

Warehousing Operations Instruction and Notification Business Message Standard (BMS)

Release 3.6, Ratified, Mar 2023





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Business Requirements Document (BRAD) Reference

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

Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change
12-Jan-2012	BMS 3.0 - Issue 1	Mark Van Eeghem	BMS Release 3.0	See summary of changes
01-May- 2013	BMS 3.1 - Issue 1	Coen Janssen	BMS Release 3.1	See summary of changes
15-Sep-2014	BMS 3.2 - Issue 1	Ewa Iwicka	BMS Release 3.2	See summary of changes
01-Mar-2017	BMS 3.3 – Issue 1	Ewa Iwicka	BMS Release 3.3	See summary of changes
15-Oct-2018	BMS 3.4 – Issue 1	Ewa Iwicka	BMS Release 3.4	See summary of changes
03-Feb-2021	BMS 3.5 – Issue 1	Miklos Bolyky	BMS Release 3.5	See summary of changes
05-Jan-2022	BMS 3.5.1 - Issue 1	Miklos Bolyky	BMS Release 3.5.1	See summary of changes
01-Mar-2023	BMS 3.6 - Issue 1	Miklos Bolyky	BMS Release 3.6	See summary of changes



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1 Business Domain View

1.1 Introduction

Message Definition

Warehousing Operations Instruction Message Definition

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

Warehousing Operations Notification Message Definition

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

Principles

These messages support the warehouse operations process.

1.2 References

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

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

[BMS_Shared] BMS Shared Common Library, 3.6, GS1 2023

[BMS eCom] BMS eCom Common Library, 3.6, GS1 2023

[BMS_Warehousing] BMS Warehousing Common Library, 3.6, GS1 2022

2 Business Context

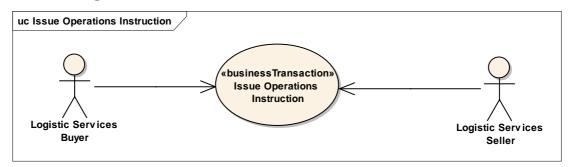
Context Category	Value(s)
Industry	All
Geopolitical	All
Product	All
Process	Warehousing – Inventory Management Operations
System Capabilities	GS1 System
Official Constraints	None



3 Business Transaction View

3.1 Business Transaction – Issue Operations Instruction

Use case diagram



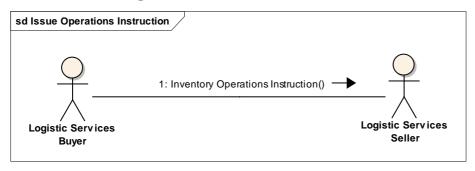
Use case description

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

Activity diagram

Not applicable

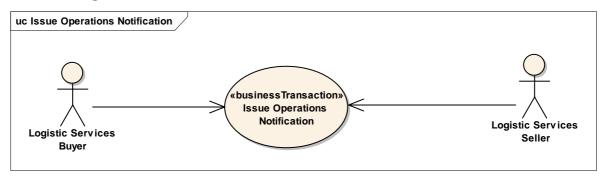
Communication diagram





3.2 Business Transaction – Issue Operations Notification

Use case diagram



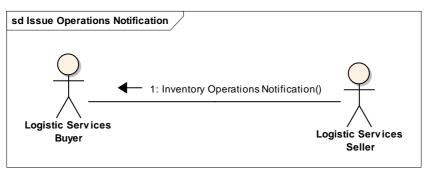
Use case description

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

Activity diagram

Not applicable

Communication diagram



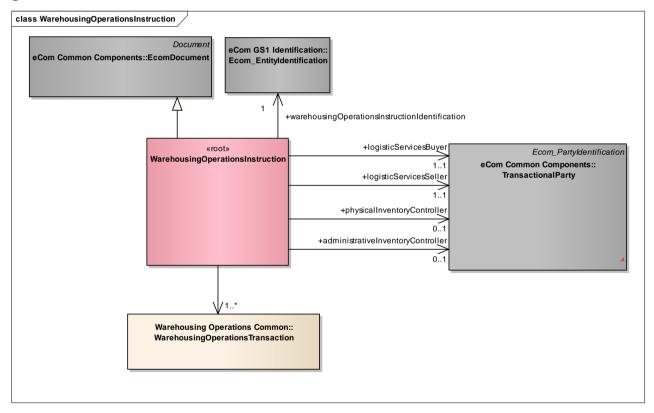




4 Business Information View

4.1 Warehousing Operations Instruction

Class diagram





GDD report

The content of the WarehousingOperationsInstruction class, its structure and component definitions can be accessed in the Global Data Dictionary: http://apps.gs1.org/GDD/bms/Version3 4/Pages/bieDetails.aspx?semanticURN=urn:gs1:gdd:bie:WarehousingOperationsInstruction

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
WarehousingOperatio nsInstruction				Message that supports the inventory management process, and enables a Logistic Services Client (LSC) to inform his Logistic Services Provider (LSP) that the inventory status of goods needs to be changed.	
Association	administrativeInve ntoryController	TransactionalParty	01	A party responsible for the control, accounting and reporting of inventory.	[brad-wim:iopins- 5]
Association		WarehousingOperation sTransaction	1*	Transactions specifying the required changes to the inventory status.	
Association	logisticServicesBuy er	TransactionalParty	11	A party that purchases logistics services from another party.	[brad-wim:iopins- 2]
Association	logisticServicesSell er	TransactionalParty	11	A party that provides logistics services to another party.	[brad-wim:iopins-3]
Association	warehousingOperat ionsInstructionIden tification	Ecom_EntityIdentificat ion	11	The identification of the warehousing operations instruction document.	[brad-wim:iopins- 1] WR 15-000314
Generalization		EcomDocument		Basic information about the content of the message including version number, creation date and time.	WR 14-000110
Association	physicalInventoryC ontroller	TransactionalParty	01	A party responsible for storing of goods and related (physical) inventory operations.	[brad-wim:iopins-4]

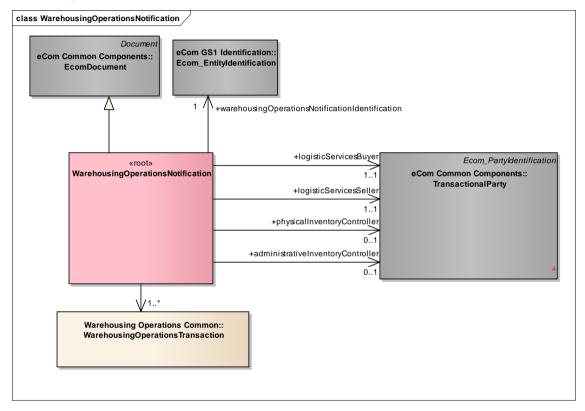


Note: Reference Shared Common Library Business Message (BMS) Release 3.6 and eCom Domain Common Library Business Message (BMS) Release 3.6 for all common information.



4.2 Warehousing Operations Notification

Class diagram



GDD Report

The content of the WarehousingOperationsNotification class, its structure and component definitions can be accessed in the Global Data Dictionary: http://apps.gs1.org/GDD/bms/Version3 4/Pages/bieDetails.aspx?semanticURN=urn:gs1:gdd:bie:WarehousingOperationsNotification



Warehousing Operations Instruction and Notification Business Message Standard (BMS)

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
WarehousingOperatio nsNotification				Message that supports the inventory management process, and enables a Logistic Services Provider (LSP) to inform his Logistic Services Client (LSC) that the inventory status of goods has been changed.	
Association	logisticServicesBuy er	TransactionalParty	11	A party that purchases logistics services from another party.	[brad-wim:iopins- 2]
Association	physicalInventoryC ontroller	TransactionalParty	01	A party responsible for storing of goods and related (physical) inventory operations.	[brad-wim:iopins-4]
Generalization		EcomDocument		Basic information about the content of the message including version number, creation date and time.	WR 14-000110
Association	warehousingOperat ionsNotificationIde ntification	Ecom_EntityIdentificat ion	11	The identification of the warehousing operations notification document.	[brad-wim:iopinn- 1] WR 15-000314
Association	administrativeInve ntoryController	TransactionalParty	01	A party responsible for the control, accounting and reporting of inventory.	[brad-wim:iopins- 5]
Association		WarehousingOperation sTransaction	1*	Transactions specifying the changes to the inventory status.	
Association	logisticServicesSell er	TransactionalParty	11	A party that provides logistics services to another party.	[brad-wim:iopins-3]



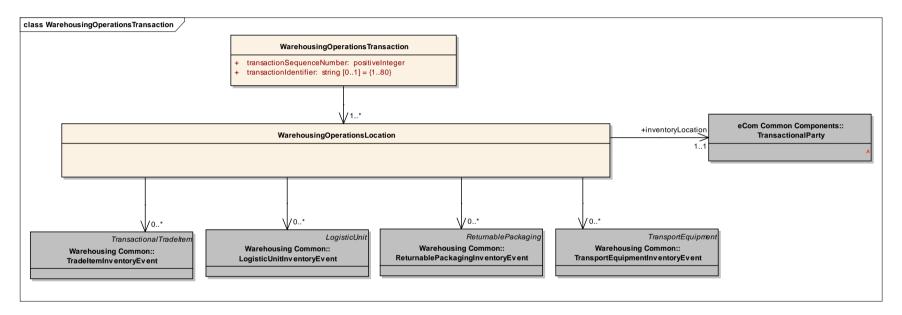
Note: Reference Shared Common Library Business Message (BMS) Release 3.6 and eCom Domain Common Library Business Message (BMS) Release 3.6 for all common information.



4.3 Warehousing Operations Common – Transaction

4.3.1 Warehousing Operations Common - Warehousing Operations Transaction

Class Diagram



GDD Report

The content of the WarehousingOperationsTransaction class, its structure and component definitions can be accessed in the Global Data Dictionary: http://apps.qs1.org/GDD/bms/Version3 4/Pages/bieDetails.aspx?semanticURN=urn:qs1:qdd:bie:WarehousingOperationsTransaction

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



Warehousing Operations Instruction and Notification Business Message Standard (BMS)

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
Attribute	transactionSequen ceNumber	positiveInteger	11	Number that prescribes the sequence in which the transactions included in the message need to be processed.	[brad-wim:iopins- 6.2]
Attribute	transactionIdentifie r	string	01	Identifier of the transaction to be used for reference purposes.	[brad-wim:iopins-6.1]
WarehousingOpera tionsLocation				Details on the inventory events for this transaction, organized by inventory location.	
Association		TradeItemInventory Event	0*	Information specifying an inventory activity of one or more trade items (of the same type) at a specific sub-location at a specific point in time.	[brad-wim:iopins-6.3.2, 6.3.3, 6.3.6, 6.3.8, 6.3.9, 6.3.10, 6.3.11]]
Association	inventoryLocatio n	TransactionalParty	11	The inventory location related to the included inventory events.	[brad-wim:iopins-6.3.4]
Association		LogisticUnitInventor yEvent	0*	Information specifying an inventory activity of a specific logistic unit at a specific sublocation at a specific point in time.	[brad- wim:iopins- 6.3.7]
Association		TransportEquipment InventoryEvent	0*	Information specifying an inventory activity of one or more pieces of transport equipment (of the same type) at a specific sub-location at a specific point in time.	-
Association		ReturnablePackagin gInventoryEvent	0*	Information specifying an inventory activity of one or more returnable packaging items (of the same type) at a specific sub-location at a specific point in time.	



4.4 Enumerations (message specific)

Not applicable

4.5 Code Lists

Not applicable

5 Business Message Examples

5.1 Example 1

Warehousing Operations Instruction

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

Attribute	Value
WarehousingOperationsInstruction	
creationDateTime	2012-07-11T12:15:00
documentStatusCode	ORIGINAL
documentActionCode	ADD
EntityIdentification (+warehousingOperationsInstructionIdentification)	Document ID: INOPI00123
TransactionalParty (+logisticServicesBuyer)	gln: 2222222000004
TransactionalParty (+logisticServicesSeller)	gln: 3333333000001
TransactionalParty (+administrativeInventoryController)	gln: 2222222000004
TransactionalParty (+physicalInventoryController)	gln: 3333333000001
WarehousingOperationsTransaction	
transactionSequenceNumber	1
transactionIdentifier	INOPI00123-1
WarehousingOperationsLocation	
TransactionalParty (+inventoryLocation)	
gln	333333000018
TradeItemInventoryEvent	
gtin	01111111001110
tradeItemQuantity	200
eventIdentifier	1
inventoryBusinessStepCode	status_changing
inventoryDispositionCode	sellable_accessible



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

5.2 Example 2

Warehousing Operations Notification

Notification by the physical inventory controller on the damaging of 1 unit of item 011111111001110, location AB-1, customs status BONDED.

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



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

Implementation Considerations 6

6.1 **User Guide**

The Functional User Guide contains more information about the structure and content of the Warehousing Operations Instruction and Notification message:

http://www.gs1.org/docs/ecom/xml/3/3.4/eCom-Trade messages.html#WarehousingOperationsInstructionandNotification

6.2 **Message Specific Considerations**

Not applicable



7 Summary of Changes

Any change in the GS1 standards is done based on the Work Request (WR) submitted by the GS1 User Companies or Member Organisations. All Work Requests are documented in the Work Request system available on the GS1 website: http://wr.qs1.org. The system is accessible to registered users. New visitors need to register first, to be able to access it. WRs can be searched by the number referenced in tables below, see: Search Work Requests. The number starts with the two last digits of the year when it was submitted, followed by the consecutive number within that year.



Note: WRs submitted earlier than February 2012 should be searched in Old Change Requests.

7.1 BMS Release 3.1

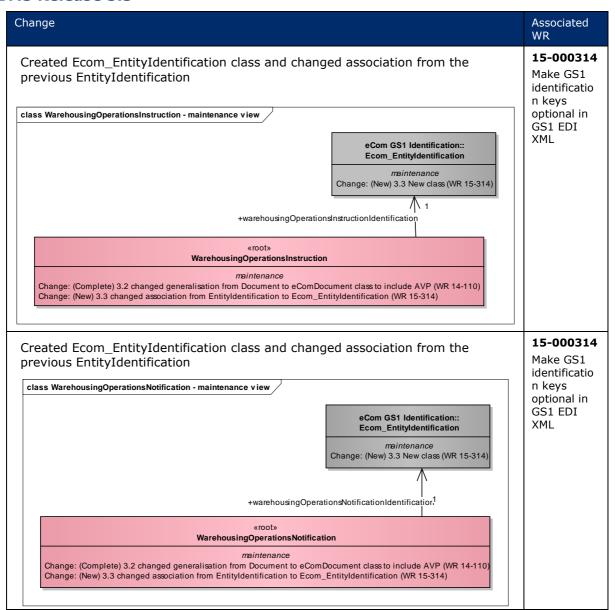
First publication

7.2 BMS Release 3.2

Cha	inge	Associated WR
Add	led Attribute Value Pair at the root, line item and sub line item levels	14-000110
cla	ss WarehousingOperationsInstruction - maintenance view	
	WarehousingOperationsInstruction maintenance Defect: (New) 3.2 changed generalisation from Document to eComDocument class to include AVP (WR 14-110)	
Add	led Attribute Value Pair at the root, line item and sub line item levels	14-000110
cla	ss WarehousingOperationsNotification - maintenance view	
	wroot» WarehousingOperationsNotification maintenance Defect: (New) 3.2 changed generalisation from Document to eComDocument class to include AVP (WR 14-110)	



7.3 BMS Release 3.3



7.4 BMS Release **3.4**

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

7.5 BMS Release 3.5

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

7.6 BMS Release 3.5.1

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

7.7 BMS Release 3.6

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	
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Member	Bodemer, Petra	dm-drogerie markt GmbH + Co. KG	
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Member	Canada, ON	M3B 3L1	
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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	
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Member	Pujol, Xavier	GS1 Spain	
Member	Racek, Greg	Wal-Mart Stores, Inc.	
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.	
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Member	Yusdiar, Dani	GS1 Indonesia	
Member	Zwanziger, Greg	SUPERVALU	

9.1.2 Development Team Members

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Technical Development Lead	Miklos Bolyky	GS1 Global Office
Peer Review	Mark Van Eeghem	GS1 Global Office

