



Transport Capacity Plan Business Message Standard (BMS)

Release 3.1

1-May-2013, Issue 1



Document Summary

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08 Jul 2009	Jean-Luc Champion, GS1 Global Office on behalf of Jaco Voorspuij, DHL	09-000189

Business Requirements Document (BRAD) Reference

BRAD Title:	BRAD Date:	BRAD Version
Transport Planning	March 2011	1.0

Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change
08Dec2011	BMS 3.0 issue 1.0	Coen Janssen	TSD Development	See summary of changes
1-May-2013	BMS 3.1 issue 1	Coen Janssen	BMS Release 3.1	See summary of changes

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1. Business Domain View

1.1. Problem Statement / Business Need

This BMS, Transport Capacity Plan, is part of the global GS1 standard for transport planning, enabling Logistic Services Buyers to share capacity forecasts for transportation equipment required by trade lane, origin and destination with Logistic Services Sellers. In this way, Logistic Services Sellers can anticipate the demand for transportation capacity, and can measure their ability to support projected volumes. By providing this visibility to Logistic Services Sellers, the seller will have a reduced need to react to equipment requirements at a moment's notice, easing capacity constraints, improving the efficiency of equipment deployment and utilization, and ultimately taking out unnecessary cost in the supply chain.

The Logistic Services Seller is responsible for developing the Transport Capacity Plan. He does this based on the Transport Capacity Requirements communicated to him by the Logistic Services Buyer.

NOTE: Please refer to BMS Transport Capacity Requirements for more information on this.

Given that the Logistic Services Seller will likely have numerous clients, he should evaluate capacity commitments to all buyers before determining whether they can support the capacity needs of each individual buyer. Based on a number of factors, the Logistic Services Seller may determine the need to allocate capacity from one client to another.

When analysing the forecast received from the Logistic Services Buyer, the Logistic Services Seller may combine the cargo (for multiple requirement lines) if they are for the same trade lane (i.e. origin/destination), forecast bucket, and service requirement level (e.g. refrigerated vs. general cargo).

1.2. Objective

This standard defines the transaction model and data model for the following business messages:

- Transport Capacity Plan

1.3. Audience

Implementers of the Business Message Standard.

1.4. References

Reference Name	Description
BRAD Transport Planning (GS1, 2011)	
Logistics Interoperability Model (GS1, 2007)	
BMS eCom Domain Common Library Release 3.1	The documented design of components that are used in multiple messages within the eCom domain.
BMS Shared Common Library Release 3.1	The documented design of components that are used in multiple messages within the eCom domain and GDSN.

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
Work Group Chair	Fred Kempkes	Unilever
Work Group Chair	Jaco Voorspuij	DHL
Work Group Member	Mia Lenman	GS1 Sweden
Work Group Member	Richard Chresta	GS1 Switzerland & UNCEFACT TGB3
Work Group Member	Jeff Melcher	Army & Air Force Exchange Service
Work Group Member	Yuliya Shevchenko	GS1 Global Office
Work Group Member	Mats Rosen	DSV Sweden
Work Group Member	Helena Lunden	ICA Sweden
Work Group Member	Gerald Borgolte	Atos Origin
Work Group Member	Audun Vennesland	SINTEF & e-Freight
Work Group Member	Mary Vayou	BMT Group Ltd & e-Freight

1.5.2. Development Team Members

Function	Name	Organisation
GSMP Process Lead	Jean-Luc Champion	GS1 Global Office
Standards Content Lead	Coen Janssen	GS1 Global Office
Technical Development Lead	Ewa Iwicka	GS1 Global Office
Peer Review	Eric Kauz	GS1 Global Office

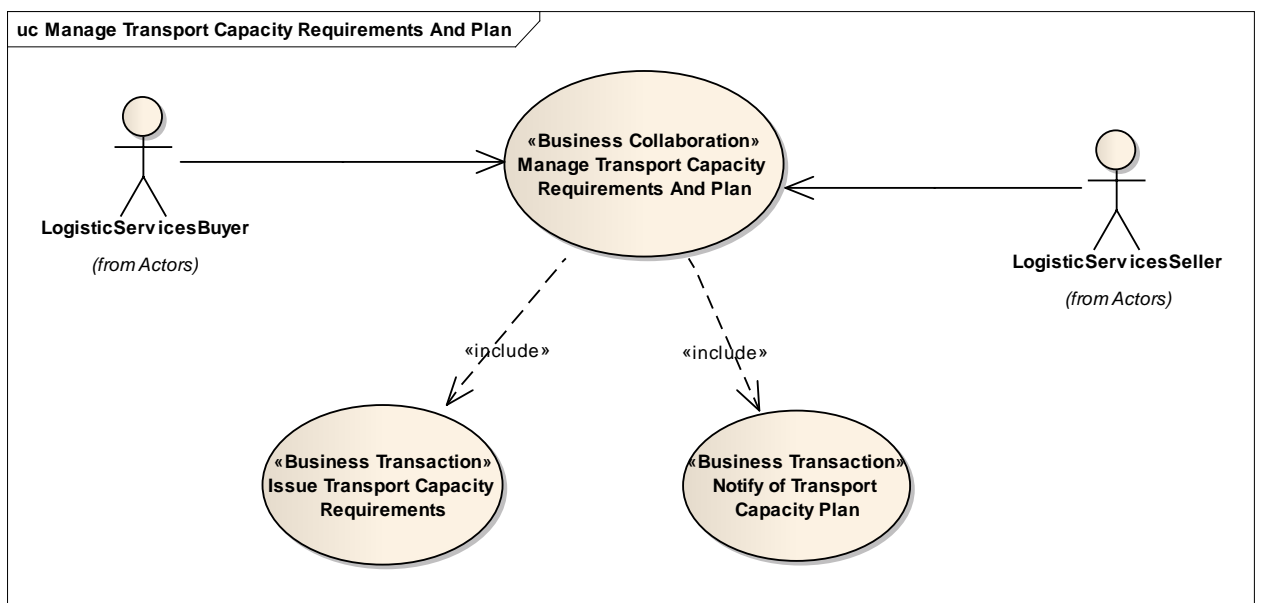
2. Business Context

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

3. Business Transaction View

3.1. Manage Transport Capacity Plan

Use Case Diagram



Use Case Description

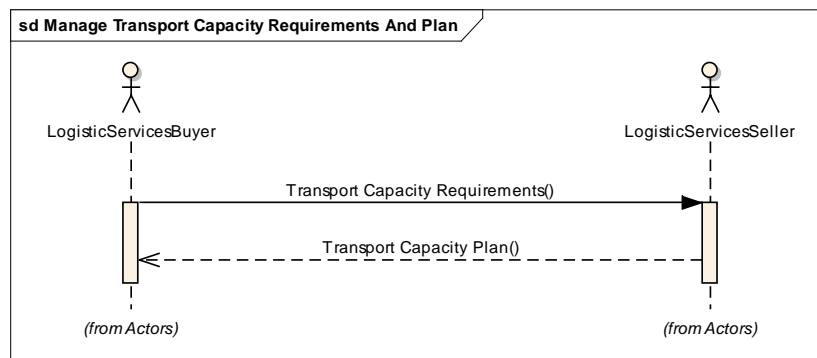
Use Case ID	UC-1B
Use Case Name	Notify of Transport Capacity Plan
Use Case Description	The purpose of this transaction is to enable the Logistic Service Seller to submit a transport capacity plan to the Logistic Service Buyer, identifying how they will support the transport capacity requirements.
Actors (Goal)	Logistic Service Buyer (LSB) Logistic Service Seller (LSS)

Use Case ID	UC-1B
Performance Goals	
Preconditions	<p>The LSS has received the transport capacity requirements (capacity forecast) from the LSB.</p> <p>The trading partners have agreed upon:</p> <ul style="list-style-type: none"> Timeframe that the transport capacity plan should be sent after receipt of transport capacity requirements. Time Horizon of the information within the message Forecast Buckets which organize the data based on the time horizon (<i>e.g. data in message that is for 3-4 months prior to shipment – “buckets” are per month; 2 months prior – “buckets” are per week; 1 month prior – “buckets” are by week for weeks 3& 4, and by day for weeks 1 & 2</i>) <p>Partners have also pre-defined the freight terms, geographic scope of partnership, and distribution strategies to be utilized.</p>
Post conditions	The LSB has received the transport capacity plan.
Scenario	<p>Begins when... The LSS has received the transport capacity requirements</p> <p>Continues with...</p> <ul style="list-style-type: none"> The LSS develops a transport capacity plan The LSS sending the transport capacity plan to the LSB The LSB receiving the transport capacity plan <p>Ends when... LSB has received the transport capacity plan</p>
Alternative Scenario	
Related Requirements	
Related Rules	

Activity Diagram(s)

Not applicable

Sequence Diagram(s)

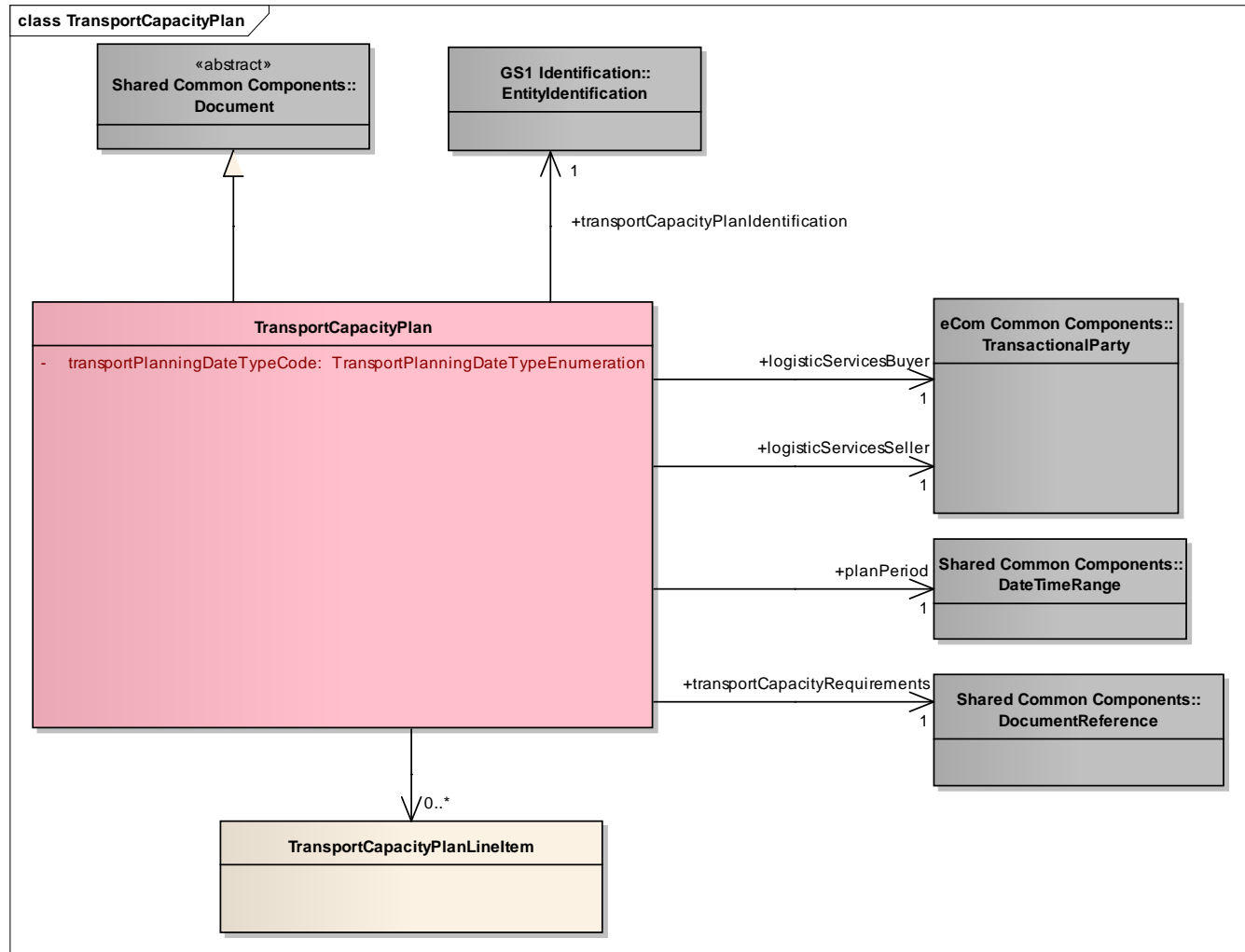


NOTE: Sending of the transport capacity plan is optional. When used it must be in reply to Transport Capacity Requirements.

4. Business Information View

4.1. Transport Capacity Plan

Class Diagram

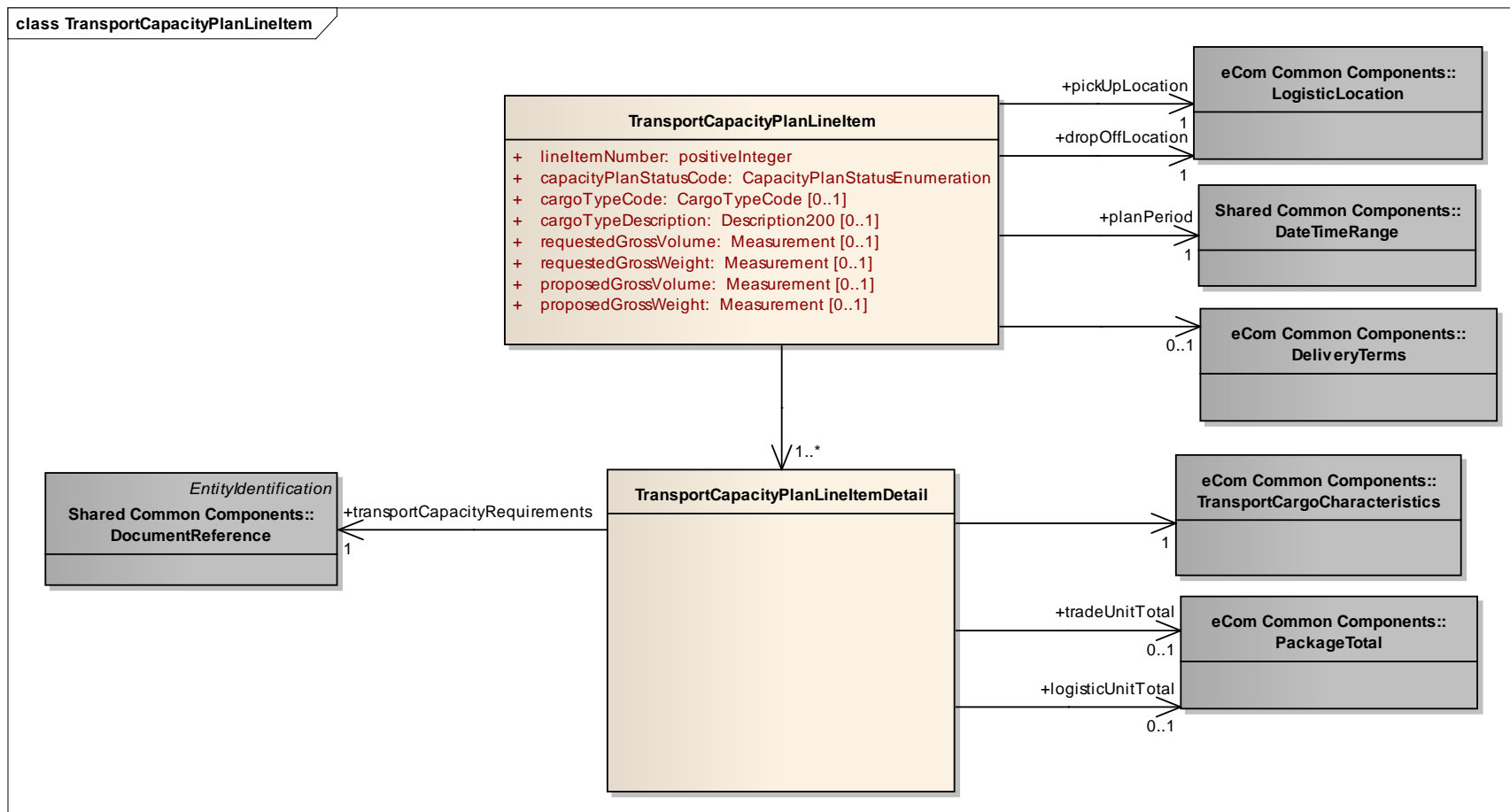


GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multipl icity	Definition	Requirements
TransportCapacityPlan				Transport Capacity Plan is created by the Logistic Services Seller based on the Transport Capacity Requirements communicated to him by the Logistic Services Buyer.	
Generalization		Document		Used to specify basic information about the content of the message including version number, creation date and time.	BRAD Transport Planning - TCP2, TCP3
Association	transportCapacityPlanIden tification	EntityIdentification	1	Provides the unique identification of the transport capacity plan.	BRAD Transport Planning - TCP1
Association	logisticServicesBuyer	TransactionalParty	1	A party that purchases logistics services from another party	BRAD Transport Planning - TCP6
Association	logisticServicesSeller	TransactionalParty	1	A party that provides logistics services to another party.	BRAD Transport Planning - TCP7
Association	planPeriod	DateTimeRange	1	The period to which the plan applies.	BRAD Transport Planning - TCP4
Association	transportCapacityRequire ments	DocumentReferenc e	1	Reference to the transport capacity requirements message on which the plan has been based.	BRAD Transport Planning - TCP8
Association		TransportCapacity PlanLineItem	0..*	Specifies the transport capacity plan on detail level.	BRAD Transport Planning - TCP9
Attribute	transportPlanningDateTyp eCode	TransportPlanning DateTypeEnumerat ion	1..1	Code specifying the type of date used for transport planning, i.e. the delivery date or the pick-up date.	BRAD Transport Planning - TCP5

4.2. Transport Capacity Plan Line Item

Class Diagram



GDD Report

Content	Attribute / Role	Datatype /Secondary class	Multipli city	Definition	Requirements
<u>TransportCapacityPlanLineItem</u>				Specifies the planned transport capacity allocation for a given route and cargo type.	

Content	Attribute / Role	Datatype /Secondary class	Multipli city	Definition	Requirements
Association	planPeriod	DateTimeRange	1	The period to which the transport capacity plan line item applies.	BRAD Transport Planning - TPL8 (TPS1)
Association	dropOffLocation	LogisticLocation	1	The location where the goods need to be delivered.	BRAD Transport Planning - TPL7 (TCL1)
Association	pickUpLocation	LogisticLocation	1	The location where the goods need to be collected.	BRAD Transport Planning - TPL7 (TCL1)
Association		DeliveryTerms	0..1	The applicable legal, customs, financial and insurance terms for the delivery of the goods.	BRAD Transport Planning - TPL3
Association		TransportCapacityPlanLineItemDetail	1..*	Details on the transport capacity requirements on which the plan is based.	BRAD Transport Planning - TPL9
Attribute	lineItemNumber	positiveInteger	1..1	Provides the line number associated to the line item.	BRAD Transport Planning - TPL1
Attribute	capacityPlanStatusCode	CapacityPlanStatusEnumeration	1..1	Code specifying the degree to which the requested capacity can be supported.	BRAD Transport Planning - TPL4
Attribute	cargoTypeCode	CargoTypeCode	0..1	Code specifying the classification of a type of cargo for example hazardous cargo.	BRAD Transport Planning - TPL2
Attribute	cargoTypeDescription	Description200	0..1	Free text specifying the classification of a type of cargo.	BRAD Transport Planning - TPL2
Attribute	requestedGrossVolume	Measurement	0..1	The requested transport capacity expressed as the volume of the goods, calculated by multiplying the maximum length, width, and height of the packaged goods.	BRAD Transport Planning - TPL5
Attribute	requestedGrossWeight	Measurement	0..1	The requested transport capacity expressed as the weight of the goods, including the weight of transport packaging, and potentially the weight of any transport equipment.	BRAD Transport Planning - TPL5
Attribute	proposedGrossVol	Measurement	0..1	The proposed transport capacity expressed as the volume of the	BRAD Transport

Content	Attribute / Role	Datatype /Secondary class	Multipli city	Definition	Requirements
	ume			goods, calculated by multiplying the maximum length, width, and height of the packaged goods.	Planning - TPL6
Attribute	proposedGrossWeight	Measurement	0..1	The proposed transport capacity expressed as the weight of the goods, including the weight of transport packaging, and potentially the weight of any transport equipment.	BRAD Transport Planning - TPL6
TransportCapacityPlanLineItemDetail				Specifies the requested transport capacity allocation for a given route and cargo type.	
Association		TransportCargoCharacteristics	1	Aggregate information on the goods to be transported.	BRAD Transport Planning - TRD2, TRD3, TRD4, TRD6
Association	logisticUnitTotal	PackageTotal	0..1	The total number of logistic units to be transported.	BRAD Transport Planning - TRD5
Association	tradeUnitTotal	PackageTotal	0..1	The total number of trade units (e.g. cases) to be transported.	BRAD Transport Planning - TRD5
Association	transportCapacityRequirements	DocumentReference	1	Reference to the related transport capacity requirements line item.	BRAD Transport Planning - TRD1

4.3. Enumerations & codes (message specific classes only)

4.3.1. Capacity Plan Status Enumeration

Value	Description
ACCEPTED_IN_FULL	The full amount of the requested capacity can be supported.
ACCEPTED_PARTIAL	A partial amount of the requested capacity can be supported (i.e. "shortage"). For example, the requested capacity is 500 CBM, but the accepted capacity is 250 CBM).
ACCEPTED_EXCESS_AVAILABLE	The full amount of the requested capacity can be supported, and there is additional capacity available. For example, the requested capacity is 500 CBM. The accepted capacity is 500 CBM, and there is still 250 CBM of capacity of available.
REJECTED	The requested capacity cannot be supported.

4.3.2. Common codes / enumerations

Please refer to BMS eCom Domain Common for the following codelists:

- TransportPlanningDateTypeCode
- CargoTypeCode

5. Business Message Examples

5.1. Example 1

A Logistic Service Buyer, ABC_Company identified by GLN 1234567890123, is providing a forecast of capacity requirements for 6 months to Logistics_International identified by GLN 9876543212345.

TransportCapacityPlan	
creationDateTime	2009-12-14T12:00:00
documentStatusCode	ORIGINAL
documentActionCode	ADD
transportPlanningDateTypeCode	DELIVERY_DATE
EntityIdentification (+transportCapacityPlanIdentification)	
entityIdentification	PLAN1234
TransactionalParty (+logisticServicesBuyer)	
gln	1234567890123
TransactionalParty (+logisticServicesSeller)	
gln	9876543212345
DateTimeRange (+planPeriod)	
beginDate	2010-01-01

endDate	2010-06-30
DocumentReference (+transportCapacityRequirements)	
entityIdentification	RQMT1234
TransportCapacityPlanLineItem	
lineItemNumber	1
capacityPlanStatusCode	ACCEPTED_IN_FULL
cargoTypeCode	12
requestedGrossWeight	50 KGM
requestedGrossVolume	9.22 CBM
proposedGrossWeight	50 KGM
proposedGrossVolume	9.22 CBM
LogisticLocation(+pickUpLocation)	
unLocationCode	US LAX
LogisticLocation(+dropOffLocation)	
unLocationCode	US EWR
DateTimeRange(+planPeriod)	
beginDate	2010-01-01
endDate	2010-01-07
DeliveryTerms	
incotermsCode	CFR
LogisticLocation	
unLocationCode	US RDG
TransportCapacityPlanLineItemDetail	
TransportCargoCharacteristics	
cargoTypeCode	12
cargoTypeDescription	Furniture
totalGrossWeight	50 KGM
totalGrossVolume	9.22 CBM
totalItemQuantity	75
totalPackageQuantity	5
LogisticUnitTotal (+tradeUnitTotal)	
packageTypeCode	CS
totalPackageQuantity	25
LogisticUnitTotal (+logisticUnitTotal)	
packageTypeCode	200
totalPackageQuantity	25
DocumentReference (+transportCapacityRequirements)	
entityIdentification	RQMT1234

lineItemNumber	1
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6. Implementation Considerations

Not applicable

7. Appendices

Not applicable

8. Summary of Changes

8.1. BMS Release 3.0

Change	BSD Version	Associated CR Number
Initial Version	1.0	N/A

8.2. BMS Release 3.1

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