



# Business Message Standard (BMS) Goods Requirements

BMS Release: 3.0.0, BRG Name: eCom

*Issue 1.0.0, 6-Jan-2012*



## Document Summary

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Date of CR Submission to GSMP:	CR Submitter(s):	Refer to Change Request (CR) Number(s):
20 –Aug- 2008	John Ryu, GS1	08-000209
06-Sep-2006	Eric Maree, Accenture	07-000320
11-May-2004	GUSI	04-000211

## Business Requirements Document (BRAD) Reference

BRAD Title:	BRD Date:	BRAD Version
BRAD Upstream Standards – Demand & Supply Signals	01-Nov-2004	0.1.0

## Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
November 21, 2011	Issue 1.0.0	Coen Janssen	Editorial changes	Noted in summary of change section	Not Applicable
January 6, 2012	Issue 1.0.0	John Ryu	Publication updates	Noted in summary of change section	Not Applicable

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# Table of Contents

<b>1. Business Domain View</b>	<b>5</b>
1.1. Problem Statement / Business Need	5
1.2. Objective	5
1.3. Audience	5
1.4. References	5
1.5. Acknowledgements	5
1.5.1. Work Group	5
1.5.2. Design Team Members	7
<b>2. Business Context</b>	<b>8</b>
<b>3. Additional Technical Requirements Analysis</b>	<b>8</b>
3.1. Technical Requirements	8
<b>4. Business Transaction View</b>	<b>9</b>
4.1. Business Transaction NET REQUIREMENTS - Use Case Diagram	9
4.2. Business Transaction NET REQUIREMENTS - Use Case Description	9
4.3. Business Transaction CONSUMPTION FORECAST - Use Case Diagram	10
4.4. Business Transaction CONSUMPTION FORECAST - Use Case Description	11
<b>5. Information Model (Including GDD Report)</b>	<b>12</b>
5.1. GDD Reports	12
5.1.1. GDD Report: Goods Requirements	12
5.1.2. GDD Report: Goods Requirements Line Item	13
5.2. Class Diagrams	14
5.3. Code Lists & Enumerations	15
<b>6. Business Document Example</b>	<b>16</b>
<b>7. Implementation Considerations</b>	<b>18</b>
<b>8. Testing</b>	<b>18</b>
8.1. Pass / Fail Criteria	18
8.2. Test Data	18
<b>9. Appendices</b>	<b>18</b>
<b>10. Adherence to Architectural Principles</b>	<b>19</b>
<b>11. Summary of Changes</b>	<b>21</b>

# 1. Business Domain View

## 1.1. Problem Statement / Business Need

In several business scenarios the buyer needs to communicate his Goods Requirements to the seller. This can be needed in traditional order driven scenarios and is definitely needed in supplier managed scenarios. The Goods Requirements communicated by the buyer can be gross or net (=gross requirements +/- inventory).

## 1.2. Objective

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

## 1.3. Audience

- Manufacturers
- Suppliers
- Logistic Service Providers

## 1.4. References

Reference Name	Description
[Ref1] BMS Common Library for Release 2.5.0 Publication Release	The documented design of components that are used in multiple messages. In the eCom Domain.
[Ref2] BMS Shared Common Library for Release 3.0.0 Publication Release	The documented design of components that are used in both the eCom Domain and GDSN
Ref2] BRAD Upstream Standards - Demand & Supply Signals 0.1.0	

## 1.5. Acknowledgements

### 1.5.1. Work Group

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Chair MR3 sub team	Spaan, Stef	GS1 Netherlands
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Member	Blankenstein, Kyra	GS1 Netherlands
Member	Bradley, Ardetha	Georgia Pacific
Member	Burke, Miriam	Procter & Gamble Co.
Member	Chatagnier, Isabelle	GS1 France

Function	Name	Company / organisation
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Member	Chresta, Richard	GS1 Switzerland
Member	Cox, Marc	Philips Electronics N.V.
Member	De Flou, Nele	GS1 Belgium & Luxembourg
Member	Denyer, Troy	GS1 Australia
Member	Dicks, Arne	GS1 Germany
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Member	Herrick, Lisa	GS1 Global Office
Member	Hill, Douglas	GS1 Denmark
Member	Hoberg, Peter	Consafe Lodistics
Member	Iwicka, Ewa	GS1 Global Office
Member	Jin Soon, Tan	GS1 Singapore
Member	Joest, Holger	SA2 Worldsynchron GmbH
Member	Kempkes, Fred	Unilever N.V.
Member	Kidd, Robin	Nestle
Member	Kille, Grant	SA2 Worldsynchron GmbH
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Member	Krid, Anne-Claire	GS1 France
Member	Lai, Keith	GS1 Australia
Member	Laur, Rita	GS1 Canada
Member	Lazarkova, Galya	GS1 Austria
Member	Lenman, Mia	GS1 Sweden
Member	Lockhead, Sean	GS1 Global Office
Member	Maniero, Ana Paula	GS1 Brasil
Member	Maree, Eric	Accenture Supply Chain Services
Member	Martinko, Michal	Hewlett-Packard
Member	McLeod, Ed	Procter & Gamble Co.
Member	Melcher, Jeff	The Exchange (AAFES)

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Member	Moritz, Marcus	GS1 Germany
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Member	Picoito, Joao	GS1 Portugal
Member	Plaksin, Leon	GS1 Australia
Member	Popper, Bret	Kraft Foods
Member	Post, Valerie	Link Snacks Inc, Jack Links Beef Jerky
Member	Pottier, Natascha	GS1 France
Member	Pujol, Xavier	GS1 Spain
Member	Repetto, Mirko	GS1 Italy
Member	Robba, Steven	SA2 Worldsynchron GmbH
Member	Rosell, Pere	GS1 Spain
Member	Rosenberg, Steven	GS1 US
Member	Ryu, John	GS1 Global Office
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Member	Schneider, Christian	GS1 Switzerland
Member	Sedano Acosta, Federico	GS1 Argentina
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Member	Sharratt, Jon	Target Corporation
Member	Shimazaki, Ayako	GS1 Japan
Member	SION, Emilie	GS1 France
Member	Smith, Matthew	Bunnings Group Limited
Member	Sobrino, Gabriel	GS1 Netherlands
Member	Strand, Roman	GS1 Germany
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Member	Tomassi, Gina	PepsiCo, Inc.
Member	Trelle, Ute	SA2 Worldsynchron GmbH
Member	Voorspuij, Jaco	DHL
Member	Welch, Shan	GS1 UK
Member	Westerkamp, Jan	GS1 Netherlands
Member	Windsperger, Bekki	Best Buy Co., Inc.

### 1.5.2. Design Team Members

Function	Name	Organisation
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Function	Name	Organisation
XML Technical Designer	Dipan Anarkat	GS1 Global Office
Peer Reviewer	John Ryu / Eric Kauz	GS1 Global Office

## 2. Business Context

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

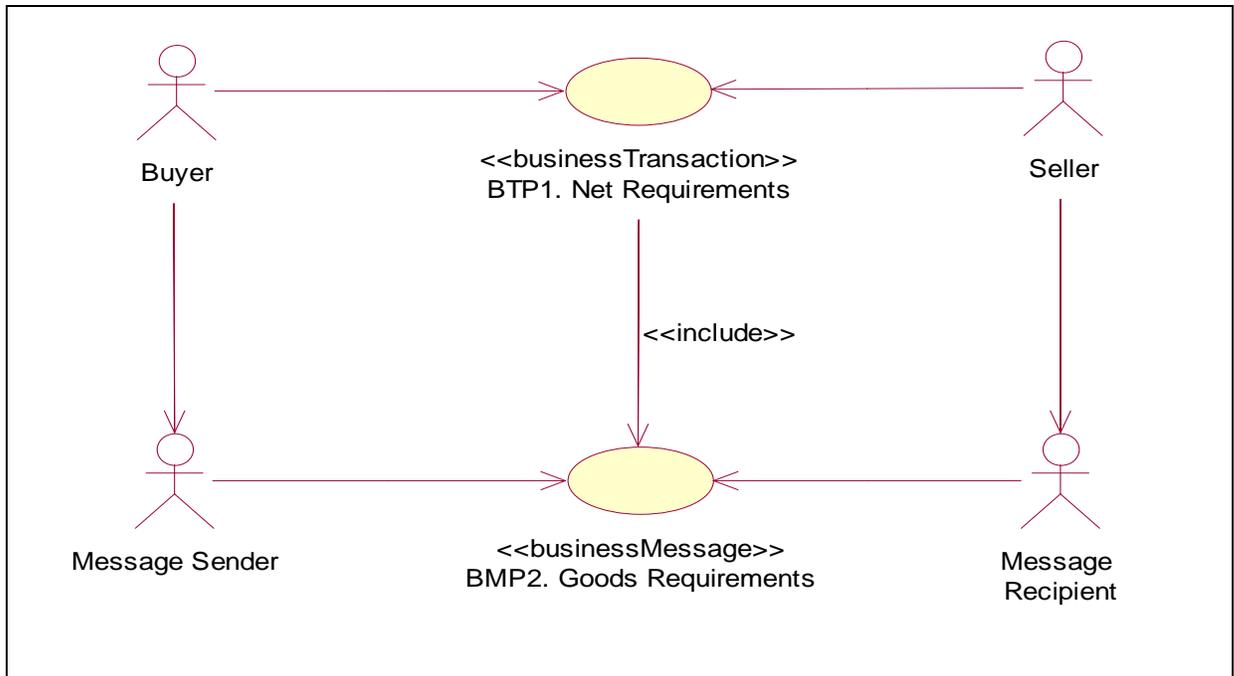
## 3. Additional Technical Requirements Analysis

### 3.1. Technical Requirements

Not Applicable

## 4. Business Transaction View

### 4.1. Business Transaction NET REQUIREMENTS - Use Case Diagram

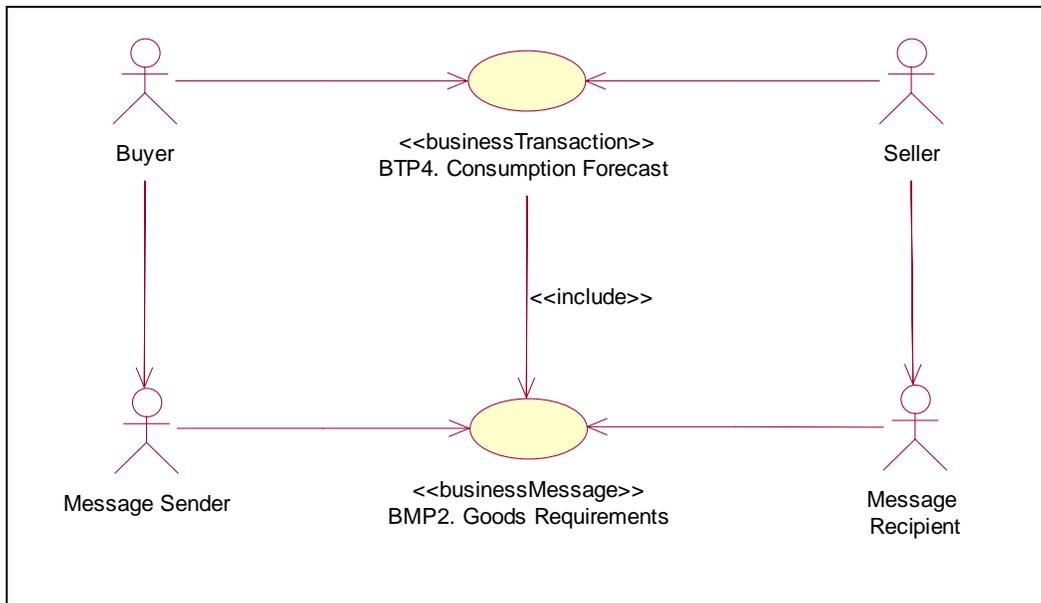


### 4.2. Business Transaction NET REQUIREMENTS - Use Case Description

<b>Use Case ID</b>	BTP1										
<b>Use Case Name</b>	Net Requirements										
<b>Use Case Description</b>	The buyer communicates his net requirements to the seller.										
<b>Actors (Goal)</b>	Buyer: To send the net requirements. Seller: To receive the net requirements.										
<b>Performance Goals</b>	Not Applicable										
<b>Preconditions</b>	Net Requirements: CALCULATED										
<b>Post conditions</b>	Net Requirements: COMMUNICATED										
<b>Scenario</b>	<p><b>Begins when:</b> Buyer has calculated his net requirements.</p> <p><b>Continues with:</b></p> <table border="1"> <thead> <tr> <th>Step #</th> <th>Actor</th> <th>Activity Step</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Buyer</td> <td>Sends Goods Requirements message to the Seller.</td> </tr> <tr> <td>2.</td> <td>Seller</td> <td>Receives Goods Requirements Message</td> </tr> </tbody> </table>		Step #	Actor	Activity Step	1.	Buyer	Sends Goods Requirements message to the Seller.	2.	Seller	Receives Goods Requirements Message
Step #	Actor	Activity Step									
1.	Buyer	Sends Goods Requirements message to the Seller.									
2.	Seller	Receives Goods Requirements Message									

	<b>Ends when:</b>					
<b>Alternative Scenario</b>	<i>(any alternatives to the above scenario)</i>					
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="width: 10%;">Step #</th> <th style="width: 15%;">Actor</th> <th style="width: 75%;">Activity Step</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>Not Applicable</td> </tr> </tbody> </table>	Step #	Actor	Activity Step		
Step #	Actor	Activity Step				
		Not Applicable				
<b>Business Transaction Rules</b>						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 10%; text-align: center;">1.</td> <td>For communicating the consumption forecast use the goodsRequirementsType with value NET_REQUIREMENTS</td> </tr> </tbody> </table>	1.	For communicating the consumption forecast use the goodsRequirementsType with value NET_REQUIREMENTS			
1.	For communicating the consumption forecast use the goodsRequirementsType with value NET_REQUIREMENTS					

### 4.3. Business Transaction CONSUMPTION FORECAST - Use Case Diagram



## 4.4. Business Transaction CONSUMPTION FORECAST - Use Case Description

<b>Use Case ID</b>	BTP4										
<b>Use Case Name</b>	Consumption Forecast										
<b>Use Case Description</b>	The buyer communicates his forecasted consumption to the seller.										
<b>Actors (Goal)</b>	Buyer: To send the consumption forecast. Seller: To receive the consumption forecast.										
<b>Performance Goals</b>	Not Applicable										
<b>Preconditions</b>	Consumption Forecast: CALCULATED										
<b>Post conditions</b>	Consumption Forecast: COMMUNICATED										
<b>Scenario</b>	<p><b>Begins when:</b> Buyer has calculated his forecasted consumption.</p> <p><b>Continues with:</b></p> <table border="1"> <thead> <tr> <th>Step #</th> <th>Actor</th> <th>Activity Step</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Buyer</td> <td>Sends Goods Requirements message to the Seller.</td> </tr> <tr> <td>2.</td> <td>Seller</td> <td>Receives Goods Requirements Message</td> </tr> </tbody> </table> <p><b>Ends when:</b></p>		Step #	Actor	Activity Step	1.	Buyer	Sends Goods Requirements message to the Seller.	2.	Seller	Receives Goods Requirements Message
Step #	Actor	Activity Step									
1.	Buyer	Sends Goods Requirements message to the Seller.									
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<b>Alternative Scenario</b>	<p><i>(any alternatives to the above scenario)</i></p> <table border="1"> <thead> <tr> <th>Step #</th> <th>Actor</th> <th>Activity Step</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>Not Applicable</td> </tr> </tbody> </table>		Step #	Actor	Activity Step			Not Applicable			
Step #	Actor	Activity Step									
		Not Applicable									
<b>Business Transaction Rules</b>	<table border="1"> <tbody> <tr> <td>1</td> <td>For communicating the consumption forecast use the goodsRequirementsType with value GROSS_REQUIREMENTS</td> </tr> </tbody> </table>		1	For communicating the consumption forecast use the goodsRequirementsType with value GROSS_REQUIREMENTS							
1	For communicating the consumption forecast use the goodsRequirementsType with value GROSS_REQUIREMENTS										

## 5. Information Model (Including GDD Report)

### 5.1. GDD Reports

#### 5.1.1. GDD Report: Goods Requirements

Content	Attribute / Role	Datatype /Secondary class	Multipl city	Definition	Requir ements
GoodsRequirement s				Contains the Goods Requirements from the buyer to the seller for given trade items and locations for specific time periods.	
Association	buyer	TransactionalParty	1..1	The buyer associated with the goods requirements for given trade items and locations for specific time periods.	
Association	seller	TransactionalParty	1..1	The seller associated with the goods requirements for given trade items and locations for specific time periods.	
Association	goodsRequirementsIde ntification	EntityIdentification	1..1	Contains the unique identifier of the business document.	
Association		GoodsRequirementsItemLo cationInformation	1..*	Contains the Goods Requirements for given trade items and locations for specific time periods.	
Generalization		Document		Basic information about the content of the message including version number, creation date and time.	
Attribute	structureTypeCode	StructureTypeCode	1..1	Contains the type of grouping and sequence of the business document.	
Attribute	goodsRequirementsTy peCode	GoodsRequirementsTypeEn umeration	1..1	Contains the type of Goods Requirements, gross or net.	
GoodsRequirement sItemLocationInfor mation				Contains the Goods Requirements for a given trade item and location for specific time periods.	

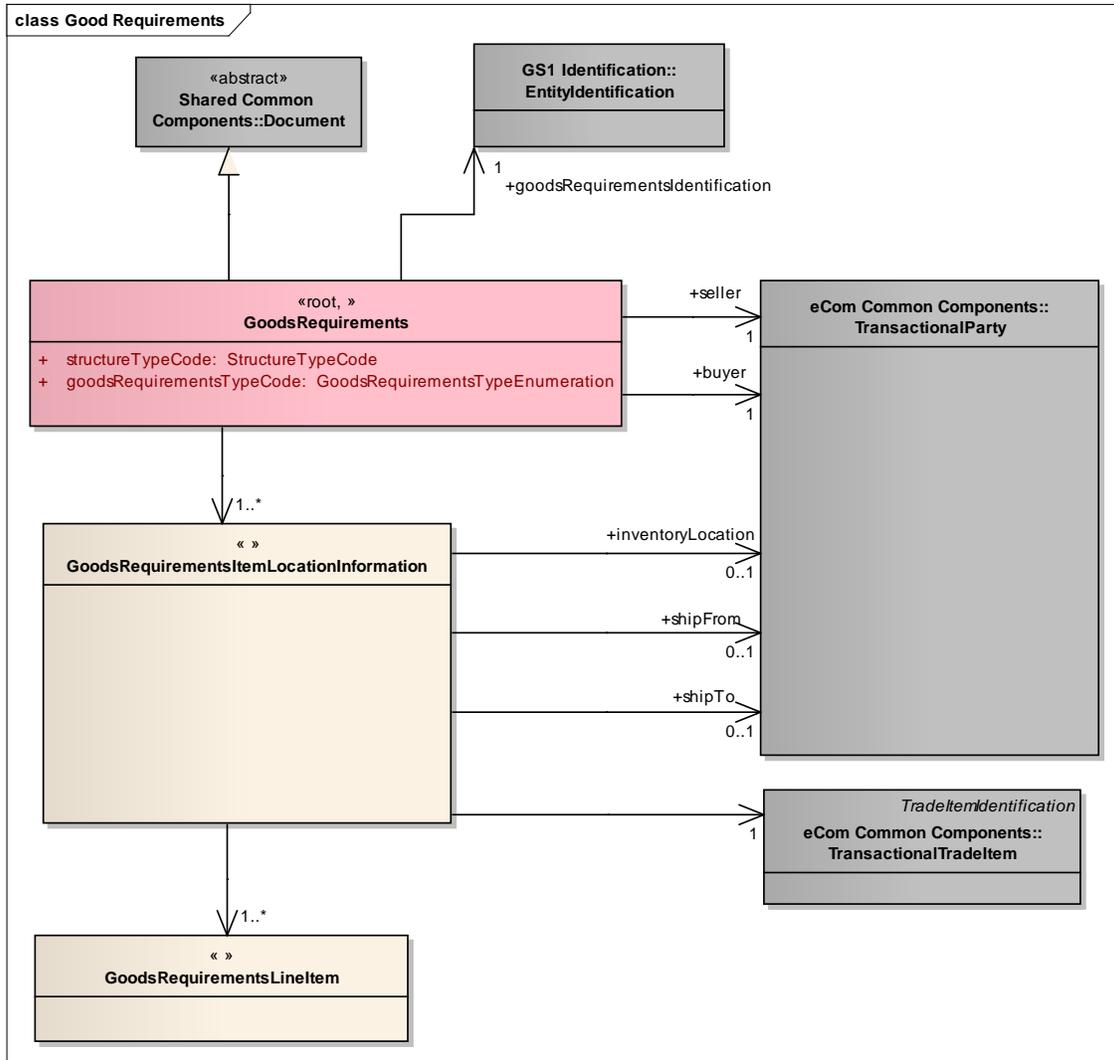
Content	Attribute / Role	Datatype /Secondary class	Multipl city	Definition	Requir ements
Association	shipFrom	TransactionalParty	0..1	The ship from location associated with a goods requirement.	
Association	shipTo	TransactionalParty	0..1	The ship to location associated with a goods requirement.	
Association	inventoryLocation	TransactionalParty	0..1	The location of inventory associated with a goods requirement.	
Association		GoodsRequirementsLineItem	1..*	Specifies the projected goods requirements for a given location / item.	
Association		TransactionalTradeItem	1..1	The trade item associated with a goods requirement.	

### 5.1.2. GDD Report: Goods Requirements Line Item

Content	Attribute / Role	Datatype /Secondary class	Multiplic ity	Definition	Requir ements
GoodsRequirementLineItem				Specifies the projected goods requirements for a given location / item.	
Association	requiredQuantitySpecification	QuantitySpecification	0..*	Specifies the cumulative quantity already received for the current time bucket.	
Association	requirementsPeriod	DateTimeRange	1..1	Contains the start and end dates and optionally start and end times of the requirements period.	
Association	purchaseConditions	DocumentReference	0..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 Goods Requirements Line Item.	
Attribute	planBucketSizeCode	PlanBucketSizeCode	1..1	Code specifying the duration of the requirements period.	renamed from timeBucketSize Type
Attribute	requiredQuantity	Quantity	1..1	The number of units required in the specified requirements period.	

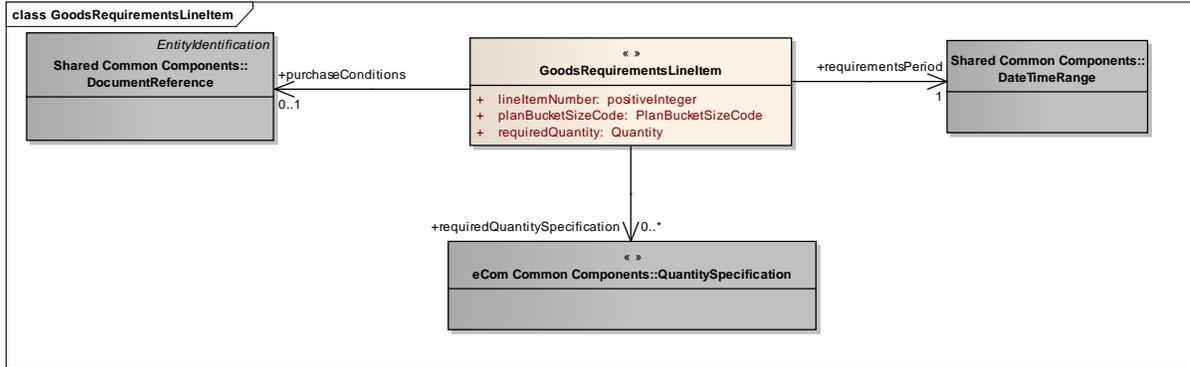
## 5.2. Class Diagrams

Figure 5-1 Class Diagram: Goods Requirements



**Note:** Reference Shared Common Library Business Message (BMS) Release 3.0.0 and eCom Domain Common Library Business Message (BMS) Release 3.0.0 for all common information.

**Figure 5-2 Class Diagram: Goods Requirements Line Item**



**Note:** Reference Shared Common Library Business Message (BMS) Release 3.0.0 and eCom Domain Common Library Business Message (BMS) Release 3.0.0 for all common information.

### 5.3. Code Lists & Enumerations

#### GoodsRequirementsTypeEnumeration

CodeValue	Description
ACTUAL_SALES	Actual goods sales
FORECAST	Forecasted goods sales
GROSS_REQUIREMENTS	Planned material consumption
NET_REQUIREMENTS	Planned material consumption corrected for available inventory

Class	Codelist	Referenced in
GoodsRequirements	StructureTypeCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0
GoodsRequirementsLineItem	PlanBucketSizeCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0

**Note:** Reference Shared Common Library Business Message (BMS) Release 3.0.0 and eCom Domain Common Library Business Message (BMS) Release 3.0.0 for all Code Lists

## 6. Business Document Example

The following is an example of a gross requirements message. The message is sent out on February 9th at 11 AM. The message is identified with the unique identifier 2005001. The content owner is the sending party, in this case the manufacturer (Buyer 8712345678913).

The gross requirements are sent by the manufacturer (Buyer 8712345678913) to the material supplier (Seller 8812345678903).

For informational purposes the manufacturer includes the name of his material requirements planner (Mr. Kramer).

The gross requirements are for two delivery sites, X (Ship To 8712345670009) and Y (Ship To 8712345678951).

The gross requirements are for one item, A (GTIN 08712345678906).

For item A and delivery site X the gross requirements are:

- Week February 11-17: 1000 units, of which 500 units have already been received.
- Week February 18-25: 200 units.

The contract to be used for the requirements in week February 11-17 (2004000012) was issued by the business unit of the material supplier (content owner 8712345678999). Within the contract line 23 refers to this item.

For the requirements in week February 18-25 no contract has been specified.

For item A and delivery site Y the gross requirements are:

- Week February 11-17: 300 units.
- Week February 18-25: 1200 units.

The contract used for the requirements in week February 11-17 (2004000012) is the same as for delivery site X.

For the requirements in week February 18-25 no contract has been specified.

GoodsRequirements	
- creationDateTime	2005-02-09T11.00.00
- documentStatusCode	ORIGINAL
- structureTypeCode	ITEM_BY_LOCATION
- goodsRequirementsTypeCode	GROSS_REQUIREMENTS
EntityIdentification (+goodsRequirementsIdentification)	
- entityIdentification	2005001
PartyIdentification (+contentOwner)	
- gln	8712345678913
TransactionalParty (+seller)	
- gln	8812345678903
TransactionalParty (+buyer)	
- gln	8712345678913
Contact	

<b>GoodsRequirements</b>	
- personName	Kramer
- responsibility	goodsRequirementsPlanner
<b>GoodsRequirementsItemLocationInformation *1</b>	
TransactionalParty (+shipTo)	
- gln	8712345670009
TransactionalTradeItem	
- gtin	08712345678906
<b>GoodsRequirementsLineItem *1.1</b>	
- lineItemNumber	1
- planBucketSizeCode	WEEK
- requiredQuantity	1000
DateTimeRange (+requirementsPeriod)	
- beginDate	2005-02-11
- endDate	2005-02-17
DocumentReference (+purchaseConditions)	
- lineItemNumber	23
- entityIdentification	2004000012
PartyIdentification (+contentOwner)	
- gln	8712345678999
QuantitySpecification(+requiredQuantitySpecification)	
- quantitySpecificationType	RECEIVED
- specificQuantity (value, unitOfMeasure)	500
<b>GoodsRequirementsLineItem *1.2</b>	
- lineItemNumber	2
- planBucketSizeCode	WEEK
- requiredQuantity	1200
DateTimeRange (+requirementsPeriod)	
- beginDate	2005-02-18
- endDate	2005-02-25
<b>GoodsRequirementsItemLocationInformation *2</b>	
TransactionalParty (+shipTo)	
- gln	8712345678951
TransactionalTradeItem	
- gtin	08712345678906
<b>GoodsRequirementsLineItem *2.1</b>	
- lineItemNumber	1
- planBucketSizeCode	WEEK

GoodsRequirements	
- requiredQuantity	300
DateTimeRange (+requirementsPeriod)	
- beginDate	2005-02-11
- endDate	2005-02-17
DocumentReference (+purchaseConditions)	
- lineNumber	23
- entityIdentification	2004000012
PartyIdentification (+contentOwner)	
- gln	8712345678999
GoodsRequirementsLineItem *2.2	
- lineNumber	2
- planBucketSizeCode	WEEK
- requiredQuantity (value, unitOfMeasure)	1200
DateTimeRange	
- beginDate	2005-02-18
- endDate	2005-02-25

## 7. Implementation Considerations

Not Applicable

## 8. Testing

This section describes the testing criteria for business solutions.

### 8.1. Pass / Fail Criteria

Not Applicable

### 8.2. Test Data

Not Applicable

## 9. Appendices

Not Applicable

## 10. Adherence to Architectural Principles

#	AG Principle	BSD Adherence Statement	Does BSD Adhere?	Comment
2.1	The GS1 Architecture shall be fully aligned to GS1 Strategy, Vision, & Mission	The solution in the BSD is aligned with the business problem as defined in the CR and BCD.	<input checked="" type="checkbox"/>	
2.2	The GS1 Architecture shall leverage the use of GS1 Keys	The solution maintains the GS1 keys as the primary, mandatory identifiers.	<input checked="" type="checkbox"/>	
2.3	The GS1 Architecture shall leverage the common GS1 Global Data Dictionary (GDD)	The solution does not alter the formats of primary identifiers and complies with data elements as defined in the Global Data Dictionary.	<input checked="" type="checkbox"/>	
2.4	The GS1 Architecture shall be forward-looking, provide for migration strategies and backward compatibility, and support adaptable and flexible solutions	The solution is backwards compatible according to the stated scope in the document. The solution takes into consideration the potential impact of the standard, especially with respect to implementation and maintenance. Any potential known impact is documented.	<input checked="" type="checkbox"/>	
2.5	The GS1 Architecture shall support business processes tied to trading partner needs, relevant, and committed to demonstrable business value	All business requirements contained in the related BRAD come from trading partners or representatives with a genuine intention to implement the standards when developed. All requirements are driven by the business needs of the trading partners.	<input checked="" type="checkbox"/>	
2.6	The GS1 Architecture shall enable security where appropriate	Security solutions are included where appropriate.	<input checked="" type="checkbox"/>	
2.7	The GS1 Architecture shall be consistent	The solution does not violate consistency of the data architecture within each layer and between each layer of the GS1 System. For example, requirements do not alter a key used across GS1 standards or alter a reusable object without applying this change across related standards.	<input checked="" type="checkbox"/>	
2.8	The GS1 Architecture shall be royalty-free	The solution supports this principle where possible. The solution may include the use of other standards organizations that may not be royalty free.	<input checked="" type="checkbox"/>	

#	AG Principle	BSD Adherence Statement	Does BSD Adhere?	Comment
3.1	The GS1 Architecture should promote the achievement of the best overall value at the lowest total cost of ownership	The solution promotes the achievement of the best overall value at the lowest total cost of ownership.	<input checked="" type="checkbox"/>	
3.2	The GS1 Architecture should promote scalability	The solution takes into consideration the potential scalability of the standard. Any potential known impact to scalability is documented.	<input checked="" type="checkbox"/>	
3.3	The GS1 Architecture should promote seamless integration	The BSD promotes seamless integration with other GS1 Standards if in scope.	<input checked="" type="checkbox"/>	
3.4	The GS1 Architecture should promote interoperability and compliance	The solution takes into consideration data and process interoperability. For example, any shared objects between interoperable messages must remain consistent. Any potential known impact to interoperability is documented.	<input checked="" type="checkbox"/>	
3.5	The GS1 Architecture should promote simplicity and standard interfaces	The solution does not threaten the standardisation of the interfaces of the GS1 System. Interfaces are not limited to references to technology but also include such ideas as business interfaces and process interfaces.	<input checked="" type="checkbox"/>	
3.6	The GS1 Architecture should avoid duplication	The solution does not create duplications with existing GS1 components. If there are potential duplications, these are documented with a stated rationale for the duplication.	<input checked="" type="checkbox"/>	
3.7	The GS1 Architecture should promote technology independence and a layered approach	The solution does not impose implicit or explicit restrictions of any technology.	<input checked="" type="checkbox"/>	
3.8	The GS1 Architecture should promote global cross-sector definitions and leverage the best of global and the best of local	The solution takes into account a global perspective.	<input checked="" type="checkbox"/>	
3.9	The GS1 Architecture shall leverage a common strategy for extensibility	This solution uses consistent and common, extensibility approaches, methodologies and technology where available and applicable.	<input checked="" type="checkbox"/>	
4.1	In support of a common GS1 Architecture, GS1 shall leverage work of other standards bodies wherever possible.	This solution utilizes works of other standards bodies wherever possible.	<input checked="" type="checkbox"/>	

#	AG Principle	BSD Adherence Statement	Does BSD Adhere?	Comment
4.2	In support of a common GS1 Architecture, GS1 shall strive to eliminate exceptions and variances wherever possible	The solution strives to eliminate exceptions and variances wherever possible and does not create new variances.	☒	

## 11. Summary of Changes

Change	BSD Version	Associated CR Number
For BMS Release 3.0.0 Updated to reflect changes in modelling methodology.	Issue 1.0.0	Not Applicable
For Issue Resolution: <ul style="list-style-type: none"> <li>■ Fixed typo in title section 11: “Principals” -&gt; “Principles”</li> <li>■ Updated business example and test data for the changes in sequencing and issue resolution.</li> </ul>	Issue 1.0.0	Not Applicable
For Peer Review: <ul style="list-style-type: none"> <li>■ Changed font in alternate scenario in use case section 4.2 from Times New Roman to Arial</li> <li>■ Changed font in alternate scenario in use case section 4.4 from Times New Roman to Arial</li> <li>■ Changed alignment in the business rule in section 4.2 to left.</li> <li>■ Changed alignment in the business rule in section 4.4 to left.</li> </ul>	Issue 1.0.0	Not Applicable
For Publication <ul style="list-style-type: none"> <li>■ Added Copyright R in GS1 Logo</li> <li>■ Changed Status to Approved</li> <li>■ Removed year reference in footer copyright statement</li> <li>■ Replaced Section 10 with updated AG Principles</li> </ul>	Issue 1.0.0	Not Applicable