

Replenishment Proposal Business Message Standard (BMS)

Release 3.6, Ratified, Mar 2023





Document Summary

Document Item	Current Value
Document Name	Replenishment Proposal Business Message Standard (BMS)
Document Date	Mar 2023
Document Version	3.6
Document Issue	1
Document Status	Ratified

Work Request Reference

Date of WR Submission to GSMP:	WR Submitter(s):	Refer to Work Request (WR) Number(s):
20-Aug-2008	GS1 Global Office	08-000209
8-Aug-2007	Accenture	07-000309
05-Nov-2004	GS1 Global Office	04-000211
07-Feb-2014	GS1 Germany	14-000021
20-Mar-2014	GS1 Slovenia	14-000044
25-Jun-2014	GS1 Global Office	14-000110
28-Oct-2015	Philips N.V.	15-000314
03-Oct-2018	GS1 GO	18-000319

Business Requirements Document (BRAD) Reference

BRAD Title	BRAD Issue Date	BRAD Version
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
15-Sep-2014	BMS 3.2 - Issue 1	Ewa Iwicka	BMS Release 3.2	See summary of changes
01-Mar-2017	BMS 3.3 – Issue 1	Ewa Iwicka	BMS Release 3.3	See summary of changes
15-Oct-2018	BMS 3.4 – Issue 1	Ewa Iwicka	BMS Release 3.4	See summary of changes



Date of Change	Version	Changed By	Reason for Change	Summary of Change
04-Feb-2021	BMS 3.5 – Issue 1	Miklos Bolyky	BMS Release 3.5	See summary of changes
05-Jan-2022	BMS 3.5.1 - Issue 1	Miklos Bolyky	BMS Release 3.5.1	See summary of changes
01-Mar-2023	BMS 3.6 - Issue 1	Miklos Bolyky	BMS Release 3.6	See summary of changes

Disclaimer

GS1®, under its IP Policy, seeks to avoid uncertainty regarding intellectual property claims by requiring the participants in the Work Group that developed this **Replenishment Proposal Business Message Standard (BMS)** to agree to grant to GS1 members a royalty-free licence or a RAND licence to Necessary Claims, as that term is defined in the GS1 IP Policy. Furthermore, attention is drawn to the possibility that an implementation of one or more features of this Specification may be the subject of a patent or other intellectual property right that does not involve a Necessary Claim. Any such patent or other intellectual property right is not subject to the licencing obligations of GS1. Moreover, the agreement to grant licences provided under the GS1 IP Policy does not include IP rights and any claims of third parties who were not participants in the Work Group.

Accordingly, GS1 recommends that any organization developing an implementation designed to be in conformance with this Specification should determine whether there are any patents that may encompass a specific implementation that the organisation is developing in compliance with the Specification and whether a licence under a patent or other intellectual property right is needed. Such a determination of a need for licencing should be made in view of the details of the specific system designed by the organisation in consultation with their own patent counsel.

THIS DOCUMENT IS PROVIDED "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, NONINFRINGMENT, FITNESS FOR PARTICULAR PURPOSE, OR ANY WARRANTY OTHER WISE ARISING OUT OF THIS SPECIFICATION. GS1 disclaims all liability for any damages arising from use or misuse of this Standard, whether special, indirect, consequential, or compensatory damages, and including liability for infringement of any intellectual property rights, relating to use of information in or reliance upon this document.

GS1 retains the right to make changes to this document at any time, without notice. GS1 makes no warranty for the use of this document and assumes no responsibility for any errors which may appear in the document, nor does it make a commitment to update the information contained herein.

GS1 and the GS1 logo are registered trademarks of GS1 AISBL.



Table of Contents

1	Bus	iness Domain View	. 5
	1.1	Introduction	. 5
	1.2	References	. 5
2	Bus	iness Context	. 5
3	Bus	iness Transaction View	. 6
	3.1	Business Transaction – Delivery Plan	. 6
4	Bus	iness Information View	. 8
	4.1	Replenishment Proposal	. 8
	4.2	Replenishment Proposal Line Item	11
	4.3	Enumerations (message specific)	13
	4.4	Code Lists	13
5	Bus	iness Message Examples	14
	5.1	Example	14
6	Imp	lementation Considerations	16
	6.1	User Guide	16
	6.2	Message Specific Considerations	16
7	Sun	nmary of Changes	17
	7.1	BMS Release 3.0	17
	7.2	BMS Release 3.1	17
	7.3	BMS Release 3.2	17
	7.4	BMS Release 3.3	18
	7.5	BMS Release 3.4	19
	7.6	BMS Release 3.5	19
	7.7	BMS Release 3.5.1	19
	7.8	BMS Release 3.6	19
8	App	endices	19
9	Ack	nowledgements	19
	9.1	Work Group	19
	9.2	Development Team Members	21



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 3.6	The documented design of components that are used in multiple messages within the eCom domain.
[Ref2]	BMS Shared Common Library Release 3.6	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

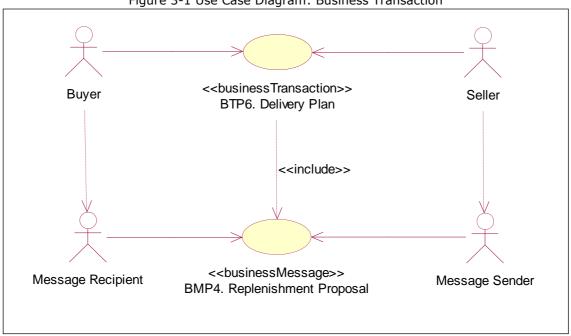


3 Business Transaction View

3.1 Business Transaction - Delivery Plan

Use Case Diagram

Figure 3-1 Use Case Diagram: Business Transaction



Use Case Description

Se case Description						
Use Case ID	BTP6	BTP6				
Use Case Name	Delivery	Delivery Plan				
Use Case Description			n is sent by the supplier and communicates to the buyer the nitems will be delivered when & where by the supplier.			
Actors (Goal)	Seller:	Γo send the	e Delivery Plan.			
	Buyer:	To receive	the Delivery Plan.			
Performance Goals						
Preconditions	Delivery	/ Plan: CAL	LCULATED			
Post conditions	Delivery	/ Plan: CO	MMUNICATED			
Scenario			red the delivery plan.			
	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 App	licable				



Guidelines	Not Applicable

Activity Diagram(s)

Not Applicable

Sequence Diagram(s)

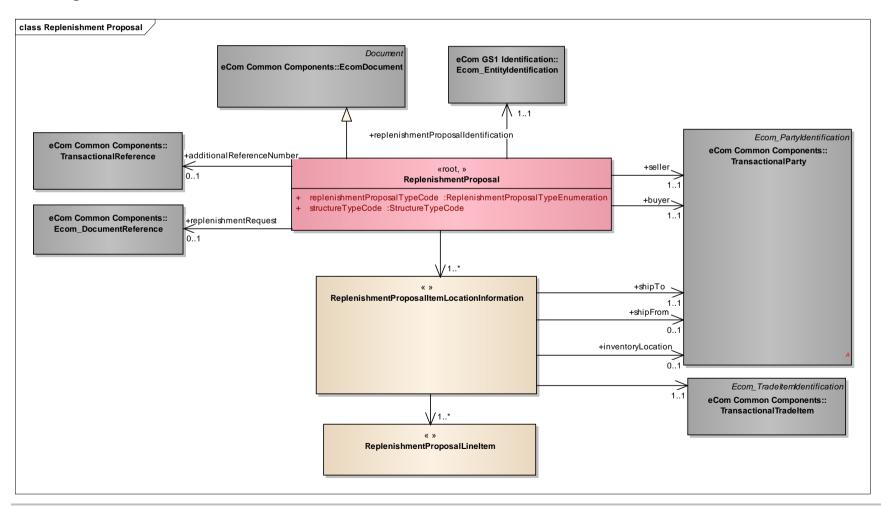
Not Applicable



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_4/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	additionalRefere nceNumber	TransactionalReference	01	Additional reference assigned by the buying party. Includes date and reference number.	replaced associated class, was TypedEntityIdentifi cation
Association		ReplenishmentProposal ItemLocationInformatio n	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	replenishmentRe quest	Ecom_DocumentRefere nce	01	Reference to the replenishment request on which the proposal has been based.	
Association	buyer	TransactionalParty	11	Contains the identification of the party that is buying the goods.	
Association	replenishmentPr oposalIdentificat ion	Ecom_EntityIdentificati on	11	Unique replenishment proposal number assigned by supplying party.	
Association	seller	TransactionalParty	11	Contains the identification of the party that is selling the goods.	
Attribute	replenishmentPr oposalTypeCode	ReplenishmentProposal TypeEnumeration	11	Contains the type of replenishment plan. E.g.production or delivery	renamed from replenishmentProp osalDocumentType Code
Attribute	structureTypeCo de	StructureTypeCode	11	Contains the type of grouping and sequence of the business document.	
ReplenishmentProposalIte mLocationInformation				Contains the Replenishment Proposal for a given trade item and location for specific time periods.	



Replenishment Proposal Business Message Standard (BMS)

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
Association	shipFrom	TransactionalParty	01	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	11	Contains the identification of the trade item that will be delivered.	
Association	inventoryLocatio n	TransactionalParty	01	Identification of the physical place at the receiving side where the items are to be stored.	
Association	shipTo	TransactionalParty	11	Contains the identification of the location whereto the required goods will be delivered.	

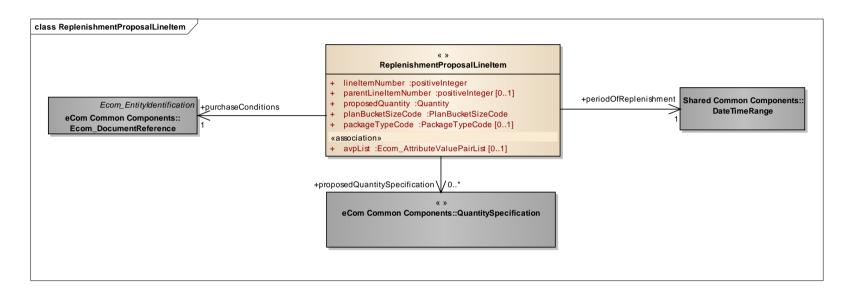


Note: Reference Shared Common Library Business Message (BMS) Release 3.6 and eCom Domain Common Library Business Message (BMS) Release 3.6 for all common information.



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 4/Pages/bieDetails.aspx?semanticURN=urn:gs1:gdd:bie:ReplenishmentProposalLineItem

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
ReplenishmentProposalLin eItem				Contains the planned delivery quantities per time bucket.	
Association	proposedQuantit ySpecification	QuantitySpecification	0*	Contains additional quantity information for the time bucket. Example: In Transit, Produced.	
Association	periodOfReplenis hment	DateTimeRange	11	Contains the start and end dates and optionally start and end times of the replenishment period.	



Replenishment Proposal Business Message Standard (BMS)

Repletion mente i reposul business i ressuge standard (Si					
Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
Association	purchaseConditio ns	Ecom_DocumentRefere nce	11	Contains a reference to the commercial agreement under which the goods are supplied.	
Attribute	lineItemNumber	positiveInteger	11	Provides the line number associated to the Replenishment Proposal Line Item.	
Attribute	proposedQuantit y	Quantity	11	The number of units planned to be replenished.	
Attribute	planBucketSizeC ode	PlanBucketSizeCode	11	Code describing the size of the planning period.	
Attribute	packageTypeCod e	PackageTypeCode	01	Code specifying the kind of logistic unit in which the goods will be delivered.	
Attribute	parentLineItemN umber	positiveInteger	01	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	avpList	Ecom_AttributeValuePai rList	01	Temporary attributes introduced between minor versions.	WR 14-000110



Note: Reference Shared Common Library Business Message (BMS) Release 3.6 and eCom Domain Common Library Business Message (BMS) Release 3.6 for all common information.



4.3 Enumerations (message specific)

Not applicable

4.4 Code Lists

Class	Codelist	GDD Link
ReplenishmentProp osal	ReplenishmentProposalT ypeEnumeration	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1: gdd:cl:ReplenishmentProposalTypeEnumeration
ReplenishmentProp osal	StructureTypeCode	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1: gdd:cl:StructureTypeCode
ReplenishmentProp osalLineItem	PlanBucketSizeCode	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1: gdd:cl:PlanBucketSizeCode
ReplenishmentProp osalLineItem	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 send 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)	



Attribute	Value
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	
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



Attribute	Value
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
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/3/3.4/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.

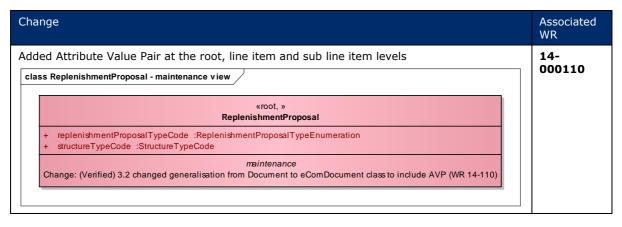
7.1 BMS Release 3.0

Change	Associated CR
 Updated to reflect changes in modelling 	Not Applicable
For Publication	Not Applicable
Changed Status to Approved	
Removed year reference in footer copyright statement	
 Replaced Section 10 with updated AG Principles 	

7.2 BMS Release 3.1

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

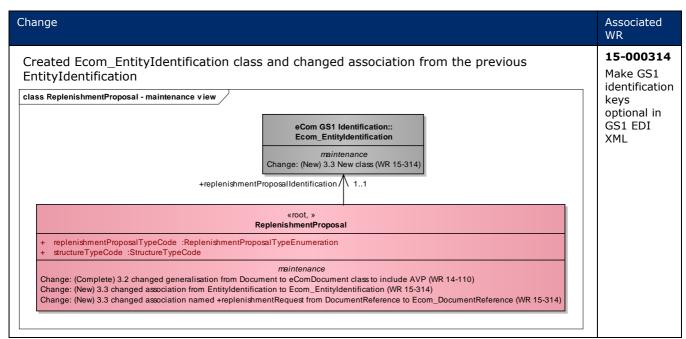
7.3 BMS Release 3.2



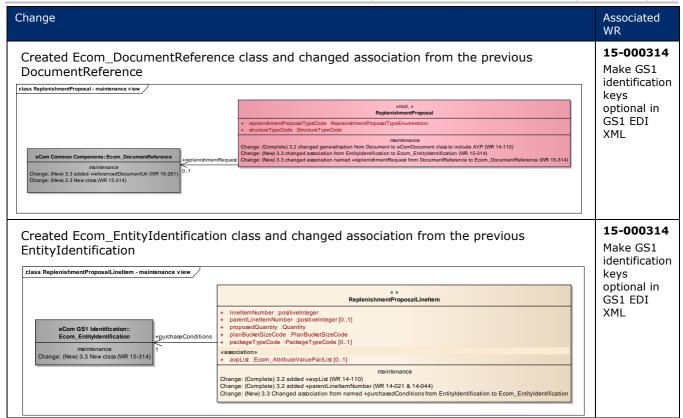


hange	Associated WR
Added a reference to parent line number to all LineItem classes, to support hierarchical items (WRs 14-021 & 14-044)	14- 000021 14-
 Added Attribute Value Pair at the root, line item and sub line item levels (WR 114-110) 	000044 14-
class ReplenishmentProposalLineItem - maintenance view	000110
« » ReplenishmentProposalLineItem	
+ lineItemNumber: positiveInteger + proposedQuantity: Quantity + planBucketSizeCode: PlanBucketSizeCode + packageTypeCode: PackageTypeCode [01] + parentLineItemNumber: positiveInteger [01] «association»	
+ avpList: Ecom_AttributeValuePairList [01]	
maintenance Change: (Verified) 3.2 added +avpList (WR 14-110) Change: (Verified) 3.2 added +parentLineItemNumber (WR 14-021 & 14-044)	

7.4 BMS Release 3.3







7.5 BMS Release 3.4

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

7.6 BMS Release **3.5**

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

7.7 BMS Release 3.5.1

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

7.8 BMS Release 3.6

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

8 Appendices

Not Applicable

9 Acknowledgements

9.1 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	Hand, Phil	JDA Software
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
Member	Robba, Steven	1WorldSync Holdings, Inc.
Member	Rosell, Pere	GS1 Spain
Member	Rosenberg, Steven	GS1 US



Function	Name	Company / organisation
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

9.2 **Development Team Members**

Function	Name	Organisation
GSMP Process Lead	David Buckley	GS1 Global Office
Technical Development Lead	Miklos Bolyky	GS1 Global Office
Peer Review	Mark Van Eeghem	GS1 Global Office