Business Message Standard (BMS)

Transport Instruction and Response

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1. Business Domain View

1.1. Problem Statement / Business Need

The main objectives of the Transport Instruction are to communicate and share the arrangements (through the agreed conditions) of the movement of the goods (including collection and delivery) between all parties involved and providing the information necessary to perform the handling of the goods.

The Transport Instruction will be sent by the Logistic Services Buyer (supplier, retailer, 3rd party warehouse or freight forwarder) to a Logistic Services Seller (freight forwarder or carrier) upon order creation.

The Transport Instruction can include a request for either executing a consignment or executing a shipment. The trading partners need the ability to differentiate between less detailed transport instructions (shipments) and more detailed instructions (consignments).

A Transport Instruction Response may be sent from Logistic Services Seller to Logistic Services Buyer, but exchanging this message is optional. In many cases there exist standing agreements that the Logistic Services Seller will accept all Transport Instructions from the Logistic Services Buyer 'as sent'. In that case sending the Transport Instruction Response adds no value to the process and partners can agree NOT to exchange this message-type.

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

Not Applicable

1.4. References

Reference Name	Description
BRAD Transport Management (GS1, 2009)	
Logistics Interoperability Model (GS1, 2007)	

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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. BRG Work Group

Function	Name	Company / organisation
BRG Work Group Chair	Fred Kempkes	Unilever
BRG Work Group Chair	Jaco Voorspuij	DHL
BRG Work Group Member	Mia Lenman	GS1 Sweden
BRG Work Group Member	Richard Chresta	GS1 Switzerland & UNCEFACT TGB3
BRG Work Group Member	Jeff Melcher	Army & Air Force Exchange Service
BRG Work Group Member	Yuliya Shevchenko	GS1 Global Office
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BRG Work Group Member	Henk van Maaren	CETIMA & UNCEFACT TBG3
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BRG Work Group Member	Gerald Borgolte	Atos Origin
BRG Work Group Member	Audun Vennesland	SINTEF & eFreight
BRG Work Group Member	Mary Vayou	BMT Group Ltd & eFreight

1.5.2. Design Team Members

Function	Name	Organisation
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XML Technical Designer	Dipan Anarkat	GS1
EANCOM Technical Designer	Not applicable	
Peer Reviewer	Eric Kauz	GS1
Process Manager	Jean-Luc Champion	GS1 Global Office

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2. Business Context

Context Category	Value(s)
Industry	All
Geopolitical	All
Product	All
Process	Deliver / Transport Management
System Capabilities	GS1 System
Official Constraints	None

3. Additional Technical Requirements Analysis

Not applicable

3.1. Technical Requirements (optional)

Number	Statement	Rationale
	Not applicable	

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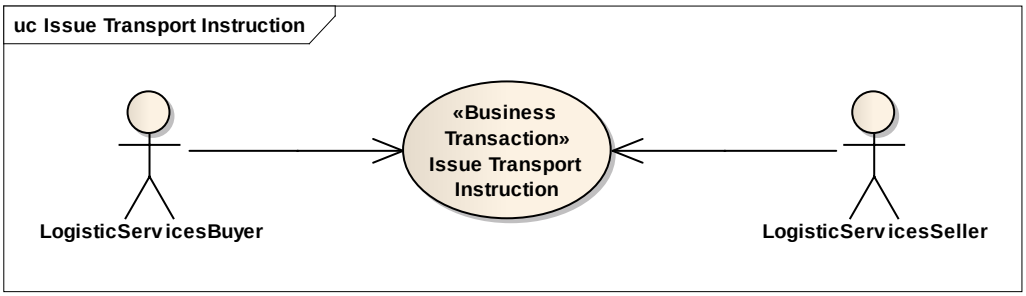
4. Business Transaction View

4.1. Use Case Diagram – Issue Transport Instruction



4.2. Use Case Description – Issue Transport Instruction

<table>
<tr><td>Use Case ID</td><td>UC-1</td></tr>
<tr><td>Use Case Name</td><td>Issue Transport Instruction</td></tr>
<tr><td>Use Case Description</td><td>The main objectives are to communicate/ share the arrangement of the transport of goods between all parties involved in the movement of the consignment(s) and or shipment(s) as well as providing the information necessary to perform that transport and delivery of the goods.</td></tr>
<tr><td>Actors (Goal)</td><td>Logistic Services Buyer (LSB)
Logistic Services Seller (LSS)</td></tr>
<tr><td>Performance Goals</td><td>Not applicable</td></tr>
<tr><td>Preconditions</td><td>Interoperation agreement is in place.</td></tr>
<tr><td>Post conditions</td><td>Transport instructions have been received by the LSS</td></tr>
<tr><td>Scenario</td><td>Begins when the Logistic Services Buyer determines transport services are needed.
Continues with...
<table>
<tr><th>Step #</th><th>Actor</th><th>Activity Step</th></tr>
<tr><td>1</td><td>LSB</td><td>Issues a transport instruction</td></tr>
<tr><td>2</td><td>LSS</td><td>Receives the transport instruction</td></tr>
</table>
Ends when the LSS has processed the transport instruction in the transport management system.</td></tr>
<tr><td>Alternative Scenario</td><td>
<table>
<tr><th>Step #</th><th>Actor</th><th>Activity Step</th></tr>
<tr><td>1</td><td></td><td></td></tr>
<tr><td>2</td><td></td><td></td></tr>
<tr><td>3</td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>Related Requirements</td><td>Not applicable</td></tr>
</table>

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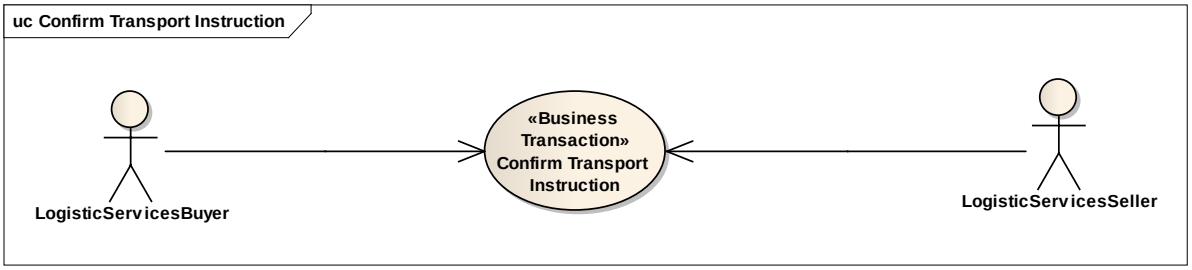
Related Rules	Not applicable

4.3. Activity Diagram(s) – Issue Transport Instruction

Not applicable

4.4. Use Case Diagram – Confirm Transport Instruction



4.5. Use Case Description – Confirm Transport Instruction

Use Case ID	UC-2
Use Case Name	Confirm Transport Instruction
Use Case Description	The main objectives are to give the confirmation or modification of the arrangement of the transport of goods between all parties.
Actors (Goal)	Logistic Services Buyer Logistic Services Seller
Performance Goals	Not applicable
Preconditions	▪ The Logistic Services Seller did receive a transport instruction. ▪ In the interoperation agreement it was agreed between the Logistic Services Buyer and Logistic Service Seller that
Post conditions	Transport instruction response has been received by the LSB.
Scenario	**Begins when** the Logistic Service Seller has determined the appropriate response to the transport instruction. **Continues with**...

Step #	Actor	Activity Step
1	LSS	Issues a transport instruction confirmation
2	LSB	Receives the transport instruction confirmation
3		

Ends when the LSB has processed the transport instruction confirmation in the transport management system.

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Alternative Scenario	<table><tr><th>Step #</th><th>Actor</th><th>Activity Step</th></tr><tr><td>1</td><td></td><td></td></tr><tr><td>2</td><td></td><td></td></tr><tr><td>3</td><td></td><td></td></tr></table>
Related Requirements	Not applicable
Related Rules	Not applicable

4.6. Activity Diagram(s) – Confirm Transport Instruction

Not applicable

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5. Information Model (Including GDD Report)

5.1. Transport Instruction (message)

5.1.1. GDD Report - Transport Instruction

content	multiplicity	attribute / role	datatype / secondary class	definition	requirements
TransportInstruction				The main objectives of the Transport Instruction are to communicate and share the arrangements (through the agreed conditions) of the movement of the goods (including collection and delivery) between all parties involved and providing the information necessary to perform the handling of the goods.	
Generalization			Document	Provides the generic document details for the transport instruction.	BRAD TransportInstruction-2, 4
Association	[1..1]	logisticServicesSeller	TransactionalParty	A party that provides logistics services to another party.	BRAD TransportInstruction-6
Association	[0..1]	billTo	TransactionalParty	Identifies the party who receives the invoice. Synonym: Invoicee.	BRAD TransportInstruction-7
Association	[0..*]		TransportInstructionShipment	Provides the information on a shipment contained in this transport instruction.	BRAD TransportInstruction-8, 9, 10, 11, 15
Association	[1..1]	logisticServicesBuyer	TransactionalParty	A party that purchases logistics services from another party.	BRAD TransportInstruction-5
Association	[0..*]		TransportInstructionConsignment	Provides the information on a consignment contained in this transport instruction.	BRAD TransportInstruction-8, 12, 13
Association	[1..1]	transportInstructionIdentification	EntityIdentification	The identification of the transport instruction document.	BRAD TransportInstruction-1

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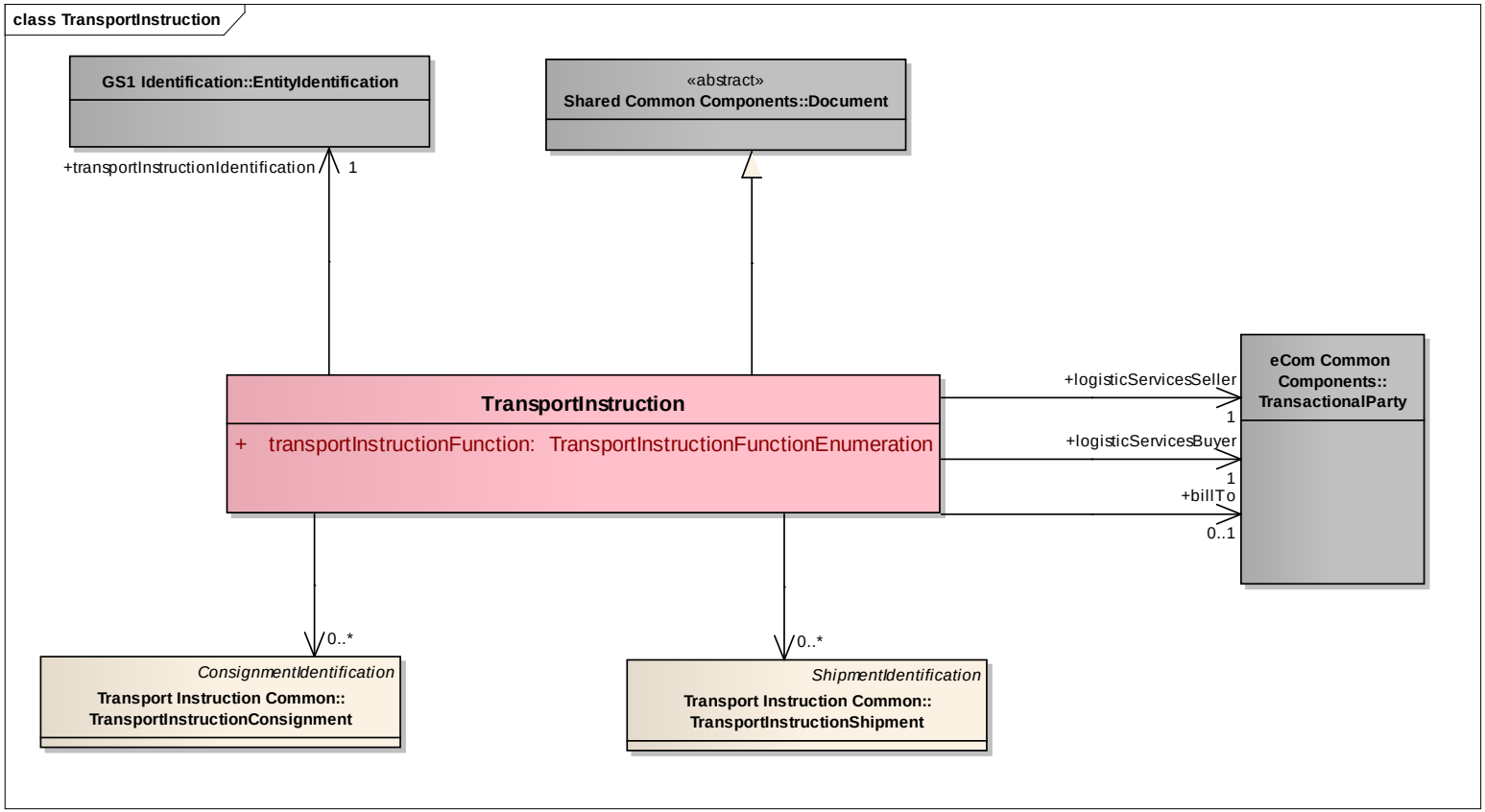
content	multiplicity	attribute / role	datatype / secondary class	definition	requirements
Attribute	[1..1]	transportInstructionFunction	TransportInstructionFunctionEnumeration	The transport instruction function identifies whether the transport instruction is consignment-based or shipment-based.	BRAD TransportInstruction-3

5.1.2. Class Diagram - Transport Instruction



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5.2. Transport Instruction Response (message)

5.2.1. GDD Report - Transport Instruction Response

content	multiplicity	attribute / role	datatype / secondary class	definition	requirements
TransportInstruction Response				The main objective of the Transport Instruction Response is to confirm the requested transport services and where needed provide additional information.	
Association	[1..1]	transportInstruction	DocumentReference	The identification of the referenced transport instruction.	BRAD TransportInstructionConfirmation-7
Association	[1..1]	transportInstruction ResponseIdentification	EntityIdentification	The identification of the transport instruction response document.	BRAD TransportInstructionConfirmation-2
Generalization			Document	Provides the generic document details for the transport instruction reponse.	BRAD TransportInstructionConfirmation-3, 18
Association	[1..1]	logisticServicesSeller	TransactionalParty	A party that provides logistics services to another party.	BRAD TransportInstructionConfirmation-5
Association	[1..1]	logisticServicesBuyer	TransactionalParty	A party that purchases logistics services from another party.	BRAD TransportInstructionConfirmation-4
Association	[0..1]	billTo	TransactionalParty	Identifies the party who receives the invoice. Synonym: Invoicee.	BRAD TransportInstructionConfirmation-6
Association	[0..*]		TransportInstructionConsignment	Provides the information on a consignment contained in this transport instruction response.	BRAD TransportInstructionConfirmation-1, 10, 11, 12, 13, 19
Association	[0..*]		TransportInstructionShipment	Provides the information on a shipment contained in this transport instruction response.	BRAD TransportInstructionConfirmation-1, 15, 16

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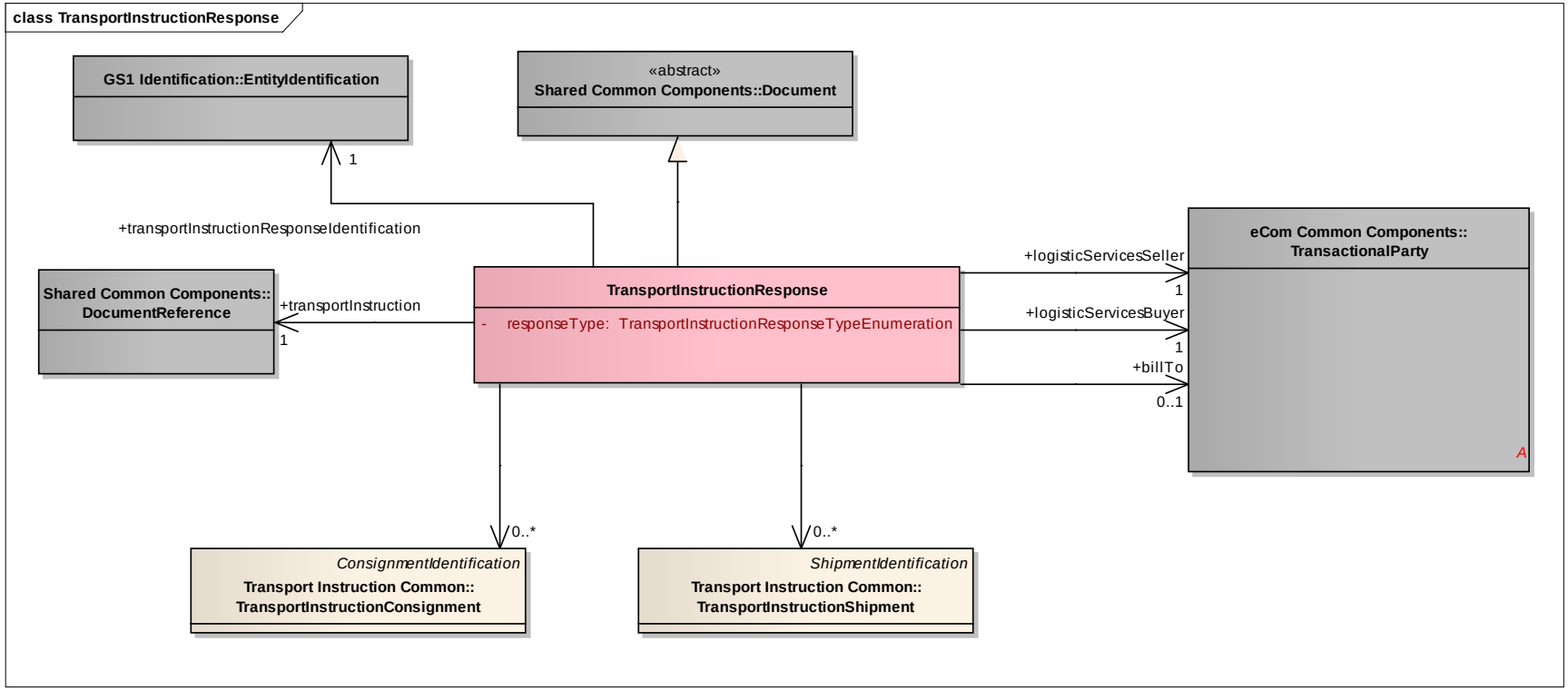
content	multiplicity	attribute / role	datatype / secondary class	definition	requirements
Attribute	[1..1]	responseType	TransportInstructionResponseTypeEnumeration	Code specifying the acceptance or non-acceptance of the services requested in the Transport Instruction.	

5.2.2. Class Diagram - Transport Instruction Response



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5.3. Transport Instruction Common (package)

5.3.1. GDD Report – Transport Instruction Consignment

Content	Attribute/Role	Datatype/Secondary Class	Multiplicity	Definition	Requirements
TransportInstructionConsignment				A consignment is a logical grouping of goods (one or more physical entities) that is intended to be transported as a whole from a consignor to a consignee by a carrier or freight forwarder via one or more modes of transport, subject to one single transport contract.	
Association	plannedDropOff	LogisticEvent	0..1	Details on the planned delivery of the consignment.	BRAD CON6, CON7 (LogisticLocation)
Association		TransportInstructionTransportMovement	1..*	The transport movement details for this consignment.	
Association	plannedPickUp	LogisticEvent	0..1	Details on the planned collection of the consignment.	BRAD CON6, CON7 (LogisticLocation)
Association		DeliveryTerms	0..1	The applicable legal, customs, financial and insurance terms that have been agreed for the delivery of the consignment.	BRAD CON10
Association		HandlingInstruction	0..*	Instruction on the way to treat the goods during transport and storage.	BRAD CON9
Association		PackageTotal	0..*	Aggregate information per type of package contained in the consignment.	BRAD CON18
Association	includedTransportEquipment	TransportInstructionTransportEquipment	0..*	Details on the transport equipment contained in the consignment.	
Association	consignee	TransactionalParty	1	The party receiving a consignment of goods.	BRAD CON1

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Association		TransportReference	0..*	References to the commercial transaction or to transport or legal documents related to the consignment.	BRAD CON19
Association	parentConsignmentID	ConsignmentIdentification	0..1	Reference to another consignment that contains this consignment (and several other consignments).	BRAD CON22
Association		TransportCargoCharacteristics	1	Aggregate information on the goods that are contained in this consignment.	BRAD CON28
Association	containedShipmentReference	ShipmentIdentification	0..*	Reference to the shipment(s) contained in this consignment. #	
Association		TransportInstructionConsignmentItem	0..*	A line item included in this consignment of goods.#	
Association	notifyParty	TransactionalParty	0..*	The party which needs to be informed regarding the consignment information to fulfill the end to end transportation process.	BRAD CON2
Association	consignor	TransactionalParty	1	The party despatching a consignment of goods.	BRAD CON1
Association		TransportInstructionConsignment	0..*	Provides the information on a consignment contained in this transport instruction.	BRAD TransportInstruction-8, 12, 13
Association	includedTransportMeans	TransportMeans	0..*	Details on the transport means contained in the consignment, such as trucks being transported on a ferry.	
Association		DangerousGoodsInformation	0..*	Hazardous instructions for this consignment, such as where or how specified packages or containers are to be handled because of restriction from dangerous goods.	BRAD CON30
Generalization		ConsignmentIdentification		The unique identifier for this consignment.	BRAD CON3
Association		PassengerInformation	0..*		

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Association	exportAgent	TransactionalParty	0..1	The party acting as an agent for, or on behalf of, the consignor with respect to the customs export procedures for this consignment.	BRAD TM: additional requirement during design phase.
Association		TransportInstructionConsignment	0..*	Provides the information on a consignment contained in this transport instruction response.	BRAD TransportInstructionConfirmation-1, 10, 11, 12, 13, 19
Association	dropOffParty	TransactionalParty	0..1	Identification of the physical location to where goods will be or have been shipped.	BRAD CON1
Association	pickUpParty	TransactionalParty	0..1	Identification of the physical location from where goods will be picked up for delivery.	BRAD CON1
Association	importAgent	TransactionalParty	0..1	The party acting as an agent for, or on behalf of, the consignee with respect to the customs import procedures for this consignment. #	BRAD TM: additional requirement during design phase.
Association		TransportInstructionTerms	1	The agreed transport service conditions for this consignment.	
Attribute	transportInstructionStatusCode	TransportInstructionStatusEnumeration	0..1	Code specifying the instruction status of this consignment.	BRAD TransportInstructionConfirmation-8
Attribute	transportInstructionStatusDescription	Description70	0..1	Textual description of the instruction status of this consignment. #	BRAD TransportInstructionConfirmation-8
Attribute	transportInstructionStatusReasonCode	TransportInstructionStatusReasonCode	0..1	Code specifying the instruction status reason for this consignment.	BRAD TransportInstructionConfirmation-8
Attribute	transportInstructionStatusReasonDescription	Description70	0..1	Textual description of the instruction status reason for this consignment.	BRAD TransportInstructionConfirmation-8
Attribute	note	Description500	0..1	Free text used to convey information that is not processed by applications. Only meant to present the information to a user as on a screen, in a browser, etc.	BRAD RQ 09.236.F

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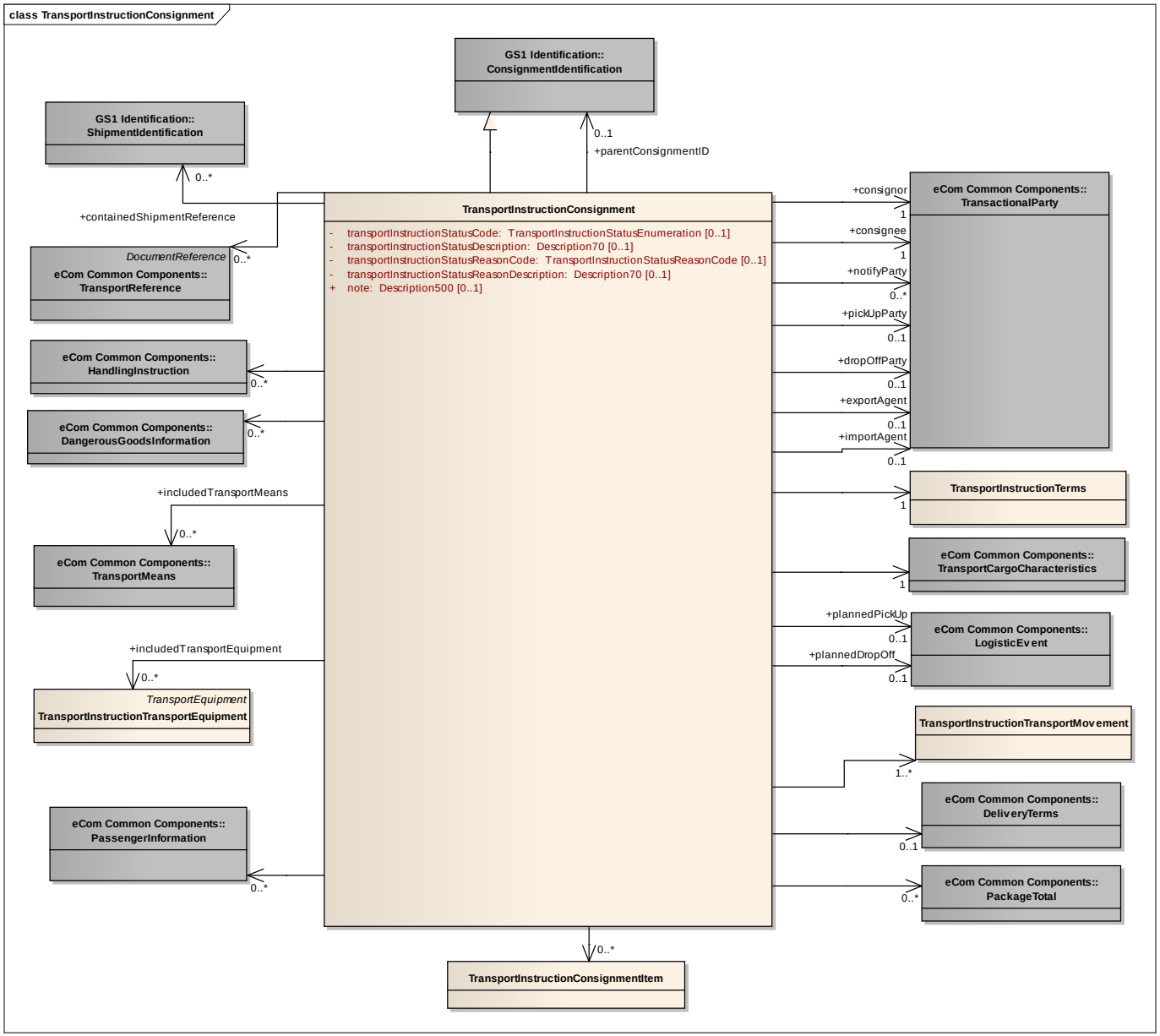
5.3.2. Class Diagram – Transport Instruction Consignment



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5.3.3. GDD Report – Transport Instruction Consignment Item

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
TransportInstructionConsignmentItem				A consignment item is a (collection of) Load Units that can be identified (uniquely) within the consignment and may be treated/handled in the same way during transportation (and associated administrative processes).	
Association		LogisticUnit	0..*	Information on the logistic unit(s) included in the consignment item.	
Association		TransportReference	0..*	References to the commercial transaction or to transport or legal documents related to the consignment item.	BRAD CIT9
Association		HandlingInstruction	0..*	Handling instructions for the consignment item.	BRAD CIT6, CIT8
Association		DangerousGoodsInformation	0..*	Hazardous instructions for this consignment item, such as where or how specified packages or containers are to be handled because of restriction from dangerous goods.	BRAD CIT7
Association		PackageTotal	0..*	Aggregate information per type of package included in the consignment item.	BRAD CIT11
Association	referencedTransportEquipment	TransportEquipment	0..*	Identification of the transport equipment that contains the consignment item.	
Association		TransportCargoCharacteristics	1	Aggregate information on the goods that are included in this consignment item.	
Attribute	lineItemNumber	positiveInteger	1..1	The sequence number for this consignment item.	BRAD CIT3
Attribute	note	Description500	0..1	Free text used to convey information that is not processed by applications. Only meant to present the information to a user as on a screen, in a browser, etc.	BRAD RQ 09.236.F

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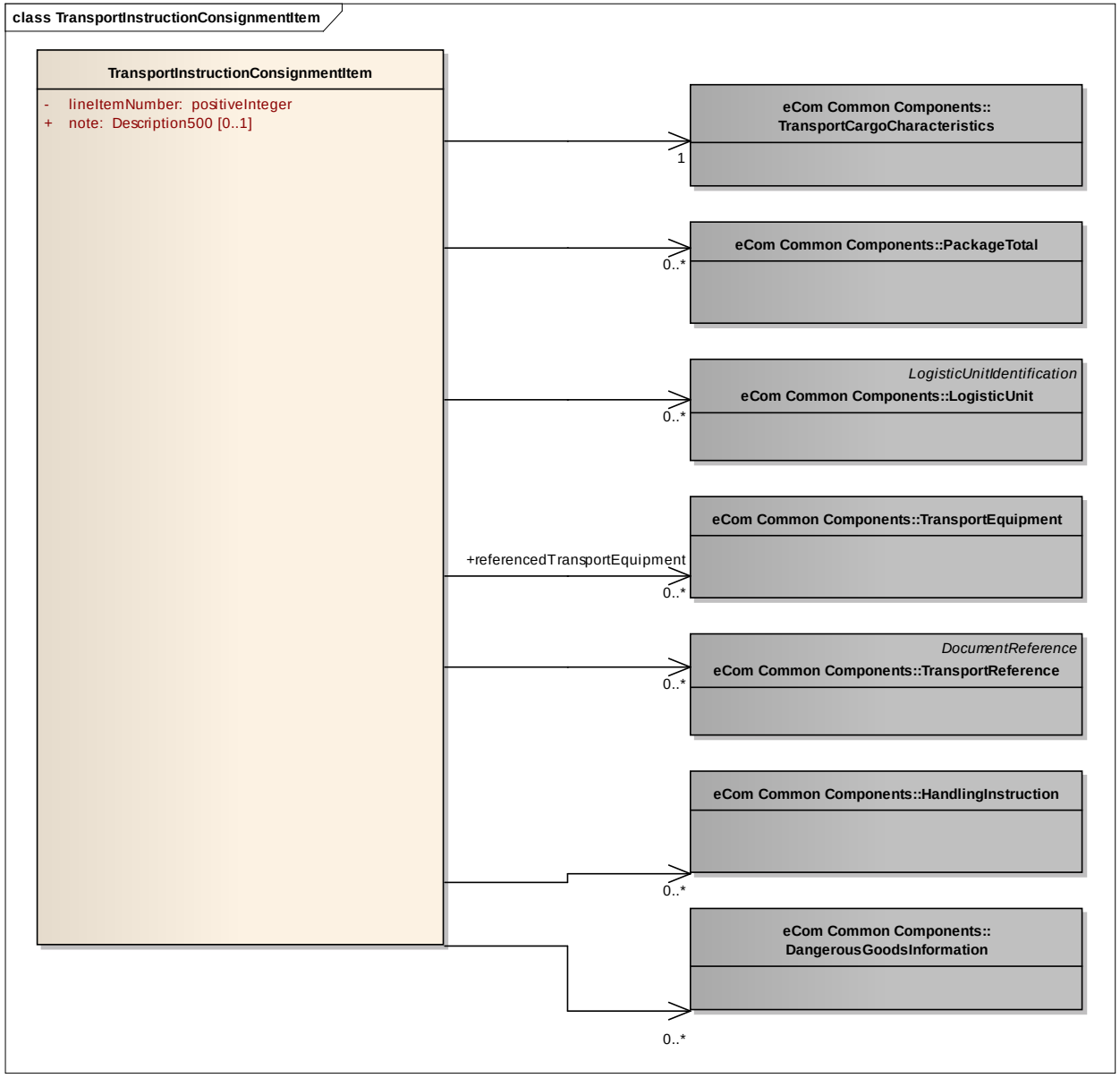
5.3.4. Class Diagram – Transport Instruction Consignment Item



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5.3.5. GDD Report – Transport Instruction Shipment

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
TransportInstructionShipment				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). Typically the shipment is the entity communicated between trading partners in the Despatch and Receiving Advice.	
Association	receiver	TransactionalParty	1	A party which engages in receiving this shipment of goods.	BRAD SHM1
Association		TransportInstructionShipmentItem	0..*	A line item included in this shipment of goods.#	
Association		HandlingInstruction	0..*	Instruction on the way to treat the goods during transport and storage. #	BRAD SHM7
Association	notifyParty	TransactionalParty	0..*	The party which needs to be informed regarding the shipment to fulfill the end to end transportation process. #	BRAD SHM20
Association	plannedDespatch	LogisticEvent	0..1	Details on the planned despatch of the shipment.	BRAD SHM10, SHM11 (LogisticLocation)
Generalization		ShipmentIdentification		The unique identifier for this shipment.	BRAD SHM4
Association		DeliveryTerms	0..1	The applicable legal, customs, financial and insurance terms that have been agreed for the delivery of the shipment.	BRAD SHM27
Association	parentShipmentID	ShipmentIdentification	0..1	Reference to a shipment that contains this shipment (and several other shipments). #	BRAD SHM17
Association	shipFrom	TransactionalParty	0..1	The physical location from where goods will be or have been shipped.	BRAD SHM1
Association		TransportInstructionShipment	0..*	Provides the information on a shipment contained in this transport instruction.	BRAD TransportInstruction-8, 9, 10, 11, 15
Association	shipper	TransactionalParty	1	A party which engages in shipping this shipment of goods;	BRAD SHM1
Association	importAgent	TransactionalParty	0..1	The party acting as an agent for, or on behalf of, the consignee with respect to the customs import procedures for this shipment. #	BRAD TM: additional requirement during

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Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
					design phase.
Association		DangerousGoodsInformation	0..*	Hazardous instructions for this shipment, such as where or how specified packages or containers are to be handled because of restriction from dangerous goods.	BRAD SHM8
Association	carrier	TransactionalParty	0..1	A party that physically transports goods from one place to another.	BRAD SHM3
Association	plannedDelivery	LogisticEvent	1	Details on the planned delivery of the shipment.	BRAD SHM10, SHM11 (LogisticLocation)
Association		TransportReference	0..*	References to the commercial transaction or to transport and legal documents related to the shipment.	BRAD SHM16
Association		PackageTotal	0..*	Aggregate information per type of package contained in the shipment.	BRAD SHM19
Association		TransportInstructionShipment	0..*	Provides the information on a shipment contained in this transport instruction response.	BRAD TransportInstructionConfirmation-1, 15, 16
Association	exportAgent	TransactionalParty	0..1	The party acting as an agent for, or on behalf of, the consignor with respect to the customs export procedures for this shipment. #	BRAD TM: additional requirement during design phase.
Association	shipTo	TransactionalParty	0..1	The physical location to where goods will be or have been shipped.	BRAD SHM1
Association		TransportCargoCharacteristics	1	Aggregate information on the goods that are contained in this shipment.	
Association		TransportInstructionTerms	1	The agreed transport service conditions for this shipment.	
Attribute	transportInstructionStatusCode	TransportInstructionStatusEnumeration	0..1	Code specifying the instruction status of this shipment. #	BRAD TransportInstructionConfirmation-9
Attribute	transportInstructionStatusDescription	Description70	0..1	Textual description of the instruction status of this shipment. #	BRAD TransportInstructionConfirmation-9

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Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
Attribute	transportInstructionStatusReasonCode	TransportInstructionStatusReasonCode	0..1	Code specifying the instruction status reason for this shipment.	BRAD TransportInstructionConfirmation-9
Attribute	transportInstructionStatusReasonDescription	Description70	0..1	Textual description of the instruction status reason for this shipment. #	BRAD TransportInstructionConfirmation-9
Attribute	note	Description500	0..1	Free text used to convey information that is not processed by applications. Only meant to present the information to a user as on a screen, in a browser, etc.	BRAD RQ 09.236.F

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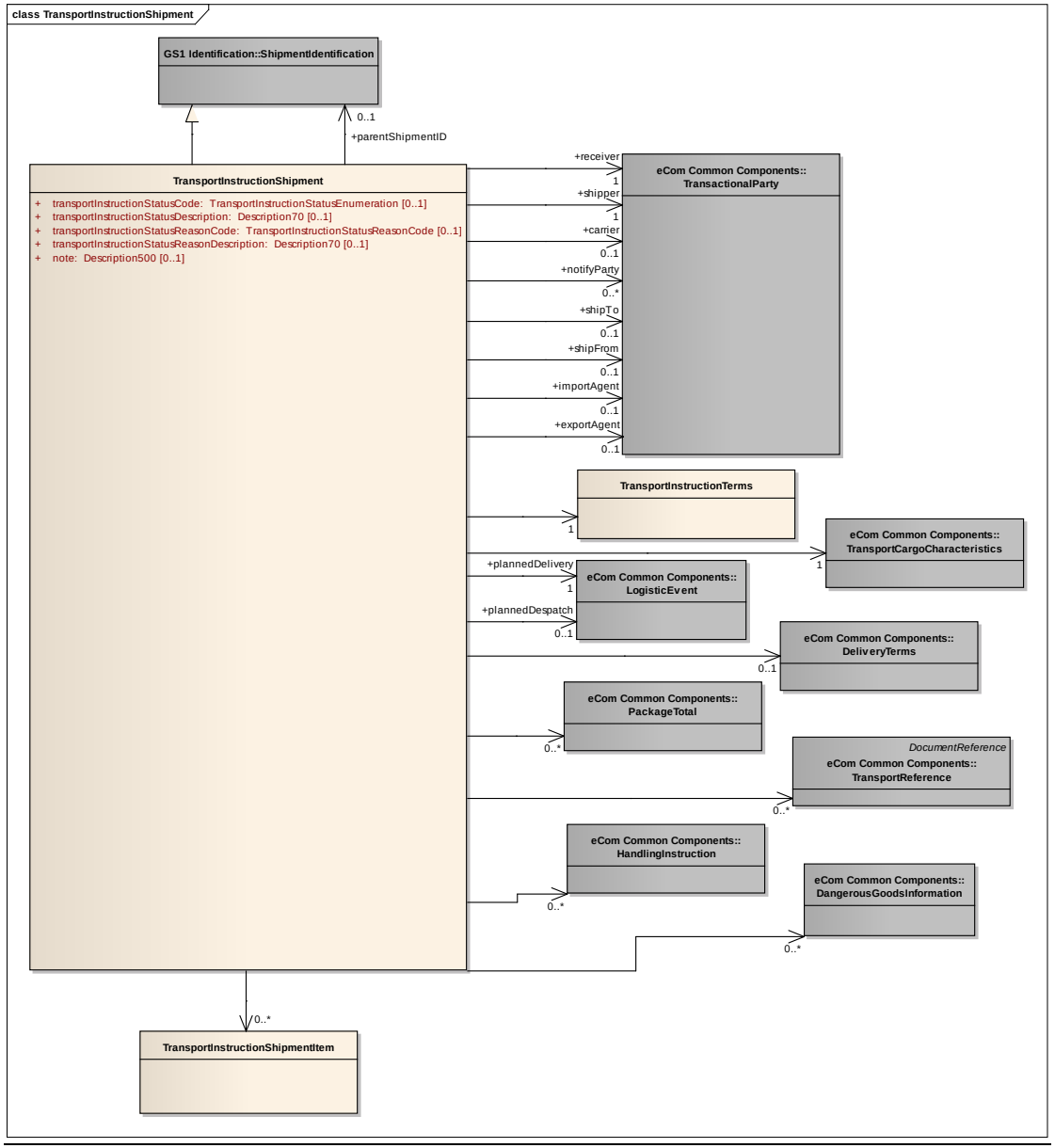
5.3.6. Class Diagram – Transport Instruction Shipment



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5.3.7. GDD Report – Transport Instruction Shipment Item

content	multiplicity	attribute / role	datatype / secondary class	definition	requirements
TransportInstruction ShipmentItem				A shipment item is a (collection of) Trade Items and/or Logistic Units that can each be identified (uniquely) within a shipment.	
Association	[0..*]		PackageTotal	Aggregate information per type of package included in the shipment item.	BRAD SHI9, SHI13
Association	[0..*]		TransportReference	References to the commercial transaction or to transport or legal documents related to the shipment item.	BRAD SHI8
Association	[0..*]		LogisticUnit	Information on the logistic unit(s) included in the shipment item.	BRAD SHI1, SHI18
Association	[0..*]		TransactionalTradeItem	Information on the trade item(s) included in the shipment item.	BRAD SHI1, SHI3, SHI5, SHI16, SHI17
Association	[0..*]		HandlingInstruction	Handling instructions for the consignment item.	BRAD SHI6, SHI19
Association	[0..*]		DangerousGoodsInformation	Hazardous instructions for this shipment item, such as where or how specified packages or containers are to be handled because of restriction from dangerous goods.	BRAD SHI7
Association	[0..1]		TransportCargoCharacteristics	Aggregate information on the goods that are included in this shipment item.	
Attribute	[1..1]	lineItemNumber	positiveInteger	The sequence number for this shipment item.	BRAD SHI2
Attribute	[0..1]	note	Description500	Free text used to convey information that is not processed by applications. Only meant to present the information to a user as on a screen, in a browser, etc.	

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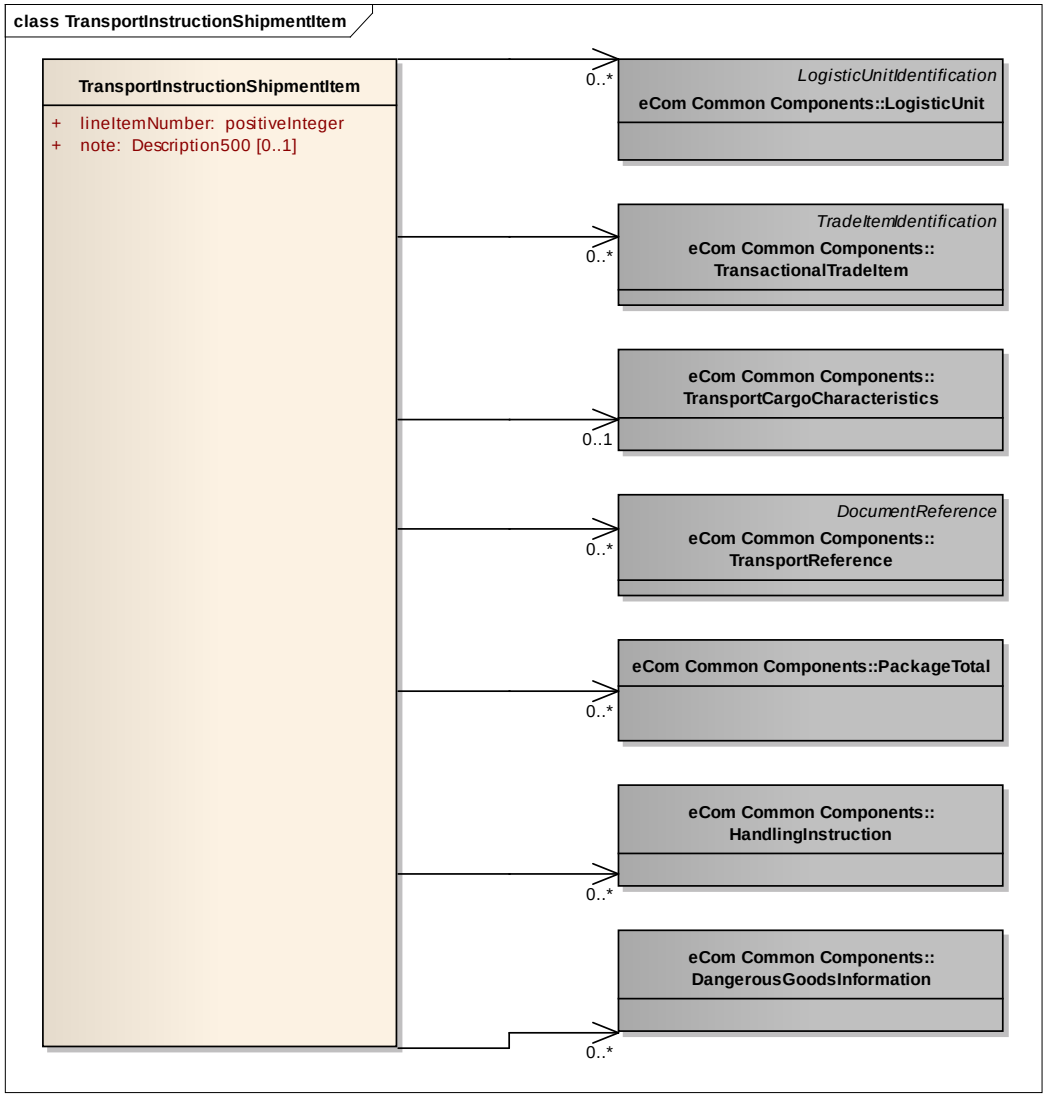
5.3.8. Class Diagram – Transport Instruction Shipment Item



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5.3.9. GDD Report – Transport Instruction Terms

content	multiplicity	attribute / role	datatype /secondary class	definition	requirements
TransportInstructionTerms				Information on the commercial conditions under which the requested transport services will be performed.#	
Association	[0..*]		LogisticService	Details on the additional services agreed as part of the transport instruction terms.#	
Attribute	[1..1]	transportServiceCategoryType	TransportServiceCategoryCode	Code specifying the type of transport service that will be provided. For example: Courier service. #	BRAD CON29, SHM26, SHM3
Attribute	[0..1]	transportCollectChargeAmount	Amount	The total monetary value of all freight and other service charges which are to be collected from the consignee at or after delivery of the goods.#	BRAD CON20
Attribute	[0..1]	transportPaymentMethodTypeCode	TransportPaymentMethodCode	Code specifying the method of payment for the transport and service charges. #	BRAD CON11, SHM5
Attribute	[0..1]	transportPickUpChargeAmount	Amount	The total monetary value of all freight and other service charges which are to be collected from the consignor at or after pick-up of the goods. #	BRAD CON20
Attribute	[0..1]	transportServiceConditionType	TransportServiceConditionTypeCode	Code specifying the type of contractual conditions applicable to these transport terms.#	BRAD CON29, SHM26
Attribute	[0..1]	transportServiceLevelCode	TransportServiceLevelCode	Code specifying the service level requested for the transport service. For example: Express service. #	BRAD CON29, SHM26

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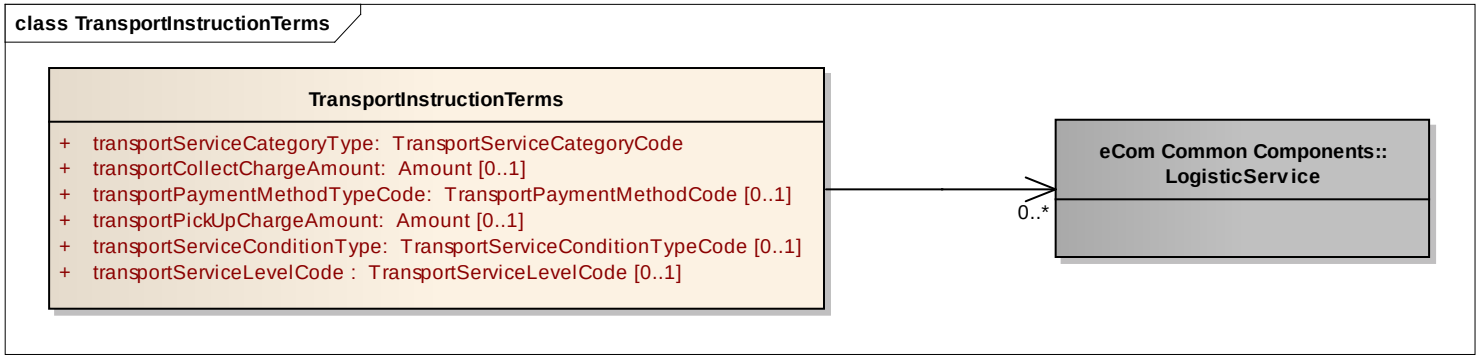
5.3.10. Class Diagram – Transport Instruction Terms



5.3.11. GDD Report – Transport Instruction Transport Equipment

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
TransportInstructionTransportEquipment				Transport equipment is a piece of equipment used to hold, protect or secure cargo for logistics purposes. Transport Equipment is to be moved using Transport Means.	
Association		TransportSeal	0..1	Details on the seal affixed to this piece of transport equipment.	
Association	returnLocation	LogisticLocation	0..1	The physical location to where the equipment will be returned.	BRAD TEQ6
Association	pickUpLocation	LogisticLocation	0..1	The physical location from where the equipment will be collected.	BRAD TEQ5
Association		Dimension	0..1	The linear dimensions of this type of transport equipment.	
Generalization		TransportEquipment		Provides the generic identification details for the transport equipment.	
Attribute	transportEquipmentWeight	Measurement	0..1	A measure of the mass of this type of transport equipment.	
Attribute	transportEquipmentProviderPartyRole	TransportPartyRoleCode	0..1	The code specifying the role of the party responsible for supplying this piece of logistics transport equipment.	BRAD TEQ3

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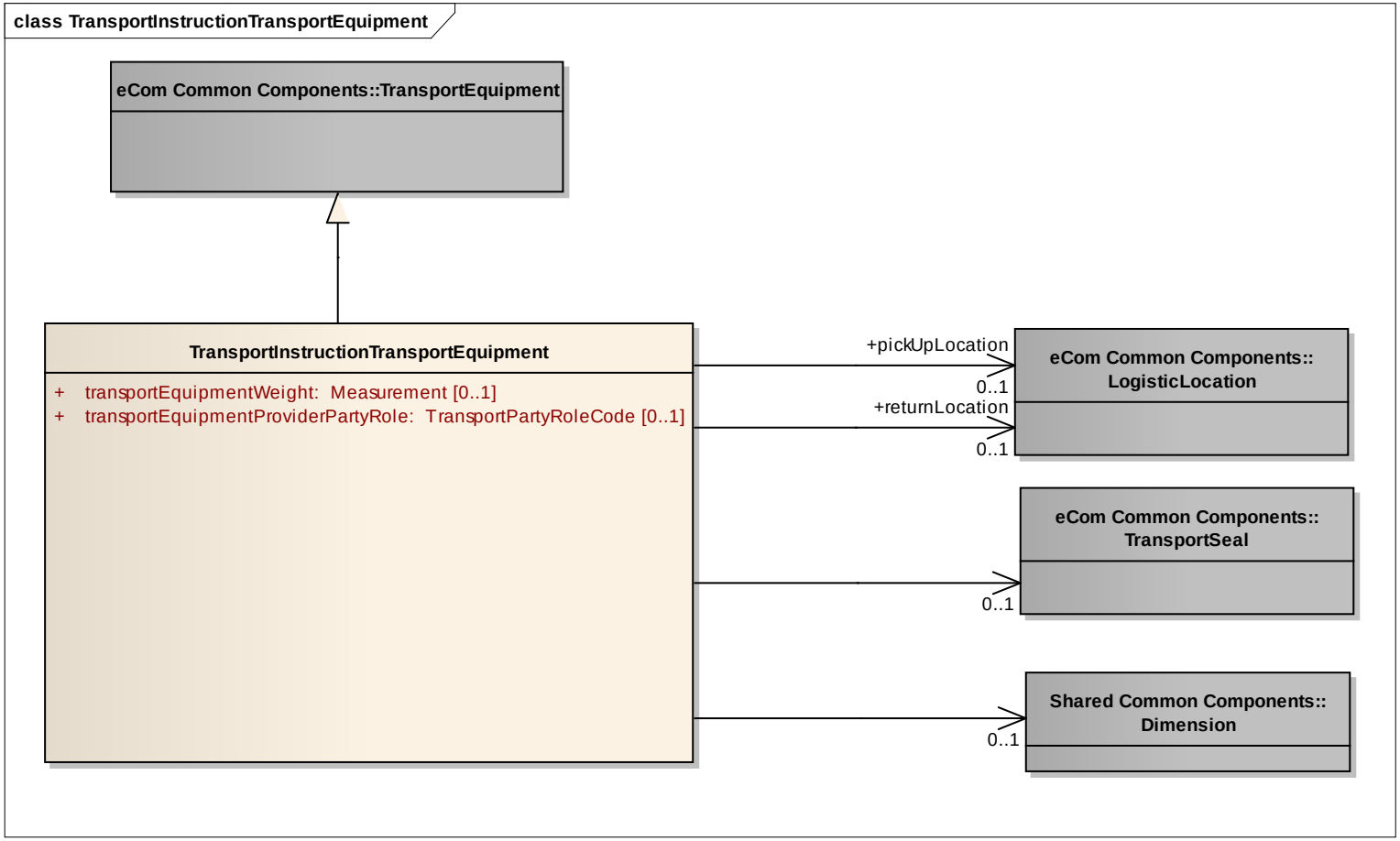
5.3.12. Class Diagram – Transport Instruction Transport Equipment



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5.3.13. GDD Report – Transport Instruction Transport Movement

content	multiplicity	attribute / role	datatype / secondary class	definition	requirements
TransportInstructionTransportMovement				The transport movement information specifies details of the movement of goods such as mode and means of transport, locations, departure, and arrival date(s) and time(s).	
Association	[0..*]	associatedPerson	Person	The name and/or identification of an individual assocatiated with this transport movement.	BRAD TMV9
Association	[0..*]	plannedWaypoint	LogisticEvent	An administrative procedure taking place at a specific location that may have an effect on the lead time of a transport movement, such as dangerous goods handling, customs clearance, …	
Association	[0..1]		TransportMeans	The type of vehicle, aircraft, vessel or other device used for the transport of goods in this transport movement	TMV19, TME1, TME2, TME3
Association	[0..1]	plannedArrival	LogisticEvent	The date, time, date time, or other date time value that the given party expects the means of transport for this transport movement to arrive at the designated arrival location.	BRAD TMV7, 13
Association	[0..1]	plannedDeparture	LogisticEvent	The date, time, date time, or other date time value that the given party expects the means of transport for this transport movement to depart from the designated departure location.	BRAD TMV6, TMV12
Association	[0..1]	carrier	TransactionalParty	A party that physically transports goods from one place to another.	BRAD TMV5
Association	[0..1]	transportStatusResponsibleParty	TransactionalParty	Party in charge of collecting and forwarding the information about the transport movement. #	BRAD TMV17, TMV18
Attribute	[1..1]	sequenceNumber	positiveInteger	Unique number identifying the sequence of this transport movement with respect to the other specified movements.#	

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content	multiplicity	attribute / role	datatype / secondary class	definition	requirements
Attribute	[1..1]	transportModeTypeCode	TransportModeCode	Code specifying the transportation mode used for this transport movement. #	BRAD TMV2
Attribute	[0..1]	routeID	Identifier	Unique identifier of the standard route that will be used for this transport movement.#	BRAD TMV8

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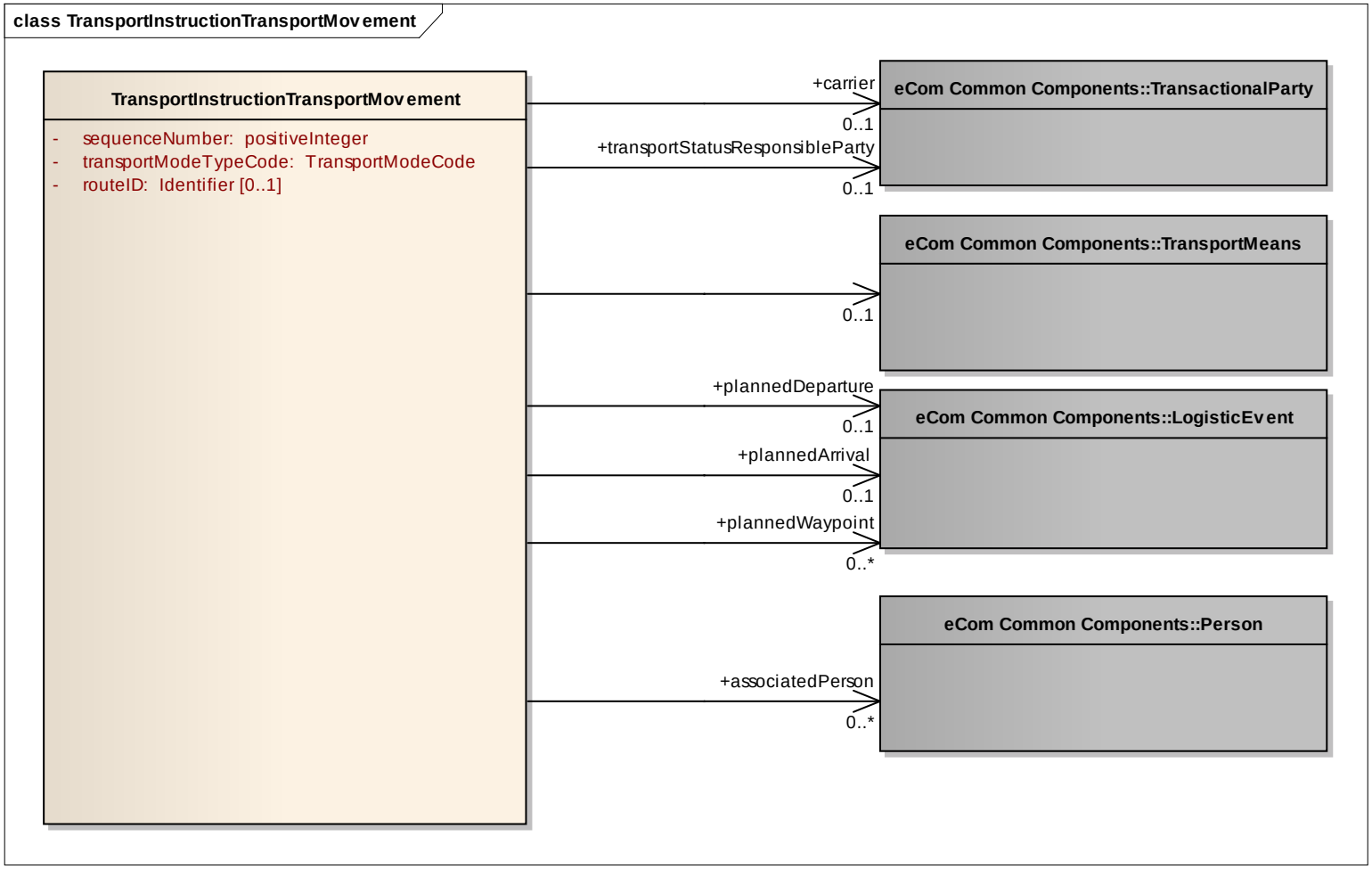
5.3.14. Class Diagram – Transport Instruction Transport Movement



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5.4. Enumerations (message specific)

5.4.1. TransportInstructionFunctionEnumeration

Code	Code Description
SHIPMENT	The transport instruction contains information on one or more shipments to be transported.
CONSIGNMENT	The transport instruction contains information on one or more consignments to be transported, and optionally also on shipments contained.

5.4.2. TransportInstructionResponseTypeEnumeration

Code	Code Description
FULLY_ACCEPTED	Fully accepted without amendments (only header information needs to be sent)
FULLY_REJECTED	Fully rejected (only header information needs to be sent)
FULLY_ACCEPTED_WITH_AMENDMENTS	Fully accepted with amendments / completed details (header and detail information needs to be sent).
PARTIALLY_ACCEPTED	Partially accepted, partially rejected (header and detail information needs to be sent)

5.4.3. TransportInstructionStatusEnumeration

Code	Code Description
CONFIRMED	The Logistic Services Seller confirms the instructed shipment / consignment without changes.
MODIFIED	The Logistic Services Seller modifies the instructed shipment / consignment.
CANCELLED	The Logistic Services Buyer cancels the instructed shipment / consignment
REJECTED	The Logistic Services Seller rejects the instructed shipment / consignment

5.5. Codelists

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

Class	Codelist	Referenced in
TransportInstructionConsignment TransportInstructionShipment	TransportInstructionStatusReasonCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0
TransportInstructionTerms	TransportServiceCategoryCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0
TransportInstructionTerms	TransportPaymentMethodCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0
TransportInstructionTerms	TransportServiceConditionTypeCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0

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Class	Codelist	Referenced in
TransportInstructionTerms	TransportServiceLevelCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0
TransportInstructionTransportEquipment	TransportPartyRoleCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0
TransportInstructionTransportMovement	TransportModeCode	eCom Domain Common Library Business Message (BMS) Release 3.0.0

6. Business Document Example

6.1. Transport Instruction – Domestic, 1 consignment, 1 truck, with logistic units

TransportInstruction	
creationDateTime	**2011-01-12T12:00:00**
documentStatusCode	**ORIGINAL**
transportInstructionFunction	**CONSIGNMENT**
EntityIdentification (+transportInstructionIdentification)	
uniqueCreatorIdentification	**TRINS00001**
TransactionalParty (+logisticServicesSeller)	
gln	**4048623000003**
TransactionalParty (+logisticServicesBuyer)	
gln	**7365566156190**
TransportInstructionConsignment	
ConsignmentIdentification	
ginc	**7365566156191234567**
TransactionalParty (+consignor)	
gln	**7365566156190**
TransactionalParty (+consignee)	
gln	**7300011234566**
TransportInstructionTerms	
transportServiceCategoryType	**30**
TransportCargoCharacteristics	
cargoTypeCode	**21**
cargoTypeDescription	**General cargo (EN)**
totalGrossVolume	**3.5 (CBM)**

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totalGrossWeight	**1500 (KGM)**
totalPackageQuantity	**5**
TransportInstructionTransportMovement	
sequenceNumber	**1**
transportModeTypeCode	**30**
LogisticEvent (+plannedDeparture)	
DateOptionalTime (+logisticEventDateTime)	
date	**2011-01-14**
LogisticLocation	
Address	
city	**Stockholm**
LogisticEvent (+plannedArrival)	
LogisticLocation	
Address	
city	**Lund**
PackageTotal	
packageTypeCode	**201**
totalPackageQuantity	**3**
PackageTotal	
packageTypeCode	**211**
totalPackageQuantity	**2**
TransportInstructionConsignmentItem	
lineItemNumber	**1**
TransportCargoCharacteristics	
cargoTypeCode	**21**
cargoTypeDescription	**Furniture (EN)**
LogisticUnit (*)	
sscc	**373655661561900018**
packageTypeCode	**201**
LogisticUnit (*)	
sscc	**373655661561900025**
packageTypeCode	**201**
LogisticUnit (*)	
sscc	**373655661561900032**
packageTypeCode	**201**
LogisticUnit (*)	
sscc	**373655661561900049**

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packageTypeCode	**211**
LogisticUnit (*)	
sscc	**373655661561900056**
packageTypeCode	**211**

6.2. Transport Instruction Response– Domestic, 1 consignment, 1 truck, with logistic units

TransportInstructionResponse	
creationDateTime	**2011-01-13T12:00:00**
documentStatusCode	**ORIGINAL**
responseType	**FULLY_ACCEPTED_WITH_AMENDMENTS**
EntityIdentification (+transportInstructionResponseIdentification)	
uniqueCreatorIdentification	**TRINR00001**
TransactionalParty (+logisticServicesSeller)	
gln	**4048623000003**
TransactionalParty (+logisticServicesBuyer)	
gln	**7365566156190**
DocumentReference (+transportInstruction)	
uniqueCreatorIdentification	**TRINS00001**
TransportInstructionConsignment	
ginc	**7365566156191234567**
TransactionalParty (+consignor)	
gln	**7365566156190**
TransactionalParty (+consignee)	
gln	**7300011234566**
TransportInstructionTerms	
transportServiceCategoryType	**30**
TransportCargoCharacteristics	
cargoTypeCode	**21**
cargoTypeDescription	**General cargo (EN)**
totalGrossVolume	**3.5 (CBM)**
totalGrossWeight	**1500 (KGM)**
totalPackageQuantity	**5**
TransportInstructionTransportMovement	
sequenceNumber	**1**
transportModeTypeCode	**30**
TransactionalParty (+carrier)	

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gln	**4048623000003**
LogisticEvent (+plannedDeparture)	
LogisticLocation	
Address	
city	**Stockholm**
DateOptionalTime (+logisticEventDateTime)	
date	**2011-01-14**
time	**08:00:00**
LogisticEvent (+plannedArrival)	
LogisticLocation	
Address	
city	**Lund**
DateOptionalTime (+logisticEventDateTime)	
date	**2011-01-14**
time	**17:00:00**
PackageTotal	
packageTypeCode	**201**
totalPackageQuantity	**3**
PackageTotal	
packageTypeCode	**211**
totalPackageQuantity	**2**
TransportInstructionConsignmentItem	
lineItemNumber	**1**
TransportCargoCharacteristics	
cargoTypeCode	**21**
cargoTypeDescription	**Furniture (EN)**
LogisticUnit (*)	
sscc	**373655661561900018**
packageTypeCode	**201**
LogisticUnit (*)	
sscc	**373655661561900025**
packageTypeCode	**201**
LogisticUnit (*)	
sscc	**373655661561900032**
packageTypeCode	**201**
LogisticUnit (*)	
sscc	**373655661561900049**
packageTypeCode	**211**

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LogisticUnit (*)	
sscc	**373655661561900056**
packageTypeCode	**211**

6.3. Transport Instruction – Domestic, 1 shipment, 1 truck, with logistic units

TransportInstruction	
creationDateTime	**2011-01-12T12:00:00**
documentStatus	**ORIGINAL**
transportInstructionFunction	**SHIPMENT**
EntityIdentification (+transportInstructionIdentification)	
uniqueCreatorIdentification	**TRINS00002**
TransactionalParty (+logisticServicesSeller)	
gln	**4048623000003**
TransactionalParty (+logisticServicesBuyer)	
gln	**7365566156190**
TransportInstructionShipment	
gsin	**73655661561900123**
TransactionalParty (+receiver)	
gln	**7300011234566**
TransactionalParty (+shipper)	
gln	**7365566156190**
TransactionalParty (+shipTo)	
Address	
city	**Lund**
postalCode	**22478**
streetAddressOne	**Glimmervägen 125**
TransportInstructionTerms	
transportServiceCategoryType	**30**
TransportCargoCharacteristics	
cargoTypeCode	**21**
cargoTypeDescription	**General cargo (EN)**
totalGrossVolume	**3.5 (CBM)**
totalGrossWeight	**1500 (KGM)**
totalPackageQuantity	**5**
LogisticEvent (+plannedDelivery)	

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DateOptionalTime (+logisticEventDateTime)	
date	**2011-01-18**
PackageTotal (*)	
packageTypeCode	**201**
totalPackageQuantity	**3**
PackageTotal (*)	
packageTypeCode	**211**
totalPackageQuantity	**2**
TransportInstructionShipmentItem (*)	
lineItemNumber	**1**
LogisticUnit (*)	
sscc	**373655661561900018**
packageTypeCode	**201**
LogisticUnit (*)	
sscc	**373655661561900025**
packageTypeCode	**201**
LogisticUnit (*)	
sscc	**373655661561900032**
packageTypeCode	**201**
TransactionalTradeItem	
gtin	**03736556615609**
tradeItemQuantity	**3**
TransportInstructionShipmentItem (*)	
lineItemNumber	**2**
LogisticUnit (*)	
sscc	**373655661561900049**
packageTypeCode	**211**
tradeItemQuantity	**10**
LogisticUnit (*)	
sscc	**373655661561900056**
packageTypeCode	**211**
tradeItemQuantity	**10**
TransactionalTradeItem	
gtin	**03736556615616**
tradeItemQuantity	**20**

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7. Implementation Considerations

(Insert Content Here)

8. Testing

This section describes the testing criteria for business solutions.

8.1. Pass / Fail Criteria

No.	Test Criteria	Related Requirement	Design Element	Pass Criteria	Fail Criteria
1					
2					
3					

8.2. Test Data

Attribute	Value

9. Appendices

Not Applicable

10. Summary of Changes

Change	BSD Version	Associated CR Number
Added section 5.5 Codelists, and populated the section. Moved section “Architecture Principles” after Summary of Changes. Fixed typo in header of section 11: “Principals” -> “Principles” Updated business examples to match the pilot issue resolution and the resequencing of attributes and associations. *Pilot Issue resolution:* **Updated class diagram and GDD report for Transport Instruction Transport Equipment:** ■ Added generalization to eCom:TransportEquipment	1.1.0	

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Change	BSD Version	Associated CR Number
■ removed association to ReturnableAssetIdentification (comes back via inheritance) ■ removed attribute transportEquipmentTypeCode (comes back via inheritance) ■ Added association to Dimension ■ Added attribute transportEquipmentWeight **Updated class diagram and GDD report for Transport Instruction Consignment:** ■ Added association to TransportMeans with rolename +includedTransportMeans (0..*) ■ Added association to PassengerInformation (0..*) ■ Changed cardinality of association +notifyParty (TransactionalParty) from 0..1 to 0..* ■ Renamed all existing attributes, removed the term consignment. ■ Added new attribute: note ■ Re-sequenced the associations **Updated class diagram and GDD report for Transport Instruction Consignment Item:** ■ Deleted association referencedTransportEquipment to ReturnableAssetIdentification ■ Added association referencedTransportEquipment to TransportEquipment ■ Added attribute: note ■ Re-sequenced associations **Updated class diagram and GDD report for Transport Instruction Transport Movement:** ■ Added association plannedWaypoint (0..*) to LogisticEvent. GDD Definition: An administrative procedure taking place at a specific location that may have an effect on the lead time of a transport movement, such as dangerous goods handling, customs clearance, … **Updated class diagram and GDD report for Transport Instruction Shipment:** ■ Changed cardinality of association +notifyParty (TransactionalParty) from 0..1 to 0..* ■ Added attribute: note ■ Re-sequenced associations **Updated class diagram and GDD report for Transport Instruction Shipment Item:** ■ Added new attribute: note		

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Change	BSD Version	Associated CR Number
■ Made cardinality of association to TransactionalTradeItem 0..* instead of 1..* ■ Resequenced the associations ■ TransportInstructionShipment: attribute transportInstructionShipmentStatus was renamed to transportInstructionStatusCode		
In class diagrams and GDD report of Transport Instruction Response: ■ Renamed association to DocumentReference into transportInstruction (was uppercase)	1.1.0 (8-Nov-2011)	

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11. 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.	☒	
2.2	The GS1 Architecture shall leverage the use of GS1 Keys	The solution maintains the GS1 keys as the primary, mandatory identifiers.	☒	
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.	☒	
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.	☒	
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.	☒	
2.6	The GS1 Architecture shall enable security where appropriate	Security solutions are included where appropriate.	☒	
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.	☒	
2.8	The GS1 Architecture shall be royalty-free	The solution supports this principal where possible. The solution may include the use of other standards organizations that may not be royalty free.	☒	

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#	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.	☒	
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.	☒	`
3.3	The GS1 Architecture should promote seamless integration	The BSD promotes seamless integration with other GS1 Standards if in scope.	☒	
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.	☒	
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.	☒	
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.	☒	
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.	☒	
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.	☒	
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.	☒	
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.	☒	

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#	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.	☒	

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