

**292360 v1.0**

Aptean Ltd  
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1 292360



DHL C-TMS

# Segregate Reason Codes to Contract

FUNCTIONAL SPECIFICATION - 10.7

17/11/11 - 1.0

Reference: 292360 PM-8LZN7Z



## 1.1 Client Requirement

This should be taken from the Estimate

## 1.2 Solution

OBS will add a Cost Centre (COST\_CENTRE) field to the reason codes table (SCH\_REASON\_CODE) and make it part of the primary key so that records are segregated by the new field.

NB) All existing data within the reason codes table will need the new COST\_CENTRE field setting to ?+? before the primary key can be changed. This will then be used in future to show that a reason code is applicable to all cost centres.

Modules that need changing in C-TMS to take this database change into account include 10 packages, 2 triggers and 9 forms. As detailed below:

### Packages :-

Module	Code Segment	Notes
DP_CSV3	Write_Failed_Shipment	Change to add cost centre from order to link to reason table
	Write BGW_Debrief	Change to pass cost centre from order to cursor to retrieve correct reason code description
DP_ORF_FUNCS	SCH_Ord_Non_Conform	Change to pass cost centre from order to cursor to retrieve the correct reason code description
INT_XML	Create_PO_File	Change to pass cost centre from INT_PO_OUTBOUND_FILE to cursor to retrieve the correct reason code description
INT_XML_MIC	Gen_Order_Det_STK	Change to pass the cost centre from the order to the cursor to retrieve the correct reason code description
	Process_Mic_Trip_XML_In	Change to pass the cost centre from the order to the cursor to retrieve the correct reason code description
INT_XML_OUT2	Gen_Order_Det_STK	Change to pass the cost centre from the order to the cursor to retrieve the correct reason code description
	Process_LOTS_Trip_XML_In	Change to pass the cost centre from the order to the cursor to retrieve the correct reason code description
	Process_ZET_Trip_XML_In	Change to pass the cost centre from the order to the cursor to retrieve the correct reason code description
Module	Code Segment	Notes
INT_XML_SMA	Gen_Order_Det_STK	Change to pass the cost centre from the order to the cursor to retrieve the correct reason code description
	Process_Sma_Trip_XML_In	Change to pass the cost centre from the order to the cursor to retrieve the correct reason code description
INT_XML_TOK	Process_POD_XML_In	Change to pass the cost centre from the order to the cursor to retrieve the correct reason code description
KPI	Write_KPI_OPS_Detail	Change to add cost centre from order to link to reason table
	Write_KPI_Campus_Detail	Change to add cost centre from order to link to reason table
	Write_KPI_DNG_Detail	Change to add cost centre from order to link to reason table
PROCESS_POD_XML_IN		Change to pass the cost centre from the order to the cursor to retrieve the correct reason code description

### Triggers :-

Module	Notes
T_SCH_ORD_NON_CONFORM_BI	Change to pass the cost centre from the order to the cursor to retrieve the correct reason code description
T_SCH_REASON_CODE_BIU	Inserting to default cost centre to ?+? when NULL.

### Forms :-

Module	Notes
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BDM New and Edit canvases on Reason Codes tab to include Cost Centre (LOV including ?+? for all).  
 INT\_ERR Use cost centre from INT\_PO\_Outbound\_File to get correct reason code.  
 ORD\_DEBRIEF Use cost centre from order to get the correct reason codes.  
 ORDERS Use cost centre from order to get the correct reason codes.  
 PURCH\_ORD Use cost centre from the control block to get the correct reason codes.  
 TRACKING User's cost centre to control the correct reason codes.  
 TRIPDTL Use cost centre from order to get the correct reason codes.  
 OBS will add a Customer Group (CUST\_GROUP) field to the reason codes table (SCH\_REASON\_CODE) and make it part of the primary key so that records are segregated by the new field.

NB) All existing data within the reason codes table will need the new CUST\_GROUP field setting to ?+? before the primary key can be changed. This will then be used in future to show that a reason code is applicable to all customer groups.

A system parameter will be created to indicate which level the system is segregating reason codes. Users will be able to set the system parameter to COST\_CENTRE, CUST\_GROUP, BOTH or null.

Where applicable, the customer group will be derived from the customer on the current order. Code will be required to deal with customers which have not been assigned to a customer group.

Modules that need changing in C-TMS to take this database change into account include 10 packages,

2 triggers and 9 forms. As detailed below:

#### Packages :-

Module	Code Segment	Notes
DP_CSV3	Write_Failed_Shipment	Change to add customer from order to link to reason table
	Write BGW_Debrief	Change to pass customer from order to cursor to retrieve correct reason code description
DP_ORF_FUNCS	SCH_Ord_Non_Conform	Change to pass customer from order to cursor to retrieve the correct reason code description
INT_XML	Create_PO_File	Change to pass customer from INT_PO_OUTBOUND_FILE to cursor to retrieve the correct reason code description
INT_XML_MIC	Gen_Order_Det_STK	Change to pass the customer from the order to the cursor to retrieve the correct reason code description
	Process_Mic_Trip_XML_In	Change to pass the customer from the order to the cursor to retrieve the correct reason code description
INT_XML_OUT2	Gen_Order_Det_STK	Change to pass the customer from the order to the cursor to retrieve the correct reason code description
	Process_LOTS_Trip_XML_In	Change to pass the customer from the order to the cursor to retrieve the correct reason code description
	Process_ZET_Trip_XML_In	Change to pass the customer from the order to the cursor to retrieve the correct reason code description

Module	Code Segment	Notes
INT_XML_SMA	Gen_Order_Det_STK	Change to pass the customer from the order to the cursor to retrieve the correct reason code description
	Process_Sma_Trip_XML_In	Change to pass the customer from the order to the cursor to retrieve the correct reason code description
INT_XML_TOK	Process_POD_XML_In	Change to pass the customer from the order to the cursor to retrieve the correct reason code description
KPI	Write_KPI_OPS_Detail	Change to add customer from order to link to reason table
	Write_KPI_Campus_Detail	Change to add customer from order to link to reason table
	Write_KPI_DNG_Detail	Change to add customer from order to link to reason table
PROCESS_POD_XML_IN		Change to pass the customer from the order to the cursor to retrieve the correct reason code description

#### Triggers :-



Module	Notes
T_SCH_ORD_NON_CONFORM_BI	Change to pass the customer from the order to the cursor to retrieve the correct reason code description
T_SCH_REASON_CODE_BIU	Inserting default cust group to ?+? when NULL.

#### Forms :-

Module	Notes
BDM	New and Edit canvases on Reason Codes tab to include Cost Centre (LOV including ?+? for all).
INT_ERR	Use customer from INT_PO_Outbound_File to get correct reason code.
ORD_DEBRIEF	Use customer from order to get the correct reason codes.
ORDERS	Use customer from order to get the correct reason codes.
PURCH_ORD	Use customer from the control block to get the correct reason codes.
TRACKING	Add customer and customer group to the STOP_LIST data block for reference when selecting non-conformance.
TRIPDTL	Use cost centre from order to get the correct reason codes.

### 1.3 Scope

This change will be applied to system version 10.7



## 2 Set-up

### 2.1 Pre-requisites

### 2.2 Menu Structure

Unchanged

### 2.3 Data

Existing reason codes will be amended setting the new Cost Centre and Cust Group fields to ??

New system parameter to control the level of segregation.

ORD\_REASON\_CODE\_FILTER

### 2.4 Implementation Advice



### 3 Functional Description

Two new columns will be added to the reason codes maintenance table (SCH\_REASON\_CODE).

- COST\_CENTRE
- CUST\_GROUP

These new columns will be incorporated into the primary key of the table so the records can be segregated based on the fields.

To allow the primary key of the table to be changed the existing records on the table will need to be updated. Both of the new columns will be set to ?+? for all the existing records in the table. This value can also be used to identify reason codes that are applicable to all cost centres or cust groups.

Any programs that currently utilise the SCH\_REASON\_CODE table will need to be altered to accommodate the addition of the two columns. When selecting a reason code in the code the cost centre and / or cust group must be taken into account and the reason codes restricted based on this.

A new system parameter ORD\_REASON\_CODE\_FILTER will be added to control the level at which the reason codes should be segregated. The values for the parameter will be :-

- COST\_CENTRE
- CUST\_GROUP
- BOTH
- NULL

If ?BOTH? is selected for the parameter then both the cost centre and cust group will be used to restrict the reason codes. If NULL is selected then neither will be used when selecting the reason codes.

**All changes to forms, packages and triggers will reference the system parameter to determine what restrictions should be used on the reason codes.**

The trigger T\_SCH\_REASON\_CODE\_BIU will be changed to insert ?+? against the cost centre and cust group columns if they have not been populated.

The customer group will be derived from the customer on an order. Customers who do not belong to a customer group will only have access to reason codes that have a ?+? for the cust group column, when the system parameter is set to CUST\_GROUP or BOTH.

#### Program Changes - Packages

Module	Code Segment	Notes
BKG	Reverse_TIs	No changes
DP_CSV3	Write_Failed_Shipment	Change to add cost centre and/or cust group from order to cursor c_non_conform to link to reason table
	Write BGW_Debrief	Change to pass cost centre and/or cust group from order to cursor c_get_nonc to retrieve correct reason code description
DP_ORF_FUNCS	SCH_Ord_Non_Conform	Change to pass cost centre and/or cust_group from order to cursor c_oms_non_conform to retrieve the correct reason code description
INT_XML	Create_PO_File	Change to pass cost centre and/or cust group from INT_PO_OUTBOUND_FILE to cursor c_non_conform to retrieve the correct reason code description
INT_XML_MIC	Gen_Order_Det_STK	Change to pass the cost centre and/or cust group from the order to the cursor c_late_reasons to retrieve the correct reason code description
	Process_Mic_Trip_XML_In	Change to pass the cost centre and/or cust group from the order to the cursors c_reason and c_reas_code to retrieve the correct reason code description
INT_XML_OUT2	Gen_Order_Det_STK	Change to pass the cost centre and/or cust group from the order to the cursor to c_late_reasons retrieve the correct reason code description





	Process_LOTS_Trip_XML_In	Change to pass the cost centre and/or cust group from the order to the cursors c_reason and c_reas_code to retrieve the correct reason code description
	Process_ZET_Trip_XML_In	Change to pass the cost centre and/or cust group from the order to the cursors c_reason and c_reas_code to retrieve the correct reason code description
INT_XML_SMA	Gen_Order_Det_STK	Change to pass the cost centre and/or cust group from the order to the cursor c_late_reasons to retrieve the correct reason code description
	Process_Sma_Trip_XML_In	Change to pass the cost centre and/or cust group from the order to the cursors c_reason and c_reas_code to retrieve the correct reason code description
INT_XML_TOK	Process_POD_XML_In	Change to pass the cost centre and/or cust group from the order to the cursor c_non_conform and c_get_detail_created to retrieve the correct reason code description
KPI	Write_KPI_OPS_Detail	Change to add cost centre and/or cust group from order to cursors c_get_detail_sched, c_get_detail_created and c_get_detail_delivered to link to reason table
	Write_KPI_Campus_Detail	Change to add cost centre and/or cust group from order to cursors c_get_detail_sched, c_get_detail_created and c_get_detail_delivered to link to reason table
	Write_KPI_DNG_Detail	Change to add the cost centre and/or cust group from order to the cursors c_get_detail_sched, c_get_detail_created and c_get_detail_delivered to link to reason table
PROCESS_POD_XML_IN ??		Change to pass the cost centre and/or cust group from the order to the cursors c_reason and c_reas_code to retrieve the correct reason code description

### Program Changes - Triggers

Module	Notes
T_SCH_ORD_NON_CONFORM_BI	Change to pass the customer and/or cost centre from the order to the cursors c_get_non_con and c_get_action to retrieve the correct reason code description
T_SCH_REASON_CODE_BIU	Inserting default cust group to ?+? when NULL.

### Program Changes - Forms

#### BDM

The BDM form will be changed to include the CUST\_GROUP and COST\_CENTRE fields for the reason codes data.

The Insert reason code canvas will be expanded to allow space for the two new fields.



The edit canvas will also be changed to include the fields.

An LOV will be added for COST\_CENTRE and CUST\_GROUP. Each LOV will included a ?+? value. If no value is entered in the COST\_CENTRE or CUST\_GROUP field the value should default to ?+?.

#### Interface Errors

The Interface Errors screen references SCH\_REASON\_CODE when displaying the PO Outbound information. The post query trigger on block INT\_PO\_OUTBOUND\_NON\_CONFORM will be changed to reference the customer (cust group) and cost centre of the purchase order when looking for the reason code.



Outbound Purchase Order Details

Event Details:						
Filename	Created Date	File Status	MTS Operation	MessageType	MTS Type	
MTS_POMO_201111112104508_0000003291	12/11/2011 10:41:3	SENT	COLV	TESCO GC3	MTS	

Purchase Order Header Details:									
PO Reference	PO Id	Item Number	PO Number	Cost Centre	Customer	Source	Hub	Destination	Cargo Ready
0192831256	019283	1256	6521	EXEL	TESCO	EXELBAWT		DHLBANB	06/10/2011 00:00:00

Special Instructions  
TEST

Purchase Order Tracking Details:									
PO Status	Original Qty	Load Type	Schedule	Booking DU Type	Booking DU Qty	Transit DU Type	Transit DU Qty	Transit Wgt	Transit V
SUPPLIER CONJ	5000	LT	111006	PALLET	2500	PALLET	2500	25000	2500

Trip Tracking Details:						
Trip Id	Trip Ref	Trip Status	Container	Trip Trailer Id	Trip Trailer Type	Tractor
MAN-00485349	M394134	PLANNED				EXE

Order Tracking Details:						
OMS Ref	Delivery Type	Destination	Order Comments	Stop Seq	Customer Ref	Del Point Ref
1021782	Standard	DHLBANB		1	6521	

Milestone Details:						
Date Sent Fin	Date Scan	Scan URL	Date Doc Disp	Courier Ref	Docs Received	Invoice Number
15/11/2012 00:00:00	15/11/2011 00:00:00	test dave2	19/11/2011 00:00:00		15/10/2011 00:00:00	

Order Non-Conformances:	
Code	Description

Close

### Order Debrief

The Order Debrief form will be changed to use the cost centre (not displayed) and the customer (to derive the cust group) from the order to restrict the reason codes available in the two drop down lists.

### Collection



[illegible]

## Delivery



[illegible]

## Orders

The Orders form will be changed to include the cost centre and customer (cust group) for the orders to segregate the reason codes available. The reason codes can be selected in a list for the order non conformance. The population of this list will be moved to the processing behind the non conformance button so the current orders details can be used to segregate the reason codes.



**Non conformance**

Schedule Name: 111115 Trip ID: OMS Ref: 1022102

Reason Code: Activity: Comments:

New OK Delete Cancel

Open Window

Product Type	DU Type	Qty	Weight	Volume	Cases	RPE	Packed	Despatched	Delivered	Weight	Volume	Special Flag
AMBIENT	CHEP PALLET	1	960.00		120	1.00						

Original Date: 1 960.00 120 1.00

Special Instructions:

New Order View Info Save Close Re-book Send Ord Msg Non Conformance Pack Confirm Reprint Label

The order items reason codes are validated against an LOV. This LOV will be dynamically set to restrict the reason codes based on the cost centre and customer (cust group) of the order.

**Create/Edit or Delete Reasons**

Oms Ref: 1022102 Item Identifier: 2001374

Order Items

Reason: Quantity: Comments: Depot:

Save New Clear Delete Exit

Create Edit/Delete 1: SAP Layout

Reason Reason Comments Qty

Create Edit/Delete

New Order View Info Save Close Re-book Send Ord Msg Non Conformance Pack Confirm Reprint Label

The post query trigger on the item non conformance block will also be change to retrieve the correct description based on the order.

Purchase Order





The Purchase order screen will be changed to use the cost center and customer (cust group) from the PO to segregate the reason codes and retrieve the correct description when populating the reason code field.

The LOV?s for the 3 reason code fields will be set dynamically when a PO is edited to populate the lists based on the PO?s cost centre and customer.

**Edit Purchase Order**

Po Reference: POIDAPOIDA2      Sched Name: 090220

PO Status: APPROVED      Cust Status: Open      Cost Centre: EXEL      Customer: TESCO

Supp Bkg Action: Approved

Source: EXELBAWT      Bawtry\_Exel Bawtry\_DN11 9HE

Hub: TR

Destination: TESCCHEST      Chesterfield\_Tesco\_S43 4XA

Delivery Date: 01-MAR-2009

PO ID: POIDA

PO Number: PONUMA2

Transport Mode: Fast Truck

UOM / Orig QTY: PARCEL      100

Unit Cost / Ccy:      GBP

Item Number: POIDA2

Item Description: Item Description A 2

Prod Type: AMBIENT

Load Type: AAA

Freight Terms: PPPD

Matched CBTPO:

Season:

Event:

Hierarchy Level 1:

Hierarchy Level 2:

Hierarchy Level 3:

Cargo Ready Date: 20-FEB-2009      Docs Received Date:

Cargo Receipt Date:      Invoice Number:

	DU Type	Quantity	In Version	Out Version
Purchase Order	PARCEL	100	MANUAL	2
Booking	PARCEL	99	Gross Weight	Net Weight
Transit	PARCEL	99	10	
			Volume	100
Sub-Transit	PARCEL	98		

Reason Code 1:     

Reason Code 2:     

Reason Code 3:     

Created By: MTS\_OWNER

Created Date: 09-Mar-2009 15:03

Last Mod By: MTS\_OWNER

Last Mod Date: 08-Sep-2011 13:57

Special Instructions: Terry Testing

Save      OK      Supplier Bkg      Close

## Tracking

The Tracking screen will be changed to use the cost centre and customer (cust group) from the order selected to segregate the reason codes.

The List for the reason codes is currently populated when the form is first opened. This will be changed to populate when the Non Conformance button is pressed for a particular order allowing the orders details to be used to segregate the list of reason codes.



The Trip Debrief screen will be changed to use the cost centre and customer (cust group) from the selected order to segregate the reason codes available in the Reason Code list and LOV.

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**Non conformance**

Schedule Name: 111115 Trip ID: INT-00485585 OMS Ref: 1022109

Reason Code	Activity	Comments	DU Type	Product Type

New OK Delete Cancel

Layout: 5: WARB Set Desp Set Del Add Time Reason(s) Non Conformance POD/CMR No:

Stop	Planned Arr.	Planned Dep.	Actual Arr.	Actual Dep.	Type	Location	Distance	Drive Mins	Trailer Type	Trailer Id	Activities
1					PK	RDC DHL Thetford	0	0			
2					DL	CANNOCK DUNELM	0	0			

Set Desp Times Set Del Times Set Actuals Save Cancel Close Set Item Actuals Set All Actuals

TRIPDTL v2.108 C-TMS v10.7.7

Set Status Tasks

OC POD OC POD OC POD OC POD OC POD OC POD OC POD OC POD

POC All POD All

Move Stop ^ v

The LOV against the order items reason code will be populated dynamically based on the cost centre and cust group of the order selected.



### Table Updates Required

Alter table SCH\_REASON\_CODE ADD COST\_CENTRE varchar2(12),

Alter table SCH\_REASON\_CODE ADD CUST\_GROUP varchar2(12).

### Modules to be changed

Module Name	Module Type	Notes
DP_CSV3	Package	
DP_ORF_FUNCS	Package	
INT_XML	Package	
INT_XML_MIC	Package	
INT_XML_OUT2	Package	
INT_XML_SMA	Package	
INT_XML_TOK	Package	
KPI	Package	
PROCESS_POD_XML_IN	Procedure	
T_SCH_ORD_NON_CONFORM_BI	Trigger	
T_SCH_REASON_CODE_BIU	Trigger	
BDM	Form	
INT_ERR	Form	
ORD_DEBRIEF	Form	
ORDERS	Form	
PURCH_ORD	Form	
TRACKING	Form	
TRIP_DTL	Form	



## References

Ref No	Document Title & ID	Version	Date
1	{Detail attachments to RIO here}	.*	**/**/**

## Glossary

Term or Acronym	Meaning
C-TMS	Calidus TMS

## Document History

Version	Date	Status	Reason	Initials
0.1	16/11/11	Draft	Initial version	DNG
0.2	17/11/11	Issue	Reviewed & Issued	MJC



## 4 AUTHORISED BY

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