

Inventory Linking Imports

Inventory Linking Imports

Abstract

This document defines the inventory linking processing for an frontier import declaration. It provides the over-arching process and the message content for each of the transactions.

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1.

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Introduction

2. Scope

This document defines the system behaviour for the Inventory Linking imports function. All processes are largely triggered from an import frontier declaration that has a MUCR declared. The document provides an initial overview, and then describes each of the main transactions.

Where XML is mentioned in this document, for declaration messages it refers to the new UCC declaration standard to be used by CDS. For inventory linking messages, it refers to the updated XML standard which replaces the current EDIFACT standard used for CHIEF.

This document does not include any definition for how exports will be processed, nor does it describe the messages regarding declaration submission, invalidation or amendments (this is described in [1]). As such, any depiction of how to submit declarations, or the trader notifications is for information and to provide context, rather than as a primer for development.

This document does not cover connectivity or the requirements on how to populate the header record, this should be covered in the API specification.

3. References

Doc Ref	ID	Document Title	Version	Location
CDS 10	1	CDS End to End Sequence Diagrams	V2.3	Google Drive folder CDS 10 End to End Sequence Diagrams: https://drive.google.com/drive/folders/16ZbrQpfe04f5X9sJpGEMhPg4kgmf6nOS
CDS 03	2	CDS Declaration Submission – Imports	V2.4	Google Drive folder CDS 03 Customs Declaration: https://drive.google.com/drive/folders/1MnP0iHeZwIL0MeNa-5V_11AxLgogKc_c

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5. Scope for Inventory Linking Transactions

For Imports, the CSPs interact with CDS to manage events such as:

- the **declaration submission**. CDS will receive all inventory-linked import frontier declarations via a CSP. CDS will determine whether a declaration is inventory linked from identifying the presence of a MUCR (Master Unique Consignment Reference) within the Previous Documents field (EUCDM field 2/1; type = 'MCR') at the header level. This will cause CDS to request the linking validation between the MRN (Movement Reference Number) and the ICR (Inventory Consignment Reference). The presence of this field will also cause one way notifications to be sent to CSPs following a change of state in the declaration, after linking has been validated.
- the **arrival of goods** message will be received from CSPs once the goods are on hand within the port. While the message may contain the ICR, CDS will use the MRN to arrive the declaration. The arriving of a pre-lodged declaration will cause the data to be re-validated, including the inventory linking, and will allow the goods to proceed to clearance/release. Currently, if the declaration fails re-validation then it will be rejected, and the declarant will need to submit a new declaration.
- the **linking of the declaration and the consignment**. Upon identification of the MUCR on the declaration, CDS will request that the CSP system links the MUCR/ICR value with the provided MRN and matches the declared total packages, agent code (held in the x-badge-identifier), and consignment status. The response will contain the IRC (Inventory Return Code) that specifies whether the match was successful or not. A value of '000' indicates success, where as any other value will be deemed a failure. CDS will not distinguish between the other values and treat them all as the same validation failure. Upon a failure, CDS will not attempt to link until a blank amendment is submitted. There is a future requirement for the CSP to notify CDS of when a positive match is made on the inventory system to make the process more efficient.
- the **update of the declaration status**. Following linking, the CDS system will notify CSPs of major state changes to the declaration. The relevant state changes include:
 - Declaration Risked
 - Goods Released
 - Declaration Cleared (if the declaration was not previously released)
 - Invalidation
 - Handle Externally
 - Declaration Rejection
 - Declaration Rejection at Arrival
 - Insufficient Funds

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- In addition, linking will occur at:
 - Pre-lodged/Advance Declaration Validation
 - Arrived Declaration Validation
 - Declaration Amendment

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6. Import Inventory Linking Design

7. Process Flow

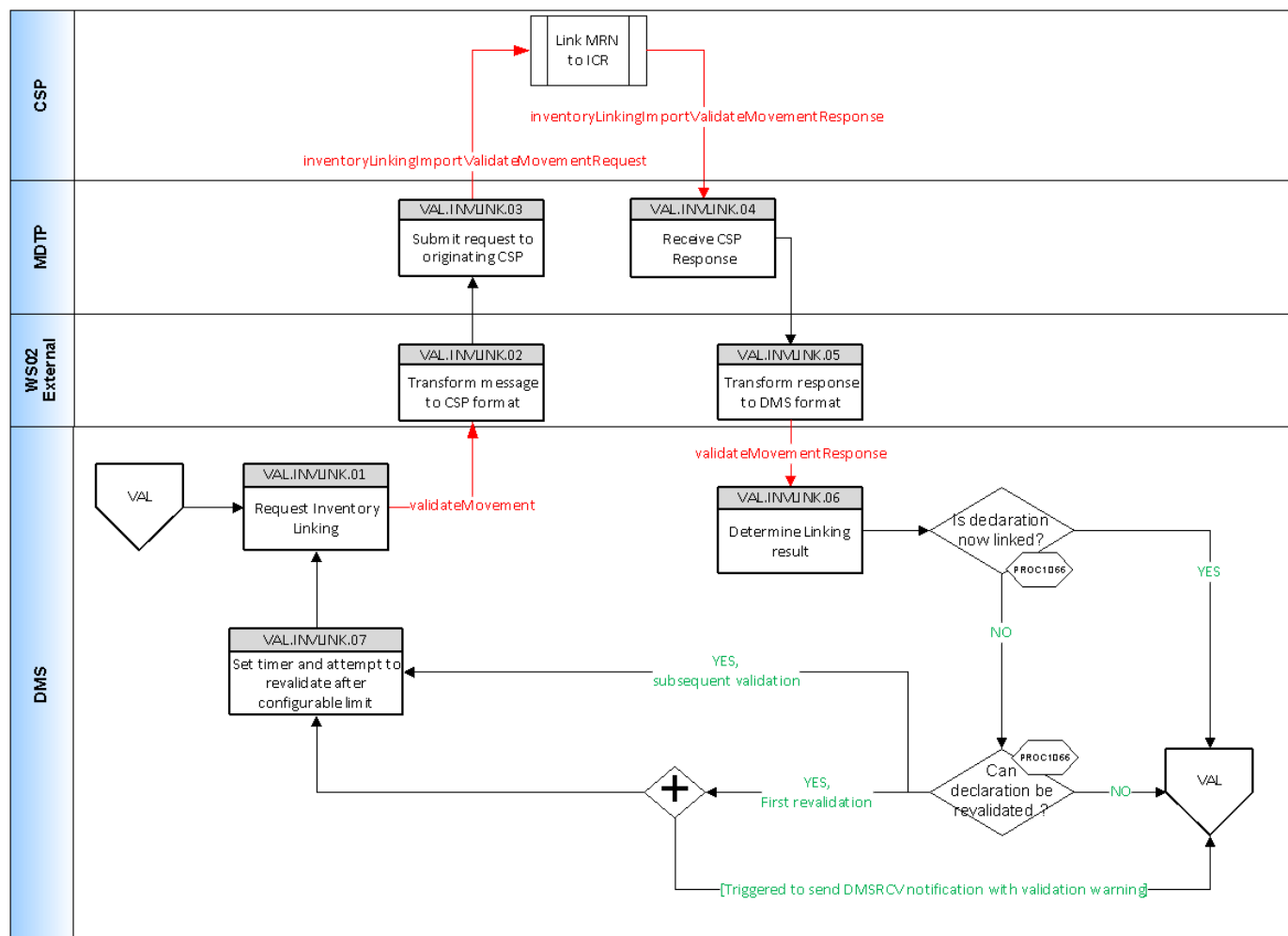
8. Introduction

The below process describes the CDS sub-process for inventory linking during Declaration Validation. The aim is to show the linking sub-process in more detail. It does not show the full declaration process, the message flow in section 3.2 describes the full process. This process can be called as part of the pre-lodged declaration validation, the arrived declaration validation, or as part of amending the declaration.

The sub-process effectively runs on a loop until the IRC is deemed to be a positive result. The loop can be re-run a configurable number of times, with the interval between each loop also configurable. Once the number of loops has reached its limit, the declaration will be rejected. This will not be used by CDS, and will instead be run once, and then wait for a positive message from the trader that signals either an amendment to the declaration, or a blank amendment to signify a change to the inventory has occurred.

9. Flow Diagram and Activity Description

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ID	Activity	Description
VAL.INVLINK.01	Request Inventory Linking	Activity in which the declaration is validated by calling the validateMovement operation. The ICS will be set to 'Declaration Validation', or to 'Declaration Correct Validation' if the declaration is being amended. The goal is to ensure the CSP recognises the MCR reference on the declaration, the package count matches, and to inform Inventory of the assigned MRN.
VAL.INVLINK.02	Transform message to CSP format	The DMS message is transformed into the message formats as specified in the schemas.
VAL.INVLINK.03	Submit request to originating CSP	The API Platform sends the request to the CSP that submitted the original declaration.
VAL.INVLINK.04	Receive CSP Response	Following the CSP matching, the response is received by the API platform.

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VAL.INVLINK.05	Transform response to DMS format	The response is transformed into a validationResult that DMS will understand. If IRC = 000 then there is no validationResult object passed, any other value and a validation result of EMSV0001 (Related Inventory not (yet) found) will be submitted to DMS.
VAL.INVLINK.06	Determine Linking result	<p>If there is a validationResult of EMSV001, and it is the first validation result attempt, then a timer is set before attempting the link again. The system will also in parallel move back to the main validation flow to send the DMSRCV notification to inform the trader of the inventory linking failure. This could trigger the trader to submit an amendment but it is not shown here.</p> <p>If the validationResult is present, but it is not the first attempt, then just the timer is set. There are no further DMSRCV notification set.</p> <p>If there are no validationResult, then the declaration processing continues.</p>
VAL.INVLINK.07	Set timer and attempt to revalidate after configurable limit	Timer that monitors whether the re-validation interval has passed. The duration is defined through configurable rules defiend in hours. This activity can also end if the sub-process is closed by another event (e.g. the goods are presented).

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10. Message Flow

Message flows can now be found in the End to End Sequence Diagram document [1].

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11. Interface Definitions

There are four main messages that are involved within the Import Inventory Linking solution, not including the declaration itself and any amendments.

1. Goods Arrival – equivalent to a UKCIRM with the goods arrival flag set and transport details included
2. Inventory Linking Request from CDS – equivalent to a UKCIUM
3. Inventory Linking Response from CSPs – equivalent to a UKCIRM with no arrival flag or transport details
4. Declaration Status Notification – equivalent to a UKCIUM, but no response is required.

The below tables describe the elements within each message and how the schemas should be populated for each message.

N.B. The principle on the data and the related formats was to keep as close to CHIEF as possible. This means there are some redundant fields that could be removed if all parties agree.

12. Goods Arrival – inventoryLinkingImportArriveGoods

The below message notifies CDS that the declaration has now arrived and the goods have been presented. This re-triggers the validation of the declaration and allows the process to move to clearance/release.

Data Item	Description	Occurs	Format	Conditions/Notes
Entry Number	ID of the declaration assigned by Customs. For CDS this will be the Movement Reference Number (MRN).	1..1	an..35	This will be defined by Customs, but for information, the MRN format is specified in the UCC IA Annex B Title 2. Specific format defined in [2].
Entry Version Number	Version number of the declaration.	0..1	n..2	
Inventory Consignment Reference	The unique consignment reference for the goods. This should match the MCR/ICR on the declaration.	1..1	an..35	
Transport Nationality	The nationality of the transport used in the transportation of the consignment.	0..1	a2	Specified from the common country code codelist. Required for the majority of pre-lodged declarations.

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13. Inventory Linking Request – inventoryLinkingImportValidateMovementRequest

The message sent by CDS to CSPs to link the declaration to the consignment.

Data Item	Description	Occurs	Format	Conditions/Notes
Declaration Method	<p>The method by which the declaration was entered in the DMS</p> <p>Should always be the same value as the declaration is being submitted electronically.</p> <p>1 = Manually Entered 2 = Electronically received 3 = Verbally declared</p>	1..1	n1	<p>The HCI solution is yet to be determined, but we can assume these will have a value of '1'. Any declaration submitted to CDS by a CSP system will have a value of '2'.</p>
Date of Entry	Date of the arrival (if arrived) or of the receipt (if pre-lodged).	1..1	an..35	<p>CCYYMMDDHHMMSSZZZ (for ZZZ timezone part, use 'Z' for UTC or values like '+01' or '-02')</p> <p>Example – “2001-12-17T09:30:47Z”</p> <p>The latter meets ISO 8601 Time Zone Notation standard</p> <p>N.B. That this will be the date the declaration was received, not legally accepted (as validation has not yet completed).</p>
Entry Number	ID of the declaration assigned by Customs. For CDS this will be the Movement Reference Number (MRN).	1..1	an..35	<p>This will be defined by Customs, but for information, the MRN format is specified in the UCC IA Annex B Title 2. Specific format defined in [2].</p>
Entry Version Number	Version number of the declaration	1..1	n..2	

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Goods Arrival Declaration	Goods Arrival Declaration as notified by the CSP system: Y – goods have arrived; N – goods have not arrived.	1..1	a1	For all declarations of type D, E, F and K, this will be sent to 'N'.
ICS	A code indicating the Customs status of the Entry.	1..1	an..2	The possible values are described in the tables in section 6.
Inventory Consignment Reference	The unique consignment reference for the goods. This should match the MCR/ICR on the declaration.	1..1	an..35	
ROE	The code for a route (of examination).	1..1	an..2	The possible values are described in the tables in section 6.
Trader Reference	This is a commercial reference supplied by the declarant. This will be provided if there is a value declared on the declaration.	0..1	an..35	This is mapped to 2/4 (Reference Number / UCR).
Total Packages	The total number of packages making up the consignment covered by the declaration.	1..1	n..8	

14. Inventory Linking Response – inventoryLinkingImportMovementValidateMovementResponse

The message received by CDS from CSPs to notify of the result of the inventory matching.

Data Item	Description	Occurs	Format	Conditions/Notes
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Entry Number	ID of the declaration assigned by Customs. For CDS this will be the Movement Reference Number (MRN).	1..1	an..35	This will be defined by Customs, but for information, the MRN format is specified in the UCC IA Annex B Title 2. Specific format defined in [2].
Entry Version Number	Version number of the declaration.	0..1	n..2	
Inventory Consignment Reference	The unique consignment reference for the goods. This should match the MCR/ICR on the declaration.	1..1	an..35	
IRC	For Imports the IRC gives the result of matching by the CSP system (not used for Exports since no data is matched). "000" indicates that the consignment has been matched to the declaration. Anything other than this value indicates a mis-match which should cause CDS to stop processing the declaration further.	1..1	n3	

15. Inventory Linked Declaration Notification – inventoryLinkingImportDeclarationStatusNotification

The one way status notifications from CDS to CSPs, providing information on the declaration at specific points in the process.

Data Item	Description	Occurs	Format	Conditions/Notes
Declaration Method	The method by which the declaration was entered in the DMS Should always be the same value as the declaration is being submitted electronically.	1..1	n1	A value of '1' will likely refer to a HCI-equivalent entry (solution yet to be defined), but not CIE as these are not inventory linked.

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	1 = Manually Entered 2 = Electronically received 3 = Verbally declared			
Date of Entry	Date of the arrival (if arrived) or of the receipt (if pre-lodged).	1..1	an..35	CCYYMMDDHHMMSSZZZ (for ZZZ timezone part, use 'Z' for UTC or values like '+01' or '-02') Example – “2001-12-17T09:30:47Z” The latter meets ISO 8601 Time Zone Notation standard
Entry Number	ID of the declaration assigned by Customs. For CDS this will be the Movement Reference Number (MRN).	1..1	an..35	This will be defined by Customs, but for information, the MRN format is specified in the UCC IA Annex B Title 2. Specific format defined in [2].
Entry Version Number	Version number of the declaration before processing the amendment.	1..1	n..2	
Goods Arrival Declaration	Goods Arrival Declaration as notified by the CSP system: Y – goods have arrived; N – goods have not arrived.	1..1	a1	
ICS	A code indicating the Customs status of the Entry.	1..1	an..2	Values defined as per section 6
Inventory Consignment Reference	The unique consignment reference for the goods. This should match the MCR/ICR on the declaration.	1..1	an..35	

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ROE	The code for a route (of examination).	1..1	an..2	Values defined as per section 6
Trader Reference	This is a commercial reference supplied by the declarant. This will be provided if there is a value declared on the declaration.	0..1	an..35	This is mapped to 2/4 (Reference Number / UCR).
Total Packages	The total number of packages making up the consignment covered by the declaration.	1..1	n..8	

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16. Schemas

As specified in the latest version of the API Specification.

17. Sample Messages

Sample messages to be provided when the schema has been published on the developer hub.

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18. ICS / ROE Mapping

19. ICS – Declaration Status

Please note that not all the below status codes will appear in the status notifications, however, the majority can be configured to be sent if needed.

Status	Code	Description	CHIEF Equivalent
Declaration Validation	1	The declaration is currently within validation and is not yet accepted, registered or rejected. This code will be received for any initial linking of the declaration to the consignment on the inventory.	00
Declaration Goods Release	2	This status will be received once the declaration has a positive customs position but either control or the debt is provisional. However, the goods can be released. This will be received as part of a Declaration Status Notification.	01
Declaration Clearance	3	This status will be received once the declaration has a positive customs position and the control/debt is finalised. The majority of declaration will move to this status and skip release. This will be received as part of a Declaration Status Notification.	01
Declaration Invalidated	4	This status will be received as part of a Declaration Status Notification once the decision has been taken to invalidate the declaration. N.B. It has been noted that this value is not granular enough for our current business process and a requirement has been raised to change this.	92 / 07 / 09 / 05
Declaration Rejected	5	If the declaration is rejected, then a Declaration Status Notification will be received with this code.	N/A
Declaration Handled Externally	6	This status will be received as part of a Declaration Status Notification once the decision has been taken to take the declaration off system. This will happen extremely rarely, e.g. a declaration with 999 items receives a partial quota allocation.	N/A
Declaration Correction Validation	7	The amendment for the declaration is currently within validation and is not yet registered or rejected. This code will	22

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		be received for any initial linking of the 'stand-in' declaration to the consignment on the inventory.	
Advance Declaration Registration	8	Will not be sent to CSPs	N/A
Declaration Acceptance	9	Will not be sent to CSPs	N/A
Declaration Acceptance at Goods Arrival	10	Will not be sent to CSPs	N/A
Declaration Rejection at Goods Arrival	11	If the declaration fails re-validation at the point of arrival, then this notification will be sent to CSPs.	R (export SOE)
Declaration Corrected	12	Will not be sent to CSPs	N/A
Declaration Supplemented	13	Will not be sent to CSPs	N/A
Declaration Risked	14	Notification that the declaration has now been risked and will contain a specific ROE code.	N/A
Customs Position Determined	15	Will not be sent to CSPs	N/A
Declaration Clearance after Goods Release	16	Will not be sent to CSPs	N/A
Insufficient Guarantees	17	Will be sent as part of a Declaration Status Notification to inform of the need for the trader to take action on their deferment account. Suggests that there may be a delay to the declaration processing.	N/A

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20. ROE Mapping

Route	Code	Description	CHIEF Equivalent
Documentary Control	1	A risk has been identified that requires the declarant to submit documentation for checking. The goods are required to be held.	1
Physical / External Party Control	2	A risk has been identified which requires the goods to be physically inspected by Border Force or some other third party. The goods are required to be held.	2
Non-Blocking Documentary Control	3	A documentary check has been requested, but the goods do not need to be held.	3
No control required	6	The declaration has been risked and no control has been required.	6
Risking not yet performed	0	The declaration is in a processing state which means that risking has not been performed yet.	N/A
Pre-lodge pre-fix	H	The declaration is an advance/pre-lodged type, and as such the routing is provisional only.	H -

N.B. the value for 'E' (HCI declaration) has not been described as these requirements are yet to be elaborated by the programme.

N.B. the value for 'F' (FEC Challenge) has been removed as FEC checks are no longer blocking.

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Document Control

Status:

Author	Ben Wallis
Status	Issued for Approval

Change Log:

Version	Date	Author	Comments <i>(please include names of approvers in this section)</i>
V1.0	01.03.18	BW	First release
V1.1	29.03.18	BW	Released for approval following updates following internal and CSP comments. Message flows have been moved into [1].
V2.0	09.05.18	BW	Baselined. Mapping for trader reference moved from 2/5 to 2/4.
V2.1	04.07.18	BW	Removed reference to HCI solution
V2.2	05.07.18	LP	Tracked changes removed.

Document Reviewer List:

Reviewer	Role
All artefacts held within this document have been reviewed by CDS product owners and the TDA.	

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Statement of Confidentiality

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