

Transport Capacity Plan Business Message Standard (BMS)

Release 3.4.1, Draft, Nov 2019





Document Summary

Document Item	Current Value	
Document Name	Transport Capacity Plan Business Message Standard (BMS)	
Document Date	Nov 2019	
Document Version	3.4.1	
Document Issue	1	
Document Status	Draft	

Work Request Reference

Date of WR Submission to GSMP	WR Submitter(s)	Refer to Work Request (WR) Number(s)
08-Jul-2009	DHL	09-000189
07-Feb-2014	GS1 Germany	14-000021
20-Mar-2014	GS1 Slovenia	14-000044
25-Jun-2014	GS1 Global Office	14-000110
03-Oct-2018	GS1 GO	18-000319

Business Requirements Document (BRAD) Reference

BRAD Title	BRAD Issue Date	BRAD Version
Transport Planning	March 2011	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



Disclaimer

GS1[®], under its IP Policy, seeks to avoid uncertainty regarding intellectual property claims by requiring the participants in the Work Group that developed this **Transport Capacity Plan Business Message Standard (BMS)** to agree to grant to GS1 members a royalty-free licence or a RAND licence to Necessary Claims, as that term is defined in the GS1 IP Policy. Furthermore, attention is drawn to the possibility that an implementation of one or more features of this Specification may be the subject of a patent or other intellectual property right that does not involve a Necessary Claim. Any such patent or other intellectual property right is not subject to the licencing obligations of GS1. Moreover, the agreement to grant licences provided under the GS1 IP Policy does not include IP rights and any claims of third parties who were not participants in the Work Group.

Accordingly, GS1 recommends that any organization developing an implementation designed to be in conformance with this Specification should determine whether there are any patents that may encompass a specific implementation that the organisation is developing in compliance with the Specification and whether a licence under a patent or other intellectual property right is needed. Such a determination of a need for licencing should be made in view of the details of the specific system designed by the organisation in consultation with their own patent counsel.

THIS DOCUMENT IS PROVIDED "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, NONINFRINGMENT, FITNESS FOR PARTICULAR PURPOSE, OR ANY WARRANTY OTHER WISE ARISING OUT OF THIS SPECIFICATION. GS1 disclaims all liability for any damages arising from use or misuse of this Standard, whether special, indirect, consequential, or compensatory damages, and including liability for infringement of any intellectual property rights, relating to use of information in or reliance upon this document.

GS1 retains the right to make changes to this document at any time, without notice. GS1 makes no warranty for the use of this document and assumes no responsibility for any errors which may appear in the document, nor does it make a commitment to update the information contained herein.

GS1 and the GS1 logo are registered trademarks of GS1 AISBL.



Table of Contents

1	Bus	iness Domain View	5
	1.1	Introduction	. 5
	1.2	References	. 5
2	Bus	iness Context	. 5
3	Puc	iness Transaction View	6
3	3.1	Business Transaction - Manage Transport Capacity Plan	
4	Bus	iness Information View	. 8
	4.1	Transport Capacity Plan	
	4.2	Transport Capacity Plan Line Item	
	4.3	Enumerations (message specific)	
	4.4	Code Lists	
5	Bus	iness Message Examples	14
	5.1	Example	14
6	Imp	lementation Considerations	15
	6.1	User Guide	15
	6.2	Message Specific Considerations	15
7	Sun	nmary of Changes	16
	7.1	BMS Release 3.0	16
	7.2	BMS Release 3.1	16
	7.3	BMS Release 3.2	16
	7.4	BMS Release 3.3	18
	7.5	BMS Release 3.4	18
	7.6	BMS Release 3.4.1	18
8	App	endices	18
9	Ack	nowledgements	19
	9	9.1.1 Work Group	19
		9.1.2 Development Team Members	20



1 Business Domain View

1.1 Introduction

Message Definition

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.

Principles

This BMS is a 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.

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 References

Reference Name	Description
BRAD Transport Planning (GS1, 2011)	
Logistics Interoperability Model (GS1, 2007)	
BMS eCom Domain Common Library Release 3.4	The documented design of components that are used in multiple messages within the eCom domain.
BMS Shared Common Library Release 3.4	The documented design of components that are used in multiple messages within the eCom domain and GDSN.

2 Business Context

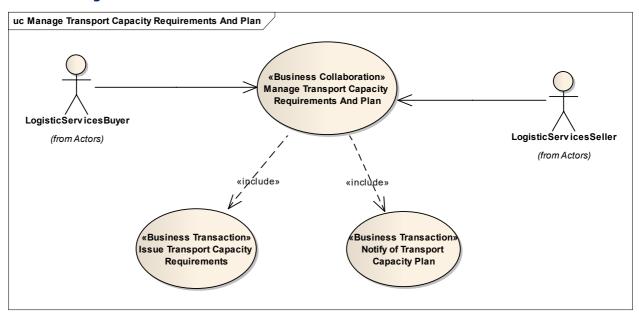
Context Category	Value(s)
Industry	All
Geopolitical	All
Product	All
Process	Transport Management
System Capabilities	GS1 System
Official Constraints	None



3 Business Transaction View

3.1 Business Transaction - Manage Transport Capacity Plan

Use Case Diagram



Use Case Description

se case bescription					
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)				
Performance Goals					
Preconditions	The LSS has received the transport capacity requirements (capacity forecast) from the LSB.				
	The trading partners have agreed upon:				
	 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 (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)				
	Partners have also pre-defined the freight terms, geographic scope of partnership, and distribution strategies to be utilized.				
Post conditions	The LSB has received the transport capacity plan.				

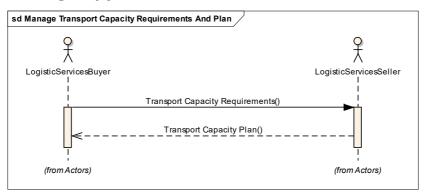


Use Case ID	UC-1B
Scenario	Begins when The LSS has received the transport capacity requirements Continues with The LSS develops a transport capacity plan The LSS sending the transport capacity plan to the LSB The LSB receiving the transport capacity plan Ends when LSB has received the transport capacity plan
Alternative Scenario	
Related Requirements	
Related Rules	

Activity Diagram(s)

Not applicable

Sequence Diagram(s)



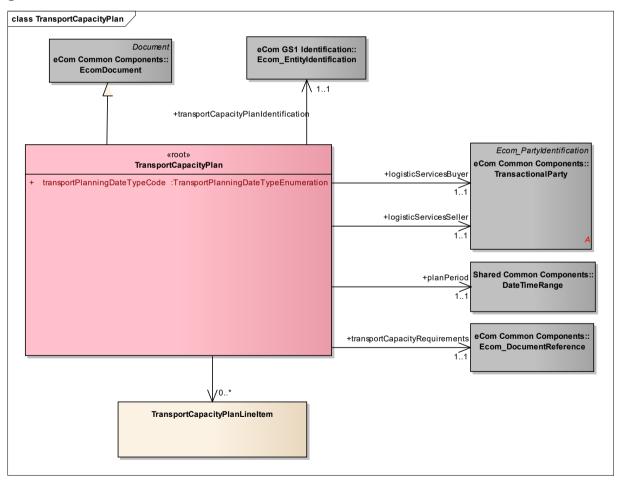
NOTE: Sending of the transport capacity plan is optional. When used it \underline{must} be in reply to Transport Capacity Requirements.



4 Business Information View

4.1 Transport Capacity Plan

Class diagram





GDD report

The content of the TransportCapacityPlan 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:TransportCapacityPlan

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	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.	
Association		TransportCapacityPla nLineItem	0*	Specifies the transport capacity plan on detail level.	BRAD Transport Planning - TCP9
Association	transportCapacit yRequirements	Ecom_DocumentRefe rence	11	Reference to the transport capacity requirements message on which the plan has been based.	BRAD Transport Planning - TCP8 WR 15-000314
Association	transportCapacit yPlanIdentificatio n	Ecom_EntityIdentific ation	11	Provides the unique identification of the transport capacity plan.	BRAD Transport Planning - TCP1 WR 15-000314
Association	logisticServicesS eller	TransactionalParty	11	A party that provides logistics services to another party.	BRAD Transport Planning - TCP7
Association	logisticServicesB uyer	TransactionalParty	11	A party that purchases logistics services from another party.	BRAD Transport Planning - TCP6
Generalization		EcomDocument		Basic information about the content of the message including version number, creation date and time.	BRAD Transport Planning - TCP2, TCP3
Association	planPeriod	DateTimeRange	11	The period to which the plan applies.	BRAD Transport Planning - TCP4
Attribute	transportPlannin gDateTypeCode	TransportPlanningDat eTypeEnumeration	11	Code specifying the type of date used for transport planning, i.e. the delivery date or the pick-up date.	BRAD Transport Planning - TCP5

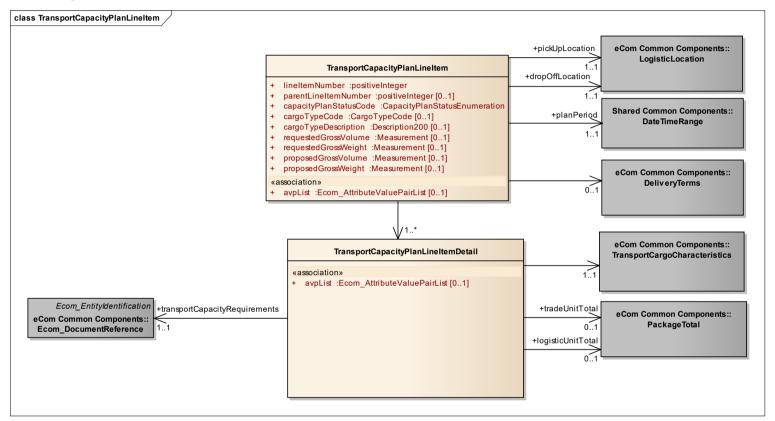


Note: Reference Shared Common Library Business Message (BMS) Release 3.4 and eCom Domain Common Library Business Message (BMS) Release 3.4 for all common information.



4.2 Transport Capacity Plan Line Item

Class Diagram



GDD Report

The content of the TransportCapacityPlanLineItem 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:TransportCapacityPlanLineItem

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
TransportCapacityPlanLineIt em				Specifies the planned transport capacity allocation for a given route and cargo type.	



Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
Association	dropOffLocation	LogisticLocation	11	The location where the goods need to be delivered.	BRAD Transport Planning - TPL7 (TCL1)
Association	planPeriod	DateTimeRange	11	The period to which the transport capacity plan line item applies.	BRAD Transport Planning - TPL8 (TPS1)
Association	pickUpLocation	LogisticLocation	11	The location where the goods need to be collected.	BRAD Transport Planning - TPL7 (TCL1)
Association		DeliveryTerms	01	The applicable legal, customs, financial and insurance terms for the delivery of the goods.	BRAD Transport Planning - TPL3
Association		TransportCapacityPla nLineItemDetail	1*	Details on the transport capacity requirements on which the plan is based.	BRAD Transport Planning - TPL9
Attribute	lineItemNumber	positiveInteger	11	The sequence number for this shipment item.	BRAD SHI2
Attribute	capacityPlanStat usCode	CapacityPlanStatusEn umeration	11	Code specifying the degree to which the requested capacity can be supported.	BRAD Transport Planning - TPL4
Attribute	cargoTypeCode	CargoTypeCode	01	Code specifying the classification of a type of cargo for example hazardous cargo.	BRAD Transport Planning - TPL2
Attribute	cargoTypeDescri ption	Description200	01	Free text specifying the classification of a type of cargo.	BRAD Transport Planning - TPL2
Attribute	requestedGrossV olume	Measurement	01	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	requestedGross Weight	Measurement	01	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	proposedGrossV olume	Measurement	01	The proposed 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 - TPL6
Attribute	proposedGrossW eight	Measurement	01	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



Transport Capacity Plan Business Message Standard (BMS)

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
Attribute	parentLineItemN umber	positiveInteger	01	The number of line item containing information about the parent of the current item. It allows establishing hierarchical link between the two items.	
Attribute	avpList	Ecom_AttributeValue PairList	01	Temporary attributes introduced between minor versions.	
TransportCapacityPlanLineIt emDetail				Specifies the requested transport capacity allocation for a given route and cargo type.	
Association	logisticUnitTotal	PackageTotal	01	The total number of logistic units to be transported.	BRAD Transport Planning - TRD5
Association		TransportCargoChara cteristics	11	Aggregate information on the goods to be transported.	BRAD Transport Planning - TRD2, TRD3, TRD4, TRD6
Association	transportCapacit yRequirements	Ecom_DocumentRefe rence	11	Reference to the related transport capacity requirements line item.	BRAD Transport Planning - TRD1 WR 156-000314
Association	tradeUnitTotal	PackageTotal	01	The total number of trade units (e.g. cases) to be transported.	BRAD Transport Planning - TRD5
Attribute	avpList	Ecom_AttributeValue PairList	01	Temporary attributes introduced between minor versions.	



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 Enumerations (message specific)

Not applicable

4.4 Code Lists

Class	Codelist	GDD Link
TransportCapacity PlanLineItem	CapacityPlanStatusEnu meration	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1: gdd:cl:CapacityPlanStatusEnumeration
TransportCapacity Plan	portCapacity TransportPlanningDateT ypeEnumeration	
TransportCapacity PlanLineItem	CargoTypeCode	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1: gdd:cl:CargoTypeCode



Note: Refer to the Global Data Dictionary (GDD) for the code values.



5 Business Message Examples

5.1 Example

A Logistic Service Buyer, ABC_Company identified by GLN 1234567890128, is providing a forecast of capacity requirements for 6 months to Logistics_International identified by GLN 9876543212344.

Party Information

GS1 Global Location Number	Party Type
1234567890128	Logistic Service Buyer
9876543212344	Logistic Service Seller

Message Example

Attribute	Value	
TransportCapacityPlan		
creationDateTime	2009-12-14T12:00:00	
documentStatusCode	ORIGINAL	
documentActionCode	ADD	
transportPlanningDateTypeCode	DELIVERY_DATE	
EntityIdentification (+transportCapacityPlanIdentification)		
entityIdentification	PLAN1234	
TransactionalParty (+logisticServicesBuyer)		
gln	1234567890128	
TransactionalParty (+logisticServicesSeller)		
gln	9876543212344	
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	



Attribute	Value
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

6 Implementation Considerations

6.1 User Guide

The Functional User Guide contains more information about the structure and content of the Transport Capacity Plan message: http://www.gs1.org/docs/ecom/xml/3/3.4/eCom-Trade_messages.html#TransportCapacityPlan

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.

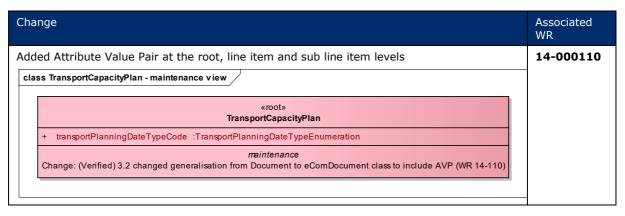
7.1 BMS Release 3.0

Change	Associated CR Number
Initial Version	N/A

7.2 BMS Release **3.1**

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

7.3 BMS Release 3.2

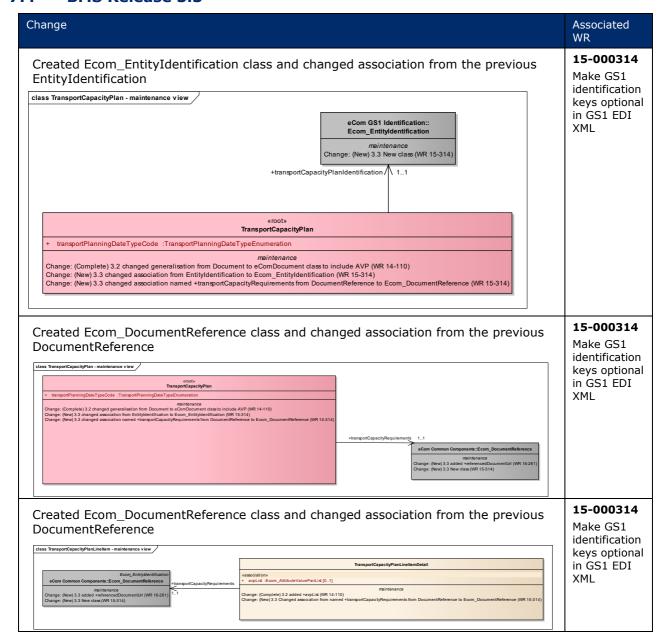




ange	Associated WR
Added a reference to parent line number to all LineItem classes, to support hierarchical items (WRs 14-021 & 14-044) Added Attribute Value Pair at the root, line item and sub line item levels (WR 14-110) lass TransportCapacityPlanLineItem - maintenance view	14-00002 14-00004 14-00011
TransportCapacityPlanLineItem + lineItemNumber: positiveInteger + capacityPlanStatusCode: CapacityPlanStatusEnumeration + cargoTypeCode: CargoTypeCode [01] + cargoTypeDescription: Description200 [01] + requestedGrossVolume: Measurement [01] + requestedGrossVolume: Measurement [01] + proposedGrossVolume: Measurement [01] + proposedGrossVolume: Measurement [01] + proposedGrossWeight: Measurement [01] + parentLineItemNumber: positiveInteger [01] «association» + avpList: Ecom_AttributeValuePairList [01] maintenance Change: (Verified) 3.2 added +avpList (WR 14-110) Change: (Verified) 3.2 added +parentLineItemNumber (WR 14-021 & 14-044)	
ded Attribute Value Pair at the root, line item and sub line item levels class TransportCapacityPlanLineItemDetail - mainte	14-00011
TransportCapacityPlanLineItemDetail	
<pre>«association» + avpList: Ecom_AttributeValuePairList [01]</pre>	
maintenance Change: (Verified) 3.2 added +avpList (WR 14-110)	



7.4 BMS Release **3.3**



7.5 BMS Release 3.4

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

7.6 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
Co-chair	Rossner (Pottier), Natascha	GS1 France
Co-chair	Schmidt, Tom Eric	August Storck KG
Member	Bemrose, Jonathan	R&R Ice Cream
Member	Bodemer, Petra	dm-drogerie markt GmbH + Co. KG
Member	Boikanyo, Rebone	GS1 South Africa / Consumer Goods Council of South Africa
Member	Canada, ON	M3B 3L1
Member	Carlson, Jim	General Mills, Inc.
Member	Chresta, Richard	GS1 Switzerland
Member	Cook, Don	Wal-Mart Stores, Inc.
Member	Cox, Marc	Philips Electronics N.V.
Member	Darnell, David	Systrends
Member	De Flou, Nele	GS1 Belgium & Luxembourg
Member	Dicks, Arne	GS1 Germany
Member	Duvinger, Karina	GS1 Sweden
Member	Foerderer, Klaus	GS1 Germany
Member	Gathmann, Stefan	GS1 Ireland
Member	Grangard, Anders	GS1 Global Office
Member	Harpell, Eileen	GS1 Community Room Staff
Member	Hand, Phil	JDA Software
Member	Herregodts, Kurt	GS1 Belgium & Luxembourg
Member	Kempkes, Fred	Unilever N.V.
Member	Kernan, Brendan	GS1 Ireland
Member	Kidd, Robin	Nestle
Member	Krid, Anne-Claire	GS1 France
Member	Lanoue, Tom	General Mills, Inc.
Member	Laur, Rita	GS1 Canada
Member	Lenman, Mia	GS1 Sweden
Member	Lerch, Hanjoerg	METRO Group
Member	Moberg, Dale	Axway
Member	Montes de Oca, Alejandra	GS1 Mexico
Member	Ng, Ella	GS1 Australia
Member	Peelen, Esther	GS1 Netherlands
Member	Pelekies, Andreas	GS1 Germany
Member	Perrier, Patricia	GS1 France
Member	Przybilla, Christian	GS1 Germany
Member	Pujol, Xavier	GS1 Spain
Member	Racek, Greg	Wal-Mart Stores, Inc.



Function	Name	Company / organisation
Member	Repetto, Mirko	GS1 Italy
Member	Robba, Steven	1WorldSync Holdings, Inc.
Member	Rosell, Pere	GS1 Spain
Member	Rosenberg, Steven	GS1 US
Member	Schmid, Sue	GS1 Australia
Member	Schneider, Christian	GS1 Switzerland
Member	Sehorz, Eugen	GS1 Austria
Member	Sharma, Vishal	General Mills, Inc.
Member	Shimazaki, Ayako	GS1 Japan
Member	Sion, Emilie	GS1 France
Member	Souza, Nadia	GS1 Brasil
Member	Strand, Roman	GS1 Germany
Member	Tan, Milton	GS1 Malaysia
Member	Tompsett, Simon	Waitrose
Member	Trelle, Ute	1WorldSync Holdings, Inc.
Member	Tse, Steve	GS1 Hong Kong
Member	Tyson, Betty	Knouse Foods Cooperative, Inc
Member	Van den Bergh, Senne	GS1 Belgium & Luxembourg
Member	Van der Eijk, Pim	OASIS - Sonnenglanz Consulting BV
Member	Veldhuis, Saskia	Procter & Gamble Co.
Member	Welch, Shan	GS1 UK
Member	Westerkamp, Jan	GS1 Netherlands
Member	Wilson, Mary	GS1 US
Member	Windsperger, Bekki	Best Buy Co., Inc.
Member	Yang, Shaopeng	GS1 China
Member	Yusdiar, Dani	GS1 Indonesia
Member	Zwanziger, Greg	SUPERVALU

9.1.2 Development Team Members

Function	Name	Organisation
GSMP Process Lead	Jean-Luc Champion and Tasha Wiehe	GS1 Global Office
Technical Development Lead	Ewa Iwicka	GS1 Global Office
Peer Review	Mark Van Eeghem	GS1 Global Office