

Business Message Standard (BMS)

for

Consumption Report

**BRG: Deliver
IRT: Upstream Standards**

BMS Release: 2.1

Document Version: 0.1.2

Date: 13.07.2005



Change Request Reference

Refer to Change Request (CR) Number(s):	CR04-000211
CR Submitter(s):	Regenald Kramer
Date of CR Submission to GSMP:	05.11.2004

Business Requirements Document (BRAD) Reference

BRAD Title:	BRAD Upstream Standards – Despatch, Receipt & Consumption
BRAD Date:	29.11.2004
BRAD Version:	0.1.1

Document Summary

Document Number:	0.1.2
Document Title:	BMS for Consumption Report
Owner:	BRG: Deliver IRT: Upstream Standards Chairperson: Fred Kempkes
Status:	(check one box) <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> Approved
BMS Template Version:	1.2
Targeted BMS Publication Version	2.1

Document Change History

Note: During development include revisions in history. Upon Approval, eliminate revisions and include only delta from previous version.

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
07.02.2005	0.0.1	CJ	Initial Draft		
01.03.2005	0.0.2	CJ	Review	Chapter 7: Moved time period and bucket size to line item level.	
06.06.2005	0.1.0	CJ	Peer review		
13.07.2005	0.1.1	CJ	Technical Development Public Review		n/a
24.04.2007	0.1.2	Giovanni Biffi	Editorial Changes	Minor Editorial Changes to the Document	N/A

Business Message Standard

Table of contents

Chapter	Page
1 Business Solution	1
1.1 Business Domain View.....	1
1.1.1 Problem Statement / Business Need.....	1
1.1.2 Objective.....	1
1.1.3 Audience.....	1
1.1.4 Artefacts	1
1.1.5 References	1
1.1.6 Acknowledgements	1
1.1.6.1 IRT Members.....	1
1.1.6.2 BRG Members.....	2
1.1.6.3 ITRG Members	3
1.1.6.4 Design Team Members	3
1.2 Business Context	3
1.3 Additional Technical Requirements Analysis	4
1.3.1 Technical Requirements (optional).....	4
1.4 Business Transaction View	4
1.4.1 Business Transaction CONSUMPTION REPORT	4
1.4.2 Business Transaction Use Case Diagram.....	4
1.4.3 Use Case Description.....	4
1.4.4 Business Transaction Activity Diagram(s).....	5
1.4.5 Business Transaction Sequence Diagram(s) (optional)	5
1.5 Information Model (including GDD Report)	6
1.5.1 Data Description	6
1.5.2 GDD Report.....	7
1.5.3 Class Diagrams	10
1.5.4 Code Lists.....	11
1.6 Business Document Example	12
1.7 Implementation Considerations.....	14
1.8 Testing.....	14
1.8.1 Pass / Fail Criteria	14
1.8.2 Test Data	14
1.9 Appendices.....	14

Business Message Standard

Table of contents

1.10 Summary of Changes.....	14
2 Technical Solution Design.....	16

Business Solution Design

1 Business Solution

1.1 Business Domain View

1.1.1 Problem Statement / Business Need

(States the business need, establishing the context for the business transactions and information requirements.)

In consignment business scenarios the buyer needs to communicate the consumed materials or sold goods to the seller.

1.1.2 Objective

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

(Above is standards text for the objective.)

1.1.3 Audience

(List of expected internal and external users of the BMS expressed as stakeholder.)

- Manufacturers
- Suppliers
- Logistic Service Providers

1.1.4 Artefacts

(List of the artefacts that are used as either an input to the process or an output from the process, also indicating the different states that the artefact takes during the process.)

Artefact name	State	Artefact / State description

1.1.5 References

	Reference Name	Description
[Ref1]	BMS Common Library - version 2.0	The documented design of components that are used in multiple messages.
[Ref2]	BRAD Upstream Standards – Despatch, Receipt & Consumption 0.1.1	

1.1.6 Acknowledgements

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

1.1.6.1 IRT Members

Function	Name	Company / organisation
IRT Chair	Fred Kempkes	Unilever
IRT Participant	Kevin Zeng	Procter & Gamble

Business Solution Design

IRT Participant	Stephen Bell	CPG Market
IRT Participant	Roland Dachs, Olivier Grienenberger, Don Reed	Crown Cork
IRT Participant	Arthur Doldersum	SCA
IRT Participant	James Kimber	General Mills, Inc.
IRT Participant	Kristen Halwachs	UCCnet
IRT Participant	Nicola Comiotto, Menno Smit	Nestlé
IRT Participant	Pawel Solowinski	Kappa Packaging
IRT Participant	Peter Broend, Johannes Lundgren	Novozymes
IRT Participant	Paul Moodey	Johnson & Johnson
IRT Participant	Wouter Crul	Nspyre
IRT Participant	Thierry Baillif, Gabriel Galeazzi	Firmenich
IRT Participant	Jan Peter Klijn	Royal Sens
IRT Participant	Yasushi Kiyama	Ajinomoto Co.
IRT Participant	Georges Socquet	Givaudan

1.1.6.2 BRG Members

Function	Name	Company / organisation
BRG Chair	Debra Noyes	Johnsonville Sausage
BRG Chair	Sue Donarski	Schneider Logistics
BRG Member	Regina De Baker	Watkins
BRG Member	Shanda Marvin	Procter & Gamble
BRG Member	Mike Osiecki	Best Buy Company
BRG Member	Roman Gural	UPS
BRG Member	Wayne Gingerich	Werner Enterprises
BRG Member	Paul Martin	General Mills
BRG Member	Kari Melhus	Target Corporation
BRG Member	Jeff Miller	Kraft Foods, Inc.
BRG Member	Bob Robertson	Manhattan Associates
BRG Member	David Burns	INTTRA
BRG Member	Marco Van Der Lee	EAN Netherlands
BRG Member	Apostolos Xiradakis	Unilever
BRG Member	Thorsten Kirschner	CCG (EAN Germany)
BRG Member	Jean François Fusco	Geodis Solution
BRG Member	Aart Koning	Albert Heijn
BRG Member	José Jean-Paul Tavares	EAN Brazil
BRG Member	Jeoffrey Cubillos	IBC Solutions
BRG Member	Tamari Tashiro	DCC (EAN Japan)
BRG Member	Tan Jin Soon	SANC (EAN Singapore)

Business Solution Design

BRG Manager	Bruno Julien	Gencod EAN France

1.1.6.3 ITRG Members

Function	Name	Company / organisation
ITRG Chair		
ITRG Member		
ITRG Member		
ITRG Member		
...		

1.1.6.4 Design Team Members

Function	Name	Organisation
Modeller	Coen Janssen	GS1 Netherlands
XML Technical Designer	Dipan Anarkat	GS1
EANCOM Technical Designer	Marco Schuyt	GS1 Netherlands
Peer Reviewer	John Ryu	GS1

1.2 Business Context

(Note: The context of the business)

Context Category	Value(s)
Industry	<i>All, Consumer Packaged Goods</i> All
Geopolitical	<i>All, Global, Europe, Unites States, Japan, UK</i> Global
Product	<i>All, Direct Materials, Food, Non-Food, Hard lines, Apparel</i> All
Process	<i>All, Order (Direct To Consumer), Order (Direct Store Delivery), Order, Pay (Self Billing), Deliver (Direct Store Delivery)</i> Deliver (Consignment)
Official Constraints	<i>None, Value Added Tax, Sales Tax</i> None
Roles	<i>Buyer, Seller, Ship From, Ship To, Payer Payee, Data Source, Data Recipient</i> Buyer, Seller
System Capabilities	<i>All, EANCOM, XML, AIDC, EPC-network</i> EANCOM, XML

Business Solution Design

If no value use, the default of "All" except for Official Constraints where default is "None".

(Process, Geopolitical, Industry, User Role (Retailer, Supplier, etc.))

If context cannot be specified, select from the context classification code list in the GDD.).

1.3 Additional Technical Requirements Analysis

1.3.1 Technical Requirements (optional)

(User Interface, Security, Performance, Quality, etc.)

Number	Statement	Rationale
1.		

1.4 Business Transaction View

1.4.1 Business Transaction CONSUMPTION REPORT

1.4.2 Business Transaction Use Case Diagram

Detailed Use Case for generic use of the message. Focuses on commands associated with business solution.

Note: Each Use Case shall be given a consecutive paragraph number (e.g., 2.4.1) and heading.)

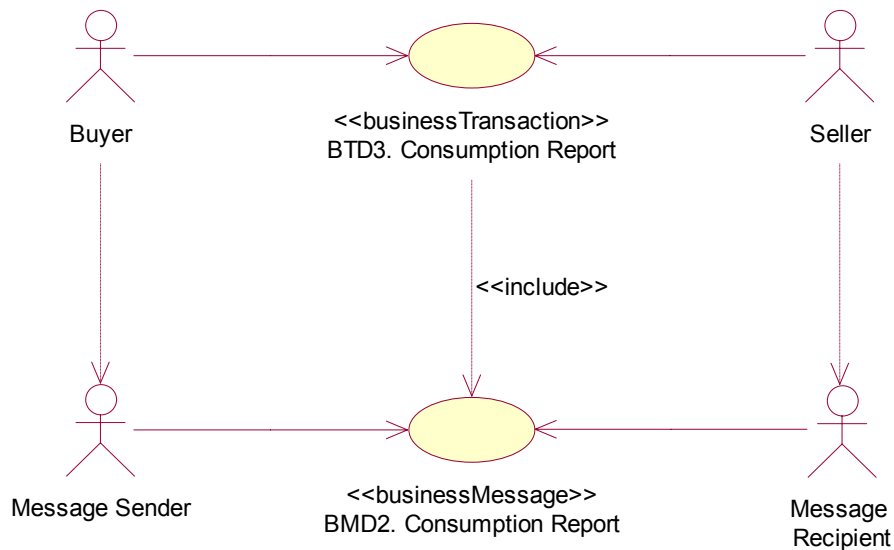


Figure 1 – Use Case Diagram: Business Transaction

1.4.3 Use Case Description

Business Solution Design

Use Case ID	BTD3										
Use Case Name	Consumption Report										
Use Case Description	The buyer communicates the consumed goods to the seller.										
Actors (Goal)	Buyer: To send the consumption report. Seller: To receive the consumption report.										
Performance Goals											
Preconditions	Goods Consumption: CALCULATED										
Post conditions	Goods Consumption: COMMUNICATED										
Scenario	<p>Begins when:</p> <p>The Buyer has calculated the goods that were consumed during the consumption period.</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>Buyer</td> <td>Sends Consumption Report message to the Seller.</td> </tr> <tr> <td>2.</td> <td>Seller</td> <td>Receives Consumption Report Message</td> </tr> </tbody> </table> <p>Ends when:</p>		Step #	Actor	Activity Step	1.	Buyer	Sends Consumption Report message to the Seller.	2.	Seller	Receives Consumption Report Message
Step #	Actor	Activity Step									
1.	Buyer	Sends Consumption Report message to the Seller.									
2.	Seller	Receives Consumption Report Message									
Alternative Scenario	<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>1.</td> <td></td> <td></td> </tr> <tr> <td>2.</td> <td></td> <td></td> </tr> </tbody> </table>		Step #	Actor	Activity Step	1.			2.		
Step #	Actor	Activity Step									
1.											
2.											
Business Transaction Rules	<table border="1"> <tbody> <tr> <td>1.</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>		1.								
1.											

1.4.4 Business Transaction Activity Diagram(s)

(Note: Activity diagrams are optional. The business process modeller shall determine the use and number of activity diagrams included in the BMS. Each activity diagram shall be given a consecutive paragraph number (e.g., 2.4.1) and heading.)

1.4.5 Business Transaction Sequence Diagram(s) (optional)

(Note: Sequence diagrams are optional. The business process modeller shall determine the use and number of sequence diagrams included. Each sequence diagram shall be given a consecutive paragraph number (e.g., 2.5.1) and heading.)

Business Solution Design

1.5 Information Model (including GDD Report)

1.5.1 Data Description

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
ConsumptionReport				
		<<is a>>	Document	[ref2] {7.3.1-2, 3}
		consumption-ReportIdentification	EntityIdentification	[ref2] {7.3.1-1}
		buyer	PartyIdentification	[ref2] {7.3.1-4}
		seller	PartyIdentification	[ref2] {7.3.1-5}
		materialRequirements-Planner	Contact	[ref2] {7.3.1-6}
ConsumptionReportItemLocation-Information				
			TradeItemIdentification	[ref2] {7.3.1-11}
		shipTo	PartyIdentification	[ref2] {7.3.1-8}
		inventoryLocation	PartyIdentification	[ref2] {7.3.1-9}
ConsumptionReportLineItem				
		<<is a>>	LineItem	[ref2] {7.3.1-7}
	consumed-Quantity			[ref2] {7.3.1-20, 21}
	timeBucket-Size			[ref2] {7.3.1-19}
		consumption-Period	TimeOr-DateTimePeriod	[ref2] {7.3.1-14, 15, 16, 17, 18}
		purchaseConditions	DocumentReference	[ref2] {7.3.1-12}

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
			LogisticUnitIdentification	[ref2] {7.3.1-10}
			Transaction-allItemData	[ref2] {7.3.1-13}

1.5.2 GDD Report

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
ConsumptionReport				Consumption Report. Details	Contains the material requirements from the buyer to the seller for given trade items and locations for specific time periods.	
		<<is a>>	Document	Consumption Report. Inheritance_ Association. Document	No definition needed.	
		consumption-ReportIdentification	EntityIdentification	Consumption Report. consumption Report Identification. Entity Identification	Contains the unique identifier of the business document.	1..1
		buyer	PartyIdentification	Consumption Report. Buyer. Party Identification	Contains the identification of the party that is buying the goods.	1..1
		seller	PartyIdentification	Consumption Report. Seller. Party Identification	Contains the identification of the party that is selling the goods.	1..1
		materialRequirements-Planner	Contact	Consumption Report. material Requirements Planner. Contact	Contains the name or ID of the person or department responsible for the planning at the buyer side.	0..1
			ConsumptionReportItemLocation-Information	Consumption Report. Association. Consumption Report Item Location Information	No definition needed.	1..*
ConsumptionReportItemLocation-Information				Consumption Report Item Location Information. Details	Contains the consumption information for given trade items and locations for specific time periods.	

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
			TradeItemIdentification	Consumption Report Item Location Information. Association. Trade Item Identification	Contains the identification of the trade item that applies to the reported goods consumption.	1..1
		shipTo	PartyIdentification	Consumption Report Item Location Information. Ship To. Party Identification	Contains the identification of the location to which the item were shipped by the seller.	1..1
		inventoryLocation	PartyIdentification	Consumption Report Item Location Information. Inventory Location. Party Identification	Identification of the physical place at the receiving side where the items are stored.	0..1
			consumptionReportLineItem	Consumption Report Item Location Information.	No definition needed.	1..*
ConsumptionReportLineItem				Consumption Report Line Item. Details	Contains the consumption information for the specified time period.	
		<<is a>>	LineItem	Consumption Report Line Item. Inheritance_ Association. Line Item	No definition needed.	
	consumed-Quantity			Consumption Report Line Item. Consumed Quantity. Quantity	The number of units consumed.	1..1
	timeBucket-Size			Consumption Report Line Item. Time Bucket Size. Bucket Size Type Code List_ Code	Contains a code describing the size of the requirements period.	0..1
		consumption-Period	TimeOr-DateTimePeriod	Consumption Report Line Item. Consumption Period. Time Or Date Time Period	Contains the start and end dates and optionally start and end times of the period in which the goods were consumed.	1..1
		purchaseConditions	DocumentReference	Consumption Report Line Item. Purchase Conditions. Document Reference	Contains a reference to the commercial agreement under which the goods are supplied.	0..1
			LogisticUnitIdentification	Consumption Report Line Item. Association. Logistic Unit Identification	Contains the identification of the logistic unit item that applies to the reported goods consumption applies.	0..1
			Transaction-	Consumption Report Line	Contains additional item	0..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi- plicity
			alItemData	Item. Association. TransactionalItemData	data such as batch number and best before date that apply to the reported goods consumption.	

1.5.3 Class Diagrams

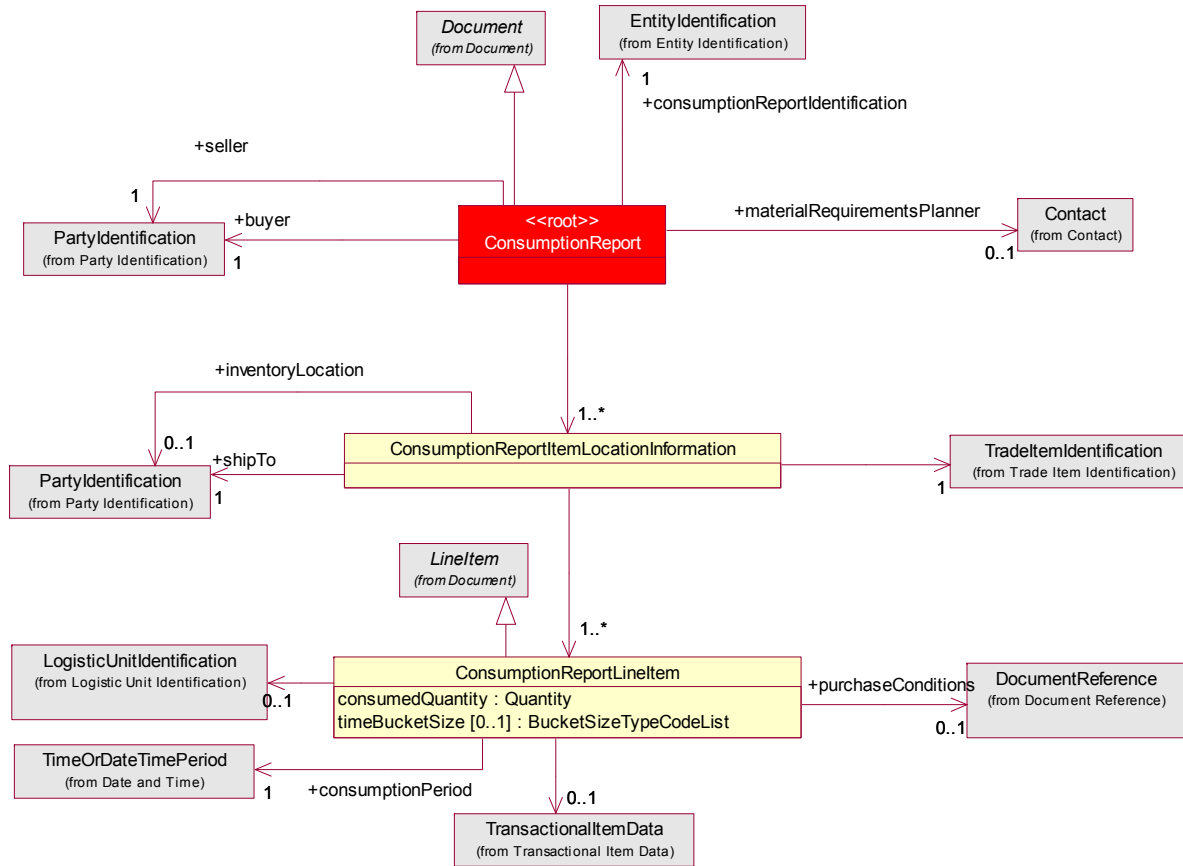


Figure 2 – Class Diagram: Business Document

Business Solution Design

1.5.4 Code Lists

Code List Name	Code List Description
Code Name	Code Description

Business Solution Design

1.6 Business Document Example

The following is an example of a consumption report 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 consumption report is 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 consumption report is for two delivery sites, X (Ship To 8712345670009) and Y (Ship To 8712345678951).

The consumption report is for one item, A (GTIN 08712345678906).

For delivery site X the reporting period is February 11-17.

For delivery site Y the reporting period is February 11, 7:00 AM – February 15, 5:00 PM

For item A and delivery site X the reported consumption is:

- 700 units.

The contract to be used for invoicing the reported consumption (2004000012) was issued by the business unit of the material supplier (content owner 8712345678999). Within the contract line 23 refers to this item.

For item A and delivery site Y the reported consumption is:

- 300 units.

The contract to be used for invoicing the reported consumption is the same as for delivery site X.

ConsumptionReport	
- creationDateTime	2005-02-09T11:00:00
- documentStatus	ORIGINAL
EntityIdentification (+consumptionReportIdentification)	
- uniqueCreatorIdentification	2005001
PartyIdentification (+contentOwner)	
- gLN	8712345678913
PartyIdentification (+seller)	
- gLN	8812345678903
PartyIdentification (+buyer)	
- gLN	8712345678913
Contact (+materialRequirementsPlanner)	
MultiDescription (+personOrDepartmentName)	
- description (language, text)	EN, Kramer
ConsumptionReportItemLocationInformation *1	
PartyIdentification (+shipTo)	

Business Solution Design

- gLN	8712345670009
TradeItemIdentification	
- gTIN	08712345678906
ConsumptionReportLineItem *1.1	
- lineItemNumber	1
- consumedQuantity (value, unitOfMeasure)	700
- timeBucketSize	WEEK
TimeOrDateTimePeriod (+consumptionPeriod)	
TimePeriod	
- startDate	2005-02-11
- endDate	2005-02-17
DocumentReference (+purchaseConditions)	
TypedEntityIdentification	
- entityType	PURCHASE_CONDITIONS
EntityIdentification	
- uniqueCreatorIdentification	2004000012
PartyIdentification (+contentOwner)	
- gLN	8712345678999
DocumentLineReference	
- lineItemNumber	23
ConsumptionReportItemLocationInformation *2	
PartyIdentification (+shipTo)	
- gLN	8712345678951
TradeItemIdentification	
- gTIN	08712345678906
ConsumptionReportLineItem *2.1	
- lineItemNumber	1
- consumedQuantity (value, unitOfMeasure)	300
- timeBucketSize	WEEK
TimeOrDateTimePeriod (+consumptionPeriod)	
DateTimePeriod	
- startDate	2005-02-11T07:00:00
- endDate	2005-02-15T17:00:00
DocumentReference (+purchaseConditions)	
TypedEntityIdentification	
- entityType	PURCHASE_CONDITIONS
EntityIdentification	
- uniqueCreatorIdentification	2004000012
PartyIdentification (+contentOwner)	

Business Solution Design

- gLN	8712345678999
DocumentLineReference	
- lineNumber	23

1.7 Implementation Considerations

1.8 Testing

1.8.1 Pass / Fail Criteria

Unit testing criteria for business solution.

Number	Test Criteria	Related Requirement	Design Element	Pass Criteria	Fail Criteria
1	Reflects a specific business requirement from a related BRAD. For example: When goods are ordered, the buyer requires an answer from the suppliers that the order has been received.	BRAD Name.Version. Req #	Message, role, attribute	Result which determines that requirement has been satisfied: For example: Seller is able to create and send an Order Receipt Acknowledgement.	Result which shows that requirement has not been satisfied: For example: Buyer does not receive the Order Receipt Acknowledgement.
2					
3					

1.8.2 Test Data

Attribute	Value
Attribute Name. For example "orderQuantity"	Valid value associated with the attribute. For example "5".

1.9 Appendices

1.10 Summary of Changes

(Details changes to BMS for each version by BMS Section)

Change	BMS Version	Associated CR Number

Business Solution Design

Section 4.2.2 – <ul style="list-style-type: none">• Added “xxxx” class to Class Diagram	V 0.1	CR 01-00001
---	-------	-------------

2 Technical Solution Design

This section provides the specifications for the standards content ITRG approves. It is called the Technical Solution Design (TSD).

The Technical Solution Design contains:

- TSD Zip file Table of Contents
- Business Message Standard Section Technical Level GDD Report
- XSD (XML Schema Documents)
- XML Instance File and HTML Form View (XML and HTML files containing sample data specified in Section 1.6)

In the process of approving the Technical Solution Design, the ITRG will be provided the following artefacts:

- Any relevant Business Requirements Analysis Document (BRAD)
- Any relevant Business Requirements Document (BRD)
- Section 1 of Business Message Standard (Business Solution Design)
- Comment Resolution Template from Technical Public Review
- XML Test Report
- Change Request
- Other informative or reference documents