CDS End to End Sequence Diagrams

Abstract

This document defines the end to end message flows for a variety of scenarios. This document has been created mid-way through an agile process and is therefore subject to change. Where the programme has not yet elaborated a requirement in a specific area, this has been identified within the document.

Origin/Author: Ben Wallis

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Prepared by: HMRC (CDIO (C&IT) – CDS)

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1.

Introduction

2.   Scope

s document defines the end to end sequencing for the submission of a declaration, an amendment, an invalidation, as well as the export inventory linking transactions. All processes are largely triggered from the receipt of a declaration or an additional message in the WCO format. The main focus of this document is imports as this has been the focus of the CDS programme so far. This document will be updated for the detail regarding exports at the appropriate time.

ere XML is mentioned in this document, for declaration messages it refers to the new UCC/WCO declaration standard to be used by CDS. Note that external CDS interfaces follow the WCO format, but validation will follow the UCC/EUCDM standard. For inventory linking messages, it refers to the updated XML standard which replaces the current EDIFACT standard used for CHIEF.

ument does not cover connectivity, technical acknowledgements or the requirements on how to populate the header record, this should be covered in the API specification [1].

3.   References

Doc Ref	ID	Document Title	Version	Location
CDS 03	1	Customs Declaration API	V1.0	Developer Hub: https://developer.service.hmrc.gov.uk/api-documentation/docs/api/service/customs-declarations/1.0

4.

5. 2. Scenarios

6. Scenarios Described

For imports, the following scenarios have been covered:

- Submitting a pre-lodged declaration through a CSP into CDS, where that declaration needs to be inventory linked.
- The flow following the receipt of the goods arrival message from a CSP.
- Submitting an arrived declaration through a CSP into CDS, where that declaration needs to be inventory linked.
- Submitting a supplementary declaration into CDS.
- Submitting a pre-lodged declaration into CDS, where the declaration does not need to be inventory linked. The below diagram denotes direct interaction with CDS from an Agent's software, however, this is only applicable for those declarants that qualify to submit up to 10 declarations a year directly to CDS. All other declarants, or once the 10 declaration limit is hit, have to go through a CSP.
- Submitting a goods arrival message into CDS, where the declaration does not need to be inventory linked. the below diagram denotes direct interaction with CDS from an Agent's software, however, this is only applicable for those declarants that qualify to submit up to 10 declarations a year directly to CDS. All other declarants, or once the 10 declaration limit is hit, have to go through a CSP.
- Submitting a supplementary declaration, where no CSP is involved.
- Invalidating a declaration.

Scenarios yet to be finalised.

- Amending the Declaration
- Export Declaration Submission
- Export Arrival
- Export Anticipated Arrival
- Export Departure
- Export Consolidation Request (Association / Disassociation)
- Export Shut Consolidation
  -

7. CSP Specific Transactions

In the below sequence diagrams, the majority show the CSP as the 'submitter' of the declaration. As the submitter, they will be the first system to receive any response from CDS. The majority will be primarily of interest to the declarant. There are however, a series of CSP specific transactions which should only be received and processed by the CSP system. These are:

- inventoryLinkingImportValidateMovementRequest
- inventoryLinkingImportValidateMovementResponse

- inventoryLinkingImportDeclarationStatusNotification
- inventoryLinkingImportArriveGoods

Every other response from CDS, the DMSxxx notifications, will be routed primarily to the submitter of the declaration. It is the responsibility of the submitter to then route the notifications to the declarant if appropriate. Where a CSP is not present, movement validation and declaration status messages are not relevant. The 'NILP' (Non-Inventory Linked Port) sequence diagrams show the interactions where a CSP is not present.

8. Key Identifiers for Messages

Submitter

CDS

POST /customs/declarations/submit-a-customs-declaration (http header + xml payload)

Submit a Customs Declaration https://developer.service.hmrc.gov.uk/api-documentation/docs/api/service/customs-declarations/1.0

http header	xml payload
	Declaration/FunctionalReferenceID [D/E 2/5, an..35]

synchronous - http status 202 accepted (http header)

202 Accepted

http header
X-Conversation-ID

API header fields:
- Standard API header fields required for a declaration submission are not included (see API Developer Hub link for detailed message specification)

Declaration submission:
- Comprised of http header and xml payload
- Declaration/FunctionalReferenceID (data element 2/5 in declaration payload) is the trader assigned reference for a declaration

202 Accepted:
- Comprised of http header only
- Synchronous response to declaration submission POST operation
- X-Conversation-ID is generated by HMRC as a unique ID for the business transaction, i.e. Declaration, and is included in all subsequent responses to that submission.
- A new X-Conversation-ID is generated on amend, cancel operations

loop   [declaration response message(s)]

asynchronous - declaration response message (http header + xml payload

Declaration Response [DMSaaa]

http header	xml payload
X-Conversation-ID	Declaration/ID [an..35] Declaration/FunctionalReferenceID [D/E 2/5, an..35]

synchronous - http status 200 OK (http header)

200 OK

http header

Declaration response:
- Comprised of http header and xml payload
- Each declaration response type (DMSaaa) is detailed in CDS documentation, examples include DMSACC, DMSRCV, DMSREJ, DMSDOC.etc.
- Declaration/ID is the unique ID of the referenced declaration assigned by CDS
- Declaration/FunctionalReferenceID (data element 2/5 in declaration payload) is the trader assigned reference for a declaration

200 OK:
- Comprised of http header only
- Synchronous response from recipient of each separate declaration response to confirm it has been successfully received

9.   Message Flow

The below message flows describe the interactions between the key L0 components as the declaration goes through its lifecycle. The trader notifications are shown as pushes out to the original submitter, but it is possible to pull these notifications as well. Full details of the pull services are within the API documentation. The notifications have also been shown as separate, rather than consolidated. For the majority of supplementary declarations the DMSTAX and DMSROG/CLE will be consolidated. Frontier declaration notifications are yet to be elaborated fully, but it is unlikely they can be consolidated in a similar way due to the DMSTAX notification being utilised as a payment instruction notification.

10.   Submitting a Pre-lodged Declaration
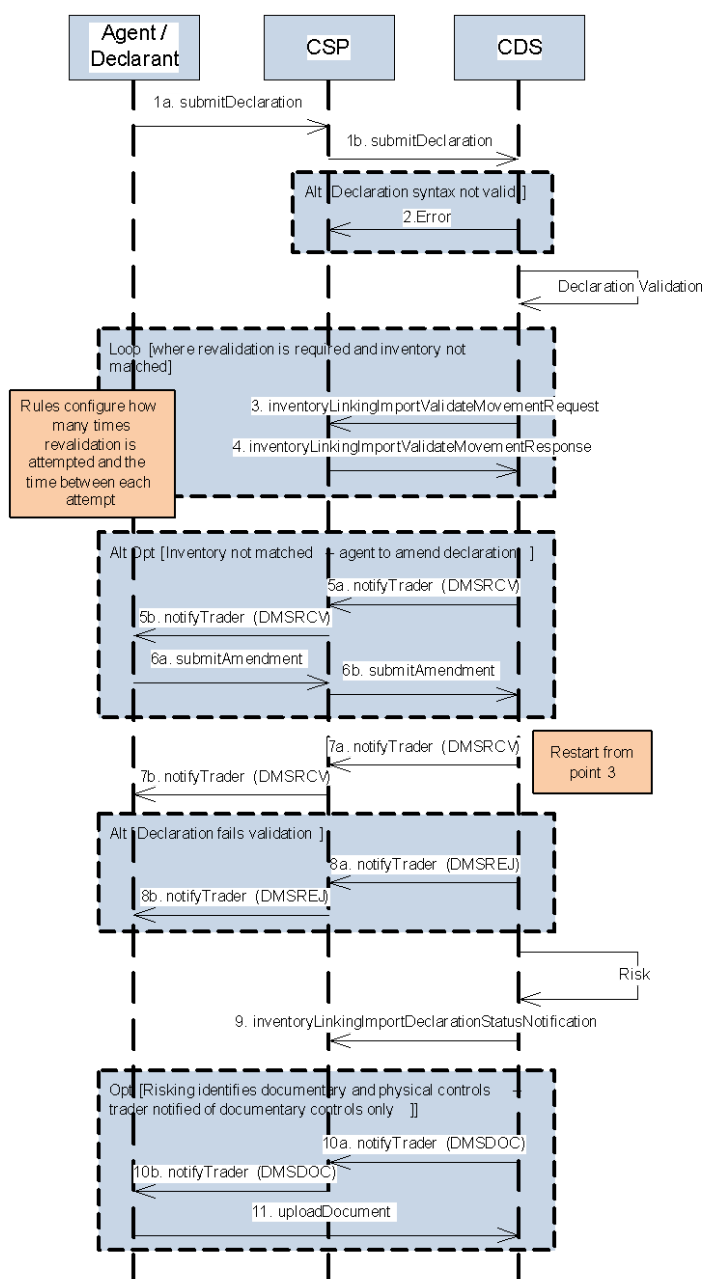
ID	Operation	Description
1a	submitDeclaration	Submission of the advance/pre-lodged declaration. This could be the full declaration (Type D), or the simplified version (Type E or F).
1b	submitDeclaration	

2	HTTP error response	Standard error response where the schema does not pass validation at the MDTP level. The mechanism of this error should be defined in the API Schema documentation. It is not shown here, but the CSP may pass the error back to the declarant depending on the error.
3	inventoryLinkingImportValidateMovementRequest	This service will be used to request a CSP to check whether they can identify the ICR on the declaration, and that the number of packages matches against the inventory record. There is no declarant involvement in this interaction. **ICS/ROE Values:** the status of the declaration (ICS) will be 1 (Declaration Validation), and the ROE will be 0 (meaning 'to be determined' as the declaration has not been risked yet).
4	inventoryLinkingImportValidateMovementResponse	The response back to the CDS service which comprises of the schema as defined. The key value will be the IRC which specifies whether the match has been successful. CDS will transform the CSP response into a DMS-valid response. Where the IRC is '000', then an 'empty' validation result will be passed to DMS. Else, a specific entry management service validation result (EMSV001) will be passed back. This error code is the trigger for the re-validation loop as specified in the Inventory Linking Import specification.
5a	notifyTrader (DMSRCV)	Part of an alternative flow where the Inventory Return Code has returned a mismatch. This will cause the DMSRCV notification to be sent back notifying the
5b	notifyTrader (DMSRCV)	

		trader of the inventory mis-match. The notification will contain a RevalidationRequiringValidationResult to differentiate this from a standard registration notification.
6a	submitAmendment	In the case of a non-match, an amendment may be needed to rectify the declaration, rather than the consignment record on the CSP system. The declaration service allows an actor to submit an amendment into the CDS service, which will cause a re-validation of the declaration, including the inventory reference and total packages.

ICS / ROE Values (on re-validation):

The process will then return to step 3. When the revalidation occurs with CSPs the message will contain an ICS of 7 (Declaration Correction Validation) and ROE of 0 (No risk performed yet). |
| 6b | submitAmendment | |
| 7a | notifyTrader (DMSRCV) | The submitter is notified of a change in status of the declaration. Following successful inventory linking and validation, this provides the positive response back to the trader that the pre-lodged declaration has been registered. A timer now starts for the goods arrival message to be submitted. If the arrival is not received within 30 days, the declaration is invalidated.

Any credibility checks identified during validation will be passed back here as separate validationResults. |
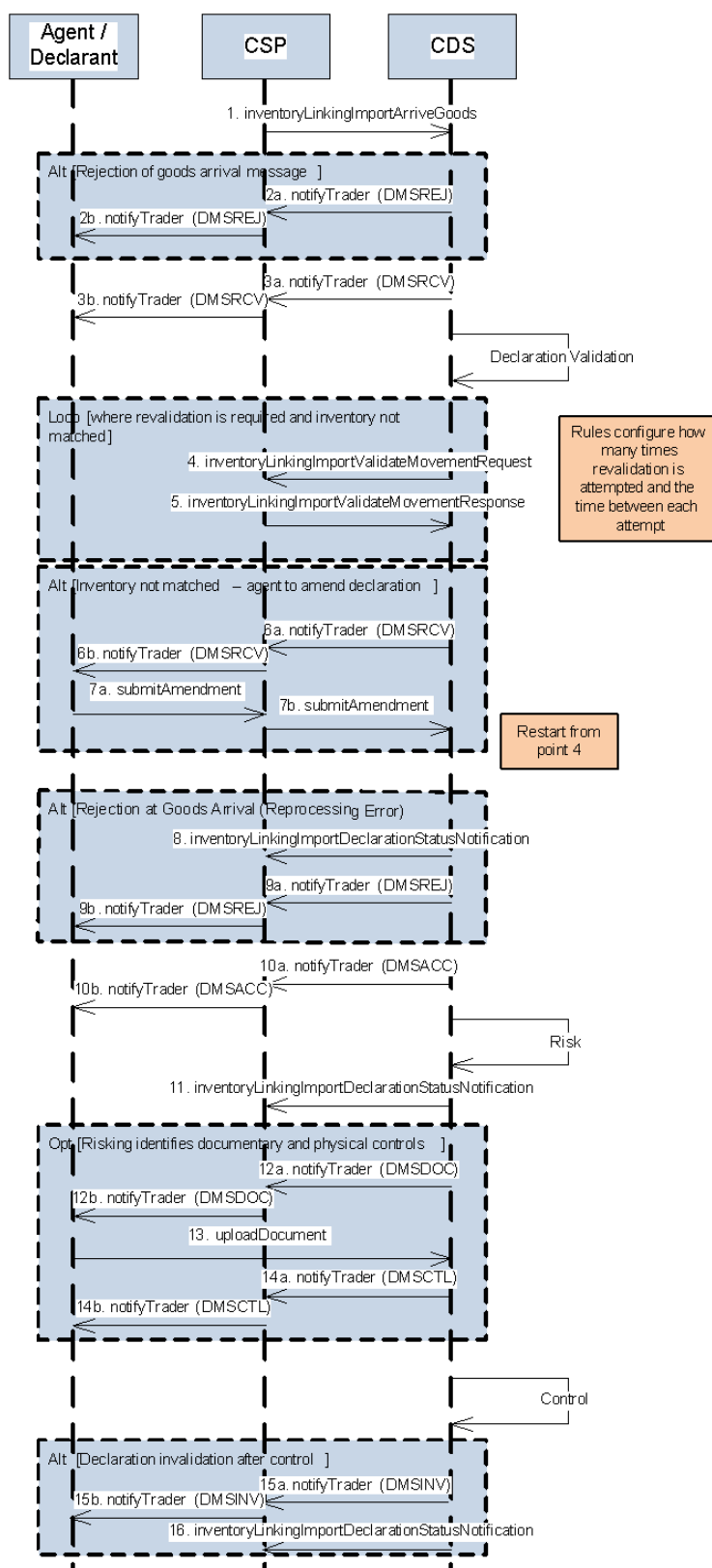| 7b | notifyTrader (DMSRCV) | |

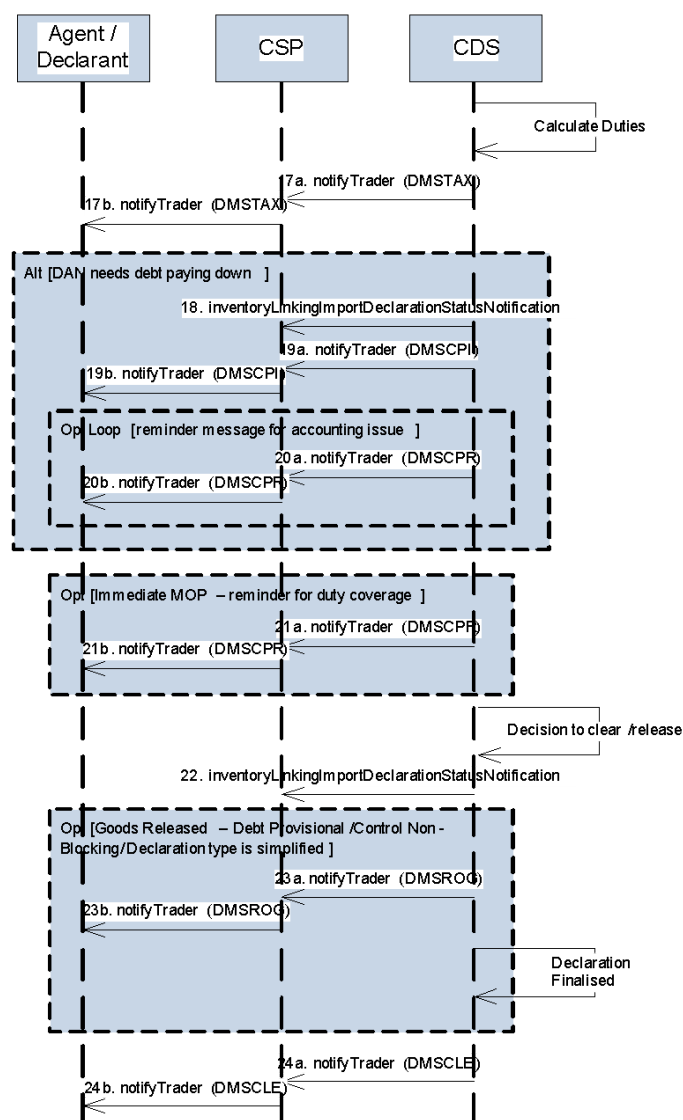| 8a	notifyTrader (DMSREJ)	Operation to notify the submitter that the declaration has failed validation and is rejected. This is an end-state and no further action can be taken on the declaration, nor any further processing within CDS. A new declaration will need to be submitted if the intention is to still import the same goods.
8b	notifyTrader (DMSREJ)	
9	inventoryLinkingImportDeclarationStatusNotification	Following validation and a positive linking, the declaration is risked. This service will be called to notify the CSP of the potential route of the declaration.
		ICS/ROE Values: The declaration status (ICS) will be 14 (Declaration Risked), and ROE will be based on the control type
10a	notifyTrader (DMSDOC)	Operation to notify the submitter of the declaration that a documentary control is required. As this declaration is a pre-lodged declaration then there will be no notification to the trader of any potential physical control.
10b	notifyTrader (DMSDOC)	
11	uploadDocument	Following the receipt of the DMSDOC notification, the documentation can be uploaded to the CDS service.

11.   Arriving a Declaration

CDS End to End Sequence Diagrams

Agent / Declarant | **CSP** | **CDS**

1. inventoryLinkingImportArriveGoods

Alt [Rejection of goods arrival message]

2a. notifyTrader (DMSREJ)

2b. notifyTrader (DMSREJ)

3a. notifyTrader (DMSRCV)

3b. notifyTrader (DMSRCV)

Declaration Validation

Loop [where revalidation is required and inventory not matched]

4. inventoryLinkingImportValidateMovementRequest

5. inventoryLinkingImportValidateMovementResponse

Rules configure how many times revalidation is attempted and the time between each attempt

Alt [Inventory not matched – agent to amend declaration]

6a. notifyTrader (DMSRCV)

6b. notifyTrader (DMSRCV)

7a. submitAmendment

7b. submitAmendment

Restart from point 4

Alt [Rejection at Goods Arrival (Reprocessing Error)]

8. inventoryLinkingImportDeclarationStatusNotification

9a. notifyTrader (DMSREJ)

9b. notifyTrader (DMSREJ)

10a. notifyTrader (DMSACC)

10b. notifyTrader (DMSACC)

Risk

11. inventoryLinkingImportDeclarationStatusNotification

Opt [Risking identifies documentary and physical controls]

12a. notifyTrader (DMSDOC)

12b. notifyTrader (DMSDOC)

13. uploadDocument

14a. notifyTrader (DMSCTL)

14b. notifyTrader (DMSCTL)

Control

Alt [Declaration invalidation after control]

15a. notifyTrader (DMSINV)

15b. notifyTrader (DMSINV)

16. inventoryLinkingImportDeclarationStatusNotification

ID	Operation	Description
1a	inventoryLinkingImportArriveGoods	Notification from the CSP that the declaration should now be arrived. The primary key for this message will be the MRN (Entry Number). If transportNationality is included in the arrival message then this will be treated as an amendment to the declaration.
2a	notifyTrader (DMSREJ)	If the arrival message fails validation, then CDS will send a DMSREJ notification to inform the
2b	notifyTrader (DMSREJ)	

		declaration submitter of the error. This will be routed through the CSP.
3a	notifyTrader (DMSRCV)	If the arrival message passes validation, then CDS will send a DMSRCV notification to inform the declaration submitter of the registration of the additional message. This will be routed through the CSP.
3b	notifyTrader (DMSRCV)	
4	inventoryLinkingImportValidateMovementRequest	During the declaration re-validation the linking is re-checked. **ICS/ROE Values:**The request will have an ICS value of '1' (validation) and an ROE value of '0' (control yet to be performed).
5	inventoryLinkingImportValidateMovementResponse	The response back to the CDS service which comprises of the schema as defined. The key value will be the IRC which specifies whether the match has been successful. CDS will transform the CSP response into a DMS-valid response. Where the IRC is '000', then an 'empty' validation result will be passed to DMS. Else, a specific entry management service validation result (EMSV001) will be passed back. This error code is the trigger for the re-validation loop as specified in Inventory Linking Import specification.
6a	notifyTrader (DMSRCV)	Trader notification to request the individual takes action to correct the declaration in the case of a mis-match between the inventory. Note that this is sent after the first linking failure, the system does not wait for the preceding loop to complete as it could be that the CSP system is updated instead.
6b	notifyTrader (DMSRCV)	
7a	submitAmendment	If in the case of a non-match, an amendment may be needed to rectify the declaration, rather than the CSP system. The declaration service allows an actor to submit an amendent into the DMS system, which will cause a re-validation of the inventory reference and total packages. This
7b	submitAmendment	

		will cause the process to re-validate with the CSP (from step 4). **ICS / ROE Values** (on re-validation): When the revalidation occurs with CSPs the message will contain an ICS of 7 (Declaration Correction Validation) and ROE of 0 (No risk performed yet).
8	inventoryLinkingImportDeclarationStatusNotification	If the declaration fails re-validation after the goods presentation notification, the declaration could be rejected. This could be for a number of reasons, for example, reference data changes, Tariff data updates, business rule config etc. The trader will be required to submit a new declaration conforming to the new data validation. **ICS/ROE Values:** The notification will contain an ICS of '11' (Declaration Rejection at Goods Arrival) and ROE of '0' (no control yet).
9a	notifyTrader (DMSREJ)	The specific trader notification regarding the rejection of the declaration at re-processing. It will contain the specific validation errors that caused the rejection. There is currently no ability to amend a re-processing error.
9b	notifyTrader (DMSREJ)	
10 a	notifyTrader (DMSACC)	The specific trader notification regarding the legal acceptance of the declaration. This effectively sets the tax point. Any credibility checks identified during validation will be passed back here as separate validationResults.
10 b	notifyTrader (DMSACC)	

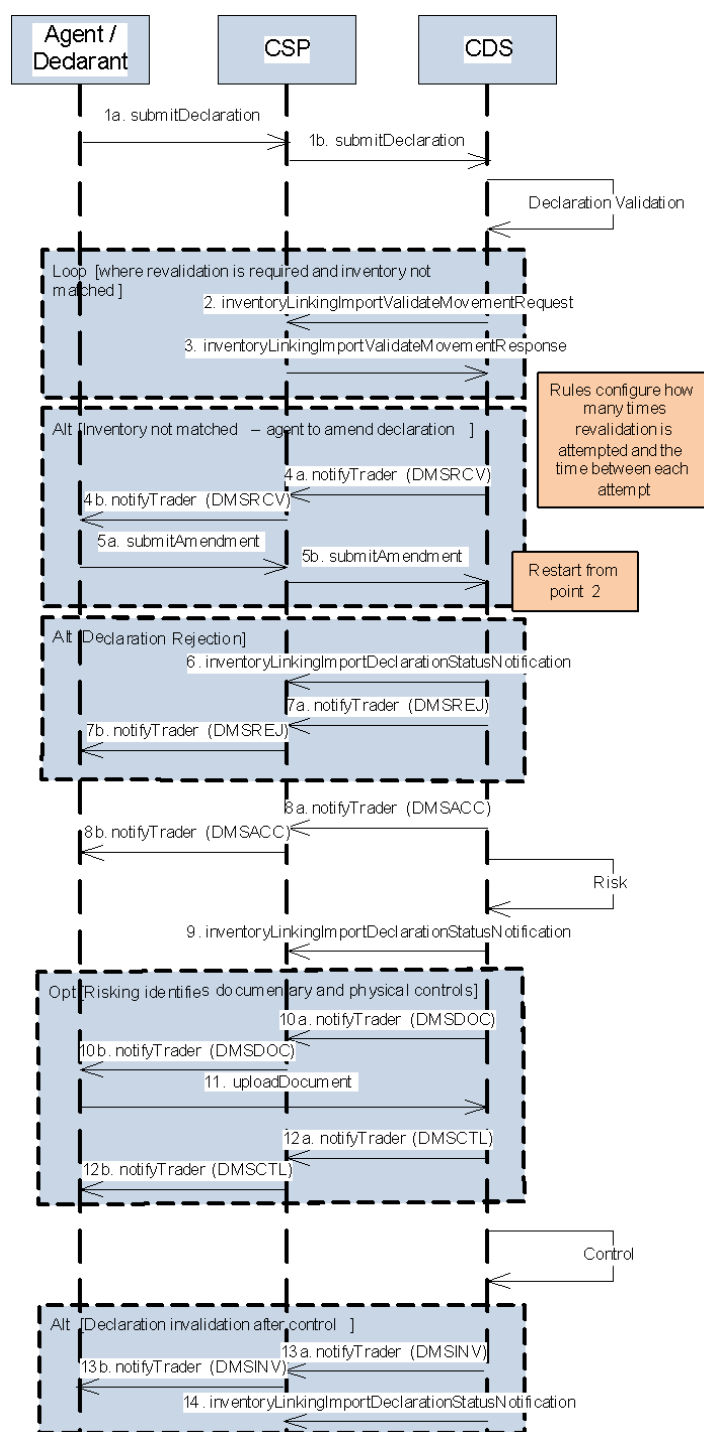| 11	inventoryLinkingImportDeclarationStatusNotification	Following validation and a positive linking, the declaration is risked. This service will be called to notify the CSP of the route confirmation. **ICS/ROE Values:** The declaration status (ICS) will be 14 (Declaration Risked), and ROE will be based on the control type.
12 a	notifyTrader (DMSDOC)	Operation to notify the submitter of the identification of a documentary control. This is used to notify the trader of the required control, but also as a request to upload specific documentation.
12 b	notifyTrader (DMSDOC)	
13	uploadDocument	Following the receipt of the DMSDOC notification, the documentation can be uploaded to the CDS service.
14 a	notifyTrader (DMSCTL)	Potential notification to inform the trader of physical control to be performed against their declaration.
14 b	notifyTrader (DMSCTL)	
15 a	notifyTrader (DMSINV)	It may be the case that the declaration after control needs to be put in a final state, for example if the goods are abandoned or destroyed. In these circumstances the declaration will be invalidated and the trader notified of this state change.
15 b	notifyTrader (DMSINV)	
16	inventoryLinkingDeclarationStatusNotification	CSP notified of the declaration being invalidated (outstanding requirement to provide a detailed reason as to why). ICS code will equal '4' (Declaration Invalidated).
17 a	notifyTrader (DMSTAX)	Trader notification providing the debt amounts that have been reserved against their deferment

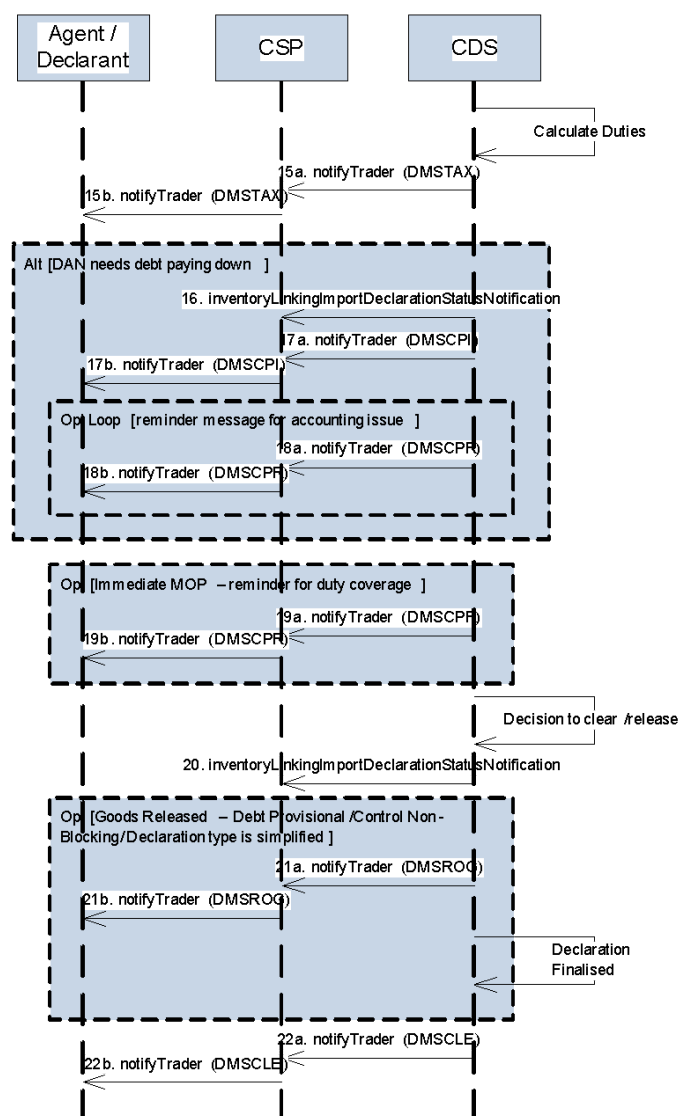| 17 b	notifyTrader (DMSTAX)	account. This notification can also be used as a prompt for an immediate payment (which will also include a specific payment reference to use). Where the declaration type is simplified, no debt may be liable, depending on the CPC.
18	inventoryLinkingImportDeclarationStatusNotification	If there is an issue reserving an amount of money against a deferment account (or those similar, e.g. cash account), declaration processing will stop while CDS awaiting either a pay down of the debt, or an update to the guarantee. This message is to inform CSPs of the break in the process. **ICS/ROE Values:** The message will contain an ICS of '17' (Accounting Failure / Insufficient Guarantees).
19 a	notifyTrader (DMSCPI)	The trader notification regarding the need to take action against a specific account ID.
19 b	notifyTrader (DMSCPI)	
20 a	notifyTrader (DMSCPR)	Where action has not been taken on a specific account, once a timer runs out, the trader is provided a reminder. Once the reminder has been sent out, and still no action has been taken, then a task will be raised to either manually chase the trader, or invalidate the declaration.
20 b	notifyTrader (DMSCPR)	
21 a	notifyTrader (DMSCPR)	Where action has not been taken to cover an immediate payment, once a timer runs out, the trader is provided a reminder. Once the reminder has been sent out, and still no action has been taken, then a task will be raised to either manually chase the trader, or invalidate the declaration.
21 b	notifyTrader (DMSCPR)	
22	inventoryLinkingImportDeclarationStatusNotification	The declaration clearance message will notify the CSPs that the goods can be released.

			ICS/ROE Values: The status (ICS) will either be 3 (Declaration Clearance), or 2 (Declaration Release). There should be no ROE at this point as any control would have been resolved. N.B there may be a requirement to always pass whatever route was applied to the declaration, rather than the current control status. This will need to be resolved in a further release.
23 a	notifyTrader (DMSROG)		Where the control allows for the goods to be released, but there are still elements that need finalising on the declaration, CDS will inform the trader of 'release of goods'.Following the declaration being finalised (e.g. provisional debt becoming finalised), then the clearance notification will be sent.
23 b	notifyTrader (DMSROG)		
24 a	notifyTrader (DMSCLE)		Following the declaration process, if the control and the debt is finalised the declaration can be cleared.
24 b	notifyTrader (DMSCLE)		Following the declaration process, if the control and the debt is finalised the declaration can be cleared.

12. Submitting an Arrived Declaration

ID	Operation	Description
1a	submitDeclaration	Submission of an arrived declaration. This could be the full declaration (Type A), or the simplified version (Type B or C).
1b	submitDeclaration	
2	inventoryLinkingImportValidateMovementRequest	During the declaration re-validation the linking is re-checked. **ICS/ROE Values:** The request will have an ICS value of '1' (validation) and an ROE value of '0' (control yet to be performed).

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3	inventoryLinkingImportValidateMovementResponse	The response back to the CDS service which comprises of the schema as defined. The key value will be the IRC which specifies whether the match has been successful. CDS will transform the CSP response into a DMS-valid response. Where the IRC is '000', then an 'empty' validation result will be passed to DMS. Else, a specific entry management service validation result (EMSV001) will be passed back. This error code is the trigger for the re-validation loop as specified in Inventory Linking Import specification.
4a	notifyTrader (DMSRCV)	Trader notification to request the individual takes action to correct the declaration in the case of a mis-match between the inventory. Note that this is sent after the first linking failure, the system does not wait for the preceding loop to complete as it could be that the CSP system is updated instead.
4b	notifyTrader (DMSRCV)	
5a	submitAmendment	If in the case of a non-match, an amendment may be needed to rectify the declaration, rather than the CSP system. The declaration service allows an actor to submit an amendent into the DMS system, which will cause a re-validation of the inventory reference and total packages. This will cause the process to re-validate with the CSP (from step 4). **ICS / ROE Values** (on re-validation): When the revalidation occurs with CSPs the message will contain an ICS of 7 (Declaration Correction Validation) and ROE of 0 (No risk performed yet).
5b	submitAmendment	
6	inventoryLinkingImportDeclarationStatusNotification	If the declaration fails validation, the declaration is rejected. The CSP is notified as the linking will have already taken place. **ICS/ROE Values:**

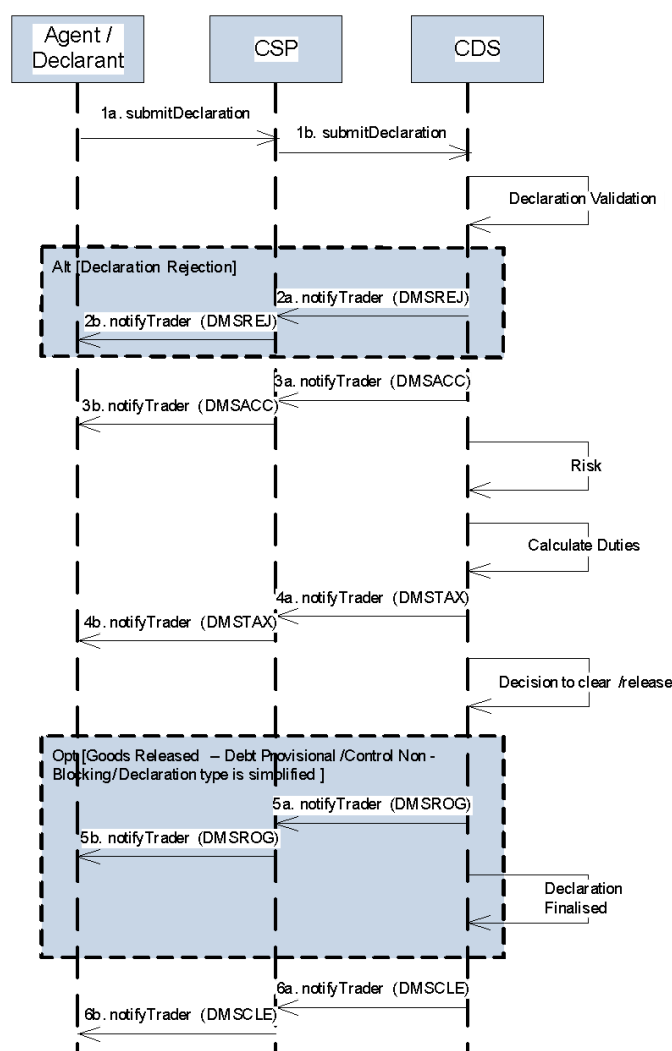|		
		The notification will contain an ICS of '5' (Declaration Rejection) and ROE of '0' (no control yet).
7a	notifyTrader (DMSREJ)	The specific trader notification regarding the rejection of the declaration. It will contain the specific validation errors that caused the rejection.
7b	notifyTrader (DMSREJ)	
8a	notifyTrader (DMSACC)	The specific trader notification regarding the legal acceptance of the declaration. This effectively sets the tax point.
8b	notifyTrader (DMSACC)	Any credibility checks identified during validation will be passed back here as separate validationResults.
9	inventoryLinkingImportDeclarationStatusNotification	Following validation and a positive linking, the declaration is risked. This service will be called to notify the CSP of the route confirmation. **ICS/ROE Values:** The declaration status (ICS) will be 14 (Declaration Risked), and ROE will be based on the control type.
10 a	notifyTrader (DMSDOC)	Operation to notify the submitter of the identification of a documentary control. This is used to notify the trader of the required control, but also as a request to upload specific documentation.
10 b	notifyTrader (DMSDOC)	
11	uploadDocument	Following the receipt of the DMSDOC notification, the documentation can be uploaded to the CDS service.
12 a	notifyTrader (DMSCTL)	Potential notification to inform the trader of physical control to be performed against their declaration.

12 b	notifyTrader (DMSCTL)	
13 a	notifyTrader (DMSINV)	It may be the case that the declaration after control needs to be put in a final state, for example if the goods are abandoned or destroyed. In these circumstances the declaration will be invalidated and the trader notified of this state change.
13 b	notifyTrader (DMSINV)	
14	inventoryLinkingDeclarationStatusNotification	CSP notified of the declaration being invalidated (outstanding requirement to provide a detailed reason as to why). ICS code will equal '4' (Declaration Invalidated).
15 a	notifyTrader (DMSTAX)	Trader notification providing the debt amounts that have been reserved against their deferment account. This notification can also be used as a prompt for an immediate payment (which will also include a specific payment reference to use).
15 b	notifyTrader (DMSTAX)	
16	inventoryLinkingImportDeclarationStatusNotification	If there is an issue reserving an amount of money against a deferment account (or those similar, e.g. cash account), declaration processing will stop while CDS awaiting either a pay down of the debt, or an update to the guarantee. This message is to inform CSPs of the break in the process. **ICS/ROE Values:** The message will contain an ICS of '17' (Accounting Failure / Insufficient Guarantees).
17 a	notifyTrader (DMSCPI)	The trader notification regarding the need to take action against a specific account ID.
17 b	notifyTrader (DMSCPI)	

18 a	notifyTrader (DMSCPR)	Where action has not been taken on a specific account, once a timer runs out, the trader is provided a reminder. Once the reminder has been sent out, and still no action has been taken, then a task will be raised to either manually chase the trader, or invalidate the declaration.
18 b	notifyTrader (DMSCPR)	
19 a	notifyTrader (DMSCPR)	Where action has not been taken to cover an immediate payment, once a timer runs out, the trader is provided a reminder. Once the reminder has been sent out, and still no action has been taken, then a task will be raised to either manually chase the trader, or invalidate the declaration.
19 b	notifyTrader (DMSCPR)	
20	inventoryLinkingImportDeclarationStatusNotification	The declaration clearance message will notify the CSPs that the goods can be released. **ICS/ROE Values:** The status (ICS) will either be 3 (Declaration Clearance), or 2 (Declaration Release). There should be no ROE at this point as any control would have been resolved. N.B there may be a requirement to always pass whatever route was applied to the declaration, rather than the current control status. This will need to be resolved in a further release.
21 a	notifyTrader (DMSROG)	Where the control allows for the goods to be released, but there are still elements that need finalising on the declaration, CDS will inform the trader of 'release of goods'.Following the declaration being finalised (e.g. provisional debt becoming finalised), then the clearance notification will be sent.
21 b	notifyTrader (DMSROG)	
22 a	notifyTrader (DMSCLE)	Following the declaration process, if the control and the debt is finalised the declaration can be cleared.
22 b	notifyTrader (DMSCLE)	

13. Submitting a Supplementary Declaration (with CSP)

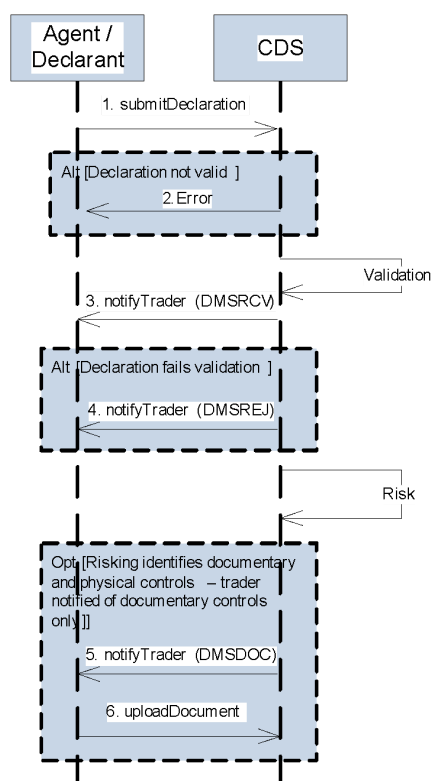| ID	Operation	Description
1a	submitDeclaration	Submission of a supplementary declaration. This could be one of a Type Y or Z.
1b	submitDeclaration	
2a	notifyTrader (DMSREJ)	The specific trader notification regarding the rejection of the declaration. It will contain the specific validation errors that caused the rejection.
2b	notifyTrader (DMSREJ)	

3a	notifyTrader (DMSACC)	The specific trader notification regarding the legal acceptance of the declaration. This effectively sets the tax point.
3b	notifyTrader (DMSACC)	Any credibility checks identified during validation will be passed back here as separate validationResults.
4a	notifyTrader (DMSTAX)	Trader notification providing the debt amounts that have been reserved against their deferment account. Only deferred methods of payment can be used for supplementary declarations.
4b	notifyTrader (DMSTAX)	
5a	notifyTrader (DMSROG)	Where the control allows for the goods to be released, but there are still elements that need finalising on the declaration, CDS will inform the trader of 'release of goods'.Following the declaration being finalised (e.g. provisional debt becoming finalised), then the clearance notification will be sent.
5b	notifyTrader (DMSROG)	
6a	notifyTrader (DMSCLE)	Following the declaration process, if the control and the debt is finalised the declaration can be cleared.
6b	notifyTrader (DMSCLE)	Following the declaration process, if the control and the debt is finalised the declaration can be cleared.

14. Submitting a Pre-lodged Declaration (NILP)

Please note, the below diagram denotes direct interaction with CDS from an Agent's software, however, this is only applicable for those declarants that qualify to submit up to 10 declarations a year directly to CDS. All other declarants, or once the 10 declaration limit is hit, have to go through a CSP.

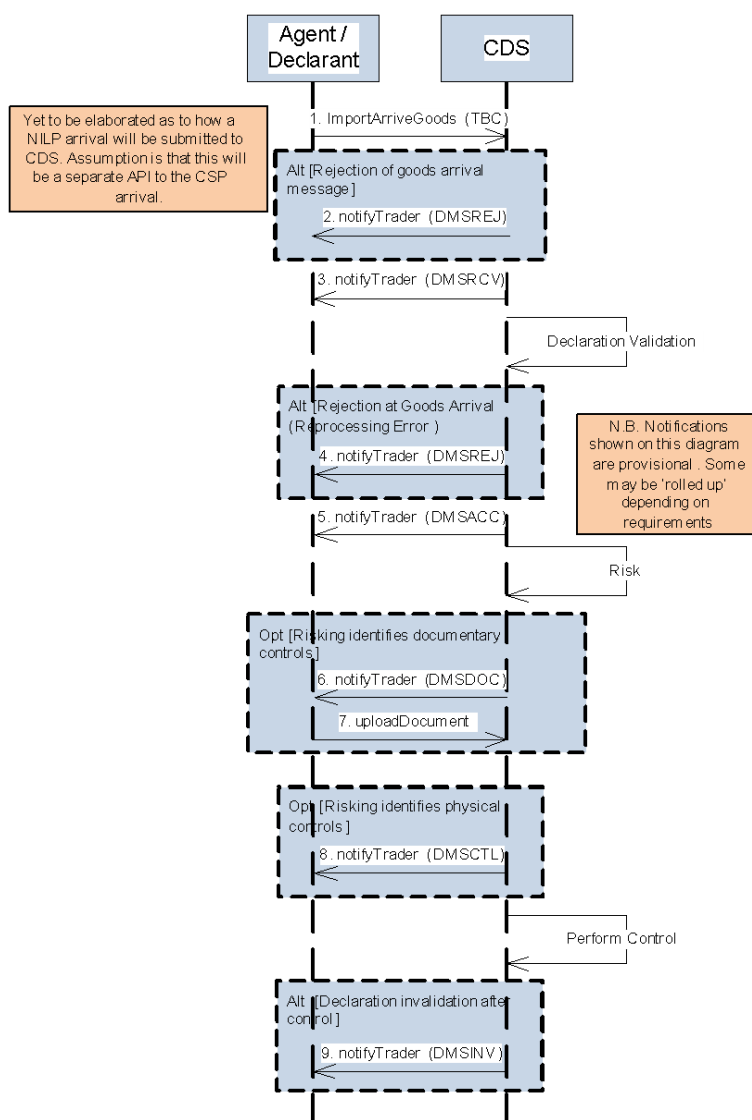| ID	Operation	Description

| 1	submitDeclaration	Submission of the advance/pre-lodged declaration. This could be the full declaration (Type D), or the simplified version (Type E or F).
2	HTTP error response	Standard error response where the schema does not pass validation at the MDTP level. The mechanism of this error should be defined in the API Schema documentation.
3	notifyTrader (DMSRCV)	The submitter is notified of a change in status of the declaration. Following successful validation, this provides the positive response back to the trader that the pre-lodged declaration has been registered. A timer now starts for the goods arrival message to be submitted. If the arrival is not received within 30 days, the declaration is invalidated. Any credibility checks identified during validation will be passed back here as separate validationResults.
4	notifyTrader (DMSREJ)	Operation to notify the submitter that the declaration has failed validation and is rejected. This is an end-state and no further action can be taken on the declaration, nor any further processing within CDS. A new declaration will need to be submitted if the intention is to still import the same goods.
5	notifyTrader (DMSDOC)	Operation to notify the submitter of the declaration that a documentary control is required. As this declaration is a pre-lodged declaration then there will be no notification to the trader of any potential physical control.
6	uploadDocument	Following the receipt of the DMSDOC notification, the documentation can be uploaded to the CDS service.

15. Arriving a Declaration (NILP)

Please note, the below diagram denotes direct interaction with CDS from an Agent's software, however, this is only applicable for those declarants that qualify to submit up to 10 declarations a year directly to CDS. All other declarants, or once the 10 declaration limit is hit, have to go through a CSP.
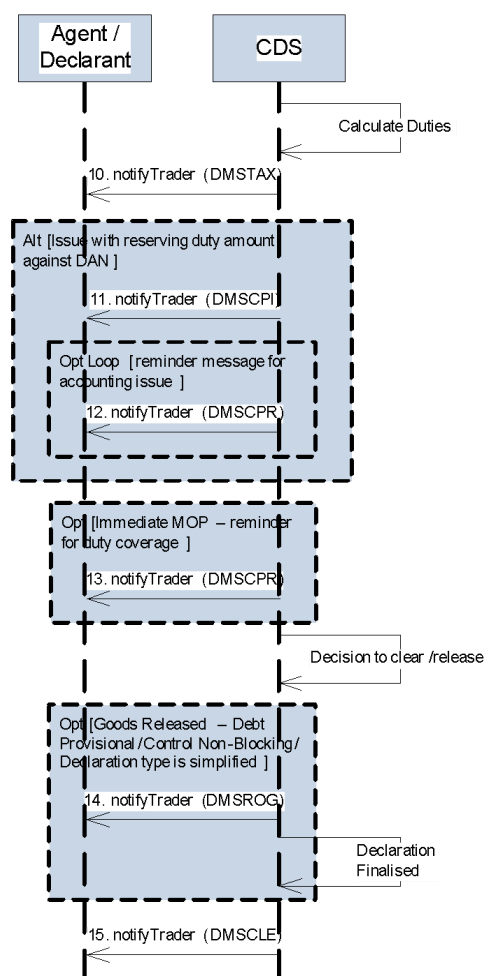
ID	Operation	Description
1	importArriveGoods	Notification from the submitter that the goods have now arrived. **N.B. the mechanism for this is yet to be determined (through either an automatic message or C1600 form to the NCH).**
2	notifyTrader (DMSREJ)	If the arrival message fails validation, then CDS will send a DMSREJ notification to inform the declaration submitter of the error.
3	notifyTrader (DMSRCV)	If the arrival message passes validation, then CDS will send a DMSRCV notification to inform the declaration submitter of the registration of the additional message.

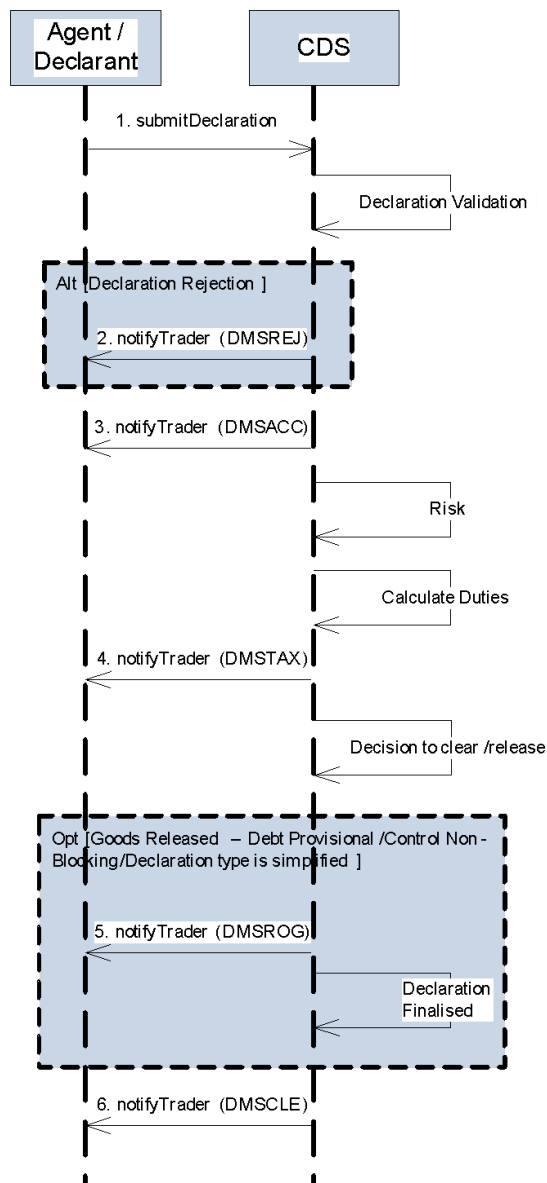| 4	notifyTrader (DMSREJ)	The specific trader notification regarding the rejection of the declaration at re-processing. It will contain the specific validation errors that caused the rejection.
5	notifyTrader (DMSACC)	The specific trader notification regarding the legal acceptance of the declaration. This effectively sets the tax point. Any credibility checks identified during validation will be passed back here as separate validationResults.
6	notifyTrader (DMSDOC)	Operation to notify the submitter of the identification of a documentary control. This is used to notify the trader of the required control, but also as a request to upload specific documentation.
7	uploadDocument	Following the receipt of the DMSDOC notification, the documentation can be uploaded to the CDS service.
8	notifyTrader (DMSCTL)	Potential notification to inform the trader of physical control to be performed against their declaration.
9	notifyTrader (DMSINV)	It may be the case that the declaration after control needs to be put in a final state, for example if the goods are abandoned or destroyed. In these circumstances the declaration will be invalidated and the trader notified of this state change.
9	notifyTrader (DMSTAX)	Trader notification providing the debt amounts that have been reserved against their deferment account. This notification can also be used as a prompt for an immediate payment (which will also include a specific payment reference to use). Where the declaration type is simplified, no debt may be liable, depending on the CPC.
10	notifyTrader (DMSCPI)	The trader notification regarding the need to take action against a specific account ID.
11	notifyTrader (DMSCPR)	Where action has not been taken on a specific account, once a timer runs out, the trader is provided a reminder. Once the reminder has been sent out, and still no

		action has been taken, then a task will be raised to either manually chase the trader, or invalidate the declaration.
12	notifyTrader (DMSCPR)	Where action has not been taken to cover an immediate payment, once a timer runs out, the trader is provided a reminder. Once the reminder has been sent out, and still no action has been taken, then a task will be raised to either manually chase the trader, or invalidate the declaration.
13	notifyTrader (DMSROG)	Where the control allows for the goods to be released, but there are still elements that need finalising on the declaration, CDS will inform the trader of 'release of goods'.Following the declaration being finalised (e.g. provisional debt becoming finalised), then the clearance notification will be sent.
14	notifyTrader (DMSCLE)	Following the declaration process, if the control and the debt is finalised the declaration can be cleared.

16. Submitting a Supplementary Declaration (no CSP)

Unlike the above frontier scenarios, there is nothing stopping a declarant submitting a supplementary declaration direct to CDS.

ID	Operation	Description
1	submitDeclaration	Submission of a supplementary declaration. This could be one of a Type Y or Z.

2	notifyTrader (DMSREJ)	The specific trader notification regarding the rejection of the declaration. It will contain the specific validation errors that caused the rejection.
3	notifyTrader (DMSACC)	The specific trader notification regarding the legal acceptance of the declaration. This effectively sets the tax point. Any credibility checks identified during validation will be passed back here as separate validationResults.
4	notifyTrader (DMSTAX)	Trader notification providing the debt amounts that have been reserved against their deferment account. Only deferred methods of payment can be used for supplementary declarations.
5	notifyTrader (DMSROG)	Where the control allows for the goods to be released, but there are still elements that need finalising on the declaration, CDS will inform the trader of 'release of goods'.Following the declaration being finalised (e.g. provisional debt becoming finalised), then the clearance notification will be sent.
6	notifyTrader (DMSCLE)	Following the declaration process, if the control and the debt is finalised the declaration can be cleared.

17.   Export

The program has prioritised import functionality over export and as such, a final view on the export interactions are yet to be agreed. As this occurs, this document will be updated with the detail required.
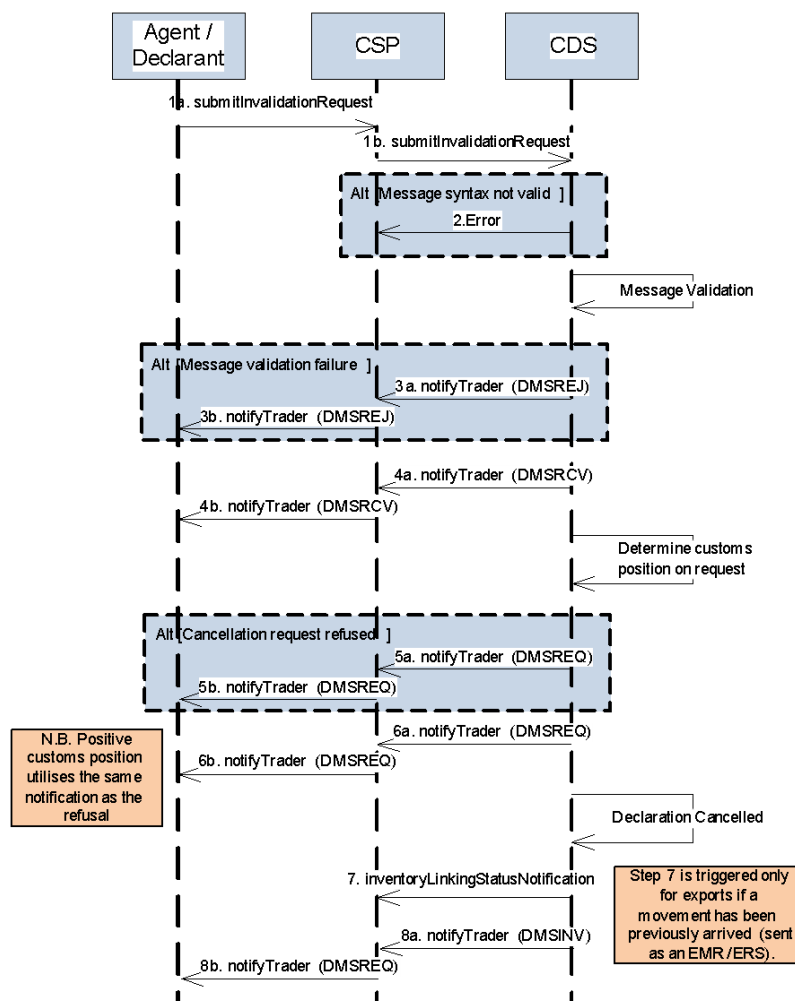
18.   Declaration Amendment

The program is yet to fully implement declaration amendments, so therefore have not been modelled here. This document will be updated when the solution has been finalised.

19. Declaration Invalidation

This flow shows the trader-intiating a cancellation. If Customs descides to cancel a declaration, the process would effectively start from Step 7. Details of the invalidation message can be found in the Customs Declaration API document [1].

ID	Operation	Description
1a	submitInvalidationRequest	Submission of the invalidation request from the trader. This will include declaration identifiers along with the reason for cancellation.
1b	submitInvalidationRequest	
2	HTTP error response	Standard error response where the schema does not pass validation at the MDTP level. The mechanism of this error should be defined in the API Schema documentation. It is not shown here, but the CSP may pass the error back to the declarant depending on the error.
3a	notifyTrader (DMSREJ)	Operation to notify the submitter that the additional message has failed validation and is rejected. No action is taken on the declaration.
3b	notifyTrader (DMSREJ)	
4a	notifyTrader (DMSRCV)	The invalidation request has passed validation and the process will now assess the declaration state to determine if it can be invalidated. The request may be passed to a Customs Office to make a manual determination.
4b	notifyTrader (DMSRCV)	
5a	notifyTrader (DMSREQ)	If the request for cancellation is refused then a DMSREQ is sent back to the submitter of the declaration. The NameCode field states whether the decision was grant or deny.
5b	notifyTrader (DMSREQ)	
6a	notifyTrader (DMSREQ)	If the request for cancellation is accepted then a DMSREQ is sent back to the submitter of the declaration (N.B. same notification type as above). The NameCode field states whether the decision was grant or deny.
6b	notifyTrader (DMSREQ)	
7	inventoryLinkingImportDeclarationStatusNotification	Following the cancellation of the declaration, the CSP (if Inventory Linked) will be notified of the declaration cancellation. **ICS/ROE Values:**The declaration status (ICS) will be 4 (Invalidation), and ROE will be based on the control type

8a	notifyTrader (DMSINV)	Once the declaration is cancelled, a notification is sent back to the submitter confirming the action.
8b	notifyTrader (DMSINV)	

Document Control

Status:

Author	Ben Wallis
Status	Issued

Change Log:

Version	Date	Author	Comments *(please include names of approvers in this section)*
V1.0	16.03.18	BW	First release for internal review
V1.1	04.04.18	BW	Updated following internal review
V1.2	05.04.18	BW	Version for external release
V1.3	19.04.18	BW	Updated following trade feedback – additional section added describing which transactions are CSP-only.
V2.0	24.04.18	BW	Tracked changes removed.
V2.1	30.05.18	BW	Updated with a new diagram for supplementary declaration submission where a CSP is not used as a message broker.
V2.2	04.07.18	BW	Updated the text under the non-CSP sequence diagrams to make clear these are only appropriate in certain circumstances.
V2.3	06.07.18	LP	Tracked changes removed.
V2.4	26.07.18	AG	Added section 2.1.2 Key Identifiers for Messages
V2.5	26.07.18	BW	Updated document to include the invalidation sequence.

Document Reviewer List:

Reviewer	Role
Caroline Wilkins	Customs Policy Interface and Design Lead
Alan Davis	Customs Policy Interface and Design
Dave Morgan	CDS Customs Innovation Lead
Amanda Milne	CDS Risk & Data Product Owner
Carol Carlile	CDS Cutover and Migration
Andy Gatland	CDS CTO
Milo Clark	CDS Delivery Architecture Lead

HM Revenue & Customs