Warehousing Operations Instruction and Notification Business Message Standard (BMS)

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Document Summary

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Business Requirements Document (BRAD) Reference

BRAD Title	BRAD Issue Date	BRAD Version
Warehousing Inventory Management	September 2012	1.0

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 – Draft for community review	Ewa Iwicka	BMS Release 3.4	See summary of changes
08-Nov-2019	BMS 3.4.1 – Issue 1	Radhika Chauhan	BMS Release 3.4.1	See summary of changes

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Table of Contents

1   Business Domain View

1.1   Introduction

Message Definition

Warehousing Operations Instruction Message Definition

The Warehousing Operations Instruction message supports the inventory management process, and enables a Logistic Services Client (LSC) to inform his Logistic Services Provider (LSP) that the inventory status of goods needs to be changed.

Warehousing Operations Notification Message Definition

The Warehousing Operations Notification message supports the inventory management process, and enables a Logistic Services Provider (LSP) to inform his Logistic Services Client (LSC) that the inventory status of goods has been changed.

Principles

These messages support the warehouse operations process.

1.2   References

[LIM] GS1 Logistics Interoperability Model, 1.0, GS1 2007

[BRAD_WIO] BRAD Warehousing Inventory Management, 1.0, GS1 2012

[BMS_Shared] BMS Shared Common Library, 3.4, GS1 2016

[BMS_eCom] BMS eCom Common Library, 3.4, GS1 2016

[BMS_Warehousing] BMS Warehousing Common Library, 3.4, GS1 2016

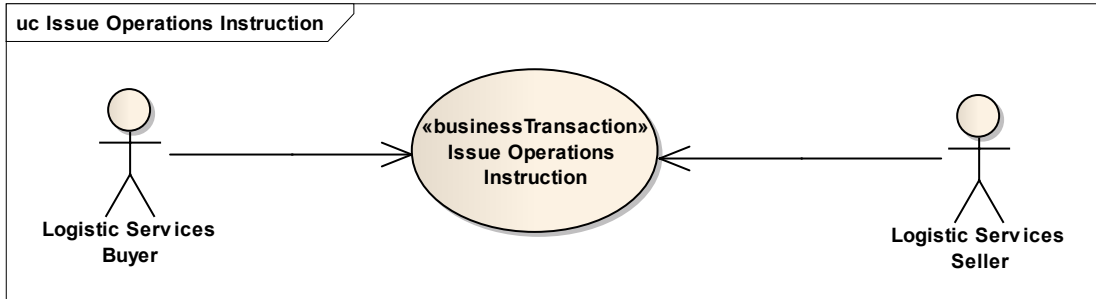# 2   Business Context

Context Category	Value(s)
Industry	All
Geopolitical	All
Product	All
Process	Warehousing – Inventory Management Operations
System Capabilities	GS1 System
Official Constraints	None

3 Business Transaction View

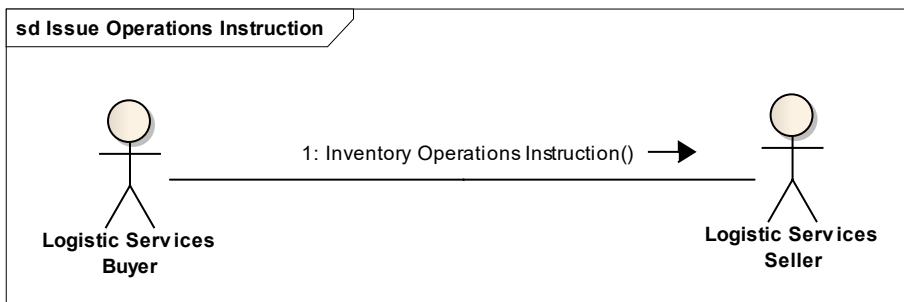## 3.1 Business Transaction – Issue Operations Instruction

Use case diagram

Use case description

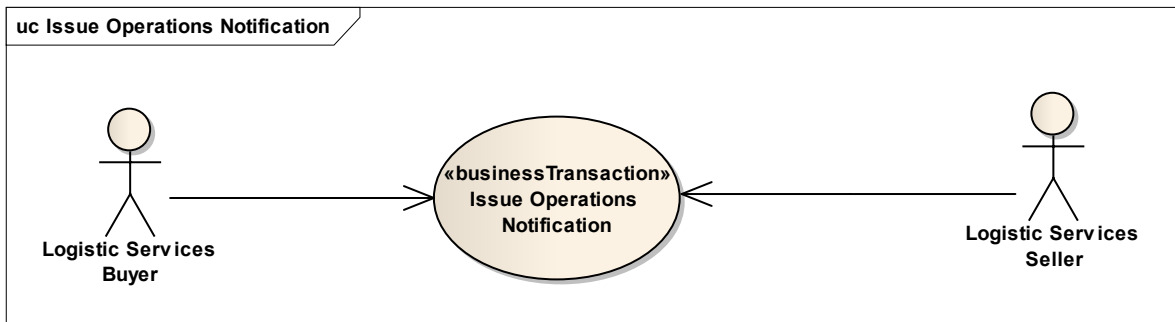|	
Use Case Name	Issue Warehousing Operations Instruction
Use Case Description	The Logistic Services Buyer (LSB) informs the Logistic Services Seller (LSS) that inventory management operations need to be carried out.
Actors (Goal)	Logistic Services Buyer (LSB) Logistic Services Seller (LSS)
Performance Goals	Not applicable
Preconditions	Item master data of the goods been communicated to the Logistic Services Seller.
Post conditions	The Logistic Services Seller has been informed on the operations to be performed.
Main Scenario	▪ LSB generates the Warehousing Operations Instruction from his (enterprise resource planning) system. ▪ LSB sends the Warehousing Operations Instruction to the LSS. ▪ LSS receives the Warehousing Operations Instruction. ▪ LSS processes the Warehousing Operations Instruction in his (warehouse management) system.
Alternative Scenario(s)	**<<scenario name>>** steps

Activity diagram

Not applicable

Communication diagram

3.2 Business Transaction – Issue Operations Notification

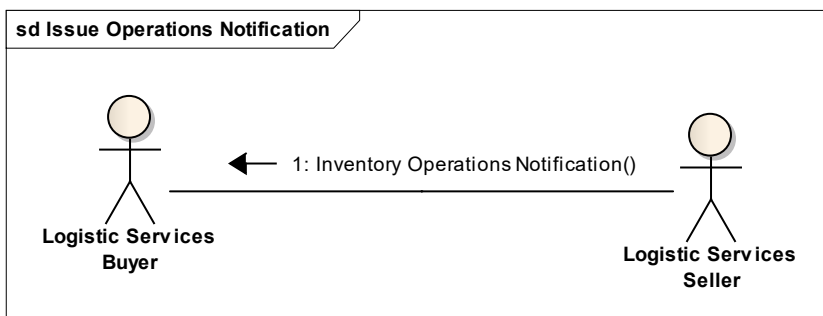### Use case diagram

Use case description

Use Case Name	Issue Warehousing Operations Notification
Use Case Description	The Logistic Services Seller (LSS) informs the Logistic Services Buyer (LSB) on the status of inventory management operations that have been carried out.
Actors (Goal)	Logistic Services Buyer (LSB) Logistic Services Seller (LSS)
Performance Goals	Not applicable
Preconditions	▪ The Logistic Services Seller has been informed on the goods to be shipped.
Post conditions	The Logistic Services Buyer has been informed on the status of the Operations shipment.
Main Scenario	▪ LSS generates the Warehousing Operations Notification from his (warehouse management) system. ▪ LSS sends the Warehousing Operations Notification to the LSB. ▪ LSB receives the Warehousing Operations Notification. ▪ LSB processes the Warehousing Operations Notification in his (enterprise resource planning) system.
Alternative Scenario(s)	Not applicable

Activity diagram

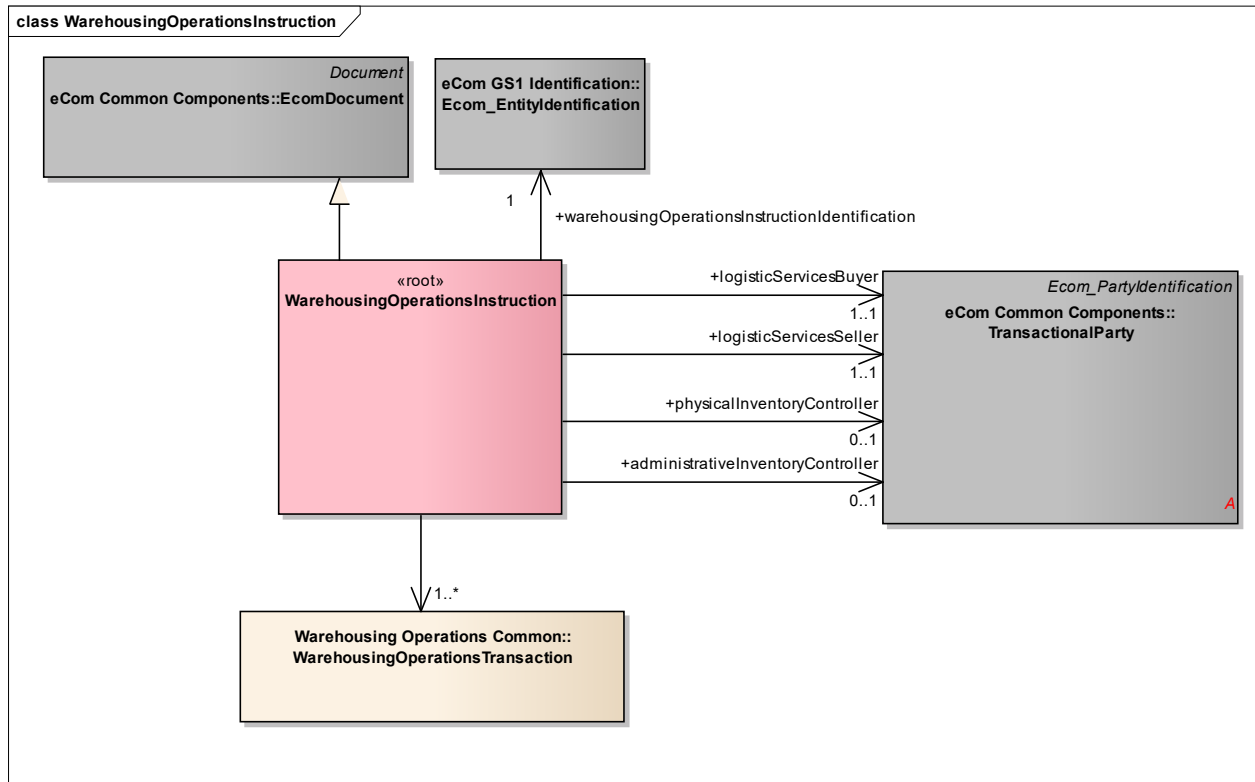Not applicable

Communication diagram

4 Business Information View

4.1 Warehousing Operations Instruction

Class diagram

GDD report

The content of the WarehousingOperationsInstruction 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:WarehousingOperationsInstruction

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
WarehousingOperationsInstruction				Message that supports the inventory management process, and enables a Logistic Services Client (LSC) to inform his Logistic Services Provider (LSP) that the inventory status of goods needs to be changed.	
Association	administrativeInventoryController	TransactionalParty	0..1	A party responsible for the control, accounting and reporting of inventory.	[brad-wim:iopins-5]
Association		WarehousingOperationsTransaction	1..*	Transactions specifying the required changes to the inventory status.	
Association	logisticServicesBuyer	TransactionalParty	1..1	A party that purchases logistics services from another party.	[brad-wim:iopins-2]
Association	logisticServicesSeller	TransactionalParty	1..1	A party that provides logistics services to another party.	[brad-wim:iopins-3]
Association	warehousingOperationsInstructionIdentification	Ecom_EntityIdentification	1..1	The identification of the warehousing operations instruction document.	[brad-wim:iopins-1] WR 15-000314
Generalization		EcomDocument		Basic information about the content of the message including version number, creation date and time.	WR 14-000110
Association	physicalInventoryController	TransactionalParty	0..1	A party responsible for storing of goods and related (physical) inventory operations.	[brad-wim:iopins-4]

✓ **Note:** Reference Shared Common Library Business Message (BMS) Release 3.4 and eCom Domain Common Library Business Message (BMS) Release 3.4 for all common information.

4.2 Warehousing Operations Notification

Class diagram

GDD Report

The content of the WarehousingOperationsNotification 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:WarehousingOperationsNotification
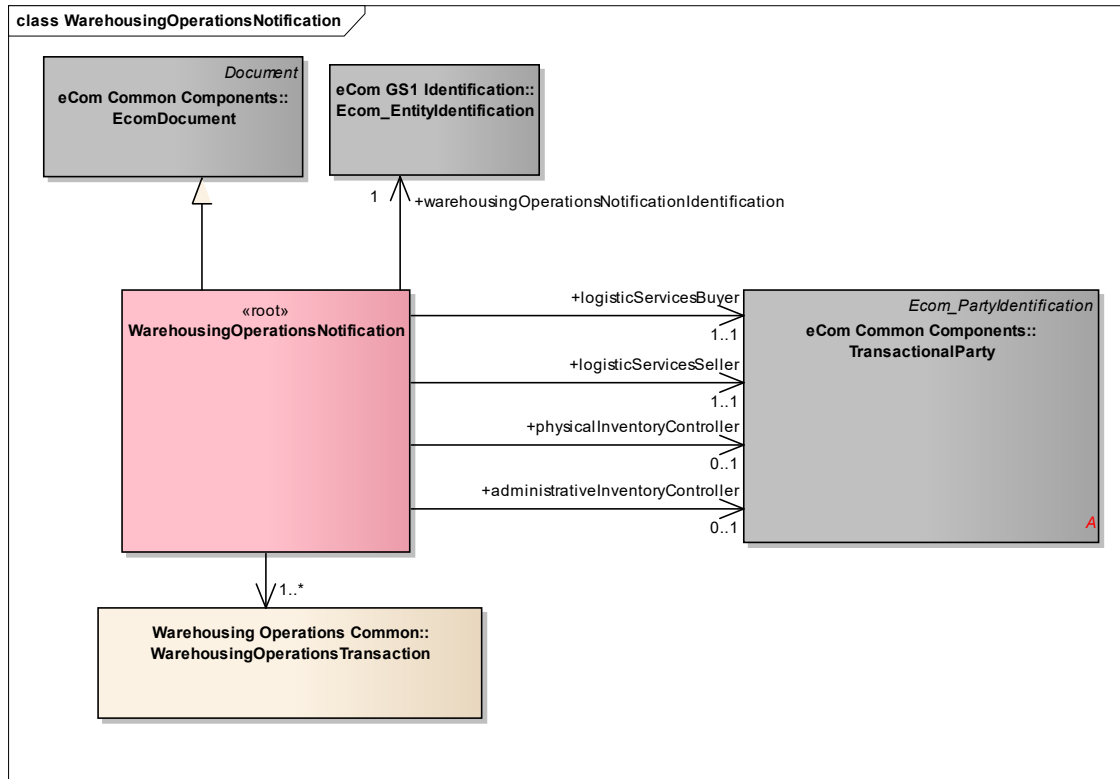
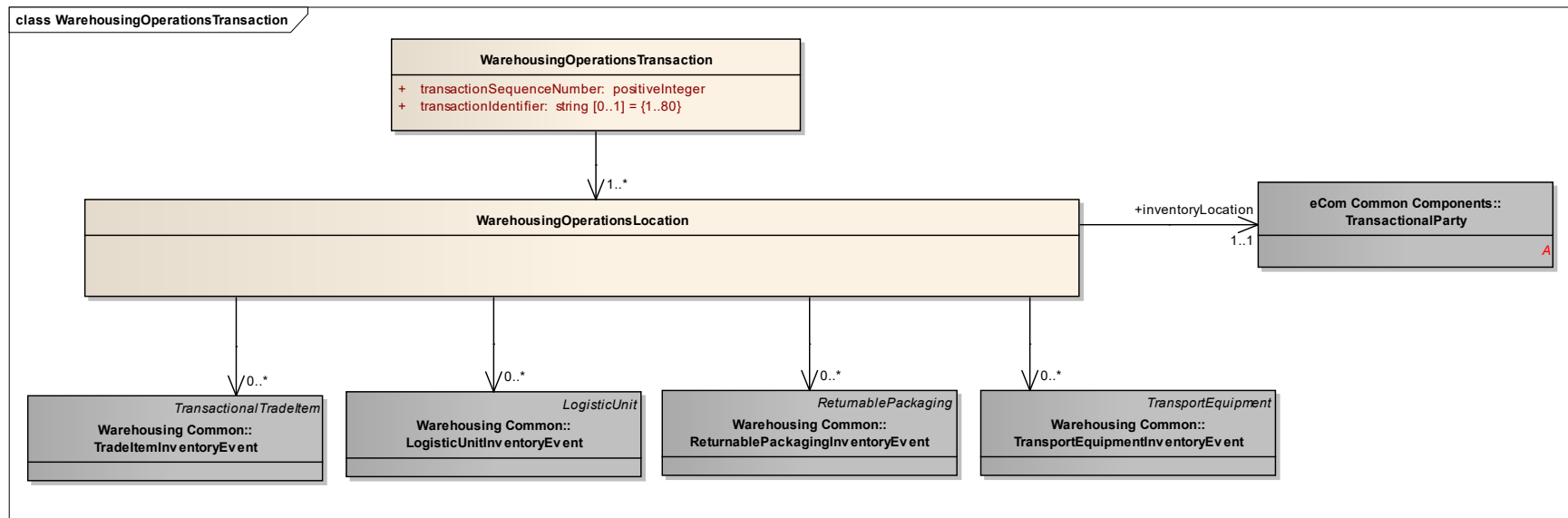| Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
WarehousingOperationsNotification				Message that supports the inventory management process, and enables a Logistic Services Provider (LSP) to inform his Logistic Services Client (LSC) that the inventory status of goods has been changed.	
Association	logisticServicesBuyer	TransactionalParty	1..1	A party that purchases logistics services from another party.	[brad-wim:iopins-2]
Association	physicalInventoryController	TransactionalParty	0..1	A party responsible for storing of goods and related (physical) inventory operations.	[brad-wim:iopins-4]
Generalization		EcomDocument		Basic information about the content of the message including version number, creation date and time.	WR 14-000110
Association	warehousingOperationsNotificationIdentification	Ecom_EntityIdentification	1..1	The identification of the warehousing operations notification document.	[brad-wim:iopinn-1] WR 15-000314
Association	administrativeInventoryController	TransactionalParty	0..1	A party responsible for the control, accounting and reporting of inventory.	[brad-wim:iopins-5]
Association		WarehousingOperationsTransaction	1..*	Transactions specifying the changes to the inventory status.	
Association	logisticServicesSeller	TransactionalParty	1..1	A party that provides logistics services to another party.	[brad-wim:iopins-3]

✅ **Note:** Reference Shared Common Library Business Message (BMS) Release 3.4 and eCom Domain Common Library Business Message (BMS) Release 3.4 for all common information.

4.3 Warehousing Operations Common – Transaction

4.3.1 Warehousing Operations Common – WarehousingOperationsTransaction

Class Diagram

GDD Report

The content of the WarehousingOperationsTransaction 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:WarehousingOperationsTransaction

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
WarehousingOperationsTransaction				A set of inventory updates that need to be carried out together for the transaction to complete successfully.	[brad-wim:iopins-6]
Association		WarehousingOperationsLocation	1..*	Details on the inventory events for this transaction, organized by inventory location.	

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
Attribute	transactionSequenceNumber	positiveInteger	1..1	Number that prescribes the sequence in which the transactions included in the message need to be processed.	[brad-wim:iopins-6.2]
Attribute	transactionIdentifier	string	0..1	Identifier of the transaction to be used for reference purposes.	[brad-wim:iopins-6.1]
WarehousingOperationsLocation				Details on the inventory events for this transaction, organized by inventory location.	
Association		TradeItemInventoryEvent	0..*	Information specifying an inventory activity of one or more trade items (of the same type) at a specific sub-location at a specific point in time.	[brad-wim:iopins-6.3.2, 6.3.3, 6.3.6, 6.3.8, 6.3.9, 6.3.10, 6.3.11]]
Association	inventoryLocation	TransactionalParty	1..1	The inventory location related to the included inventory events.	[brad-wim:iopins-6.3.4]
Association		LogisticUnitInventoryEvent	0..*	Information specifying an inventory activity of a specific logistic unit at a specific sub-location at a specific point in time.	[brad-wim:iopins-6.3.7]
Association		TransportEquipmentInventoryEvent	0..*	Information specifying an inventory activity of one or more pieces of transport equipment (of the same type) at a specific sub-location at a specific point in time.	
Association		ReturnablePackagingInventoryEvent	0..*	Information specifying an inventory activity of one or more returnable packaging items (of the same type) at a specific sub-location at a specific point in time.	

4.4 Enumerations (message specific)

Not applicable

4.5 Code Lists

Not applicable

5 Business Message Examples

5.1 Example 1

Warehousing Operations Instruction

Instruction by the administrative inventory controller to change the customs status of item `01111111001110`, location AB-1, from BONDED to FREE_CIRCULATION.

Attribute	Value
WarehousingOperationsInstruction	
creationDateTime	2012-07-11T12:15:00
documentStatusCode	ORIGINAL
documentActionCode	ADD
EntityIdentification (+warehousingOperationsInstructionIdentification)	Document ID: INOPI00123
TransactionalParty (+logisticServicesBuyer)	gln: 2222222000004
TransactionalParty (+logisticServicesSeller)	gln: 3333333000001
TransactionalParty (+administrativeInventoryController)	gln: 2222222000004
TransactionalParty (+physicalInventoryController)	gln: 3333333000001
WarehousingOperationsTransaction	
transactionSequenceNumber	1
transactionIdentifier	INOPI00123-1
WarehousingOperationsLocation	
TransactionalParty (+inventoryLocation)	
gln	3333333000018
TradeItemInventoryEvent	
gtin	01111111001110
tradeItemQuantity	200
eventIdentifier	1
inventoryBusinessStepCode	status_changing
inventoryDispositionCode	sellable_accessible

Attribute	Value
inventoryMovementTypeCode	DECREASE
InventorySubLocation (+)	
glnExtension	AB-1
AdministrativeUnit (+)	
administrativeUnitTypeCode	OPERATING_UNIT
internalAdministrativeUnitIdentification	123-E
InventoryDutyFeeTaxStatus (+)	
dutyFeeTaxTypeCode	IMP
customsWarehouseStatusCode	BONDED
TradeItemInventoryEvent	
gtin	01111111001110
tradeItemQuantity	200
eventIdentifier	2
inventoryBusinessStepCode	STATUS_CHANGING
inventoryDispositionCode	SELLABLE_ACCESSIBLE
inventoryMovementTypeCode	INCREASE
InventorySubLocation (+)	
glnExtension	AB-1
AdministrativeUnit (+)	
administrativeUnitTypeCode	OPERATING_UNIT
internalAdministrativeUnitIdentification	123-NE
InventoryDutyFeeTaxStatus (+)	
dutyFeeTaxTypeCode	IMP
customsWarehouseStatusCode	FREE_CIRCULATION

5.2 Example 2

Warehousing Operations Notification

Notification by the physical inventory controller on the damaging of 1 unit of item `01111111001110`, location AB-1, customs status BONDED.

Element	Value
WarehousingOperationsNotification	creationDateTime: 2012-07-11T12:15:00 documentStatusCode: ORIGINAL documentActionCode: ADD
EntityIdentification (+warehousingOperationsNotificationIdentification)	Document ID: INOPN54031
TransactionalParty (+administrativeInventoryController)	gln: 2222222000004
TransactionalParty (+physicalInventoryController)	gln: 3333333000001

Element	Value
TransactionalParty (+logisticServicesSeller)	gln: 2222222000004
TransactionalParty (+logisticServicesBuyer)	gln: 3333333000001
WarehousingOperationsTransaction	transactionSequenceNumber 1 transactionIdentifier INOPN54031-1
WarehousingOperationsLocation	
- TransactionalParty (+inventoryLocation)	gln: 3333333000018
TradeItemInventoryEvent	gtin: 01111111001110 tradeItemQuantity: 1 eventIdentifier: 2 inventoryBusinessStepCode: status_changing inventoryDispositionCode: sellable_accessible inventoryMovementTypeCode: DECREASE
- InventorySubLocation (+)	glnExtension: AB-1
- AdministrativeUnit (+)	administrativeUnitTypeCode: OPERATING_UNIT internalAdministrativeUnitIdentification: 123-E
- InventoryDutyFeeTaxStatus (+)	dutyFeeTaxTypeCode = IMP customsWarehouseStatusCode: BONDED
TradeItemInventoryEvent	gtin: 01111111001110 tradeItemQuantity: 1 eventIdentifier: 2 inventoryBusinessStepCode: status_changing inventoryDispositionCode: non_sellable_damaged inventoryMovementTypeCode: INCREASE
- InventorySubLocation (+)	glnExtension: AB-1
- AdministrativeUnit (+)	administrativeUnitTypeCode: OPERATING_UNIT internalAdministrativeUnitIdentification: 123-E
- InventoryDutyFeeTaxStatus (+)	dutyFeeTaxTypeCode = IMP customsWarehouseStatusCode: BONDED

6 Implementation Considerations

6.1 User Guide

The Functional User Guide contains more information about the structure and content of the Warehousing Operations Instruction and Notification message:
http://www.gs1.org/docs/ecom/xml/3/3.4/eCom-Trade_messages.html#WarehousingOperationsInstructionandNotification

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 3.1

First publication

7.2 BMS Release 3.2

Change	Associated WR
Added Attribute Value Pair at the root, line item and sub line item levels **class WarehousingOperationsInstruction - maintenance view** «root» **WarehousingOperationsInstruction** *maintenance* Defect: (New) 3.2 changed generalisation from Document to eComDocument class to include AVP (WR 14-110)	**14-000110**
Added Attribute Value Pair at the root, line item and sub line item levels **class WarehousingOperationsNotification - maintenance view** «root» **WarehousingOperationsNotification** *maintenance* Defect: (New) 3.2 changed generalisation from Document to eComDocument class to include AVP (WR 14-110)	**14-000110**

7.3   BMS Release 3.3

Change	Associated WR
Created Ecom_EntityIdentification class and changed association from the previous EntityIdentification 	**15-000314** Make GS1 identificatio n keys optional in GS1 EDI XML
Created Ecom_EntityIdentification class and changed association from the previous EntityIdentification 	**15-000314** Make GS1 identificatio n keys optional in GS1 EDI XML

7.4   BMS Release 3.4

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

7.5   BMS Release 3.4.1

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

8   Appendices

Not Applicable

9 Acknowledgements

9.1.1 Work Group

Function	Name	Company / organisation
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Co-chair	Schmidt, Tom Eric	August Storck KG
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Member	Bodemer, Petra	dm-drogerie markt GmbH + Co. KG
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Member	Chresta, Richard	GS1 Switzerland
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Member	Cox, Marc	Philips Electronics N.V.
Member	Darnell, David	Systrends
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Member	Sharma, Vishal	General Mills, Inc.
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Member	Tompsett, Simon	Waitrose
Member	Trelle, Ute	1WorldSync Holdings, Inc.
Member	Tse, Steve	GS1 Hong Kong
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9.1.2 Development Team Members

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