Subscriptions only to relevant Source Data Pools.																xx	x						
128	Source Data Pools must send notifications based on matching publications and subscriptions.										xx	x	x	x	x									
129	GTIN and Category are mutually exclusive subscription criteria as the Category is uniquely defined for a given GTIN, independently from the GLN and from the TM.													xx	x	x	x							

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130	GTIN, GLN (of Data Source), Target Market and Classification must be stored in the Global Registry, and are linked to the Source Data Pool(s) where the data can be found. For instance, if given a GTIN, the Global Registry will be able to return all the data pools where data can be found on that GTIN, independently from the GLN of the Data Source, the Target Market or the Category.																XX	X						
131	The distribution of subscriptions is either a scheduled event or is triggered by an other event.																XX	X						
132	The events that can trigger the distribution of a subscription are: - new/updated registration: check existing subscriptions, if new data pools are found : distribute subscriptions - new subscription: check existing registrations, if new data pools are found: distribute subscriptions - delete subscriptions: distribute "delete" to source data pools where subscription had been sent													X	X	XX	X							
133	Subscriptions cannot be updated, they are created or deleted.													X	XX	X	X							

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134	Subscriptions must be stored in the recipient's data pool.													X	X	XX	X							
135	For every subscription, the Registry must store the GLN of the Source Data Pool to which the subscription was sent and when it was sent.													X	X	XX	X							
136	Ability to identify new or updated registered Catalogue Items that match a subscription and forward the subscription to the Source Data Pool.													X	X	XX	X							
137	Match new subscriptions with registered Catalogue Items and forward the subscription to the Source Data Pool.													X	X	XX	X							
138	Publication Who : Data Source = source GLN What : Item record, identified by GTIN+GLN+TM Where : TM or GLN (= target GLN)												XX	X										
139	Subscription Who : Data Recipient = target GLN What : Any combination of GTIN, GLN, TM and Category													X	X	XX	X							

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140	Publication TM does not have to be equal to the GTIN TM (i.e. I can have a product record defined for TM France, but publishing the data to Belgium only for information purposes).											xx	x											
141	Deletion of a Subscription stops New Catalogue Items from being sent to RDP, but, doesn't stop Catalogue Items already in the Synchronization List from being updated.													x	xx	x	x							
142	Request for Notification is not retained in the Global Registry and acts like a Subscription that is applied to the Synchronization List, then deleted (no New Catalogue Item data will be sent).													x	x	xx	x							
143	"Reload" flag is passed through to Recipient.													x	x	x	x	x	xx					
144	Request for publication (subscription) resets the reject flag if catalogue Item has been previously rejected and reactivate the subscription.											xx	x	x	x	x	x							
145	The request for publication subscription is only executed once.											xx	x	x	x	x	x							

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146	Subscriptions are passed from global Registry to data pools just once. The Global Registry passes along to the source data pool matching subscriptions in the entirety, rather than replicating for each GTIN registered.											X	X	X	X	XX	X							
147	Request for notification publication (subscription) resets the reject flag if the Catalogue Item has been previously rejected and reactivate the subscription.											X	X	X	X	XX	X							
148	The "Reload" attribute will contain a Boolean value (TRUE or FALSE).											X	X	X	X	XX	X							
149	Upon execution of an item data notification, the source data pool will pass along the value of this attribute within the message for the recipient to properly route the inbound message											X	X	X	X	XX	X							

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150	The team identified the need for an additional process to be known as "Request for Notification". The Request for Notification is originated by the requesting data recipient, through the recipient data pool, to the Global Registry and forwarded to the Source Data Pool.											X	X	X	X	XX	X							
151	The team wanted to reiterate the fact that new subscriptions received by a source data pool would be executed immediately a single time.											X	X	X	X	XX	X							
152	The ability to set up a subscription and not get an initial full load of data. She wants to only receive the changes, adds, deletes and new items that match her subscription. (This is the same as a regular subscription with the exception of not getting the initial load.											X	X	X	X	XX	X							

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153	The Global Registry and the data pools should be able to process current and previous versions of the Catalogue Item Synchronization messages. The Global Registry and the data pools should also be able to process a new version within a certain time frame.																			xx				
154	The Global Registry shall send only once a subscription to a Source Data Pool.											x	x	x	x	xx	x							
155	Data Sources will publish trade items at the highest level of the hierarchy.										xx	x												
156	Subscription matches are performed at any level of the hierarchy. The data recipient is sent all hierarchies that match.										xx	x	x	x	x									
157	Confirmations will be done at the highest level of the published trade item hierarchy.																xx							
158	Top of hierarchy is assumed to be the largest available unit determined by the data source. Defined as the GTIN of the highest published item in the hierarchy.										x	x					xx							

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159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	x		x	x	x	x					x							xx	x				
160	Catalogue Item Confirmations (CIC) for the item at the top level of the hierarchy with a status of reject will stop publications of the whole hierarchy.																	xx						
161	A CIC with a status of Rejected, Accepted, Review or Synchronized sent for an item below the highest level of the published item hierarchy will result in a CIC failure.																	xx						
162	To stop the publication of a hierarchy to data recipient, a CIN (with a Document Command of Delete and a CIN Catalogue Item State which equals the current catalogue item state in the Global Registry) will be sent from the source data pool to the recipient data pool and on to the data recipient.												xx											
165	Publication deletes must be done at highest level of the published item hierarchy.												x											

Business Solution Design

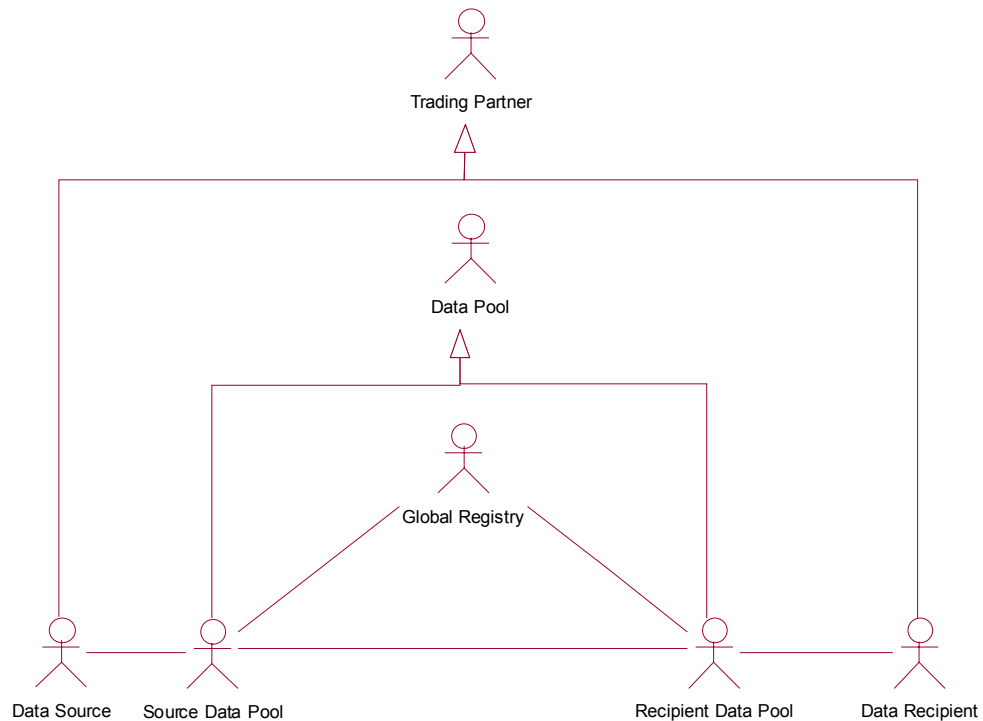
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166	<p>A Request for Catalogue Item Notification with the isReload set to false will result in items being re-sent whether they were previously rejected or not. The Sync List will be reset. This is only valid for items that have previously been sent to the data recipient.</p> <p>The CIN response will have the following values:</p> <ul style="list-style-type: none">documentStatus= OriginalisReload = FalseCommand= Add												X										X	
167	<p>A Request for Catalogue Item Notification with the isReload set to true will result in only items not previously rejected being re-sent. The Sync List is not reset. The CIN response will have the following values:</p> <ul style="list-style-type: none">documentStatus= CopyisReload = TrueCommand= Add												X										X	

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Req ID	Business Requirement Description	UC-3 Add Catalogue Item Hierarchy	UC-4 Change Catalogue Item Hierarchy	UC-5 Correct Catalogue Item Hierarchy	UC-6 Discontinue Catalogue Item	UC-25 Delete Catalogue Item Hierarchy	UC-7 Cancel Catalogue Item	UC-18 Register Catalogue Item	UC-19 Change Registered Catalogue Item	UC-20 Correct Registered Catalogue Item	UC-21 Delete Registered Catalogue Item	UC-23 Manage Catalogue Item Distribution Criteria	UC-24 Publish Catalogue Item Data	UC-34 Stop Publishing Catalogue Item Data	UC-27 Subscribe to Catalogue Item Data	UC-28 Remove Catalogue Item Subscription	UC-35 Distribute Subscription Data	UC-43 Distribute Confirmation Data	UC-37 Distribute Catalogue Item Data from SDP to RDP	UC-38 Distribute Catalogue Item Data from RDP to Recipient	UC-32 Validate Data Pool	UC-33 Validate Catalogue Item Data for Global Registry	UC-31 Global Search	UC-48 Request Catalogue Item Data
168	The Document Status of the RFCIN command is ignored for the purposes of determining its impact on the sync list and the status of the CIN that is generated.											X											X	
169	The Global Registry shall retain and persist all Catalogue Item Subscriptions that are received that contain a GTIN or GLN that is not found in the Global Registry.													X										
171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	

1.5 Business Transaction View

1.5.1 Business Transaction Use Case Diagram



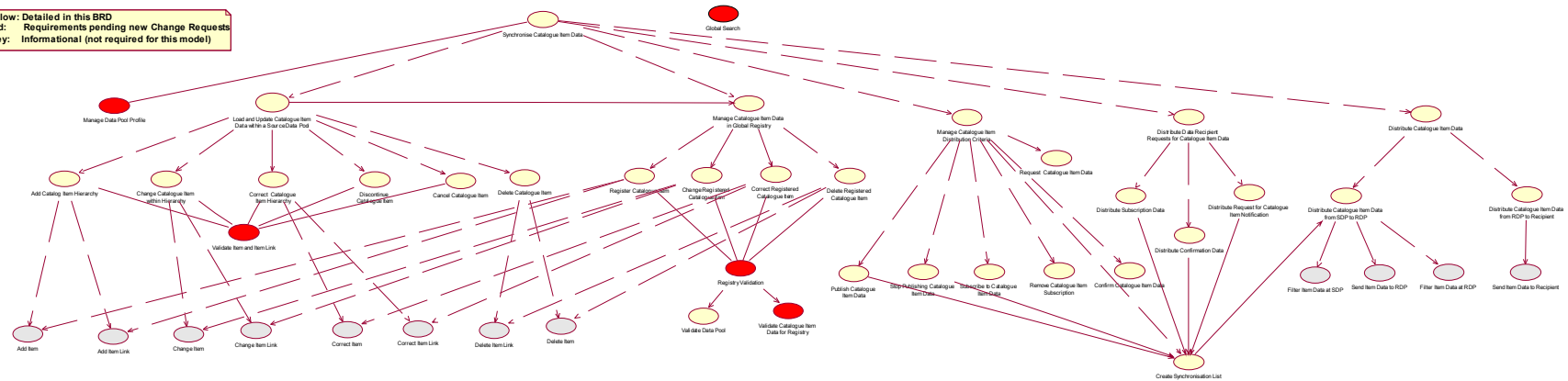
Notation:
Stick Figures: People, Companies or Systems that interact with the system under study. They can also represent roles that are performed by these entities.

Lines with large open arrows:
This is a Generalisation. It shows that one actor (non arrow end) is a more specific type of another actor (arrow end).

Lines without arrows:
This is an association. It shows that two actors are associated and participate in processes together.

Business Solution Design

Yellow: Detailed in this BRD
 Red: Requirements pending new Change Requests
 Grey: Informational (not required for this model)



Yellow: Detailed in this BRD
Red: Requirements pending new Change Requests
Grey: Informational (not required for this model)

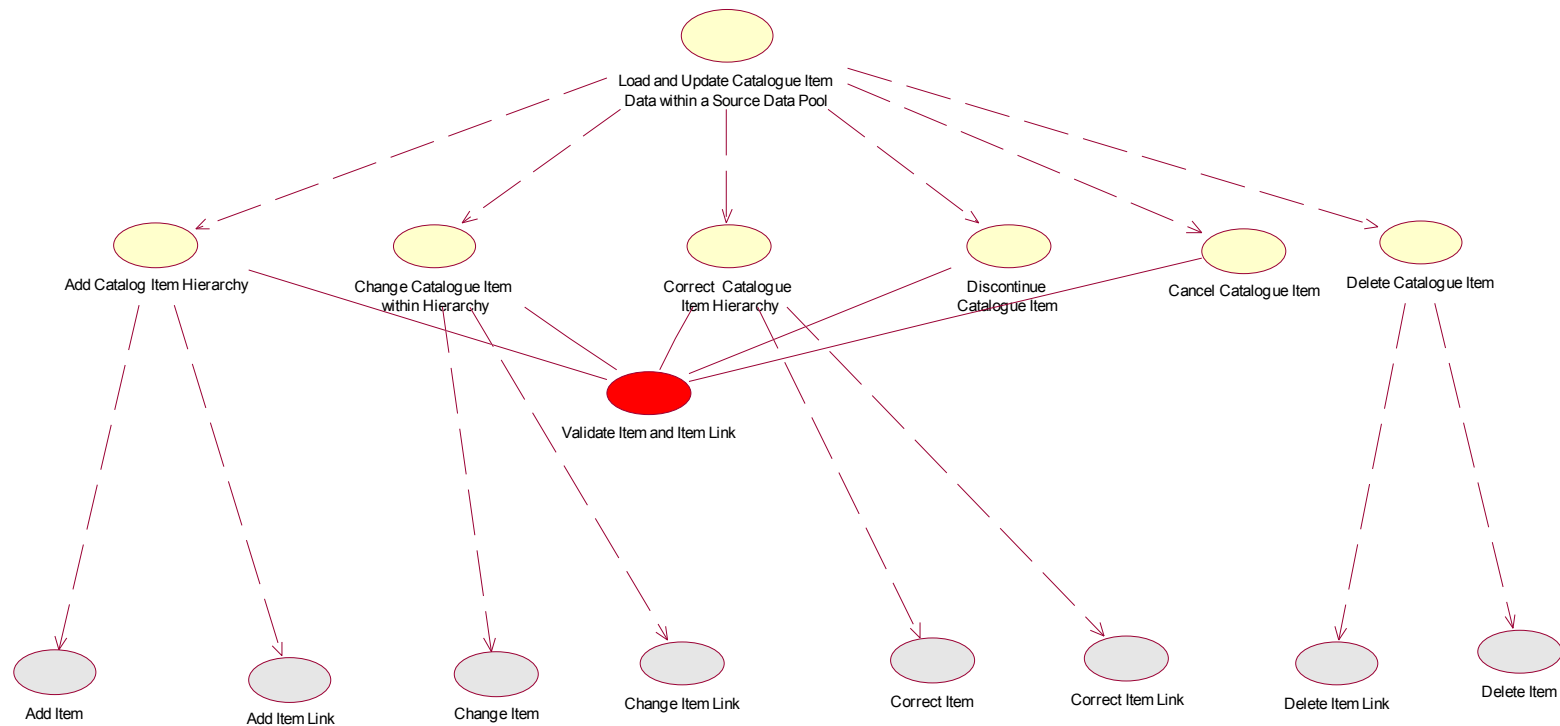


Figure 1 - Load and Update Catalogue Item Data within a Source Data Pool Use Case Diagram

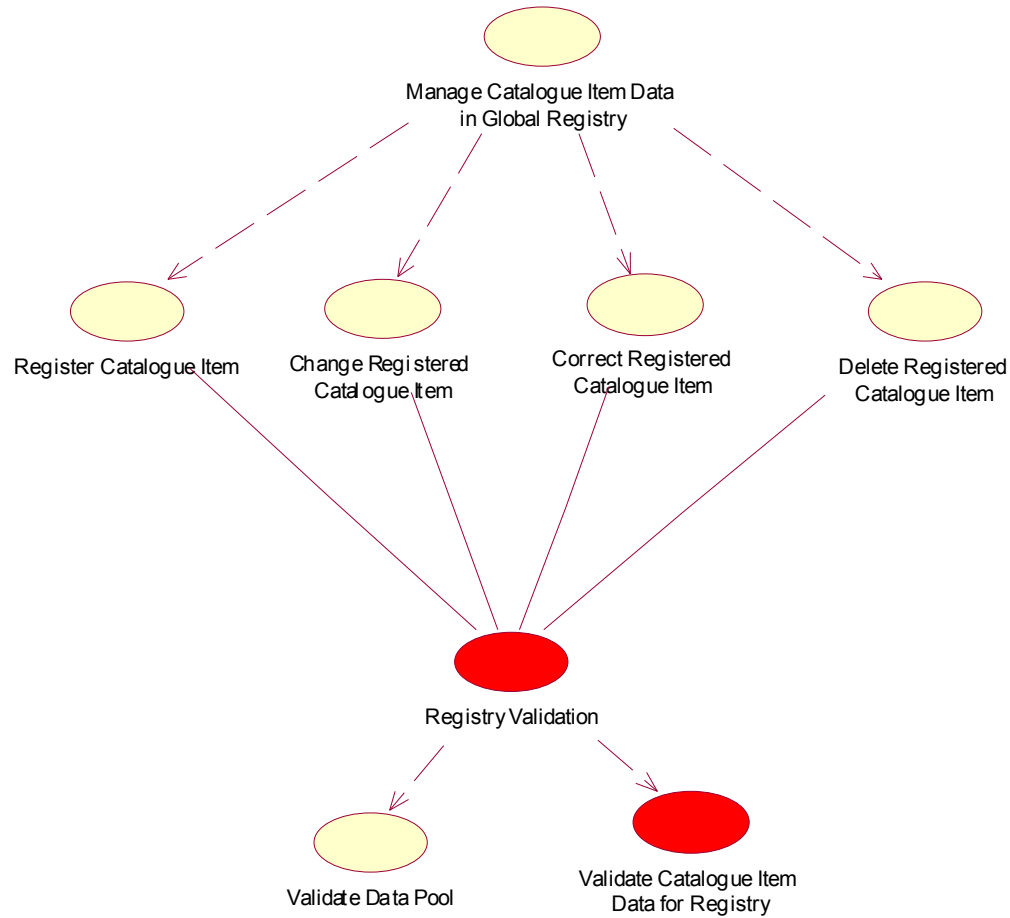


Figure 2 - Manage Catalogue Item Data in Global Registry Use Case Diagram

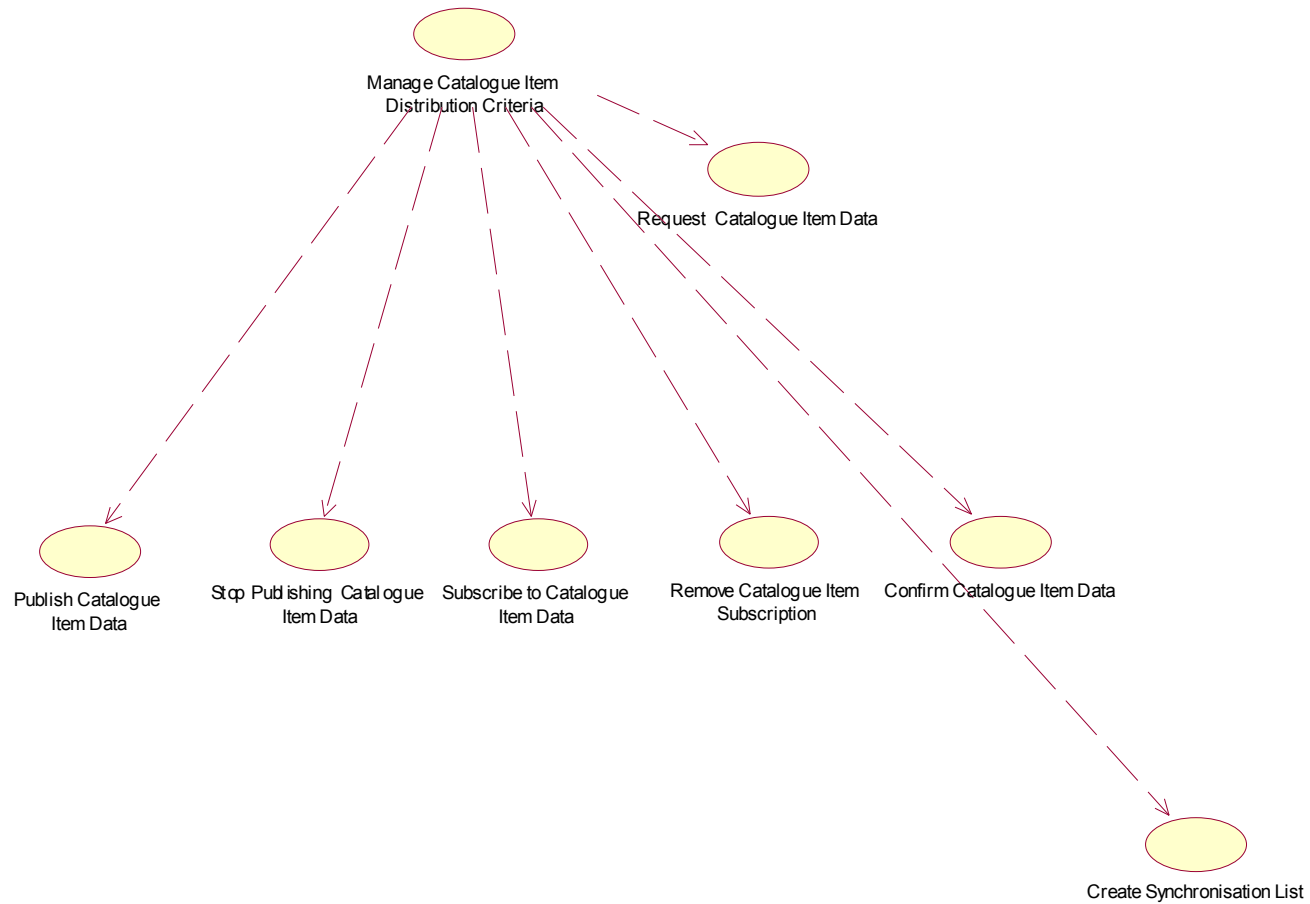


Figure 3 – Manage Catalogue Item Distribution Criteria Use Case Diagram

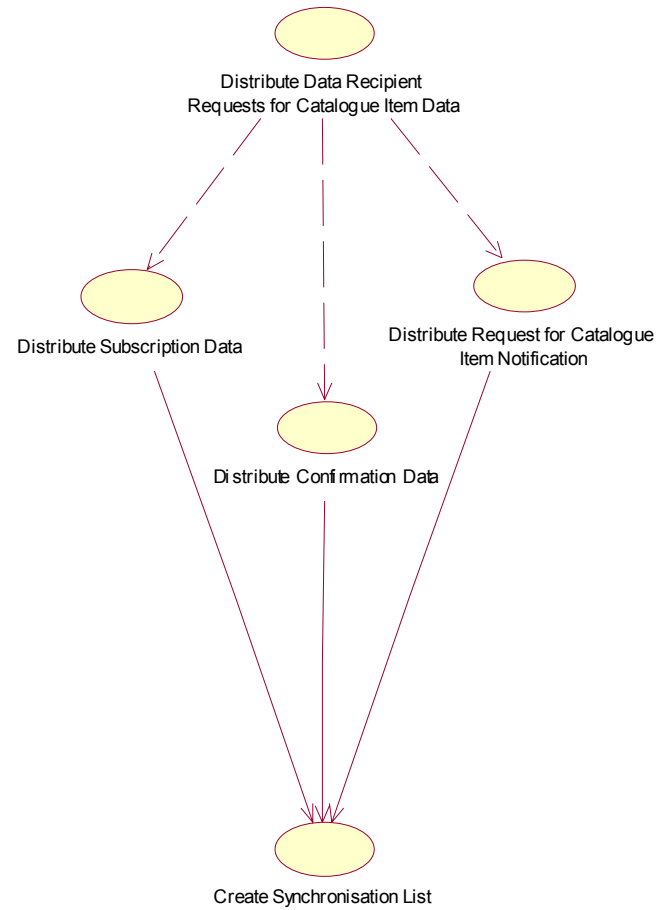


Figure 4 - Distribute Data Recipient Requests Use Case Diagram

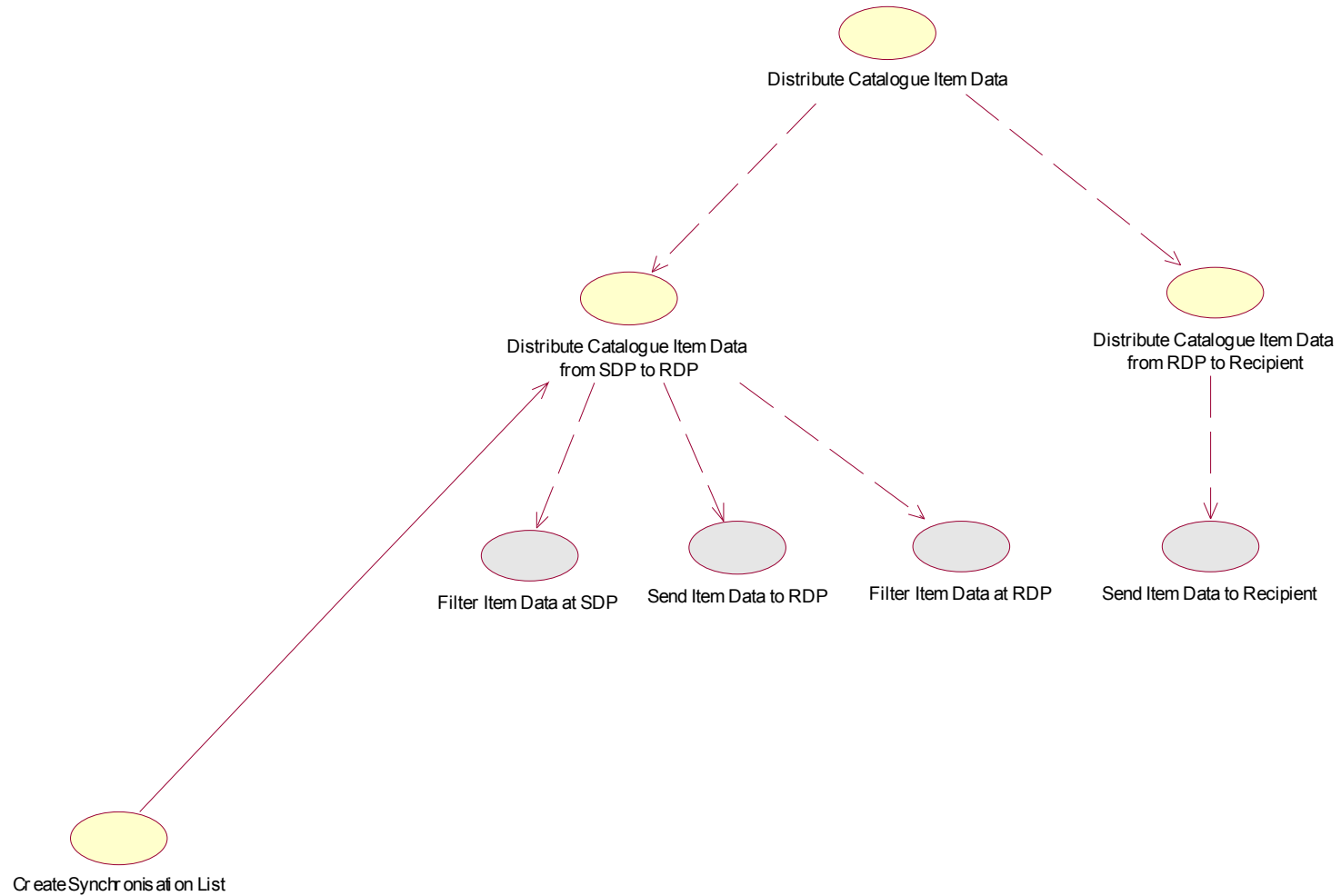


Figure 5 - Distribute Catalogue Item Data Use Case Diagram

1.6 Summary Use Cases

1.6.1 Global Search

Use Case Name	Global Search	
Traceability Identifier	UC-31	
Use Case Description	<p>The Global Search feature of Data Synchronization will be defined as directed by GSMP Change Request 02-000152.</p> <p>Preliminarily, the Guiding Principles are:</p> <ol style="list-style-type: none">will have:<ol style="list-style-type: none">parametric searchwild card searchdrop down list for searchingTarget Market specificity (language & currency)Must be enabled for imagesMust have ability to drill down enough to EAN.UCC classification structuresAbility to search by specific languagewill have the ability to search to the attribute level.will have a request for publication functionalitysearch engine will be housed at the home data poolGlobal Search functionality will be facilitated by the Global Registry <p>As a summary Use Case, specific processes will be further defined in the Detail Use Case section of this document.</p>	
Use Cases Above	UC-1: Synchronize Catalogue Item Data	
Use Cases Below		
Actors	Source Data Pool (SDP) Global Registry Recipient Data Pool (RDP) Data Recipient	
Performance Goals	<p>SDP: To ensure that Data Source provided Catalogue Item Data is searchable by Recipient Data Pools.</p> <p>RDP: To find Catalogue Item Data that matches the Data Recipient's search criteria.</p> <p>Data Recipient: To find Catalogue Item Data available in the Target Markets served by the Data Recipient.</p> <p>Global Registry: To ensure that Catalogue Item Data can be found by Recipient Data Pools.</p>	

Preconditions	
Postconditions	
Scenario	
Alternative Scenario	
Special Requirements	•
Extension Points	N/A
Requirements Covered	•

1.6.2 Synchronize Catalogue Item Data

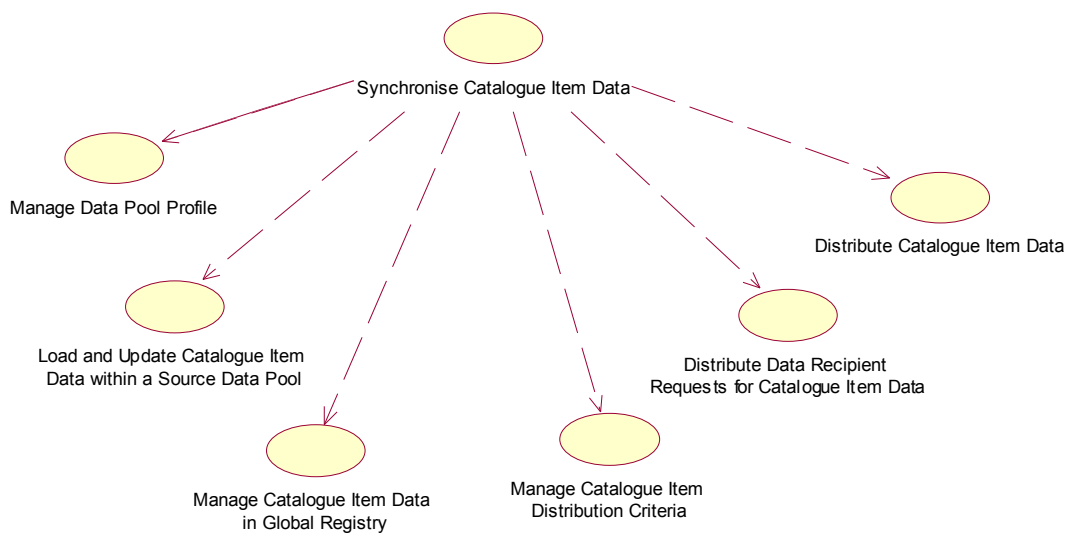


Figure 6 - Synchronize Catalogue Item Data Use Case Diagram

Use Case Name	Synchronize Catalogue Item Data
Traceability Identifier	UC-1
Use Case Description	<p>The process of continuous harmonization of information between all trading partners within the supply chain through the use of Align Data standards.</p> <p>The salient points for synchronization are: synchronization is a process, it is auditable, must utilize industry standards (i.e. EAN.UCC), the data exchanged must be compliant with these standards, the recipient (i.e. the buyer) must acknowledge the integration of the data, and continuous updates must be applied.</p> <p>As a summary Use Case, specific processes will be further defined in the Detail Use Case section of this document.</p>

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Use Cases Above	None
Use Cases Below	UC-30: Manage Data Pool Profile UC-2: Load and Update Catalogue Item Data within a Source Data Pool UC-46: Manage Catalogue Item Data in Global Registry UC-23: Manage Catalogue Item Distribution Criteria UC-47: Distribute Data Recipient Requests UC-29: Distribute Catalogue Item Data
Actors	Data Source Source Data Pool (SDP) Global Registry Recipient Data Pool (RDP) Data Recipient
Performance Goals	Data Source: To have Catalogue Item Data available to Data Recipients. SDP: To have Data Source provided Catalogue Item Data is searchable by Recipient Data Pools. RDP: To find Catalogue Item Data that matches the Data Recipient's search criteria. Data Recipient: To find Catalogue Item Data available in the Target Markets served by the Data Recipient. Global Registry: To ensure that Catalogue Item Data can be found by Recipient Data Pools.
Preconditions	
Postconditions	
Scenario	
Alternative Scenario	
Special Requirements	<ul style="list-style-type: none">•
Extension Points	N/A
Requirements Covered	<ul style="list-style-type: none">•

1.6.3 Manage Data Pool Profile

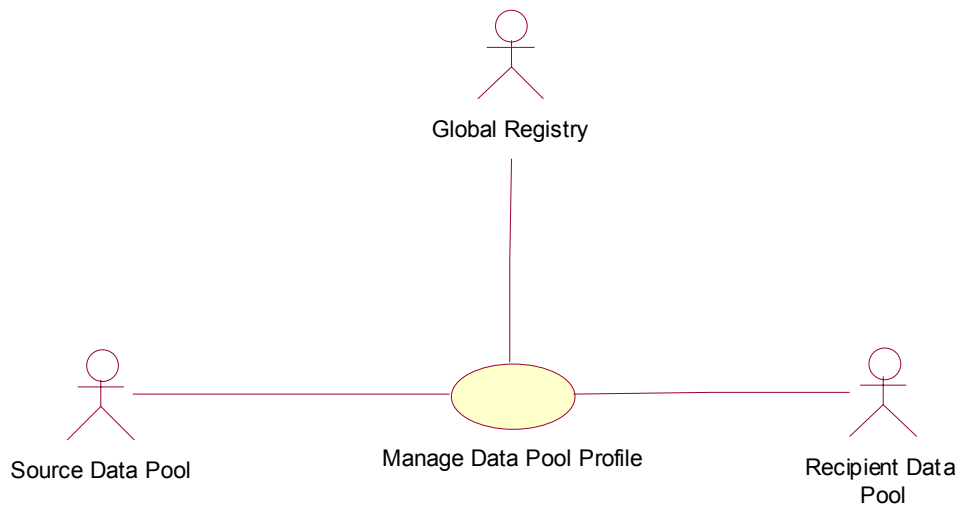


Figure 7 - Manage Data Pool Profile Use Case Diagram

Use Case Name	Manage Data Pool Profile	
Traceability Identifier	UC-30	
Use Case Description	<p>The maintenance and storage of certified data pool information in the Global Registry, defining all the actors in the interoperable network and allowing any actor to retrieve information about the others. Additional requirements are needed for the Data Pool Profile Use Case.</p> <p>As a summary Use Case, specific processes will be further defined in the Detail Use Case section of this document.</p>	
Use Cases Above	UC-1: Synchronize Catalogue Item Data	
Use Cases Below		
Actors	Source Data Pool (SDP) Global Registry Recipient Data Pool (RDP)	
Performance Goals	<p>SDP: To be able to obtain the address or URL of the RDP.</p> <p>RDP: To make available their address (URL) to SDPs.</p> <p>Global Registry: To be able to identify the Data Pools in the Synchronization process.</p>	
Preconditions		

Postconditions	
Scenario	
Alternative Scenario	
Special Requirements	
Extension Points	N/A
Requirements Covered	

1.6.4 Load and Update Catalogue Item Data within a Source Data Pool

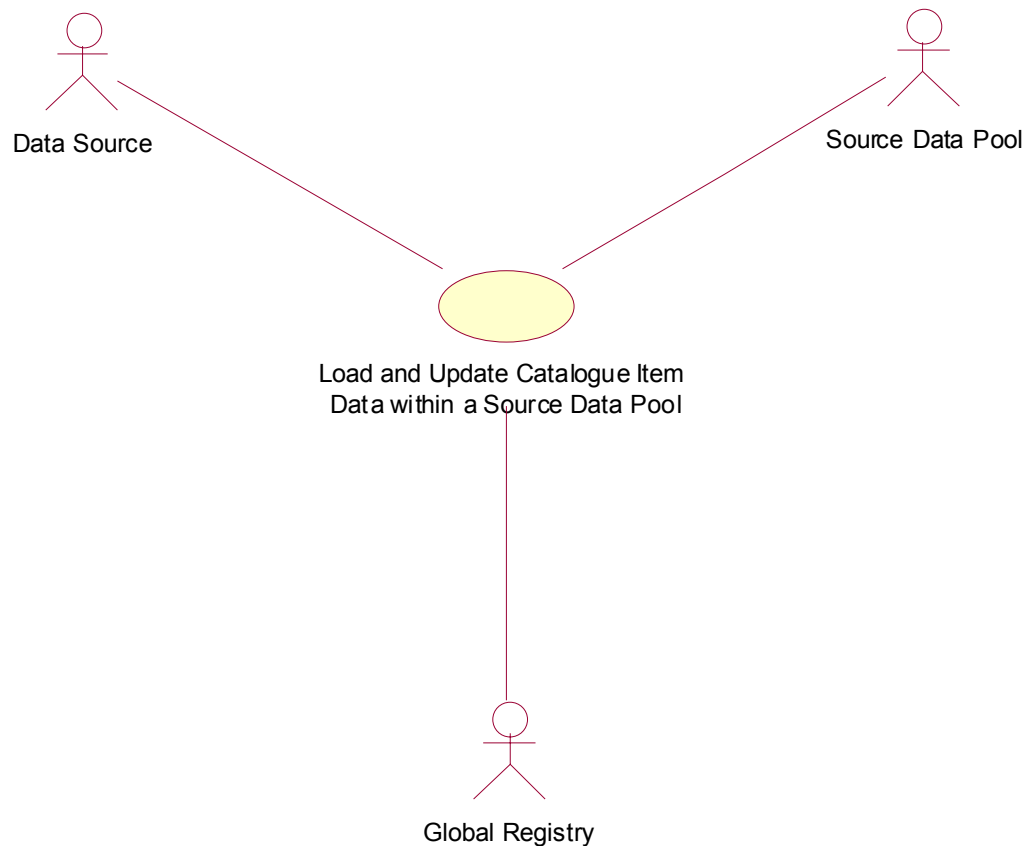


Figure 8 - Load and Update Catalogue Item Data within a Source Data Pool Use Case Diagram

Use Case Name	Load and Update Catalogue Item Level Data within Source Data Pool
Traceability Identifier	UC-2
Use Case Description	<p>This Use Case describes the processes that need to take place for Catalogue Item data to be transferred from the Data Source to the Source Data Pool, be validated and registered in the Global Registry. After this process, Catalogue Item data may be distributed to Recipients according to the distribution rules described in the Manage Catalogue Item Data Distribution Criteria Use Cases.</p> <p>As a summary Use Case, specific processes will be further defined in the Detail Use Case section of this document.</p>
Use Cases Above	UC-1: Synchronize Catalogue Item Data
Use Cases Below	UC-3: Add Catalogue Item Hierarchy UC-4: Change Catalogue Item Hierarchy UC-5: Correct Catalogue Item Hierarchy UC-25: Delete Catalogue Item Hierarchy UC-7: Cancel Catalogue Item
Actors	Data Source Source Data Pool (SDP) Global Registry
Performance Goals	<p>Data Source: To have validated, registered Catalogue Item Hierarchy data in their Source Data Pool.</p> <p>SDP: To have validated, registered Catalogue Item Hierarchy data.</p> <p>Global Registry: To ensure valid, unique Catalogue Item data are registered.</p>
Preconditions	Data Source has defined Catalogue Item data and Catalogue Item hierarchies using Item Links.
Postconditions	Data Source knows that Catalogue Item data has been validated and registered and Item Links have been validated.
Scenario	<p>Begins when, the Data Source sends, to the SDP, Catalogue Item Hierarchy data.</p> <ol style="list-style-type: none">1. The SDP validates the Catalogue Item Hierarchy data2. The SDP sends Catalogue Item Data to the Global Registry3. The Global Registry validates and registers the Catalogue Item Data4. The SDP stores the Catalogue Item Hierarchy data5. The SDP notifies the Data Source of Registration <p>Ends when, the Data Source receives acknowledgement of the registration</p>

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	<p>6. Some time later, the Data Source updates the Catalogue Item Hierarchy data and sends it to SDP</p> <p>7. The SDP validates the Catalogue Item Hierarchy data</p> <p>8. The SDP sends pertinent Catalogue Item Data updates to the Global Registry</p> <p>9. The Global Registry validates and updates the Catalogue Item Data</p> <p>10. The SDP stores the new Catalogue Item Hierarchy data</p> <p>11. The SDP notifies the Data Source of Updates</p> <p>Ends when, the Data Source receives acknowledgement of the registration</p>
Alternative Scenario	<p>ad 1 & 7. Validation fails:</p> <p>1.1. / 7.1. SDP sends an validation error message to the Data Source</p> <p>Ends when, the Data Source receives the validation error message</p> <p>ad 3 & 9. Validation fails at the Global Registry</p> <p>3.1 / 9.1. Global Registry sends a registration error message to the SDP</p> <p>3.2 / 9.2. The SDP receives the registration error message and passes it to the Data Source</p> <p>Ends when, the Data Source receives the registration error message</p> <p>** SDP may not send Catalogue Item data to Registry for Uniqueness check w/o Registration.</p>
Special Requirements	<ul style="list-style-type: none">• Data Source is using a (source) data pool.• Catalogue Item Hierarchy data consists of Catalogue Item data and Item Link data (if applicable).
Extension Points	N/A
Requirements Covered	

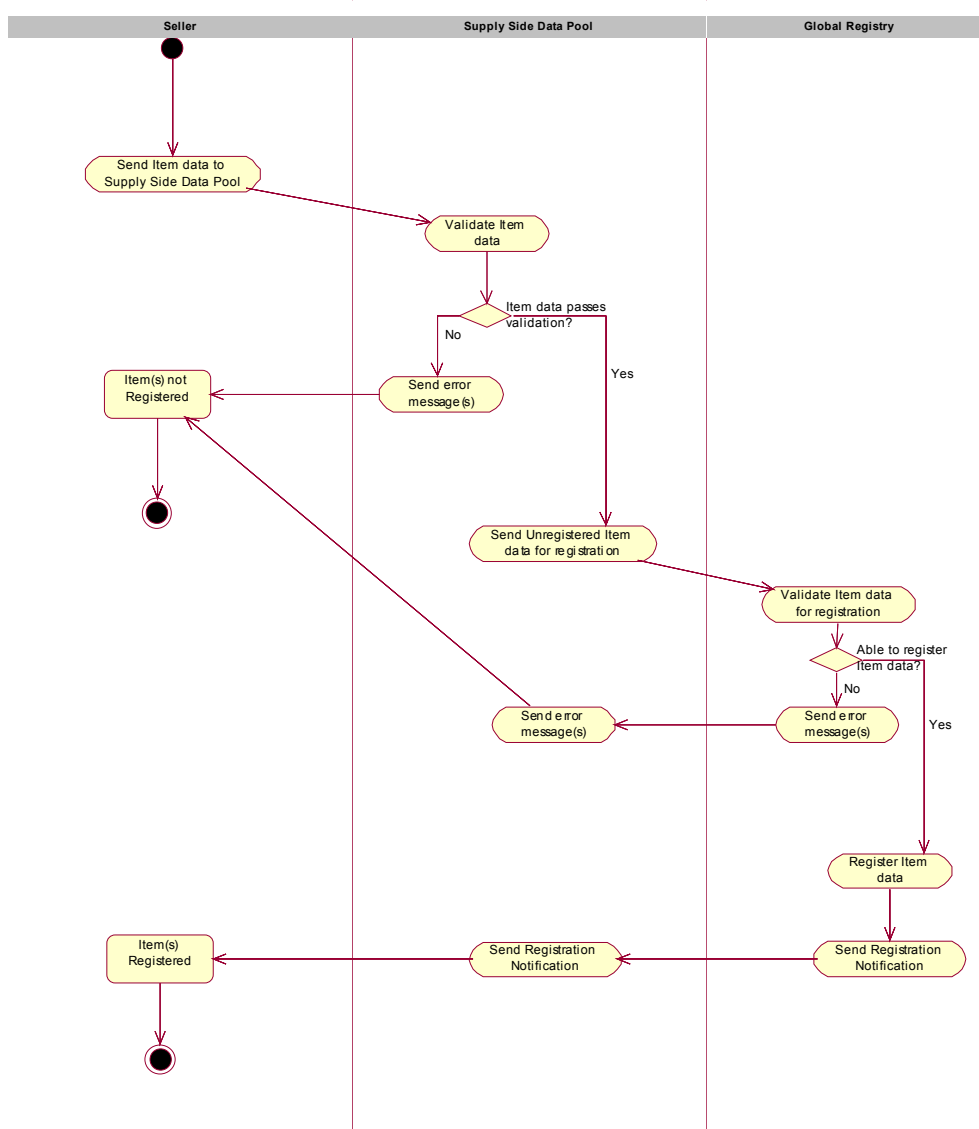


Figure 9 - Load and Update Catalogue Item Data within a Source Data Pool Activity Diagram

1.6.5 Manage Catalogue Item Data in Global Registry

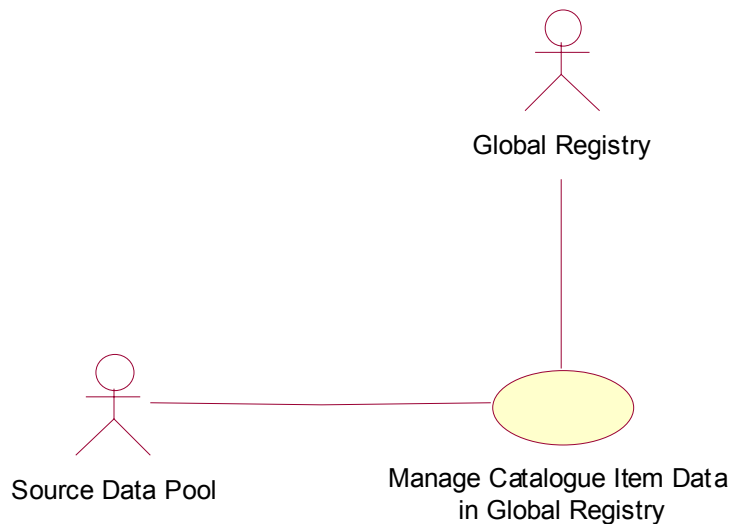


Figure 10 - Manage Catalogue Item Data in Global Registry Use Case Diagram

Use Case Name	Manage Catalogue Item Data in Global Registry
Traceability Identifier	UC-46
Use Case Description	<p>This use case describes the processes that need to take place for Catalogue Item Data to be registered in the Global Registry.</p> <p>As a summary Use Case, specific processes will be further defined in the Detail Use Case section of this document.</p>
Use Cases Above	UC-1: Synchronize Catalogue Item Data
Use Cases Below	UC-18: Register Catalogue Item UC-19: Change Registered Catalogue Item UC-21: Delete Registered Catalogue Item UC-17: Registry Validation UC-32: Validate Data Pool UC-33: Validate Catalogue Item Data for Registry
Actors	Source Data Pool (SDP) Global Registry
Performance Goals	<p>SDP: To have validated, registered Catalogue Item Hierarchy data.</p> <p>Global Registry: To ensure valid, unique Catalogue Item data are registered.</p>
Preconditions	Data Source has defined Catalogue Item data and Catalogue Item hierarchies using Item Links.

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Postconditions	Data Source knows that Catalogue Item data has been validated and registered and Item Links have been validated.
Scenario	See detailed Use Cases for Scenarios
Alternative Scenario	
Special Requirements	<ul style="list-style-type: none">• Data Source is using a (source) data pool.• Catalogue Item Hierarchy data consists of Catalogue Item data and Item Link data (if applicable).
Extension Points	N/A
Requirements Covered	

1.6.6 Manage Catalogue Item Distribution Criteria

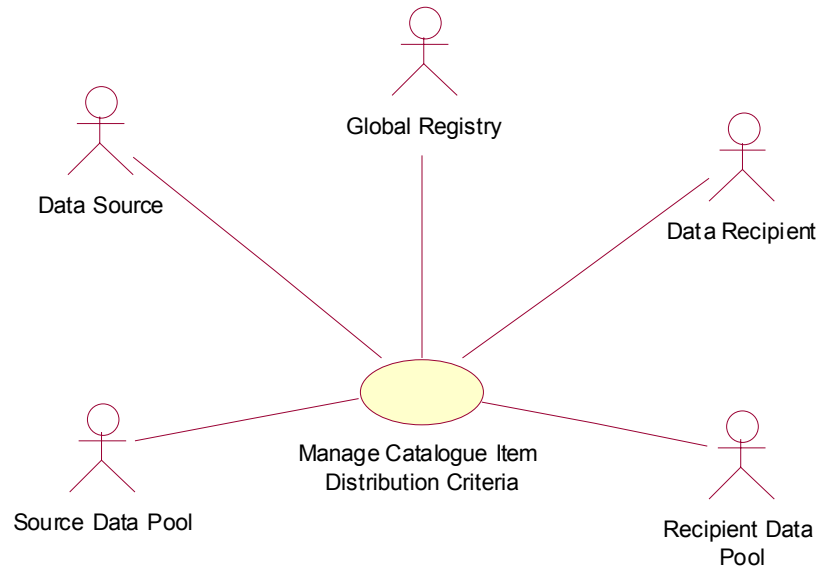


Figure 11 - Manage Catalogue Item Distribution Criteria Use Case Diagram

Use Case Name	Manage Catalogue Item Distribution Criteria
Traceability Identifier	UC-23
Use Case Description	<p>This Use Case describes the processes that need to take place for Publications, Subscriptions and Confirmations to be moved throughout the Synchronization System.</p> <p>As a summary Use Case, specific processes will be further defined in the Detail Use Case section of this document.</p>
Use Cases Above	UC-1: Synchronize Catalogue Item Data
Use Cases Below	UC-24: Publish Catalogue Item Data UC-34: Stop Publishing Catalogue Item Data UC-27: Subscribe to Catalogue Item Data UC-28: Remove Catalogue Item Subscription UC-26: Confirm Catalogue Item Data
Actors	Data Source Source Data Pool (SDP) Global Registry Recipient Data Pool (RDP) Data Recipient
Performance Goals	Data Source: To have Catalogue Item publications available to the SDP for matching with Subscriptions.

	<div>SDP: To have the proper criteria (Publications, Subscriptions and Confirmations) to allow distribution of Catalogue Item data to Data Recipients (via their Recipient Data Pool).</div> <div>Global Registry: To be able to distribute Catalogue Item Subscriptions to the proper Source Data Pools.</div> <div>RDP: To ensure Catalogue Item Subscriptions match the data that is being sent by SDPs.</div> <div>Data Recipients: To control the type and volume of Catalogue Item Data received.</div>																								
Preconditions																									
Postconditions																									
Scenario	See detailed Use Cases for Scenarios																								
Alternative Scenario																									
Special Requirements	<div>•</div>																								
Extension Points	N/A																								
Requirements Covered	<table><tr><th>ID</th><th>Requirement</th><th>Weight</th></tr><tr><td>REQ-12</td><td>Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure</td><td>Primary</td></tr><tr><td>REQ-13</td><td>The Data Source grants visibility of item, party and partner profiles including party capabilities data to a given list of parties (identified by their GLNs) or to all parties in a given Target Market.</td><td>Secondary</td></tr><tr><td>REQ-20</td><td>Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.</td><td>Secondary</td></tr><tr><td>REQ-21</td><td>If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.</td><td>Secondary</td></tr><tr><td>REQ-22</td><td>Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.</td><td>Secondary</td></tr><tr><td>REQ-23</td><td>Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process</td><td>Primary</td></tr><tr><td>REQ-24</td><td>Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item</td><td>Primary</td></tr></table>	ID	Requirement	Weight	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary	REQ-13	The Data Source grants visibility of item, party and partner profiles including party capabilities data to a given list of parties (identified by their GLNs) or to all parties in a given Target Market.	Secondary	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Secondary	REQ-21	If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Secondary	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Secondary	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
ID	Requirement	Weight																							
REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary																							
REQ-13	The Data Source grants visibility of item, party and partner profiles including party capabilities data to a given list of parties (identified by their GLNs) or to all parties in a given Target Market.	Secondary																							
REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Secondary																							
REQ-21	If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Secondary																							
REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Secondary																							
REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary																							
REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary																							

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	REQ-25	The Data Distribution, which is the movement of data from one entity to another, must be handled through a specific notification type.	Primary
	REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Primary
	REQ-27	In case of an ItemLink correction, the entire hierarchy will be indicated as corrected in the notification.	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Secondary
	REQ-92	"Single Data Source" Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
	REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
	REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
	REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
	REQ-102	Registry validation is a part of the registration process.	Primary
	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary

	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.	Primary
	REQ-108	Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.	Primary
	REQ-109	A Data Recipient requests that it receive a “notification” when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient’s access to information as controlled by the data source through its source data pool.	Primary
	REQ-119	Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.	Primary
	REQ-121	Party: - GLN - Start Availability Date of the Party - Deletion Date of the Party - Registration Date - Source Data Pool Pointer [GLN used to ...] - GLN of Data Source (*Data Source is actually the ‘owner’ of the GLN data - Date and Time of last change - Party Validation Information (including Version, Date & Certificate ID)	Primary
	REQ-128	Source Data Pools must send notifications based on matching publications and subscriptions.	Secondary
	REQ-156	Subscription matches are performed at any level of the hierarchy. The data recipient is sent all hierarchies that match.	Secondary

1.6.7 Distribute Data Recipient Requests for Catalogue Item Data

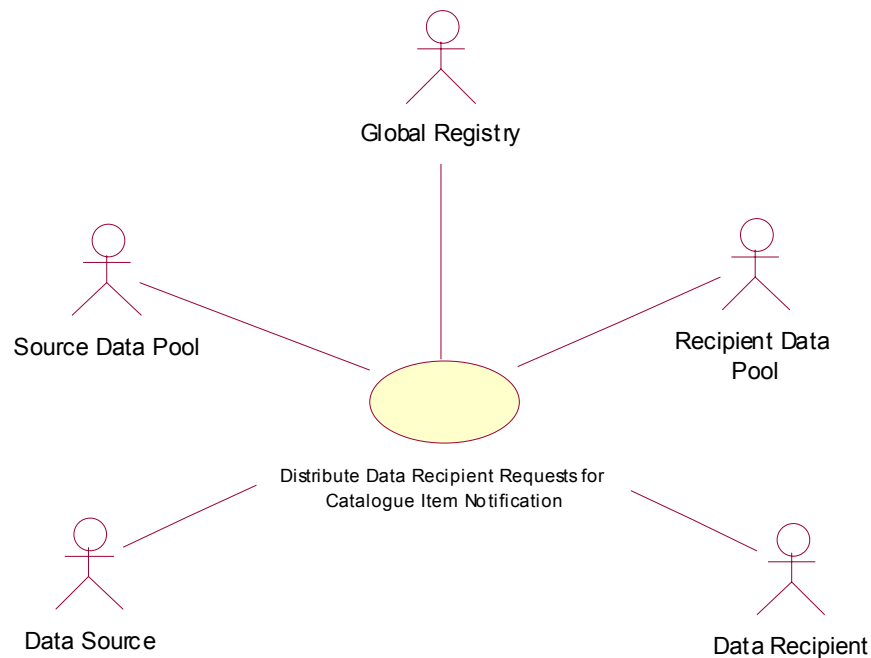


Figure 12 - Distribute Data Recipient Request for Catalogue Item Data Use Case Diagram

Use Case Name	Distribute Data Recipient Requests for Catalogue Item Data
Traceability Identifier	UC-47
Use Case Description	<p>This Use Case describes the processes that need to take place for Publications, Subscriptions and Confirmations to be moved throughout the Synchronization System.</p> <p>As a summary Use Case, specific processes will be further defined in the Detail Use Case section of this document.</p>
Use Cases Above	UC-1: Synchronize Catalogue Item Data
Use Cases Below	UC-35: Distribute Subscription Data UC-43: Distribute Confirmation Data UC-22: Distribute Request for Notification
Actors	Data Source Source Data Pool (SDP) Global Registry Recipient Data Pool (RDP) Data Recipient
Performance Goals	Data Source: To obtain a copy of all subscriptions. SDP: To have the proper criteria (Publications, Sub-

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	<p>scriptions and Confirmations) to allow distribution of Catalogue Item data to Data Recipients (via their Recipient Data Pool).</p> <p>Global Registry: To be able to distribute Catalogue Item Subscriptions to the proper Source Data Pools.</p> <p>RDP: To ensure Catalogue Item Subscriptions match the data that is being sent by SDPs.</p> <p>Data Recipients: To control the type and volume of Catalogue Item Data received.</p>
Preconditions	
Postconditions	
Scenario	See detailed Use Cases for Scenarios
Alternative Scenario	
Special Requirements	<ul style="list-style-type: none">•
Extension Points	N/A
Requirements Covered	

1.6.8 Distribute Catalogue Item Data

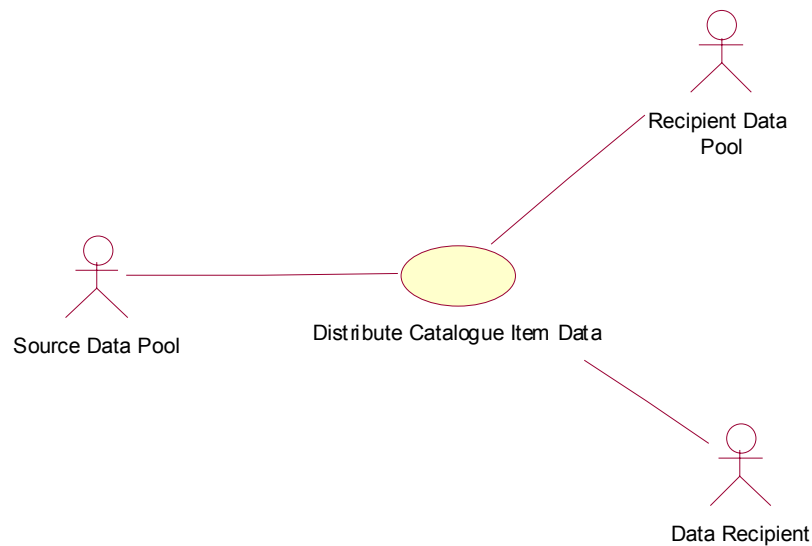


Figure 13 - Distribute Catalogue Item Data Use Case Diagram

Use Case Name	Distribute Catalogue Item Data	
Traceability Identifier	UC-29	
Use Case Description	<p>Using the Distribution Criteria, the Catalogue Item Data are distributed from SDP to RDP and finally, to the Data Recipient.</p> <p>As a summary Use Case, specific processes will be further defined in the Detail Use Case section of this document.</p>	
Use Cases Above	UC-1: Synchronize Catalogue Item Data	
Use Cases Below	UC-37: Distribute Catalogue Item Data from SDP to RDP UC-38: Distribute Catalogue Item Data from RDP to Data Recipient	
Actors	Source Data Pool (SDP) Recipient Data Pool (RDP) Data Recipient	
Performance Goals	SDP:	Distribute Catalogue Item Data to the RDP based on the Distribution Criteria.
	RDP:	Distribute Catalogue Item Data to the Recipient based on the Distribution Criteria.
	Data Recipient:	To receive Catalogue Item Data that comply with

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	their Subscriptions and Confirmations.
Preconditions	Publications, Subscriptions and Confirmations have been defined. The SDP knows which RDP needs to receive Catalogue Item Data for each Recipient.
Postconditions	Data Recipient has received Catalogue Item Data that comply with their Subscriptions and Confirmations.
Scenario	<ul style="list-style-type: none">• SDP uses the Synchronization List to filter the Catalogue Item Data.• SDP sends filtered Catalogue Item Data to the RDP.• RDP use Subscription and Confirmations to filter Catalogue Item Data.• RDP sends filtered Catalogue Item Data to the Data Recipient.• RDP sends appropriate Confirmations to the SDP.
Alternative Scenario	None at this summary level
Special Requirements	<ul style="list-style-type: none">•
Extension Points	N/A
Requirements Covered	See Detail Use Cases

1.7 Detail Use Cases

1.7.1 Add Catalogue Item Hierarchy

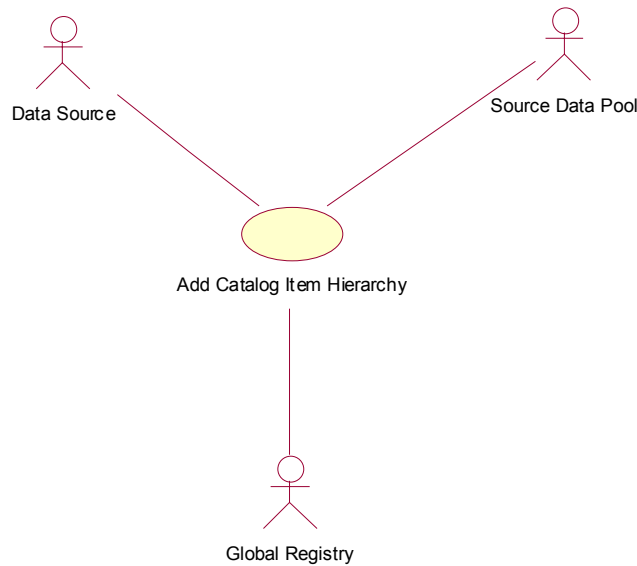


Figure 14 – Add Catalogue Item Hierarchy Use Case

Use Case Name	Add Catalogue Item Hierarchy
Traceability Identifier	UC-3
Use Case Description	The Add Catalogue Item Hierarchy use case describes what activities need to happen to validate and register Catalogue Item Hierarchy data. After the Catalogue Item Hierarchy data are validated and registered, they can then reside in the Source Data Pool for distribution.
Actors	Data Source Source Data Pool (SDP) Global Registry
Use Cases Above	UC-2: Load and Update Catalogue Item Data within a Source Data Pool
Use Cases Below	
Performance Goals	Data Source: To have validated, registered Catalogue Item Hierarchy data in their Source Data Pool. SDP: To have validated, registered Catalogue Item Hierarchy data.

	Global Registry: To ensure valid, unique Catalogue Item data are registered.
Preconditions	Data Source has defined Catalogue Item data and Catalogue Item hierarchies using Item Links.
Postconditions	Data Source knows that Catalogue Item data has been validated and registered and Item Links have been validated.
Scenario	<p>Begins when, the Data Source sends, to the SDP, Catalogue Item Hierarchy data.</p> <p>1. The SDP receives the Catalogue Item Hierarchy data</p> <ol style="list-style-type: none"> 2. The SDP validates the Catalogue Item Hierarchy data 3. The SDP sends a validation acknowledgement to the Data Source 4. The Data Source receives the validation acknowledgement: <i>Catalogue Item Hierarchy data loaded</i> 5. The SDP loads the Catalogue Item Hierarchy data 6. The SDP sends the Registry Catalogue Item data of Catalogue Items that are not registered yet to the Global Registry 7. The Global Registry receives the Registry Item data 8. The Global Registry validates the Registry Item data for uniqueness 9. The Global Registry registers the Registry Item data 10. The Global Registry sends a registration acknowledgement to the SDP 11. The SDP receives the registration acknowledgement 12. The SDP stores the registration acknowledgement 12. The SDP sends a registration acknowledgement to the Data Source <p>Ends when, the Data Source receives the registration acknowledgement: <i>Catalogue Item data registered</i></p>
Alternative Scenario	<p>ad 2. Validation fails: <i>Catalogue Item Hierarchy data not loaded</i></p> <ol style="list-style-type: none"> 2.1. SDP sends an validation error message to the Data Source <p>Ends when, the Data Source receives the validation error message</p> <p>ad 7. Validation fails at the Global Registry: <i>Catalogue Item data not registered</i></p> <ol style="list-style-type: none"> 7.1. Global Registry sends a registration error message to the SDP 7.2. The SDP receives the registration error message 7.3. The SDP sends a registration error message to the Data Source <p>Ends when, the Data Source receives the registration error message</p> <p>ad 3. & 11. the validation and registration acknowledgment mes-</p>

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	<p>sages can be combined</p> <p>** SDP may not send Catalogue Item data to Registry for Uniqueness check w/o Registration.</p>																																													
Special Requirements	<ul style="list-style-type: none">• Data Source is using a (source) data pool.• Catalogue Item Hierarchy data consists of Catalogue Item data and Item Link data (if applicable).																																													
Extension Points	N/A																																													
Requirements Covered	<table><tr><th>ID</th><th>Requirement</th><th>Weight</th></tr><tr><td>REQ-1</td><td>Party data must exist prior to a Catalogue Item is being registered.</td><td>Primary</td></tr><tr><td>REQ-2</td><td>Catalogue Item data must be validated prior to registration.</td><td>Primary</td></tr><tr><td>REQ-3</td><td>Data Source must be able to add a Catalogue Item to the Source Data Pool.</td><td>Secondary</td></tr><tr><td>REQ-8</td><td>EAN.UCC standards validation for GTIN and GLN format.</td><td>Primary</td></tr><tr><td>REQ-9</td><td>Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.</td><td>Primary</td></tr><tr><td>REQ-10</td><td>The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.</td><td>Primary</td></tr><tr><td>REQ-12</td><td>Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure</td><td>Secondary</td></tr><tr><td>REQ-20</td><td>Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.</td><td>Primary</td></tr><tr><td>REQ-24</td><td>Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item</td><td>Primary</td></tr><tr><td>REQ-26</td><td>Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)</td><td>Primary</td></tr><tr><td>REQ-28</td><td>The updated hierarchy always fully replaces the current hierarchy. This action is called "Full Refresh".</td><td>Primary</td></tr><tr><td>REQ-30</td><td>Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.</td><td>Primary</td></tr><tr><td>REQ-31</td><td>Validation acknowledgements are mandatory.</td><td>Primary</td></tr><tr><td>REQ-32</td><td>Acknowledgement Reason codes must be unique.</td><td>Primary</td></tr></table>	ID	Requirement	Weight	REQ-1	Party data must exist prior to a Catalogue Item is being registered.	Primary	REQ-2	Catalogue Item data must be validated prior to registration.	Primary	REQ-3	Data Source must be able to add a Catalogue Item to the Source Data Pool.	Secondary	REQ-8	EAN.UCC standards validation for GTIN and GLN format.	Primary	REQ-9	Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.	Primary	REQ-10	The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.	Primary	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Secondary	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary	REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Primary	REQ-28	The updated hierarchy always fully replaces the current hierarchy. This action is called "Full Refresh".	Primary	REQ-30	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.	Primary	REQ-31	Validation acknowledgements are mandatory.	Primary	REQ-32	Acknowledgement Reason codes must be unique.	Primary
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	REQ-33	ItemLinks are identified by the parent GTIN key + child GTIN key + quantity contained.	Secondary
	REQ-34	ItemLinks are not registered or held within the Global Registry.	Primary
	REQ-45	Data source is sending full Hierarchies to the Source Data Pool.	Secondary
	REQ-46	New hierarchy replaces old hierarchy completely.	Primary
	REQ-92	“Single Data Source” Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
	REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
	REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
	REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
	REQ-102	Registry validation is a part of the registration process.	Primary
	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary

	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing a Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.	Primary
	REQ-108	Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.	Primary
	REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

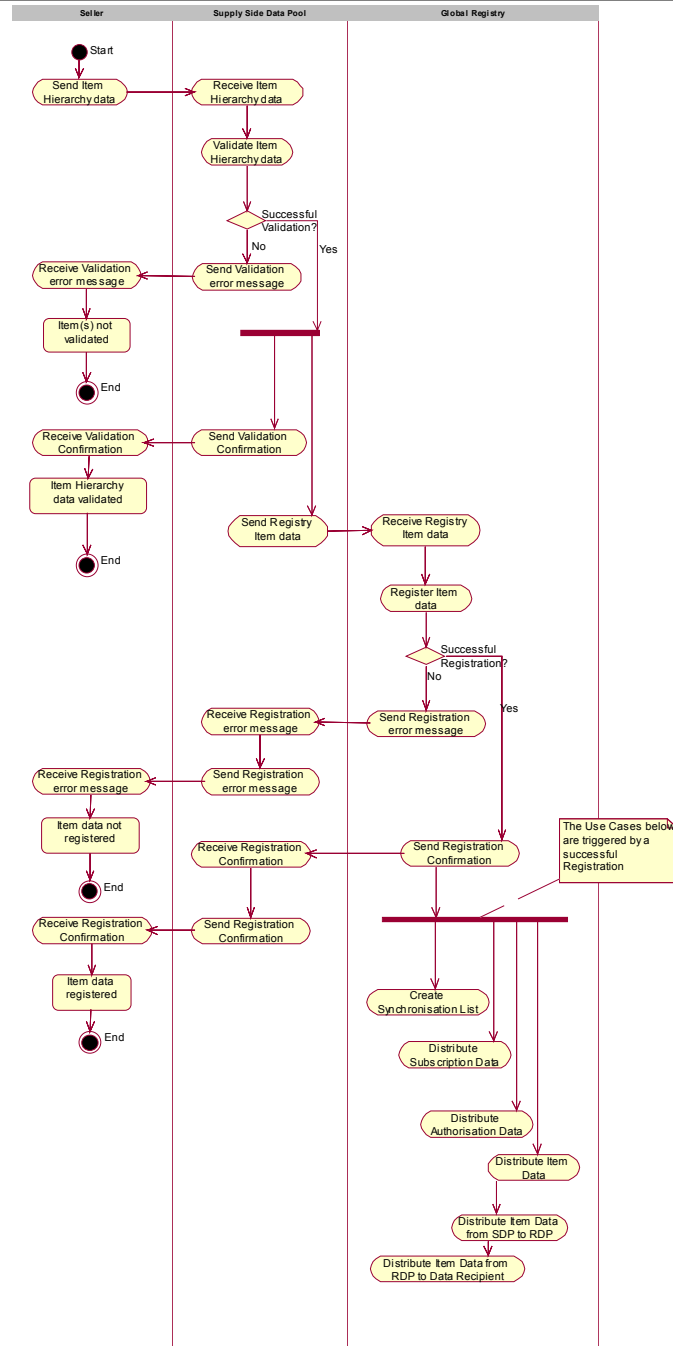


Figure 15 – Add Catalogue Item Hierarchy Activity Diagram

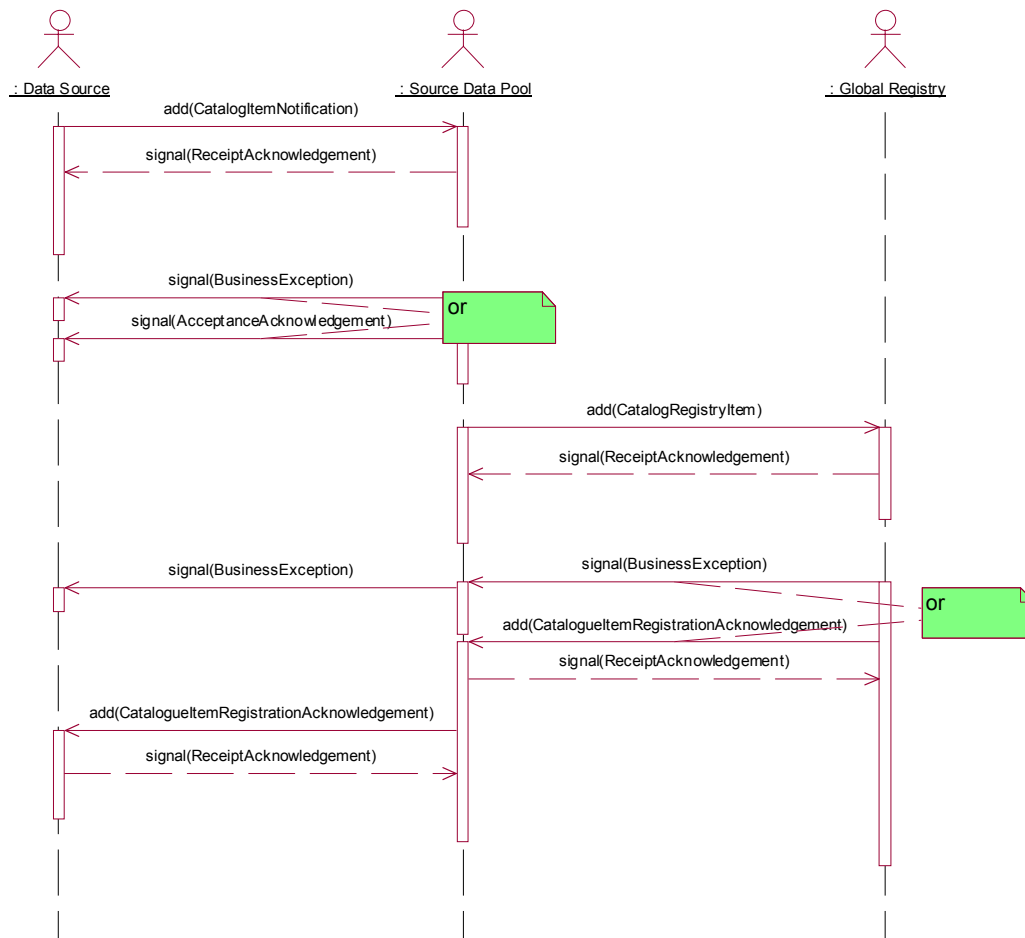


Figure 16 - Add Catalogue Item Hierarchy Sequence Diagram

1.7.2 Change Catalogue Item Hierarchy

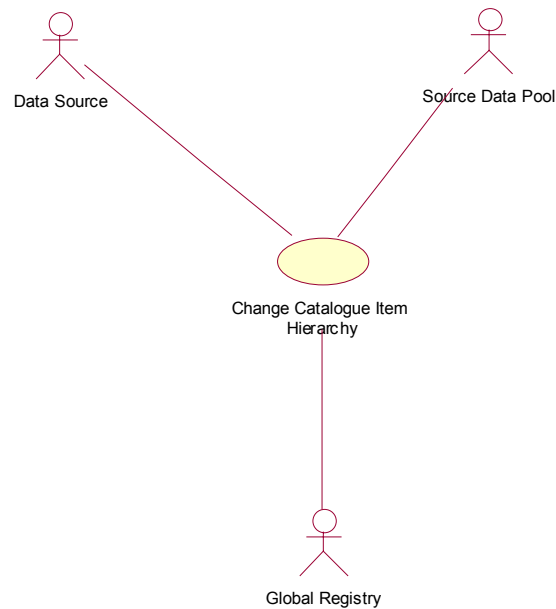


Figure 8 – Change Catalogue Item Hierarchy Use Case

Use Case Name	Change Catalogue Item Hierarchy
Traceability Identifier	UC-4
Use Case Description	The Change Catalogue Item Hierarchy use case describes what activities need to happen to change Catalogue Item Hierarchy data of a Catalogue Item already existing in a Source Data Pool, whether the Catalogue Item has been registered or not.
Use Cases Above	UC-2: Load and Update Catalogue Item Data within a Source Data Pool
Use Cases Below	UC-10: Change Catalogue Item UC-11: Change Item Link
Actors	Data Source Source Data Pool (SDP) Global Registry
Performance Goals	Data Source: To change Catalogue Item Hierarchy data in their Source Data Pool. SDP: To have validated, registered updated Catalogue

	<p>Item Hierarchy data.</p> <p>Global Registry: To ensure valid, unique Catalogue Item data are registered, whether the Catalogue Item has been changed or not.</p>
Preconditions	Data Source has defined the changes to Catalogue Item data and Catalogue Item hierarchies (using Item Links) of a Catalogue Item already existing in a Source Data Pool.
Postconditions	Data Source knows that updated Catalogue Item data has been validated and registered and updated Item Links have been validated.
Scenario	<p>Begins when, the Data Source sends, to the SDP, Catalogue Item Hierarchy data to be changed.</p> <ol style="list-style-type: none"> 1. The SDP receives Catalogue Item Hierarchy data to be changed 2. The SDP validates Catalogue Item Hierarchy data to be changed 3. The SDP sends a validation acknowledgement to the Data Source 4. The Data Source receives the validation acknowledgement: <i>Catalogue Item Hierarchy data changed</i> 5. The SDP loads the changed Catalogue Item Hierarchy data 6. The SDP sends the Registry Item data (to be changed) to the Global Registry 7. The Global Registry receives the Registry Item data to be changed 8. The Global Registry validates the Registry Item data 9. The Global Registry registers the changed Registry Item data 10. The Global Registry sends a registration acknowledgement to the SDP 12. The SDP receives the registration acknowledgement 13. The SDP stores the registration acknowledgement 14. The SDP sends a registration acknowledgement to the Data Source <p>Ends when, the Data Source receives the registration acknowledgement: <i>Catalogue Item data registered</i></p>
Alternative Scenario	<p>ad 2. Validation fails: <i>Catalogue Item Hierarchy data not loaded</i></p> <p>2.1. SDP sends an validation error message to the Data Source</p> <p>Ends when, the Data Source receives the validation error message</p> <p>ad 7. Validation fails at the Global Registry: <i>Catalogue Item data not registered</i></p> <p>7.1. Global Registry sends a registration error message to the SDP</p>

	<p>7.2. The SDP receives the registration error message</p> <p>7.3. The SDP sends a registration error message to the Data Source</p> <p>Ends when, the Data Source receives the registration error message</p> <p>ad 3. & 11. the validation and registration acknowledgment messages can be combined</p> <p>** SDP may not send Catalogue Item data to Registry for Uniqueness check w/o Registration.</p>																																	
Special Requirements	<ul style="list-style-type: none">• Data Source is using a (source) data pool.• Catalogue Item Hierarchy data consists of Catalogue Item data and Item Link data (if applicable).• Validation is done against existing data, applying GDD standard and GTIN allocation rules.																																	
Extension Points	N/A																																	
Requirements Covered	<table><tr><th>ID</th><th>Requirement</th><th>Weight</th></tr><tr><td>REQ-4</td><td>Data Source must be able to change Catalogue Item data in the Source Data Pool.</td><td>Primary</td></tr><tr><td>REQ-8</td><td>EAN.UCC standards validation for GTIN and GLN format.</td><td>Primary</td></tr><tr><td>REQ-9</td><td>Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.</td><td>Primary</td></tr><tr><td>REQ-10</td><td>The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.</td><td>Primary</td></tr><tr><td>REQ-12</td><td>Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure</td><td>Primary</td></tr><tr><td>REQ-20</td><td>Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.</td><td>Primary</td></tr><tr><td>REQ-24</td><td>Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item</td><td>Primary</td></tr><tr><td>REQ-30</td><td>Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.</td><td>Primary</td></tr><tr><td>REQ-31</td><td>Validation acknowledgements are mandatory.</td><td>Primary</td></tr><tr><td>REQ-32</td><td>Acknowledgement Reason codes must be unique.</td><td>Primary</td></tr></table>	ID	Requirement	Weight	REQ-4	Data Source must be able to change Catalogue Item data in the Source Data Pool.	Primary	REQ-8	EAN.UCC standards validation for GTIN and GLN format.	Primary	REQ-9	Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.	Primary	REQ-10	The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.	Primary	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary	REQ-30	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.	Primary	REQ-31	Validation acknowledgements are mandatory.	Primary	REQ-32	Acknowledgement Reason codes must be unique.	Primary
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REQ-32	Acknowledgement Reason codes must be unique.	Primary																																

REQ-33	ItemLinks are identified by the parent GTIN key + child GTIN key + quantity contained.	Primary
REQ-34	ItemLinks are not registered or held within the Global Registry.	Primary
REQ-35	Changes have to comply with validation rules.	Secondary
REQ-36	If the Catalogue Item was registered, updates impacting the Registry data must be reflected in the Global Registry.	Primary
REQ-37	Registration of Catalogue Item changes only needs to happen for changes that: - Impact fields stored in the Global Registry. - Are authorized according to the GTIN allocation rules.	Primary
REQ-38	The change function implies a full refresh of all attributes of the previously created Catalogue Item – this will be reflected in the subsequent notification, including a full refresh of the changed record of the full hierarchy.	Secondary
REQ-45	Data source is sending full Hierarchies to the Source Data Pool.	Primary
REQ-46	New hierarchy replaces old hierarchy completely.	Secondary
REQ-92	“Single Data Source” Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
REQ-102	Registry validation is a part of the registration process.	Primary
REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary

	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary
	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.	Primary
	REQ-108	Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.	Primary
	REQ-118	Changes/corrections applied to the Global Registry are effective immediately.	Primary
	REQ-119	Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

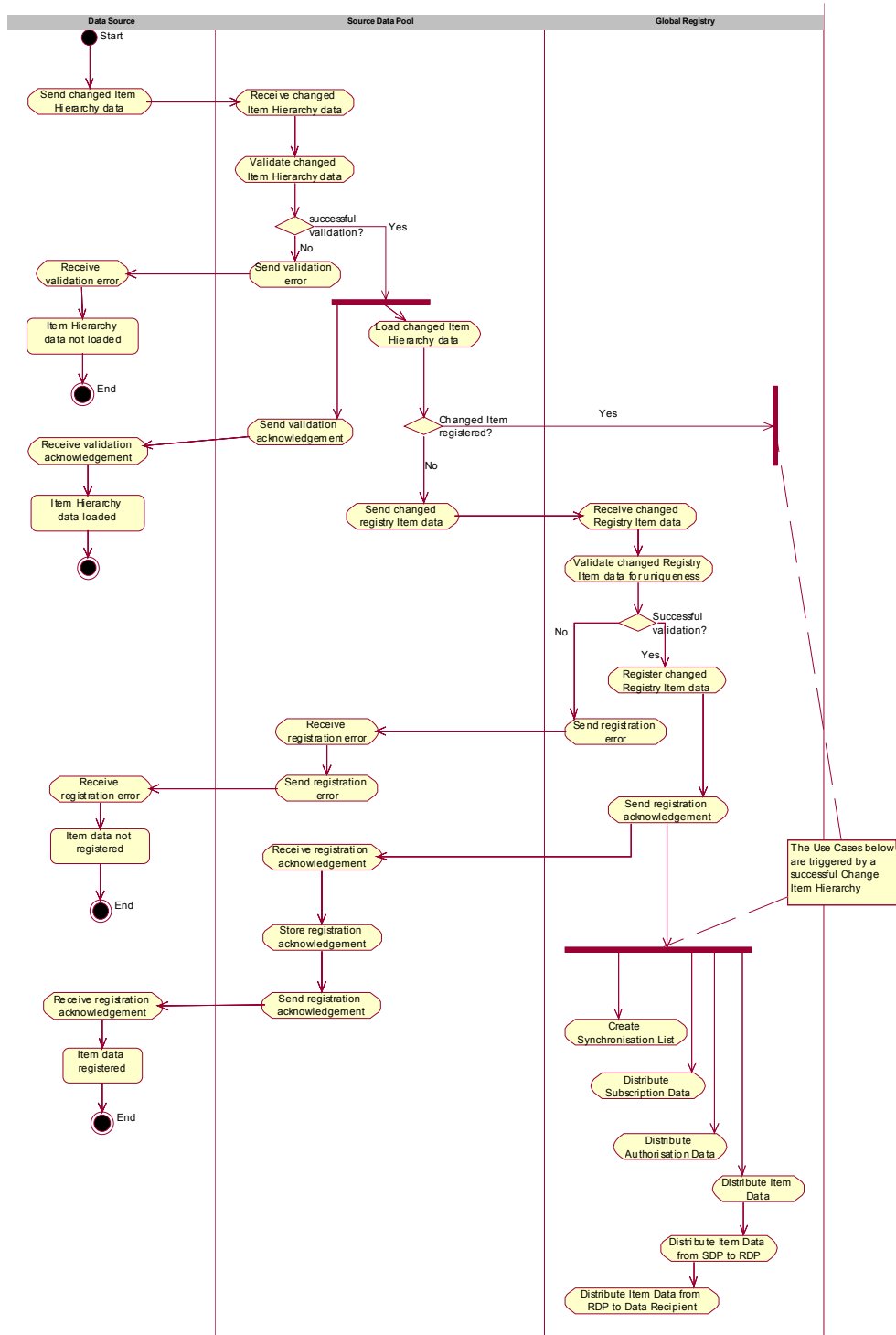


Figure 9 – Change Catalogue Item Hierarchy Activity Diagram

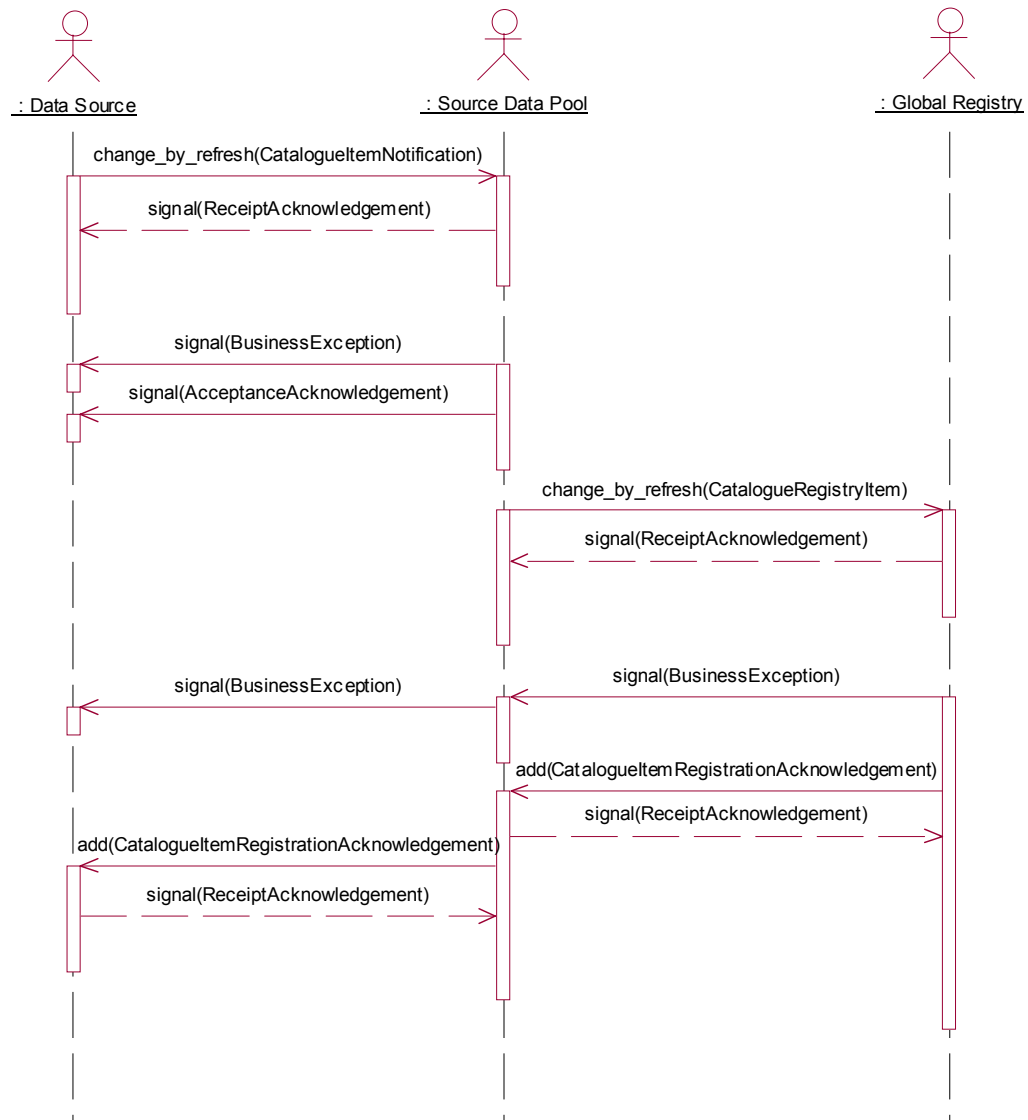


Figure 10 - Change Catalogue Item Hierarchy Sequence Diagram

1.7.3 Correct Catalogue Item Hierarchy

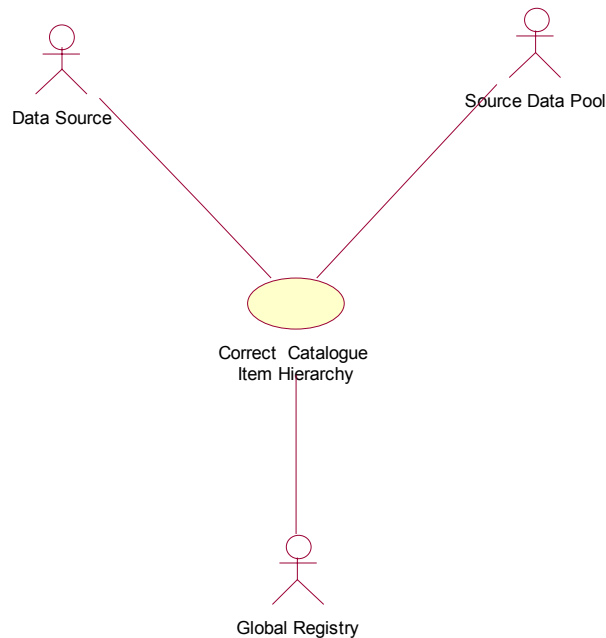


Figure 17 - Correct Catalogue Item Hierarchy Use Case

Use Case Name	Correct Catalogue Item Hierarchy
Traceability Identifier	UC-5
Use Case Description	The Correct Catalogue Item Hierarchy use case describes what activities need to happen to correct Catalogue Item Hierarchy data of a Catalogue Item already existing in a Source Data Pool, whether the Catalogue Item has been registered or not. A correction allows a Data Source to make changes to Catalogue Item data and hierarchy that would not be allowed by validation rules and as such is outside of normal processing. It is intended to provide a means for errors to be corrected and not as an alternative to the Change Catalogue Item Hierarchy process. A Data Source should expect that a Correct Catalogue Item Hierarchy message may be scrutinized more closely by the Data Recipient and possibly incur a delay in processing.
Use Cases Above	UC-2: Load and Update Catalogue Item Data within a Source Data Pool
Use Cases Below	
Actors	Data Source Source Data Pool (SDP)

	Global Registry
Performance Goals	<p>Data Source: To make corrections to errors in Catalogue Item Hierarchy data and have those corrections reflected in their Source Data Pool.</p> <p>SDP: To have validated, registered updated Catalogue Item Hierarchy data.</p> <p>Global Registry: To ensure valid, unique Catalogue Item data are registered, whether the Catalogue Item has been corrected or not.</p>
Preconditions	Data Source has defined the corrections to Catalogue Item data and Catalogue Item hierarchies (using Item Links) of a Catalogue Item already existing in a Source Data Pool.
Postconditions	Data Source knows that corrected Catalogue Item data has been validated and registered and corrected Item Links have been validated.
Scenario	<p>Begins ...when, the Data Source sends, to the SDP, Catalogue Item Hierarchy data to be corrected.</p> <ol style="list-style-type: none"> 1. The SDP receives Catalogue Item Hierarchy data to be corrected 2. The SDP validates Catalogue Item Hierarchy data to be corrected 3. The SDP sends a validation acknowledgement to the Data Source 4. The Data Source receives the validation acknowledgement: <i>Catalogue Item Hierarchy data corrected</i> 5. The SDP loads the corrected Catalogue Item Hierarchy data 6. The SDP sends the Registry Item data (to be corrected) to the Global Registry 7. The Global Registry receives the Registry Item data to be corrected 8. The Global Registry checks that the Catalogue Item exists in the Registry. 9. The Global Registry registers the corrected Registry Item data 10. The Global Registry sends a registration acknowledgement to the SDP 11. The SDP receives the registration acknowledgement 12. The SDP stores the registration acknowledgement 13. The SDP sends a registration acknowledgement to the Data Source <p>Ends ...when, the Data Source receives the registration acknowledgement: <i>Catalogue Item data registered</i></p>
Alternative Scenario	<p>ad 2. Validation fails: <i>Catalogue Item Hierarchy data not loaded</i></p> <p>2.1. SDP sends an validation error message to the Data</p>

	<p>Source</p> <p>Ends when, the Data Source receives the validation error message</p> <p>ad 8. The Catalogue Item is not found in the Registry: <i>Catalogue Item data not registered</i></p> <p>8.1. Global Registry sends a registration error message to the SDP</p> <p>8.2. The SDP receives the registration error message</p> <p>8.3. The SDP sends a registration error message to the Data Source</p> <p>Ends when, the Data Source receives the registration error message</p> <p>ad 3. & 13. The validation and registration acknowledgment messages can be combined</p> <p>** SDP may not send Catalogue Item data to Registry for Uniqueness check w/o Registration.</p>
Special Requirements	<ul style="list-style-type: none">• Data Source is using a (source) data pool.• Catalogue Item Hierarchy data consists of Catalogue Item data and Item Link data (if applicable).• Validation is done against existing data, applying GDD standard and GTIN allocation rules.• Catalogue Item Hierarchy data bypasses the GTIN Allocation Rules
Extension Points	N/A

Requirements Covered			
	ID	Requirement	Weight
	REQ-5	Data Source must be able to correct Catalogue Item data in the Source Data Pool.	Primary
	REQ-8	EAN.UCC standards validation for GTIN and GLN format.	Primary
	REQ-9	Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.	Primary
	REQ-10	The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.	Primary
	REQ-11	Corrections bypass the standard GTIN/GLN allocation rules.	Primary
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-21	If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Primary
	REQ-27	In case of an ItemLink correction, the entire hierarchy will be indicated as corrected in the notification.	Secondary
	REQ-28	The updated hierarchy always fully replaces the current hierarchy. This action is called "Full Refresh".	Secondary
	REQ-30	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.	Primary
	REQ-31	Validation acknowledgements are mandatory.	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary

REQ-33	ItemLinks are identified by the parent GTIN key + child GTIN key + quantity contained.	Primary
REQ-34	ItemLinks are not registered or held within the Global Registry.	Primary
REQ-36	If the Catalogue Item was registered, updates impacting the Registry data must be reflected in the Global Registry.	Primary
REQ-37	Registration of Catalogue Item changes only needs to happen for changes that: - Impact fields stored in the Global Registry. - Are authorized according to the GTIN allocation rules.	Primary
REQ-40	Incorrect core data (i.e. attributes that cannot be updated according to allocation rules) can only be updated through a specific correction functionality.	Secondary
REQ-41	Correct Item Hierarchy must: - trigger syntactical and content validation - skip GTIN allocation rules validation - set a flag on the GTIN data record to inform the data recipient of the correction (see data distribution / notification) - the correction will also be reflected in the Global Registry if it impacts Registry data	Secondary
REQ-42	If the correction impacts the hierarchy, then it must be handled by deleting the incorrect ItemLink and adding a new Item Link - Add/Delete Scenario's.	Secondary
REQ-43	if the correction does not impact the hierarchy, then ItemLink attributes will be updated through the correction command.	Primary
REQ-44	Notification of the hierarchy must indicate it is a correction.	Secondary
REQ-45	Data source is sending full Hierarchies to the Source Data Pool.	Primary
REQ-46	New hierarchy replaces old hierarchy completely.	Primary
REQ-57	A deletion cannot be corrected – only the discontinuation can be reversed.	Primary
REQ-59	ItemLinks can only be deleted: - as the correction of an error - as the result of a delete.Item	Primary
REQ-92	“Single Data Source” Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
REQ-102	Registry validation is a part of the registration process.	Primary

	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary
	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.	Primary
	REQ-108	Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.	Primary
	REQ-118	Changes/corrections applied to the Global Registry are effective immediately.	Primary
	REQ-119	Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.	Primary
	REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A –	Primary

	case A –each A.	
REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

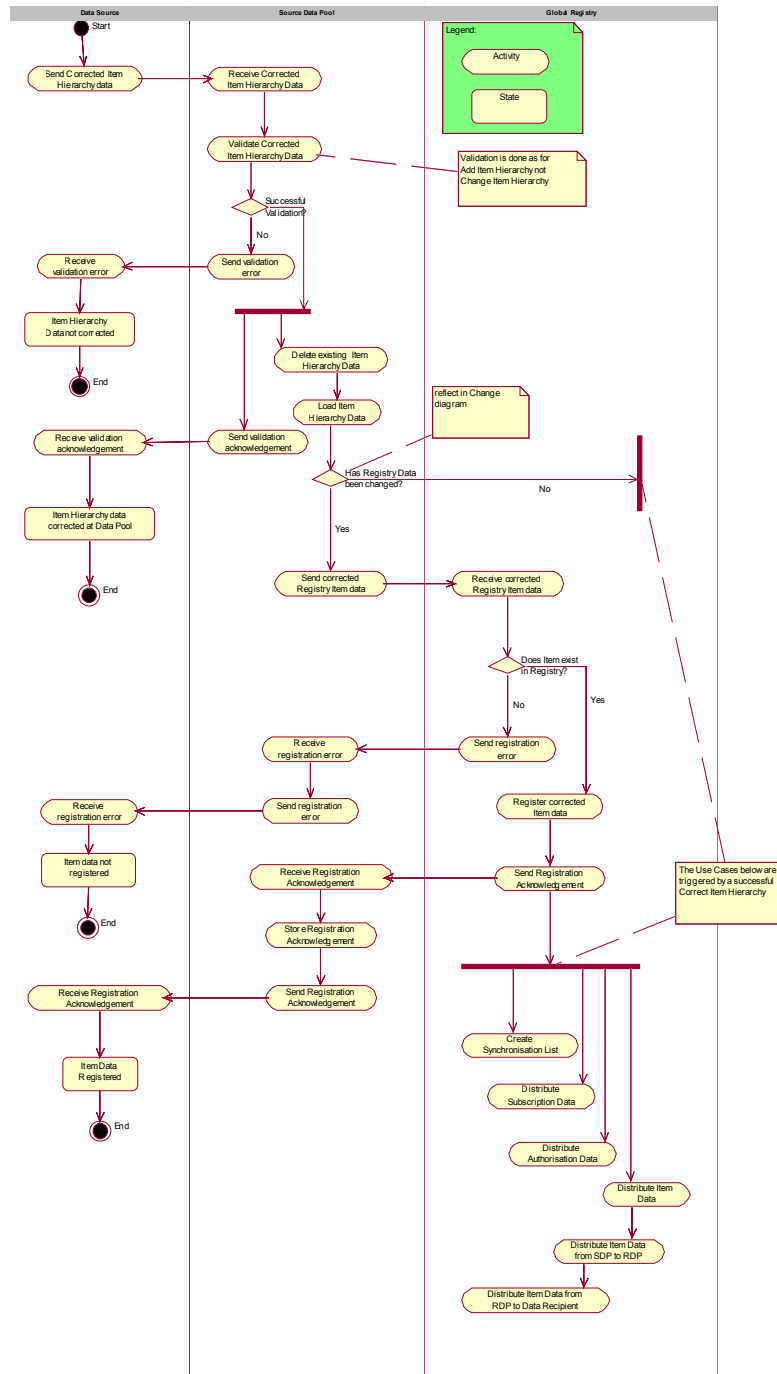


Figure 18 - Correct Catalogue Item Hierarchy Data Activity Diagram

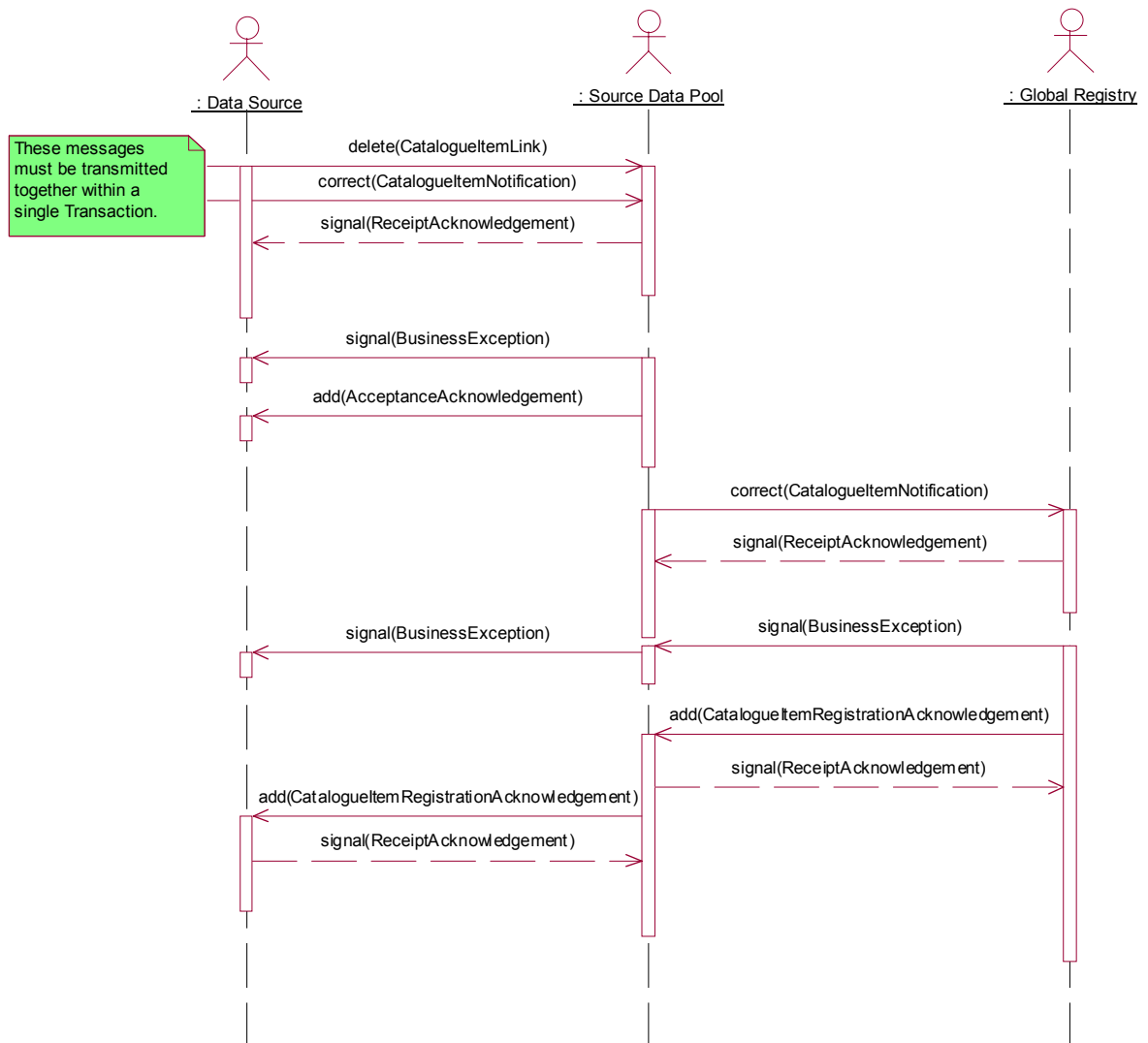


Figure 19 - Correct Catalogue Item Hierarchy Sequence Diagram

1.7.4 Discontinue Catalogue Item

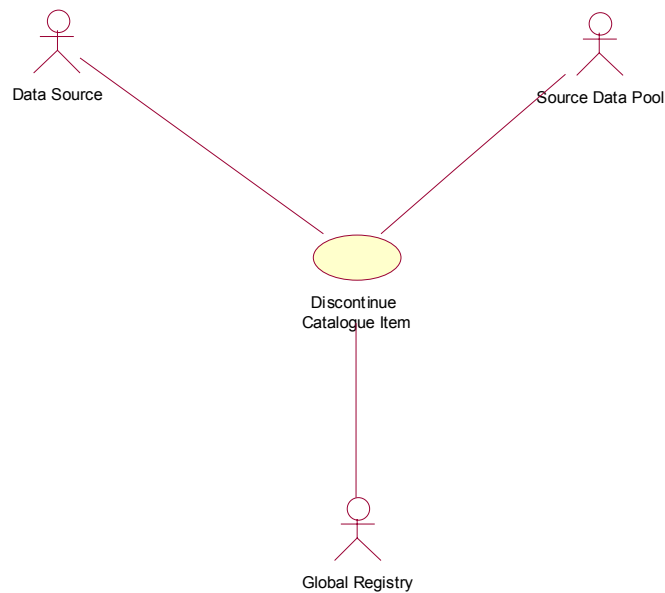


Figure 20 - Discontinue Catalogue Item Use Case

Use Case Name	Discontinue Catalogue Item
Traceability Identifier	UC-6
Use Case Description	<p>This use case describes the process to flag a Catalogue Item for deletion, authorizing the deletion of the Catalogue Item Data. After the discontinuation period lapses (as defined by EAN.UCC GTIN allocation rules), all parties are free to delete the Item from their databases.</p> <p>This process is a special case of the Change Catalogue Item in that it uses the Change Catalogue Item process to set the discontinuation flag and date.</p>
Use Cases Above	UC-2: Load and Update Catalogue Item Data within a Source Data Pool
Use Cases Below	UC-21: Delete Registered Catalogue Item
Actors	Data Source Source Data Pool (SDP) Global Registry
Performance Goals	<p>Data Source: To be able to discontinue Catalogue Item Data in the SDP (and in the Global Registry).</p> <p>SDP: To discontinue Catalogue Item Data upon request</p>

	<p>of the Data Source.</p> <p>Global Registry: To discontinue Catalogue Item Data upon request of a SDP.</p>
Preconditions	The SDP has identified the Catalogue Item Data to be discontinued.
Postconditions	The Data Source has received the discontinue acknowledgement: <i>Catalogue Item data discontinued</i>
Scenario	<p>Begins when, the Data Source sends the Catalogue Item Data to be discontinued to the SDP.</p> <ol style="list-style-type: none"> 1. The SDP receives the Catalogue Item Data to be discontinued The SDP validates the Catalogue Item Data against: <ul style="list-style-type: none"> • Publication status • Availability status (end availability + discontinued Y/N) • Hierarchy (parents have to be deleted before children) The SDP discontinues the Catalogue Item Data The SDP discontinues any Item Link involving the Catalogue Item Data The SDP sends the Registry Item data to be discontinued to the Global Registry The Global Registry receives the Registry Item data to be discontinued The Global Registry validates the Registry Item data The Global Registry discontinues the Registry Item data (deletion flag + effective change date = deletion date in the Global Registry) The Global Registry sends a discontinue acknowledgement to the SDP The SDP receives the discontinue acknowledgement The SDP sends the discontinue acknowledgement to the Data Source <p>Ends when, the Data Source receives the discontinue acknowledgement: <i>Catalogue Item data discontinued</i></p>
Alternative Scenario	<p>ad 2. Validation fails: <i>Catalogue Item data not discontinued</i></p> <p>2.1. SDP sends a discontinue validation error message to the Data Source</p> <p>Ends when, the Data Source receives the discontinue validation error message</p> <p>ad 7. Validation fails: <i>Catalogue Item data not discontinued</i></p> <p>7.1. Global Registry sends a discontinue validation error message to the SDP</p> <p>7.2. The SDP receives the discontinue validation error message</p> <p>7.3. The SDP sends a discontinue validation error message to the Data Source</p>

Business Solution Design

	Ends when, the Data Source receives the discontinue validation error message		
Special Requirements	<ul style="list-style-type: none">• The discontinuation date starts the standard retention period depending on the sector as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the registry).• A deletion cannot be corrected – only the discontinuation can be reversed.• Deletes are not synchronized across data pools.		
Extension Points	N/A		
Requirements Covered	ID	Requirement	Weight
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-21	If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Primary
	REQ-30	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.	Primary
	REQ-31	Validation acknowledgements are mandatory.	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-34	ItemLinks are not registered or held within the Global Registry.	Primary
	REQ-36	If the Catalogue Item was registered, updates impacting the Registry data must be reflected in the Global Registry.	Primary
	REQ-37	Registration of Catalogue Item changes only needs to happen for changes that: - Impact fields stored in the Global Registry. - Are authorized according to the GTIN allocation rules.	Primary

	REQ-45	Data source is sending full Hierarchies to the Source Data Pool.	Primary
	REQ-46	New hierarchy replaces old hierarchy completely.	Primary
	REQ-49	Rules for archiving or physical deletes will be agreed with the data pools and in the scope of the certification process.	Primary
	REQ-56	The discontinuation dates starts the standard retention period depending on the sector as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry).	Secondary
	REQ-57	A deletion cannot be corrected – only the discontinuation can be reversed.	Primary
	REQ-67	Communicate the product is no longer going to be manufactured: discontinued = Y + effective change date = discontinued date in the Global Registry.	Secondary
	REQ-68	Communicate the product is no longer going to be available: maintain end availability date.	Secondary
	REQ-92	“Single Data Source” Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
	REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
	REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
	REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
	REQ-102	Registry validation is a part of the registration process.	Primary
	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary
	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry	Primary

		<p>record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.</p>	
	REQ-108	<p>Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.</p>	Primary
	REQ-118	Changes/corrections applied to the Global Registry are effective immediately.	Primary
	REQ-119	Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.	Primary
	REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

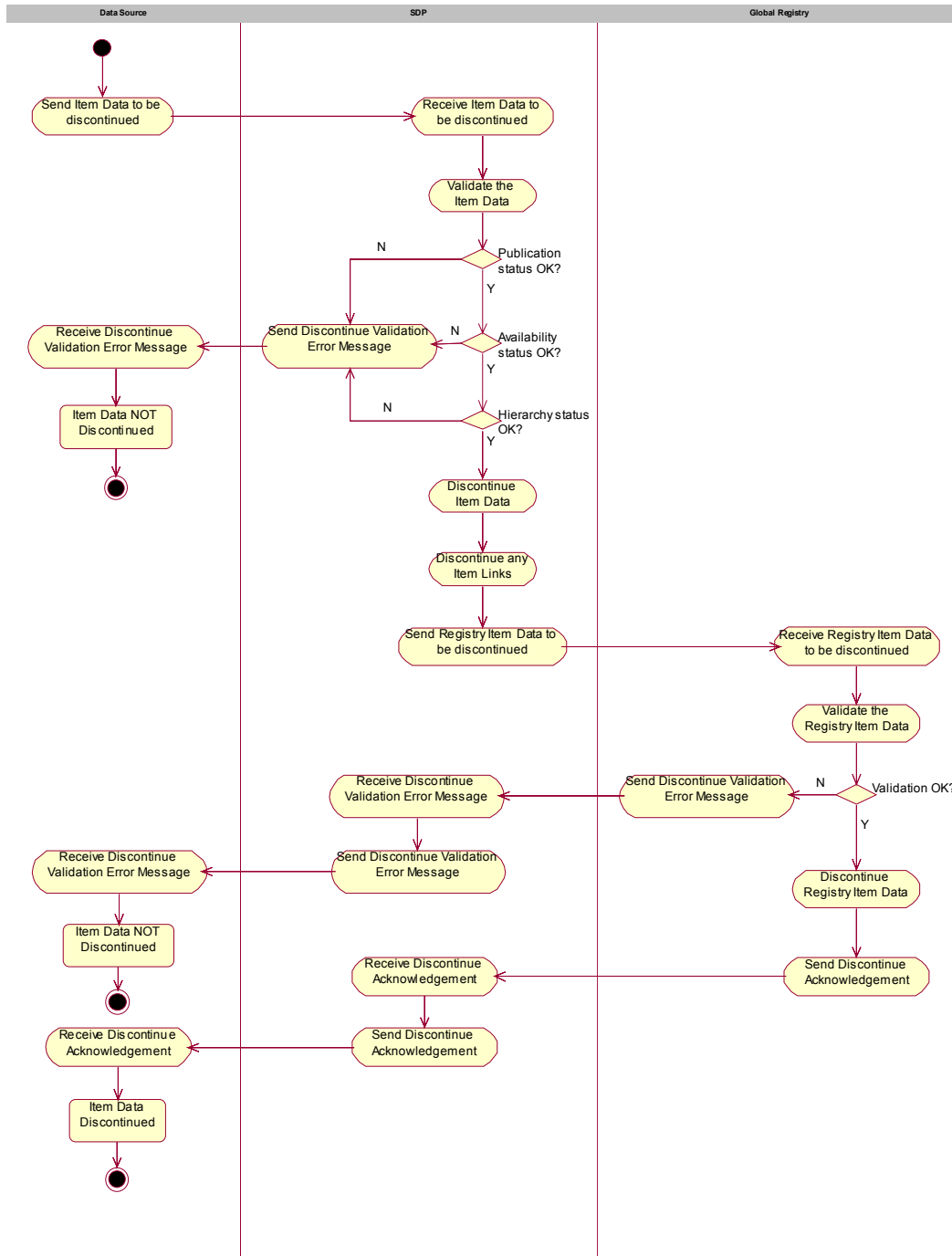


Figure 21 - Discontinue Catalogue Item Activity Diagram

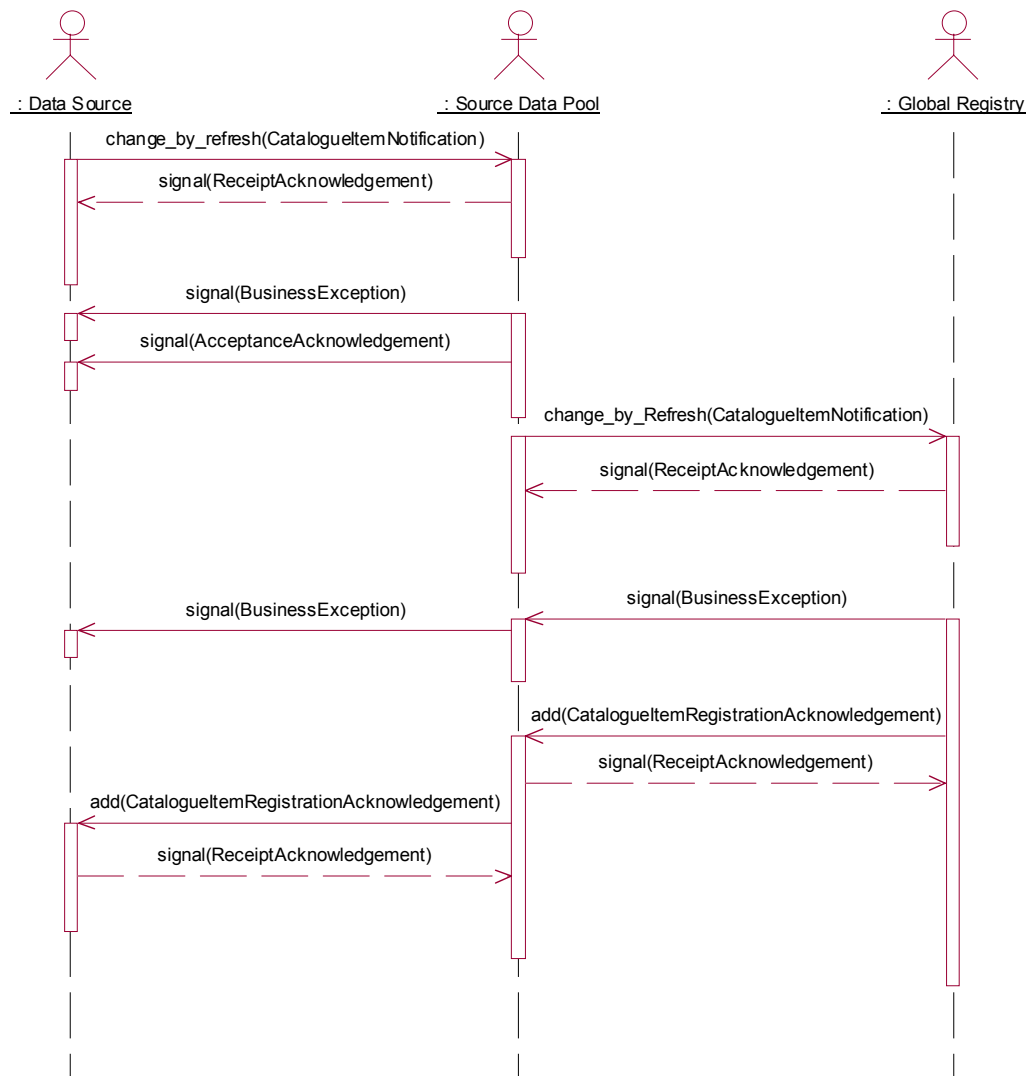


Figure 22 - Discontinue Catalogue Item Sequence Diagram

1.7.5 Delete Catalogue Item Hierarchy

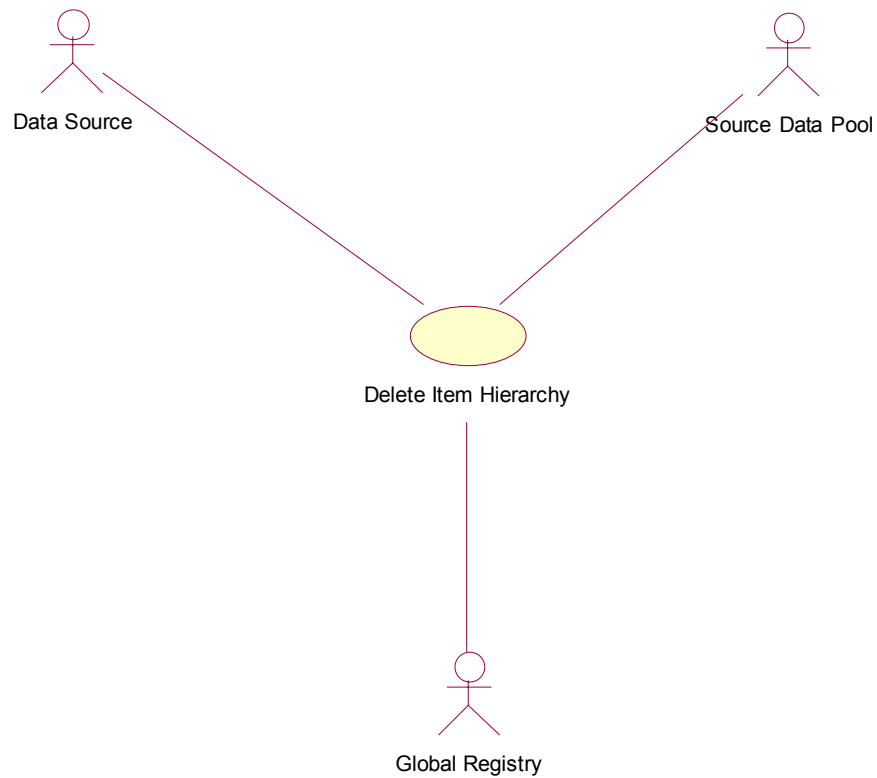


Figure 23 - Delete Catalogue Item Hierarchy Use Case

Use Case Name	Delete Catalogue Item Hierarchy
Traceability Identifier	UC-25
Use Case Description	This use case describes the process to remove a Catalogue Item from the Source Data Pool.
Use Cases Above	UC-2: Load and Update Catalogue Item Data within a Source Data Pool
Use Cases Below	None
Actors	Data Source Source Data Pool (SDP) Global Registry
Performance Goals	Data Source: To be able to remove a discontinued or cancelled Catalogue Item Data in the SDP (and in the Global Registry).

Business Solution Design

	<div>SDP: To be able to remove a discontinued or cancelled Catalogue Item Data.</div> <div>Global Registry: To remove a discontinued or cancelled Catalogue Item Data.</div>																														
Preconditions	The SDP has either discontinued or cancelled a Catalogue Item within the timeframe allowed by EAN.UCC standards.																														
Postconditions	The Catalogue Item has been removed from the SDP and Registry.																														
Scenario	<div>No scenario.</div> <div>The SDP and Registry may remove (physically delete) a Catalogue Item that has been Cancelled or Discontinued for a period described in the EAN.UCC General Specification.</div>																														
Alternative Scenario	None																														
Special Requirements																															
Extension Points	N/A																														
Requirements Covered	<table><tr><th>ID</th><th>Requirement</th><th>Weight</th></tr><tr><td>REQ-6</td><td>Data Source must be able to delete Catalogue Item data in the Source Data Pool.</td><td>Primary</td></tr><tr><td>REQ-7</td><td>If a Catalogue Item is deleted:- the links pointing down must be deleted- all links above must be deleted- all Items above must be deleted</td><td>Primary</td></tr><tr><td>REQ-12</td><td>Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure</td><td>Primary</td></tr><tr><td>REQ-20</td><td>Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.</td><td>Primary</td></tr><tr><td>REQ-21</td><td>If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.</td><td>Primary</td></tr><tr><td>REQ-22</td><td>Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.</td><td>Primary</td></tr><tr><td>REQ-23</td><td>Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process</td><td>Primary</td></tr><tr><td>REQ-24</td><td>Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item</td><td>Primary</td></tr><tr><td>REQ-26</td><td>Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)</td><td>Primary</td></tr></table>	ID	Requirement	Weight	REQ-6	Data Source must be able to delete Catalogue Item data in the Source Data Pool.	Primary	REQ-7	If a Catalogue Item is deleted:- the links pointing down must be deleted- all links above must be deleted- all Items above must be deleted	Primary	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary	REQ-21	If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary	REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Primary
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REQ-21	If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary																													
REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary																													
REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary																													
REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary																													
REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Primary																													

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REQ-30	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.	Primary
REQ-31	Validation acknowledgements are mandatory.	Primary
REQ-32	Acknowledgement Reason codes must be unique.	Primary
REQ-33	ItemLinks are identified by the parent GTIN key + child GTIN key + quantity contained.	Primary
REQ-34	ItemLinks are not registered or held within the Global Registry.	Primary
REQ-36	If the Catalogue Item was registered, updates impacting the Registry data must be reflected in the Global Registry.	Primary
REQ-37	Registration of Catalogue Item changes only needs to happen for changes that: - Impact fields stored in the Global Registry. - Are authorized according to the GTIN allocation rules.	Primary
REQ-45	Data source is sending full Hierarchies to the Source Data Pool.	Primary
REQ-46	New hierarchy replaces old hierarchy completely.	Primary
REQ-47	The objective of the "Delete" Function is not to physically remove data from the data pool, but to "Flag for deletion", authorizing the deletion of the data.	Primary
REQ-48	The deletion needs to be validated against a number of criteria, e.g. Item is no longer published, item discontinued, retention limit (EAN/UCC specifications)...	Secondary
REQ-49	Rules for archiving or physical deletes will be agreed with the data pools and in the scope of the certification process.	Primary
REQ-50	Deletions need to be reflected in the registry (deletion flag + effective change date = deletion date in the Global Registry)	Primary
REQ-51	To protect data integrity within the data pool, the deletion of a child can only occur after the deletion of the parents.	Primary
REQ-52	Validation for deleted Items ensures the parents have been deleted before the deletion of the child is performed.	Primary
REQ-53	Validation is automatically triggered by the "Delete" command and does not require a specific message flow.	Primary
REQ-54	Deletion of a Catalogue Item must trigger the invalidation of any hierarchy links involving that Item, whether that Item is the parent or the child in the link. This is completed by the Refresh.ItemLink message. Ackn.ItemLink will be repeated for every link that was refreshed or invalidated.	Primary
REQ-55	Deletion needs to be validated against : - Publication status - Availability Status (end availability + discontinued Y/N) - Hierarchy : parents have to be deleted before children	Primary
REQ-57	A deletion cannot be corrected – only the discontinuation can be reversed.	Primary
REQ-58	Deletes are not synchronized across data pools.	Primary
REQ-59	ItemLinks can only be deleted: - as the correction of an error - as the result of a delete.Item	Secondary

Business Solution Design

	REQ-60	The validity period of a ItemLink is defined by the validity period of the Parent Item and/or the Child Item.	Secondary
	REQ-61	When either parent or child expire, the related ItemLink(s) have to expire as well. This is achieved through the Refresh.ItemLink function.	Secondary
	REQ-92	“Single Data Source” Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
	REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
	REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
	REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
	REQ-102	Registry validation is a part of the registration process.	Primary
	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary

	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.	Primary
	REQ-108	Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.	Primary
	REQ-118	Changes/corrections applied to the Global Registry are effective immediately.	Primary
	REQ-119	Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.	Primary
	REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	Primary

1.7.6 Cancel Catalogue Item

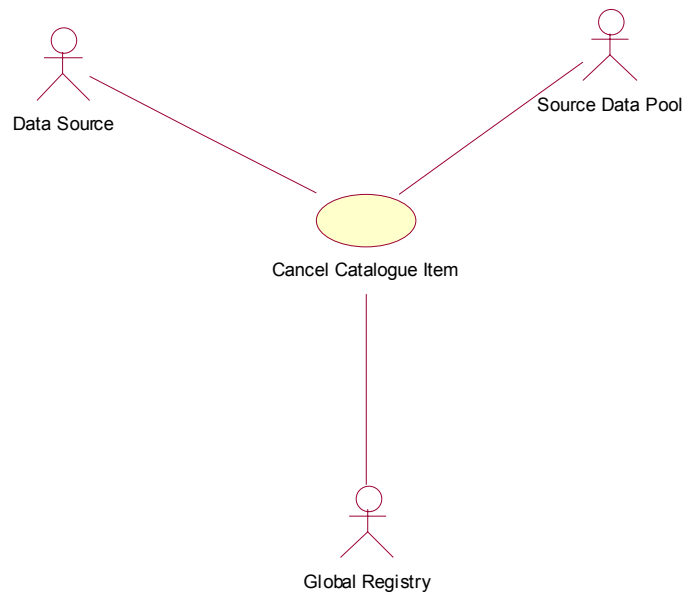


Figure 24 - Cancel Catalogue Item Use Case Diagram

Use Case Name	Cancel Catalogue Item
Traceability Identifier	UC-7
Use Case Description	<p>In certain cases, a manufacturer will register a Catalogue Item prior to deciding if it will ultimately be manufactured and sold.</p> <p>The Cancel Catalogue Item use case describes the process to communicate that a trade item was never manufactured. This allows the reuse of the GTIN 12 months after cancellation instead of 48 months.</p> <p>Note: This is a special usage of the Change Catalogue Item Hierarchy or Correct Catalogue Item Hierarchy use cases.</p>
Use Cases Above	UC-2: Load and Update Catalogue Item Data within a Source Data Pool
Use Cases Below	UC-22: Cancel Registered Catalogue Item
Actors	Data Source Source Data Pool (SDP) Global Registry
Performance Goals	Data Source: To be able to reuse the GTIN of a Catalogue Item

	<p>that has not been manufactured as soon as possible.</p> <p>SDP: To have validated, registered updated Catalogue Item Hierarchy data.</p> <p>Global Registry: To ensure valid, unique Catalogue Item data are registered.</p>
Preconditions	Data Source has registered a Catalogue Item that it now does not intend to manufacture.
Postconditions	Catalogue Item retention period begins (after which, the GTIN can be reused).
Scenario	<p>Begins when, the Data Source sends, to the SDP, Catalogue Item Hierarchy data with a Catalogue Item that contains a cancel date.</p> <ol style="list-style-type: none"> 1. The SDP receives Catalogue Item Hierarchy data to be changed The SDP validates Catalogue Item Hierarchy data to be changed The SDP sends a validation acknowledgement to the Data Source The Data Source receives the validation acknowledgement: <i>Catalogue Item Hierarchy data cancelled</i> The SDP loads the changed Catalogue Item Hierarchy data The SDP sends the Registry Item data (to be changed) to the Global Registry The Global Registry receives the Registry Item data to be changed The Global Registry checks that the Catalogue Item exists in the Registry. The Global Registry registers the changed Registry Item data The Global Registry sends a registration acknowledgement to the SDP The SDP receives the registration acknowledgement The SDP stores the registration acknowledgement The SDP sends a registration acknowledgement to the Data Source <p>Ends when, the Data Source receives the registration acknowledgement: <i>Catalogue Item data changed</i></p>
Alternative Scenario	<p>ad 2. Validation fails: <i>Catalogue Item Hierarchy data not loaded</i></p> <p>2.1. SDP sends an validation error message to the Data Source</p> <p>Ends when, the Data Source receives the validation error message</p> <p>ad 8. The Catalogue Item is not found in the Registry: <i>Catalogue</i></p>

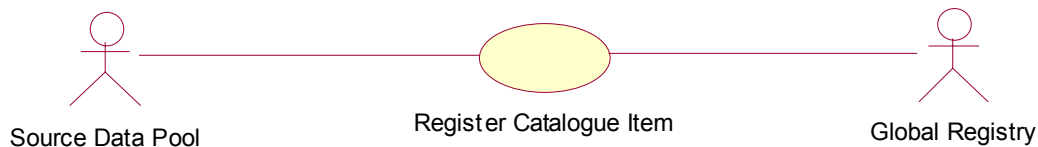
	<p><i>Item data not registered</i></p> <p>8.1. Global Registry sends a registration error message to the SDP</p> <p>8.2. The SDP receives the registration error message</p> <p>8.3. The SDP sends a registration error message to the Data Source</p> <p>Ends when, the Data Source receives the registration error message</p> <p>ad 3. & 13. The validation and registration acknowledgment messages can be combined</p> <p>** The Catalogue Item Data is now not available for distribution.</p>																											
Special Requirements	<ul style="list-style-type: none">• Data Source is using a (source) data pool.• Catalogue Item Hierarchy data consists of Catalogue Item data and Item Link data (if applicable).• Validation is done against existing data, applying GDD standard and GTIN allocation rules.• Catalogue Item Hierarchy data bypasses the GTIN Allocation Rules																											
Extension Points	N/A																											
Requirements Covered	<table><tr><th>ID</th><th>Requirement</th><th>Weight</th></tr><tr><td>REQ-12</td><td>Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure</td><td>Primary</td></tr><tr><td>REQ-20</td><td>Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.</td><td>Primary</td></tr><tr><td>REQ-21</td><td>If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.</td><td>Primary</td></tr><tr><td>REQ-22</td><td>Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.</td><td>Primary</td></tr><tr><td>REQ-23</td><td>Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process</td><td>Primary</td></tr><tr><td>REQ-24</td><td>Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item</td><td>Primary</td></tr><tr><td>REQ-26</td><td>Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)</td><td>Primary</td></tr><tr><td>REQ-</td><td>Only Catalogue Items are registered in the Global Registry. Not Catalogue Item</td><td>Primary</td></tr></table>	ID	Requirement	Weight	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary	REQ-21	If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary	REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Primary	REQ-	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item	Primary
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REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Primary																										
REQ-	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item	Primary																										

	30	Hierarchies.	
	REQ-31	Validation acknowledgements are mandatory.	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-34	ItemLinks are not registered or held within the Global Registry.	Primary
	REQ-36	If the Catalogue Item was registered, updates impacting the Registry data must be reflected in the Global Registry.	Primary
	REQ-37	Registration of Catalogue Item changes only needs to happen for changes that: - Impact fields stored in the Global Registry. - Are authorized according to the GTIN allocation rules.	Primary
	REQ-45	Data source is sending full Hierarchies to the Source Data Pool.	Primary
	REQ-62	Cancel Catalogue Item is achieved through the maintenance (using change function) of the cancel date.	Secondary
	REQ-63	Need cancel date in Catalogue Item data model.	Secondary
	REQ-64	Cancel date needs to be stored in the Global Registry.	Secondary
	REQ-65	Communicate that product is no longer available: maintain end availability date.	Secondary
	REQ-66	When product is available again: update start/end availability date.	Secondary
	REQ-92	"Single Data Source" Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
	REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
	REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
	REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
	REQ-102	Registry validation is a part of the registration process.	Primary
	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
	REQ-	Registration is the process, which references all Catalogue Items and Parties	Primary

	105	published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary
	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.	Primary
	REQ-108	Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.	Primary
	REQ-118	Changes/corrections applied to the Global Registry are effective immediately.	Primary
	REQ-119	Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.	Primary
	REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

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1.7.7 Register Catalogue Item



Use Case Name	Register Catalogue Item
Traceability Identifier	UC-18
Use Case Description	<p>All Catalogue Items for trade must be registered in the Global Registry. Prior to registration, the Catalogue Item data must pass a validation at the Source Data Pool and a uniqueness check at the Registry. The Global Registry ensures that valid, unique Catalogue Item data are available worldwide.</p> <p>This Use Case describes the Registration process that is performed by the Global Registry.</p>
Use Cases Above	UC-2: Load and Update Catalogue Item Data within a Source Data Pool
Use Cases Below	None
Actors	Source Data Pool (SDP) Global Registry
Performance Goals	<p>SDP: To have validated, registered Catalogue Item data.</p> <p>Global Registry: To ensure valid, unique Catalogue Item data are registered.</p>
Preconditions	The Source Data Pool is a certified Data Pool. The Source Data Pool has a profile that resides in the registry. The Source Data Pool has validated Catalogue Item data received from a Data Source and has sent that Catalogue Item data and a Validation Certificate to the Global Registry.
Postconditions	The Catalogue Item data has been registered and retained by the Global Registry.
Scenario	Begins when, the Global Registry receives validated Catalogue Item Data from a Source Data Pool.

	<div>1. The Global Registry ensures that the Source Data Pool is certified.</div> <div>2. The Global Registry validates the Validation Certificate (from validation engine) sent with the Catalogue Item data.</div> <div>3. The Global Registry verifies the uniqueness of the GTIN, GLN, TM combination.</div> <div>4. The Global Registry stores the Catalogue Item data.</div> <div>Ends when, The Global Registry sends a registration acknowledgement to the SDP</div>															
Alternative Scenario	<div>ad 1. Data Pool not certified:<div>1.1. The Global Registry sends an error message to the Source Data Pool</div>Ends when, the Source Data Pool receives the error message</div> <div>ad 2. Validation certificate does not pass validation:<div>2.1. The Global Registry sends a validation error message to the Source Data Pool</div>Ends when, the Source Data Pool receives the validation error message</div> <div>ad 3. The Catalogue Item already exists in the Registry:<div>3.1. Global Registry sends a registration error message to the SDP</div><div>3.2. The SDP receives the registration error message</div><div>3.3. The SDP sends a registration error message to the Data Source</div>Ends when, the Data Source receives the registration error message</div>															
Special Requirements	<div><div>Validation: applying GDD standard and GTIN allocation rules.</div></div>															
Extension Points	N/A															
Requirements Covered	<table><tr><th>ID</th><th>Requirement</th><th>Weight</th></tr><tr><td>REQ-1</td><td>Party data must exist prior to a Catalogue Item is being registered.</td><td>Secondary</td></tr><tr><td>REQ-2</td><td>Catalogue Item data must be validated prior to registration.</td><td>Secondary</td></tr><tr><td>REQ-8</td><td>EAN.UCC standards validation for GTIN and GLN format.</td><td>Primary</td></tr><tr><td>REQ-9</td><td>Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.</td><td>Primary</td></tr></table>	ID	Requirement	Weight	REQ-1	Party data must exist prior to a Catalogue Item is being registered.	Secondary	REQ-2	Catalogue Item data must be validated prior to registration.	Secondary	REQ-8	EAN.UCC standards validation for GTIN and GLN format.	Primary	REQ-9	Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.	Primary
ID	Requirement	Weight														
REQ-1	Party data must exist prior to a Catalogue Item is being registered.	Secondary														
REQ-2	Catalogue Item data must be validated prior to registration.	Secondary														
REQ-8	EAN.UCC standards validation for GTIN and GLN format.	Primary														
REQ-9	Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.	Primary														

	REQ-10	The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.	Secondary
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Secondary
	REQ-30	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.	Secondary
	REQ-31	Validation acknowledgements are mandatory.	Secondary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-34	ItemLinks are not registered or held within the Global Registry.	Secondary
	REQ-36	If the Catalogue Item was registered, updates impacting the Registry data must be reflected in the Global Registry.	Primary
	REQ-37	Registration of Catalogue Item changes only needs to happen for changes that: - Impact fields stored in the Global Registry. - Are authorized according to the GTIN allocation rules.	Primary
	REQ-42	If the correction impacts the hierarchy, then it must be handled by deleting the incorrect ItemLink and adding a new Item Link - Add/Delete Scenario's.	Primary
	REQ-92	"Single Data Source" Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
	REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
	REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary

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	REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
	REQ-102	Registry validation is a part of the registration process.	Secondary
	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Secondary
	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Secondary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Secondary
	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.	Secondary
	REQ-108	Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.	Secondary

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	REQ-117	Catalogue Item: - GTIN - GLN of Data Source - Unique Item Identification - Target Market - Country Code [3166-1] - Sub-division code [3166-2] - EAN.UCC Classification [brick level] - Address of the source data pool (GLN used to look up url in data pool profile) - Registration Date - Deletion Date (default : 31.12.9999) - Cancel Date (default : 31.12.9999) - Discontinued Date (default : 31.12.9999) - Date and Time of last change (system date for every action on the Catalogue Item) - Item Validation Information (including validation engine Version, validation date Date & Certificate ID) – certificate ID only has to be maintained at item creation time, periodic maintenance does not affect the Global Registry but is ensured in the data notification (notified certificate needs to be equal or higher than registry certificate)	Secondary
	REQ-121	Party: - GLN - Start Availability Date of the Party - Deletion Date of the Party - Registration Date - Source Data Pool Pointer [GLN used to] - GLN of Data Source (*Data Source is actually the 'owner' of the GLN data - Date and Time of last change - Party Validation Information (including Version, Date & Certificate ID)	Secondary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

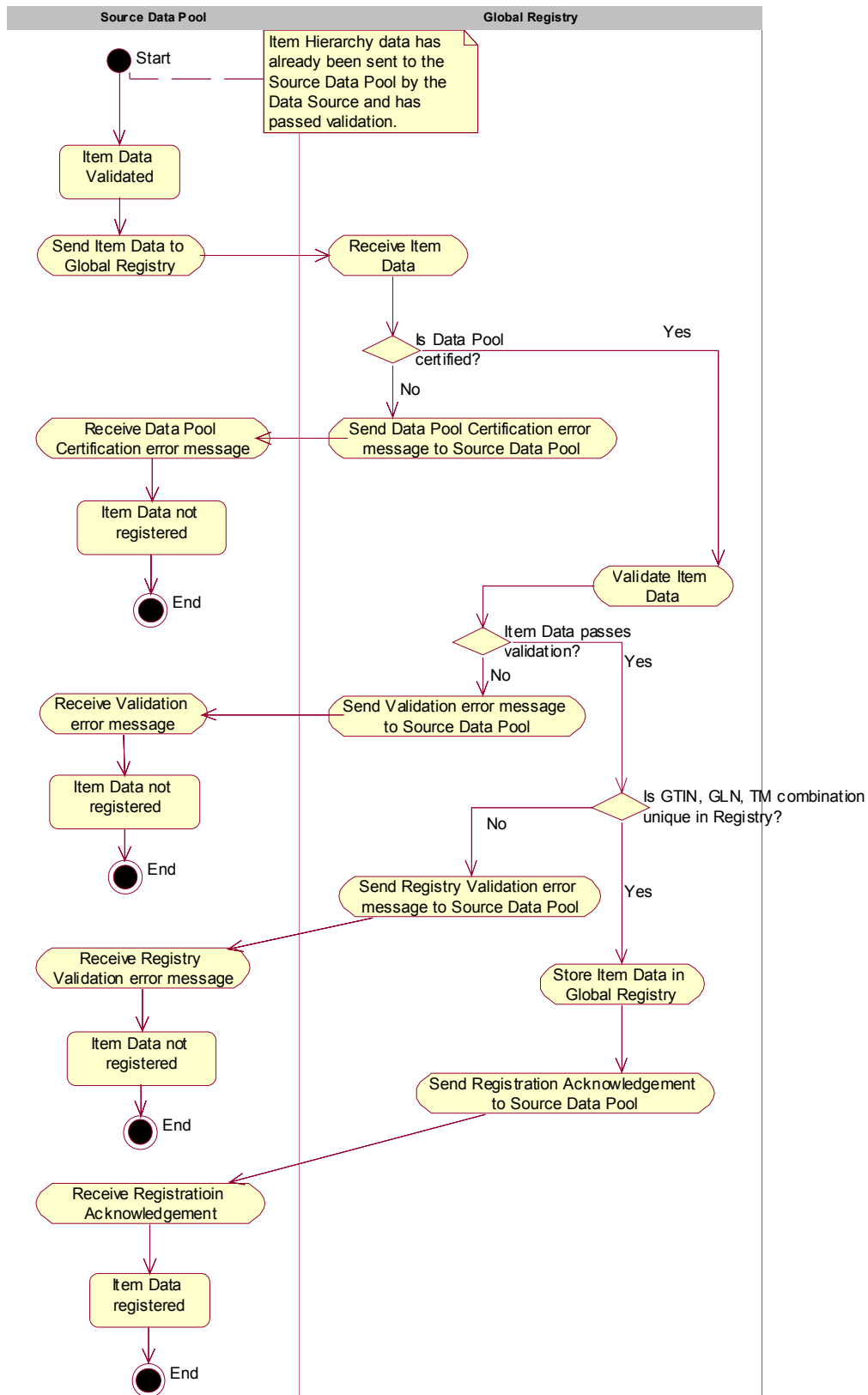


Figure 25 - Register Catalogue Item Activity Diagram

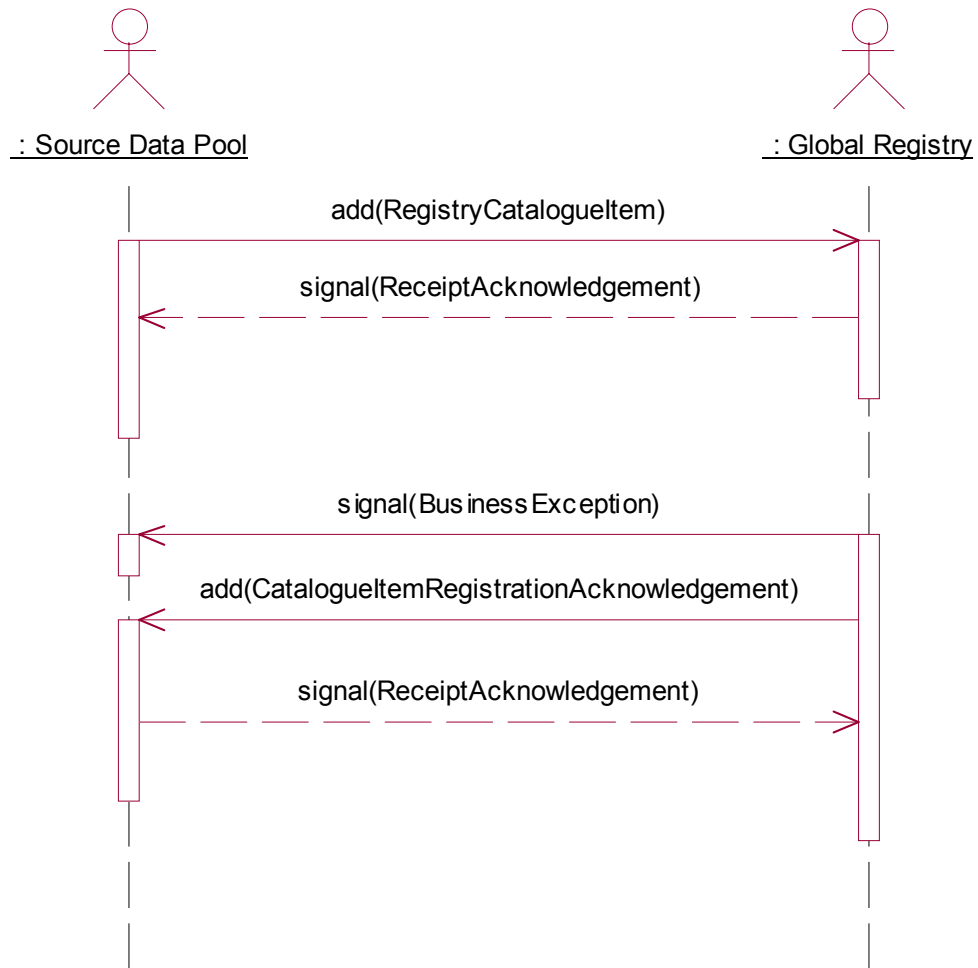


Figure 26 - Register Catalogue Item Sequence Diagram

1.7.8 Change Registered Catalogue Item

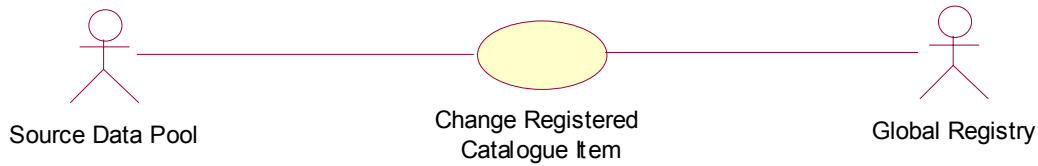


Figure 27 - Change Registered Catalogue Item Use Case Diagram

Use Case Name	Change Registered Catalogue Item
Traceability Identifier	UC-19
Use Case Description	<p>All Catalogue Items for trade must be registered in the Global Registry. Prior to registration, the Catalogue Item data must pass a validation at the Source Data Pool and a uniqueness check at the Registry. The Global Registry ensures that valid, unique Catalogue Item data are available worldwide.</p> <p>In the event that Catalogue Item data changes (see Change Catalogue Item Hierarchy Use Case) in a Source Data Pool, the changes must be reflected in the Global Registry.</p>
Use Cases Above	UC-10: Change Catalogue Item
Use Cases Below	None
Actors	Source Data Pool (SDP) Global Registry
Performance Goals	<p>SDP: To have validated, registered Catalogue Item data.</p> <p>Global Registry: To ensure valid, unique Catalogue Item data are registered.</p>
Preconditions	The Source Data Pool is a certified Data Pool. . The Source Data Pool has a profile that resides in the registry. The Source Data Pool has received a "Change Catalogue Item Hierarchy" message from the Data Source. The Source Data Pool has validated Catalogue Item data received from a Data Source and has sent that Catalogue Item data and a Validation Certificate to the Global Registry.
Postconditions	The Catalogue Item data changes have been applied and retained in the Global Registry.
Scenario	Begins when, the Global Registry receives a validated Change Registered Catalogue Item message from a Source Data Pool.

	<div>1. The Global Registry ensures that the Source Data Pool is certified.</div> <div>2. The Global Registry validates the Validation Certificate (from validation engine) sent with the Catalogue Item data.</div> <div>3. The Global Registry ensures that the Catalogue Item data already exists in the Registry.</div> <div>4. The Global Registry stores the Catalogue Item data.</div> <div>Ends when, The Global Registry sends a registration acknowledgement to the SDP</div>																		
Alternative Scenario	<div>ad 1. Data Pool not certified:<div>1.1. The Global Registry sends an error message to the Source Data Pool</div>Ends when, the Source Data Pool receives the error message</div> <div>ad 2. Validation certificate does not pass validation:<div>2.1. The Global Registry sends a validation error message to the Source Data Pool</div>Ends when, the Source Data Pool receives the validation error message</div> <div>ad 3. The Catalogue Item does not exist in the Registry:<div>3.1. Global Registry sends a registration error message to the SDP</div><div>3.2. The SDP receives the registration error message</div>Ends when, the Source Data Pool receives the registration error message</div>																		
Special Requirements	<div>• Validation: applying GDD standard and GTIN allocation rules.</div>																		
Extension Points	N/A																		
Requirements Covered	<table><tr><th>ID</th><th>Requirement</th><th>Weight</th></tr><tr><td>REQ-4</td><td>Data Source must be able to change Catalogue Item data in the Source Data Pool.</td><td>Secondary</td></tr><tr><td>REQ-8</td><td>EAN.UCC standards validation for GTIN and GLN format.</td><td>Primary</td></tr><tr><td>REQ-9</td><td>Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.</td><td>Primary</td></tr><tr><td>REQ-10</td><td>The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.</td><td>Primary</td></tr><tr><td>REQ-</td><td>Every command needs a response and is handled according to the agreement</td><td>Primary</td></tr></table>	ID	Requirement	Weight	REQ-4	Data Source must be able to change Catalogue Item data in the Source Data Pool.	Secondary	REQ-8	EAN.UCC standards validation for GTIN and GLN format.	Primary	REQ-9	Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.	Primary	REQ-10	The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.	Primary	REQ-	Every command needs a response and is handled according to the agreement	Primary
ID	Requirement	Weight																	
REQ-4	Data Source must be able to change Catalogue Item data in the Source Data Pool.	Secondary																	
REQ-8	EAN.UCC standards validation for GTIN and GLN format.	Primary																	
REQ-9	Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.	Primary																	
REQ-10	The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.	Primary																	
REQ-	Every command needs a response and is handled according to the agreement	Primary																	

	12	between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-30	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.	Primary
	REQ-31	Validation acknowledgements are mandatory.	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-34	ItemLinks are not registered or held within the Global Registry.	Primary
	REQ-35	Changes have to comply with validation rules.	Secondary
	REQ-36	If the Catalogue Item was registered, updates impacting the Registry data must be reflected in the Global Registry.	Secondary
	REQ-37	Registration of Catalogue Item changes only needs to happen for changes that: - Impact fields stored in the Global Registry. - Are authorized according to the GTIN allocation rules.	Secondary
	REQ-38	The change function implies a full refresh of all attributes of the previously created Catalogue Item – this will be reflected in the subsequent notification, including a full refresh of the changed record of the full hierarchy.	Primary
	REQ-62	Cancel Catalogue Item is achieved through the maintenance (using change function) of the cancel date.	Primary
	REQ-64	Cancel date needs to be stored in the Global Registry.	Primary
	REQ-92	“Single Data Source” Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
	REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
	REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary

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	REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
	REQ-102	Registry validation is a part of the registration process.	Primary
	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary
	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.	Primary
	REQ-108	Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.	Primary

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	REQ-118	Changes/corrections applied to the Global Registry are effective immediately.	Secondary
	REQ-119	Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.	Secondary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

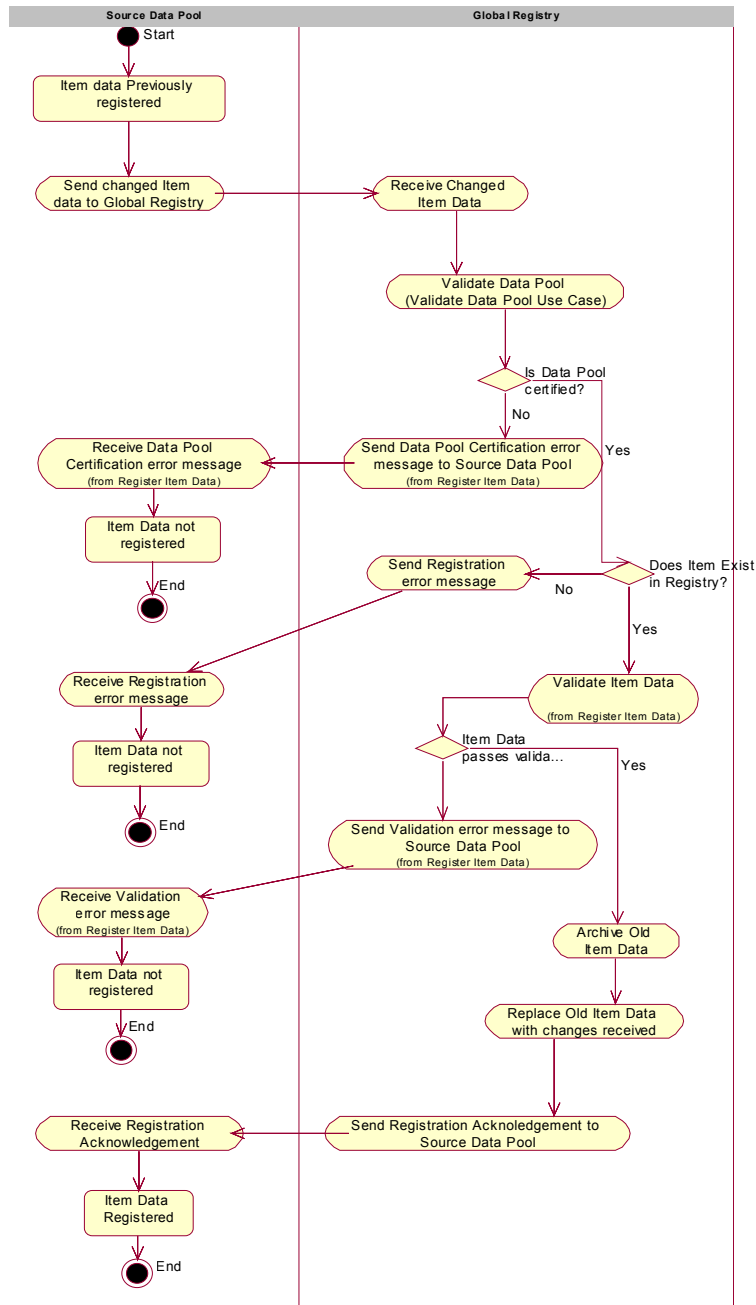


Figure 28 - Change Registered Catalogue Item Activity Diagram

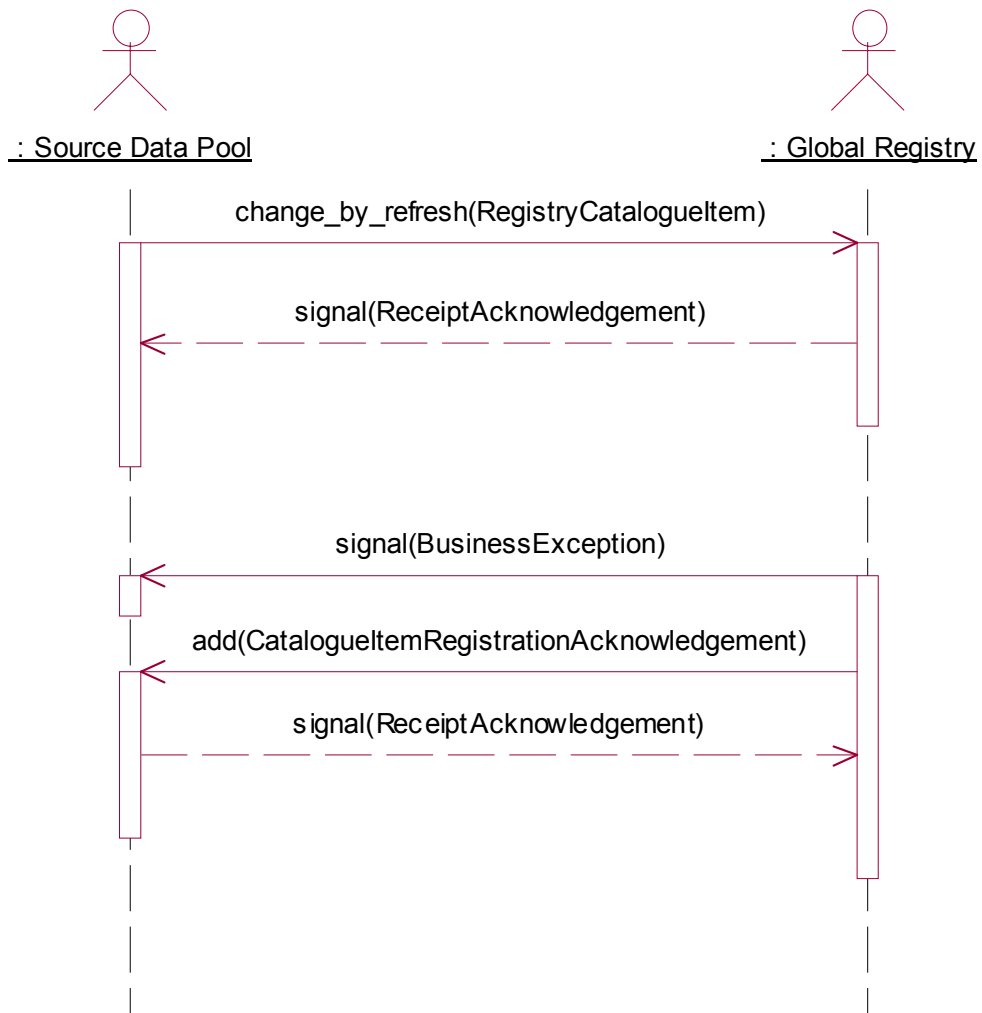


Figure 29 - Change Registered Catalogue Item Sequence Diagram

1.7.9 Correct Registered Catalogue Item

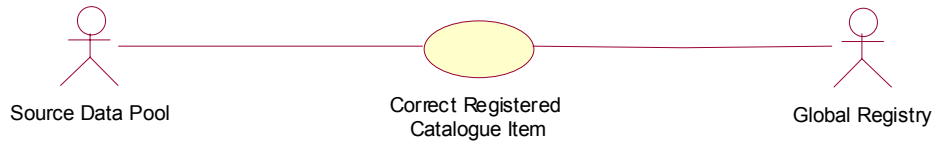


Figure 30 - Correct Registered Catalogue Item Use Case Diagram

Use Case Name	Correct Registered Catalogue Item
Traceability Identifier	UC-20
Use Case Description	<p>All Catalogue Items for trade must be registered in the Global Registry. Prior to registration, the Catalogue Item data must pass a validation at the Source Data Pool and a uniqueness check at the Registry. The Global Registry ensures that valid, unique Catalogue Item data are available worldwide.</p> <p>A correction allows a Data Source to make changes to Catalogue Item data that would not be allowed by validation rules and as such is outside of normal processing. It is intended to provide a means for errors to be corrected and not as an alternative to the Change Registered Catalogue Item process.</p> <p>This process is triggered by the “Correct Hierarchy Data” Use Case. In the event that Catalogue Item Hierarchy data is corrected (see Correct Catalogue Item Hierarchy Use Case) in a Source Data Pool, the changes must be reflected in the Global Registry.</p>
Use Cases Above	
Use Cases Below	None
Actors	Source Data Pool (SDP) Global Registry
Performance Goals	<p>SDP: To correct errors in Catalogue Item data. To have validated, registered Catalogue Item Hierarchy data.</p> <p>Global Registry: To ensure valid, unique Catalogue Item data are registered.</p>

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Preconditions	The Source Data Pool is a certified Data Pool whose profile resides in the registry. The Source Data Pool has received a "Correct Catalogue Item Hierarchy" message from the Data Source. The Source Data Pool has validated Catalogue Item data received and has sent that Catalogue Item data to the Global Registry.
Postconditions	The Catalogue Item data corrections have been applied and retained in the Global Registry.
Scenario	<p>Begins when, the Global Registry receives a validated Correct Registered Catalogue Item message from a Source Data Pool.</p> <ol style="list-style-type: none">1. The Global Registry ensures that the Source Data Pool is certified.2. The Global Registry ensures that the Catalogue Item data already exists in the Registry.3. The Global Registry performs the Source Data Pool validation.4. The Global Registry removes the old Catalogue Item Data from the Registry.5. The Global Registry stores the Catalogue Item data. <p>Ends when, The Global Registry sends a registration acknowledgement to the SDP</p>
Alternative Scenario	<p>ad 1. Data Pool not certified:</p> <ol style="list-style-type: none">1.1. The Global Registry sends an error message to the Source Data Pool <p>Ends when, the Source Data Pool receives the error message</p> <p>ad 2. The Catalogue Item does not exist in the Registry:</p> <ol style="list-style-type: none">3.1. Global Registry sends a registration error message to the SDP3.2. The SDP receives the registration error message <p>Ends when, the Source Data Pool receives the registration error message</p> <p>ad 3. Catalogue Item data does not pass Data Pool validation:</p> <ol style="list-style-type: none">3.1. The Global Registry sends a validation error message to the Source Data Pool <p>Ends when, the Source Data Pool receives the validation error message</p>
Special Requirements	<ul style="list-style-type: none">• Validation: applying GDD standards.
Extension Points	N/A

Requirements Covered	ID	Requirement	Weight
	REQ-5	Data Source must be able to correct Catalogue Item data in the Source Data Pool.	Secondary
	REQ-8	EAN.UCC standards validation for GTIN and GLN format.	Primary
	REQ-9	Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.	Primary
	REQ-10	The Catalogue Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique.	Primary
	REQ-11	Corrections bypass the standard GTIN/GLN allocation rules.	Secondary
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-21	If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-30	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.	Primary
	REQ-31	Validation acknowledgements are mandatory.	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-34	ItemLinks are not registered or held within the Global Registry.	Primary
	REQ-36	If the Catalogue Item was registered, updates impacting the Registry data must be reflected in the Global Registry.	Primary
	REQ-37	Registration of Catalogue Item changes only needs to happen for changes that: - Impact fields stored in the Global Registry. - Are authorized according to the GTIN allocation rules.	Primary

	REQ-40	Incorrect core data (i.e. attributes that cannot be updated according to allocation rules) can only be updated through a specific correction functionality.	Primary
	REQ-41	Correct Item Hierarchy must: - trigger syntactical and content validation - skip GTIN allocation rules validation - set a flag on the GTIN data record to inform the data recipient of the correction (see data distribution / notification) - the correction will also be reflected in the Global Registry if it impacts Registry data	Primary
	REQ-42	If the correction impacts the hierarchy, then it must be handled by deleting the incorrect ItemLink and adding a new Item Link - Add/Delete Scenario's.	Primary
	REQ-43	If the correction does not impact the hierarchy, then ItemLink attributes will be updated through the correction command.	Secondary
	REQ-44	Notification of the hierarchy must indicate it is a correction.	Primary
	REQ-57	A deletion cannot be corrected – only the discontinuation can be reversed.	Primary
	REQ-92	“Single Data Source” Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
	REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
	REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
	REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
	REQ-102	Registry validation is a part of the registration process.	Primary
	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary
	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue	Primary

		<p>Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.</p>	
	REQ-108	<p>Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.</p>	Primary
	REQ-118	Changes/corrections applied to the Global Registry are effective immediately.	Primary
	REQ-119	Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

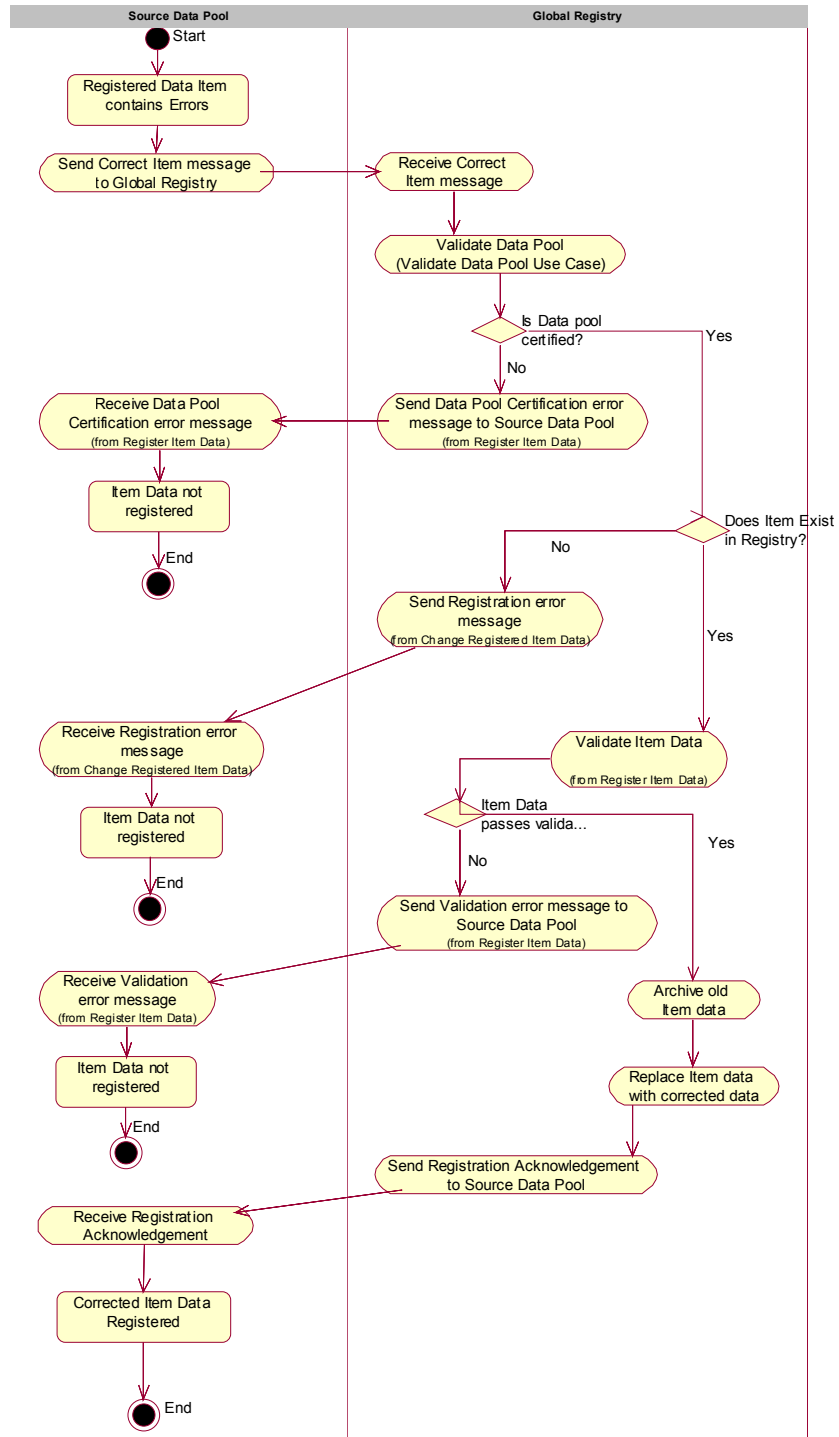


Figure 31 - Correct Registered Catalogue Item Activity Diagram

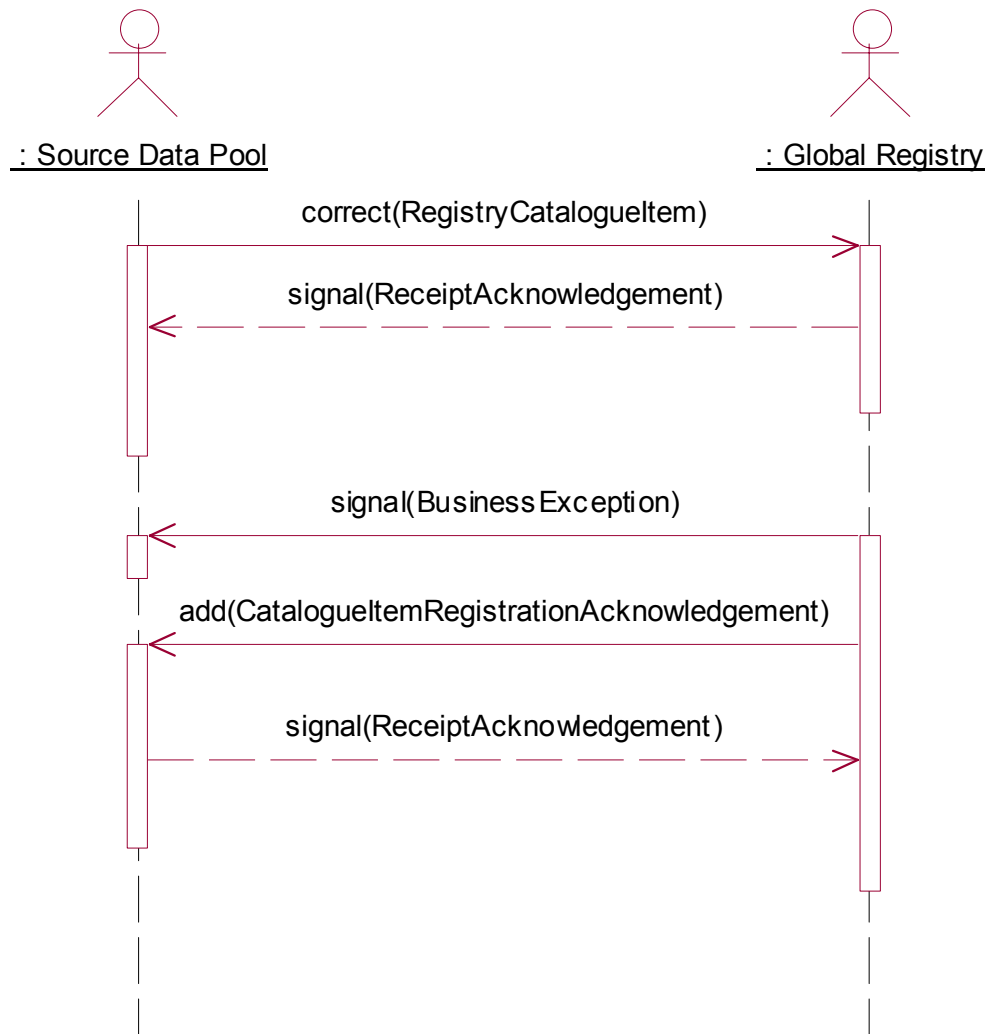


Figure 32 - Correct Registered Catalogue Item Sequence Diagram

1.7.10 Delete Registered Catalogue Item



Figure 33 - Delete Registered Catalogue Item

Use Case Name	Delete Registered Catalogue Item
Traceability Identifier	UC-21
Use Case Description	This use case describes the processes that need to take place for Catalogue Item registered in the Global Registry to be deleted. The process takes place in the Global Registry based upon either a previously set Cancel or Discontinue date.
Use Cases Above	UC-46: Manage Catalogue Item Data in Global Registry
Use Cases Below	None
Actors	Global Registry
Performance Goals	Global Registry: To ensure that GTIN allocation rules are followed.
Preconditions	The deletion of registered Catalogue Items is a consequence of 2 actions: <ul style="list-style-type: none">- Catalogue Item was discontinued or cancelled (through change)- Catalogue Item was flagged for deletion (through change). So these changes are reflected in the Global Registry data and will trigger a clean up (internal process) when the retention limit is over.
Postconditions	
Scenario	
Alternative Scenario	
Special Requirements	<ul style="list-style-type: none">•
Extension Points	N/A

Requirements Covered	ID	Requirement	Weight
	REQ-6	Data Source must be able to delete Catalogue Item data in the Source Data Pool.	Secondary
	REQ-7	If a Catalogue Item is deleted:- the links pointing down must be deleted- all links above must be deleted- all Items above must be deleted	Secondary
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-21	If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-30	Only Catalogue Items are registered in the Global Registry. Not Catalogue Item Hierarchies.	Primary
	REQ-31	Validation acknowledgements are mandatory.	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-34	ItemLinks are not registered or held within the Global Registry.	Primary
	REQ-36	If the Catalogue Item was registered, updates impacting the Registry data must be reflected in the Global Registry.	Primary
	REQ-37	Registration of Catalogue Item changes only needs to happen for changes that: - Impact fields stored in the Global Registry. - Are authorized according to the GTIN allocation rules.	Primary
	REQ-42	If the correction impacts the hierarchy, then it must be handled by deleting the incorrect ItemLink and adding a new Item Link - Add/Delete Scenario's.	Primary
	REQ-47	The objective of the "Delete" Function is not to physically remove data from the data pool, but to "Flag for deletion", authorizing the deletion of the data.	Secondary
	REQ-48	The deletion needs to be validated against a number of criteria, e.g. Item is no longer published, item discontinued, retention limit (EAN/UCC specifications)...	Primary
	REQ-49	Rules for archiving or physical deletes will be agreed with the data pools and in the scope of the certification process.	Primary

REQ-50	Deletions need to be reflected in the registry (deletion flag + effective change date = deletion date in the Global Registry)	Secondary
REQ-51	To protect data integrity within the data pool, the deletion of a child can only occur after the deletion of the parents.	Secondary
REQ-52	Validation for deleted Items ensures the parents have been deleted before the deletion of the child is performed.	Secondary
REQ-53	Validation is automatically triggered by the "Delete" command and does not require a specific message flow.	Primary
REQ-54	Deletion of a Catalogue Item must trigger the invalidation of any hierarchy links involving that Item, whether that Item is the parent or the child in the link. This is completed by the Refresh.ItemLink message. Ackn.ItemLink will be repeated for every link that was refreshed or invalidated.	Secondary
REQ-55	Deletion needs to be validated against : - Publication status - Availability Status (end availability + discontinued Y/N) - Hierarchy : parents have to be deleted before children	Primary
REQ-57	A deletion cannot be corrected – only the discontinuation can be reversed.	Secondary
REQ-58	Deletes are not synchronized across data pools.	Secondary
REQ-59	ItemLinks can only be deleted: - as the correction of an error - as the result of a delete.Item	Primary
REQ-60	The validity period of a ItemLink is defined by the validity period of the Parent Item and/or the Child Item.	Primary
REQ-61	When either parent or child expire, the related ItemLink(s) have to expire as well. This is achieved through the Refresh.ItemLink function.	Primary
REQ-92	"Single Data Source" Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
REQ-102	Registry validation is a part of the registration process.	Primary
REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary

	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary
	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.	Primary
	REQ-108	Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.	Primary
	REQ-118	Changes/corrections applied to the Global Registry are effective immediately.	Primary
	REQ-119	Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

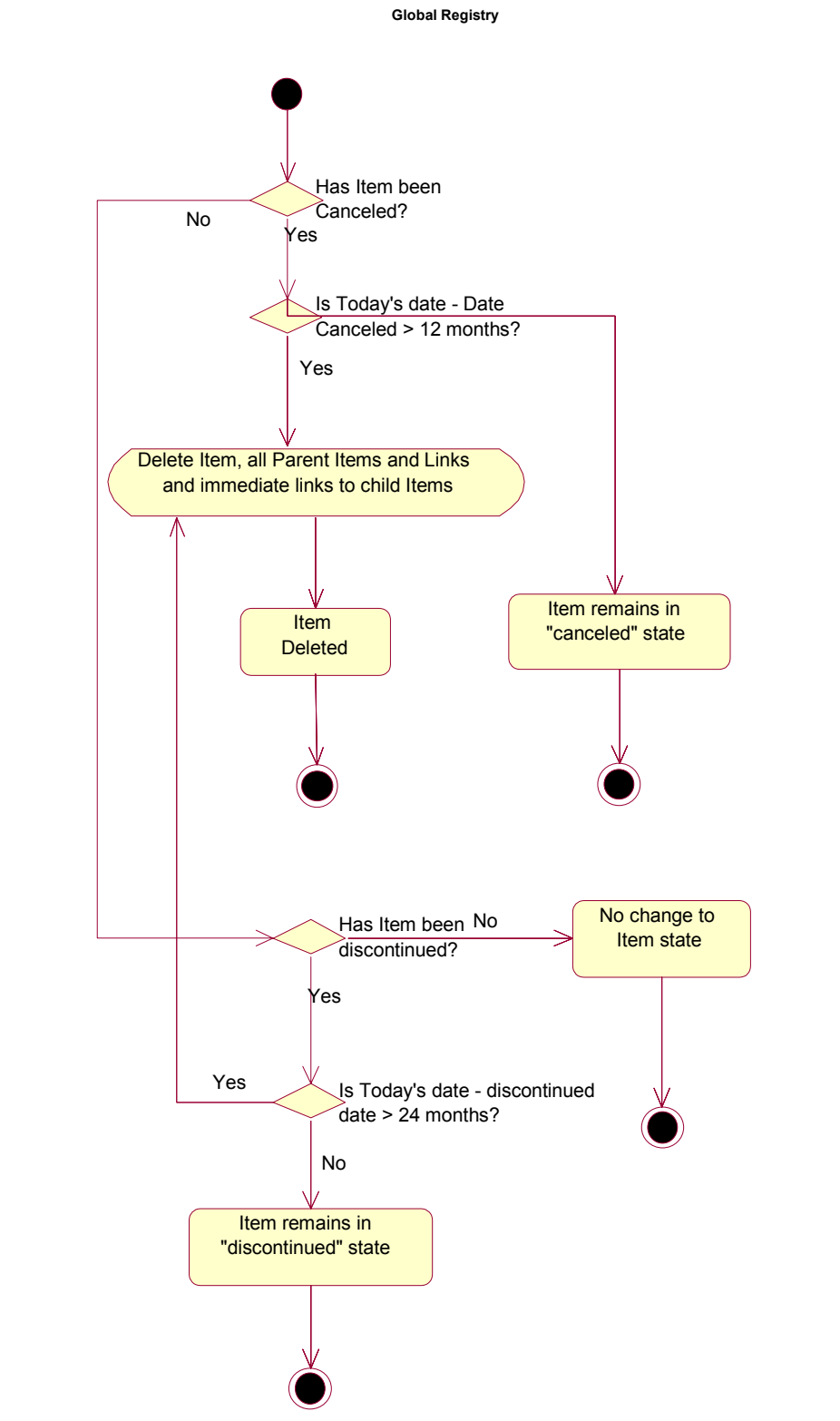
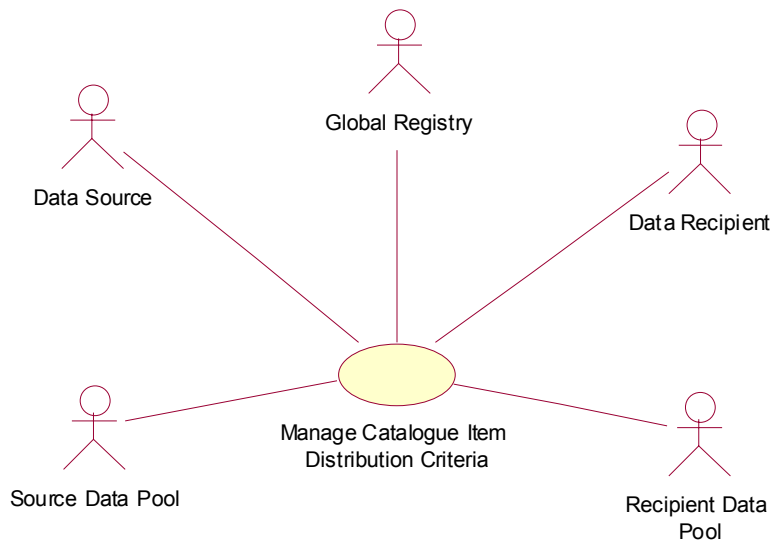


Figure 34 - Delete Registered Catalogue Item Activity diagram

1.7.11 Manage Catalogue Item Distribution Criteria



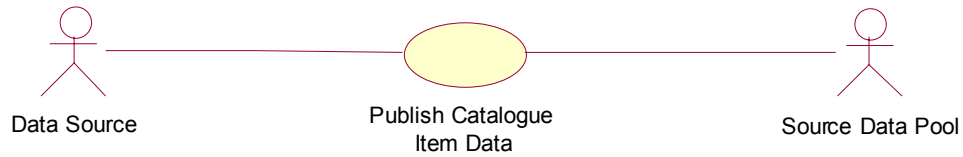
Use Case Name	Manage Catalogue Item Distribution Criteria
Traceability Identifier	UC-23
Use Case Description	The Manage Catalogue Item Distribution Criteria Use Case describes the process that takes place to allow Data Sources and Data Recipients to define the criteria or circumstances under which they will distribute or receive Catalogue Item data.
Use Cases Above	UC-1: Synchronize Catalogue Item Data
Use Cases Below	UC-24: Publish Catalogue Item Data UC-26: Confirm Catalogue Item Data UC-27: Subscribe to Catalogue Item Data UC-28: Remove Catalogue Item Subscription UC-34: Stop Publishing Catalogue Item Data UC-48: Request Catalogue Item Data
Actors	Data Source Source Data Pool (SDP) Data Recipient Recipient Data Pool (RDP) Global Registry
Performance Goals	Data Source: To inform the Source Data Pool of the criteria under which Catalogue Item Data may be distributed to Data Recipients (Publication). SDP: To obtain the necessary information that will allow the SDP to distribute Catalogue Item Data to the appropriate Recipient Data Pool (Publications,

	<p>Subscriptions and Confirmations).</p> <p>Data Recipient: To inform the Recipient Data Pool of the criteria under which Catalogue Item Data may be forwarded to the Data Recipient (Subscriptions, Confirmations).</p> <p>Recipient Data Pool: To obtain the necessary information that will allow the RDP to forward Catalogue Item Data to the appropriate Data Recipient (Subscriptions, Confirmations).</p> <p>Global Registry: To provide SDP with Subscriptions and the address of the RDP for a particular Data Recipient.</p>																					
Preconditions	The Data Source has determined that they would like to distribute Catalogue Item Data. The Data Recipient has determined that they would like to receive Catalogue Item Data.																					
Postconditions	A full set of criteria (Publications, Subscriptions and Confirmations) is specified, enabling the ongoing process of distribution of Catalogue Item data. The confirmation is not a pre-requisite to the distribution of data.																					
Scenario	<ul style="list-style-type: none">• The Data Source Publishes Catalogue Item data.• The Data Recipient Subscribes to Catalogue Item Data.• The Data Recipient Confirms Catalogue Item Data.• The Source Data Pool applies the Publications, Subscriptions and Confirmations to create the Synchronization List.																					
Alternative Scenario	None at this summary level																					
Special Requirements	<ul style="list-style-type: none">•																					
Extension Points	N/A																					
Requirements Covered	<table><tr><th>ID</th><th>Requirement</th><th>Weight</th></tr><tr><td>REQ-12</td><td>Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure</td><td>Primary</td></tr><tr><td>REQ-13</td><td>The Data Source grants visibility of item, party and partner profiles including party capabilities data to a given list of parties (identified by their GLNs) or to all parties in a given Target Market.</td><td>Secondary</td></tr><tr><td>REQ-20</td><td>Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.</td><td>Secondary</td></tr><tr><td>REQ-21</td><td>If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.</td><td>Secondary</td></tr><tr><td>REQ-22</td><td>Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.</td><td>Secondary</td></tr><tr><td>REQ-</td><td>Events that can trigger notifications are: - Publication of new data / change of</td><td>Primary</td></tr></table>	ID	Requirement	Weight	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary	REQ-13	The Data Source grants visibility of item, party and partner profiles including party capabilities data to a given list of parties (identified by their GLNs) or to all parties in a given Target Market.	Secondary	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Secondary	REQ-21	If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Secondary	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Secondary	REQ-	Events that can trigger notifications are: - Publication of new data / change of	Primary
ID	Requirement	Weight																				
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REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Secondary																				
REQ-21	If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Secondary																				
REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Secondary																				
REQ-	Events that can trigger notifications are: - Publication of new data / change of	Primary																				

	23	publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-25	The Data Distribution, which is the movement of data from one entity to another, must be handled through a specific notification type.	Primary
	REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Primary
	REQ-27	In case of an ItemLink correction, the entire hierarchy will be indicated as corrected in the notification.	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Secondary
	REQ-92	"Single Data Source" Principle : - there can only be one official source of the data – the one that is registered - this source is identified by the data source - this is the only valid source for data synchronization and related processes	Primary
	REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
	REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
	REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
	REQ-102	Registry validation is a part of the registration process.	Primary
	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary
	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue	Primary

	<p>Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.</p>	
REQ-108	<p>Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.</p>	Primary
REQ-109	<p>A Data Recipient requests that it receive a “notification” when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient’s access to information as controlled by the data source through its source data pool.</p>	Primary
REQ-119	<p>Future effective changes stored in the data pool are only reflected in the Global Registry when they become effective.</p>	Primary
REQ-121	<p>Party: - GLN - Start Availability Date of the Party - Deletion Date of the Party - Registration Date - Source Data Pool Pointer [GLN used to] - GLN of Data Source (*Data Source is actually the ‘owner’ of the GLN data - Date and Time of last change - Party Validation Information (including Version, Date & Certificate ID)</p>	Primary
REQ-128	<p>Source Data Pools must send notifications based on matching publications and subscriptions.</p>	Secondary
REQ-159	<p>Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.</p>	Primary
REQ-171	<p>The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.</p>	Primary

1.7.12 Publish Catalogue Item Data



Use Case Name	Publish Catalogue Item Data
Traceability Identifier	UC-24
Use Case Description	The Publish Catalogue Item Data Use Case describes how a Data Source provides the Source Data Pool with the criteria under which their Catalogue Item Data may be distributed to Data Recipients.
Use Cases Above	UC-23: Manage Catalogue Item Distribution Criteria
Use Cases Below	None
Actors	Data Source Source Data Pool (SDP)
Performance Goals	Data Source: To inform the Source Data Pool of the criteria (Target Market, Recipient GLN) under which their Catalogue Item Data may be distributed to Data Recipients. SDP: To possess the necessary information that will allow the SDP to distribute Catalogue Item Data to the appropriate Recipient Data Pool.
Preconditions	Each Catalogue Item has been loaded to the Source Data Pool and Registered in the Global Registry.
Postconditions	Publication data is stored in the Source Data Pool.
Scenario	Begins when, the Source Data Pool receives a Publication message from a Data Source. 1. The SDP validates the Publication (valid Target Market, GLN) 2. The SDP creates or updates the Synchronization List Ends when, the Synchronization List is created or updated.

Alternative Scenario	ad 1. Data Source has sent invalid data: 1.1. The SDP sends an error message to the Source Data Pool specifying what was invalid. Ends when, the Data Source receives the error message		
Special Requirements			
Extension Points	N/A		
Requirements Covered	ID	Requirement	Weight
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-13	The Data Source grants visibility of item, party and partner profiles including party capabilities data to a given list of parties (identified by their GLNs) or to all parties in a given Target Market.	Primary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-21	If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-66	When product is available again: update start/end availability date.	Primary
	REQ-82	Maintaining a publication is granting visibility and access to data.	Secondary
	REQ-83	Publications are initiated by the Data Source in the source data pool, they do not need to be synchronized in the Global Data Synchronization Network (GDSN).	Secondary
	REQ-84	The Target Market where product is available is communicated in the product key (GTIN+GLN+TM) – this can be different from the Target Market for publication.	Secondary
	REQ-85	Data is either published: - to a Target Market: any GLN in the Target Market has access to the data (only applies to “public” Items) - to specific GLN’s: only these GLN’s have access to the data (only applies to “private” Items)	Secondary
REQ-86	The purpose of the public/private flag is to provide information to the parties involved on the status of the Catalogue Item.	Secondary	

	REQ-87	Notification is triggered by the matching process.	Secondary
	REQ-88	The matching process is owned and developed by each source data pool in order to trigger data distribution based on publication and subscription data.	Secondary
	REQ-89	The matching process can be triggered either by publication, subscription or as a scheduled event. It is valid for all subscription types (including synchronization list) and all publication types.	Secondary
	REQ-91	For a given publication (create/update) : - the matching process identifies subscriptions with matching criteria (TM, GLN, category, GTIN...) - for each matching subscription, a notification is created including all dependent hierarchies - for a synchronization list, the hierarchy information included in the notification, will be limited to the GTIN's maintained in the Synchronization list. - The notification is sent to the home data pool of the data recipient.	Secondary
	REQ-93	Although the notification process will physically move the data from one data pool to another, this data should not be stored permanently for the purpose of synchronization with any other user than the initial subscriber. If stored, access should be limited to the initial data recipient.	Secondary
	REQ-109	A Data Recipient requests that it receive a "notification" when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient's access to information as controlled by the data source through its source data pool.	Primary
	REQ-128	Source Data Pools must send notifications based on matching publications and subscriptions.	Primary
	REQ-138	PublicationWho : Data Source = source GLNWhat : Item record, identified by GTIN+GLN+TMWhere : TM or GLN (= target GLN)	Secondary
	REQ-140	Publication TM does not have to be equal to the GTIN TM (i.e. I can have a product record defined for TM France, but publishing the data to Belgium only for information purposes).	Secondary
	REQ-144	Request for publication (subscription) resets the reject flag if catalogue Item has been previously rejected and reactivate the subscription.	Secondary
	REQ-145	The request for publication subscription is only executed once.	Secondary
	REQ-146	Subscriptions are passed from global Registry to data pools just once. The Global Registry passes along to the source data pool matching subscriptions in the entirety, rather than replicating for each GTIN registered.	Primary
	REQ-147	Request for notification publication (subscription) resets the reject flag if the Catalogue Item has been previously rejected and reactivate the subscription.	Primary
	REQ-148	The "Reload" attribute will contain a Boolean value (TRUE or FALSE).	Primary
	REQ-149	Upon execution of an item data notification, the source data pool will pass along the value of this attribute within the message for the recipient to properly route the inbound message. After executing the item data notification, the source data pool will	Primary
	REQ-150	The team identified the need for an additional process to be known as "Request for Notification". The Request for Notification is originated by the requesting data recipient, through the recipient data pool, to the Global Registry and forwarded to the so	Primary
	REQ-	The team wanted to reiterate the fact that new subscriptions received by a	Primary

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	151	source data pool would be executed immediately a single time.	
	REQ-152	The ability to set up a subscription and not get an initial full load of data. She wants to only receive the changes, adds, deletes and new items that match her subscription. (This is the same as a regular subscription with the exception of not getting	Primary
	REQ-154	The Global Registry shall send only once a subscription to a Source Data Pool.	Primary
	REQ-156	Subscription matches are performed at any level of the hierarchy. The data recipient is sent all hierarchies that match.	Secondary
	REQ-155	Data Sources will publish trade items at the highest level of the hierarchy	Primary
	REQ-158	Top of hierarchy is assumed to be the largest available unit determined by the data source. Defined as the GTIN of the highest published item in the hierarchy.	Primary
	REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	Primary
	REQ-166	<p>A Request for Catalogue Item Notification with the isReload set to false will result in items being re-sent whether they were previously rejected or not. The Sync List will be reset. This is only valid for items that have previously been sent to the data recipient.</p> <p>The CIN response will have the following values:</p> <ul style="list-style-type: none"> • documentStatus= Original • isReload = False • Command= Add 	Primary
	REQ-167	<p>A Request for Catalogue Item Notification with the isReload set to true will result in only items not previously rejected being re-sent. The Sync List is not reset.</p> <p>The CIN response will have the following values:</p> <ul style="list-style-type: none"> • documentStatus= Copy • isReload = True • Command= Add 	Primary
	REQ-168	The Document Status of the RFCIN command is ignored for the purposes of determining its impact on the sync list and the status of the CIN that is generated.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceldentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceldentifier of the original message.	Primary

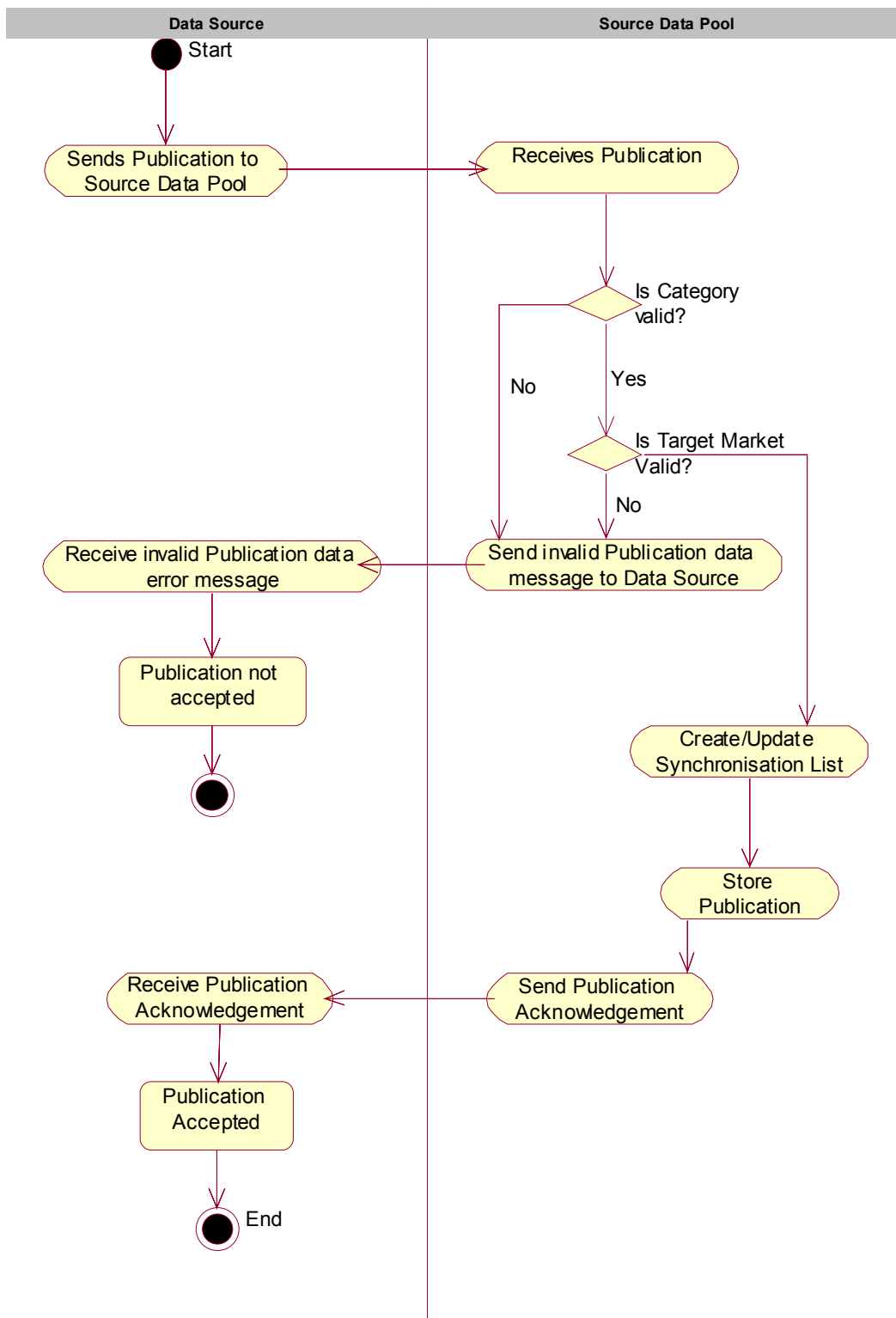


Figure 35 - Publish Catalogue Item Data Activity Diagram

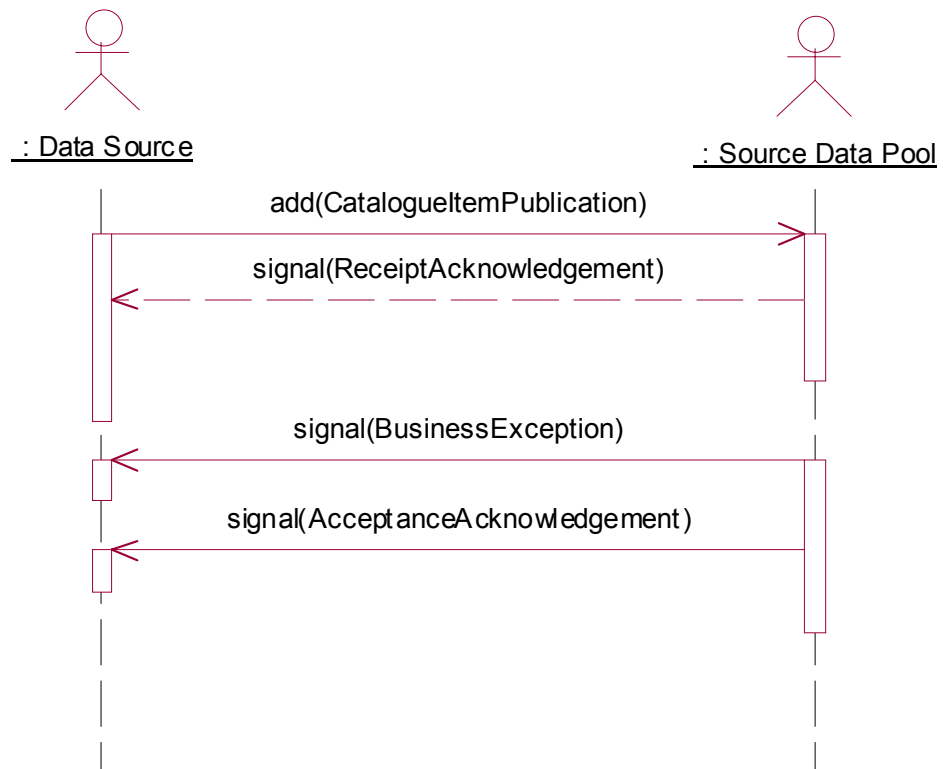


Figure 36 - Publish Catalogue Item Data Sequence Diagram

1.7.13 Stop Publishing Catalogue Item Data

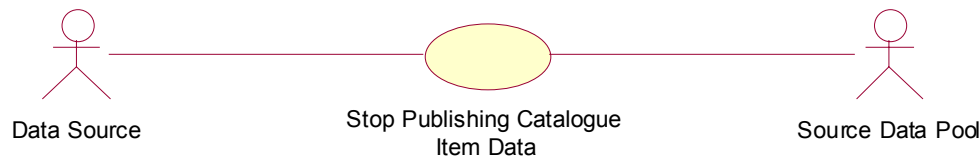


Figure 37 - Stop Publishing Catalogue Item Data Use Case Diagram

Use Case Name	Stop Publishing Catalogue Item Data
Traceability Identifier	UC-34
Use Case Description	<p>The Stop Publishing Catalogue Item Data Use Case describes how a Data Source informs the Source Data Pool to delete the criteria under which their Catalogue Item Data may be distributed to Data Recipients.</p> <p>The Source Data Pool will not be able to distribute the Catalogue Item Data prescribed by the criteria.</p>
Use Cases Above	UC-23: Manage Catalogue Item Distribution Criteria
Use Cases Below	None
Actors	Data Source Source Data Pool (SDP)
Performance Goals	<p>Data Source: To inform the Source Data Pool to delete a Publication and stop distributing Catalogue Item Data.</p> <p>SDP: To possess the necessary information that will allow the SDP to distribute Catalogue Item Data to the appropriate Recipient Data Pool.</p>
Preconditions	The Publication exists in the Source Data Pool.
Postconditions	The Source Data Pool is unable to distribute the Catalogue Item Data that was specified in the deleted Publication.
Scenario	<p>Begins when, the Source Data Pool receives a message to delete a publication from a Data Source.</p> <ol style="list-style-type: none"> 1. The SDP validates that the Publication exists 2. The SDP removes the entry from the Synchronization List 3. The SDP deletes the Publication. 4. The SDP sends a CIN (with a Document Command of Delete and a CIN Catalogue Item State which equals the current catalogue item state in the Global Registry) to the recipient data pool and on to the data recipient informing them that the publication has been stopped (break in synchronization). Note : None of the item dates are updated in this transaction. <p>Ends when, the Data Recipient receives the CIN with a Document</p>

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	Command of Delete and a CIN Catalogue Item State which equals the current catalogue item state in the Global Registry.		
Alternative Scenario	<p>ad 1. The Publication does not exist at the Source Data Pool:</p> <p>1.1. The SDP sends an error message to the Source Data Pool specifying that the Publication does not exist.</p> <p>Ends when, the Data Source receives the error message</p>		
Special Requirements	<ul style="list-style-type: none"> • 		
Extension Points	N/A		
Requirements Covered	ID	Requirement	Weight
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-13	The Data Source grants visibility of item, party and partner profiles including party capabilities data to a given list of parties (identified by their GLNs) or to all parties in a given Target Market.	Primary
	REQ-16	Subscription remains valid until it is deleted. Hence, it can not be updated.	Primary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-21	If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-65	Communicate that product is no longer available: maintain end availability date.	Primary
	REQ-66	When product is available again: update start/end availability date.	Primary
	REQ-82	Maintaining a publication is granting visibility and access to data.	Primary
	REQ-83	Publications are initiated by the Data Source in the source data pool, they do not need to be synchronized in the Global Data Synchronization Network (GDSN).	Primary

	REQ-84	The Target Market where product is available is communicated in the product key (GTIN+GLN+TM) – this can be different from the Target Market for publication.	Primary
	REQ-85	Data is either published: - to a Target Market: any GLN in the Target Market has access to the data (only applies to “public” Items) - to specific GLN's: only these GLN's have access to the data (only applies to “private” Items)	Primary
	REQ-86	The purpose of the public/private flag is to provide information to the parties involved on the status of the Catalogue Item.	Primary
	REQ-87	Notification is triggered by the matching process.	Primary
	REQ-88	The matching process is owned and developed by each source data pool in order to trigger data distribution based on publication and subscription data.	Primary
	REQ-89	The matching process can be triggered either by publication, subscription or as a scheduled event. It is valid for all subscription types (including synchronization list) and all publication types.	Primary
	REQ-91	For a given publication (create/update) : - the matching process identifies subscriptions with matching criteria (TM, GLN, category, GTIN...) - for each matching subscription, a notification is created including all dependent hierarchies - for a synchronization list, the hierarchy information included in the notification, will be limited to the GTIN's maintained in the Synchronization list. - The notification is sent to the home data pool of the data recipient.	Primary
	REQ-93	Although the notification process will physically move the data from one data pool to another, this data should not be stored permanently for the purpose of synchronization with any other user than the initial subscriber. If stored, access should be limited to the initial data recipient.	Primary
	REQ-109	A Data Recipient requests that it receive a “notification” when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient's access to information as controlled by the data source through its source data pool.	Primary
	REQ-128	Source Data Pools must send notifications based on matching publications and subscriptions.	Primary
	REQ-138	PublicationWho : Data Source = source GLNWhat : Item record, identified by GTIN+GLN+TMWhere : TM or GLN (= target GLN)	Primary
	REQ-140	Publication TM does not have to be equal to the GTIN TM (i.e. I can have a product record defined for TM France, but publishing the data to Belgium only for information purposes).	Primary
	REQ-144	Request for publication (subscription) resets the reject flag if catalogue Item has been previously rejected and reactivate the subscription.	Primary
	REQ-145	The request for publication subscription is only executed once.	Primary
	REQ-146	Subscriptions are passed from global Registry to data pools just once. The Global Registry passes along to the source data pool matching subscriptions in the entirety, rather than replicating for each GTIN registered.	Primary
	REQ-147	Request for notification publication (subscription) resets the reject flag if the Catalogue Item has been previously rejected and reactivate the subscription.	Primary
	REQ-148	The "Reload" attribute will contain a Boolean value (TRUE or FALSE).	Primary

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	REQ-149	Upon execution of an item data notification, the source data pool will pass along the value of this attribute within the message for the recipient to properly route the inbound message. After executing the item data notification, the source data pool will	Primary
	REQ-150	The team identified the need for an additional process to be known as "Request for Notification". The Request for Notification is originated by the requesting data recipient, through the recipient data pool, to the Global Registry and forwarded to the so	Primary
	REQ-151	The team wanted to reiterate the fact that new subscriptions received by a source data pool would be executed immediately a single time.	Primary
	REQ-152	The ability to set up a subscription and not get an initial full load of data. She wants to only receive the changes, adds, deletes and new items that match her subscription. (This is the same as a regular subscription with the exception of not getting	Primary
	REQ-154	The Global Registry shall send only once a subscription to a Source Data Pool.	Primary
	REQ-155	Data Sources will publish trade items at the highest level of the hierarchy.	Primary
	REQ-158	Top of hierarchy is assumed to be the largest available unit determined by the data source. Defined as the GTIN of the highest published item in the hierarchy.	Primary
	REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	Primary
	REQ-162	To stop the publication of a hierarchy to data recipient, a CIN (with a Document Command of Delete and a CIN Catalogue Item State which equals the current catalogue item state in the Global Registry) will be sent from the source data pool to the recipient data pool and on to the data recipient.	Primary
	REQ-165	Publication deletes must be done at highest level of the published item hierarchy.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instance-identifier of the original message.	Primary

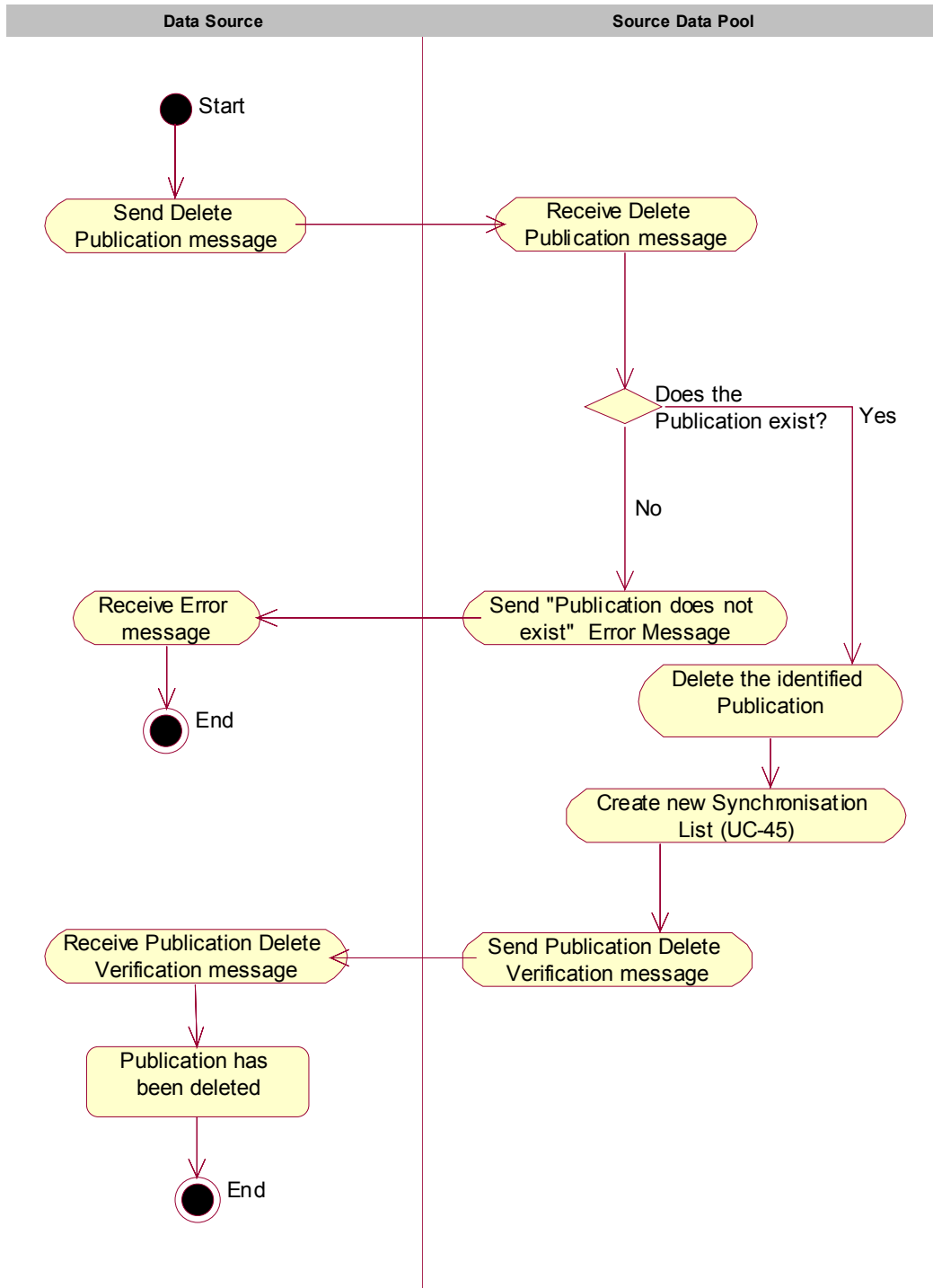


Figure 38 - Stop Publishing Catalogue Item Data Activity Diagram

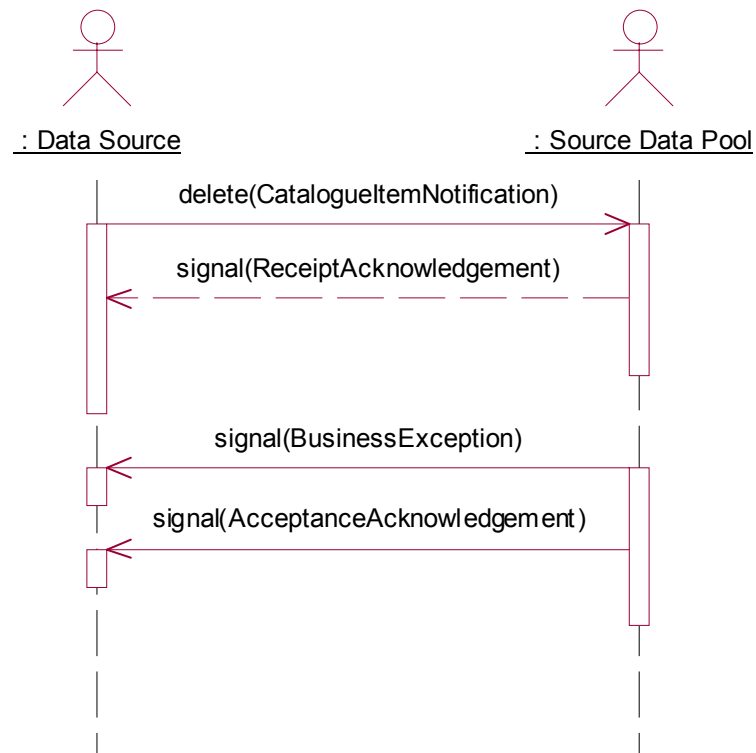


Figure 39 - Stop Publishing Catalogue Item Data Sequence Diagram

1.7.14 Subscribe to Catalogue Item Data

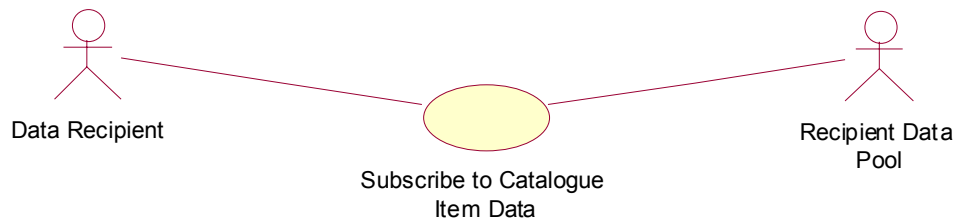


Figure 40 – Subscribe to Catalogue Item Data Use Case Diagram

Use Case Name	Subscribe to Catalogue Item Data
Traceability Identifier	UC-27
Use Case Description	<p>The Subscribe to Catalogue Item Data Use Case describes how a Data Recipient informs the Recipient Data Pool with the criteria under which Catalogue Item Data may be distributed to the Data Recipient.</p> <p>Once the Subscription is created, the Recipient Data Pool will forward it to the Global Registry which, in turn, will forward it to appropriate Source Data Pools (see UC-35 Distribute Subscription Data).</p>
Use Cases Above	UC-23: Manage Catalogue Item Distribution Criteria
Use Cases Below	None
Actors	Data Recipient Recipient Data Pool (RDP)
Performance Goals	<p>Data Recipient: To inform the Recipient Data Pool of the criteria by which Catalogue Item Data may be forwarded to the Recipient.</p> <p>RDP: To possess the necessary information that will allow the RDP to send subscriptions to the Global Registry.</p>
Preconditions	None
Postconditions	The Recipient Data Pool has a Subscription that can be shared with the Global Registry.
Scenario	<p>Begins when, the Recipient Data Pool receives a Subscription Publication message from a Data Recipient.</p> <ol style="list-style-type: none"> 1. The RDP sends a message acknowledgement to the Data Recipient 2. The RDP validates the Subscription criteria (GTIN, GLN of data owner, Target Market or Category). 3. The RDP sends a Subscription Verification to the Data Recipient

	Ends when, the Data Recipient acknowledges the Subscription Verification message.																				
Alternative Scenario	ad 1. The Subscription already exists: 1.1. The RDP sends an error message to the Data Recipient specifying that the Subscription exists. Ends when, the Data Recipient receives the error message Ad 2. The validation fails: 2.1. The RDP sends an error message to the Data Recipient specifying the field in error Ends when, the Data Recipient receives the error message																				
Special Requirements	<p>If the GLN is not found in the party registry, the subscription is still persisted. The GLN must still pass all syntactic validations.</p> <p>If the GTIN is not found in the item registry, the subscription is still persisted. The GTIN must still pass all syntactic validations.</p> <p>If the Target Market is not found in the code list of valid target markets in the global registry, the subscription fails.</p> <p>If the GPC is not found in the code list of valid GPCs in the global registry, the subscription fails.</p> <p>If a subscription, after passing these validations fails to match any items in the global registry, the subscription is still persisted.</p>																				
Extension Points	N/A																				
Requirements Covered	<table><tr><th>ID</th><th>Requirement</th><th>Weight</th></tr><tr><td>REQ-12</td><td>Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure</td><td>Primary</td></tr><tr><td>REQ-14</td><td>A subscription must be able to be maintained on the following levels : - GTIN - GLN of Data Source - Target Market - Lowest level of EAN.UCC Classification or any combination of these 4 elements.</td><td>Secondary</td></tr><tr><td>REQ-15</td><td>With the set up of a subscription, a Data Recipient sets a profile to receive ongoing updates of the matching data (including all hierarchies, independently from the level subscribed on).</td><td>Secondary</td></tr><tr><td>REQ-16</td><td>Subscription remains valid until it is deleted. Hence, it can not be updated.</td><td>Primary</td></tr><tr><td>REQ-17</td><td>Subscriptions must be created by data recipients in their Recipients Data Pool and sent to the Global Registry.</td><td>Secondary</td></tr></table>			ID	Requirement	Weight	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary	REQ-14	A subscription must be able to be maintained on the following levels : - GTIN - GLN of Data Source - Target Market - Lowest level of EAN.UCC Classification or any combination of these 4 elements.	Secondary	REQ-15	With the set up of a subscription, a Data Recipient sets a profile to receive ongoing updates of the matching data (including all hierarchies, independently from the level subscribed on).	Secondary	REQ-16	Subscription remains valid until it is deleted. Hence, it can not be updated.	Primary	REQ-17	Subscriptions must be created by data recipients in their Recipients Data Pool and sent to the Global Registry.	Secondary
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REQ-14	A subscription must be able to be maintained on the following levels : - GTIN - GLN of Data Source - Target Market - Lowest level of EAN.UCC Classification or any combination of these 4 elements.	Secondary																			
REQ-15	With the set up of a subscription, a Data Recipient sets a profile to receive ongoing updates of the matching data (including all hierarchies, independently from the level subscribed on).	Secondary																			
REQ-16	Subscription remains valid until it is deleted. Hence, it can not be updated.	Primary																			
REQ-17	Subscriptions must be created by data recipients in their Recipients Data Pool and sent to the Global Registry.	Secondary																			

	REQ-19	The system must maintain detailed subscription lists.	Secondary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-21	If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-29	The confirmation process must take place in the home data pool of the data recipient.	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-69	Data recipient maintains subscription.	Secondary
	REQ-70	Data recipient will continue to receive updates until he rejects the data.	Primary
	REQ-72	Reject is optional: in the absence of confirmation & reject, the data recipient would still receive updates.	Primary
	REQ-73	Confirmed GTIN: - subscription: go to synchronization list - synchronization list: no action required	Secondary
	REQ-74	Only new products matching the initial subscription will be distributed to avoid resending data that was previously rejected.	Primary
	REQ-78	Subscription: for every matching GTIN, independently from its level, all hierarchies will be returned.	Secondary
	REQ-79	Synchronization list: - Includes every GTIN id (GTIN+GLN+TM) that needs to be synchronized - Can be a result of the Confirmation process - All GTIN's equal or lower in the hierarchy than the GTIN confirmed will be returned	Primary
	REQ-81	Synchronization List is only synchronized between the involved source and recipient data pools for applicable data: synchronization list is built based on confirmation received by a source data pool and nothing else.	Primary
	REQ-88	The matching process is owned and developed by each source data pool in order to trigger data distribution based on publication and subscription data.	Primary
	REQ-89	The matching process can be triggered either by publication, subscription or as a scheduled event. It is valid for all subscription types (including synchronization list) and all publication types.	Primary

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REQ-90	For a given subscription (create/update): - the matching process identifies Items published to the GLN or TM of the subscription owner. - for each item, a notification is created including all dependent hierarchies. - for a synchronization list, the hierarchy information included in the notification, will be limited to the GTIN's maintained in the Synchronization list. - The notification is sent to the home data pool of the data recipient.	Secondary
REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
REQ-109	A Data Recipient requests that it receive a "notification" when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient's access to information as controlled by the data source through its source data pool.	Primary
REQ-110	After a Subscription is created, the Global Registry will then disseminate relevant subscriptions to appropriate Source Data Pools (current and future new data pools).	Secondary
REQ-111	Registry requirements for subscription are: - Receive and store subscriptions - Provide subscription acknowledgement - Matching process of subscriptions with Source Data Pools - Forward subscriptions	Secondary
REQ-123	Recipient maintains a subscription, including the "Reload" flag.	Secondary
REQ-124	The notification triggered by a subscription must also carry the "Reload" flag value.	Secondary
REQ-126	If a new Reload is needed, the Recipient must delete the previous Reload Subscription, then create a new Subscription with the "Reload" flag set.	Secondary
REQ-128	Source Data Pools must send notifications based on matching publications and subscriptions.	Primary
REQ-129	GTIN and Category are mutually exclusive subscription criteria as the Category is uniquely defined for a given GTIN, independently from the GLN and from the TM.	Secondary
REQ-132	The events that can trigger the distribution of a subscription are: - new/updated registration: check existing subscriptions, if new data pools are found : distribute subscriptions - new subscription: check existing registrations, if new data pools are found: distribute subscriptions - delete subscriptions: distribute "delete" to source data pools where subscription had been sent	Primary
REQ-133	Subscriptions cannot be updated, they are created or deleted.	Primary
REQ-134	Subscriptions must be stored in the recipient's data pool.	Primary
REQ-135	For every subscription, the Registry must store the GLN of the Source Data Pool to which the subscription was sent and when it was sent.	Primary

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REQ-136	Ability to identify new or updated registered Catalogue Items that match a subscription and forward the subscription to the Source Data Pool.	Primary
REQ-137	Match new subscriptions with registered Catalogue Items and forward the subscription to the Source Data Pool.	Primary
REQ-139	SubscriptionWho : Data Recipient = target GLNWhat : Any combination of GTIN, GLN, TM and Category	Primary
REQ-141	Deletion of a Subscription stops New Catalogue Items from being sent to RDP, but, doesn't stop Catalogue Items already in the Synchronization List from being updated.	Primary
REQ-142	Request for Notification is not retained in the Global Registry and acts like a Subscription that is applied to the Synchronization List, then deleted (no New Catalogue Item data will be sent).	Primary
REQ-143	"Reload" flag is passed through to Recipient.	Primary
REQ-144	Request for publication (subscription) resets the reject flag if catalogue Item has been previously rejected and reactivate the subscription.	Primary
REQ-145	The request for publication subscription is only executed once.	Primary
REQ-146	Subscriptions are passed from global Registry to data pools just once. The Global Registry passes along to the source data pool matching subscriptions in the entirety, rather than replicating for each GTIN registered.	Primary
REQ-147	Request for notification publication (subscription) resets the reject flag if the Catalogue Item has been previously rejected and reactivate the subscription.	Primary
REQ-148	The "Reload" attribute will contain a Boolean value (TRUE or FALSE).	Primary
REQ-149	Upon execution of an item data notification, the source data pool will pass along the value of this attribute within the message for the recipient to properly route the inbound message. After executing the item data notification, the source data pool will	Primary
REQ-150	The team identified the need for an additional process to be known as "Request for Notification". The Request for Notification is originated by the requesting data recipient, through the recipient data pool, to the Global Registry and forwarded to the so	Primary
REQ-151	The team wanted to reiterate the fact that new subscriptions received by a source data pool would be executed immediately a single time.	Primary
REQ-152	The ability to set up a subscription and not get an initial full load of data. She wants to only receive the changes, adds, deletes and new items that match her subscription. (This is the same as a regular subscription with the exception of not getting	Primary
REQ-154	The Global Registry shall send only once a subscription to a Source Data Pool.	Primary
REQ-156	Subscription matches are performed at any level of the hierarchy. The data recipient is sent all hierarchies that match.	Primary
REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	Primary

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	REQ-169	The Global Registry shall retain and persist all Catalogue Item Subscriptions that are received that contain a GTIN or GLN that is not found in the Global Registry.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

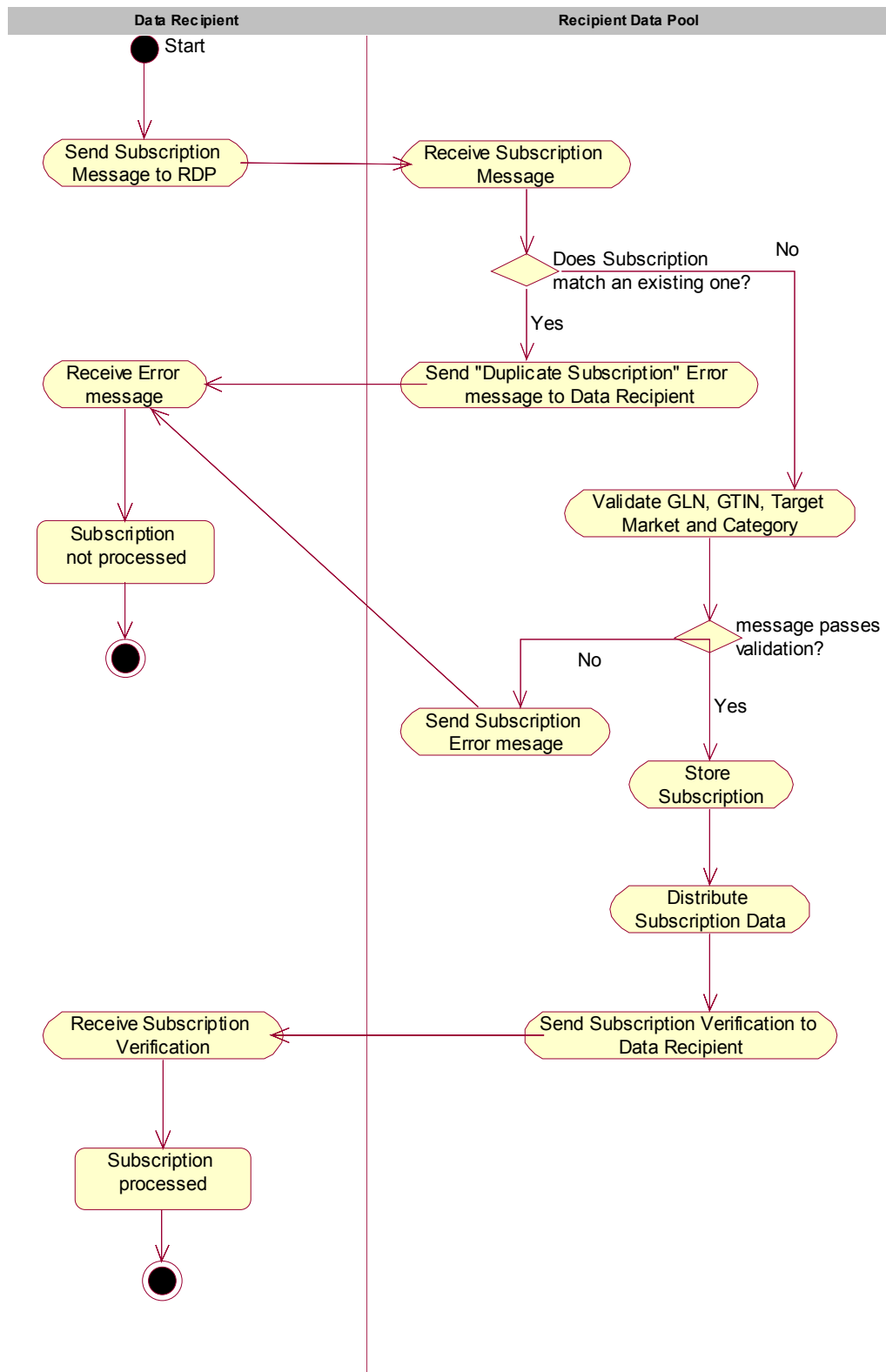


Figure 41 - Subscribe to Catalogue Item Data Activity Diagram

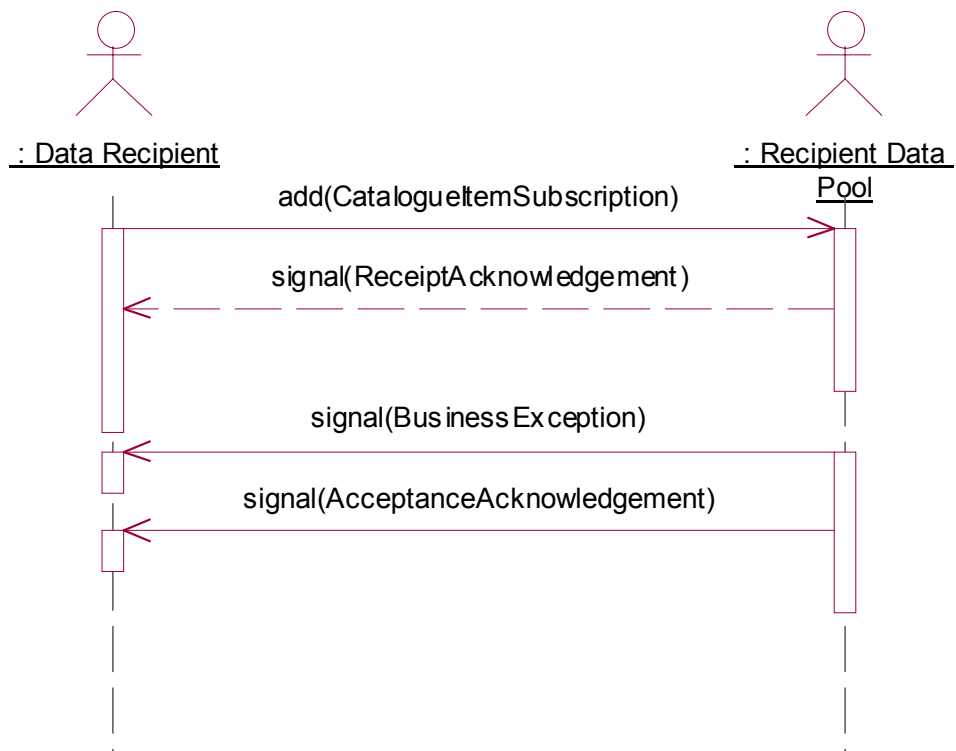


Figure 42 - Subscribe to Catalogue Item Data Sequence Diagram

1.7.15 Remove Catalogue Item Subscription

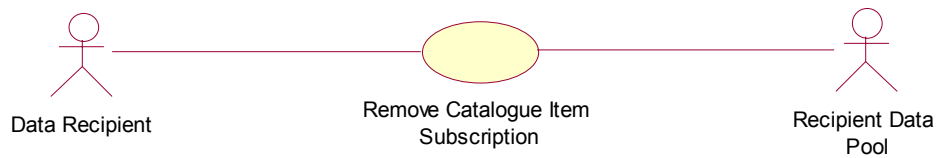


Figure 43 - Remove Catalogue Item Subscription Use Case Diagram

Use Case Name	Remove Catalogue Item Subscription
Traceability Identifier	UC-28
Use Case Description	<p>The Remove Catalogue Item Subscription Use Case describes how a Data Recipient informs the Recipient Data Pool to delete a subscription.</p> <p>Once the Subscription is removed, the Recipient Data Pool will forward the removal information to the Global Registry which, in turn, will forward it to appropriate Source Data Pools (see UC-35 Distribute Subscription Data).</p> <p>The Source Data Pools will remove the subscription. Thereafter, the Source Data Pools will not send new Catalogue Item data to the Data Recipient (via their Recipient Data Pool). The removal of a subscription does not affect the Synchronization list held by the Source Data pool. The Data Recipient will continue to receive changes, corrections and deletions based on the Synchronization List.</p>
Use Cases Above	UC-23: Manage Catalogue Item Distribution Criteria
Use Cases Below	None
Actors	Data Recipient Recipient Data Pool (RDP)
Performance Goals	Data Recipient: To inform the Recipient Data Pool of the removal of a subscription. Essentially (via the Distribute Subscription Use Case) stopping new Catalogue Item data from being forwarded. RDP: To possess the necessary information that will allow the RDP and appropriate Source Data Pools to distribute Catalogue Item Data to the Recipient.
Preconditions	The Data recipient has a Subscription held by the Recipient Data Pool.
Postconditions	The Subscription no longer exists in the Recipient Data Pool or (via the Distribute Subscription Use Case) the Registry and Source

	Data Pools.																																
Scenario	<p>Begins when, the Recipient Data Pool receives a Delete Subscription message from a Data Recipient.</p> <p>1. The RDP sends a message acknowledgement to the Data Recipient</p> <p>2. The RDP validates that the Subscription exists.</p> <p>3. The RDP sends a Subscription Verification to the Data Recipient</p> <p>Ends when, the Data Recipient acknowledges the Subscription Verification message.</p>																																
Alternative Scenario	<p>ad 2. The Subscription does not exist:</p> <p>2.1. The RDP sends an error message to the Data Recipient specifying that the Subscription does not exist.</p> <p>Ends when, the Data Recipient receives the error message</p>																																
Special Requirements	●																																
Extension Points	N/A																																
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	Rejection - Request for Notification - Any successful matching process	
REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
REQ-29	The confirmation process must take place in the home data pool of the data recipient.	Primary
REQ-32	Acknowledgement Reason codes must be unique.	Primary
REQ-70	Data recipient will continue to receive updates until he rejects the data.	Secondary
REQ-71	For a synchronization list / subscription, the reject will remove that GTIN from the synchronization list.	Secondary
REQ-72	Reject is optional: in the absence of confirmation & reject, the data recipient would still receive updates.	Secondary
REQ-77	Filtering out rejected data is a source data pool responsibility.	Primary
REQ-78	Subscription: for every matching GTIN, independently from its level, all hierarchies will be returned.	Primary
REQ-79	Synchronization list: - Includes every GTIN id (GTIN+GLN+TM) that needs to be synchronized - Can be a result of the Confirmation process - All GTIN's equal or lower in the hierarchy than the GTIN confirmed will be returned	Primary
REQ-80	Rejection at the highest level of a hierarchy will trigger the rejection of all GTIN's in the hierarchy of the rejected GTIN.	Primary
REQ-81	Synchronization List is only synchronized between the involved source and recipient data pools for applicable data: synchronization list is built based on confirmation received by a source data pool and nothing else.	Primary
REQ-88	The matching process is owned and developed by each source data pool in order to trigger data distribution based on publication and subscription data.	Primary
REQ-89	The matching process can be triggered either by publication, subscription or as a scheduled event. It is valid for all subscription types (including synchronization list) and all publication types.	Primary
REQ-90	For a given subscription (create/update): - the matching process identifies Items published to the GLN or TM of the subscription owner. - for each item, a notification is created including all dependent hierarchies. - for a synchronization list, the hierarchy information included in the notification, will be limited to the GTIN's maintained in the Synchronization list. - The notification is sent to the home data pool of the data recipient.	Primary
REQ-98	Note : rejection should not remove data previously authorized, for instance in a different hierarchy.	Primary
REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation -	Primary

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	Registration - Subscription - Global Search	
REQ-109	A Data Recipient requests that it receive a "notification" when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient's access to information as controlled by the data source through its source data pool.	Primary
REQ-110	After a Subscription is created, the Global Registry will then disseminate relevant subscriptions to appropriate Source Data Pools (current and future new data pools).	Primary
REQ-111	Registry requirements for subscription are: - Receive and store subscriptions - Provide subscription acknowledgement - Matching process of subscriptions with Source Data Pools - Forward subscriptions	Primary
REQ-123	Recipient maintains a subscription, including the "Reload" flag.	Primary
REQ-124	The notification triggered by a subscription must also carry the "Reload" flag value.	Primary
REQ-126	If a new Reload is needed, the Recipient must delete the previous Reload Subscription, then create a new Subscription with the "Reload" flag set.	Primary
REQ-128	Source Data Pools must send notifications based on matching publications and subscriptions.	Primary
REQ-129	GTIN and Category are mutually exclusive subscription criteria as the Category is uniquely defined for a given GTIN, independently from the GLN and from the TM.	Primary
REQ-132	The events that can trigger the distribution of a subscription are: - new/updated registration: check existing subscriptions, if new data pools are found : distribute subscriptions - new subscription: check existing registrations, if new data pools are found: distribute subscriptions - delete subscriptions: distribute "delete" to source data pools where subscription had been sent	Primary
REQ-133	Subscriptions cannot be updated, they are created or deleted.	Secondary
REQ-134	Subscriptions must be stored in the recipient's data pool.	Primary
REQ-135	For every subscription, the Registry must store the GLN of the Source Data Pool to which the subscription was sent and when it was sent.	Primary
REQ-136	Ability to identify new or updated registered Catalogue Items that match a subscription and forward the subscription to the Source Data Pool.	Primary
REQ-137	Match new subscriptions with registered Catalogue Items and forward the subscription to the Source Data Pool.	Primary
REQ-139	SubscriptionWho : Data Recipient = target GLNWhat : Any combination of GTIN, GLN, TM and Category	Primary
REQ-141	Deletion of a Subscription stops New Catalogue Items from being sent to RDP, but, doesn't stop Catalogue Items already in the Synchronization List from being updated.	Secondary
REQ-142	Request for Notification is not retained in the Global Registry and acts like a Subscription that is applied to the Synchronization List, then deleted (no New Catalogue Item data will be sent).	Primary
REQ-143	"Reload" flag is passed through to Recipient.	Primary

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	REQ-144	Request for publication (subscription) resets the reject flag if catalogue Item has been previously rejected and reactivate the subscription.	Primary
	REQ-145	The request for publication subscription is only executed once.	Primary
	REQ-146	Subscriptions are passed from global Registry to data pools just once. The Global Registry passes along to the source data pool matching subscriptions in the entirety, rather than replicating for each GTIN registered.	Primary
	REQ-147	Request for notification publication (subscription) resets the reject flag if the Catalogue Item has been previously rejected and reactivate the subscription.	Primary
	REQ-148	The "Reload" attribute will contain a Boolean value (TRUE or FALSE).	Primary
	REQ-149	Upon execution of an item data notification, the source data pool will pass along the value of this attribute within the message for the recipient to properly route the inbound message. After executing the item data notification, the source data pool will	Primary
	REQ-150	The team identified the need for an additional process to be known as "Request for Notification". The Request for Notification is originated by the requesting data recipient, through the recipient data pool, to the Global Registry and forwarded to the so	Primary
	REQ-151	The team wanted to reiterate the fact that new subscriptions received by a source data pool would be executed immediately a single time.	Primary
	REQ-152	The ability to set up a subscription and not get an initial full load of data. She wants to only receive the changes, adds, deletes and new items that match her subscription. (This is the same as a regular subscription with the exception of not getting	Primary
	REQ-154	The Global Registry shall send only once a subscription to a Source Data Pool.	Primary
	REQ-156	Subscription matches are performed at any level of the hierarchy. The data recipient is sent all hierarchies that match.	Primary
	REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

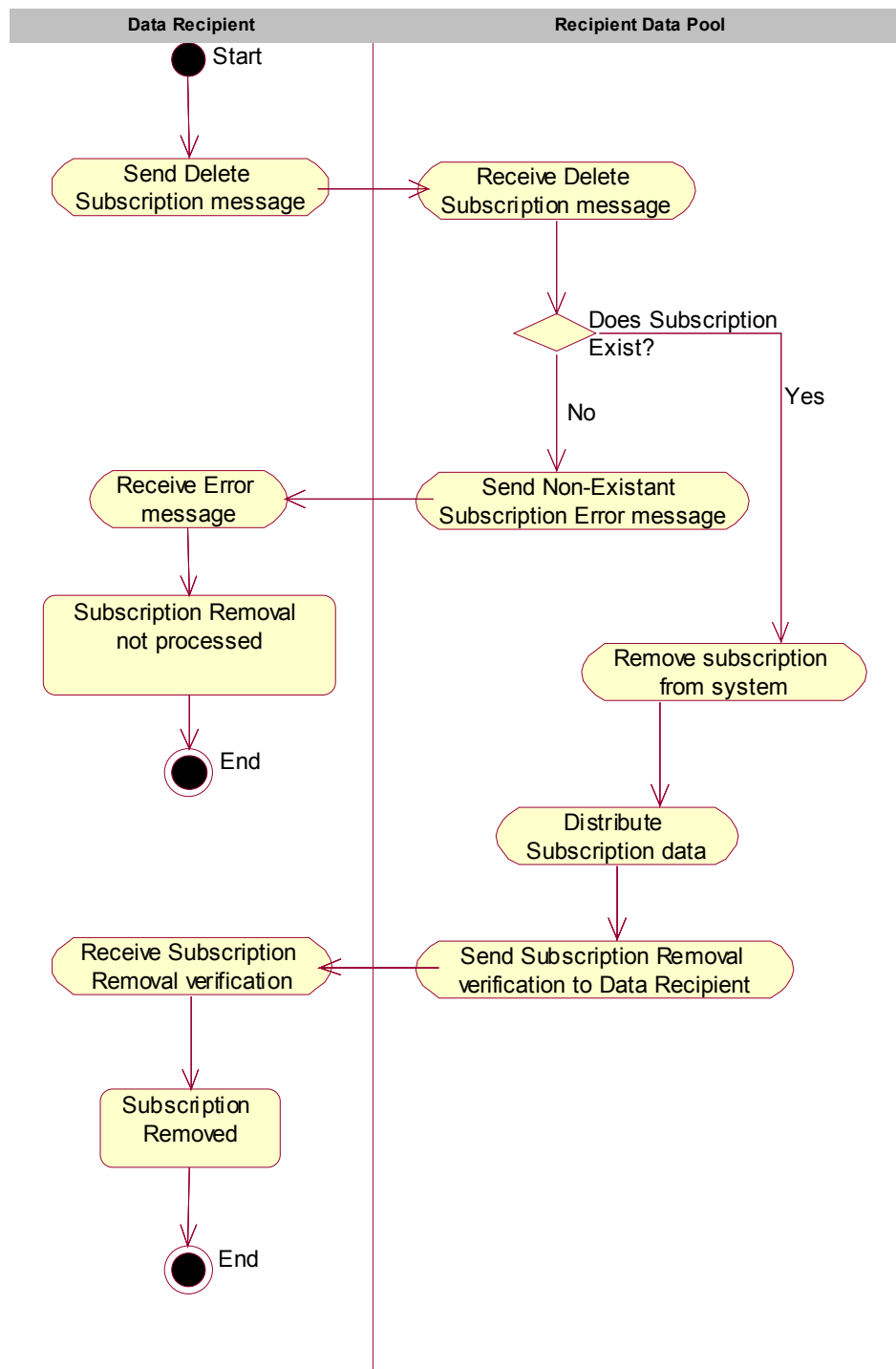


Figure 44 - Remove Catalogue Item Subscription Activity Diagram

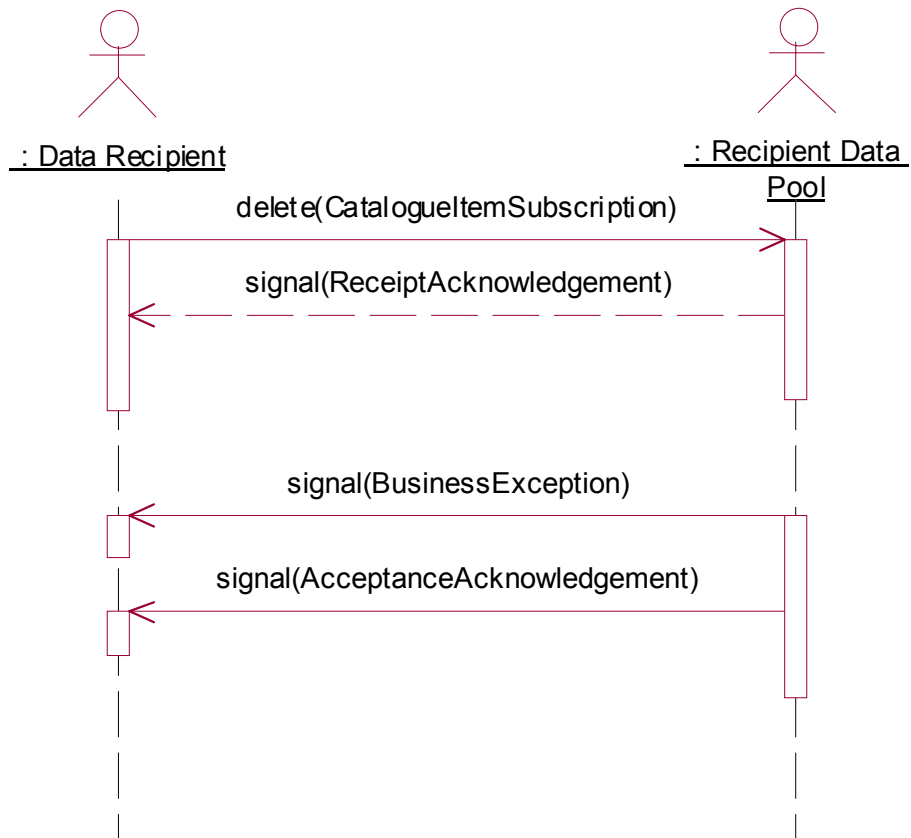
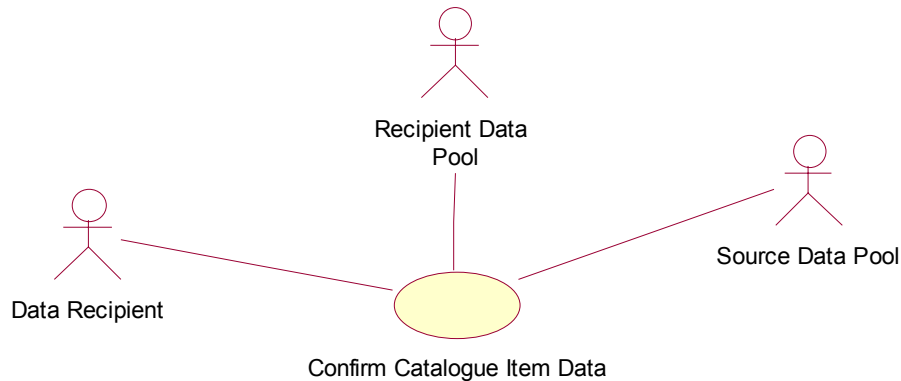


Figure 45 - Remove Subscription Sequence Diagram

1.7.16 Confirm Catalogue Item Data



Use Case Name	Confirm Catalogue Item Subscription
Traceability Identifier	UC-26
Use Case Description	<p>The Confirm Catalogue Item Data Use Case describes how a Data Recipient informs the Source Data Pool of its intentions regarding the Catalogue Item.</p> <p>The four states that can be communicated are Accepted, Synchronized, Rejected, or Review. Only a CIC communicated with the status of Rejected will stop the Source Data Pool from sending updates to the Recipient Data Pool. In the absence of a confirmation, the Source Data Pool will continue to send updates to the Recipient Data Pool.</p>
Use Cases Above	UC-23: Manage Catalogue Item Distribution Criteria
Use Cases Below	None
Actors	Data Recipient Recipient Data Pool (RDP) Source Data Pool (SDP)
Performance Goals	<p>Data Recipient: To inform the Source Data Pool of its intentions regarding the Catalogue Item</p> <p>RDP: To possess the necessary information that will allow the RDP and appropriate Source Data Pools to distribute Catalogue Item Data to the Recipient.</p> <p>SDP: To identify Data Recipients that are actively using Synchronized Item data.</p>
Preconditions	The Data recipient has received Catalogue Item data.
Postconditions	The RDP and SDP are aware of the Data Recipient's intentions regarding a specific Catalogue Item. In the case of a reject, the SDP knows not to continue sending updates on the particular Item.
Scenario	Begins when, the Data Recipient sends a Catalogue Item Confirmation to the RDP.

	<ol style="list-style-type: none">1. The RDP sends a message acknowledgement to the Data Recipient2. The RDP validates the Confirmation message.3. The RDP sends an acknowledgement to the Data Recipient.4. The RDP sends the Catalogue Item Confirmation to the SDP. <p>Ends when, the SDP receives the Catalogue Item Confirmation.</p>
Alternative Scenario	<p>ad 2. The Confirmation message is invalid:</p> <ol style="list-style-type: none">2.1. The RDP sends an error message to the Data Recipient specifying the errors in the Confirmation message. <p>Ends when, the Data Recipient receives the error message</p>
Special Requirements	<ul style="list-style-type: none">•
Extension Points	N/A
Requirements Covered	<hr/> <hr/>



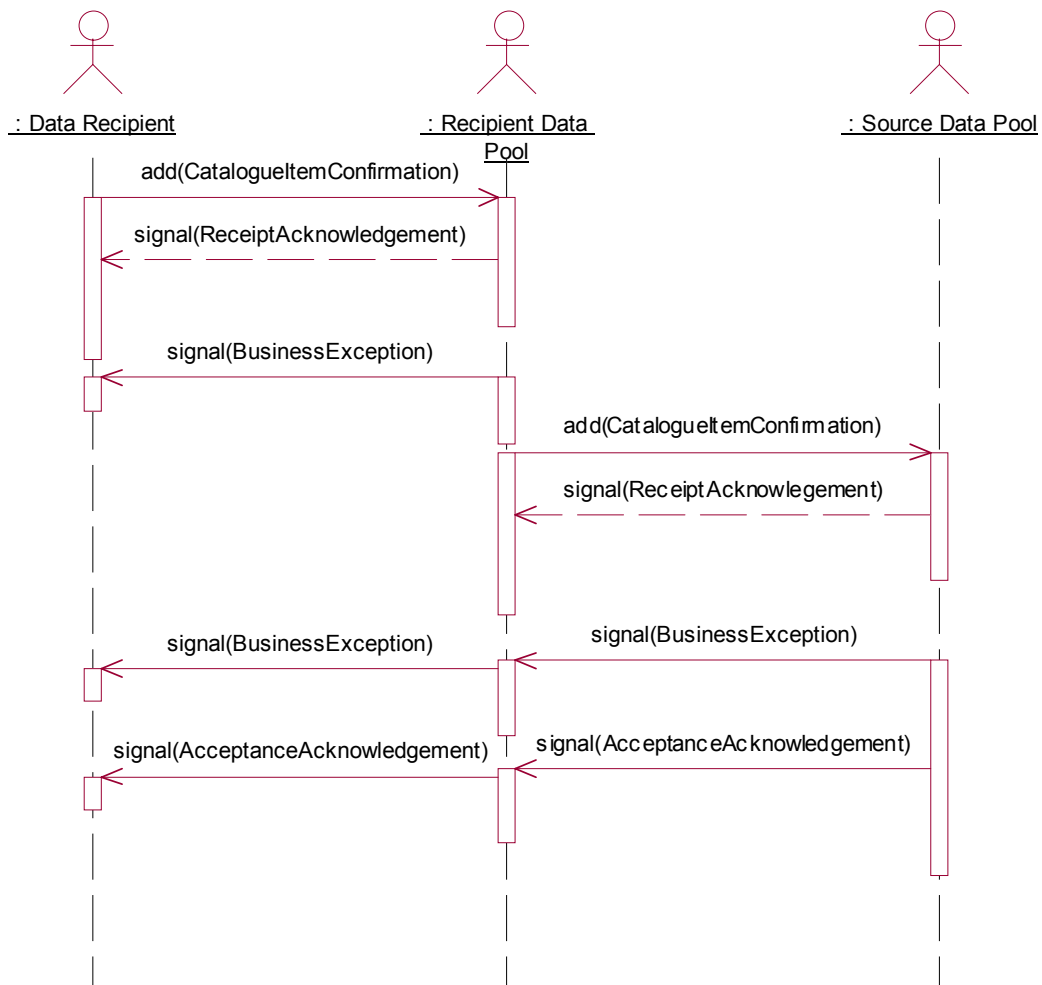


Figure 47 - Confirm Catalogue Item Data Sequence Diagram

1.7.17 Request Catalogue Item Data

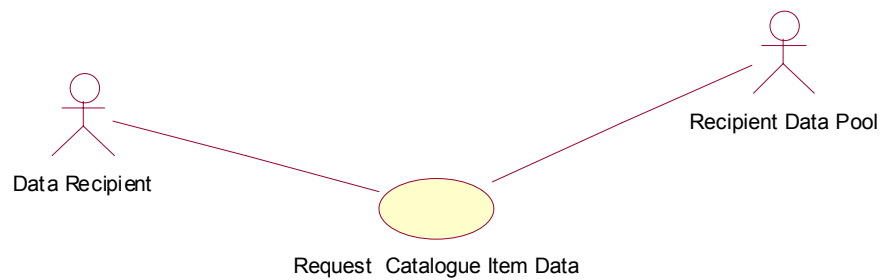


Figure 48 - Request Catalogue Item Data

Use Case Name	Request Catalogue Item Data		
Traceability Identifier	UC-48		
Use Case Description	<p>The Request Catalogue Item Data Use Case describes how a Data Recipient informs the Source Data Pool to resend certain Catalogue Item data. This Use Case makes use of the Request for Catalogue Item Notification message.</p> <p>This request is identical to a subscription with the difference being that the Global Registry will not retain the message once all relevant Source Data Pools receive the message. A special case of the Request is when the Data Recipient includes the “reload” flag in the message. This flag is attached to the resultant Catalogue Item Notification.</p>		
Use Cases Above	UC-23: Manage Catalogue Item Distribution Criteria		
Use Cases Below	None		
Actors	Data Recipient Recipient Data Pool (RDP)		
Performance Goals	<p>Data Recipient: To inform the Source Data Pool that it Would like certain Catalogue Item data to be resent.</p> <p>RDP: To posses the necessary information that will allow the RDP and appropriate Source Data Pools to distribute Catalogue Item Data to the Recipient.</p>		
Preconditions	The Data recipient has received Catalogue Item data.		
Postconditions	The RDP is aware that certain Catalogue Item data is to be resent to the Data Recipient.		
Scenario	<p>Begins when, the Data Recipient sends a RequestForCatalogueItemNotification to the RDP.</p> <ol style="list-style-type: none"> 1. The RDP sends a message acknowledgement to the Data Recipient 2. The RDP validates the request message. 3. The RDP sends an acknowledgement to the Data Recipient. <p>Ends when, the Data Recipient receives the acknowledgement.</p>		
Alternative Scenario	<p>ad 2. The request message is invalid:</p> <ol style="list-style-type: none"> 2.1. The RDP sends an error message to the Data Recipient specifying the errors in the original message. <p>Ends when, the Data Recipient receives the error message</p>		
Special Requirements	•		
Extension Points	N/A		
Requirements Covered	REQ-166	A Request for Catalogue Item Notification with the isReload set to false will result in items being re-sent whether they were previously rejected or not. The Sync List will be reset. This is only valid for items that have	Primary

		<p>previously been sent to the data recipient.</p> <p>The CIN response will have the following values:</p> <ul style="list-style-type: none"> • documentStatus= Original • isReload = False • Command= Add 	
	REQ-167	<p>A Request for Catalogue Item Notification with the isReload set to true will result in only items not previously rejected being re-sent. The Sync List is not reset.</p> <p>The CIN response will have the following values:</p> <ul style="list-style-type: none"> • documentStatus= Copy • isReload = True • Command= Add 	Primary
	REQ-168	The Document Status of the RFCIN command is ignored for the purposes of determining its impact on the sync list and the status of the CIN that is generated.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

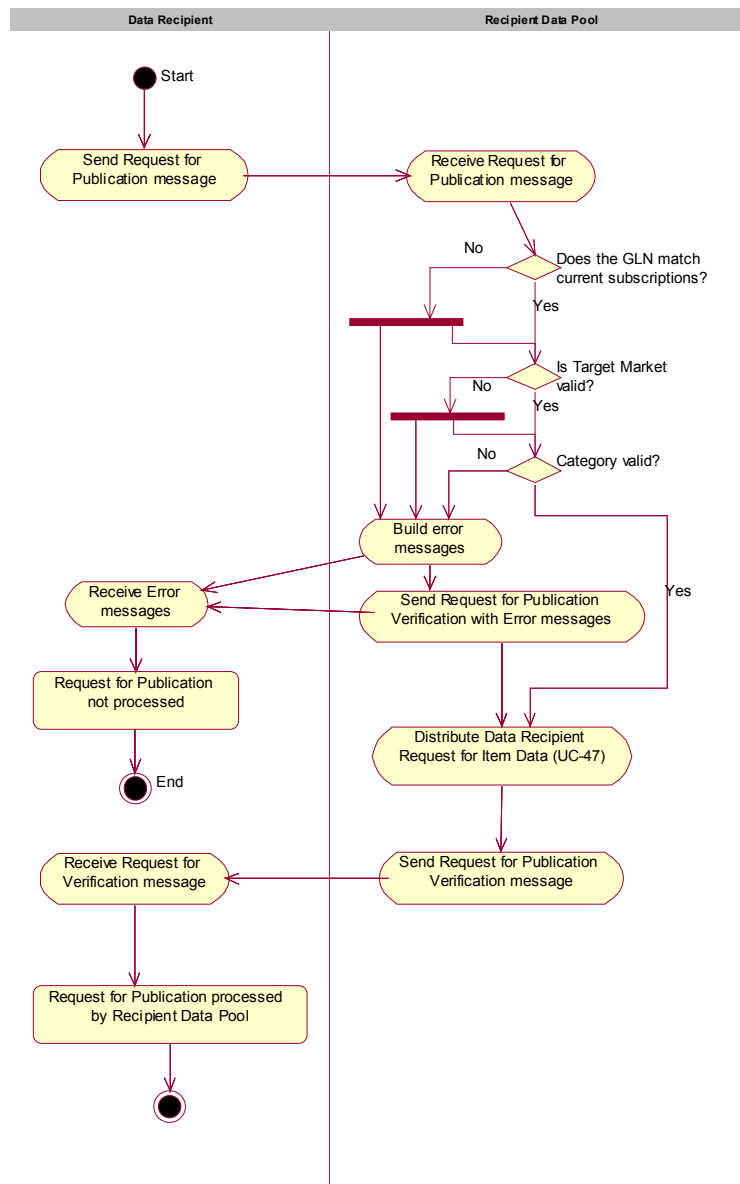


Figure 49 - Request Catalogue Item Data Activity Diagram

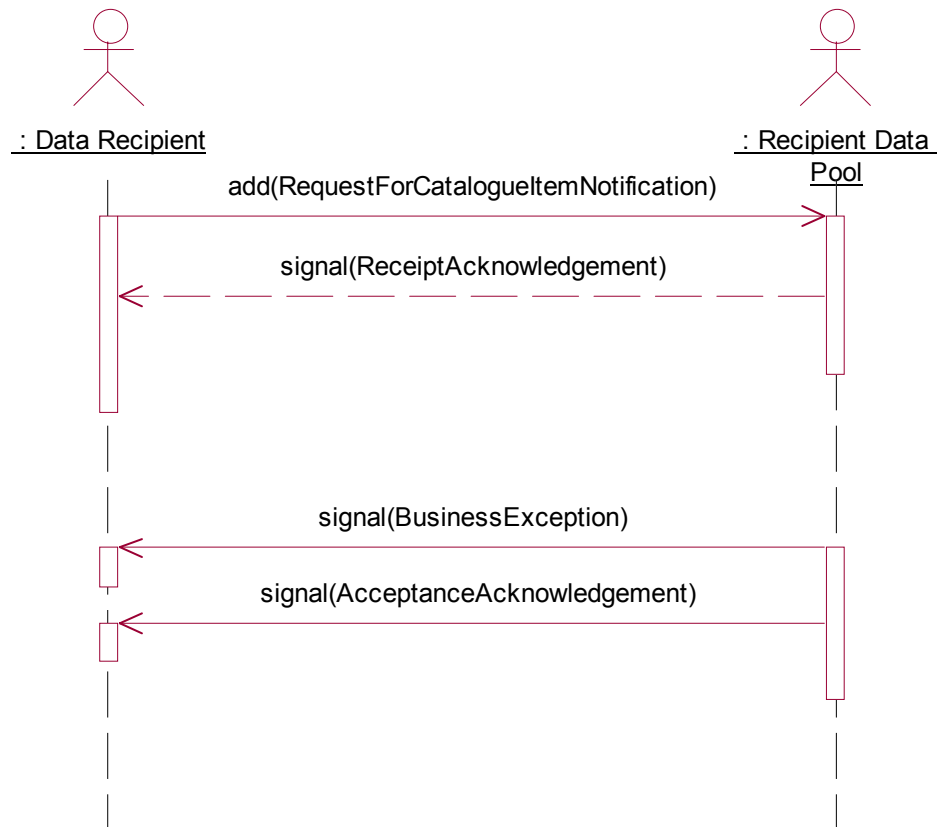


Figure 50 - Request Catalogue Item Data Sequence Diagram

1.7.18 Distribute Subscription Data

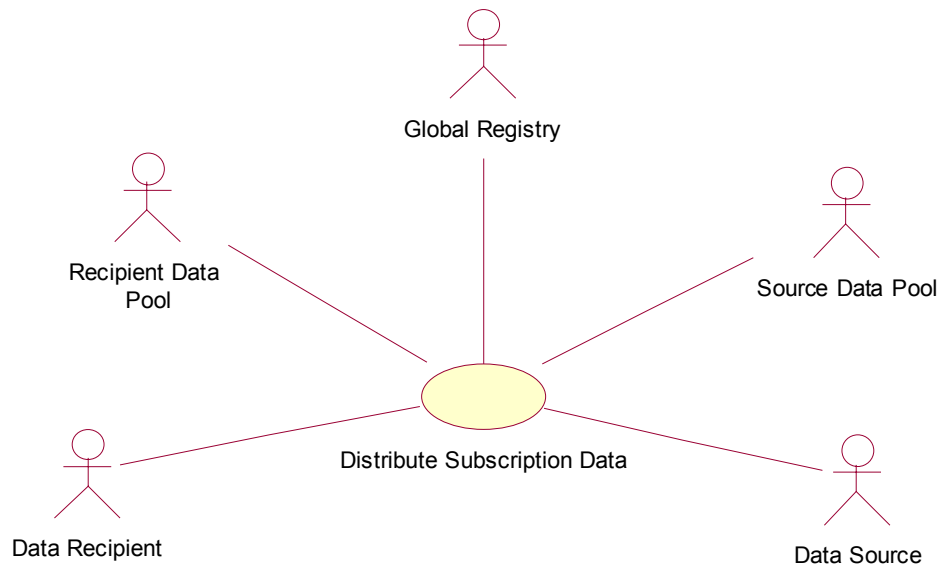


Figure 51 - Distribute Subscription Data Use Case

Use Case Name	Distribute Subscription Data
Traceability Identifier	UC-35
Use Case Description	The Distribute Subscription Data Use Case describes how new and Delete Subscription messages are propagated throughout the Data Synchronization system.
Use Cases Above	UC-23: Manage Catalogue Item Distribution Criteria
Use Cases Below	None
Actors	Data Recipient Recipient Data Pool (RDP) Global Registry Source Data Pool (SDP) Data Source
Performance Goals	Data Recipient: To share Subscriptions and removal of Subscriptions with the appropriate Source Data Pools and Data Sources. RDP: To possess the necessary information that will allow the RDP and appropriate Source Data Pools to distribute Catalogue Item Data to the Recipient. Global Registry: To propagate Subscriptions to appropriate Data Pools. SDP: To possess the necessary information that will allow the SDP to distribute Catalogue Item Data

	<p>to the Recipient (via their RDP).</p> <p>Data Source: To keep track of current and potential customer's usage of Catalogue Item Data.</p>
Preconditions	The Data recipient has either created or deleted a Subscription in their Recipient Data Pool.
Postconditions	The Subscription or delete subscription message is propagated to the Registry and proper Source Data Pools and Data Sources.
Scenario	<p>Begins when, the Recipient Data Pool receives a Subscription or Delete Subscription message from a Data Recipient and has validated it.</p> <ol style="list-style-type: none"> 1. The RDP sends the Add/Delete Subscription to the Global Registry. 2. The Global Registry validates the message. 3. The Global Registry matches the subscription to Catalogue Item data in the Registry. 4. The Global Registry sends the Add/Delete Subscription to the matching SDP 5. The SDP sends the Add/Delete Subscription to the appropriate Data Source <p>Ends when, the Data Source acknowledges the Subscription message.</p>
Alternative Scenario	<p>ad 1. A new Catalogue Item is added to the Registry:</p> <ol style="list-style-type: none"> 1.1 The Global Registry matches the new Catalogue Item against existing Subscriptions. 1.2 The Global Registry Sends all matching Subscriptions to the SDP of the new Catalogue Item. 1.3 The SDP forwards the Subscription to the Data Source that Published the Catalogue Item. <p>Ends when, the Data Source sends an acknowledgement of the Subscription</p> <p>ad 2. The Subscription fails validation at the Registry:</p> <ol style="list-style-type: none"> 2.1. The Global Registry sends an error message to the RDP. 2.2. The RDP sends an error message to the Data Recipient. <p>Ends when, the Data Recipient receives the error message</p>
Special Requirements	•
Extension Points	N/A

Requirements Covered	Requirements	
	ID	Requirement
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure
	REQ-14	A subscription must be able to be maintained on the following levels : - GTIN - GLN of Data Source - Target Market - Lowest level of EAN.UCC Classification or any combination of these 4 elements.
	REQ-15	With the set up of a subscription, a Data Recipient sets a profile to receive ongoing updates of the matching data (including all hierarchies, independently from the level subscribed on).
	REQ-17	Subscriptions must be created by data recipients in their Recipients Data Pool and sent to the Global Registry.
	REQ-18	A new Source Data Pool will get their relevant subscriptions as soon as they start registering their GTIN's.
	REQ-19	The system must maintain detailed subscription lists.
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.
	REQ-21	If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item
	REQ-25	The Data Distribution, which is the movement of data from one entity to another, must be handled through a specific notification type.
	REQ-29	The confirmation process must take place in the home data pool of the data recipient.
	REQ-32	Acknowledgement Reason codes must be unique.
	REQ-69	Data recipient maintains subscription.
	REQ-70	Data recipient will continue to receive updates until he rejects the data.
	REQ-71	For a synchronization list / subscription, the reject will remove that GTIN from the synchronization list.
	REQ-	Reject is optional: in the absence of confirmation & reject, the data recipient

	72	would still receive updates.	
REQ-73	Confirmed GTIN: - subscription: go to synchronization list - synchronization list: no action required	Primary	
REQ-74	Only new products matching the initial subscription will be distributed to avoid resending data that was previously rejected.	Secondary	
REQ-78	Subscription: for every matching GTIN, independently from its level, all hierarchies will be returned.	Primary	
REQ-79	Synchronization list: - Includes every GTIN id (GTIN+GLN+TM) that needs to be synchronized - Can be a result of the Confirmation process - All GTIN's equal or lower in the hierarchy than the GTIN confirmed will be returned	Primary	
REQ-80	Rejection at the highest level of a hierarchy will trigger the rejection of all GTIN's in the hierarchy of the rejected GTIN.	Primary	
REQ-81	Synchronization List is only synchronized between the involved source and recipient data pools for applicable data: synchronization list is built based on confirmation received by a source data pool and nothing else.	Primary	
REQ-88	The matching process is owned and developed by each source data pool in order to trigger data distribution based on publication and subscription data.	Primary	
REQ-89	The matching process can be triggered either by publication, subscription or as a scheduled event. It is valid for all subscription types (including synchronization list) and all publication types.	Primary	
REQ-90	For a given subscription (create/update): - the matching process identifies Items published to the GLN or TM of the subscription owner. - for each item, a notification is created including all dependent hierarchies. - for a synchronization list, the hierarchy information included in the notification, will be limited to the GTIN's maintained in the Synchronization list. - The notification is sent to the home data pool of the data recipient.	Primary	
REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary	
REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary	
REQ-109	A Data Recipient requests that it receive a "notification" when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient's access to information as controlled by the data source through its source data pool.	Primary	
REQ-110	After a Subscription is created, the Global Registry will then disseminate relevant subscriptions to appropriate Source Data Pools (current and future new data pools).	Primary	
REQ-111	Registry requirements for subscription are: - Receive and store subscriptions - Provide subscription acknowledgement - Matching process of subscriptions with Source Data Pools - Forward subscriptions	Primary	
REQ-127	The Global Registry must distribute Subscriptions only to relevant Source Data Pools.	Secondary	
REQ-	GTIN and Category are mutually exclusive subscription criteria as the Category	Primary	

	129	is uniquely defined for a given GTIN, independently from the GLN and from the TM.	
	REQ-130	GTIN, GLN (of Data Source), Target Market and Classification must be stored in the Global Registry, and are linked to the Source Data Pool(s) where the data can be found. For instance, if given a GTIN, the Global Registry will be able to return all the data pools where data can be found on that GTIN, independently from the GLN of the Data Source, the Target Market or the Category.	Secondary
	REQ-131	The distribution of subscriptions is either a scheduled event or is triggered by an other event.	Secondary
	REQ-132	The events that can trigger the distribution of a subscription are: - new/updated registration: check existing subscriptions, if new data pools are found : distribute subscriptions - new subscription: check existing registrations, if new data pools are found: distribute subscriptions - delete subscriptions: distribute "delete" to source data pools where subscription had been sent	Secondary
	REQ-133	Subscriptions cannot be updated, they are created or deleted.	Primary
	REQ-134	Subscriptions must be stored in the recipient's data pool.	Secondary
	REQ-135	For every subscription, the Registry must store the GLN of the Source Data Pool to which the subscription was sent and when it was sent.	Secondary
	REQ-136	Ability to identify new or updated registered Catalogue Items that match a subscription and forward the subscription to the Source Data Pool.	Secondary
	REQ-137	Match new subscriptions with registered Catalogue Items and forward the subscription to the Source Data Pool.	Secondary
	REQ-139	SubscriptionWho : Data Recipient = target GLNWhat : Any combination of GTIN, GLN, TM and Category	Secondary
	REQ-141	Deletion of a Subscription stops New Catalogue Items from being sent to RDP, but, doesn't stop Catalogue Items already in the Synchronization List from being updated.	Primary
	REQ-142	Request for Notification is not retained in the Global Registry and acts like a Subscription that is applied to the Synchronization List, then deleted (no New Catalogue Item data will be sent).	Secondary
	REQ-143	"Reload" flag is passed through to Recipient.	Primary
	REQ-144	Request for publication (subscription) resets the reject flag if catalogue Item has been previously rejected and reactivate the subscription.	Primary
	REQ-145	The request for publication subscription is only executed once.	Primary
	REQ-146	Subscriptions are passed from global Registry to data pools just once. The Global Registry passes along to the source data pool matching subscriptions in the entirety, rather than replicating for each GTIN registered.	Secondary
	REQ-147	Request for notification publication (subscription) resets the reject flag if the Catalogue Item has been previously rejected and reactivates the subscription.	Secondary
	REQ-148	The "Reload" attribute will contain a Boolean value (TRUE or FALSE).	Secondary
	REQ-149	Upon execution of an item data notification, the source data pool will pass along the value of this attribute within the message for the recipient to properly route	Secondary

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		the inbound message. After executing the item data notification, the source data pool will	
REQ-150		The team identified the need for an additional process to be known as "Request for Notification". The Request for Notification is originated by the requesting data recipient, through the recipient data pool, to the Global Registry and forwarded to the so	Secondary
REQ-151		The team wanted to reiterate the fact that new subscriptions received by a source data pool would be executed immediately a single time.	Secondary
REQ-152		The ability to set up a subscription and not get an initial full load of data. She wants to only receive the changes, adds, deletes and new items that match her subscription. (This is the same as a regular subscription with the exception of not getting	Secondary
REQ-154		The Global Registry shall send only once a subscription to a Source Data Pool.	Secondary
REQ-156		Subscription matches are performed at any level of the hierarchy. The data recipient is sent all hierarchies that match.	Primary
REQ-171		The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

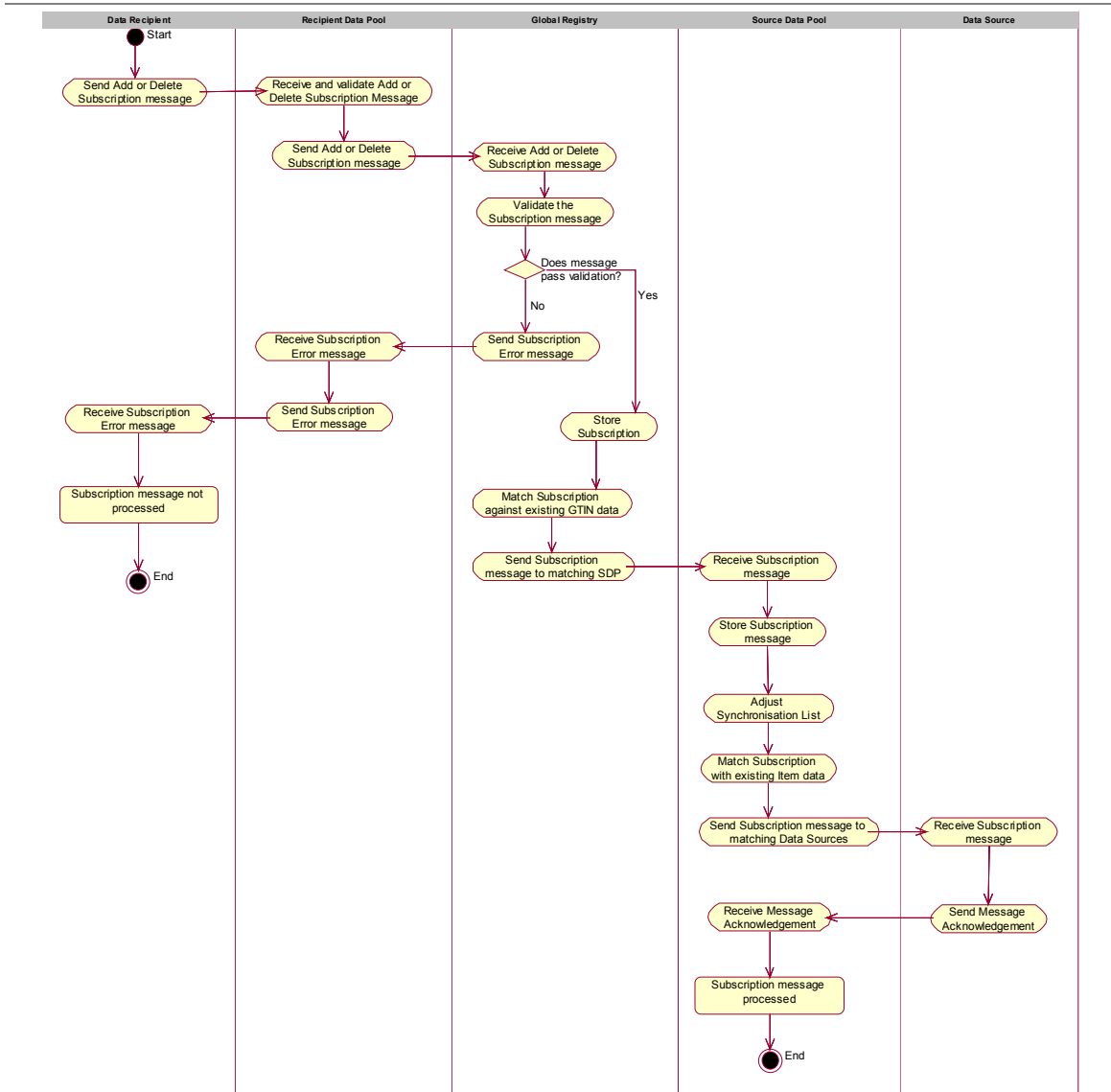


Figure 52 - Distribute Subscription Data Activity Diagram

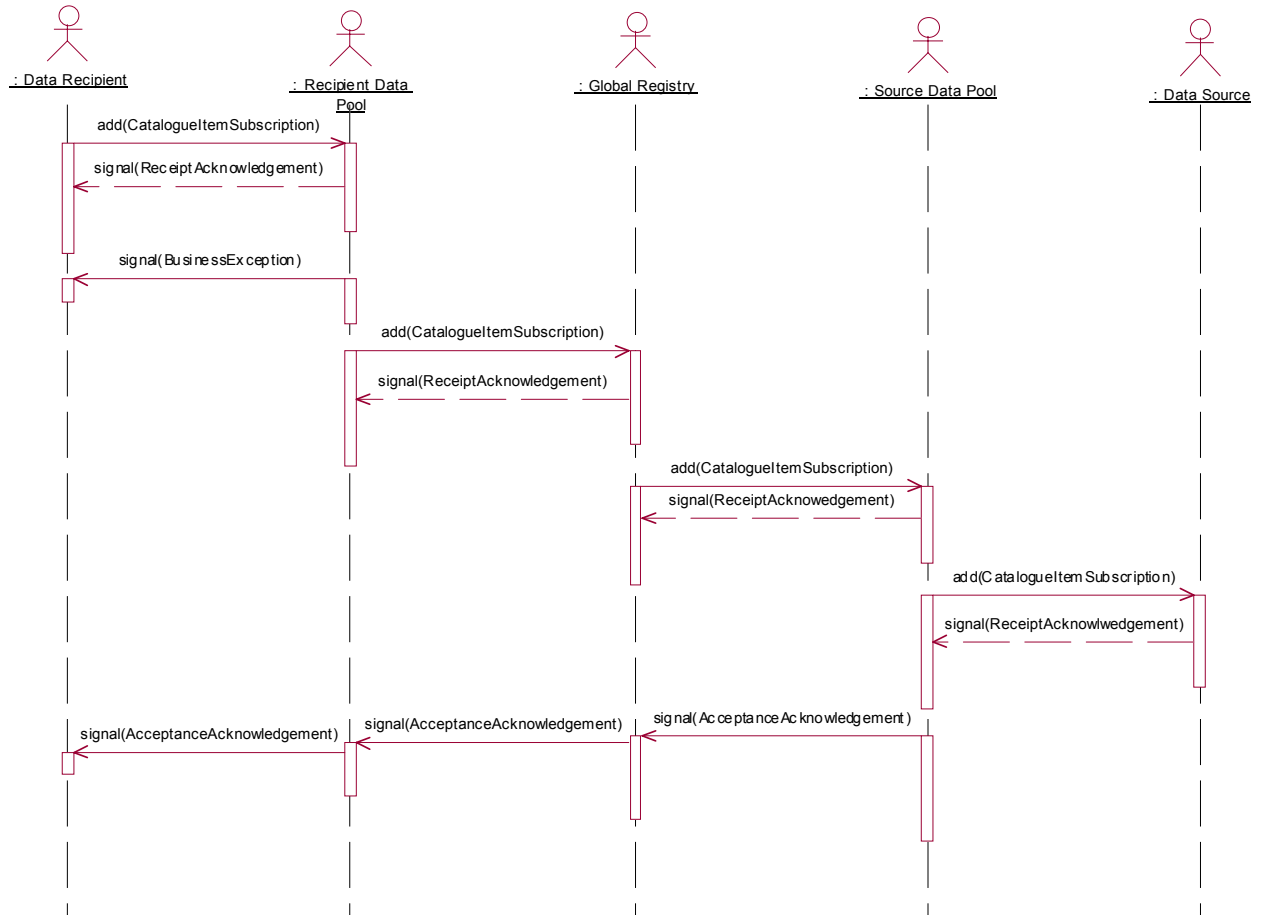


Figure 53 - Distribute Subscription Data Sequence Diagram

1.7.19 Distribute Confirmation Data

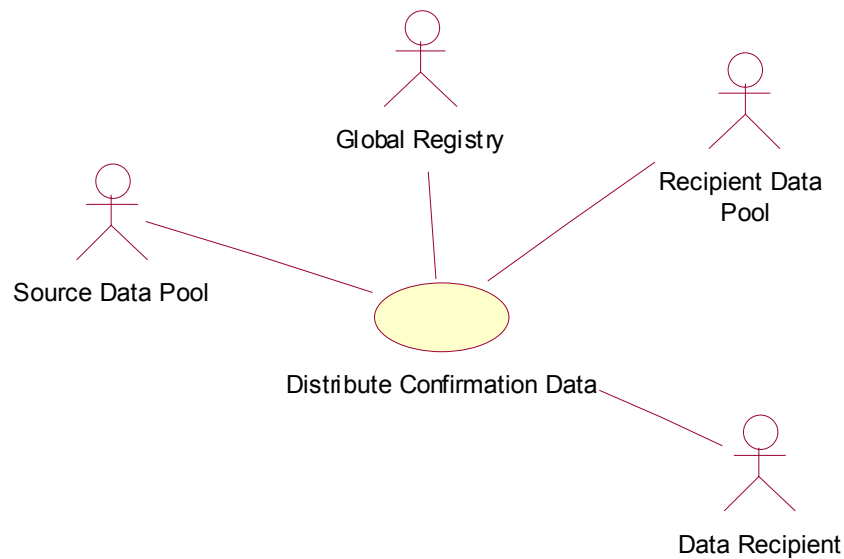


Figure 54 - Distribute Confirmation Data Use Case Diagram

Use Case Name	Distribute Confirmation Data
Traceability Identifier	UC-43
Use Case Description	<p>The Distribute Confirmation Data Use Case describes how the Data Recipient informs the Source Data pool of the status of an individual Catalogue Item Data synchronization that was the result of a Publication / Subscription match. Valid values for the status are: “no value” (continue to send updates), “Accept” (Data Recipient signals that they are interested in the Catalogue Item, continue to send updates), “Synchronized” (Data Recipient signals that they intend to keep their database synchronized, continue to send updates) and “Reject” (Data Recipient signals that they are not interested in the Catalogue Item, do not continue to send updates).</p> <p>Confirmations are passed to the Source Data Pool from the Recipient Data Pool.</p>
Use Cases Above	UC-47: Distribute Data Recipient Requests for Catalogue Item Data
Use Cases Below	None
Actors	Data Recipient Recipient Data Pool (RDP) Source Data Pool (SDP)

Performance Goals	<p>Data Recipient: To prohibit future synchronizations of specific Catalogue Item Data, or, to notify the Source Data Pool of the Data Recipient's intentions regarding the Catalogue Item data.</p> <p>RDP: To possess the necessary information that will allow the RDP and appropriate Source Data Pools to distribute Catalogue Item Data to the Recipient.</p> <p>SDP: To possess the necessary information that will allow the SDP to distribute Catalogue Item Data to the Recipient (via their RDP).</p>
Preconditions	The Data recipient has either created a Subscription in their Recipient Data Pool and has received Catalogue Item data.
Postconditions	In the case of a "Rejection", the Data Recipient no longer receives updates to the specific Catalogue Item. The Catalogue Item is removed from the Synchronization list for that Data Recipient. For all other authorizations, the Source Data Pool is aware of the Data Recipient's intentions regarding the Catalogue Item data.
Scenario	<p>Begins when, the Data Recipient sends a Confirmation message to the Recipient Data Pool</p> <ol style="list-style-type: none"> 1. The RDP sends the Confirmation to the SDP. 2. The SDP validates the message. 3. The SDP matches the Confirmation with the Recipient's Synchronization List. 4. A "Reject" Confirmation will stop future publications of the whole hierarchy. 5. For all other Confirmations, the SDP applies the change to the Data Recipient Synchronization List. 6. The SDP sends the Confirmation to the Data Source. 7. The SDP sends a Confirmation Acknowledgement to the RDP. 8. The RDP forwards the Confirmation Acknowledgement to the Data Recipient. <p>Ends when, the Data Recipient sends an acknowledgement of the Recipient Data Pool's message.</p>
Alternative Scenario	<p>ad 2. The Confirmation message does not pass validation:</p> <ol style="list-style-type: none"> 2.1 The SDP sends a Confirmation Error message to the RDP. 2.2 The RDP forwards the Confirmation Error message to the Data Recipient. <p>Ends when, the Data Recipient sends an acknowledgement of the error message</p>
Special Requirements	<ul style="list-style-type: none"> •

Extension Points	N/A		
Requirements Covered	ID	Requirement	Weight
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-17	Subscriptions must be created by data recipients in their Recipients Data Pool and sent to the Global Registry.	Primary
	REQ-18	A new Source Data Pool will get their relevant subscriptions as soon as they start registering their GTIN's.	Primary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-21	If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-25	The Data Distribution, which is the movement of data from one entity to another, must be handled through a specific notification type.	Primary
	REQ-29	The confirmation process must take place in the home data pool of the data recipient.	Secondary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-75	Updates for confirmed products will be distributed based on the synchronization list.	Secondary
	REQ-76	Confirmation (accept or synchronized) will indicate the data recipient's commitment to synchronize the data in its internal systems.	Secondary
	REQ-77	Filtering out rejected data is a source data pool responsibility.	Secondary
	REQ-78	Subscription: for every matching GTIN, independently from its level, all hierarchies will be returned.	Primary
	REQ-79	Synchronization list: - Includes every GTIN id (GTIN+GLN+TM) that needs to be synchronized - Can be a result of the Confirmation process - All GTIN's equal or lower in the hierarchy than the GTIN confirmed will be returned	Secondary
	REQ-80	Rejection at the highest level of a hierarchy will trigger the rejection of all GTIN's in the hierarchy of the rejected GTIN.	Secondary
	REQ-81	Synchronization List is only synchronized between the involved source and recipient data pools for applicable data: synchronization list is built based on	Primary

		confirmation received by a source data pool and nothing else.	
REQ-88		The matching process is owned and developed by each source data pool in order to trigger data distribution based on publication and subscription data.	Primary
REQ-89		The matching process can be triggered either by publication, subscription or as a scheduled event. It is valid for all subscription types (including synchronization list) and all publication types.	Primary
REQ-90		For a given subscription (create/update): - the matching process identifies Items published to the GLN or TM of the subscription owner. - for each item, a notification is created including all dependent hierarchies. - for a synchronization list, the hierarchy information included in the notification, will be limited to the GTIN's maintained in the Synchronization list. - The notification is sent to the home data pool of the data recipient.	Primary
REQ-94		<p>Confirmation is not mandatory and can provide 4 outcomes:</p> <ol style="list-style-type: none"> 1. Synchronized: data is integrated, in synch 2. Accept: Data has been received by the data recipient, but no business decision has been made on the data. 3. Reject: data will no longer be synchronized or updates will no longer be provided. 4. Review: request to the data source to review their data and take action (applies to adds & changes) because the data recipient has received discrepant data which they cannot synchronize. <p>If no confirmation is sent, data updates will continue to be provided until the data recipient accepts, rejects or updates the subscription, or until the data source changes the publication. For a new Catalogue Item the same confirmation can be used.</p>	Secondary
REQ-95		The list of authorized values for the confirmation message does not imply a sequence in which the message has to be used.	Secondary
REQ-96		The same "confirmation" message can be used to stop synchronising a Catalogue Item. In that case, the "Reject" status will be used to remove the Catalogue Item of the synchronization list.	Secondary
REQ-97		"Synchronized" status is sent once – parties are assumed to be in synch unless a reject/review status is exchanged.	Secondary
REQ-98		Note : rejection should not remove data previously authorized, for instance in a different hierarchy.	Secondary
REQ-99		The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
REQ-100		The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
REQ-109		A Data Recipient requests that it receive a "notification" when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient's access to information as controlled by the data source through its source data pool.	Primary

	REQ-110	After a Subscription is created, the Global Registry will then disseminate relevant subscriptions to appropriate Source Data Pools (current and future new data pools).	Primary
	REQ-111	Registry requirements for subscription are: - Receive and store subscriptions - Provide subscription acknowledgement - Matching process of subscriptions with Source Data Pools - Forward subscriptions	Primary
	REQ-127	The Global Registry must distribute Subscriptions only to relevant Source Data Pools.	Primary
	REQ-129	GTIN and Category are mutually exclusive subscription criteria as the Category is uniquely defined for a given GTIN, independently from the GLN and from the TM.	Primary
	REQ-130	GTIN, GLN (of Data Source), Target Market and Classification must be stored in the Global Registry, and are linked to the Source Data Pool(s) where the data can be found. For instance, if given a GTIN, the Global Registry will be able to return all the data pools where data can be found on that GTIN, independently from the GLN of the Data Source, the Target Market or the Category.	Primary
	REQ-131	The distribution of subscriptions is either a scheduled event or is triggered by an other event.	Primary
	REQ-132	The events that can trigger the distribution of a subscription are: - new/updated registration: check existing subscriptions, if new data pools are found : distribute subscriptions - new subscription: check existing registrations, if new data pools are found: distribute subscriptions - delete subscriptions: distribute "delete" to source data pools where subscription had been sent	Primary
	REQ-133	Subscriptions cannot be updated, they are created or deleted.	Primary
	REQ-134	Subscriptions must be stored in the recipient's data pool.	Primary
	REQ-135	For every subscription, the Registry must store the GLN of the Source Data Pool to which the subscription was sent and when it was sent.	Primary
	REQ-136	Ability to identify new or updated registered Catalogue Items that match a subscription and forward the subscription to the Source Data Pool.	Primary
	REQ-137	Match new subscriptions with registered Catalogue Items and forward the subscription to the Source Data Pool.	Primary
	REQ-139	SubscriptionWho : Data Recipient = target GLNWhat : Any combination of GTIN, GLN, TM and Category	Primary
	REQ-141	Deletion of a Subscription stops New Catalogue Items from being sent to RDP, but, doesn't stop Catalogue Items already in the Synchronization List from being updated.	Primary
	REQ-142	Request for Notification is not retained in the Global Registry and acts like a Subscription that is applied to the Synchronization List, then deleted (no New Catalogue Item data will be sent).	Primary
	REQ-143	"Reload" flag is passed through to Recipient.	Primary
	REQ-144	Request for publication (subscription) resets the reject flag if catalogue Item has been previously rejected and reactivate the subscription.	Primary
	REQ-145	The request for publication subscription is only executed once.	Primary

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	REQ-146	Subscriptions are passed from global Registry to data pools just once. The Global Registry passes along to the source data pool matching subscriptions in the entirety, rather than replicating for each GTIN registered.	Primary
	REQ-147	Request for notification publication (subscription) resets the reject flag if the Catalogue Item has been previously rejected and reactivates the subscription.	Primary
	REQ-148	The "Reload" attribute will contain a Boolean value (TRUE or FALSE).	Primary
	REQ-149	Upon execution of an item data notification, the source data pool will pass along the value of this attribute within the message for the recipient to properly route the inbound message. After executing the item data notification, the source data pool will	Primary
	REQ-150	The team identified the need for an additional process to be known as "Request for Notification". The Request for Notification is originated by the requesting data recipient, through the recipient data pool, to the Global Registry and forwarded to the so	Primary
	REQ-151	The team wanted to reiterate the fact that new subscriptions received by a source data pool would be executed immediately a single time.	Primary
	REQ-152	The ability to set up a subscription and not get an initial full load of data. She wants to only receive the changes, adds, deletes and new items that match her subscription. (This is the same as a regular subscription with the exception of not getting	Primary
	REQ-154	The Global Registry shall send only once a subscription to a Source Data Pool.	Primary
	REQ-156	Subscription matches are performed at any level of the hierarchy. The data recipient is sent all hierarchies that match.	Primary
	REQ-157	Confirmations will be done at the highest level of the published trade item hierarchy.	Primary
	REQ-158	Top of hierarchy is assumed to be the largest available unit determined by the data source. Defined as the GTIN of the highest published item in the hierarchy.	Primary
	REQ-160	Catalogue Item Confirmations (CIC) for the item at the top level of the hierarchy with a status of reject will stop publications of the whole hierarchy.	Primary
	REQ-161	A CIC with a status of Rejected, Accepted, Review or Synchronized sent for an item below the highest level of the published item hierarchy will result in a CIC failure.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

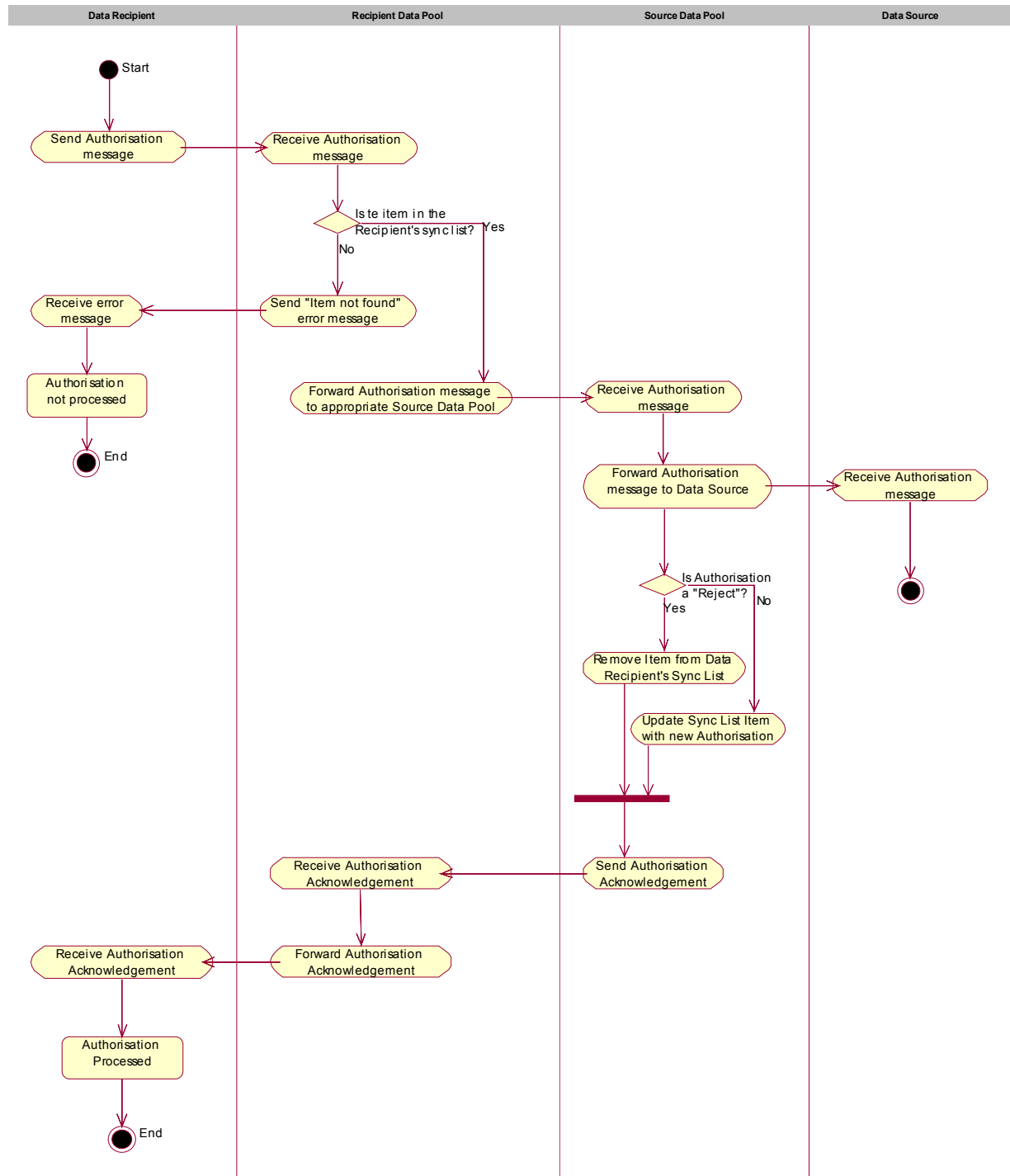


Figure 55 - Distribute Confirmation Data Activity Diagram

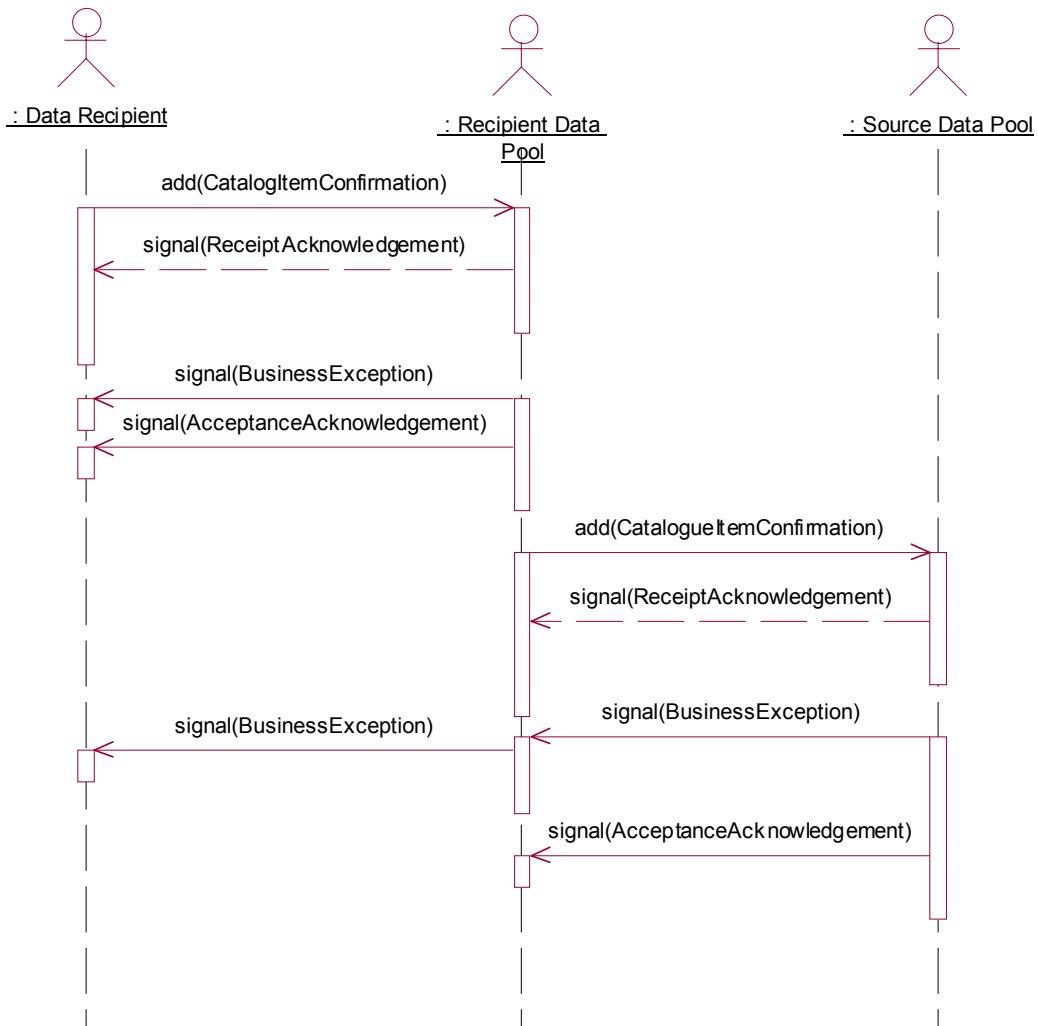


Figure 56 - Distribute Catalogue Item Confirmation Sequence Diagram

1.7.20 Distribute Request for Catalogue Item Notification

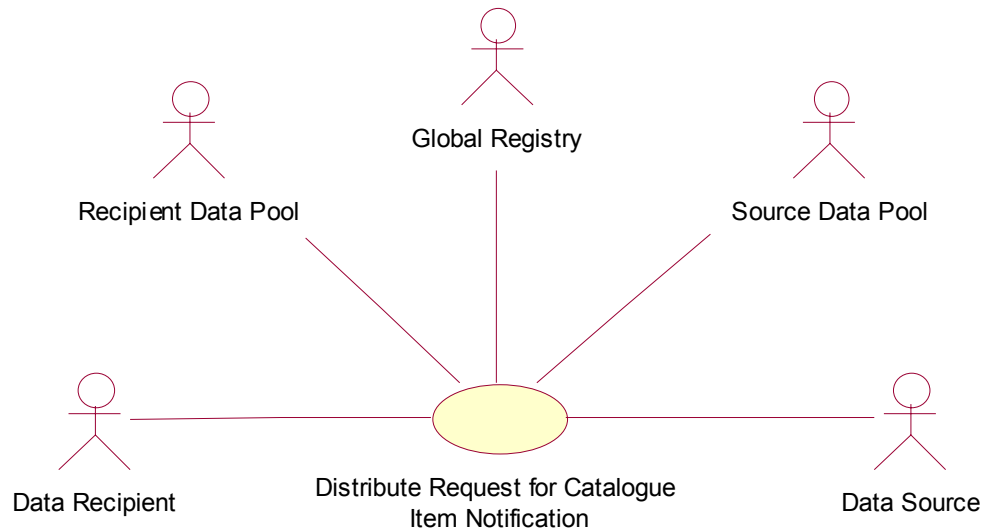


Figure 57 - Distribute Request for Catalogue Item Notification Use Case Diagram

Use Case Name	Distribute Request for Catalogue Item Notification
Traceability Identifier	UC-22
Use Case Description	<p>The Distribute Request for Catalogue Item Notification Use Case describes how the message is passed from Data Recipient through to the Source Data Pool and Data Source.</p> <p>This Use Case makes use of the RequestForCatalogueItemNotification message. This message is identical to the CatalogueItemSubscription with the addition of a “reload” flag. This reload flag is later attached to the resultant CatalogueItemNotification message to allow the Data Recipient to process it differently than a normal notification. The RequestForCatalogueItemNotification message is also different from a Subscription in that it is not retained in the Global Registry after the Source Data Pools have received it.</p>
Use Cases Above	UC-47: Distribute Data Recipient Requests for Catalogue Item Data
Use Cases Below	None
Actors	Data Recipient Recipient Data Pool (RDP) Global Registry Source Data Pool (SDP) Data Source
Performance Goals	Data Recipient: To request that previously sent Catalogue Item

	<p>data be resent.</p> <p>RDP: To possess the necessary information that will allow the RDP and appropriate Source Data Pools to distribute Catalogue Item Data to the Recipient.</p> <p>Global Registry: To forward to appropriate Source Data Pools all requests from Data Recipients.</p> <p>SDP: To possess the necessary information that will allow the SDP to distribute Catalogue Item Data to the Recipient (via their RDP).</p> <p>Data Source: To be aware of all usages of supplied data.</p>
Preconditions	The Data recipient has created a Subscription in their Recipient Data Pool and has received Catalogue Item data.
Postconditions	The request is passed to the Global Registry, appropriate Source Data pools and the Data Source.
Scenario	<p>Begins when, the Data Recipient sends a Request message to the Recipient Data Pool</p> <ol style="list-style-type: none"> 1. The RDP sends the Request to the Global Registry. 2. The Global Registry matches the Request with a list of Source Data Pools. 3. The Global Registry sends the request to the appropriate Source Data Pool. 4. The Source Data Pool sends a copy of the request to the Data Source.
Alternative Scenario	
Special Requirements	
Extension Points	N/A
Requirements Covered	

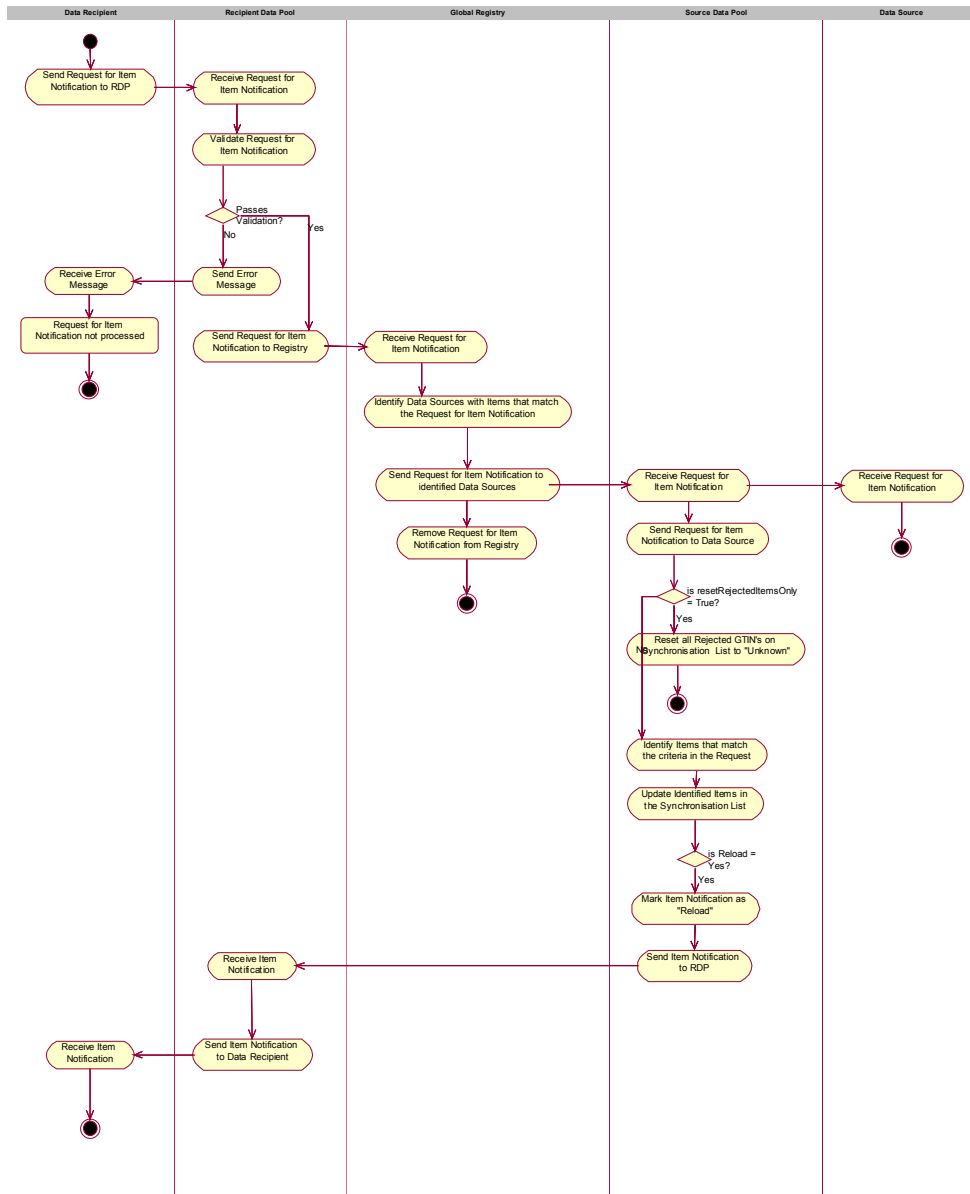


Figure 58 - Distribute Request for Catalogue Item Notification

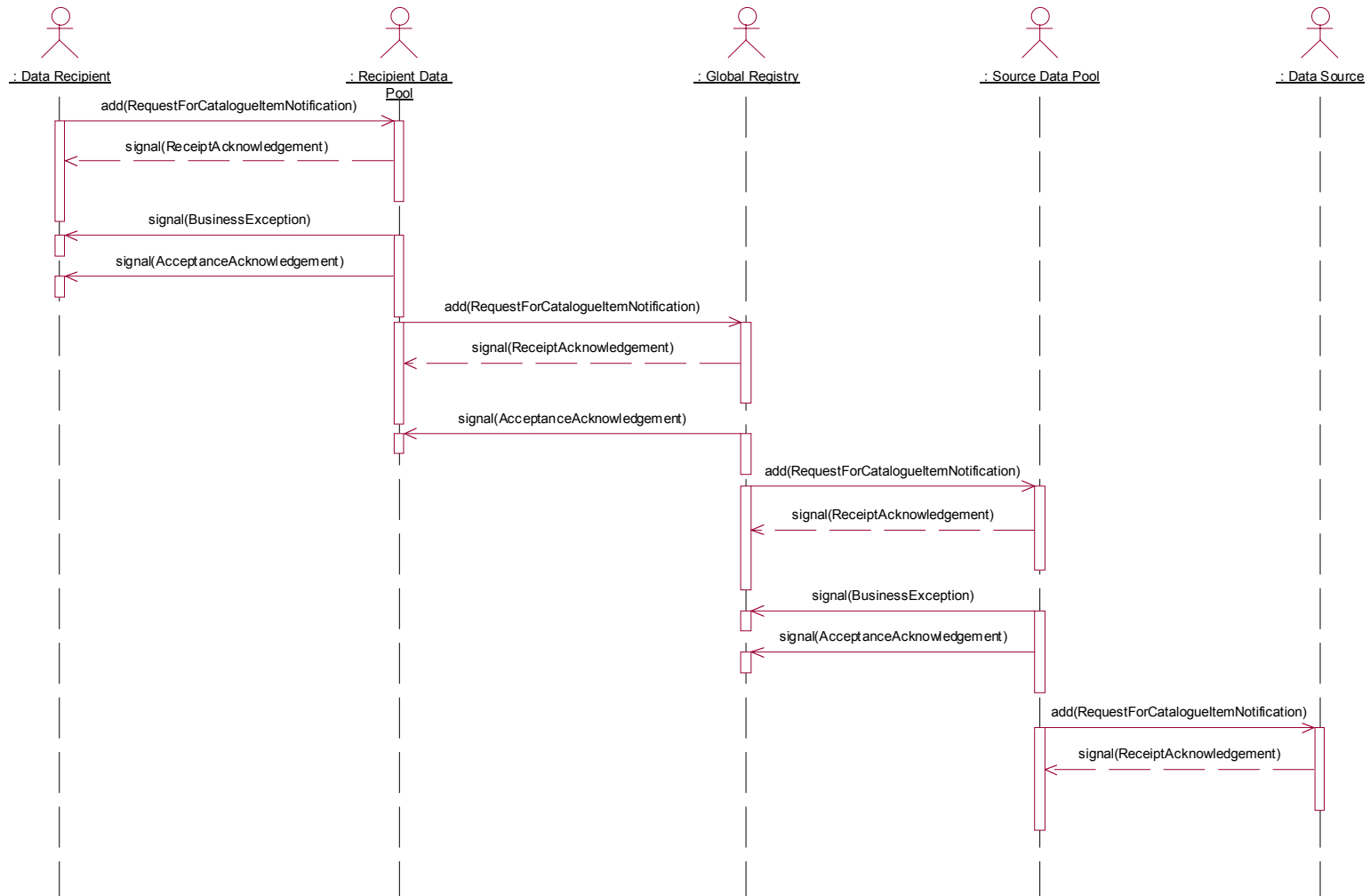


Figure 59 - Distribute Request for Catalogue Item Notification Sequence Diagram

1.7.21 Create Synchronization List

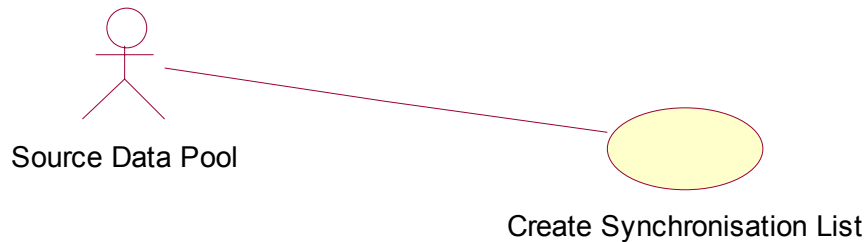


Figure 60 - Create Synchronization List

Use Case Name	Create Synchronization List
Traceability Identifier	UC-45
Use Case Description	<p>The Synchronization list is the sole means by which a Source Data Pool determines the Catalogue Item Data that is to be sent to a Data Recipient (via the Recipient's Recipient Data Pool).</p> <p>The Synchronization list is created based on Publications, Subscriptions and Confirmations. Each one of these pares down the matches between Catalogue Item and Recipient. The delta, or net positive matches are placed into the Synchronization List, which is used by the "Distribute Catalogue Item Data from SDP to RDP" (UC-37) and "Distribute Catalogue Item Data from RDP to Data Recipient" (UC-38) Use Cases.</p> <p>UC-37 will use the Synchronization List to send Recipient bound Catalogue Item Data to the Recipient Data Pool. UC-38 will then pass all appropriate Catalogue Item data to the Recipient.</p>
Use Cases Above	UC-23: Manage Catalogue Item Distribution Criteria
Use Cases Below	None
Actors	Source Data Pool (SDP)
Performance Goals	SDP: To determine which Recipient should be sent what Catalogue Item Hierarchy data.
Preconditions	Publications, Subscriptions and Confirmations exist in the Source Data Pool.
Postconditions	The Synchronization List is created and able to be used to direct the Source Data Pool in moving appropriate Catalogue Item data to Recipient Data Pools.
Scenario	<p>Begins when, the Source Data Pool receives an add or delete of a Publication, an Add of a Subscription, Confirmation ,or a Add, Change, Correct of an Catalogue Item Hierarchy message.</p> <p>1. The SDP Identifies all GTIN's of publications to a target market</p>

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	<ol style="list-style-type: none">2. The SDP Identifies all GTIN's of Subscriptions by Recipient's Target Market3. Subset all GTIN's that are in both lists4. Remove GTINs that have been rejected by the Recipient5. Add Source GLN, RDP GLN, Recipient GLN, Source GTIN and Source TM to the Synchronization List <p>Ends when, Synchronization Listed is complete.</p>
Alternative Scenario	None
Special Requirements	<ul style="list-style-type: none">•
Extension Points	N/A
Requirements Covered	<hr/> <hr/>

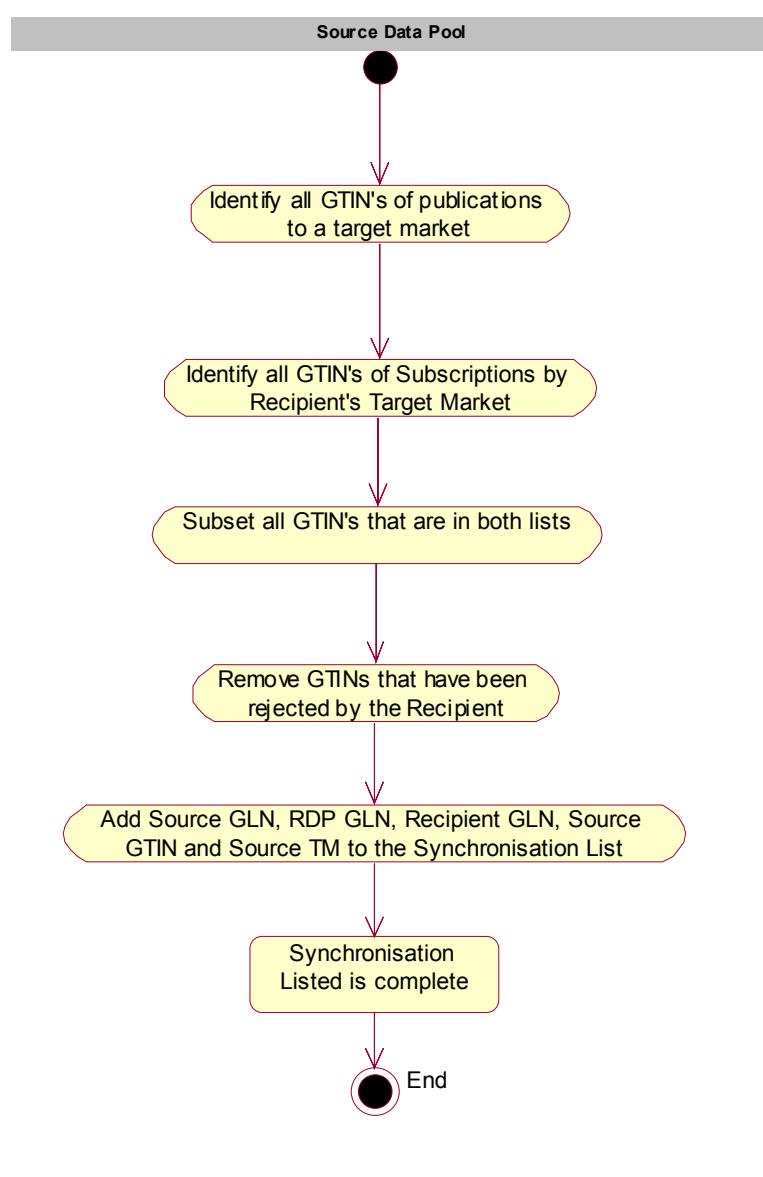


Figure 61 - Create Synchronization List

1.7.22 Distribute Catalogue Item Data from SDP to RDP

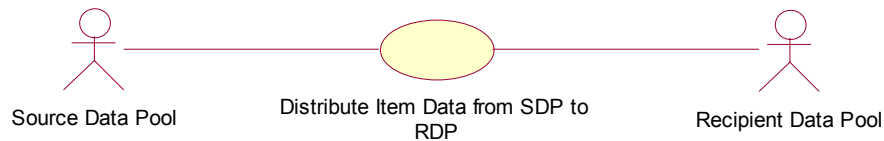


Figure 62 - Distribute Catalogue Item Data from SDP to RDP Use Case Diagram

Use Case Name	Distribute Catalogue Item Data from SDP to RDP
Traceability Identifier	UC-37
Use Case Description	Using the Distribution Criteria, the Catalogue Item Data are distributed from SDP to RDP.
Use Cases Above	UC-29: Distribute Catalogue Item Data
Use Cases Below	UC-xx: Filter Catalogue Item Data at SDP UC-xx: Send Catalogue Item Data to RDP UC-xx: Filter Catalogue Item Data at RDP
Actors	Source Data Pool (SDP) Recipient Data Pool (RDP)
Performance Goals	SDP: Distribute Catalogue Item Data to the RDP based on the Distribution Criteria. RDP: To receive Catalogue Item Data that comply with the Distribution Criteria.
Preconditions	Publications are available at the SDP. Subscriptions are communicated to the SDP. The SDP has the updated Synchronization list based on the subscriptions and Confirmations received. The SDP knows which RDP needs to receive Catalogue Item Data for each Recipient.
Postconditions	RDP has received Catalogue Item Data that comply with the Distribution Criteria.
Scenario	Begins when, the SDP filters the Catalogue Item Data using the Synchronization list. <ul style="list-style-type: none">• The SDP sends filtered Catalogue Item Data to the RDP.• The RDP receives the Catalogue Item Data. Ends when, the RDP uses the Subscription and Confirmations of the recipient to filter the Catalogue Item Data to identify any Catalogue Items that should not have been sent.
Alternative Scenario	None at this summary level
Special Requirements	•
Extension Points	N/A

Requirements Covered	ID	Requirement	Weight
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-13	The Data Source grants visibility of item, party and partner profiles including party capabilities data to a given list of parties (identified by their GLNs) or to all parties in a given Target Market.	Primary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary
	REQ-21	If an Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-25	The Data Distribution, which is the movement of data from one entity to another, must be handled through a specific notification type.	Secondary
	REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Secondary
	REQ-27	In case of an ItemLink correction, the entire hierarchy will be indicated as corrected in the notification.	Primary
	REQ-28	The updated hierarchy always fully replaces the current hierarchy. This action is called "Full Refresh".	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-58	Deletes are not synchronized across data pools.	Primary
	REQ-81	Synchronization List is only synchronized between the involved source and recipient data pools for applicable data: synchronization list is built based on confirmation received by a source data pool and nothing else.	Secondary
	REQ-88	The matching process is owned and developed by each source data pool in order to trigger data distribution based on publication and subscription data.	Primary
	REQ-89	The matching process can be triggered either by publication, subscription or as a scheduled event. It is valid for all subscription types (including synchronization list) and all publication types.	Primary
	REQ-93	Although the notification process will physically move the data from one data pool to another, this data should not be stored permanently for the purpose of synchronization with any other user than the initial subscriber. If stored, access should be limited to the initial data recipient.	Primary
	REQ-	A Data Recipient requests that it receive a "notification" when a specific event	Primary

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	109	occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient's access to information as controlled by the data source through its source data pool.	
	REQ-125	The Source Data Pool is responsible to reset the "Reload" flag once it sends all requested data.	Secondary
	REQ-126	If a new Reload is needed, the Recipient must delete the previous Reload Subscription, then create a new Subscription with the "Reload" flag set.	Secondary
	REQ-143	"Reload" flag is passed through to Recipient.	Primary
	REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	Primary
	REQ-166	<p>A Request for Catalogue Item Notification with the isReload set to false will result in items being re-sent whether they were previously rejected or not. The Sync List will be reset. This is only valid for items that have previously been sent to the data recipient.</p> <p>The CIN response will have the following values:</p> <ul style="list-style-type: none"> • documentStatus= Original • isReload = False • Command= Add 	Primary
	REQ-167	<p>A Request for Catalogue Item Notification with the isReload set to true will result in only items not previously rejected being re-sent. The Sync List is not reset.</p> <p>The CIN response will have the following values:</p> <ul style="list-style-type: none"> • documentStatus= Copy • isReload = True • Command= Add 	Primary
	REQ-168	The Document Status of the RFCIN command is ignored for the purposes of determining its impact on the sync list and the status of the CIN that is generated.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

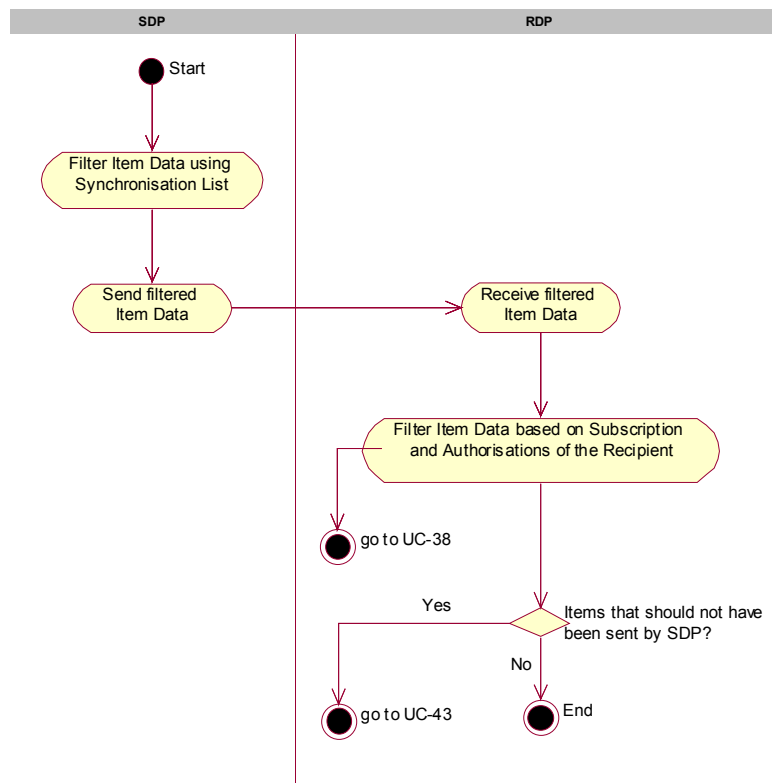


Figure 63 - Distribute Catalogue Item Data from SDP to RDP Activity Diagram

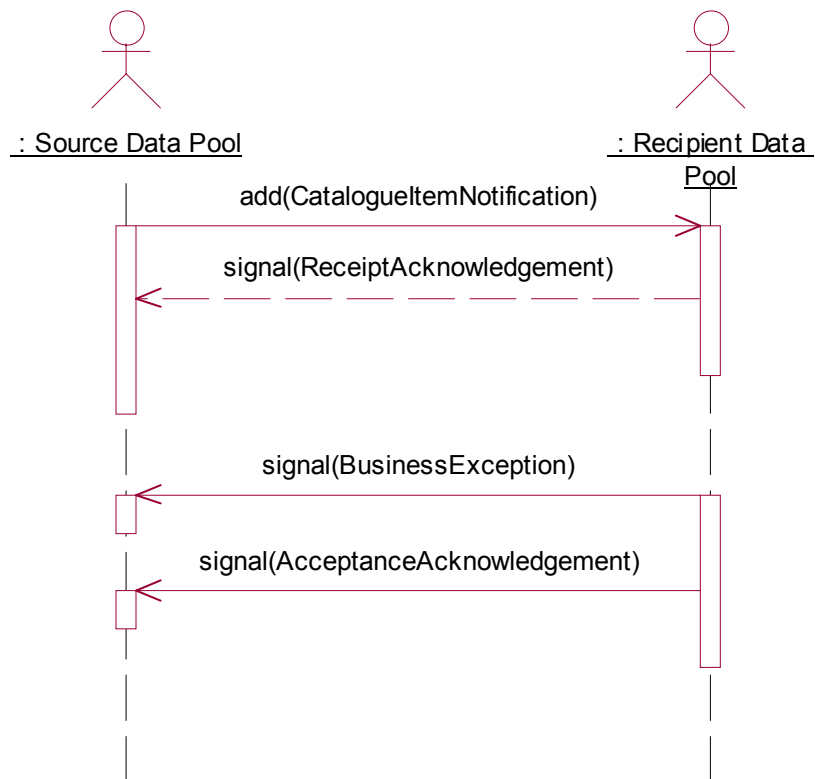


Figure 64- Distribute Catalogue Item Data from SDP to RDP Sequence Diagram

1.7.23 Distribute Catalogue Item Data from RDP to Recipient

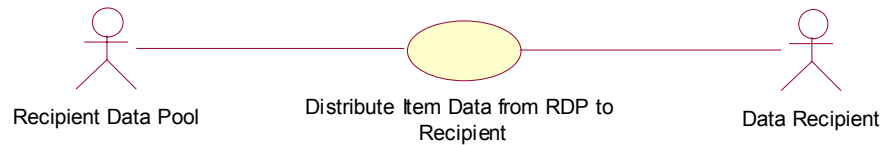


Figure 65 - Distribute Catalogue Item Data from RDP to Recipient Use Case Diagram

Use Case Name	Distribute Catalogue Item Data from RDP to Recipient		
Traceability Identifier	UC-38		
Use Case Description	Catalogue Item Data are distributed from RDP to the Data Recipient.		
Use Cases Above	UC-29: Distribute Catalogue Item Data		
Use Cases Below	UC-xx: Send Catalogue Item Data to Recipient		
Actors	Recipient Data Pool (RDP) Data Recipient		
Performance Goals	RDP: Distribute Catalogue Item Data to the Recipient based on the Subscriptions and Confirmations. Data Recipient: To receive Catalogue Item Data that comply with their Subscriptions and Confirmations.		
Preconditions	Publications, Subscriptions and Confirmations have been defined. The Catalogue Item Data are filtered by the RDP (see UC-37).		
Postconditions	Data Recipient has received Catalogue Item Data that comply with their Subscriptions and Confirmations.		
Scenario	Begins when, the RDP sends the filtered Catalogue Item Data to the Data recipient. Ends when, the Data Recipient receives the Catalogue Item Data from its RDP.		
Alternative Scenario	None at this summary level		
Special Requirements	•		
Extension Points	N/A		
Requirements Covered	ID	Requirement	Weight
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-20	Synchronization Lists must include every Catalogue Item (GTIN+GLN+TM) that needs to be synchronized.	Primary

	REQ-21	If a Catalogue Item is "Confirmed of Synchronization" then all Catalogue items below in the Catalogue Item Hierarchy shall be included in the Synchronization list.	Primary
	REQ-22	Relationship dependent data will only be communicated for Synchronized, Review or Accept status in the Synchronization List.	Primary
	REQ-23	Events that can trigger notifications are: - Publication of new data / change of publication - Change of published Catalogue Item / Party / Partner Profile - Change of owner, rights - Subscription - Synchronization List - Confirmation/ Rejection - Request for Notification - Any successful matching process	Primary
	REQ-24	Notifications must NOT be sent in the following cases since data is not yet public and validated information: - Data load (add, change, etc...) - Data validation - Registration of new Catalogue Item	Primary
	REQ-25	The Data Distribution, which is the movement of data from one entity to another, must be handled through a specific notification type.	Primary
	REQ-26	Notification to the data recipient will always include the entire hierarchy. (applies to add & update by adding a higher level)	Primary
	REQ-27	In case of an ItemLink correction, the entire hierarchy will be indicated as corrected in the notification.	Primary
	REQ-28	The updated hierarchy always fully replaces the current hierarchy. This action is called "Full Refresh".	Primary
	REQ-32	Acknowledgement Reason codes must be unique.	Primary
	REQ-109	A Data Recipient requests that it receive a "notification" when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc). This is subject to the recipient's access to information as controlled by the data source through its source data pool.	Secondary
	REQ-143	"Reload" flag is passed through to Recipient.	Secondary
	REQ-159	Multiple independent hierarchies can co-exist at the data-pool for an item for example hierarchy 1 = case A – each A and hierarchy 2 = pallet A – case A –each A.	Primary
	REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

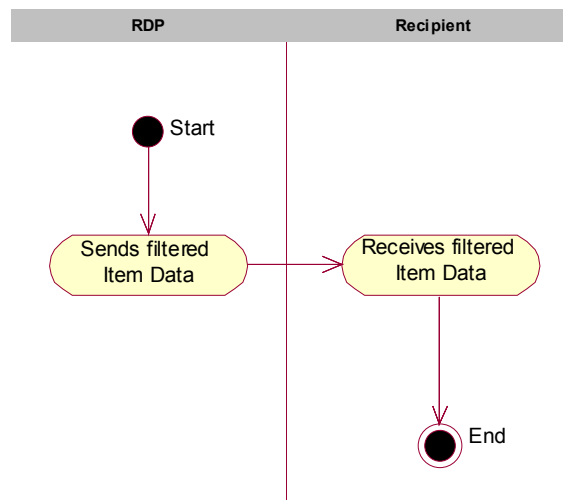


Figure 66 - Distribute Catalogue Item Data from RDP to Recipient Activity Diagram

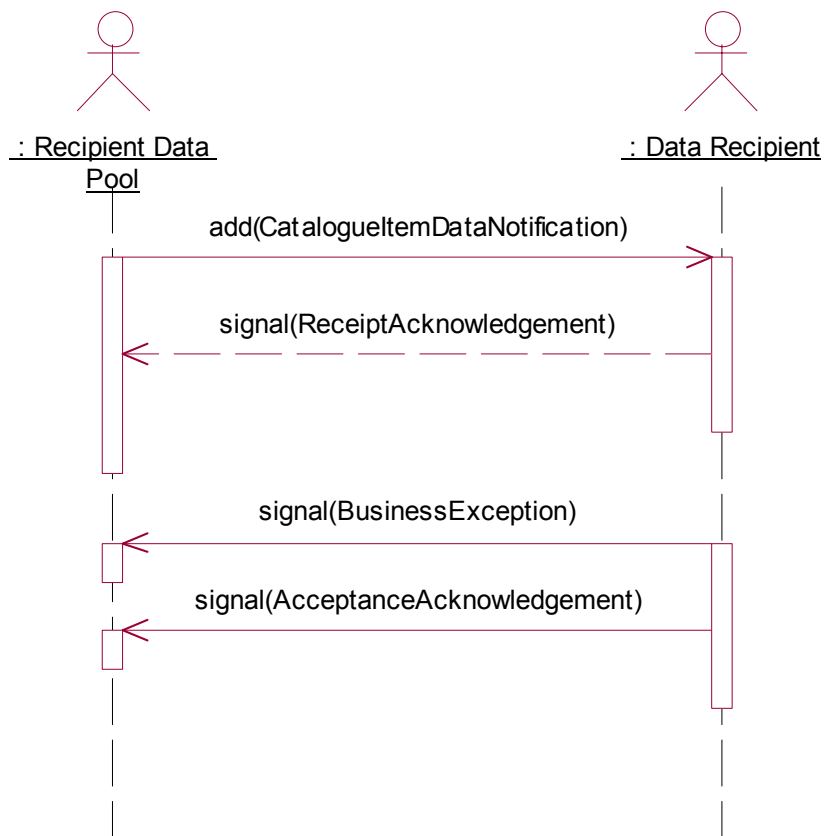


Figure 67 - Distribute Catalogue Item Data from RDP to Recipient Sequence Diagram

1.8 Common Use Cases

1.8.1 Validate Data Pool

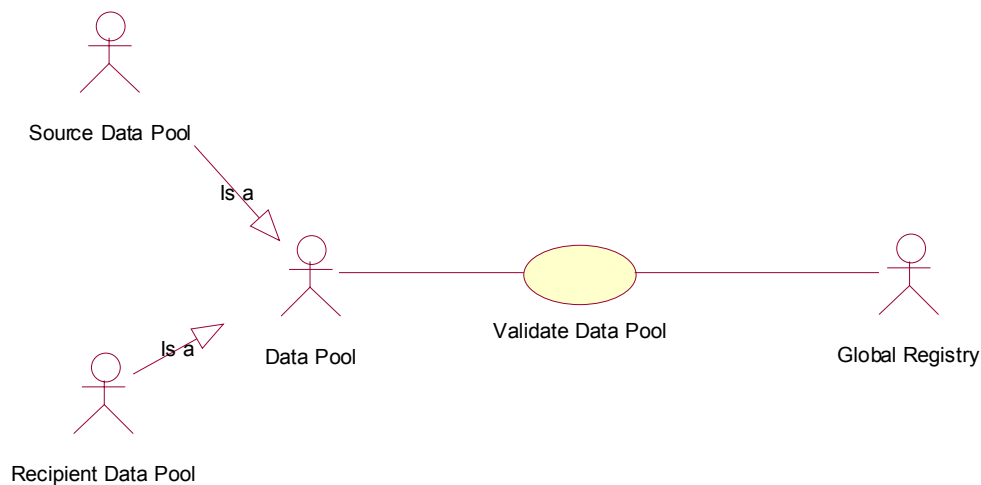


Figure 68 - Validate Data Pool

Use Case Name	Validate Data Pool
Traceability Identifier	UC-32
Use Case Description	<p>As only certified Data Pools can send and receive messages to and from the Global Registry, there must be a way to validate that the sending Data Pool is certified. As Global Registry will only accept messages from certified Data Pools, all responses to messages (other than certification errors) will be to certified Data Pools.</p> <p>This Use Case describes the process the Global Registry will perform to verify that the sender of a message is a certified Data Pool and has permission to send the type of message on behalf of the Data Source.</p> <p>This process is triggered by any incoming message to the Global Registry.</p>
Use Cases Above	UC-17: Registry Validation
Use Cases Below	None
Actors	Data Pool (Source Data Pool or Recipient Data Pool) Global Registry
Performance Goals	Data Pool: To provide the Global Registry with verification that each message originates from a certified

	<p>Data Pool.</p> <p>Global Registry: To ensure that only certified Data Pools access the Global Registry.</p>
Preconditions	<p>The Data Pool has sent their Data Pool Profile to the Global Registry and has passed certification.</p> <p>The Data Pool sends any supported message to the Global Registry.</p>
Postconditions	<p>The message is accepted for processing by the Global Registry.</p>
Scenario	<p>Begins when, the Global Registry receives a message.</p> <ol style="list-style-type: none"> 1. The Global Registry matches the senders GLN with the Data Pool Profile to ensure the Data Pool has a Profile. 2. The Global Registry matches the IP address of the message with the Profile. 3. The Global Registry ensures that the Start Availability Date is today's date or before Today's Date 4. The Global Registry ensures that the End Availability Date is after Today's date 5. The Global Registry ensures that the Certification Start Date is today's date or before Today's Date 6. The Global Registry ensures that the Certification End Date is after Today's date 7. The Global Registry ensures that the Certification Status is "Certified" <p>Ends when, The Global Registry accepts the message for processing</p>
Alternative Scenario	<p>ad 1., 7. Data Pool not certified:</p> <p>1.1, 7.1. The Global Registry sends an error message to the Source Data Pool</p> <p>Ends when, the Source Data Pool receives the error message</p> <p>ad 2. The IP address does not match:</p> <p>2.1. Global Registry sends an error message to the IP address in the Profile</p> <p>2.2. Manual (phone call) intervention takes place</p> <p>Ends when, the Source Data Pool receives the IP error message</p> <p>ad 3., 4., 5., 6. Any of these dates are out of range:</p> <p>3.1, 4.1, 5.1, 6.1. The Global Registry sends a validation error message to the Source Data Pool</p> <p>Ends when, the Source Data Pool receives the validation error message</p>
Special Requirements	<p>None</p>
Extension Points	<p>N/A</p>

Requirements Covered	ID	Requirement	Weight
	REQ-12	Every command needs a response and is handled according to the agreement between the parties involved. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: - Confirmation of message receipt- Success / Failure of processing (syntax and content)- Reason for failure, with a code number and text message unique assigned to each failure	Primary
	REQ-39	The ability to provide incremental updates is: - optional – not required for data pool certification - functionality provided between the recipient's data pool and its users	Secondary
	REQ-49	Rules for archiving or physical deletes will be agreed with the data pools and in the scope of the certification process.	Secondary
	REQ-99	The Global Registry functionality requirements can be summarized as follows: - Enable data synchronization - Validation, registration and subscription functions - Enable global validation - Checking compliance with basic EAN.UCC rules related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered - Enable global search functionality that does not require full duplication of data in the Global Registry.	Primary
	REQ-100	The Global Registry is involved in the following functions and/or business cases as defined in the Item Synchronization detailed requirements: - Validation - Registration - Subscription - Global Search	Primary
	REQ-101	Registry Validation includes : - EAN.UCC standards validation for GTIN and GLN formats (i.e. check digit) - Uniqueness validation for Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN), ensuring there is only one occurrence and data source for each data record as identified by the appropriate fields.	Primary
	REQ-102	Registry validation is a part of the registration process.	Primary
	REQ-103	Data Pool Validation includes the validation according to any other EAN.UCC standard applicable to the synchronized data and not included in the Global Registry validation scope.	Secondary
	REQ-104	In summary, the registry requirements for validation are: - EAN.UCC standards validation for GTIN/GLN formats - Uniqueness validation for Item, Party and data pool key - Store and maintain EAN.UCC standards - Process validation command - Provide validation acknowledgement	Primary
	REQ-105	Registration is the process, which references all Catalogue Items and Parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.	Primary
	REQ-106	Registering a Catalogue Item involves a check by the Global Registry for Item uniqueness. The Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Global Registry must be unique. When an Item is registered, the registry verifies that the combination of this data is unique to that Item.	Primary
	REQ-107	The registration process is triggered by the following business cases: 1. Create Catalogue Item: After the physical load and validation of the data, the registry record needs to be created before data can be published. 2. Update Catalogue Item: When a registered Catalogue Item is updated in its source data pool, updates impacting the Registry data must be reflected in the Global Registry, before the updated data can be propagated to the recipients. Registration of Catalogue Item changes only needs to happen for changes that: Impacts fields stored in the Global Registry. Are authorized according to the GTIN allocation	Primary

	rules. 3. Correct Catalogue Item: When a registered item is corrected in its source data pool, corrections impacting the Registry data must be reflected in the Global Registry before the updated data can be propagated to the data recipients. 4. Delete Catalogue Item: Deletions need to be reflected in the Global Registry: the discontinuation dates starts the EAN.UCC standard retention period (48 months for CPG, 36 months for apparel) as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the Global Registry). 5. Cancel Catalogue Item: Communicates a trade item was never manufactured – this allows an earlier “reuse” of the GTIN i.o. standard retention period. This is achieved through the maintenance (using change function) of the cancel date. 6. Removing an Catalogue Item from the supply chain: The permanent removal of a Catalogue Item from the supply chain is achieved through the maintenance of a discontinuation date. This date has to be reflected in the Global Registry to kick off the EAN.UCC retention period. Temporary removals are not reflected in the Global Registry and only handled through the maintenance of the availability period in the data pools.	
REQ-108	Registry requirements for registration are : - Registration can only happen after successful validation. - Registration can only produce errors, no warnings. - Successful Registration of a Catalogue Item is mandatory prior to publication of any hierarchy containing that Catalogue Item. - ItemStatus needs to be included in GTIN data model to reflect validation and registration status. - Process registration command (for create, update, correct, delete). - Provide registration acknowledgement.	Primary
REQ-112	The data pool validation is the compliance checking of new or changed data versus EAN.UCC Global Data Standards, principles and rules, including: - EAN.UCC Item and Party data model validation - Syntax checks (field formats...) - Consistency checks (pick lists, authorized values...) - Legal checks (local data requirements...) - Quality checks (measurements, hierarchy representation...) This will be handled through a validation engine.	Primary
REQ-113	The Global Registry provider will be expected to store and distribute what has been described as a “Validation Engine”. This software module will be executed by the data pools to ensure common standards compliance.	Secondary
REQ-114	Additionally, EAN.UCC standards should be stored centrally – potentially in the Global Registry by version.	Secondary
REQ-121	Party: - GLN - Start Availability Date of the Party - Deletion Date of the Party - Registration Date - Source Data Pool Pointer [GLN used to ...] - GLN of Data Source (*Data Source is actually the ‘owner’ of the GLN data - Date and Time of last change - Party Validation Information (including Version, Date & Certificate ID)	Primary
REQ-122	Data Pool Profile: - GLN of the data pool - Name of data pool - Address of the Data Pool (IP or URL) - Creation date of data pool provider [for audit of set-up predating certification] - Start availability date of the Data Pool - End availability date of the Data Pool - Certification Start Date - Certification Expiration Date - Certification Status - Identification of the Certification Body - Certification ID (with version)	Secondary
REQ-153	The Global Registry and the data pools should be able to process current and previous versions of the Catalogue Item Synchronization messages. The Global Registry and the data pools should also be able to process a new version within a certain time frame.	Secondary
REQ-171	The message identifier (CorrelationInformation: requestingDocumentInstanceIdentifier) at the document header level for the EAN.UCC response and the GDSN Exception must equal the DocumentIdentification: instanceIdentifier of the original message.	Primary

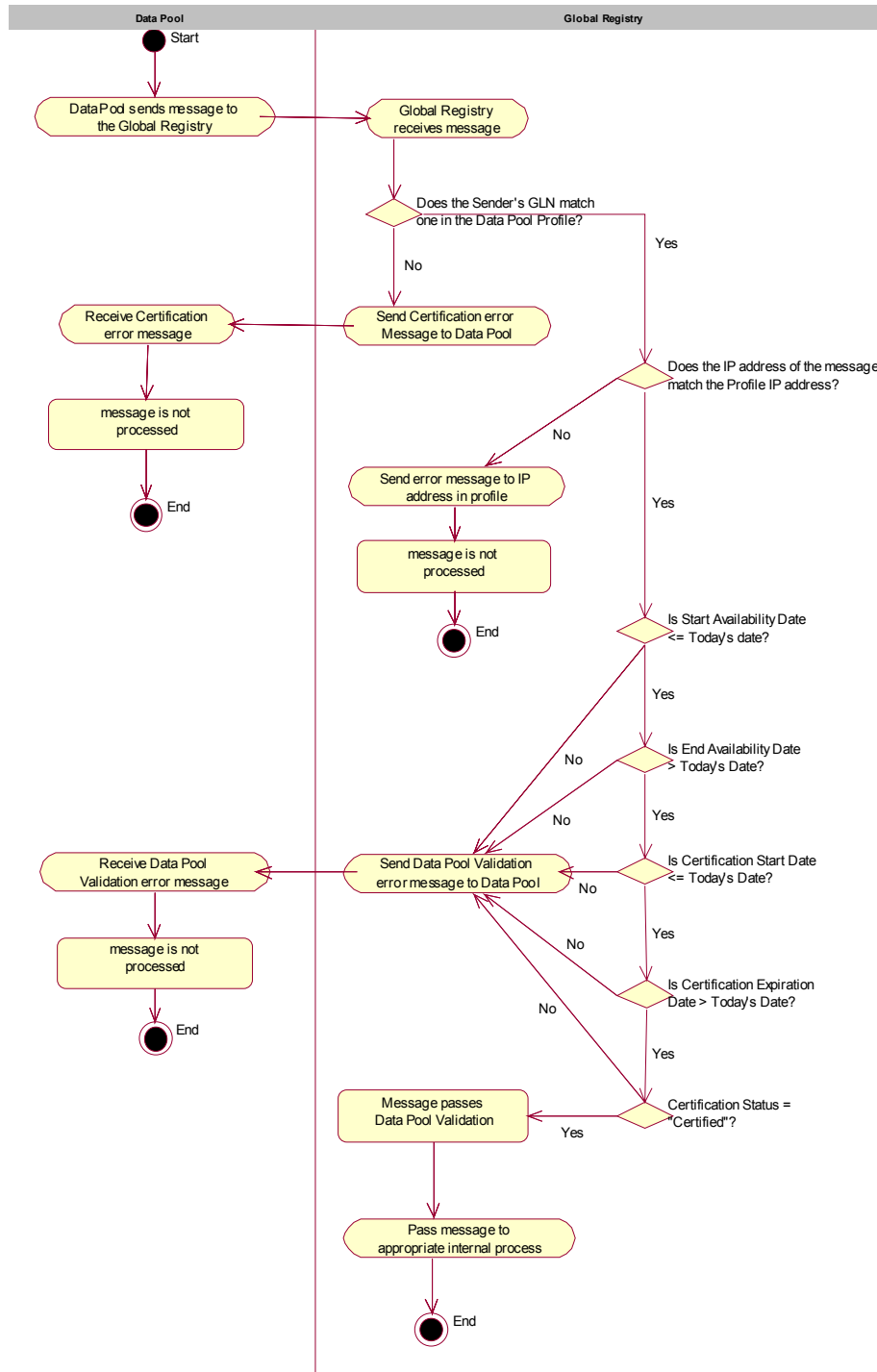


Figure 69 - Validate Data Pool Activity Diagram

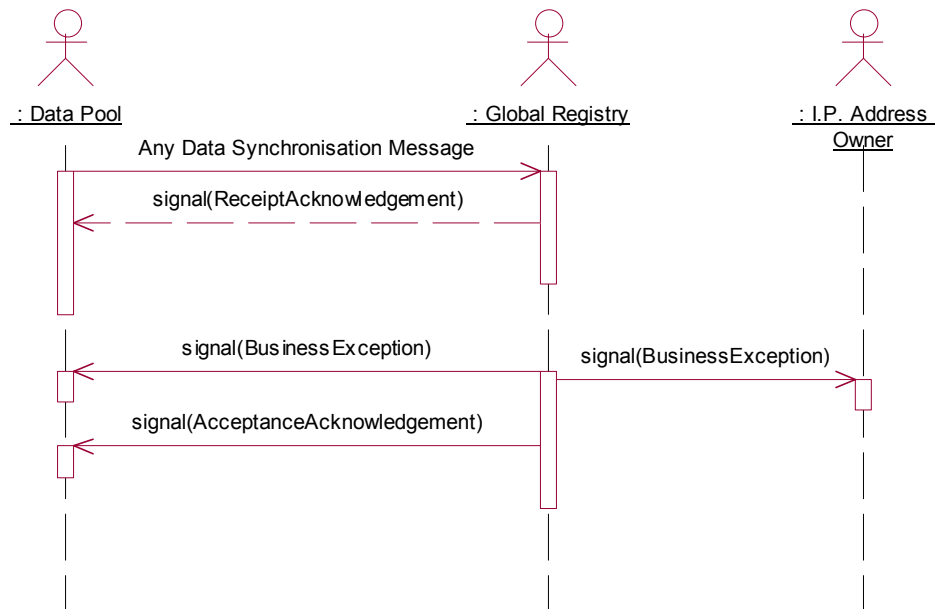


Figure 70 - Validate Data Pool Sequence Diagram

1.8.2 Validate Catalogue Item Data for Registry

Use Case Name	Validate Catalogue Item Data for Registry
Traceability Identifier	UC-33
Use Case Description	
Use Cases Above	UC-17: Registry Validation
Use Cases Below	None
Actors	Data Pool (Source Data Pool or Recipient Data Pool) Global Registry
Performance Goals	Data Pool: Global Registry:
Preconditions	
Postconditions	
Scenario	
Alternative Scenario	
Special Requirements	None
Extension Points	N/A
Requirements Covered	<ul style="list-style-type: none">•

1.8.3 Business Transaction Activity Diagram(s)

1.8.4 Business Transaction Sequence Diagram(s) (optional)

1.9 Information Model (including GDD Report)

1.9.1 Data Description:

1.9.2 GDD Report :

1.9.2.1 Catalogue Item Confirmation

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
CatalogueItemConfirmation				Catalogue Item Confirmation. Details	This refers to electronic communication from the Data Recipient to the Data Source indicating what action has been taken on the item. The confirmation process occurs in the recipient's data pool. Confirmation is not mandatory. When used, it provides for the following outcomes:1. Synchronised.2. Accepted 3. Rejected .4. Review. If the data was previously synchronized, it will be removed from the synchronization list.	
		None	CatalogueItemConfirmationState	Catalogue Item Confirmation. Association. Catalogue Item Confir-	None	1..1

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				mation State		
		None	CatalogueItemReference	Catalogue Item Confirmation. Association. Catalogue Item Identification	None	1..1
		None	Document	Catalogue Item Confirmation. Inheritance_ Association. Electronic_ Document	None	1..1
		catalogueItemConfirmationIdentification	EntityIdentification	Catalogue Item Confirmation. Catalogue Item Confirmation Identification. Entity Identification	None	1..1
CatalogueItemConfirmationState				Catalogue Item Confirmation State. Details	!! The four states reflected by a Recipient Data Pool are: Accepted, Rejected, Review and Synchronized	
	recipientDataPool			Catalogue Item Confirmation State. Recipient Data Pool_ Party. GLN_ Identifier	A data pool that supports the functionality of the Data Recipient (Subscription, Confirmation, Search, Request for Notification, etc.)	0..1

Business Solution Design

	recipientGLN			Catalogue Item Confirmation State. Recipient GLN_ Party. GLN_ Identifier	Not Available	1..1
	state			Catalogue Item Confirmation State. Confirmation State. Catalogue Item Confirmation State Type_ Code	The four states reflected by a Recipient Data Pool are: Accepted, Rejected, Review and Synchronized	1..1
CatalogueItemReference				Catalogue Item Identification. Details	A class of information used to identify the key to the trade item information using the data source GLN, the GTIN, and the Target Market within the Global Data Synchronization Network.	
	dataSource			Catalogue Item Identification. Data Source_ Party. GLN_ Identifier	Entity that provides the global data synchronization network with Master Data. The Data Source is officially recognized as the owner of this data. For a given Item or Party, the source of data is responsible for permanent updates of the information under its responsibility.	1..1
	gTIN			Catalogue Item Identification	A particular Global trade item Number, a numerical value	1..1

Business Solution Design

				cation. GTIN_ Identification. GTIN_ Identifier	used to uniquely identify a trade item. A trade item is any trade item (trade item or service) upon which there is a need to retrieve pre-defined information and that may be planned, priced, ordered, delivered and or invoiced at any point in any supply chain.	
		None	TargetMarket	Catalogue Item Identification. Association. Target Market	Not Available	1..1
EntityIdentification				Entity Identification. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identification. Identifier	Not Available	1..1
		contentOwner	PartyIdentification	Entity Identification. Content Owner. Party Identification	Not Available	1..1

1.9.2.2 Catalogue Item Link

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
CatalogueItemLink				Catalogue Item Link.	A business message used to identify the packaging	

				Details	hierarchy levels of trade items.	
	childGTIN			Catalogue Item Link. Child GTIN_ Identification. GTIN_ Identifier	not available	1..1
	gLN			Catalogue Item Link. GLN_ Party. GLN_ Identifier	Unique location number mandatory within the Global Data Synchronization process to identify data owners/info providers, etc such as Distributors, brokers, manufacturers.	1..1
	parentGTIN			Catalogue Item Link. Parent GTIN_ Identification. GTIN_ Identifier	not available	1..1
		None	Document	Catalogue Item Link. Inheritance_ Association. Electronic_ Document	None	1..1
		catalogueItemLinkIdentification	EntityIdentification	Catalogue Item Link. Catalogue Item Link Identification. Entity Identification	None	1..1
		targetMarket	TargetMarket	Catalogue	None	1..1

Business Solution Design

				Item Link. Association. Target Mar- ket		
EntityIdentification				Entity Identi- fication. Details	The unique identification of a document.	
	uniqueCreatorIden- tification			Entity Identi- fication. Identification. Identifier	Not Available	1..1
		contentOwner	PartyIdentification	Entity Identi- fication. Content Owner. Party Identification	Not Available	1..1
TargetMarket				Target Mar- ket. Details	The Target Market is a geographical region based upon geographical boundaries sanctioned by the United Nations. There is one international sys- tem to describe geo- graphical regions, the ISO-3166-code system.	
	targetMarketCoun- tryCode			Target Mar- ket. Market Country. ISO3166_1_ Code	The country level or higher geographical defini- tion in which the Informa- tion Provider will make the GTIN available to buyers. This does not in any way govern where the buyer may re-sell the GTIN to	1..1

					consumers. This code can be repeated as many times as needed. This code is represented by the 2-character ISO 3166-1 code. It is a mandatory attribute. Additionally, Target Market Subdivision Code indicates country subdivision where the trade item is intended to be sold. This code is represented by the 3-character ISO 3166-2 code.	
	targetMarketSubdivisionCode			Target Market Subdivision. ISO3166_2_Code	The Target Market Subdivision Code is the secondary code of the Target Market and must be a subdivision of a Target Market Country Code. The Target Market Subdivision Code describes the "geopolitical subdivision of a country" where the trade item is intended for sale, as determined by the Information Provider (e.g. "State" in the US). Target Market Subdivision Codes must be used in conjunction with Target Market Country Codes. The Target Market subdivision code is represented by the three-character ISO 3166-2 code.	0..1

1.9.2.3 Catalogue Item Notification

Catalogue Item Notification

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
CatalogueItem				Catalogue Item. Details	n.a.	
	dataRecipient			Catalogue Item. Data Recipient_Party. GLN_Identifier	Party, which is authorized to view, use, download a set of Master Data provided by a Data Source.	0..1
	sourceDataPool			Catalogue Item. Source Data Pool_Party. GLN_Identifier	A data pool that supports the functionality required by a Data Source such as Data Loading, Publication, Notification, Registration, etc.	0..1
		None	CatalogueItemChildItem-Link	Catalogue Item. Association. Child Item Quantity	None	0..*
		None	CatalogueItemState	Catalogue	None	1..1

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				Item. Association. Catalogue Item State		
		None	TradeItem	Catalogue Item. Association. Trade Item	None	1..1
CatalogueItemChildItem-Link				Child Item Quantity. Details	A class of information to identify the quantity of items within a packaging hierarchy level within the Global Data Synchronization Network.	
	quantity			Child Item Quantity. Child_Quantity. Integer_Numeric	Not Applicable	1..1
		None	CatalogueItem	Child Item Quantity. Association. Catalogue Item	None	1..1
CatalogueItemNotification				Catalogue Item Notification. Details	A business message used to transmit	

					trade item information from a data source or a data pool to a data recipient with the Global Data Synchronization Network.	
	isReload			Catalogue Item Notification. Reload. Indicator	The Boolean value within the request for notification process (True = currently on the notification list and False = initial Load).	1..1
		None	CatalogueItem	Catalogue Item Notification. Association. Catalogue Item	None	1..1
		None	Document	Catalogue Item Notification. Inheritance_ Association. Electronic_ Document	None	1..1
		catalogueItemNotificationIdentification	EntityIdentification	Catalogue Item Notification. Association. Entity Identification	None	1..1

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CatalogueItemState				Catalogue Item State. Details	!! The four states are: Registered , Cancelled, In Progress and Discontinued.	
	cancelDate			Catalogue Item State. Cancel_ Date Time. Date Time	Date as- signed by data source and stored in the source data pool reflecting the date the catalogue item was cancelled. This date will also be stored in the Registry.	0..1
	discontinueDate			Catalogue Item State. Discon- tinued_ Date Time. Date Time	Date as- signed by data source and stored in the source data pool reflecting the date the catalogue item was discontinued. This date will also be stored in the	0..1

Business Solution Design

					Registry.	
	state			Catalogue Item State. Item State. Catalogue Item State_ Code	The four states are: Registered , Cancelled, In Progress and Discontinued .	1..1
EntityIdentification				Entity Identification. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identification. Identification. Identifier	Not Available	1..1
		contentOwner	PartyIdentification	Entity Identification. Content Owner. Party Identification	Not Available	1..1

1.9.2.4 Catalogue Item Publication

Catalogue Item Publication

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
CatalogueItemPublication				Catalogue Item Publication. Details	A business message standard used to distribute trade item information within the Global Data Synchronization Network.	

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	publishToGLN			Catalogue Item Publication. Choice_ Publish To GLN Party. GLN_ Identifier	Not Available	1..1
		None	CatalogueItemReference	Catalogue Item Publication. Association. Catalogue Item Identification	None	1..1
		None	Document	Catalogue Item Publication. Inheritance_ Association. Electronic_ Document	None	1..1
		catalogueItemPublication-Identification	EntityIdentification	Catalogue Item Publication. Catalogue Item Publication Identification. Entity Identification	None	1..1
		publishToTargetMarket	TargetMarket	Catalogue Item Publication. Choice_ Publish To Target Market. Target Market	None	1..1
CatalogueItemReference				Catalogue Item Identification. Details	A class of information used to identify the key to the trade item information using the data source GLN, the GTIN, and the Target Market within the Global Data Synchronization Network.	
	dataSource			Catalogue Item Identification. Data Source_	Entity that provides the global data synchronization network with Master Data. The Data	1..1

Business Solution Design

				Party. GLN_ Identifier	Source is officially recognized as the owner of this data. For a given Item or Party, the source of data is responsible for permanent updates of the information under its responsibility.	
	gTIN			Catalogue Item Identification. GTIN_ Identification. GTIN_ Identifier	A particular Global trade item Number, a numerical value used to uniquely identify a trade item. A trade item is any trade item (trade item or service) upon which there is a need to retrieve pre-defined information and that may be planned, priced, ordered, delivered and or invoiced at any point in any supply chain.	1..1
		None	TargetMarket	Catalogue Item Identification. Association. Target Market	Not Available	1..1
EntityIdentification				Entity Identification. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identification. Identification. Identifier	Not Available	1..1
		contentOwner	PartyIdentification	Entity Identification. Content Owner. Party Identification	Not Available	1..1
TargetMarket				Target Market. Details	The Target Market is a geographical region based upon geographical boundaries sanctioned by the United Nations.	

					There is one international system to describe geographical regions, the ISO-3166-code system.	
	targetMarketCountryCode			Target Market. Market Country. ISO3166_1_ Code	The country level or higher geographical definition in which the Information Provider will make the GTIN available to buyers. This does not in any way govern where the buyer may re-sell the GTIN to consumers. This code can be repeated as many times as needed. This code is represented by the 2-character ISO 3166-1 code. It is a mandatory attribute. Additionally, Target Market Subdivision Code indicates country subdivision where the trade item is intended to be sold. This code is represented by the 3-character ISO 3166-2 code.	1..1
	targetMarketSubdivision-Code			Target Market. Market Subdivision. ISO3166_2_ Code	The Target Market Subdivision Code is the secondary code of the Target Market and must be a subdivision of a Target Market Country Code. The Target Market Subdivision Code describes the "geo-political subdivision of a country" where the trade item is intended for sale, as determined by the Information Provider (e.g. "State" in the US). Target Market Subdivision Codes must be used in conjunction with Target Market Country Codes. The Target Market subdivision code is represented by the three-character	0..1

					ISO 3166-2 code.	
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1.9.2.5 Catalogue Item Registration Response

Catalogue Item Registration Response

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
CatalogueItemReference				Catalogue Item Identification. Details	A class of information used to identify the key to the trade item information using the data source GLN, the GTIN, and the Target Market within the Global Data Synchronization Network.	
	dataSource			Catalogue Item Identification. Data Source_Party. GLN_Identifier	Entity that provides the global data synchronization network with Master Data. The Data Source is offi-	1..1

					cially recognized as the owner of this data. For a given Item or Party, the source of data is responsible for permanent updates of the information under its responsibility.	
	gTIN			Catalogue Item Identification. GTIN Identification. GTIN Identifier	A particular Global trade item Number, a numerical value used to uniquely identify a trade item. A trade item is any trade item (trade item or service) upon which there is a need to retrieve pre-defined information and that may be planned, priced, ordered, delivered and or invoiced at any point in any supply chain.	1..1

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		None	TargetMarket	Catalogue Item Identification. Association. Target Market	Not Available	1..1
CatalogueItemRegistrationInformation				Catalogue Item Registration_ Date Group. Details	Not Available	
	lastChangedDate			Catalogue Item Registration_ Date Group. Last Changed_ Date Time. Date Time	Date assigned by system indicating last time the information was changed. This date is generic and will be stored where assigned and will accompany every message.	1..1
	registrationDate			Catalogue Item Registration_ Date Group. Registration_ Date Time. Date Time	Date assigned by the registry of successful registration.	1..1
CatalogueItemRegistrationResponse				Catalogue Item Registration Response. Details	A business message used to notify a data pool of the status of the	

					registration in the Global Registry for a trade item.	
		catalogueItemReference	CatalogueItemReference	Catalogue Item Registration Response. Association. Catalogue Item Identification	None	1..1
		None	CatalogueItemRegistrationInformation	Catalogue Item Registration Response. Association. Catalogue Item Registration_ Date Group	None	1..1
		None	Response	Catalogue Item Registration Response. Inheritance_ Association. Response	No	

1.9.2.5.1 Catalogue Item Subscription

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
CatalogueItemSubscription				Catalogue Item Subscription. Details	A business message used to establish a request for the update of trade item information from an end recipient on a continuous basis.	
	dataRecipient			Catalogue Item Subscription. Data Recipient_ Party. GLN_ Identifier	Party, which is authorized to view, use, download a set of Master Data provided by a Data Source.	1..1
	dataSource			Catalogue Item Subscription. Data Source_ Party. GLN_ Identifier	Entity that provides the global data synchronization network with Master Data. The Data Source is officially recognized as the owner of this data. For a given Item or	0..1

					Party, the source of data is responsible for permanent updates of the information under its responsibility.	
	gTIN			Catalogue Item Subscription. GTIN_ Identification. GTIN_ Identifier	A particular Global trade item Number, a numerical value used to uniquely identify a trade item. A trade item is any trade item (trade item or service) upon which there is a need to retrieve predefined information and that may be planned, priced, ordered, delivered and or invoiced at any point in any supply chain.	0..1
	recipientDataPool			Catalogue Item Subscription. Recipient	A data pool that supports the functionality of the Data	0..1

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				Data Pool_ Party. GLN_ Identifier	Recipient (Sub- scription, Con- firmation, Search, Re- quest for Noti- fication, etc.)	
		classification	CatalogueItemClassification	Catalogue Item Sub- scription. Association. GPC_ Product Classification	None	0..1
		catalogueItemSubscriptionIdentifica- tion	EntityIdentification	Catalogue Item Sub- scription. Identification. Entity Identi- fication	Not Available	1..1
		targetMarket	TargetMarket	Catalogue Item Sub- scription. Association. Target Mar- ket	None	0..1
EntityIdentification				Entity Identi- fication. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identi- fication. Identification. Identifier	Not Available	1..1
		contentOwner	PartyIdentification	Entity Identi- fication. Content	Not Available	1..1

Business Solution Design

				Owner. Party Identification		
TargetMarket				Target Market. Details	The Target Market is a geographical region based upon geographical boundaries sanctioned by the United Nations. There is one international system to describe geographical regions, the ISO-3166-code system.	
	targetMarketCountryCode			Target Market. Market Country. ISO3166_1_Code	The country level or higher geographical definition in which the Information Provider will make the GTIN available to buyers. This does not in any way govern where the buyer may re-sell the GTIN to consumers. This	1..1

					code can be repeated as many times as needed. This code is represented by the 2-character ISO 3166-1 code. It is a mandatory attribute. Additionally, Target Market Subdivision Code indicates country subdivision where the trade item is intended to be sold. This code is represented by the 3-character ISO 3166-2 code.	
	targetMarketSubdivisionCode			Target Market. Market Subdivision. ISO3166_2_Code	The Target Market Subdivision Code is the secondary code of the Target Market and must be a subdivision of a Target Market Country Code. The Target Market Subdivision Code	0..1

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					describes the "geo-political subdivision of a country" where the trade item is intended for sale, as determined by the Information Provider (e.g. "State" in the US). Target Market Subdivision Codes must be used in conjunction with Target Market Country Codes. The Target Market subdivision code is represented by the three-character ISO 3166-2 code.	
TradeItemClassification				Product Classification. Details	n.a.	
	classificationCategoryCode			Product Classification. Class. Identifier	Global EAN.UCC classification category code. Unique, permanent 10-	1..1

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					digit key.	
	classificationCategoryDefinition			Product Classification. Class Description. Text	System generated explanation of Global EAN.UCC category.	1..1
	classificationCategoryName			Product Classification. Class Name. Text	The system generated text equivalent of the Global EAN.UCC classification category code.	1..1
		ClassificationCategory	ClassificationCategory	Product Classification. Additional Classification. Non-GPC_ Product Classification	None	0..*
		theEANUCCTradeItemClassification	EANUCCTradeItemClassification	Product Classification. Association. GPC_ Product Classification Attribute	Not Available	0..7

1.9.2.6 Data Synchronization Data Pool Profile

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
DataPoolCertificationInformation				Data Pool Certification. Details	Not Available	

	certificationBody			Data Pool Certification. Certification Body. Text	Organization that performs the certification process. (This is stored in the Registry).	1..1
	certificationExpirationDate			Data Pool Certification. Certification Expiration_ Date Time. Date Time	Date on which the Data Pool certification is no longer valid. (This is stored in the Registry).	1..1
	certificationIdentification			Data Pool Certification. Certification_ Identification. Identifier	Value that uniquely identifies a certified member of the Global Data Synchronization Network GDSN. (This is stored in the Registry).	1..1
	certificationStartDate			Data Pool Certification. Certification Start_ Date Time. Date Time	Date on which the Data Pool obtains certification. (This is stored in the Registry).	1..1
	certificationStatus			Data Pool Certification. Status. Data Pool Certification Status_ Code	Indicator of the stage of the certification process (This is stored in the Registry).	1..1

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DataSynchronisationDataPoolProfile				GDSN_ Data Pool Profile. Details	Not Available	
	dataPoolGLN			GDSN_ Data Pool Profile. Party. Identifier	Not Available	1..1
	electronicAddress			GDSN_ Data Pool Profile. Electronic Address. Text	The Internet Protocol identification for a certified data pool within the GDSN	1..1
	endAvailabilityDate			GDSN_ Data Pool Profile. End Availability_ Date Time. Date Time	The date at which a trade item or a location will no longer exist.	1..1
	startAvailabilityDate			GDSN_ Data Pool Profile. Start Availability_ Date Time. Date Time	The date at which a trade item or location begins its existence	1..1
		None	DataPoolCertificationInformation	GDSN_ Data Pool Profile. Association. Data Pool Certification	None	1..1
		dataPoolProfileIdentification	EntityIdentification	GDSN_ Data Pool Profile. Identification. Entity Identification	None	1..1

Business Solution Design

		dataPoolNameAndAddress	NameAndAddress	GDSN_ Data Pool Profile. Data Pool Name And Address. Party Address Group	None	1..1
EntityIdentification				Entity Identifi- cation. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identifi- cation. Identification. Identifier	Not Available	1..1
		contentOwner	PartyIdentification	Entity Identifi- cation. Content Owner. Party Identification	Not Available	1..1
NameAndAddress				Party Address Group. De- tails	Each party will identify their party name and address. The Party informa- tion includes city, name, country code ISO 3166, and the language of the party ISO 639-1988. Optional ad- dress informa- tion may in-	

					clude: street address, P.O. Box number, state, province code, postal code, latitude, longitude, cross street, county code, city code.	
	city			Party Address Group. City. Text	Not Available	1..1
	cityCode			Party Address Group. City Code. Text	Not Available	0..1
	countryCode			Party Address Group. Country Code. ISO3166_1_Code	Not Available	1..1
	countyCode			Party Address Group. County Code. Text	Not Available	0..1
	crossStreet			Party Address Group. Cross Street. Text	Not Available	0..1
	currency			Party Address Group. Currency. ISO_Currency_Code	Not Available	0..1
	languageOfTheParty			Party Address Group. Language. Lan-	Not Available	1..1

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				guage_ Code		
	name			Party Address Group. Name. Text	Not Available	1..1
	pOBoxNumber			Party Address Group. PO Box Number. Text	Not Available	0..1
	postalCode			Party Address Group. Postal Code. Text	Not Available	0..1
	provinceCode			Party Address Group. Province Code. Text	Not Available	0..1
	state			Party Address Group. State. Text	Not Available	0..1
	streetAddressOne			Party Address Group. Street Address One. Text	Not Available	0..1
	streetAddressTwo			Party Address Group. Street Address Two. Text	Not Available	0..1
		None	GeographicalCoordinates	Party Address Group. Association. Geographical Coordinate	Not Available	0..1

1.9.2.7 Registry Catalogue Item

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
CatalogueItemClassification				GPC_ Product Classification. Details	Not Available	
	classificationCategoryCode			GPC_ Product Classification. Class. Identifier	Not Available	1..1
CatalogueItemDates				Catalogue Item_ Date Group. Details	Not Available	
	cancelDate			Catalogue Item_ Date Group. Cancel_ Date Time. Date Time	Date assigned by data source and stored in the source data pool reflecting the date the catalogue item was cancelled. This date will also be stored in the Registry.	0..1
	deletionDate			Catalogue Item_ Date Group. Deletion_ Date Time. Date	Date assigned by data source and stored in the source data pool reflecting	0..1

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				Time	the date the catalogue item was flagged for deletion. This date will also be stored in the Registry.	
	discontinuedDate			Catalogue Item_ Date Group. Discontinued_ Date Time. Date Time	Date assigned by data source and stored in the source data pool reflecting the date the catalogue item was discontinued. This date will also be stored in the Registry.	0..1
	lastChangedDate			Catalogue Item_ Date Group. Last Changed_ Date Time. Date Time	Not Available	0..1
	registrationDate			Catalogue Item_ Date Group. Registration_ Date Time. Date Time	Date assigned by the registry of successful registration.	0..1
CatalogueItemReference				Catalogue Item Identification. Details	A class of information used to identify the key to the	

					trade item information using the data source GLN, the GTIN, and the Target Market within the Global Data Synchronization Network.	
	dataSource			Catalogue Item Identification. Data Source_Party. GLN_Identifier	Entity that provides the global data synchronization network with Master Data. The Data Source is officially recognized as the owner of this data. For a given Item or Party, the source of data is responsible for permanent updates of the information under its responsibility.	1..1
	gTIN			Catalogue Item Identification. GTIN_Identifier. GTIN_Identifier	A particular Global trade item Number, a numerical value used to uniquely identify	1..1

					tify a trade item. A trade item is any trade item (trade item or service) upon which there is a need to retrieve pre-defined information and that may be planned, priced, ordered, delivered and or invoiced at any point in any supply chain.	
		None	TargetMarket	Catalogue Item Identification. Association. Target Market	Not Available	1..1
EntityIdentification				Entity Identification. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identification. Identifier	Not Available	1..1
		contentOwner	PartyIdentification	Entity Identification. Content Owner. Party Identification	Not Available	1..1

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RegistryCatalogueItem				Catalogue Item Alignment. Details	N/A	
		None	CatalogueItemClassification	Catalogue Item Alignment. Association. GPC_Product Classification	None	1..*
		None	CatalogueItemDates	Catalogue Item Alignment. Association. Catalogue Item Date Group	None	0..1
		None	CatalogueItemReference	Catalogue Item Alignment. Association. Catalogue Item Identification	None	1..1
		None	Document	Catalogue Item Alignment. Inheritance Association. Electronic Document	None	1..1
		registryCatalogueItemIdentification	EntityIdentification	Catalogue Item Alignment. Registry Catalogue Item Identification. Entity Identification	None	1..1

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		None	RegistryCatalogueItemState	Catalogue Item Alignment. Association. Registry_ Catalogue Item State	None	1..1
RegistryCatalogueItemState				Registry_ Catalogue Item State. Details	Not Available	
	State			Registry_ Catalogue Item State. Status. Registry_ Catalogue Item State_ Code	The four states are: Registered , Cancelled, In Progress and Discontinued .	1..1

1.9.2.8 Request For Catalogue Item Notification

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
CatalogueItemSubscription				Catalogue Item Subscription. Details	A business message used to establish a request for the update of trade item information from an end recipient on a continuous basis.	
	dataRecipient			Catalogue Item Subscription. Data Recipient_ Party. GLN_	Party, which is authorized to view, use, download a set of Master Data provided by a Data Source.	1..1

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				Identifier		
	dataSource			Catalogue Item Subscription. Data Source_ Party. GLN_ Identifier	Entity that provides the global data synchronization network with Master Data. The Data Source is officially recognized as the owner of this data. For a given Item or Party, the source of data is responsible for permanent updates of the information under its responsibility.	0..1
	gTIN			Catalogue Item Subscription. GTIN_ Identification. GTIN_ Identifier	A particular Global trade item Number, a numerical value used to uniquely identify a trade item. A trade item is any trade item (trade item or service) upon which there is a need to retrieve pre-defined information and that may be planned, priced, ordered, delivered and or invoiced at any point in any supply chain.	0..1
	recipientData-Pool			Catalogue Item Subscription. Recipient Data Pool_ Party. GLN_ Identifier	A data pool that supports the functionality of the Data Recipient (Subscription, Confirmation, Search, Request for Notification, etc.)	0..1
		classification	CatalogueItemClassification	Catalogue Item Subscription. Association. GPC_ Product Classification	None	0..1
		catalogueItemSubscription-Identification	EntityIdentification	Catalogue Item Subscription. Identification.	Not Available	1..1

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				Entity Identification		
		targetMarket	TargetMarket	Catalogue Item Subscription. Association. Target Market	None	0..1
RequestForCatalogueItemNotification				Request For Catalogue Item Notification. Details	Not Available	
	isReload			Request For Catalogue Item Notification. Reload. Indicator	The Boolean value within the request for notification process (True = currently on the notification list and False = initial Load).	1..1
		None	CatalogueItemSubscription	Request For Catalogue Item Notification. Inheritance. Association. Catalogue Item Subscription	n.a.	1..1

1.9.2.9 EANUCC Response

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
EANUCCResponse				EANUCC_Response. Details	None	
	receiver			EANUCC_	Not Available	1..1

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				Response. Receiver_ Party Identifi- cation. GLN_ Identi- fier		
	responseStatus			EANUCC_ Response. Response Status_ Status. Code	The 3 states are: Ac- cepted, Modified, Re- jected	1..1
	sender			EANUCC_ Response. Sender_ Party Identifi- cation. GLN_ Identi- fier	Not Available	1..1
		documentReceived	EntityIdentification	EANUCC_ Response. Document Received_ Association. Entity Identi- fication	Not Available	1..1
EntityIdentification				Entity Identi- fication. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identi- fication. Identification. Identifier	Not Available	1..1
		contentOwner	PartyIdentification	Entity Identi- fication.	Not Available	1..1

				Content Owner. Party Identification		
--	--	--	--	---	--	--

1.9.2.10 GDSN Exception

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
AttributeEx-ception				Attribute_ Message Level. Details		
	attributeName			Attribute_ Message Level. Attribute_ Name. Text		1..1
	attributeValue			Attribute_ Message Level. Attribute_ Value. Text		1..1
	xPath			Attribute_ Message Level. XPath_ Text. Text		0..1
		None	GDSNError	Attribute_ Message Level. Association. Global Data Syn- chronization Network_ Error Message Line	None	0..*
CommandEx-ception				Command_ Message Level. Details		
		None	DocumentEx-ception	Command_ Message Level. Association. Document_ Mes- sage Level	None	0..*
		None	EntityIdentifica- tion	Command_ Message Level. Association. Entity Identifica- tion	None	1..1
		None	GDSNError	Command_ Message Level. Association. Global Data Syn- chronization Network_ Error Message Line	None	0..*
DocumentEx-				Document_ Message Level.		

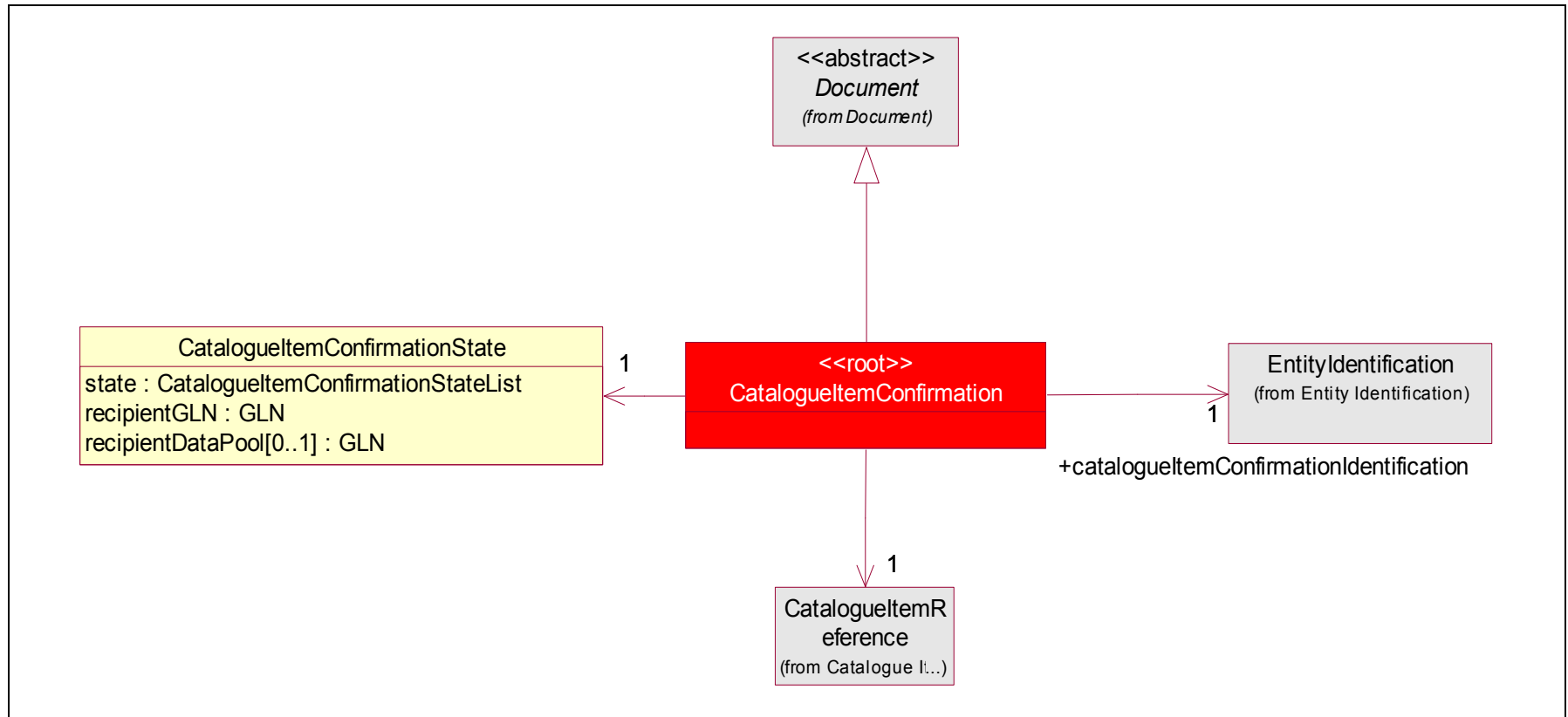
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ception				Details		
		None	AttributeException	Document_ Message Level. Association. Attribute_ Message Level	None	0..*
		None	EntityIdentification	Document_ Message Level. Association. Entity Identification	None	1..1
		None	GDSNError	Document_ Message Level. Association. Global Data Synchronization Network_ Error Message Line	None	0..*
GDSNError				Global Data Synchronization Network_ Error Message Line. Details		
	errorCode			Global Data Synchronization Network_ Error Message Line. Error_ Identification. Identifier		1..1
	errorDateTime			Global Data Synchronization Network_ Error Message Line. Date Time. Date Time		1..1
	errorDescription			Global Data Synchronization Network_ Error Message Line. Description. Text		1..1
GDSNException				Global Data Synchronization Network_ Error Message. Details		
	receiver			Global Data Synchronization Network_ Error Message. Receiver_ Party. GLN_ Identifier		1..1
	sender			Global Data Synchronization Network_ Error Message. Sender_ Party. GLN_ Identifier		1..1
		originating-	EntityIdentification	Global Data Synchronization	None	1..1

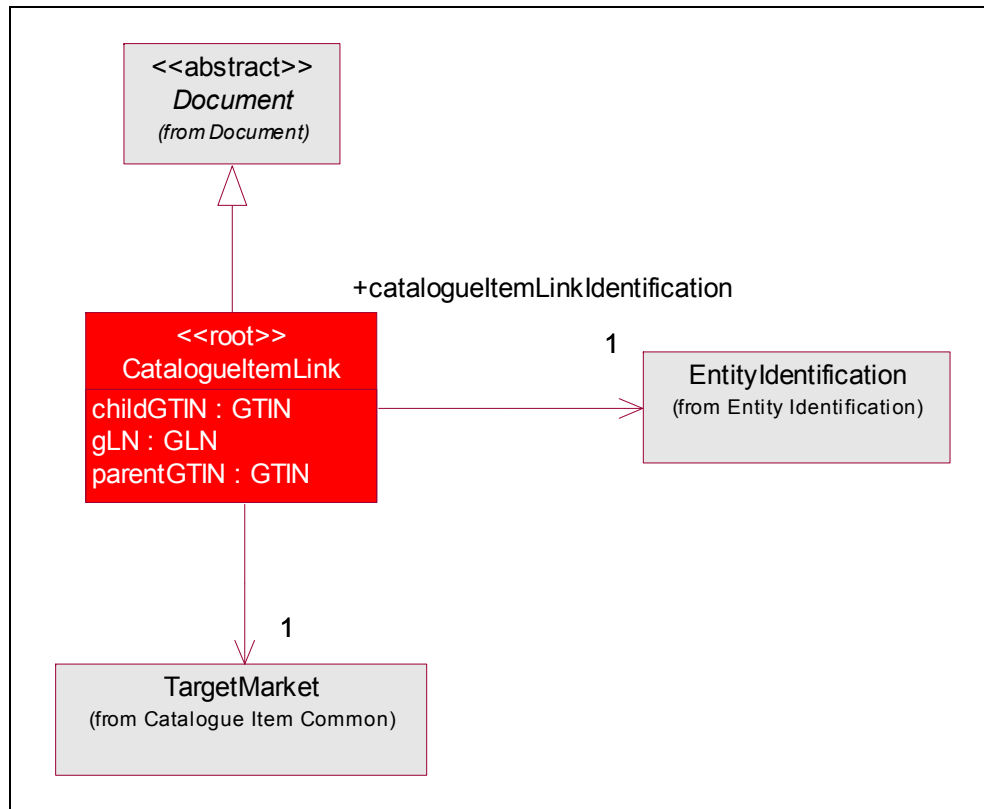
		MessageIdentifier	tion	Network_ Error Message. Originating_ Document Identification. Entity Identification		
		None	MessageException	Global Data Synchronization Network_ Error Message. Choice_ Association. Message_ Message Level	None	1..1
		None	TransactionException	Global Data Synchronization Network_ Error Message. Choice_ Association. Transaction_ Message Level	None	1..1
MessageException				Message_ Message Level. Details		
		None	GDSNError	Message_ Message Level. Association. Global Data Synchronization Network_ Error Message Line	None	1..*
TransactionException				Transaction_ Message Level. Details		
		None	CommandException	Transaction_ Message Level. Association. Command_ Message Level	None	0..*
		None	EntityIdentification	Transaction_ Message Level. Association. Entity Identification	None	1..1
		None	GDSNError	Transaction_ Message Level. Association. Global Data Synchronization Network_ Error Message Line	None	0..*

1.9.3 Class Diagrams

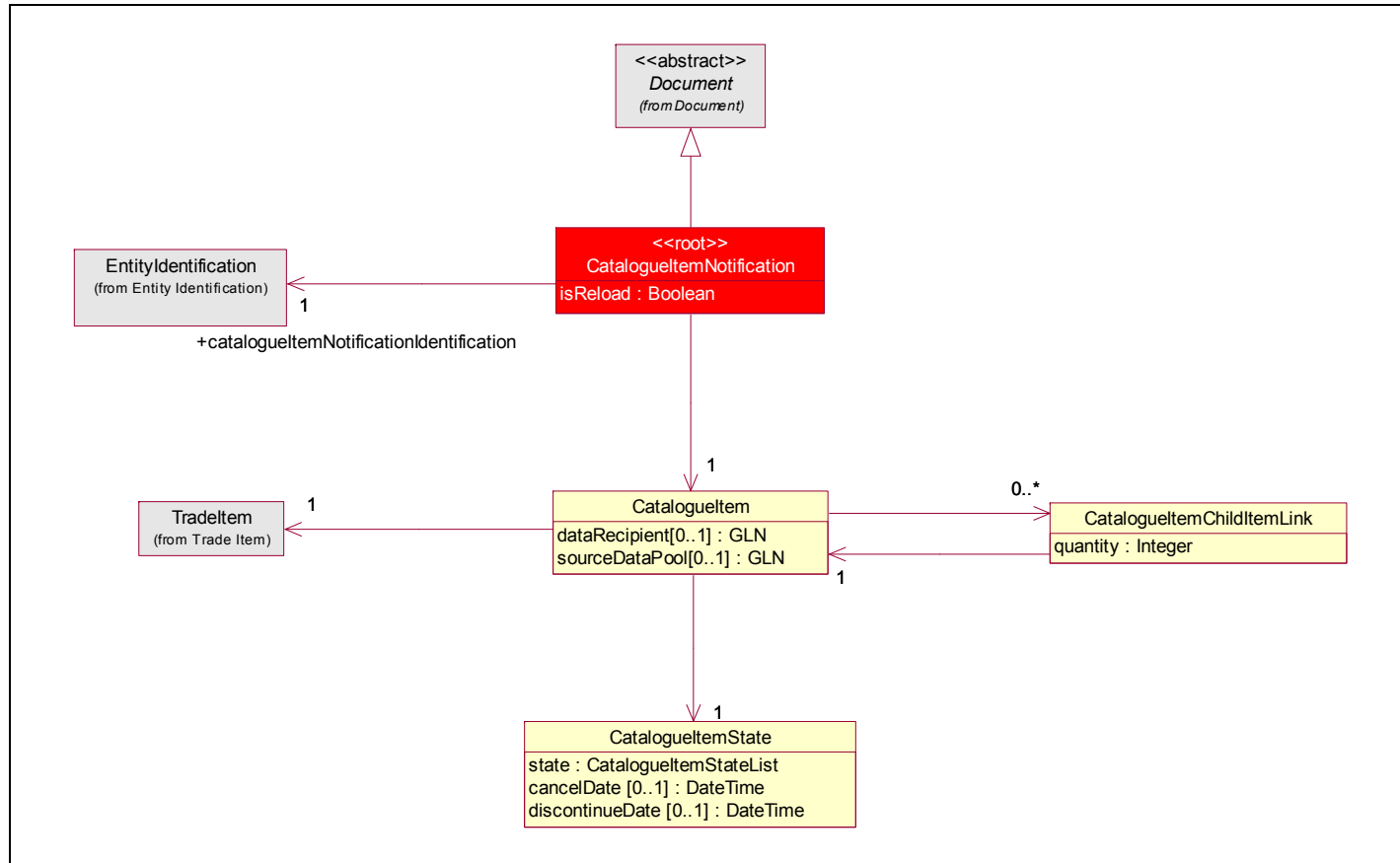
1.9.3.1 Catalogue Item Confirmation



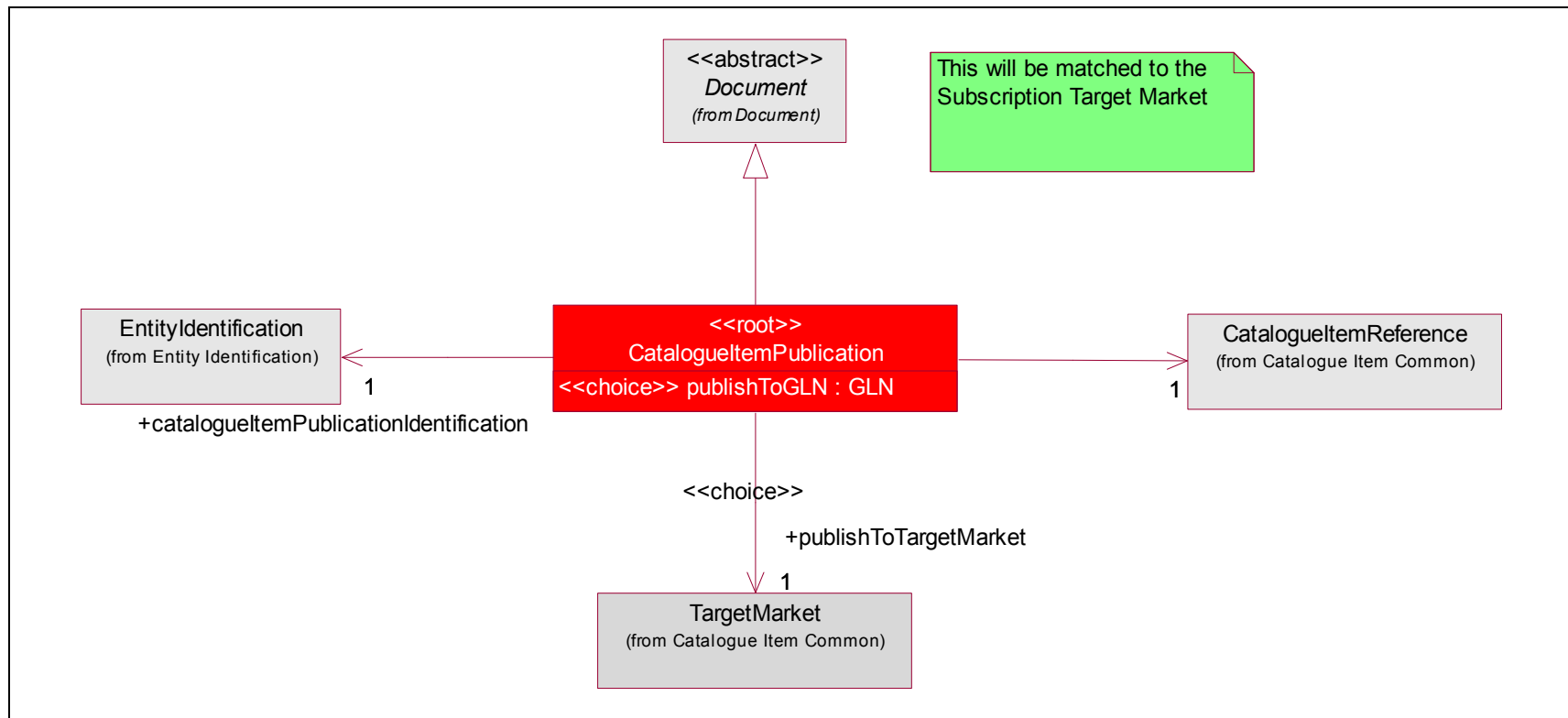
1.9.3.2 Catalogue Item Link



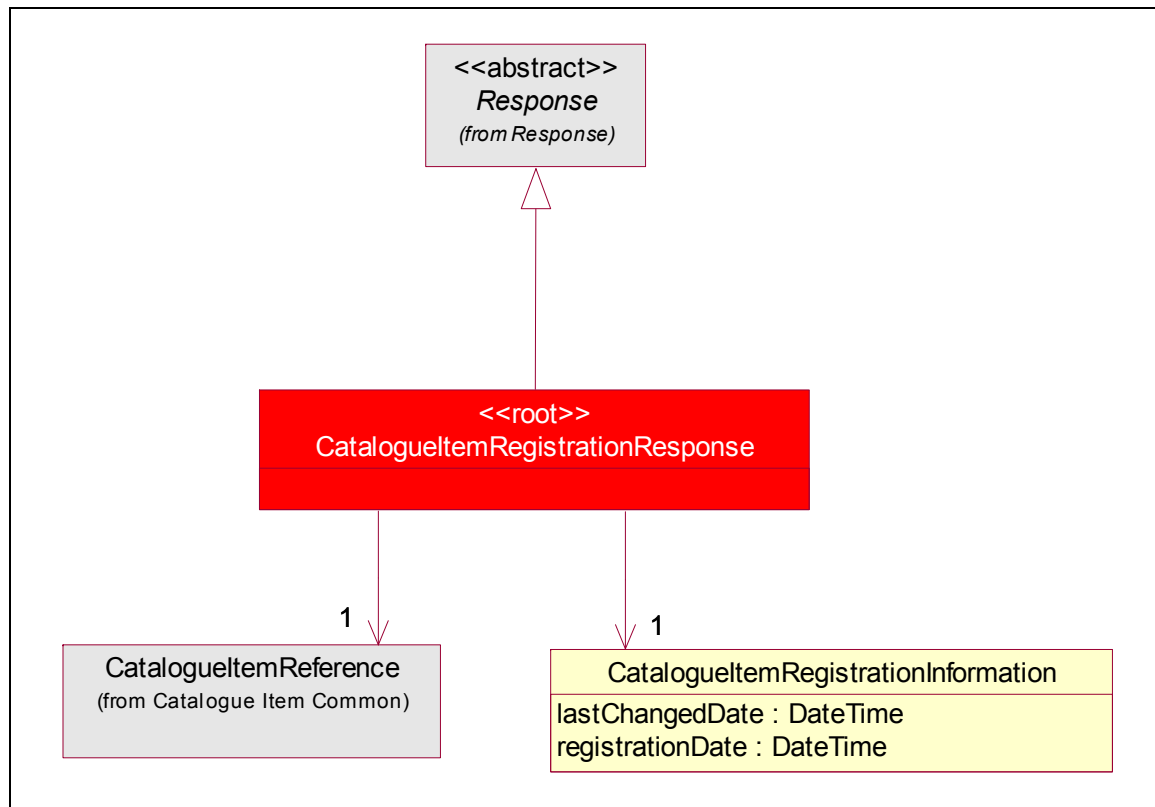
1.9.3.3 Catalogue Item Notification



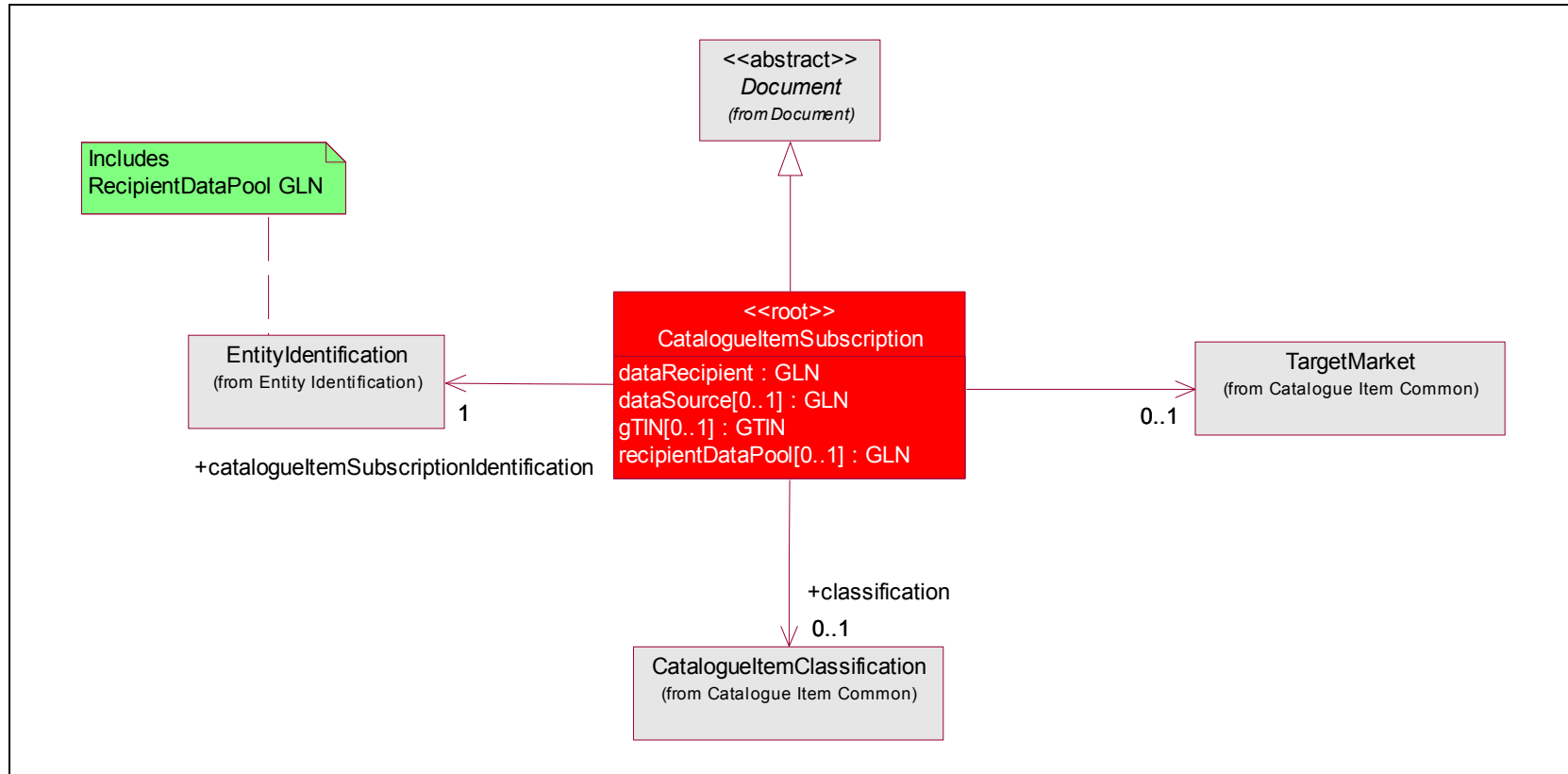
1.9.3.4 Catalogue Item Publication



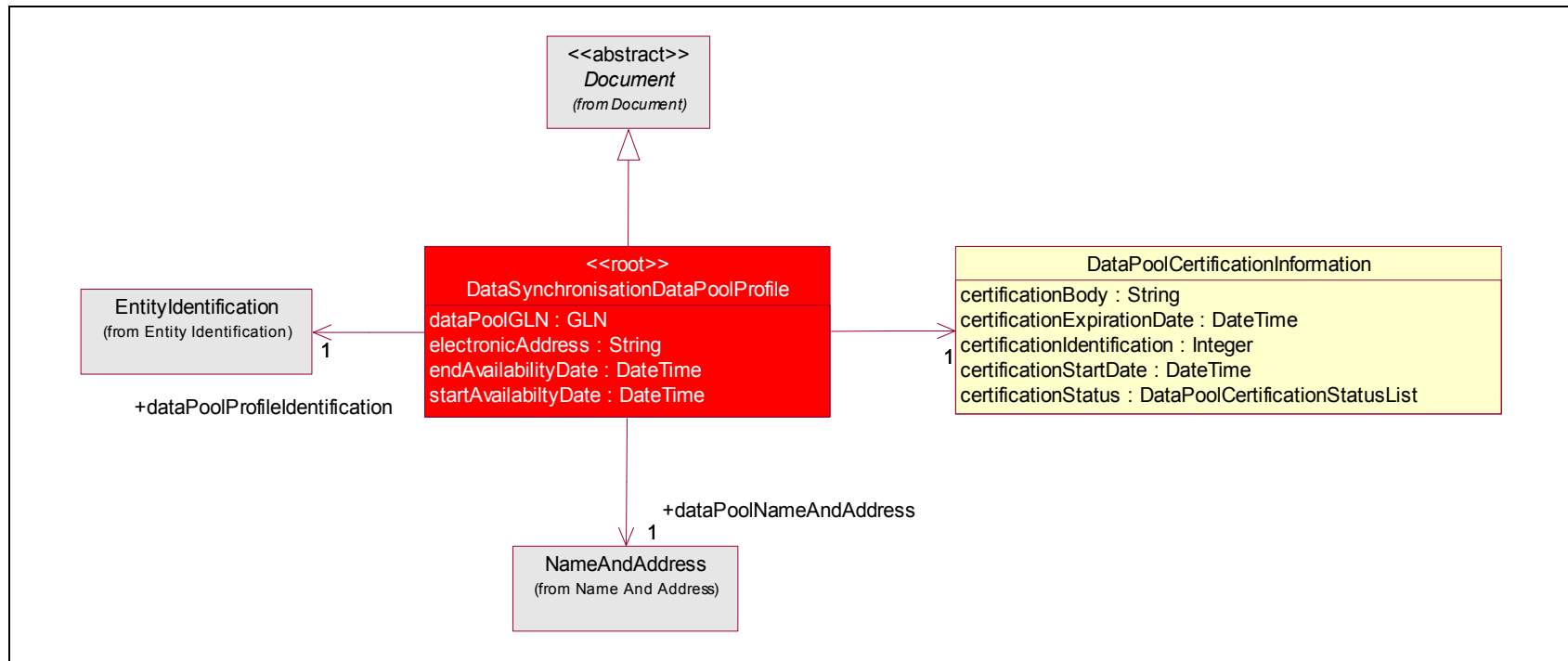
1.9.3.5 Catalogue Item Registration Response



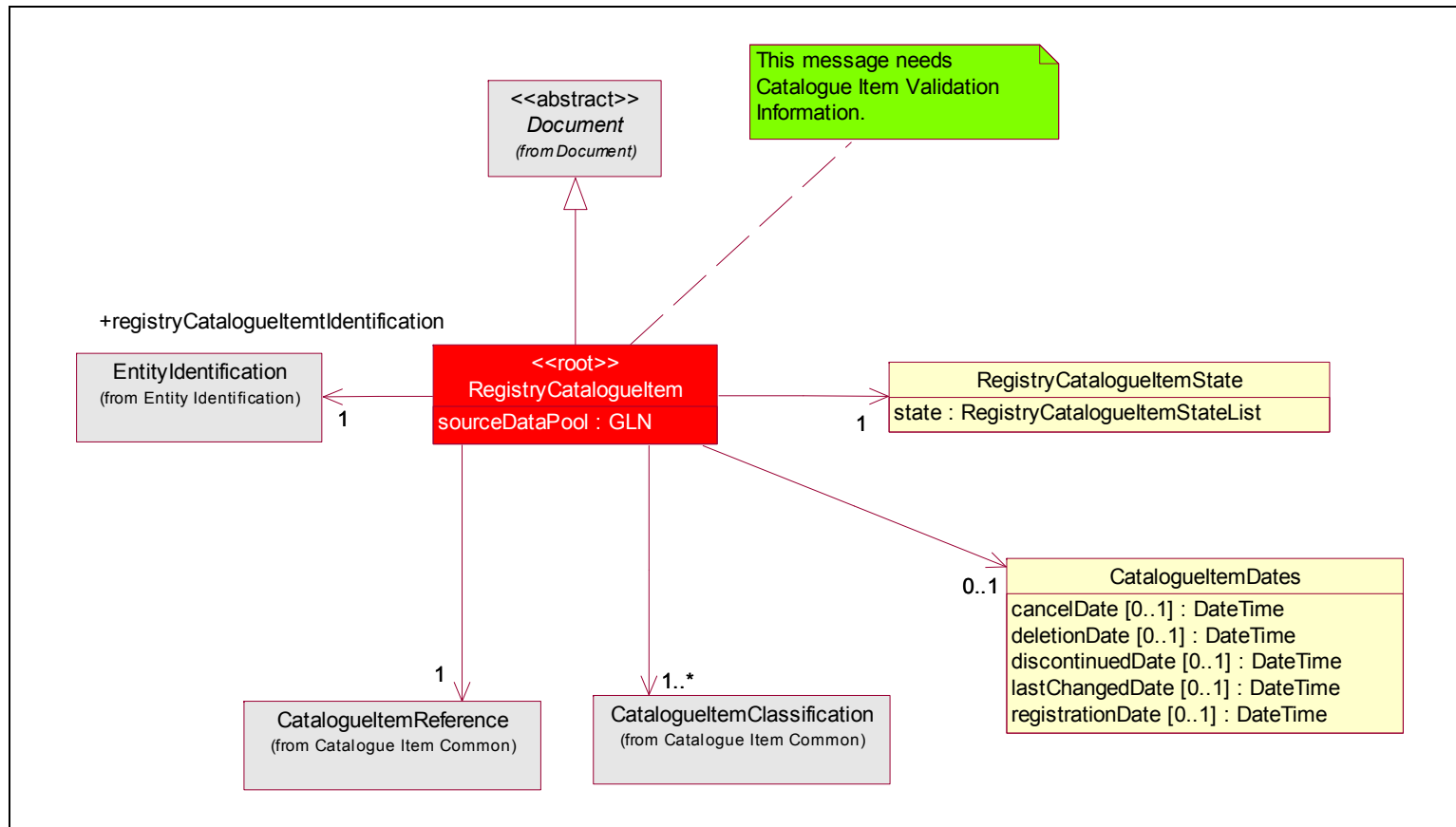
1.9.3.6 Catalogue Item Subscription



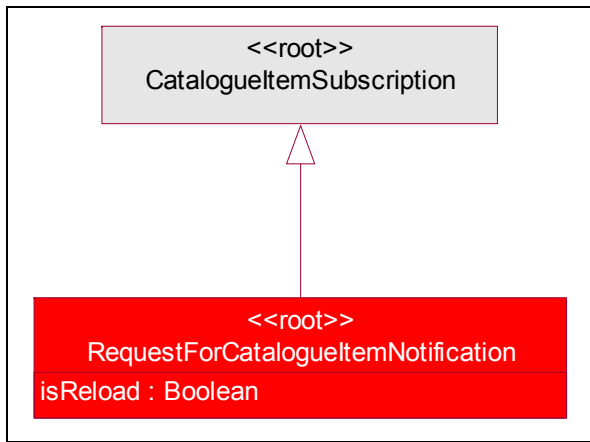
1.9.3.7 Data Synchronization Data Pool Profile



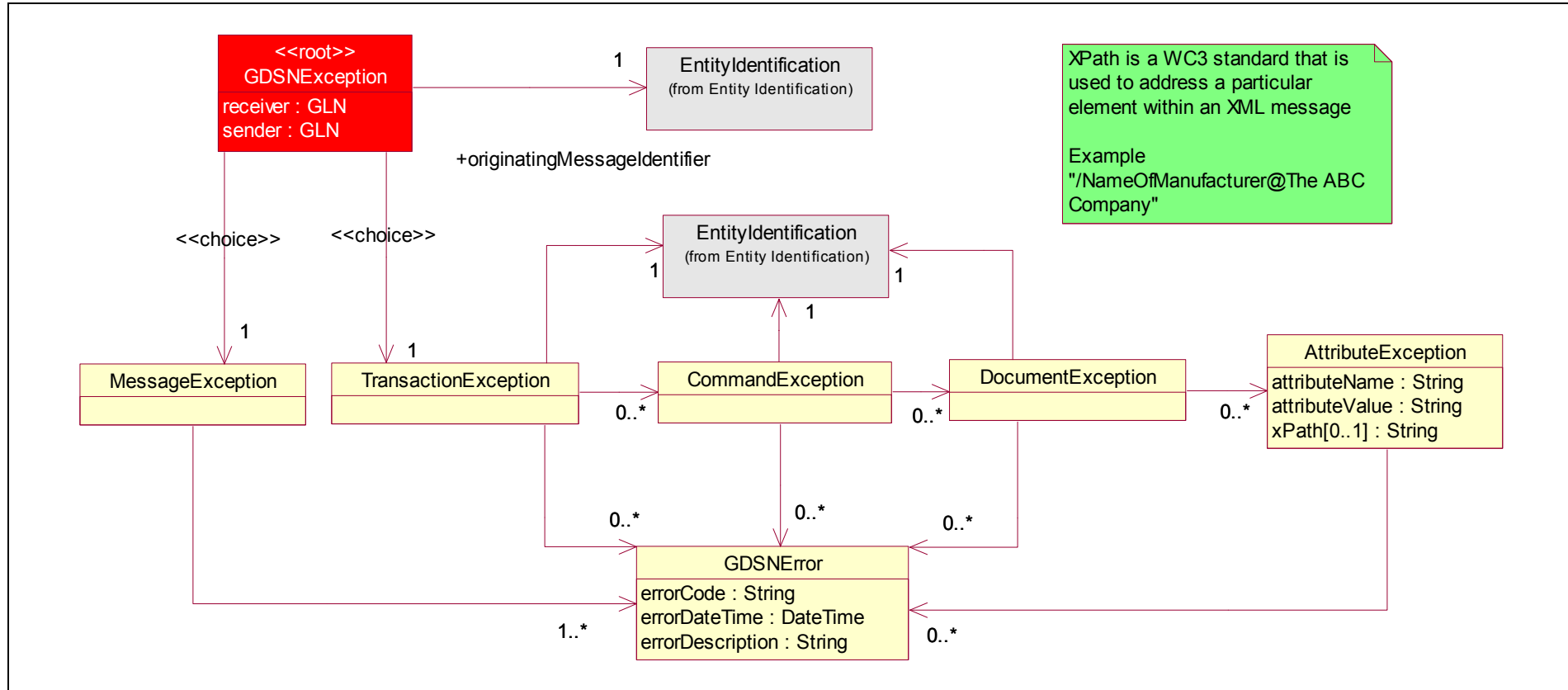
1.9.3.8 Registry Catalogue Item



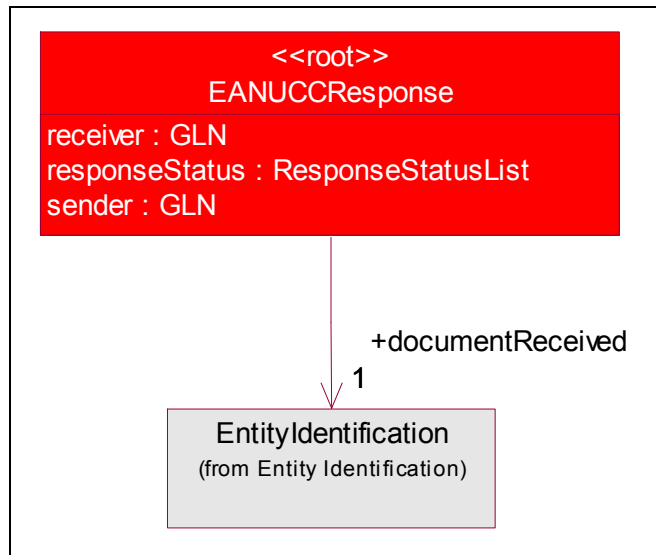
1.9.3.9 Request for Catalogue Item Notification



1.9.3.10 GDSN Exception



1.9.3.11 EANUCC Response



1.9.4 Code Lists

Code List Name	Code List Description
Catalogue Confirmation State List	
Code Name	Code Description
ACCEPTED	N/A
REJECTED	N/A
REVIEW	N/A
SYNCHRONISED	N/A

Code List Name	Code List Description
Catalogue Item State List	
Code Name	Code Description
CANCELED	N/A
DISCONTINUED	N/A
IN_PROGRESS	N/A
REGISTERED	N/A

Code List Name	Code List Description
Registry Catalogue Item State List	
Code Name	Code Description
CANCELED	N/A
DISCONTINUED	N/A
IN_PROGRESS	N/A
REGISTERED	N/A

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Code List Name	Code List Description
Response Status List	
Code Name	Code Description
ACCEPTED	N/A
MODIFIED	N/A
REJECTED	N/A

Code List Name	Code List Description
DataPoolCertificationStatus-List	
Code Name	Code Description
CERTIFICATION_INITIATED	N/A
CERTIFICATION_PENDING	N/A
CERTIFIED	N/A
REVIEWED_FOR_CERTIFICATION	N/A

1.10 Business Document Example

1.11 Implementation Considerations

1.11.1 Implementation Notes

Relationships to TradeltemIdentification:

- GlobalTradeltemNumber is always used in the Catalogue Item Synchronization process.
- AlternateTradeltemIdentification is never used in the Catalogue Item Synchronization process.

Relationship between TradeltemInformation and TargetMarketInformation:

- Cardinality is always 1 (not 0..n as in the diagram). This means that Tradeltem information must be sent for each Target Market separately.

cancelDate:

- The cancelDate within the Tradeltem refers to the date that the Tradeltem owner has cancelled the Tradeltem.
- The cancelDate within the Catalogue Item (Class: CatalogueltemDates) refers to the date that the Data Source has cancelled the Catalogue Item. In this event, the Trade Item may still be manufactured and offered for sale within other Target Markets or by other sources.

discontinuedDate:

- The discontinuedDate within the Tradeltem refers to the date that the Tradeltem owner has discontinued the Tradeltem.
- The discontinuedDate within the Catalogue Item (Class: CatalogueltemDates) refers to the date that the Data Source has discontinued the Catalogue Item. In this event, the Trade Item may still be manufactured and offered for sale within other Target Markets or by other sources.

Item Containment within the Trade Item:

- At this writing, the Trade Item model includes only one level down (one level of children) per parent Trade Item. Requirement #28 states that "The updated hierarchy always fully replaces the current hierarchy." As such, the Containment that is modelled in the Trade Item message is not used in the Catalogue Item Synchronization Process. Catalogue Item Hierarchy is communicated via the "CatalogueltemChildLink" class in the "CatalogueltemNotification" message.

1.11.2 Definitions & Principles

1.11.2.1 Single Data Source Principle

- there can only be one official source of the data – the one that is registered
- this source is identified by the data owner
- this is the only valid source for data synchronization and related processes

Although the notification process will physically move the data from one data pool to another, this data should not be stored permanently for the purpose of synchronization with any other user than the initial subscriber.

If stored, access should be limited to the initial data recipient.

1.11.2.2 Catalogue Item Identification

In the synchronization process,

- a Catalogue Item is uniquely identified by GTIN + GLN + TM
- a ItemLink is uniquely identified by the Parent Item Key + Child Item Key + quantity contained

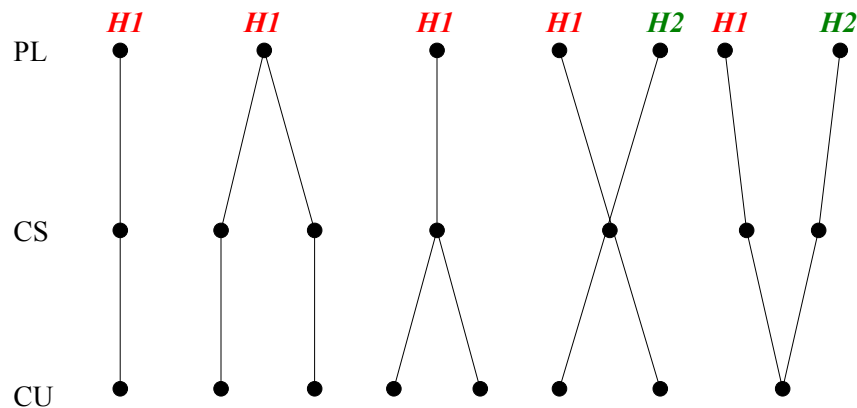
1.11.2.3 Full Hierarchies

All Catalogue Item messages communicated by full hierarchy. In other words, all communication at the highest level of the hierarchy. This begins with publication messages, and follows with all distribution messages and then all response messages.

1.11.3 Definition

Construct of data containing a set of GTIN's and links that make up a unique relationship from the highest level GTIN with no parent down to the lowest level GTIN(s) with no children.

Full Hierarchy Examples



1.11.4 Data Loading Business Cases

1.11.4.1 Overview

A data source sends a full data set (Catalogue Item Hierarchy) to its source data pool. The data loaded can be published only after validation by the data pool and registration in the Global Registry. This function covers:

Add new Catalogue Item Hierarchy

Correct mistakes: changes to an existing Catalogue Item Record to correct errors

Change of information to reflect changes in the original object

Delete obsolete Catalogue Item Hierarchy in this function the related data records are flagged as inactive but not physically deleted from the data pool. Data cleansing and data archiving mechanisms have to be implemented in data pools and Global Registry. The source data pool is the unique reference point for registered GTIN's, even if the data is not physically stored there.

1.11.4.2 New Catalogue Item Hierarchy

To create a new Catalogue Item Hierarchy, the Data Source enters a full Catalogue Item Hierarchy (Catalogue Item and ItemLink data) into the Source Data Pool.

The data pool verifies that the information loaded is "correct", i.e. expected and complete and then sends the relevant Catalogue Item data to the registry for registration.

ItemLink data is not sent to the Registry as ItemLinks do not need to be registered

Example :

Command :Add

Payload :Catalogue Item Data

Catalogue Item1 (CU)

Catalogue Item2 (CS)

Catalogue Item3 (PL)

ItemLink Data

ItemLink 1 (2 →1)

ItemLink 2 (3→ 2)

The validation of the data is a 2-step process:

1. Data Pool Validation is the compliance checking of new or changed data versus EAN.UCC Global Data Standards, principles and rules, including:

EAN.UCC Item and Party data model validation

Syntax checks (field formats...)

Consistency checks (pick lists, authorized values...)

Legal checks (local data requirements...)

Quality checks (measurements, hierarchy representation...)

This will be handled through a validation engine.

EAN.UCC standards used for validation are stored centrally (could be in the registry)

2. Registry Validation is the checking compliance with basic EAN.UCC standards related to the format of a GTIN/GLN and ensuring the uniqueness of the data that is being registered.

In summary:

- EAN.UCC standards validation for GTIN and GLN format
- Uniqueness validation for Catalogue Item (GTIN/GLN/TM), Party (GLN) or data pool (GLN) – only applies to the occurrence of the key, not to the uniqueness of the information related to it.

Registration is the process, which references all Catalogue Items and parties published in all certified data pools and on which there is a need to synchronize / retrieve information. This is supported by data storage in accordance with the Registry data scope and rules.

Registering a Trade Item involves a check by the Registry for uniqueness. The Trade Item is identified by the following elements: GTIN, GLN, Target Market. Each combination of this key data found in the Registry must be unique.

1.11.4.3 Change Catalogue Item Hierarchy

To make changes to a Catalogue Item Hierarchy already existing in a data pool, whether the Catalogue Items have been registered or not.

Changes have to comply with validation rules.

If the Catalogue Items in the Hierarchy were registered, updates impacting the Registry data must be reflected in the Registry.

Registration of Catalogue Item changes only needs to happen for changes that :

- Impact fields stored in the registry

- Are authorized according to the GTIN allocation rules

Validation is done against existing data, applying GDD standard and GTIN Allocation rules.

The change function implies a full replacement of all attributes of the previously created Catalogue Item – this will be reflected in the subsequent notification, including a full refresh of the changed record.

The ability to provide incremental updates is :

- optional – not required for data pool certification

- functionality provided between the recipient's data pool and its users

1.11.4.4 Correct Catalogue Item Hierarchy

Correction is the update of data in ways that would not be allowed by the standard GTIN allocation rules (i.e. changes that would otherwise require the allocation of a new GTIN).

All other validations (i.e. syntax, consistency, legal compliancy) still apply.

Correction will trigger a different process at the data recipient's end.

This process is intended to correct errors, not to circumvent the validation process as part of a standard data update.

Incorrect core data (i.e. attributes that cannot be updated according to allocation rules) can only be updated through a specific correction functionality.

This functionality will:

- trigger syntactical and content validation
- skip GTIN allocation rules validation
- set a flag on the GTIN data record to inform the data recipient of the correction (see data distribution / notification)
- the correction will also be reflected in the registry if it impacts registry data

According to GTIN allocation rules, ItemLinks can never be updated, as they reflect the relationship between 2 GTIN's. There is, however, a need for a process to correct data that was incorrectly maintained.

The correction will be handled differently depending whether it impacts the integrity of the hierarchy or not :

- if the correction impacts the hierarchy, then it will be handled by deleting the incorrect ItemLink and adding a new Item Link - **Add/Delete Scenario's**
- else, Catalogue Item or ItemLink attributes will be updated through the correction command - **Correction Scenario's**

1.11.4.5 Correction Scenarios

1. Correct Catalogue Item Data Element

Process:

- no impact on logical hierarchy
- update data element with Correct.Catalogue ItemHierarchy

2. Correct ItemLink Data Element

Example:

- ItemLink : QuantityContained
- Catalogue Item : Weight
- current hierarchy :
 - Parent : GTIN1
 - Child : GTIN2
 - Quantity Contained : 10
- correction :
 - Quantity Contained : 12

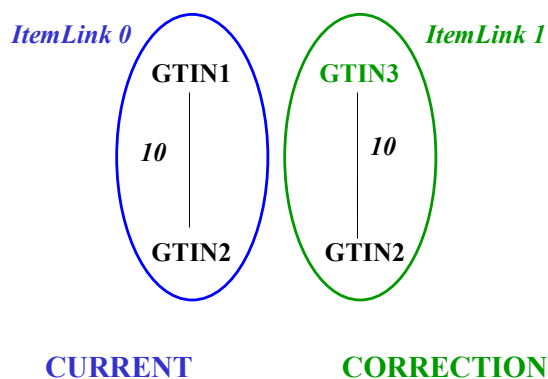
Process:

- no impact on logical hierarchy
- update data element with Correct.ItemHierarchy

1.11.4.6 Add/Delete Scenarios

1. Parent / Child Correction

Example:



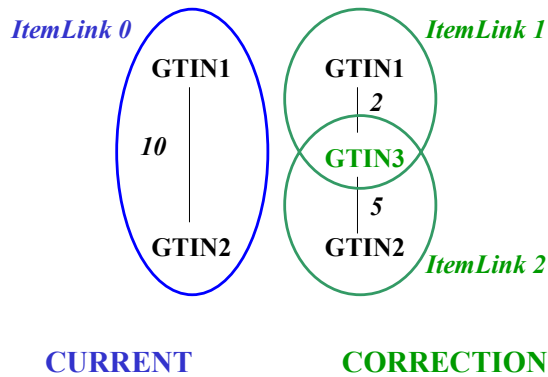
Process:

- Delete.ItemLink0
- Add.GTIN3

- Add.ItemLink1

2. Insert Intermediate layer in existing hierarchy

Example:

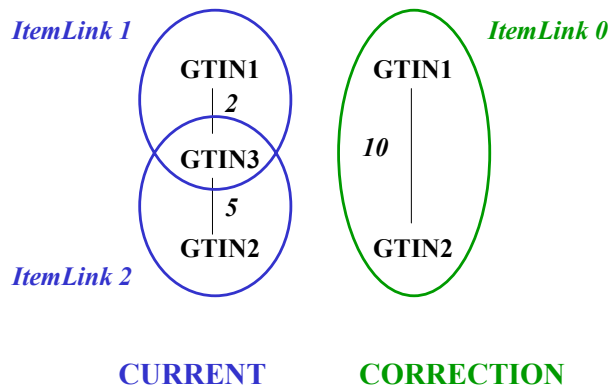


Process:

- Delete.ItemLink 0
- Add.GTIN3
- Add.ItemLink 1
- Add.ItemLink 2

3. Delete Intermediate layer in existing hierarchy

Example:

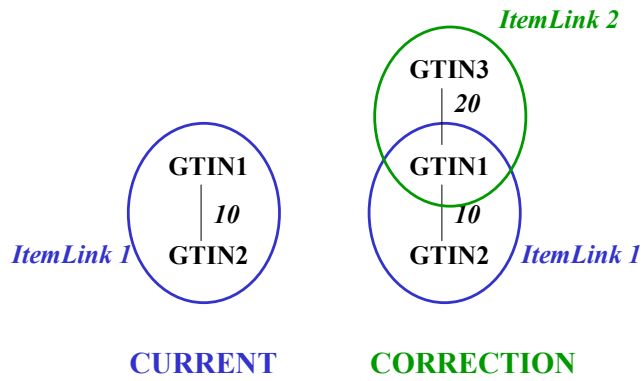


Process:

- Delete ItemLink 1
- Delete ItemLink 2
- Delete GTIN3 if not used anywhere else
- Add ItemLink 0

4. Add new layer on top of existing hierarchy

Example:

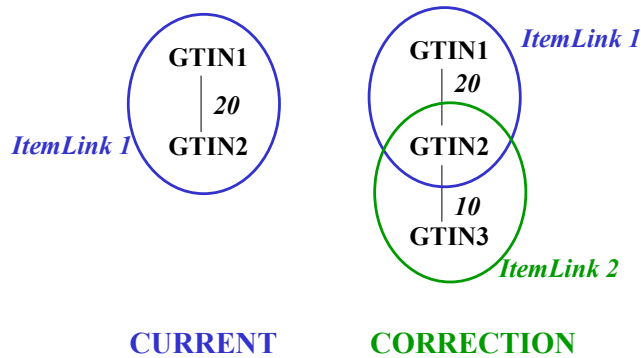


Process:

- Add.Item (GTIN3)
- Add.ItemLink 2

5. Add new layer at bottom of existing hierarchy

Example:



Process:

- update GTIN2 : no longer BU
- Add.Item(GTIN3) – new BU
- Add.ItemLink 2

1.11.4.7 Delete Catalogue Item Hierarchy

The objective of the “Delete” Function is not to physically remove data from the data pool, but to “Flag for deletion”, authorizing the deletion of the data.

The deletion needs to be validated against a number of criteria, e.g. Catalogue Item is no longer published, Catalogue Item discontinued, retention limit (EAN/UCC specifications)...

Rules for archiving or physical deletes will be agreed with the data pools and in the scope of the certification process.

Deletions need to be reflected in the registry (deletion flag + effective change date = deletion date in the registry)

Comments:

To protect data integrity within the data pool, the deletion of a child can only occur after the deletion of the parents. Validation for deleted Catalogue Items ensures the parents have been deleted before the deletion of the child is performed.

Deletion of a Catalogue Item must trigger the invalidation of any hierarchy links involving that Catalogue Item, whether that Catalogue Item is the parent or the child in the link. This is completed by the Refresh.ItemLink message. Ackn.ItemLink will be repeated for every link that was refreshed or invalidated.

Deletion needs to be validated against:

- Publication status

- Availability Status (end availability + discontinued Y/N)

- Hierarchy: parents have to be deleted before children

the discontinuation dates starts the standard retention period depending on the sector as soon as GTIN has been discontinued in ALL target markets where it was active (needs to be stored in the registry)

A deletion cannot be corrected – only the discontinuation can be reversed.

Deletes are not synchronized across data pools

ItemLinks can only be deleted:

- as the correction of an error
- as the result of a delete.Item

The ItemLink validity in time is defined by the validity of the Parent Item and Child Item. When either parent or child expire, the related ItemLink(s) have to expire as well.

When a parent or child is deleted:

- the links pointing down must be deleted
- the links above must be deleted
- all Catalogue Items above must be deleted

Whether that happens automatically or not is a matter of implementation.

The deletion of an Catalogue Item Hierarchy will trigger the clean up of the synchronization list.

1.11.4.8 Removing and restoring a Catalogue Item from the supply chain

3 business cases:

1. Catalogue Item was never manufactured: Cancel Catalogue Item
2. Catalogue Item is temporarily removed from the supply chain
3. Catalogue Item is permanently removed from the supply chain

1.11.4.9 Cancel Catalogue Item

Communicates a trade item was never manufactured – this allows the reuse of the GTIN 12 months after cancellation i.o. 48

This is achieved through the maintenance (using change function) of the cancel date

Next steps:

- need cancel date in Catalogue Item data model
- cancel date needs to be included in the registry

Temporarily

Communicate that product is no longer available: maintain end availability date

When product is available again: update start/end availability date

Permanently

Communicate the product is no longer going to be manufactured: discontinued = Y + effective change date = discontinued date in the registry.

Communicate the product is no longer going to be available: maintain end availability date.

The maintenance of the discontinued date will start the retention period for the GTIN in the Registry.

As a GTIN can be active in several Target Markets at the same time, it does not have to be discontinued in all Target Markets at the same time. This implies that the retention period for a given GTIN can only start after that GTIN has been discontinued in all Target Markets.

The Registry will need to provide information to the GTIN owner about the actual start of the retention period.

If a Catalogue Item was previously discontinued, it can only be re-introduced through a correction.

If a public Catalogue Item is discontinued, it is discontinued for the entire market. It has no effect on the synchronization list, the recipients will be notified of the change in Catalogue Item data.

The synchronization list will only be cleaned up after the data source requests the deletion of the Catalogue Item.

1.11.5 Data Distribution Business Cases

1.11.5.1 Overview

Data Distribution refers to the movement of data to the correct destination according to defined criteria.

It also includes the ongoing maintenance of these criteria..

This function includes:

- the creation and synchronization of subscriptions
- the maintenance of publication
- the notification of data based on a publication/subscription matching process

1.11.5.2 Create and Synchronize Subscriptions

A Data Recipient requests that it receive a “notification” when a specific event occurs that meets the Recipients criteria (selective on sources, categories, etc).

This is subject to the recipient’s access to information as controlled by the data source through its source data pool.

A subscription can be maintained on following levels :

- GTIN
- GLN of data owner
- Target Market
- Classification

Or any combination of these 4 elements.

With the set up of a subscription, a Data Recipient sets a profile to receive ongoing updates of the matching data (including all hierarchies, independently from the level subscribed on).

Subscriptions remain valid until they are deleted.

Subscriptions are created by data recipients in their home data pool and sent to the registry.

The Registry will then disseminate relevant subscriptions to appropriate Home Data Pools (current and future new data pools)

A new data pool will get their relevant subscriptions as soon as they start registering their GTIN's

1.11.5.3 Subscription Scenario

Data recipient maintains subscription

Data recipient will continue to receive updates until he rejects the data

For a synchronization list / subscription, the reject will remove that GTIN from the synchronization list

Reject is optional : in the absence of authorization & reject, the data recipient would still receive updates

Authorized GTIN :

- subscription : go to synchronization list

- *synchronization list : no action required

Only new products matching the initial subscription will be distributed to avoid resending data that was previously rejected

Updates for authorized products will be distributed based on the synchronization list

Confirmation (accept or synchronized) will indicate the data recipient's commitment to synchronize the data in its internal systems

Filtering out rejected data is a source data pool responsibility

1.11.5.4 Subscription & Synchronization List

Subscription: for every matching GTIN, independently from its level, all hierarchies will be returned

Synchronization list:

- Includes every GTIN id (GTIN+GLN+TM) that needs to be synchronized
- Can be a result of the Confirmation process
 - o All GTIN's equal or lower in the hierarchy than the GTIN confirmed will be returned
 - o Only these GTIN's will be returned

Rejections are done at the highest level of the hierarchy and will result in a rejection of the entire hierarchy.

Relationship dependent data will only be communicated for GTIN's that are on the Synchronization List.

Synchronization List is only synchronized between the involved source and recipient data pools for applicable data: synchronization list is built based on confirmation received by a source data pool and nothing else.

The synchronization list is a subset of the notification list maintained by the source data pool, keeping track of where data has been notified, independently from the received confirmations.

The data recipient needs to be notified if the synchronization list is being modified by the data source.

That can only happen if a Catalogue Item is deleted or if publication of a given ItemHierarchy is stopped.

1.11.5.5 Subscription Matching Process

The subscription matching process takes place in the registry.

The objective is to compare subscription data with registry data to only distribute subscriptions to data pools matching the criteria.

!!! Watch Out !!!

This does not include synchronization lists – these are only synchronized between the recipient and source data pool as they are the result of the synchronization process.

1.11.5.6 Common Data

A subscription can be maintained on any combination of 4 elements:

- GTIN
- GLN of Data Source a.k.a. Data Owner
- Target Market
- Lowest level EAN.UCC Classification

GTIN and Lowest level of EAN.UCC classification are mutually exclusive subscription criteria as the Classification is uniquely defined for a given GTIN, independently from the GLN and from the TM

These 4 elements are also stored in the registry, and are linked to the source data pool(s) where the data can be found.

For instance, if given a GTIN, the registry will be able to return all the data pools where data can be found on that GTIN, independently from the GLN of the data owner, the Target Market or the classification.

The business cases for the registry matching process are organized in 2 axes :

- how to determine where the subscriptions have to be distributed –“where to”
- when are subscriptions being distributed “ when”

1.11.5.7 “Where To” Business Cases

The following combinations of criteria can define the list of data pools where the subscription data needs to be sent.

GTIN	GLN Of Data Source	TM	Category	Relevant Source Data Pools	Example
X	X	X		0-1	GTIN1 by Kraft in UK0 : GTIN+GLN+TM does not exist in the registry 1 : source data pool for GTIN+Kraft+UK
X	X			0-N	GTIN1 by Kraft → Target Market(s) 0 : GTIN1+Kraft+** does not exist in the registry N : 1<=N<=X where X is the number of TM variants for GTIN1+Kraft

GTIN	GLN Of Data Source	TM	Category	Relevant Source Data Pools	Example
X		X		0-N	GTIN1 in UK → Data Sources (s) 0 : GTIN1 + *** + UK does not exist in the registry N : 1 ≤ N ≤ X where X is the number of GLN variants for GTIN1+UK
	X	X	X	0-N	Kraft in UK for Category “Snacks” → GTIN(s) 0 : ****+Kraft+UK, “Snacks” does not exist in the registry N : 1 ≤ N ≤ X where X is the number of GTIN variants for Kraft+UK with category “Snacks”
	X	X		0-N	Kraft in UK → GTIN(s) 0 : ****+Kraft+UK does not exist in the registry N : 1 ≤ N ≤ X where X is the number of GTIN variants for Kraft+UK
	X		X	0-N	Kraft for Category “Snacks” → GTIN(s) per TM(s) 0 : ****+Kraft+**, Snacks does not exist in the registry N : 1 ≤ N ≤ X where X is the number of GTIN+TM variants for Kraft, Snacks
		X	X	0-N	UK for Category “Snacks” → GTIN(s) per GLN(s) 0 : ****+***+UK, Snacks does not exist in the registry N : 1 ≤ N ≤ X where X is the number of GTIN+GLN variants for UK, Snacks
X				0-N	GTIN1 → GLN(s) per TM(s) 0 : GTIN1+***+** does not exist in the registry N : 1 ≤ N ≤ X where X is the number of GLN+TM variants for GTIN1
	X			0-N	Kraft → GTIN(s) per TM(s) 0 : ****+Kraft+** does not exist in the registry N : 1 ≤ N ≤ X where X is the number of GTIN+TM variants for Kraft
		X		0-N	UK → GTIN(s) per GLN(s) 0 : ****+***+UK does not exist in the registry N : 1 ≤ N ≤ X where X is the number of GTIN+GLN variants for UK

GTIN	GLN Of Data Source	TM	Category	Relevant Source Data Pools	Example
			X	0-N	Snacks → GTIN(s) per GLN(s) per TM(s) 0 : ****+***+** does not exist in the registry for category “Snacks” N : 1<=N<=X where is the number of GTIN+GLN+TM with Category = “Snacks”

** - wildcard for TM

*** - wildcard for GLN

**** - wildcard for GTIN

1.11.5.8 “When” Business Cases

The distribution of subscriptions is either a scheduled event or is triggered by another event.

The events that can trigger the distribution of a subscription are:

- new/updated registration : check existing subscriptions, if new data pools are found : distribute subscriptions
- new subscription : check existing registrations, if new data pools are found, distribute subscriptions
- delete subscriptions : distribute “delete” to source data pools where subscription had been sent

Remark:

Subscriptions cannot be updated, they are created or deleted

This assumes subscriptions are stored in the recipient’s data pool

1.11.5.9 Impact on Registry Requirements

- for every subscription, store to which data pool the data has been sent and when
- ability to identify new or updated registered Catalogue Items that match a subscription and forward the subscription to the source data pool
- match new subscriptions with registered Catalogue Items and forward the subscription to the source data pool

1.11.5.10 Create Publication

Maintaining a publication is granting visibility and access to data.

Publications are initiated by the data source in the source data pool, they do not need to be synchronized in the GDSN

The Target Market where product is available is communicated in the product key (GTIN+GLN+TM) – this can be different from the Target Market for publication.

Data is either published:

- to a Target Market : any GLN in the Target Market has access to the data (only applies to “public” Items)

- to specific GLN's : only these GLN's have access to the data (only applies to "private" Items)

The purpose of the public/private flag is to provide information to the parties involved on the status of the Catalogue Item.

1.11.5.11 Notification based on Publication/Subscription

Notification is the result of a successful matching process.

Events that can trigger a notification are :

- new or updated publication
- change of published data
- change of owner/rights
- subscription
- synchronization list update
- request for notification

The matching process is owned and developed by each source data pool in order to trigger data distribution based on publication and subscription data. The implementation of a matching process is a pre-requisite for data pool certification.

The matching process can be triggered either by publication, subscription or as a scheduled event. It is valid for all subscription types (including synchronization list) and all publication types.

For a given subscription :

- the matching process identifies Catalogue Items published to the GLN or TM of the subscription owner
- for each Catalogue Item, a notification is created including all dependent hierarchies.
- If the subscription is a synchronization list, the hierarchy information included in the notification, will be limited to the GTIN's maintained in the Synchronization List.
- The notification is sent to the home data pool of the data recipient

For a given publication :

- the matching process identifies subscriptions with matching criteria (TM, GLN, category, GTIN...)
- for each matching subscription, a notification is created including all dependent hierarchies
- If the subscription is a synchronization list, the hierarchy information included in the notification, will be limited to the GTIN's maintained in the Synchronization List.
- The notification is sent to the home data pool of the data recipient

1.11.5.12 Publication and Subscription Data

Publication

Who : Data Source = source GLN

What : Catalogue Item record, identified by GTIN+GLN+TM

Additional attributes : Category
Where :TM or GLN (= target GLN)

Subscription

Who :Data recipient = target GLN
What :Any combination of GTIN, GLN, TM and Category

1.11.5.13 Matching Process Scenarios

Subscription	Publication to TM <i>Notification if :</i>	Publication to GLN <i>Notification if :</i>
GTIN+GLN+TM <i>GTIN1 by Kraft in UK</i>	<ul style="list-style-type: none"> published Catalogue Item has same GTIN+ GLN+TM publication TM >= subscription TM 	<ul style="list-style-type: none"> published Catalogue Item has same GTIN+ GLN+TM target GLN = subscriber's GLN
GTIN+GLN <i>GTIN1 by Kraft, all TM</i>	<ul style="list-style-type: none"> published Catalogue Item has same GTIN+ GLN, independently from the TM 	<ul style="list-style-type: none"> published Catalogue Item has same GTIN+ GLN, independently from the TM target GLN = subscriber's GLN
GTIN+TM <i>GTIN1 in UK, all GLNs</i>	<ul style="list-style-type: none"> published Catalogue Item has same GTIN+TM, independently from the GLN publication TM >= subscription TM 	<ul style="list-style-type: none"> published Catalogue Item has same GTIN+TM, independently from the GLN target GLN = subscriber's GLN
GLN+TM+Category <i>Kraft, UK, "Snacks", all GTINs</i>	<ul style="list-style-type: none"> published Catalogue Item has the same GLN+ TM+Category, independently from the GTIN publication TM >= subscription TM 	<ul style="list-style-type: none"> published Catalogue Item has the same GLN+TM+Category, independently from the GTIN target GLN = subscriber's GLN
GLN+TM <i>Kraft, UK, all GTINs</i>	<ul style="list-style-type: none"> published Catalogue Item has the same GLN+ TM, independently from the GTIN publication TM >= subscription TM 	<ul style="list-style-type: none"> published Catalogue Item has the same GLN+ TM, independently from the GTIN target GLN = subscriber's GLN
GLN+Category <i>Kraft, "Snacks", all TMs, all GTINs</i>	<ul style="list-style-type: none"> published Catalogue Item has the same GLN+ Category, independently from the GTIN or TM 	<ul style="list-style-type: none"> published Catalogue Item has the same GLN+ Category, independently from the GTIN or TM target GLN = subscriber's GLN
TM+Category <i>UK, "Snacks", all GLNs, all GTINs</i>	<ul style="list-style-type: none"> published Catalogue Item has the same TM and Category, independently from the GTIN or GLN publication TM >= subscription TM 	<ul style="list-style-type: none"> published Catalogue Item has the same TM and Category, independently from the GTIN or GLN target GLN = subscriber's GLN
GTIN <i>GTIN1, all TMs, all GLNs</i>	<ul style="list-style-type: none"> published Catalogue Item has the same GTIN, independently from the GLN or TM 	<ul style="list-style-type: none"> published Catalogue Item has the same GTIN, independently from the GLN or TM target GLN = subscriber's GLN

GLN <i>Kraft, all GTINs, all TMs</i>	<ul style="list-style-type: none">published Catalogue Item has the same GLN, independently from the GTIN or TM	<ul style="list-style-type: none">published Catalogue Item has the same GLN, independently from the GTIN or TMtarget GLN = subscriber's GLN
TM <i>UK, all GTINs, all GLNs</i>	<ul style="list-style-type: none">published Catalogue Item has the same TM, independently from the GTIN or GLNpublication TM >= subscription TM	<ul style="list-style-type: none">published Catalogue Item has the same TM, independently from the GTIN or GLNtarget GLN = subscriber's GLN
Category <i>"Snacks", all GTINs, all GLNs, all TMs</i>	<ul style="list-style-type: none">published Catalogue Item has the same Category, independently from the GTIN, GLN or TM	<ul style="list-style-type: none">published Catalogue Item has the same Category, independently from the GTIN, GLN or TMtarget GLN = subscriber's GLN

Publication TM does not have to be equal to the GTIN TM.

I.e. I can have a product record defined for TM France, but publishing the data to Belgium only for information purposes.

1.11.5.14 Confirmation of Synchronization

The final recipient communicates with the data source to indicate further action upon the Catalogue Item.

The confirmation process takes place in the data pool of the data recipient.

Confirmation is not mandatory and can provide 4 outcomes:

- Synchronized : data is integrated, in synch and added to the synchronization list
- Accept : Data has been received by the Recipient, but no business decision has been made on the data.
- Reject : data will no longer be synchronized or updates will no longer be provided
- Review : a request to the data source to "review" their data because the data recipient has received discrepant data which they cannot synchronize.

If no confirmation is received, data updates will continue to be provided until the data recipient accepts, rejects or updates the subscription, or until the data owner changes the publication

The list of authorized values for the confirmation message does not imply a sequence in which the message has to be used.

I.e., possible responses for a new Catalogue Item introduction:

- synchronized
- accept + synchronized
- accept
- reject

The same "confirmation" message can be used to stop synchronizing a Catalogue Item. In that case, the "Reject" status will be used to remove the Catalogue Item from the synchronization list.

“Synchronized” status is sent once – parties are assumed to be in synch unless a reject/review status is exchanged.

Note: rejection should not remove data previously authorized, for instance in a different hierarchy

Catalogue Items rejected by the recipient will not be re-transmitted by virtue of a new subscription or publication. Only by the request for notification.

All Catalogue Item messages are communicated by full hierarchy. In other words, all communication is done at the highest level of the hierarchy. This begins with publication messages, follows with all distribution messages and then all response messages.

For the confirmation process this implies:

- accept/reject confirmations are always communicated on the highest level of the hierarchy.
- The implementation of the confirmation process in the recipient's data pool or in the recipient's back end systems can be at any level as long as the confirmation messages used for communication in the GDSN only contain full, uniquely identified hierarchies

The synchronization list will contain all Catalogue Items (GTIN+GLN+TM) where the recipient has responded with Accept, Synchronize or Review confirmation message. Specifically, it does not include Rejects.

The synchronization list is a subset of a larger list kept by the data pools: the notification list.

The notification list will contain the confirmation status for every GTIN + GLN+TM notified to a given GLN.

That is :

- accepted
- synchronized
- review
- rejected
- unknown

1.11.5.15Request for Notification

This is a one time subscription requesting for the data to be (re)sent.

The request for notification is not distributed and stored by the registry: the recipient data pool, where the request is created, looks up the source data pool where it needs to be sent in the registry and sends the request to the source data pool.

Request for notification is only executed once and then discarded by the source data pool.

For Catalogue Items that were previously synchronized (= in synchronization list) or rejected, the request for notification resets the confirmation status : undo reject or remove from synchronization list.

In summary, the confirmation status is reset to “unknown” in the notification list.

The notification resulting from a request for notification will carry the value of the Reload attribute maintained in the request for notification.

This attribute contains a Boolean value.

The value of this attribute will be passed along with the notification for the recipient to properly route the inbound message.

After executing the notification, the source data pool will change the stored value from True to False.

1.11.5.16Ending Synchronization

There are 2 ways of ending synchronization (= remove references from the synchronization list) :

- the data recipient can send a reject confirmation
- the data source can stop the publication

The notification triggered by an end of publication will carry the status of “unpublished”, indicating this is the last time the data is being notified and that the synch list will be cleaned up.

This applies to the synchronization and notification lists and is effective immediately.

This does not tell anything about the status of the Catalogue Item in the supply chain (life cycle, availability) – it merely indicates the end of data synchronization without indicating a reason.

1.11.6 Class Diagrams

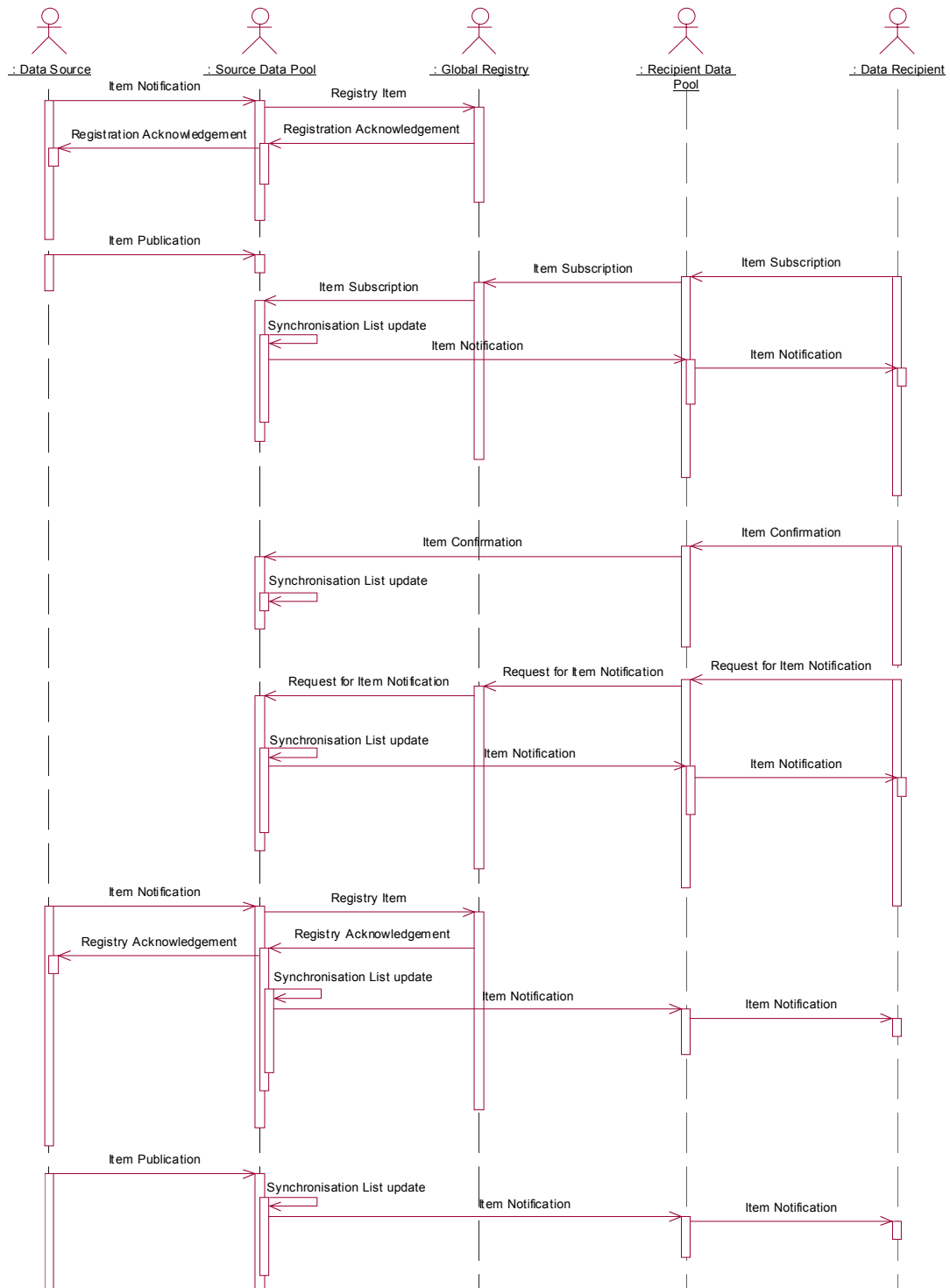


Figure 71 - Data Synchronization Message Flow Sequence Diagram

1.11.7 Actor Permissions

Use Case Name	Data Source	Source Data Pool	Global Registry	Recipient Data Pool	Data Recipient
Add Catalogue Item		X	X		
Add Catalogue Item Hierarchy	X	X			
Add Item Link		X	X		
Confirm Catalogue Item Data			X	X	X
Cancel Catalogue Item	X	X	X		
Change Catalogue Item		X	X		
Change Catalogue Item Hierarchy	X	X			
Change Item Link			X		
Change Registered Catalogue Item			X		
Correct Catalogue Item		X	X		
Correct Catalogue Item Hierarchy	X	X			
Correct Item Link			X		
Correct Registered Catalogue Item			X		
Create Synchronization List		X			
Delete Catalogue Item		X	X		
Delete Catalogue Item Data in Source Data		X			
Delete Item Link		X	X		
Delete Registered Catalogue Item			X		
Discontinue Catalogue Item	X	X	X		
Distribute Confirmation Data		X	X	X	X
Distribute Data Recipient Requests for Catalogue Item Data	X	X	X	X	X
Distribute Catalogue Item Data	X	X		X	X
Distribute Catalogue Item Data from RDP to				X	X
Distribute Catalogue Item Data from SDP to		X		X	
Distribute Request for Notification	X	X	X	X	X
Distribute Subscription Data	X	X	X	X	X
Filter Catalogue Item Data at RDP				X	
Filter Catalogue Item Data at SDP		X			
Global Search		X	X	X	
Load and Update Catalogue Item Data within	X	X			
Manage Data Pool Profile		X	X	X	
Manage Catalogue Item Data in Global Registry			X		
Manage Catalogue Item Distribution Criteria	X	X	X	X	X
Publish Catalogue Item Data	X	X			
Register Catalogue Item		X	X		
Registry Validation			X		
Remove Catalogue Item Subscription		X	X	X	X
Send Catalogue Item Data to Data Recipient				X	X
Send Catalogue Item Data to RDP		X		X	
Stop Publishing Catalogue Item Data	X	X	X		

Use Case Name	Data Source	Source Data Pool	Global Registry	Recipient Data Pool	Data Recipient
Subscribe to Catalogue Item Data				X	X
Synchronize Catalogue Item Data		X	X	X	X
Validate Data Pool		X	X	X	
Validate Catalogue Item and Item Link		X	X	X	
Validate Catalogue Item Data for Registry			X		

1.12 Glossary of Terms

Term	Definition
Acceptance Acknowledgement	A message sent by the receiving unit to the sending station or computer indicating that transmission has been processed successfully (syntax and content).
Acknowledgement	In the global data synchronization process, this is a response to a command returned to the originator of the command. Every command needs a response. In the inter-operable network, acknowledgement messages are standardized and may contain the following information: confirmation of message receipt (see receipt acknowledgement), success/failure of processing for syntax and content (see acceptance acknowledgement) or reason code for each type of failure (see Business error)
Add Catalogue Item	The command to create a new catalogue item record.
Align Data	The uniform definition of Electronic Commerce (EC) constructs to support defined business processes. This alignment is the exchange of basic business data such as the trading partners' names, addresses and agreements, item information, price lists, and locations. The process of alignment creates a common understanding between the trading parties and is fundamental to all trade activities.
Business Error	A message sent by the receiving unit to the sending station or computer indicating that transmission has errors (code type and text).
Cancel Date	Date assigned by data source and stored in the source data pool reflecting the date the catalogue item was cancelled. This date will also be stored in the Registry.
Cancel Item	Global data synchronization term describing a maintenance function used to communicate that a catalogue item was never manufactured. This allows reuse of the GTIN 12 months after cancellation.
Catalogue Item	The item as it is stored in a catalogue or data pool. This is uniquely identified by (GTIN + GLN + Target Market).
Catalogue Item Child Item Link	A class of information to identify the quantity of items within a packaging hierarchy level within the Global Data Synchronization Network.
Catalogue Item Classification	See classification
Catalogue Item Confirmation	This refers to electronic communication from the Data Recipient to the Data Source indicating what action has been taken on the item. The confirmation process occurs in the recipient's data pool. Confirmation is not mandatory. When used, it provides for the following outcomes: 1. Synchronized: data is integrated, in synch and added to the synchronization list.

Term	Definition
	<ol style="list-style-type: none"> 2. Accepted: Data has been received by the Recipient, but no business decision has been made on the data. 3. Rejected: recipient requests that no further updates are desired. Data will no longer be synchronized or updates will no longer be provided. 4. Review: a request to the data source to “review” their data because the data recipient has received discrepant data which they cannot synchronize.
Catalogue Item Confirmation State	The four states reflected by a Recipient Data Pool are: Accepted, Rejected, Review and Synchronized
Catalogue Item Dates	A class of information used to describe the dates of the action taken on the catalogue item record within the Global Data Synchronization Network.
Catalogue Item Link	A business message used to identify the packaging hierarchy levels of trade items.
Catalogue Item Notification	A business message used to transmit trade item information from a data source or a data pool to a data recipient with the Global Data Synchronization Network.
Catalogue Item Publication	A business message standard used to distribute trade item information within the Global Data Synchronization Network.
Catalogue Item Reference	A class of information from the Catalogue Item Common library used to identify the key to the trade item information using the data source GLN, the GTIN, and the Target Market within the Global Data Synchronization Network.
Catalogue Item Registration Information	A class of information used to identify the dates of the action taken on the Global Registry item record within the Global Data Synchronization Network.
Catalogue Item Registration Response	A business message used to notify a data pool of the status of the registration in the Global Registry for a trade item.
Catalogue Item State	The four states are: Registered , Cancelled, In Progress and Discontinued.
Catalogue Item Subscription	A business message used to establish a request for the update of trade item information from an end recipient on a continuous basis.
Certification	The accreditation of organizations to perform activities that conform to established business processes, business models and rules such as: certification of other organizations, operation of the global registry, operation of data pools, validation, authentication, consultancy, etc.
Certification Body	Organization that performs the certification process. (This is stored in the Registry).
Certification Expiration Date	Date on which the Data Pool certification is no longer valid. (This is stored in the Registry).
Certification Identification	Value that uniquely identifies a certified member of the Global Data Synchronization Network GDSN. (This is stored in the Registry).
Certification Start Date	Date on which the Data Pool obtains certification. (This is stored in the Registry).
Certification Status	Indicator of the stage of the certification process (This is stored in the Registry).
Change Catalogue Item	The command to update an existing catalogue item record.
Classification	A classification schema is an Industry accepted, standardized method to group like products together so that global searches can be enabled. Within Data Synchronization, a classification for the item is mandatory.
Compliance Check	The validation of specific data or data constructs to defined industry standards.
Construct	Data or data structure.
Content Provider	See Data Source
Context	“Context is expressed as classifications drawn from various standards (business

Term	Definition
	sub-process, industry, region and geography, product, legislative). The idea of Context is that the structure of a piece of business information is defined by the purpose which it serves within a business process, an industry, region, etc.” Example: An item can be defined in context of Global for product type FMCG (Fast Moving Consumer Goods) or other verticals.
Core Data	Core is defined as “common, reusable elements across various business processes. They can be mandatory or optional. Core is a common denominator upon which extensions are built”. Example: GTIN, Ship To, Date
Core Extensions = Cross Industry Extensions	Data or data constructs specific to more than one process, industry or sector but not used across all.
Correct Item	Refers to a command that allows incorrect data to be altered in ways that would not normally be allowed by standard GTIN allocation rules. All other validations still apply. This process is intended to correct errors, not to circumvent the validation process.
Correct Item Link	Command that allows alteration of item links that were incorrectly entered provided that the integrity of the Item Hierarchy is not impacted. If the Item Hierarchy is impacted, the “correct item link” command must not be applied. Instead, the incorrect item link must be <u>deleted</u> and a new Item Link <u>added</u> .
Data Pool	A repository of Data where trading partners can obtain, maintain and exchange information on items and parties in a standard format through electronic means.
Data Pool Certification Information	A class of information used to describe the status of a data pool’s certification within the Global Data Synchronization Network.
Data Pool Certification Status List	A class of information used to identify the certification status of a data pool within the Global Data Synchronization Network. The values include: Certification initiated; Certification pending, Certified, and Reviewed for Certification.
Data Pool Profile	Information that allows data pools to interoperate with each other technically and from an operational business perspective. This information includes (but is not limited to): business, administration and technical contacts, capabilities, services, network addresses and transport protocols.
Data Recipient	Party, which is authorized to view, use, download a set of Master Data provided by a Data Source.
Data Source	Entity that provides the global data synchronization network with Master Data. The Data Source is officially recognized as the owner of this data. For a given Item or Party, the source of data is responsible for permanent updates of the information under its responsibility.
Data Synchronization Data Pool Profile	A business message used to identify a data pool within the Global Data Synchronization Network.
Data Synchronization Error	A business message used to notify a member of the Global Data Synchronization Network of an error that has occurred within the process.
Data Synchronization Error Information	A class of information used to describe an error within the Global Data Synchronization Network and it’s process.
Data Synchronization Error Reference	A class of information used to describe the entity and the type of process identified as an error within the Global Data Synchronization Network.

Term	Definition
Delete Catalogue Item	The command to flag the existing catalogue item record for deletion (The objective is to enable the eventual removal of the catalogue item record from the data pool.)
Delete Catalogue Item Link	The command to flag the existing catalogue item link record for deletion.
Deletion Date	Date assigned by data source and stored in the source data pool reflecting the date the catalogue item was flagged for deletion. This date will also be stored in the Registry.
Discontinue Date	Date assigned by data source and stored in the source data pool reflecting the date the catalogue item was discontinued. This date will also be stored in the Registry.
Discontinue Item – Permanent	Refers to permanent removal of an item in the supply chain. This involves maintaining a discontinuation date in the Registry. The discontinuation date is used to trigger and track the EAN.UCC retention period.
Discontinue Item - Temporary	Refers to removing an item temporarily from the supply chain. This is communicated via end availability date. When available again, updated start and end availability dates are provided. Temporary removals are not reflected in the Registry. They are a responsibility of relevant data pools who maintain the availability period.
Document	"Business data being exchanged in support of business processes. It is a named collection of core and extensions". Any self-contained piece of work created with an application program and, if saved on disk, given a unique filename by which it can be retrieved. Documents are generally thought of as word-processed materials only. To a computer, however, data is nothing more than a collection of characters, so a spreadsheet or a graphic is as much a document as is a letter or report.
Electronic Address	The Internet Protocol identification for a certified data pool within the GDSN.
End Availability Date	The date at which a trade item or a location will no longer exist.
Error Name	A brief, text description related to an error number.
Error Number	An identification code used to relate to an error name.
Extension	"Extensions to core represent defined business processes which go beyond core requirements. Optional core data may be used in an extension but are not required." Example: US Grocery extension for Item, VAT
Full Hierarchy	A construct of data containing a set of GTINs and Links that make up a unique relationship from the highest level GTIN with no parent down to the lowest level GTIN with no children
GCI	Global Commerce Initiative
Global Data Dictionary (GDD)	The repository of definitions and attributes of all data elements used within the EAN•UCC Business Message Standards.
Global Data Synchronization Network (GDSN)	The Global Data Synchronization Network is a federation of interoperable certified Data Pools and a certified Global Registry that collectively provide for the synchronization of Master Data between trading partners on a global basis.
Global Location Number (GLN)	Unique location number mandatory within the Global Data Synchronization process to identify data owners/info providers, etc such as Distributors, brokers, manufacturers.
Global Registry	A directory for the registration of unique catalogue items and parties. It contains a limited data set certified to be EAN.UCC compliant and acts as a pointer to source

Term	Definition
	data pools where master data is housed.
Global Trade Item Number GTIN	A particular Global trade item Number, a numerical value used to uniquely identify a trade item. A trade item is any trade item (trade item or service) upon which there is a need to retrieve pre-defined information and that may be planned, priced, ordered, delivered and or invoiced at any point in any supply chain.
Governance	It is the management of the ongoing process for master data synchronization and consists of: controlling changes to scope, rules and standards, establishing and regulating the Global Registry, regulating the Certification of Organizations, and regulating the business model.
Inter-Operability	The ability to communicate master data in a standardized and transparent way throughout the global data synchronization network.
Item	An item is any product or service upon which there is a need to retrieve pre-defined information and that may be priced, ordered or invoiced at any point in any supply chain. An item is uniquely identified by a EAN/UCC Global Trade Item Number (GTIN).
Item Link Notification	A term used to advise data recipients of relationships among items. This notification always provides the entire item hierarchy. In case of an Item Link correction, the entire hierarchy will be indicated as corrected in the notification. The updated hierarchy always fully replaces the current hierarchy.
Last Change Date	Date assigned by system indicating last time the information was changed. This date is generic and will be stored where assigned and will accompany every message.
Manufacturer	The party that produces the item.
Market Group	A proprietary group of data recipients normally determined by the Information Provider, although it can also be created by buyers and third parties. The Market Group is a common term and should not be confused with the Target Market Codes. This group is developed and used by the Information Provider to control the publication of data to a specific group of customers.
Master Data	Within the context of Data synchronization, any data or constructs that are applicable across multiple business transactions. Master data describes each Item and Party involved in Supply Chain Processes. Each data set is uniquely identified by a Global Trade Item Number (GTIN) and a Global Location Number (GLN). Master Data can be divided into neutral and relationship dependent data. Typically Master data is static - not transactional.
Master Data Global / Local Status	<p>GLOBAL = (G): Indicates that the data element is required by all markets and contains the same information (e.g. GTIN)</p> <p>GLOBAL/LOCAL = (G/L): Indicates that the data element is required by all markets but that the actual value can be different for each one (i.e. language, tax indications etc.)</p> <p>LOCAL = (L): Indicates that the data element is required for a limited number of markets (i.e. Green point – Germany) Local requirements occur in response to national legislation, national standards or languages.</p>
Master Data Identification	A Data Synchronization term used to describe the unique identification of an item in a product catalogue (=key) in compliance with EAN.UCC standards. This is achieved by the combination of 3 attributes: GTIN, GLN of Information Provider, and Target Market. For product catalogue management purposes, a product can-

Term	Definition
	not be uniquely identified by its GTIN alone as there are valid business cases for information provider and target market specific data.
Master Data Synchronization	The process of continuous harmonization of master data between all trading partners within the supply chain through use of EAN.UCC standards.
Matching Process	A critical step within the data synchronization process that is owned and developed by each source data pool in order to trigger data distribution based on publication and subscription data. The matching process can be triggered either by publication, subscription or as a scheduled event.
Neutral Data	Within the context of Data Synchronization, master data or constructs applicable across multiple business transactions and constant across all trading partners, such as item, party, standard terms, etc.
New Item Hierarchy	A new construct of data containing a set of GTINs and Links that make up a unique relationship from the highest level GTIN with no parent to the lowest level with no children. To create a new Item Hierarchy, the Information Provider (or data owner) enters Item and Item Link data into the Source Data Pool. The data pool verifies that the information loaded is "correct" and then sends the relevant Item data to the registry for registration. Item link data is not sent to the Registry as links are not registered.
New Item Link	The connection of two GTINs. The description of the relationship of the two connected GTINs.
Notification	In the data synchronization process, the data source, through the source data pool, sends an electronic notice to a subscriber when a valid event occurs. This is based on the subscription profile. Events that can trigger notifications are: publication of new data, change of publication (visibility granted, deleted), change of published item, party, partner profile, change of owner, rights, subscription, authorization, non-authorization rejection and request for notification.
Party	A Party (or) Location is any legal, functional or physical entity involved at any point in any supply chain and upon which there is a need to retrieve pre-defined information. A Party is uniquely identified by a EAN/UCC Global Location Number (GLN).
Party Identification	The only valid party identification is the Global Location Number (See GLN)
Party Role	These are elements defining the roles and relationships of the party, such as buyer, seller, distribution centre, store, etc. Examples of party roles are: bill to, buyer, corporate identity, delivery party, information provider, invoicee, issuer of invoice, payer, seller, ship from, ship to and supplier.
Publication	To prepare and issue data for distribution to one or a group of trading partners. A function within the Data Synchronization process whereby the Data Source grants visibility of item, party and partner profiles including party capabilities data to a given list of parties (identified by their GLNs) or to all parties in a given Market. It also will trigger the matching process that is the precursor to the distribution of data
Receipt Acknowledgement	A message sent by the receiving unit to the sending station or computer indicating that transmission has been received.
Recipient Data Pool	A data pool that supports the functionality of the Data Recipient (Subscription, Confirmation, Search, Request for Notification, etc.)
Registration	Registration is the process, which references all items and parties prior to publication by all EAN.UCC certified data pools and on which there is a need to synchronize information. Registering a Trade Item involves validation by the Registry for product uniqueness. The combination of attributes used to ensure unique records

Term	Definition
	includes GTIN, GLN and Target Market.
Registration Date	Date assigned by the registry of successful registration.
Registry Catalogue Item	A business message used to register trade item information from a data pool to the Global Registry within the Global Data Synchronization Network.
Registry Catalogue Item State	The 4 states reflected by a Source Data pool are: Cancelled, Discontinued, In Progress, Registered.
Registry Validation	Registry Validation is checking compliance against EAN.UCC standards in relation to GTIN, GLN and Target Market to ensure uniqueness of data being registered.
Relationship Dependant Data	Relationship Dependant Data is Master Data identifying all terms bilaterally agreed and communicated between trading partners such as a marketing conditions, prices, and discounts, logistics agreements, etc.
Removing an Item from the Supply Chain	Refers to cancelling an item that was never manufactured (see Cancel Item), temporarily discontinuing the item, or communicating that the item will be permanently discontinued.
Request for Catalogue Item Notification	A business message used to establish a subscription to trade item information for a data recipient within the Global Data Synchronization Network.
Response	An abstract class of information in the Global Business Model used to define the status of a document within the EAN.UCC system.
Response Status	The 3 states are: Accepted, Modified, Rejected
Search	This function provides data visibility according to user's permissions and certain criteria such as Categories, GTIN, GLN, target market, etc. The Home Data Pool provides this visibility in the framework of the inter-operable network.
Simple_eb	"Simplified process in a B2B exchange of information that assumes data synchronization."
Source Data Pool	A data pool that supports the functionality required by a Data Source such as Data Loading, Publication, Notification, Registration, etc.
Start Availability Date	The date at which a trade item or location begins its existence.
Stop Publication Catalogue Item	The process by which the Data Source stops the synchronization process by disallowing visibility of the catalogue item. This will modify the notification list if the catalogue item was previously notified; and the synchronization list if it has been synchronized, accepted or reviewed.
Subscribe	A data synchronization function that refers to the creation of a subscription that lists the criteria for receiving publications.
Subscription	GTIN, GLN of Information Provider, Target market and Product Classification or any combination of these can maintain subscriptions. When a subscription is established, a Data Recipient sets a profile to receive ongoing updates of the matching data. Subscriptions remain valid until they are deleted. Subscriptions are created by data recipients in their home data pool and sent to the registry. The Registry maintains a subscription list that is used to route relevant subscriptions to appropriate Source Data Pools.
Synchronization	The process of continuous harmonization of information between all trading partners within the supply chain through the use of Align Data standards as published by EAN.UCC.
Synchronization List	This is a subset of the Notification List maintained by the source data pool to keep track of where data has been notified - independent of the confirmations received. The list includes every Catalogue Item (GTIN+GLN+TM) that is synchronized.
Target Market	The Target Market is a geographical region based upon geographical boundaries

Term	Definition
	sanctioned by the United Nations. There is one international system to describe geographical regions, the ISO-3166-code system.
Target Market Country Code	The country level or higher geographical definition in which the Information Provider will make the GTIN available to buyers. This does not in any way govern where the buyer may re-sell the GTIN to consumers. This code can be repeated as many times as needed. This code is represented by the 2-character ISO 3166-1 code. It is a mandatory attribute. Additionally, Target Market Subdivision Code indicates country subdivision where the trade item is intended to be sold. This code is represented by the 3-character ISO 3166-2 code.
Target Market Subdivision Code	The Target Market Subdivision Code is the secondary code of the Target Market and must be a subdivision of a Target Market Country Code. The Target Market Subdivision Code describes the “geo-political subdivision of a country” where the trade item is intended for sale, as determined by the Information Provider (e.g. “State” in the US). Target Market Subdivision Codes must be used in conjunction with Target Market Country Codes. The Target Market subdivision code is represented by the three-character ISO 3166-2 code.
Trade Item Configuration	The number of complete layers contained in a trade item and number of trade items contained in a complete layer.
Trading Partners	One or more parties engaged in trade. In the context of EAN•UCC business models any combination of Buyer, Seller, or Third Party.
Transactional Data	Information necessary for the business process being executed. For example, item codes and ordered quantities are transactional as these are mandatory fields within a purchase order: and, may vary by purchase order.
UCC	Uniform Code Council.
Update Item	A function used to make changes to an Item, which exists in a data pool whether the Item has been registered, or not. All changes must comply with EAN.UCC validation rules. If the Item is registered, updates must be applied to the corresponding Global Registry data fields before the revised data can be propagated to data recipients.
Validation	The compliance checking of new or changed data against EAN.UCC Global Data Standards, principles, rules and models.

1.13 Testing

1.13.1 Pass / Fail Criteria

Unit testing criteria for business solution.

Number	Test Criteria	Related Requirement	Design Element	Pass Criteria	Fail Criteria
1					
2					
3					

1.13.2 Test Data

Attribute	Value

1.14 Appendices

1.15 Summary of Changes

Change	BMS Ver- sion	Associated CR Number
<ul style="list-style-type: none">Added Business Rules 155 to 171 to Section 1.4.Changed text on Rule 80 in section 1.4.Changed text on Rule 94 in section 1.4.Added appropriate business rules/requirements to following use cases:<ul style="list-style-type: none">UC-3UC-4UC-5UC-6UC-25UC-7UC-23UC-24UC-34UC-27UC-28UC-35UC-43UC-37UC-38UC-48Section 1.11.5.4. Added sentence to clarify that rejections are done at the highest level of the hierarchy.Section 1.11.5.14 Updated definitions of Accepted Status and Review Status.Changed definition of Catalogue Item Confirmation in glossary.	2.0.2	
<ul style="list-style-type: none">Section 1.7.12: Re-wrote use case to include contingencies for data not found in the registry (GLN, GTIN,TM,GPC)Section 1.7.13: Re-wrote use case for Stop Publication to make use of CIN (Delete).Section 1.7.13: Updated Sequence Diagram (figure 39) for Catalogue Item Notification.	2.0.3	

<ul style="list-style-type: none">Updated Catalogue Item State List and Registry Catalogue Item State List to match values in 1.3.1 and 1.3.2 schema releases.	2.0.4	
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2 XML Technical Solution ITRG Packet

The Technical Representation of the Business process is documented in a Technical Solution ITRG Packet containing all supplemental XML artefacts and is used by the Information Requirements Group (ITRG) to evaluate the solution. Upon approval from the Information Technical Requirements Group (ITRG), the Technical Solution ITRG Packet is updated to the Technical Solution Implementers Packet and published with the Business

Message Standard at:

http://www.ean-ucc.org/global_smp/ean.ucc_standards.htm.

Technical Solution ITRG Packet Content:

- Business Message Standard (BMS)
- ITRG Review Packet
 - Style Sheet: This HTML has been created using a Style Sheet that is a visual representation of the data. It is not an actual Style Sheet, but an example of what a Style Sheet may look like.
 - Instance File: The Instance File is an example of what the schema may look like when it includes live data. This can be used as comparison to a completed schema and can serve as a point of reference for development.
 - Technical Level GDD Report

Technical Solution Implementers Packet Content:

Contains all the message specific .XSD files required to implement

Example:

- AS2Envelope
- Command.xsd
- DocumentCommand.xsd
- Proxy.xsd
- ComponentLibrary.xsd

Both the Business Message Standard and the Implementers Packet are available during the ITRG Review Period in the working documents section of the ITRG eRoom:

http://eroom.uncouncil.org/eRoom/facility/InformationTechnicalAssessmentGroupITAG/0_14f7

All documents for review will be in this folder listed by name of the Change Request and Change Request Number. The Business Message Standard is not open for review, but offered as the basis for determining the suitability of the technical solutions.

This eRoom may be accessed by using the following User Name and Password:

User Name: guest

Password: guest