Business Message Standard (BMS)

Warehousing Inbound Instruction and Notification

BMS Release 3.1

1-May-2013, Issue 1

Document Summary

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BRAD Title:	BRAD Date:	BRAD Version
Warehousing Inbound and Outbound processes	25-Jul-2012	1.0

Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change
1-May-2013	BMS 3.1 - issue 1	Coen Janssen	Publication of BMS release 3.1	First release of this message standard.

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1. Business Domain View

1.1. Problem Statement / Business Need

This standard is part of a global GS1 solution for warehouse management that will support the optimization of warehouse management operations in a scalable way. This will ultimately take out unnecessary cost of the supply chain.

1.2. Objective

This standard defines the transaction model and data model for the following business message(s):

- Warehousing Inbound Instruction – Message that supports the warehouse inbound process, and enables a Logistic Services Client (LSC) to inform his Logistic Services Provider (LSP) that goods will be arriving.
- Warehousing Inbound Notification –Message that supports the warehouse intbound process, and enables a Logistic Services Provider (LSP) to inform his Logistic Services Client (LSC) on the status of goods received on behalf of the client.

1.3. Audience

This document is intended for anyone interested in implementing the GS1 eCom standards for Transport and Logistics.

1.4. References

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

[BRAD_WIO] BRAD Warehousing Inbound and Outbound Processes, 1.0, GS1 2012

[BMS_Shared] BMS Shared Common Library, 3.1, GS1 2012

[BMS_eCom] BMS eCom Common Library, 3.1, GS1 2012

[BMS_Warehousing] BMS Warehousing Common Library, 3.1, GS1 2012

1.5. Acknowledgements

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

1.5.1. Work Group

Function	Name	Company / organisation
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Member	Bonnie Ryan	GS1 Australia
Member	Kurt Herregodts	GS1 Belgium & Luxembourg

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Function	Name	Company / organisation
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1.5.2. Development Team Members

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2. Business Context

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

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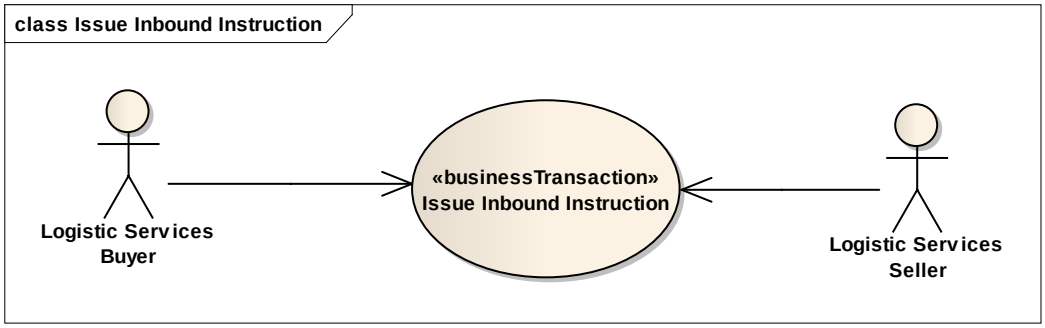
3. Business Transaction View

3.1. Business Transaction – Issue Inbound Instruction

Use case diagram



Use case description

Use Case Name	Issue Warehousing Inbound Instruction
Use Case Description	The Logistic Services Buyer (LSB) informs the Logistic Services Seller (LSS) that a shipment will be delivered to the warehouse.
Actors (Goal)	Logistic Services Buyer (LSB) Logistic Services Seller (LSS)
Performance Goals	Not applicable
Preconditions	Item master data of the goods to be received have been communicated to the Logistic Services Seller.
Post conditions	The Logistic Services Seller has been informed on the goods to be received.
Main Scenario	▪ LSB generates the Warehousing Inbound Instruction from his (enterprise resource planning) system. ▪ LSB sends the Warehousing Inbound Instruction to the LSS. ▪ LSS receives the Warehousing Inbound Instruction. ▪ LSS processes the Warehousing Inbound Instruction in his (warehouse management) system.
Alternative Scenario(s)	Not applicable
Related Requirements	
Related Rules	

Activity diagram

Not applicable

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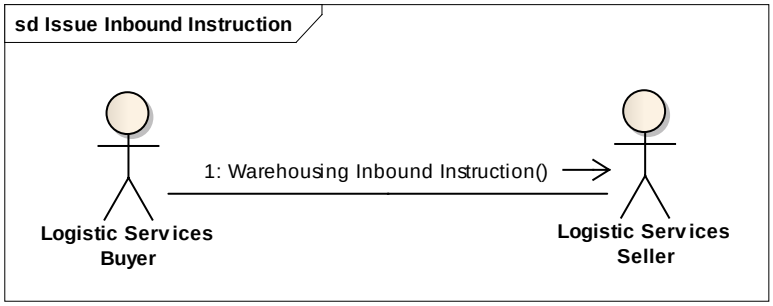
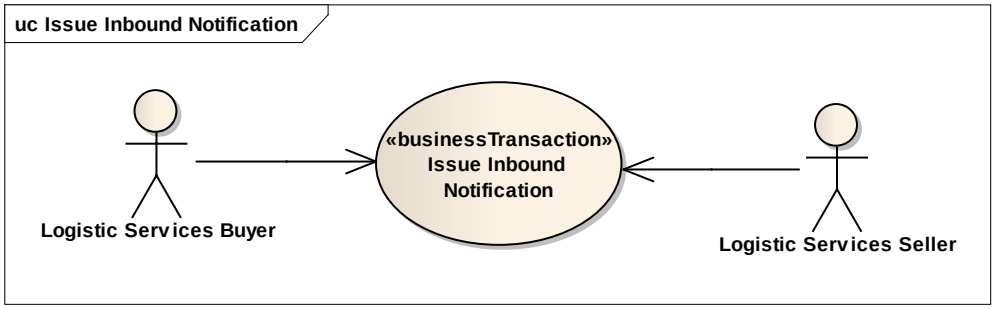
Communication diagram



3.2. Business Transaction – Issue Inbound Notification

Use case diagram



Use case description

Use Case Name	Issue Warehousing Inbound Notification
Use Case Description	The Logistic Services Seller (LSS) informs the Logistic Services Buyer (LSB) on the status of a shipment that will be / has been received in the warehouse.
Actors (Goal)	Logistic Services Buyer (LSB) Logistic Services Seller (LSS)
Performance Goals	Not applicable
Preconditions	▪ Item master data of the goods to be received have been communicated to the Logistic Services Seller. ▪ The Logistic Services Seller has been informed on the goods to be received. Exception to this condition is the situation where 'spontaneous receipts are allowed.
Post conditions	The Logistic Services Buyer has been informed on status of the inbound shipment.
Main Scenario	▪ LSS generates the Warehousing Inbound Notification from his (warehouse management) system. ▪ LSS sends the Warehousing Inbound Notification to the LSB. ▪ LSB receives the Warehousing Inbound Notification. ▪ LSB processes the Warehousing Inbound Notification in his (enterprise resource planning) system.
Alternative Scenario(s)	Not applicable

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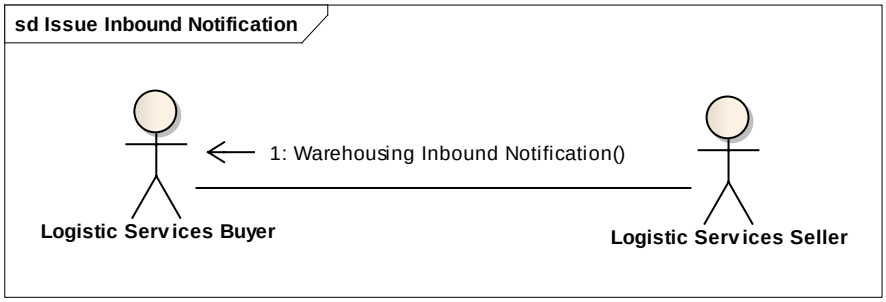
Related Requirements	
Related Rules	

Activity diagram

Not applicable

Communication diagram



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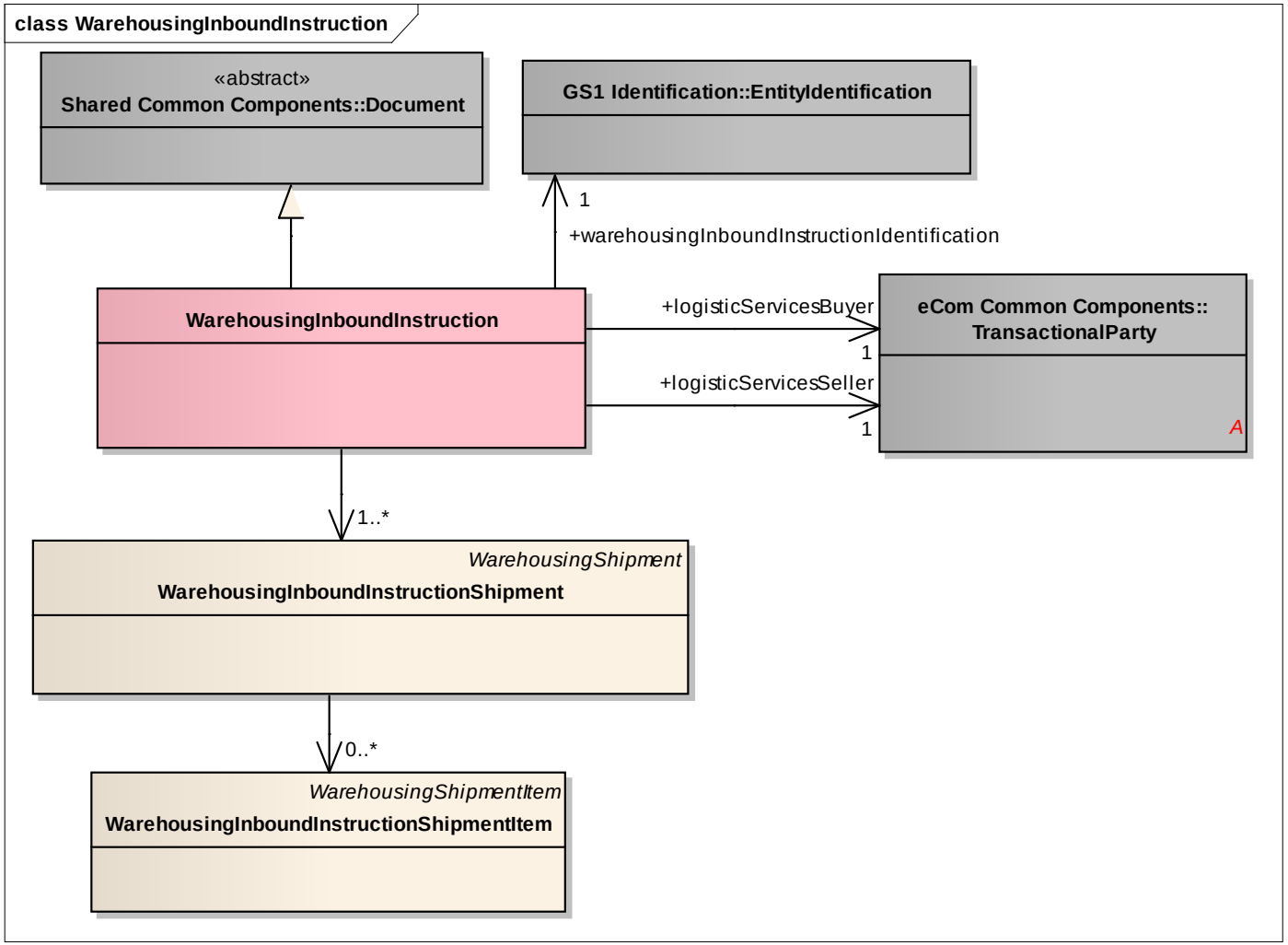
4. Business Information View

4.1. Warehousing Inbound Instruction

Class Diagram



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GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
WarehousingInboundInstruction					
Association	logisticServicesSeller	TransactionalParty	1	A party that provides logistics services to another party.	
Association	logisticServicesBuyer	TransactionalParty	1	A party that purchases logistics services from another party.	
Association	warehousingInboundInstructionIdentification	EntityIdentification	1	The identification of the warehousing inbound instruction document.	
Generalization		Document		Used to specify basic information about the content of the message including version number, creation date and time.	
Association		WarehousingInboundInstructionShipment	1..*	Information on the shipments that need to be received by the logistics services seller.	

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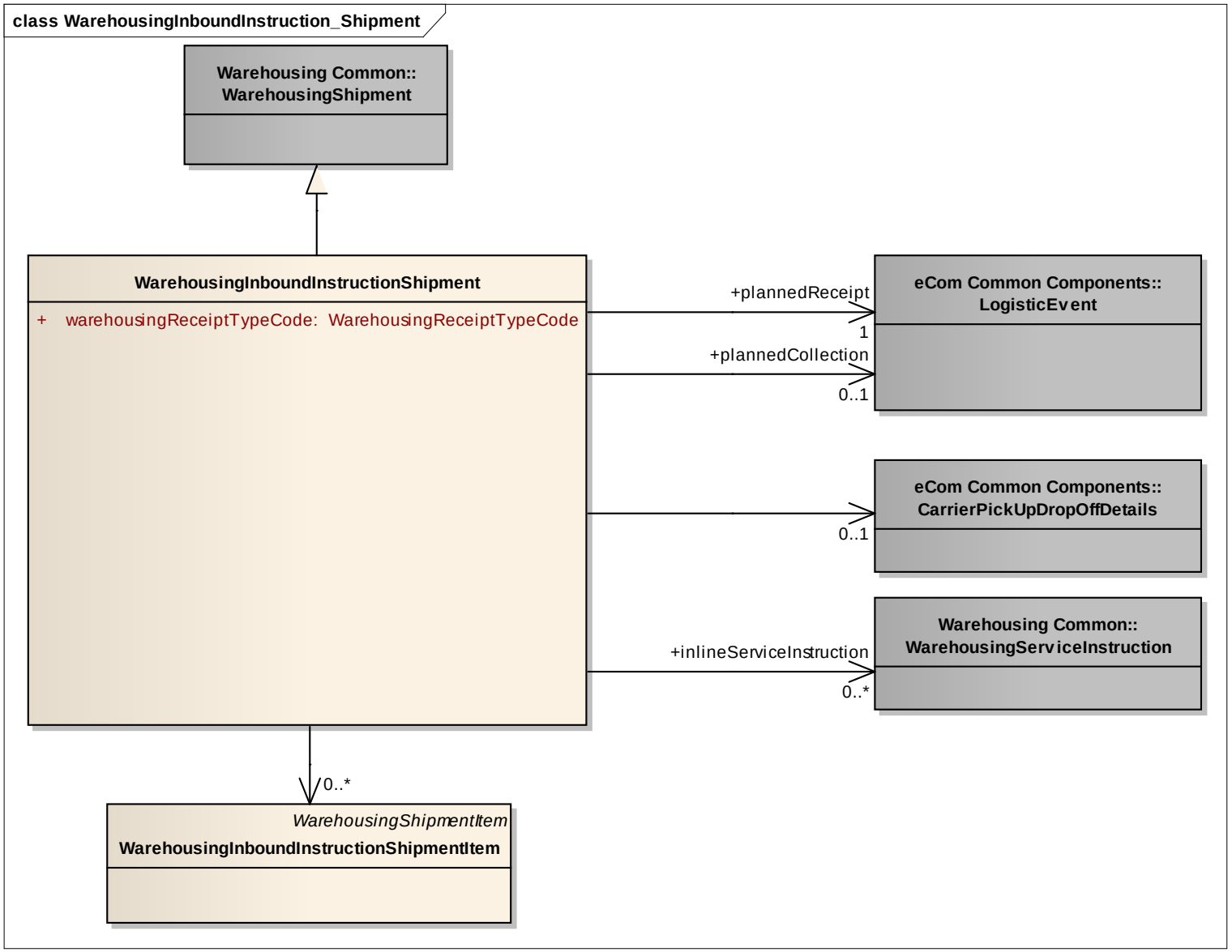
4.2. Warehousing Inbound Instruction – Shipment

Class Diagram



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GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
WarehousingInboundInstructionShipment				A shipment is an identifiable collection of one or more Trade Items available to be transported together from the shipper (Original Consignor/Shipper), to the receiver (Final/Ultimate Consignee).	
Association		WarehousingInboundInstructionShipmentItem	0..*	Details on the items contained in the shipment.	
Association	inlineServiceInstruction	WarehousingServiceInstruction	0..*	Details on one or more services to be performed by the logistic services seller during inbound processing.	[brad-whiop:insrec_4.5]
Association		CarrierPickUpDropOffDetails	0..1	Details on the carrier that will deliver the goods.	[brad-wio:insrec_4.4]
Association	plannedCollection	LogisticEvent	0..1	The date and time goods need to be collected from a rail terminal, sea port, airport or inland container terminal.This element is not intended to be used for the pick-up at supplier scenario.	[brad-whiop:insrec_4.2]
Association	plannedReceipt	LogisticEvent	1	Date and time the goods are planned to be delivered.	[brad-whiop:insrec_4.1]
Generalization		WarehousingShipment			
Attribute	warehousingReceiptTypeCode	WarehousingReceiptTypeCode	1..1	Code specifying the type of receipt, in order to inform the receiving party how toprocess thereceipt.	[brad-whiop:insrec-4.3]

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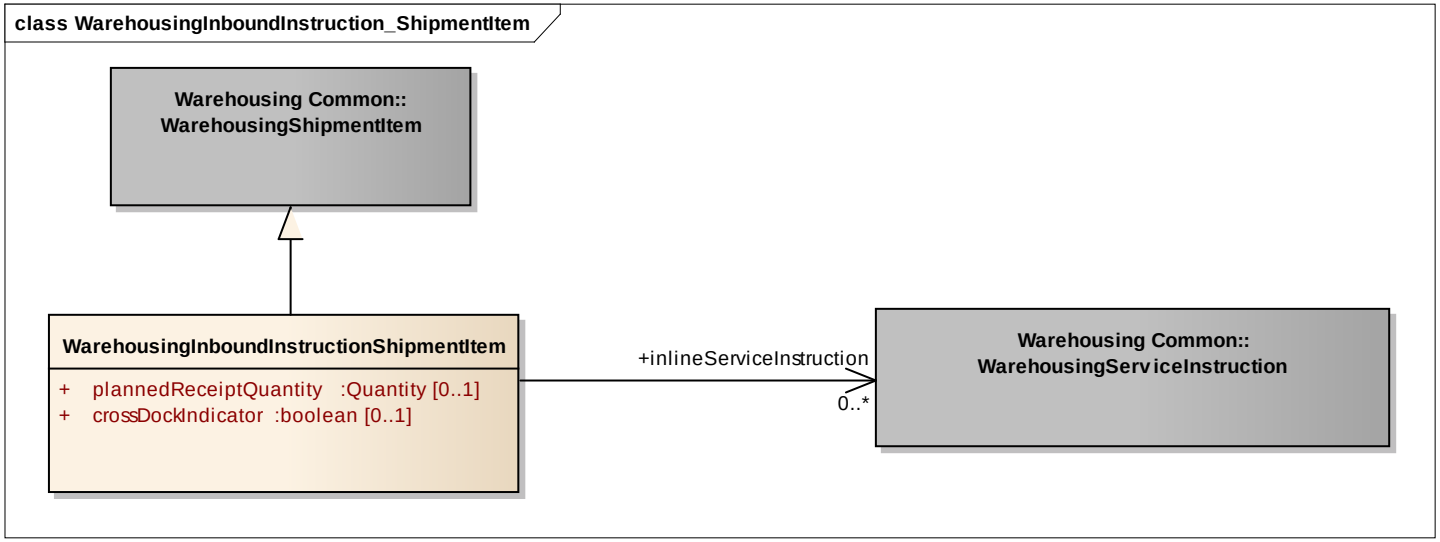
4.3. Warehousing Inbound Instruction – Shipment Item

Class Diagram



GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
WarehousingInboundInstructionShipmentItem				A shipment item is collection of trade items and related logistic units that can each be identified (uniquely) within a shipment.	
Association	inlineServiceInstruction	WarehousingServiceInstruction	0..*	Details on one or more services to be performed by the logistic services seller during inbound processing.	[brad-whiop:insrec_5.2]
Generalization		WarehousingShipmentItem			
Attribute	plannedReceiptQuantity	Quantity	0..1	The quantity that is ordered / planned to be received.	[brad-whiop:insrec_5.1]
Attribute	crossDockIndicator	boolean	0..1	Indication whether or not the received shipment item needs to be cross-docked instead of put into storage.	

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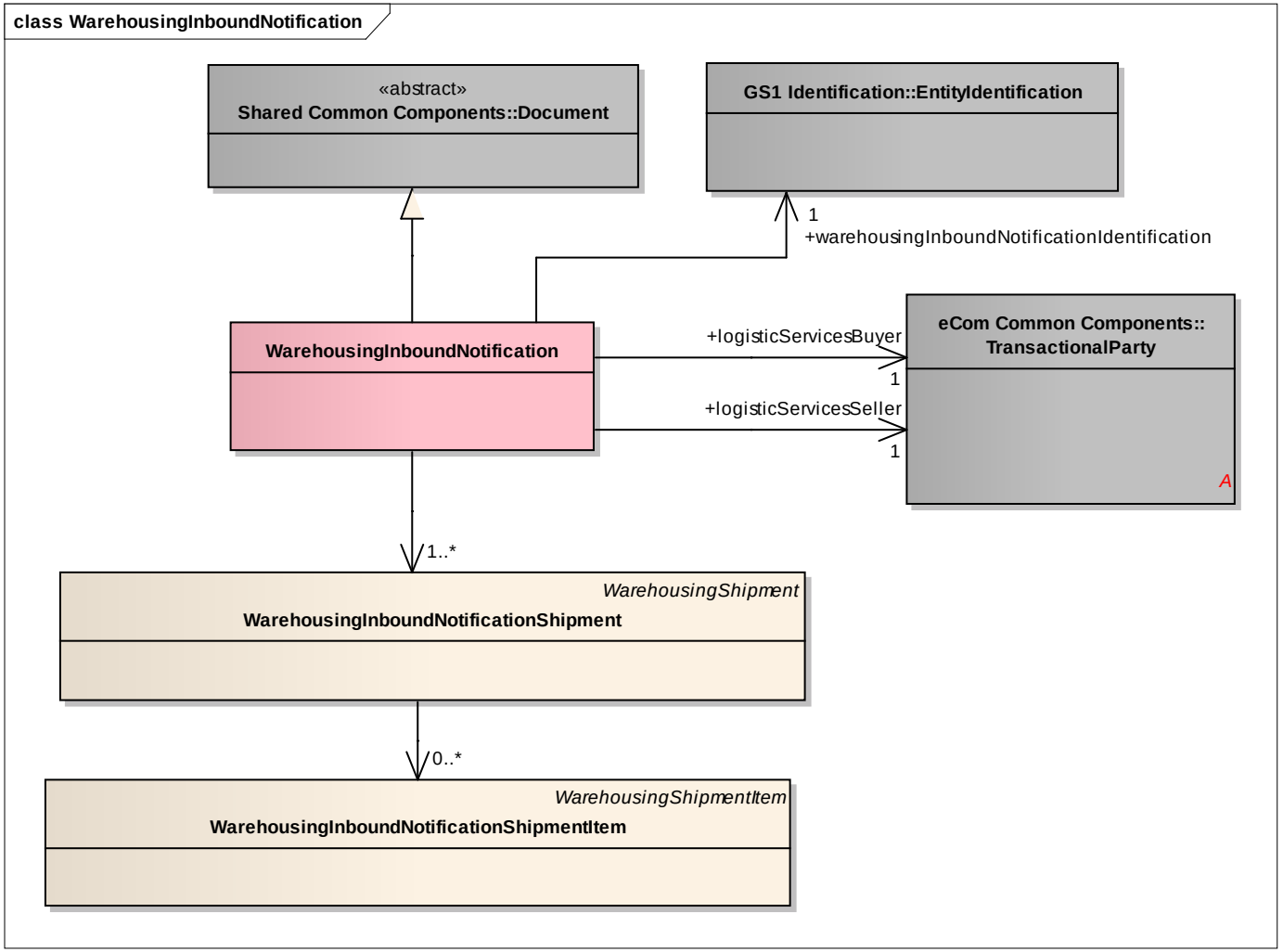
4.4. Warehousing Inbound Notification

Class Diagram



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GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
WarehousingInboundNotification					
Association		WarehousingInboundNotificationShipment	1..*	Status information on the shipments that have been received or are expected to be received.	[brad_wio:ibsta-4.3]
Association	logisticServicesSeller	TransactionalParty	1		[brad_wio:ibsta-3]
Association	logisticServicesBuyer	TransactionalParty	1	A party that purchases logistics services from another party.	[brad_wio:ibsta-2]
Association	warehousingInboundNotificationIdentification	EntityIdentification	1	The identification of the warehousing inbound notification document.	[brad_wio:ibsta-1]
Generalization		Document		Used to specify basic information about the content of the message including version number, creation date and time.	[brad_wio:ibsta-1]

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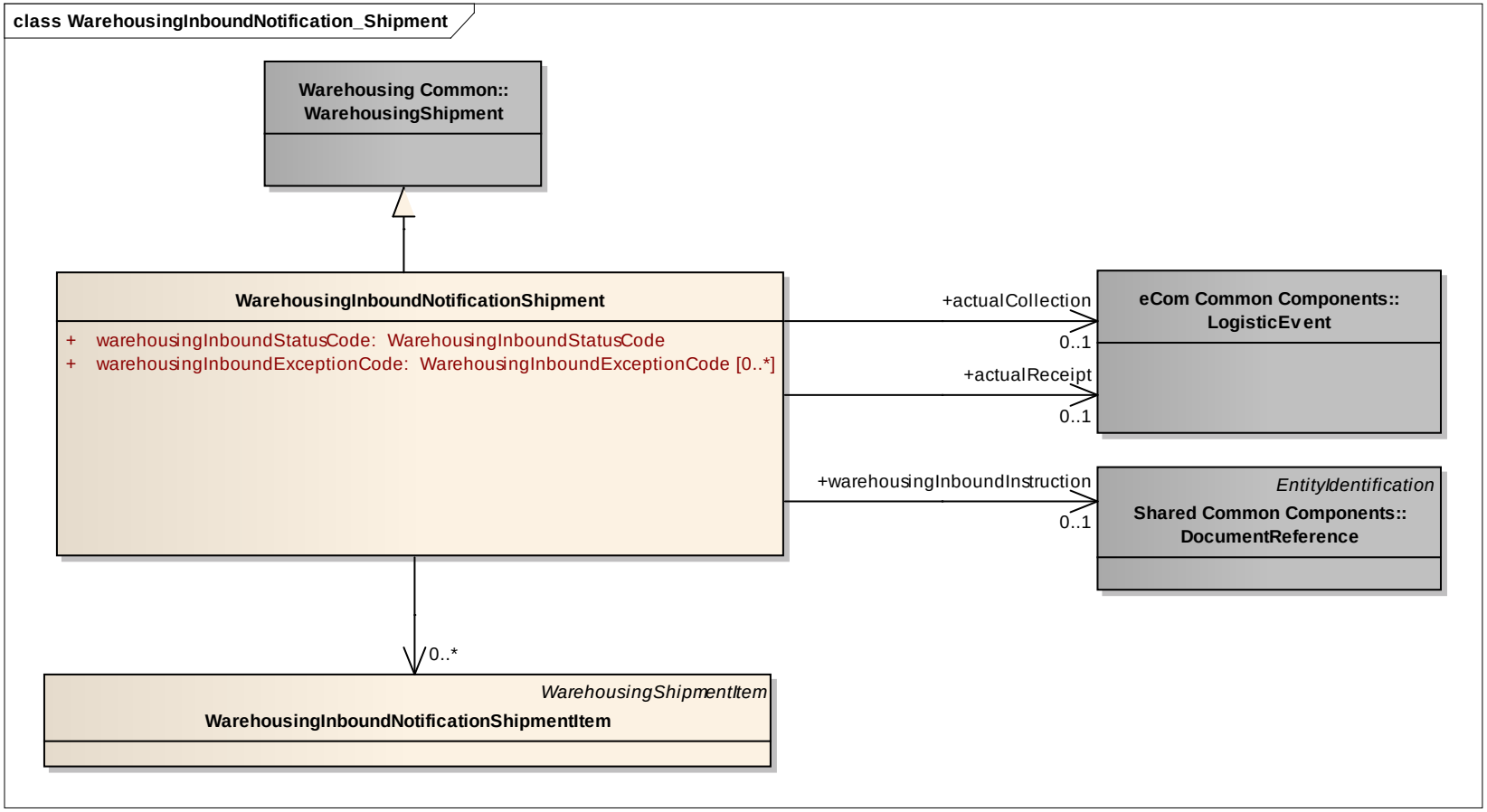
4.5. Warehousing Inbound Notification – Shipment

Class Diagram



GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
WarehousingInboundNotificationShipment					
Association	actualCollection	LogisticEvent	0..1	Details on the date and time the goods were collected from a rail terminal, sea port, airport or	[brad_wio:ibsta-4.5]

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Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
				inland container terminal.	
Association		WarehousingInboundNotificationShipmentItem	0..*	Details on the items contained in the shipment.	[brad_wio:ibsta-5]
Association	actualReceipt	LogisticEvent	0..1	Details on the date and time the goods were received in the warehouse.	[brad_wio:ibsta-4.4]
Association	warehousingInboundInstruction	DocumentReference	0..1	A reference to the related line item in the inbound instruction.	
Generalization		WarehousingShipment			
Attribute	warehousingInboundStatusCode	WarehousingInboundStatusCode	1..1	Code specifying the status of the inbound shipment.	[brad_wio:ibsta-4.2]
Attribute	warehousingInboundExceptionCode	WarehousingInboundExceptionCode	0..*	Code specifying an exception that occurred in the inbound shipment.	[brad_wio:ibsta-4.3]

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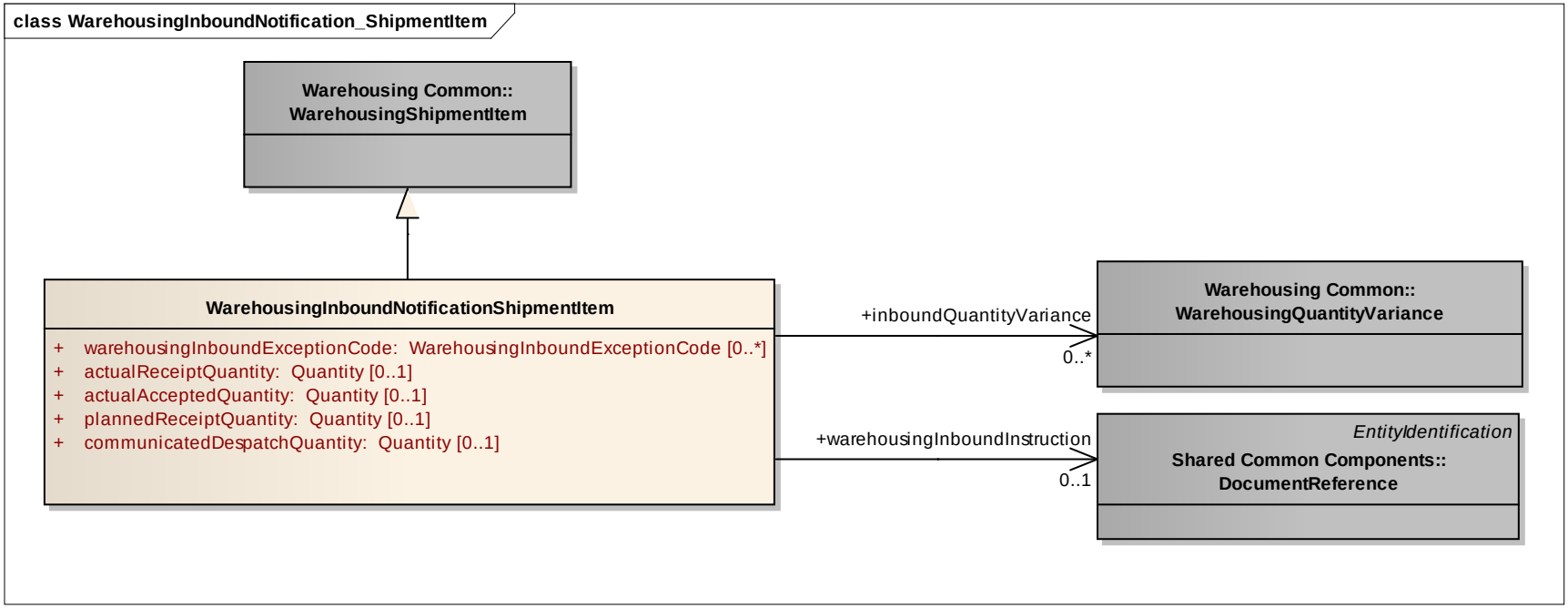
4.6. Warehousing Inbound Notification – Shipment Item

Class Diagram



GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
WarehousingInboundNotificationShipmentItem				A shipment item is collection of trade items and related logistic units that can each be identified (uniquely) within a shipment.	
Association	warehousingInboundInstruction	DocumentReference	0..1	A reference to the related line item in the inbound instruction.	
Association	inboundQuantityVariance	WarehousingQuantityVariance	0..*	Quantity and reason of a shortage or surplus occurring in a warehousing process.	[brad_wio:ibsta-5.7]
Generalization		WarehousingShipmentItem			
Attribute	warehousingInboundExceptionCode	WarehousingInboundExceptionCode	0..*	Code specifying an exception that occurred in the inbound shipment.	[brad_wio:ibsta-5.2]
Attribute	actualReceiptQuantity	Quantity	0..1	Thenumber of items that were received.	[brad_wio:ibsta-5.3]
Attribute	actualAcceptedQuantity	Quantity	0..1	The number of items that wereaccepted.	[brad_wio:ibst

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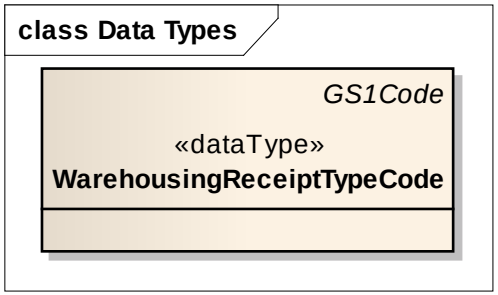
Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
					a-5.4]
Attribute	plannedReceiptQuantity	Quantity	0..1	The number of items that were planned to be received, as stated in theinbound instruction.	[brad_wio:ibsta-5.5]
Attribute	communicatedDespatchQuantity	Quantity	0..1	The number of items that were despatched, as stated in the despatch advice sent by the shipper.	[brad_wio:ibsta-5.6]

4.7. Data Types (Warehousing Inbound Instruction)

Class Diagram



GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Code List
WarehousingReceiptTypeCode					urn:gs1:gdd:cl:WarehousingReceiptTypeCode
Generalization		GS1Code			

4.8. Data Types (Warehousing Inbound Notification)

Class Diagram

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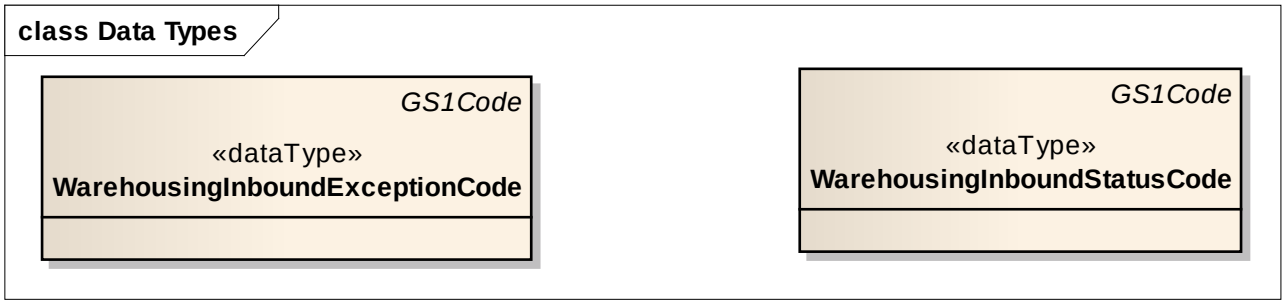

GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Code List
WarehousingInboundExceptionCode					urn:gs1:gdd:cl:WarehousingInboundExceptionCode
Generalization		GS1Code			
WarehousingInboundStatusCode					urn:gs1:gdd:cl:WarehousingInboundStatusCode
Generalization		GS1Code			

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4.9. Enumerations (message specific)

Not applicable

4.10. External Code Lists

Codelist	Referenced in
	■

4.10.1. Warehousing Receipt Type Code

GS1 Code List	**urn:gs1:gdd:cl:WarehousingReceiptTypeCode**
GS1 Code List Version	**#1 (March 2013)**
Managing Agency	**GS1**
Based on Code List	**Not applicable**
Type Of Management	**Not applicable**

Code Value	Code Name	Code Definition
REGULAR_RECEIPT		Normal receipt, no special actions required.
RETURNS		The instructed receipt is a return, for example a customer return or a recall.
PRIORITY_RECEIPT		The instructed receipt needs to be processed with high priority.
REPAIR_RECEIPT		The instructed receipt relates to goods that were under repair.
CROSS-DOCK_RECEIPT		The instructed receipt is intended to be cross-docked.

4.10.2. Warehousing Inbound Exception Code

GS1 Code List	**urn:gs1:gdd:cl:WarehousingInboundExceptionCode**
GS1 Code List Version	**#1 (March 2013)**
Managing Agency	**GS1**
Based on Code List	**Not applicable**
Type Of Management	**Not applicable**

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Code Value	Code Name	Code Definition
NOT_ARRIVED		The instructed receipt did not (yet) arrive.
DISCREPANCIES		The incoming shipment arrived but does not match the instruction.
NO_EXCEPTIONS		The incoming shipment arrived and is ok.
REFUSED		The incoming shipment has been refused, for example because there is no related instruction.
PARTIALLY_ACCEPTED		The incoming shipment arrived and some but not all of the goods have been accepted.

4.10.3. Warehousing Inbound Status Code

GS1 Code List	**urn:gs1:gdd:cl:WarehousingInboundStatusCode**
GS1 Code List Version	**#1 (March 2013)**
Managing Agency	**GS1**
Based on Code List	**Not applicable**
Type Of Management	**Not applicable**

Code Value	Code Name	Code Definition
UNLOADING_FINISHED		The goods have been unloaded from the transport means.
RECEIVING_FINISHED		The receiving process of the goods has been finalized.
GOODS_STORED		The goods have been stored.
GOODS_MOVED_TO_OUTBOUND_AREA		The goods have been moved from the inbound (receiving) area to the outbound area.
RECEVING_IN_PROGRESS		The goods have arrived and are in the process of being received.
RECEIVING_FAILED		The receiving process has failed and has been closed, for example because the shipment was fully rejected or never arrived.

5. Business Message Examples

5.1. Warehousing Inbound Instruction

Manufacturer 2222222 has outsourced a distribution centre to LSP 3333333.

The Manufacturer informs the LSP that 2 pallets of item 02222222003333 will be arriving from Factory 1111111.

Element	Value

WarehousingInboundInstruction	`creationDateTime: 2012-07-11T12:15:00`
	`documentStatusCode: ORIGINAL`
	`documentActionCode: ADD`

TransactionalParty (+logisticServicesSeller)	`gln: 3333333000001`

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Element	Value
TransactionalParty (+logisticServicesBuyer)	gln: 2222222000004
EntityIdentification (+warehousingInboundInstructionIdentification)	entityIdentification: INSREC00123
WarehousingInboundInstructionShipment	warehousingReceiptTypeCode = PRIORITY_RECEIPT
TransactionalParty (+receiver)	gln: 3333333000018
TransactionalParty (+shipper)	gln: 1111111000007
ShipmentIdentification (+)	gsin: 11111110000834053
PackageTotal (+)	packageTypeCode: AF totalPackageQuantity: 2
LogisticUnit (+)	packageTypeCode: AF
- LogisticUnitIdentification (+)	sscc: 311111110000123455
LogisticUnit (+)	packageTypeCode: AF
- LogisticUnitIdentification (+)	sscc: 311111110000123554
CarrierPickUpDropOffDetails (+)	
TransportMeans (+)	transportMeansTypeCode:31 transportMeansID: 11-BB-AA
Person (+transportResponsiblePerson)	personName: LENMAN
- IdentityDocument (+)	identityDocumentNumber: 12345 identityDocumentType: DRIVERS_LICENSE
LogisticEvent (+plannedReceipt)	
- DateTimeRange (+logisticEventPeriod)	beginDate: 2012-07-12 beginTime: 10:00:00 endDate: 2012-07-12 endTime:11:00:00
WarehousingInboundInstructionShipmentItem	lineItemNumber: 1 plannedReceiptQuantity 40
TransactionalTradeItem	gtin: 02222222003333
LogisticUnit	tradeItemQuantity: 20
- LogisticUnitIdentification (+)	sscc: 311111110000123455
LogisticUnit	tradeItemQuantity: 20
- LogisticUnitIdentification (+)	sscc: 311111110000123554

5.2. Warehousing Inbound Notification

Manufacturer 2222222 has outsourced a distribution centre to LSP 3333333.

The LSP informs the Manufacturer that the unloading of the shipment from Supplier 1111111 has been completed.

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Element	Value
WarehousingInboundNotification	creationDateTime: 2012-07-11T12:15:00 documentStatusCode: ORIGINAL documentActionCode: ADD
EntityIdentification (+warehousingInboundNotificationIdentification)	entityIdentification: IBSTA00113
TransactionalParty (+logisticServicesSeller)	gln: 3333333000001
TransactionalParty (+logisticServicesBuyer)	gln: 2222222000004
WarehousingInboundNotificationShipment	warehousingInboundStatusCode: UNLOADING_FINISHED
TransactionalParty (+receiver)	gln: 3333333000018
TransactionalParty (+shipper)	gln: 1111111000007
ShipmentIdentification (+)	gsin: 11111110000834053
DocumentReference (+warehousingInboundInstruction)	entityIdentification: INSREC00123
PackageTotal (+)	packageTypeCode: AF totalPackageQuantity: 2
LogisticUnit (+)	packageTypeCode: AF
- LogisticUnitIdentification (+)	sscc: 311111110000123455
LogisticUnit (+)	packageTypeCode: AF
- LogisticUnitIdentification (+)	sscc: 311111110000123554
LogisticEvent (+actualReceipt)	
- DateOptionalTime (+logisticEventDateTime)	date: 2012-07-12 time: 11:30:00

6. Implementation Considerations

(Insert Content Here)

7. Appendices

(Insert Content Here)

8. Summary of Changes

8.1. BMS Release 3.1

First publication

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