



Replenishment Proposal

Business Message Standard (BMS)

Release 3.2

01-Dec-2014, Issue 1



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Business Requirements Document (BRAD) Reference

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BRAD Upstream Standards – Demand & Supply Signals	01-Nov-2004	0.1.0
Replenishment – Business Requirement Document	30-Mar-2004	1.0.0

Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change
12-Jan-2012	BMS 3.0 – Issue 1	Mark Van Eeghem	BMS Release 3.0	See summary of changes
01-May-2013	BMS 3.1 – Issue 1	Coen Janssen	BMS Release 3.1	See summary of changes
01-Dec-2014	BMS 3.2 – Issue 1	Ewa Iwicka	BMS Release 3.2	See summary of changes

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1. Business Domain View

1.1. Introduction

Message Definition

The Replenishment Proposal message contains the seller delivery or production plan for the buyer for given trade items and locations for specific time periods.

Principles

In the downstream supply chain, between retailer and manufacturer, the data is based on future demand put together as finished products and time series, but it can also be restricted to actual sales data for a certain period of time. The manufacturer needs to provide feedback on its availability to deliver, taking into account available inventories of both sides.

In the upstream supply chain, between manufacturer and material supplier, the data is based on material requirements for production and the timing, the availability of material supplier to deliver and the schedule for delivery. Inventories on both sides are taken into account for the actual delivery schedule.

Based on the delivery schedule (replenishment proposal), a transport and shipping planning can be derived.

1.2. References

	Reference Name	Description
[Ref1]	BMS eCom Domain Common Library Release 3.2	The documented design of components that are used in multiple messages within the eCom domain.
[Ref2]	BMS Shared Common Library Release 3.2	The documented design of components that are used in both the eCom domain and GDSN.
[Ref3]	BRAD Upstream Standards - Demand & Supply Signals 0.1.0	
[Ref4]	Replenishment – Business Requirement Document 1.0.0	

2. Business Context

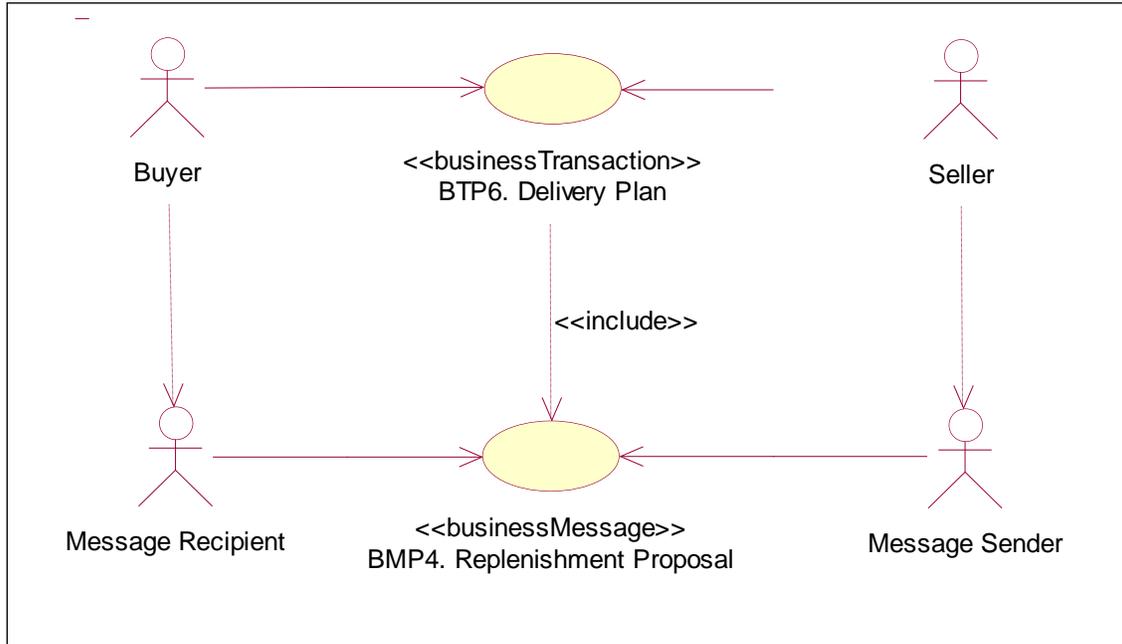
Context Category	Value(s)
Industry	All
Geopolitical	All
Product	All
Process	Plan
System Capabilities	GS1 System
Official Constraints	None

3. Business Transaction View

3.1. Business Transaction – Delivery Plan

Use Case Diagram

Figure 3-1 Use Case Diagram: Business Transaction



Use Case Description

Use Case ID	BTP6									
Use Case Name	Delivery Plan									
Use Case Description	The Delivery Plan is sent by the supplier and communicates to the buyer the quantities of which items will be delivered when & where by the supplier.									
Actors (Goal)	Seller: To send the Delivery Plan. Buyer: To receive the Delivery Plan.									
Performance Goals										
Preconditions	Delivery Plan: CALCULATED									
Post conditions	Delivery Plan: COMMUNICATED									
Scenario	<p>Begins when: Seller has calculated the delivery plan.</p> <p>Continues with:</p> <table border="1"> <thead> <tr> <th>Step #</th> <th>Actor</th> <th>Activity Step</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Seller</td> <td>Sends Replenishment Proposal message to the Buyer.</td> </tr> <tr> <td>2.</td> <td>Buyer</td> <td>Receives Replenishment Proposal message</td> </tr> </tbody> </table>	Step #	Actor	Activity Step	1.	Seller	Sends Replenishment Proposal message to the Buyer.	2.	Buyer	Receives Replenishment Proposal message
Step #	Actor	Activity Step								
1.	Seller	Sends Replenishment Proposal message to the Buyer.								
2.	Buyer	Receives Replenishment Proposal message								

	Ends when: Buyer receives Replenishment Proposal message
Alternative Scenario	Not Applicable
Guidelines	Not Applicable

Activity Diagram(s)

Not Applicable

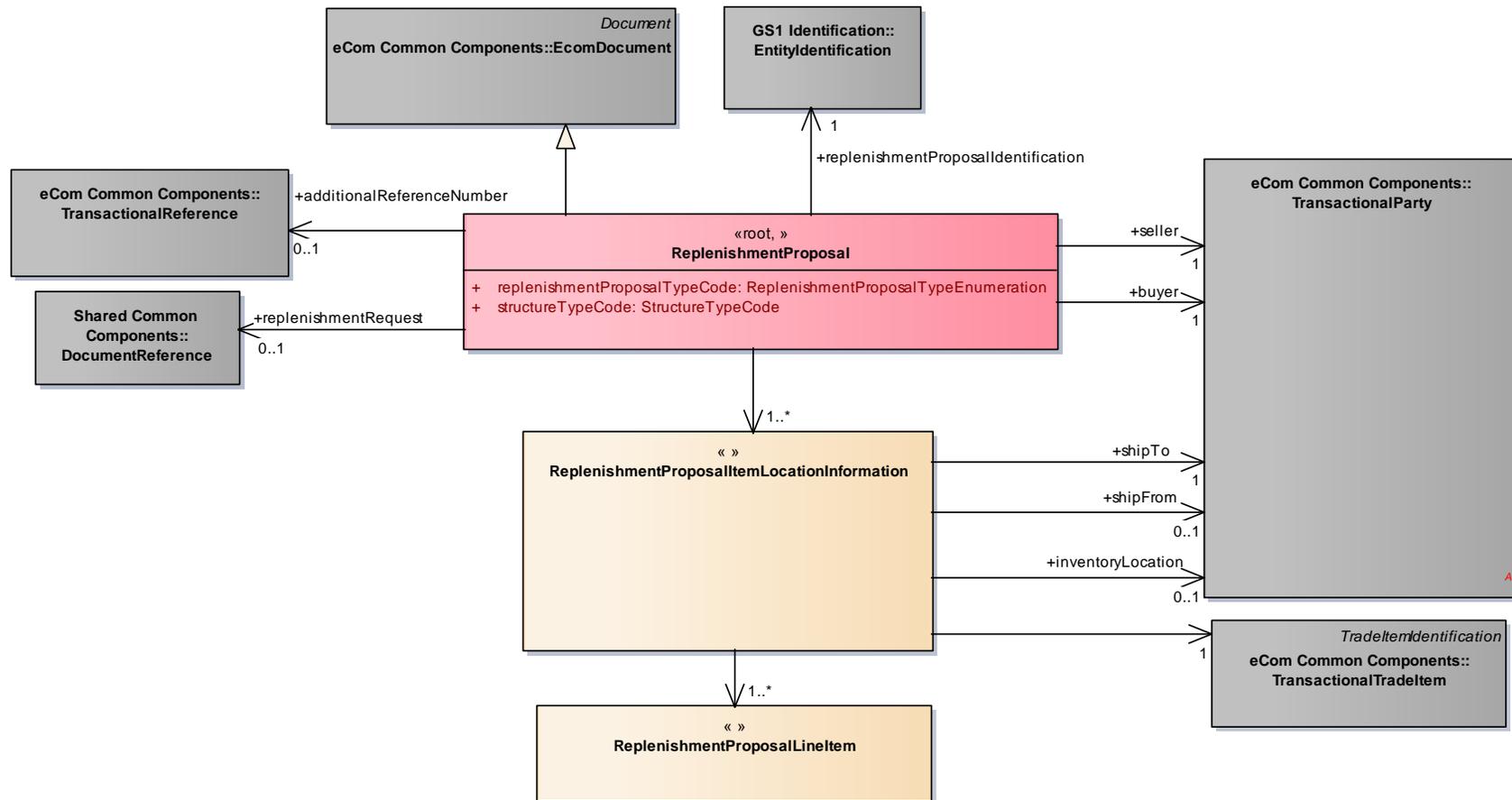
Sequence Diagram(s)

Not Applicable

4. Business Information View

4.1. Replenishment Proposal

Class Diagram



GDD Report

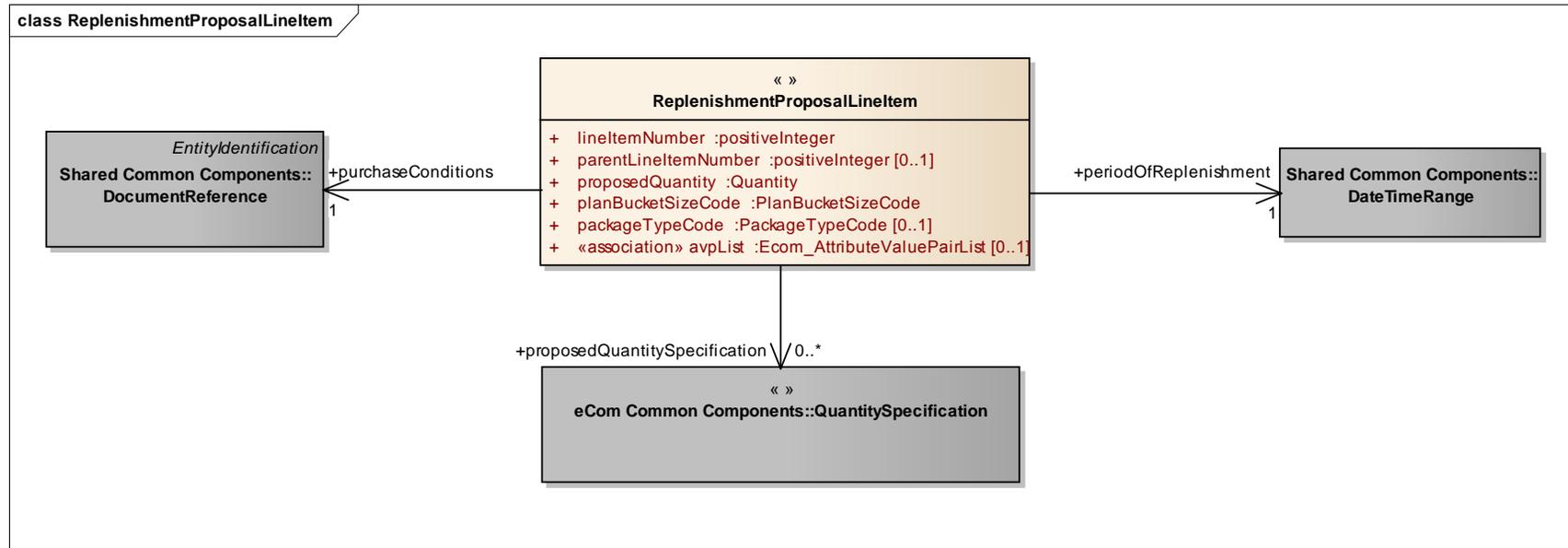
The content of the ReplenishmentProposal class, its structure and component definitions can be accessed in the Global Data Dictionary: http://apps.gs1.org/GDD/bms/Version3_2/Pages/bieDetails.aspx?semanticURN=urn:gs1:gdd:bie:ReplenishmentProposal

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
ReplenishmentProposal				Contains the seller delivery or production plan for the buyer for given trade items and locations for specific time periods.	
Association	additionalReferenceNumber	TransactionalReference	0..1	Additional reference assigned by the buying party. Includes date and reference number.	replaced associated class, was TypedEntityIdentification
Association		ReplenishmentProposalItemLocationInformation	1..*	Contains the Replenishment Proposal for given trade items and locations for specific time periods.	
Generalization		EcomDocument		Basic information about the content of the message including version number, creation date and time.	WR 14-000110
Association	replenishmentRequest	DocumentReference	0..1	Reference to the replenishment request on which the proposal has been based.	
Association	buyer	TransactionalParty	1..1	Contains the identification of the party that is buying the goods.	
Association	replenishmentProposalIdentification	EntityIdentification	1..1	Unique replenishment proposal number assigned by supplying party.	
Association	seller	TransactionalParty	1..1	Contains the identification of the party that is selling the goods.	
Attribute	replenishmentProposalTypeCode	ReplenishmentProposalTypeEnumeration	1..1	Contains the type of replenishment plan. E.g.production or delivery	renamed from replenishmentProposalDocumentTypeCode
Attribute	structureTypeCode	StructureTypeCode	1..1	Contains the type of grouping and sequence of the business document.	
ReplenishmentProposalItemLocationInformation				Contains the Replenishment Proposal for a given trade item and location for specific time periods.	

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
Association	shipFrom	TransactionalParty	0..1	Contains the identification of the location wherefrom the required goods will be delivered.	
Association		ReplenishmentProposal LineItem	1..*	The planned delivery quantities per time bucket.	
Association		TransactionalTradeItem	1..1	Contains the identification of the trade item that will be delivered.	
Association	inventoryLocation	TransactionalParty	0..1	Identification of the physical place at the receiving side where the items are to be stored.	
Association	shipTo	TransactionalParty	1..1	Contains the identification of the location whereto the required goods will be delivered.	

4.2. Replenishment Proposal Line Item

Class Diagram



GDD Report

The content of the ReplenishmentProposalLineItem class, its structure and component definitions can be accessed in the Global Data Dictionary: http://apps.gs1.org/GDD/bms/Version3_2/Pages/bieDetails.aspx?semanticURN=urn:gs1:gdd:bie:ReplenishmentProposalLineItem

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
ReplenishmentProposalLineItem				Contains the planned delivery quantities per time bucket.	
Association	proposedQuantitySpecification	QuantitySpecification	0..*	Contains additional quantity information for the time bucket. Example: In Transit, Produced.	
Association	periodOfReplenishment	DateTimeRange	1..1	Contains the start and end dates and optionally start and end times of the replenishment period.	

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
Association	purchaseConditions	DocumentReference	1..1	Contains a reference to the commercial agreement under which the goods are supplied.	
Attribute	lineItemNumber	positiveInteger	1..1	Provides the line number associated to the Replenishment Proposal Line Item.	
Attribute	parentLineItemNumber	positiveInteger	0..1	The number of line item containing information about the parent of the current item. It allows establishing hierarchical link between the two items.	WR 14-000021 WR 14-000044
Attribute	proposedQuantity	Quantity	1..1	The number of units planned to be replenished.	
Attribute	planBucketSizeCode	PlanBucketSizeCode	1..1	Code describing the size of the planning period.	
Attribute	packageTypeCode	PackageTypeCode	0..1	Code specifying the kind of logistic unit in which the goods will be delivered.	
Attribute	avpList	Ecom_AttributeValuePairList	0..1	Temporary attributes introduced between minor versions.	WR 14-000110



Note: Reference Shared Common Library Business Message (BMS) Release 3.2.0 and eCom Domain Common Library Business Message (BMS) Release 3.2.0 for all common information.

4.3. Code Lists

Class	Codelist	GDD Link
ReplenishmentProposal	ReplenishmentProposalTypeEnumeration	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:ReplenishmentProposalTypeEnumeration
ReplenishmentProposal	StructureTypeCode	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:StructureTypeCode
ReplenishmentProposalLineItem	PlanBucketSizeCode	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:PlanBucketSizeCode
ReplenishmentProposalLineItem	PackageTypeCode	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:PackageTypeCode



Note: Refer to the Global Data Dictionary (GDD) for the code values.

5. Business Message Examples

5.1. Example

This is an example of a Replenishment Proposal message used as a delivery plan. The message is sent out on January 11th at 11 AM. The message is identified with the unique identification number RP250014.

The delivery plan is sent by the material supplier - Seller (GLN 4098765000010) to the manufacturer - Buyer (GLN 5412345000013).

Party Information

GS1 Global Location Number	Party Type
5412345000013	Buyer
4098765000010	Seller
4098765000997	Ship From
5412345000174	Ship to

For informational purposes the material supplier includes the name of the material requirements planner of the manufacturer (Mr. Gilgamesh).

The delivery plan is for one delivery site (Ship to 5412345000174), one supplier site (Ship from 4098765000997). For one of the products there is a specific storage location specified (Inventory location 8712345670077). It has an additional seller assigned id (ROTTERDAM-01).

The delivery plan contains two items: Item A (GTIN 40987650000223) and item B (GTIN 40987650000346) and buyer item number AB77770004). Item A has two planned deliveries:

- on February 11th of 1000 units of which 500 units are in transit.
- on February 12th of 200 units.

The contract used for this product (PC356987) issued by the material supplier. Within the contract line 23 refers to this item.

Item B has one planned delivery on February 9th of 500 units. This needs to be delivered between 8 AM and 9 AM.

The contract used for this product (PC356987) issued by the material supplier. Within the contract line 25 refers to this item.

Message Example

Attribute	Value
ReplenishmentProposal	
creationDateTime	2005-01-11 11:00
documentStatusCode	ORIGINAL
replenishmentProposalTypeCode	DELIVERY_PLAN
structureType	LOCATION_BY_ITEM
EntityIdentification (+replenishmentProposalIdentification)	
entityIdentification	RP250014
PartyIdentification (+contentOwner)	
gln	4098765000010
TransactionalParty(+seller)	
gln	4098765000010
TransactionalParty (+buyer)	
gln	5412345000013
Contact	
personName	Gilgamesh
responsibility	Material requirements planner
ReplenishmentProposalItemLocationInformation *1	
TransactionalParty (+shipTo)	
gln	5412345000174
TransactionalParty (+shipFrom)	
gln	5412345000174
TransactionalTradeItem	
gtin	40987650000223
ReplenishmentProposalLineItem *1.1	
lineItemNumber	1
planBucketSizeCode	DAY
proposedQuantity (value, unitOfMeasure)	1000
DateTimeRange (+requirementsPeriod)	
beginDate	2005-02-11
endDate	2005-02-11
DocumentReference (+purchaseConditions)	
lineItemNumber	23
EntityIdentification	

Attribute	Value
entityIdentification	PC356987
TransactionalParty (+contentOwner)	
gln	4098765000010
QuantitySpecification (+proposedQuantitySpecification)	
quantitySpecificationType	IN_TRANSIT
specificQuantity (value, unitOfMeasure)	500
ReplenishmentProposalLineItem *1.2	
lineItemNumber	2
planBucketSizeCode	DAY
proposedQuantity (value, unitOfMeasure)	200
DateTimeRange (+requirementsPeriod)	
- beginDate	2005-02-12
- endDate	2005-02-12
DocumentReference (+purchaseConditions)	
- entityIdentification	2004000012
- lineItemNumber	2
PartyIdentification (+contentOwner)	
- gln	8812345678901
ReplenishmentProposalItemLocationInformation *2	
TransactionalParty (+shipTo)	
gln	5412345000174
TransactionalParty (+shipFrom)	
gln	5412345000174
TransactionalParty (+InventoryLocation)	
gln	8712345670077
additionalPartyIdentification	ROTTERDAM-01 (SELLER_ASSIGNED_IDENTIFIER_FOR_A_PARTY)
TransactionalTradeItem	
gtin	08712345678920
additionalTradeItemIdentification	AB77770004 (BUYER_ASSIGNED)
ReplenishmentProposalLineItem *2.1	
lineItemNumber	3
planBucketSizeCode	DAY
proposedQuantity (value, unitOfMeasure)	500
DateTimeRange (+requirementsPeriod)	
beginDate	2005-02-09T08:00:00

Attribute	Value
endDate	2005-02-09T09:00:00
DocumentReference (+purchaseConditions)	
entityIdentification	PC356987
lineItemNumber	25
PartyIdentification (+contentOwner)	
gln	4098765000010

6. Implementation Considerations

6.1. User Guide

The Functional User Guide contains more information about the structure and content of the Replenishment Proposal message: http://www.gs1.org/docs/ecom/xml/3/3.2/eCom-Trade_messages.html#ReplenishmentProposal

6.2. Message Specific Considerations

Not Applicable

7. Summary of Changes

Any change in the GS1 standards is done based on the Work Request (WR) submitted by the GS1 User Companies or Member Organisations. All Work Requests are documented in the Work Request system available on the GS1 website: <http://wr.gs1.org>. The system is accessible to registered users. New visitors need to register first, to be able to access it. WRs can be searched by the number referenced in tables below, see: Search Work Requests. The number starts with the two last digits of the year when it was submitted, followed by the consecutive number within that year.

 **Note:** WRs submitted earlier than February 2012 should be searched in Old Change Requests.

7.1. BMS Release 3.0

Change	BMS Version	Associated CR
<ul style="list-style-type: none"> ■ Updated to reflect changes in modelling 	Issue 3.0.0	Not Applicable
For Publication <ul style="list-style-type: none"> ■ Changed Status to Approved ■ Removed year reference in footer copyright statement ■ Replaced Section 10 with updated AG Principles 	Issue 3.0.0	Not Applicable

7.2. BMS Release 3.1

No work requests. Indirect changes due to upgrade to new Shared and eCom Common libraries.

7.3. BMS Release 3.2

Change	Associated WR
<p>Added Attribute Value Pair at the root, line item and sub line item levels</p> <div style="border: 1px solid black; padding: 5px;"> <p>class ReplenishmentProposal - maintenance view</p> <div style="border: 1px solid black; padding: 5px; background-color: #f8d7da;"> <p style="text-align: center;">«root, » ReplenishmentProposal</p> <p>+ replenishmentProposalTypeCode :ReplenishmentProposalTypeEnumeration + structureTypeCode :StructureTypeCode</p> <p style="text-align: right;"><i>maintenance</i></p> <p>Change: (Verified) 3.2 changed generalisation from Document to eComDocument class to include AVP (WR 14-110)</p> </div> </div>	14-000110
<ul style="list-style-type: none"> ■ Added a reference to parent line number to all Lineltem classes, to support hierarchical items (WRs 14-021 & 14-044) ■ Added Attribute Value Pair at the root, line item and sub line item levels (WR 114-110) <div style="border: 1px solid black; padding: 5px;"> <p>class ReplenishmentProposalLineltem - maintenance view</p> <div style="border: 1px solid black; padding: 5px; background-color: #fff3cd;"> <p style="text-align: center;">« » ReplenishmentProposalLineltem</p> <p>+ lineltemNumber :positiveInteger + parentLineltemNumber :positiveInteger [0..1] + proposedQuantity :Quantity + planBucketSizeCode :PlanBucketSizeCode + packageTypeCode :PackageTypeCode [0..1] + «association» avpList :Ecom_AttributeValuePairList [0..1]</p> <p style="text-align: right;"><i>maintenance</i></p> <p>Change: (Verified) 3.2 added +avpList (WR 14-110) Change: (Verified) 3.2 added +parentLineltemNumber (WR 14-021 & 14-044)</p> </div> </div>	14-000021 14-000044 14-000110

8. Appendices

Not Applicable

9. Acknowledgements

The following is a list of individuals (and their companies) who participated in the creation, review and approval of this BMS.

9.1.1. Work Group

Function	Name	Company / organisation
Co-chair	Rossner (Pottier), Natascha	GS1 France

Function	Name	Company / organisation
Co-chair	Schmidt, Tom Eric	August Storck KG
Member	Bemrose, Jonathan	R&R Ice Cream
Member	Bodemer, Petra	dm-drogerie markt GmbH + Co. KG
Member	Boikanyo, Rebone	GS1 South Africa / Consumer Goods Council of South Africa
Member	Canada, ON	M3B 3L1
Member	Carlson, Jim	General Mills, Inc.
Member	Chresta, Richard	GS1 Switzerland
Member	Cook, Don	Wal-Mart Stores, Inc.
Member	Cox, Marc	Philips Electronics N.V.
Member	Darnell, David	Systrends
Member	De Flou, Nele	GS1 Belgium & Luxembourg
Member	Dicks, Arne	GS1 Germany
Member	Duvinger, Karina	GS1 Sweden
Member	Foerderer, Klaus	GS1 Germany
Member	Gathmann, Stefan	GS1 Ireland
Member	Grangard, Anders	GS1 Global Office
Member	Harpell, Eileen	GS1 Community Room Staff
Member	Herregodts, Kurt	GS1 Belgium & Luxembourg
Member	Kempkes, Fred	Unilever N.V.
Member	Kernan, Brendan	GS1 Ireland
Member	Kidd, Robin	Nestle
Member	Krid, Anne-Claire	GS1 France
Member	Lanoue, Tom	General Mills, Inc.
Member	Laur, Rita	GS1 Canada
Member	Lenman, Mia	GS1 Sweden
Member	Lerch, Hanjoerg	METRO Group
Member	Moberg, Dale	Axway
Member	Montes de Oca, Alejandra	GS1 Mexico
Member	Ng, Ella	GS1 Australia
Member	Peelen, Esther	GS1 Netherlands
Member	Pelekies, Andreas	GS1 Germany
Member	Perrier, Patricia	GS1 France
Member	Przybilla, Christian	GS1 Germany
Member	Pujol, Xavier	GS1 Spain
Member	Racek, Greg	Wal-Mart Stores, Inc.
Member	Repetto, Mirko	GS1 Italy

Function	Name	Company / organisation
Member	Robba, Steven	1WorldSync Holdings, Inc.
Member	Rosell, Pere	GS1 Spain
Member	Rosenberg, Steven	GS1 US
Member	Schmid, Sue	GS1 Australia
Member	Schneider, Christian	GS1 Switzerland
Member	Sehorz, Eugen	GS1 Austria
Member	Sharma, Vishal	General Mills, Inc.
Member	Shimazaki, Ayako	GS1 Japan
Member	Sion, Emilie	GS1 France
Member	Souza, Nadia	GS1 Brasil
Member	Strand, Roman	GS1 Germany
Member	Tan, Milton	GS1 Malaysia
Member	Tompsett, Simon	Waitrose
Member	Trelle, Ute	1WorldSync Holdings, Inc.
Member	Tse, Steve	GS1 Hong Kong
Member	Tyson, Betty	Knouse Foods Cooperative, Inc
Member	Van den Bergh, Senne	GS1 Belgium & Luxembourg
Member	Van der Eijk, Pim	OASIS - Sonnenglanz Consulting BV
Member	Veldhuis, Saskia	Procter & Gamble Co.
Member	Welch, Shan	GS1 UK
Member	Westerkamp, Jan	GS1 Netherlands
Member	Wilson, Mary	GS1 US
Member	Windsperger, Bekki	Best Buy Co., Inc.
Member	Yang, Shaopeng	GS1 China
Member	Yusdiar, Dani	GS1 Indonesia
Member	Zwanziger, Greg	SUPERVALU

9.1.2. Development Team Members

Function	Name	Organisation
GSMP Process Lead	Jean-Luc Champion	GS1 Global Office
Standards Content Lead	Coen Janssen, Ewa Iwicka	GS1 Global Office
Technical Development Lead	Ewa Iwicka	GS1 Global Office
Peer Review	Eric Kauz	GS1 Global Office