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| Excise Functional Requirements BPM Report-CS/MISE |
| COVER PAGE  |

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|--|----------------------------------|-------------------------|
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| <b>European Commission</b><br><b>Taxation and Customs Union DG</b><br><br><b>SUBJECT:</b><br><b>Excise Functional Requirements BPM Report-CS/MISE</b><br><b>SC11-RfA#667</b> |                                  |                         |
| <b>FRAMEWORK CONTRACT:</b><br><b>TAXUD/2013/CC/121</b>   |                                  |                         |
| <b>STATUS: MSI</b>   |                                  |                         |

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# 1. INTRODUCTION

## 1.1. Document Purpose

This document presents the L4 Functional Requirements Processes for CS/MISE. This includes L4 processes that show the human interaction tasks and the automated tasks and the information exchanges. In addition, there is an annex containing graphic representations of the L4 Business Process Diagrams. This report is generated from ARIS and only contains information present in ARIS.

## 1.2. Deviation From TEMPO

The following TEMPO sections are not part of this document:

- Sign Off list;
- Distribution List;
- Scope;
- Applicable Documents;
- List of Tables;
- List of Figures.

The following TEMPO sections are added to this document:

- Project Ownership;
- Intended Audience.

## 1.3. Assumption and Constraints

The reader should have a basic knowledge of the EU BPM methodology.

## 1.4. Project Ownership

The unit DG TAXUD/C2 is the project owner of this Excise Functional Requirements BPM Report.

## 1.5. Intended Audience

The purpose of this document is to establish a common understanding between readers that are familiar with the applicable documents and may belong to the following categories:

- Any person responsible for the Excise - EMCS business / system processes, requirements, functional specifications or conformance testing;
- Any person responsible for the Export - AES business / system processes, requirements, functional specifications or conformance testing;
- Any person of the development team of DG TAXUD/C5 who will use this document as a reference during the development cycle;
- Any person from the DG TAXUD units who has to verify whether the current document is consistent with the applicable documents and depicts the solution to be followed;
- Any Member State (MS) or Trade representatives who have to identify the actions, implications and consequences on their national domain, including both business people and people having an IT background.

## 1.6. Structure of Document

This document is organised as follows:

- Introduction;
- References, containing a list of acronyms and abbreviations and the documents referenced in this functional requirements document;

- Document History, listing the different versions and submission dates of this functional requirements document;
- High Level System Overview, providing an overview of the system and the actors involved in this functional requirements document;
- Process Models, visualising in separate sections information from all L4 BPMs relating to the system covered in this functional requirements document.

In separate document, the following related annex may be found:

- Annex 1: Model Graphics, providing all L4 BPM models

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## 2. REFERENCES

### 2.1. Acronyms and abbreviations

| ACRONYM  | DESCRIPTION   |
|----------|---|
| ARC      | Administrative Reference Code                           |
| Art      | Article   |
| BPM      | Business Process Model                                  |
| B2B      | Business-to-Business                                    |
| CCN      | Common Communication Network                            |
| COL      | Customs Office List                                     |
| CS/MISE  | Central Services/Management Information System for EMCS |
| DG TAXUD | Directorate General Taxation and Customs Union          |
| e-AD     | Electronic Administrative Document                      |
| ELO      | Excise Liaison Office                                   |
| EMCS     | Excise Movement and Control System                      |
| EOL      | Excise Office List                                      |
| e-SAD    | Electronic Simplified Administrative Document           |
| EU       | European Union  |
| ID       | Identifier  |
| IT       | Information Technology                                  |
| MS       | Member State(s)   |
| MSA      | Member State Administration                             |
| N/A      | Not Applicable  |
| HL       | High Level  |
| RADM     | Registration and Authorisation Data Management          |
| Reg      | Regulation  |
| TEMPO    | TAXUD Electronic Management of Projects On-Line         |
| UR       | User Requirement  |

Table 2.1: Acronyms and abbreviations

### 2.2. Reference Documents

The following documents are of interest to this document and its annexes:

| REF. | TITLE | ORIGINATOR | VERSION | DATE |
|------|-------|------------|---------|------|
|------|-------|------------|---------|------|

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|     |   |          |       |            |
|-----|---|----------|-------|------------|
| R01 | SC15 DLV-6.4-1-(10) EU CUSTOMS BPM METHODOLOGY DOCUMENT-v3.00   | DG TAXUD | 3.00  | 10/01/2014 |
| R02 | Functional Excise System Specifications                         | DG TAXUD | v3.65 | 13/11/2013 |
| R03 | Design Document for National Excise Applications (EMCS Phase 3) | DG TAXUD | v1.76 | 13/11/2013 |

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2.2:

Reference

Documents

|   |
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| DOCUMENT HISTORY                                  |

### 3. DOCUMENT HISTORY

| ED. | REV. | DATE       | DESCRIPTION  | ACTION * | PAGES |
|-----|------|------------|--|----------|-------|
| 1   | 00   | 28/07/2017 | Produced L4 Models and Artefacts (EMCS P3.3 Evolution & EMCS Baseline Completion) under SC03-RfA#077<br><br>Submitted for Acceptance to DG Taxation and Customs Union. | I,U      | All   |
| 1   | 01   | 04/08/2017 | Published for Member States (MSP).   | I,U      | All   |
| 1   | 02   | 04/08/2017 | Submitted for Review to DG Taxation and Customs Union.   | I,U      | All   |
| 1   | 03   | 02/05/2018 | Submitted for Acceptance to DG Taxation and Customs Union.   | I,U      | All   |
| 1   | 04   | 02/05/2018 | Published for Member States (MSI).   | I,U      | All   |
| 1   | 05   | 08/10/2018 | Implementation of EMCS 3.4 BPMs under SC05-RfA #525.<br><br>Submitted for Review to DG Taxation and Customs Union.   | I,U      | All   |
| 1   | 06   | 29/10/2018 | Implementation of EMCS 3.4 BPMs under SC05-RfA #525.<br><br>Submitted for Acceptance to DG Taxation and Customs Union.   | I,U      | All   |
| 1   | 07   | 23/11/2018 | Published for Member States (MSI).   | I,U      | All   |
| 3   | 92   | 11/11/2020 | Implementation of EMCS Phase 4 BPMs under SC09-RfA#632.<br><br>Submitted for Review to DG Taxation and Customs Union.  | I, U     | All   |
| 3   | 93   | 01/12/2020 | Implementation of review comments for EMCS Phase 4 BPMs under SC09-RfA#632.<br>Submitted for Acceptance to DG Taxation and Customs Union.                              | I, U     | All   |
| 3   | 94   | 16/12/2020 | Implementation of Phase 4 BPMs under SC09-RfA#632. Submitted for Member States' review.  | I, U     | All   |
| 4   | 01   | 18/11/2021 | Implementation of the following RFCs:  | I, U     | All   |

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| DOCUMENT HISTORY                                  |

|  |  |  |   |  |  |
|--|--|--|---|--|--|
|  |  |  | FESS-274, FESS-276, FESS-277,<br>FESS-278, FESS-279, FESS-280,<br>FESS-281, FESS-282, FESS-283,<br>FESS-284, FESS-285.<br><br>Published for Member States<br>Information (MSI). |  |  |
|--|--|--|---|--|--|

Table

3.1:

Document

History

\*I = Insert, R = Replace, U = Update



## 4. HIGH LEVEL SYSTEM OVERVIEW

### 4.1. System Overview

This document contains the functional specifications for the Excise Movement and Control System to which any Nationally Developed Excise Application (NDEA) and Centrally Developed Excise Application (CDEA) needs to conform. These functional specifications are to be regarded as the basis for the development of the technical specifications (i.e. DDNEA – 'Design Document for National Excise Applications'). It is important to note that the complete functional specifications can be found in ARIS and that this document is envisaged to be supporting documentation to the diagrams and information in ARIS. If the legal baseline of this document would change, the functional specifications will need to be updated and aligned.

Since the actual implementation of the system is under national responsibility, the division between user interface and automated tasks included in this document should be considered as a proposal from DG TAXUD. MSAs are free to deviate and introduce more or less automation. However, as with all Trans-European Systems, compliance with the common domain information exchanges will be mandatory to ensure automated communication between MSAs.

### 4.2. Actors

## 5. PROCESS MODELS

### 5.1. Process L4-AVM-01-01-Manage Unavailability Registration Process

#### 5.1.1. Objective of Process

The purpose of this process is to describe all possible paths in the electronic flow of a MSA to announce the unavailability of application services, so that the other Member States are informed in order to take the necessary actions in their own system to cope with that situation. in accordance with the current Common Specifications (FESS and DDNEA).

The current process is triggered when CS/MISE at Common Domain Central Services receives a Business Process Unavailability message (IE770) from a MSA (CS/MISE MSA Central Services), indicating unavailability of functional services.

Three possible types of business process unavailability are defined:

- \*Scheduled: An unavailability planned in advance by an NEA for any implemented and open business service having specific begin and end date and time;
- \*Unscheduled: An unplanned unavailability by an NEA for any implemented and open business service having specific begin date and time and optionally end date and time;
- \*Non-Implemented: An unavailability that reports the non-implementation of a particular business service.

The business processes for which an unavailability is registered, among:

- \*Support for All Functionality (i.e. all FESS business process);
- \*Support for EMCS - Central Circuit – External Domain Functionality (i.e., all business processes of UC2.01, UC2.05, UC2.06, UC2.07, UC2.10, UC2.12, UC2.33, UC2.34, UC2.36, UC2.43, UC2.44 and UC2.46 of Section II of FESS);
- \*Support for EMCS - Central Circuit – Common Domain Functionality (i.e. all business processes of Section II of FESS);
- \*Support for EMCS - Follow-up and Collaboration Functionality (i.e. all business process of Section IV of FESS);
- \*Support for National SEED Functionality (i.e. all business processes of Section III of FESS that are executed by the MSA central services, i.e. national SEED).

After receiving the Business Process Unavailability message IE770, CS/MISE at Common Domain Central Services validates its data by using the “L4-AVM-01-02-Perform validation of Business Process Unavailability message” sub process. Then, CS/MISE proceeds with the handling of the validation results by using the “L4-AVM-01-03-Handle validation Results of Business Process Unavailability message” call activity. Depending on the outcome (end event) of the “L4-AVM-01-03-Handle validation Results of Business Process Unavailability message” call activity, the following may happen:

1. If a refusal message (IE917) is sent to the MSA Central Services (since the Business Process Unavailability message was found syntactically invalid), the whole process ends at this point;
2. If the Business Process Unavailability message is semantically invalid, then CS/MISE informs via email the registered National Administrator of the MSA;
3. If the Business Process Unavailability message (IE770) is recorded (since it was found valid), the process continues.

Following, CS/MISE builds an Operations on register the unavailability entry based on the information received and stores it. Then, CS/MISE disseminate the unavailability information of Business Process Unavailability message (IE770) and the whole process ends.

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| PROCESS MODELS                                    |

### 5.1.2. Process Details

| PROCESS ATTRIBUTE NAME  | PROCESS ATTRIBUTE VALUE                                  |
|-------------------------|--|
| Process ID              | L4-AVM-01-01   |
| Full Name               | Manage Unavailability Registration Process               |
| Assumptions             | N/A  |
| Constraints             | No constraints.  |
| L3 Reference Models     | N/A  |
| Existing Specifications | Design Document for National Excise Applications - v3.02 |

Table 5.1: Process Details

### 5.1.3. Tasks and Events

#### Event Business Process Unavailability to register an unavailability of functional services received

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE  |
|----------------------|--|
| Event Name           | Business Process Unavailability to register an unavailability of functional services received  |
| Event Type           | Message start event  |
| Description          | <p>Business Process Unavailability message (IE770) indicating unavailability of functional services is received.</p> <p>This shows that the concerned MSA requests to inform the other MSAs of anticipated unavailability of functional services.</p> <p>The possible types of unavailability are defined using the possible values of &lt;Type&gt;:</p> <ul style="list-style-type: none"> <li>- 'S' = Scheduled</li> <li>- 'U' = Unscheduled</li> <li>- 'N' = Non-Implemented</li> </ul> <p>The possible functional services that can be reported to be unavailable are based on the &lt;Business Process Code&gt;:</p> <ul style="list-style-type: none"> <li>- 1 = All Functionality</li> <li>- 2 = EMCS - Central Circuit – External Domain Functionality</li> <li>- 3 = EMCS - Central Circuit – Common Domain Functionality</li> <li>- 4 = EMCS - Follow-up and Collaboration Functionality</li> <li>- 5 = National SEED Functionality</li> </ul> |
| Previous Objects     | CS/MISE MSA Central Services   |

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| PROCESS MODELS                                    |

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Table 5.2: Event Business Process Unavailability to register an unavailability of functional services received

### Task Perform Validation of Business Process Unavailability

| TASK ATTRIBUTE NAME  | TASK ATTRIBUTE VALUE  |
|----------------------|---|
| Task Name            | Perform Validation of Business Process Unavailability   |
| Task Type            | Subprocess (collapsed)  |
| Description          | This task is modeled in a separate process: L4-AVM-01-02-Perform validation of Business Process Unavailability message. |
| Actor                | CS/MISE   |
| Input Data           |   |
| Output Data          |   |
| Previous Objects     | Business Process Unavailability to register an unavailability of functional services received                           |
| Information Exchange |   |
| Requirements         |   |
| Data Set             |   |
| Events               |   |
| State                |   |

Table 5.3: Task Perform Validation of Business Process Unavailability

### Task Handle validation results of Business Process Unavailability

| TASK ATTRIBUTE NAME  | TASK ATTRIBUTE VALUE   |
|----------------------|--|
| Task Name            | Handle validation results of Business Process Unavailability   |
| Task Type            | Call activity (collapsed)  |
| Description          | This task is modeled in a separate process: L4-AVM-01-03-Handle validation Results of Business Process Unavailability message. |
| Actor                | CS/MISE  |
| Input Data           |  |
| Output Data          |  |
| Previous Objects     | Perform Validation of Business Process Unavailability  |
| Information Exchange |  |
| Requirements         |  |
| Data Set             |  |
| Events               |  |

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| PROCESS MODELS                                    |

|       |  |
|-------|--|
| State |  |
|-------|--|

Table 5.4: Task Handle validation results of Business Process Unavailability

### Event Refusal message or email notification sent to the MSA Central Services since the Business Process Unavailability had been found invalid

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE   |
|----------------------|---|
| Event Name           | Refusal message or email notification sent to the MSA Central Services since the Business Process Unavailability had been found invalid   |
| Event Type           | End event   |
| Description          | 1. Refusal message IE917 sent to the MSA Central Services, since the Business Process Unavailability (IE770) had been found invalid for syntactic errors;<br>2. An email notification sent to the registered National Administrator of the MSA, since the Business Process Unavailability (IE770) had been found invalid for semantic errors. |
| Previous Objects     | What is the outcome of handling the validation results  |

Table 5.5: Event Refusal message or email notification sent to the MSA Central Services since the Business Process Unavailability had been found invalid

### Event Business Process Unavailability recorded

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE   |
|----------------------|---|
| Event Name           | Business Process Unavailability recorded  |
| Event Type           | Conditional intermediate event  |
| Description          | The Business Process Unavailability message (IE770) was recorded since it had been found valid and the process continues. |
| Previous Objects     | What is the outcome of handling the validation results  |

Table 5.6: Event Business Process Unavailability recorded

### Task Build Business Process Unavailability

| TASK ATTRIBUTE NAME | TASK ATTRIBUTE VALUE   |
|---------------------|--|
| Task Name           | Build Business Process Unavailability  |
| Task Type           | Service task   |
| Description         | CS/MISE builds a Business Process Unavailability message (IE770) containing the information provided by the concerned MSA. |
| Actor               | CS/MISE  |
| Input Data          | ATTRIBUTES for IE770<br>UNAVAILABILITY SCHEDULE  |

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| PROCESS MODELS                                    |

|                      |  |
|----------------------|--|
| Output Data          | C_AVA_DAT                                |
| Previous Objects     | Business Process Unavailability recorded |
| Information Exchange |  |
| Requirements         | AVM_FUR_0001                             |
| Data Set             |  |
| Events               |  |
| State                |  |

Table 5.7: Task Build Business Process Unavailability

### Task Record the Business Process Unavailability

| TASK ATTRIBUTE NAME  | TASK ATTRIBUTE VALUE                                   |
|----------------------|--|
| Task Name            | Record the Business Process Unavailability             |
| Task Type            | Service task   |
| Description          | The Business Process Unavailability (IE770) is stored. |
| Actor                | CS/MISE  |
| Input Data           | C_AVA_DAT  |
| Output Data          | C_AVA_DAT  |
| Previous Objects     | Build Business Process Unavailability                  |
| Information Exchange |  |
| Requirements         | AVM_FUR_0002   |
| Data Set             |  |
| Events               |  |
| State                |  |

Table 5.8: Task Record the Business Process Unavailability

### Task Notify CS/MISE MSA Central Services of the Business Process Unavailability

| TASK ATTRIBUTE NAME | TASK ATTRIBUTE VALUE   |
|---------------------|--|
| Task Name           | Notify CS/MISE MSA Central Services of the Business Process Unavailability |
| Task Type           | Send task  |
| Description         | CS/MISE notifies the concerned MSA Central Services of the Business        |

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| PROCESS MODELS                                    |

|                      |  |
|----------------------|--|
|                      | Process Unavailability message (IE770). Additionally, each MSA is informed of the unavailability of the issuing actor. |
| Actor                | CS/MISE  |
| Input Data           | C_AVA_DAT  |
| Output Data          |  |
| Previous Objects     | Record the Business Process Unavailability   |
| Information Exchange | business process unavailability  |
| Requirements         | AVM_FUR_0003   |
| Data Set             |  |
| Events               |  |
| State                |  |

Table 5.9: Task Notify CS/MISE MSA Central Services of the Business Process Unavailability

### Event Each MSA is informed of the unavailability of the concerned MSA

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE  |
|----------------------|--|
| Event Name           | Each MSA is informed of the unavailability of the concerned MSA  |
| Event Type           | End event  |
| Description          | The registered unavailability information has been sent to all MSAs. MSAs are in a position to apply the steps it defined for such a case, e.g. configure its own application to queue functional requests or refuse applications for the period of unavailability |
| Previous Objects     | Notify CS/MISE MSA Central Services of the Business Process Unavailability   |

Table 5.10: Event Each MSA is informed of the unavailability of the concerned MSA

## 5.2. Process L4-AVM-01-03-Handle validation Results of Business Process Unavailability message

### 5.2.1. Objective of Process

The purpose of this process is to describe all possible paths in the electronic flow of the handling of the validation results of a Business Process Unavailability message received over the Common Domain, in accordance with the current Common Specifications (FESS and DDNEA).

The process is triggered when a Business Process Unavailability message received over the Common Domain is validated by CS/MISE and the validation results are available. Depending on the validation result the following may happen:

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a. If the Business Process Unavailability message was found invalid due to Syntactic violation(s), CS/MISE at Common Domain Central Services builds a Negative Acknowledgement of XML Receipt refusal message (IE917) and then it records it. Following, CS/MISE at the Common Domain Central Services notifies MSA Central Services of the Negative Acknowledgement of XML Receipt refusal message (IE917) and the whole process ends at this point;

b. If the Business Process Unavailability message was found invalid due to Semantic violation(s), CS/MISE at the Common Domain Central Services identifies CS/MISE sends an email to the registered National Administrator of concerned MSA that originally sent the semantically invalid message. The semantically invalid messages are not processed by CS/MISE and no part of such messages will be registered in CS/MISE, hence no changes to the Availability Schedule occur by semantically invalid messages. The whole process ends at this point

c. If the Business Process Unavailability message was found valid, CS/MISE at the Common Domain Central Services records the valid message and the whole process ends.

### 5.2.2. Process Details

| PROCESS ATTRIBUTE NAME  | PROCESS ATTRIBUTE VALUE  |
|-------------------------|--|
| Process ID              | L4-AVM-01-03   |
| Full Name               | Handle validation Results of Business Process Unavailability message |
| Assumptions             | N/A  |
| Constraints             | No constraints.  |
| L3 Reference Models     | N/A  |
| Existing Specifications | Design Document for National<br>Excise Applications - v3.02          |

Table 5.11: Process Details

### 5.2.3. Tasks and Events

#### Event Business Process Unavailability message validated and results are available

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE  |
|----------------------|--|
| Event Name           | Business Process Unavailability message validated and results are available  |
| Event Type           | Start event  |
| Description          | The validation mechanism has processed the Business Process Unavailability message and produced validation results.<br>The current process starts when the validation results are available to be handled. |
| Previous Objects     |  |

Table 5.12: Event Business Process Unavailability message validated and results are available



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| PROCESS MODELS                                    |

### Task Build Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message

| TASK ATTRIBUTE NAME  | TASK ATTRIBUTE VALUE   |
|----------------------|--|
| Task Name            | Build Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message   |
| Task Type            | Service task   |
| Description          | If the Business Process Unavailability message is found invalid due to Syntactic violation(s), CS/MISE builds a Negative Acknowledgement of XML Receipt refusal message (IE917). |
| Actor                | CS/MISE  |
| Input Data           | Result Identify if the Business Process Unavailability message is Syntactically valid  |
| Output Data          |  |
| Previous Objects     | What is the Business Process Unavailability message validation result?   |
| Information Exchange | Negative Acknowledgement of XML Receipt message<br>business process unavailability   |
| Requirements         | AVM_FUR_0007   |
| Data Set             |  |
| Events               |  |
| State                |  |

Table 5.13: Task Build Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message

### Task Record valid Business Process Unavailability message

| TASK ATTRIBUTE NAME | TASK ATTRIBUTE VALUE  |
|---------------------|---|
| Task Name           | Record valid Business Process Unavailability message  |
| Task Type           | Service task  |
| Description         | The valid Business Process Unavailability message is stored.  |
| Actor               | CS/MISE   |
| Input Data          | Result Identify if the Business Process Unavailability message is Semantically valid<br>Result Identify if the Business Process Unavailability message is Syntactically valid |
| Output Data         |   |
| Previous Objects    | What is the Business Process Unavailability message validation result?  |

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| PROCESS MODELS                                    |

|                      |  |
|----------------------|--|
|                      |  |
| Information Exchange | business process unavailability<br>business process unavailability |
| Requirements         | AVM_FUR_0006   |
| Data Set             |  |
| Events               |  |
| State                |  |

Table 5.14: Task Record valid Business Process Unavailability message

**Task Record the Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message**

| TASK ATTRIBUTE NAME  | TASK ATTRIBUTE VALUE  |
|----------------------|---|
| Task Name            | Record the Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message             |
| Task Type            | Service task  |
| Description          | The Negative Acknowledgement of XML Receipt refusal message (IE917) for an invalid Business Process Unavailability message is stored. |
| Actor                | CS/MISE   |
| Input Data           |   |
| Output Data          |   |
| Previous Objects     | Build Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message                  |
| Information Exchange | Negative Acknowledgement of XML Receipt message<br>Negative Acknowledgement of XML Receipt message                                    |
| Requirements         | AVM_FUR_0008  |
| Data Set             |   |
| Events               |   |
| State                |   |

Table 5.15: Task Record the Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message

**Event CS/MISE sends an email to the registered National Administrator regarding the refusal of the Business Process Unavailability message**

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE |
|----------------------|-----------------------|
|----------------------|-----------------------|

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| PROCESS MODELS                                    |

|                  |  |
|------------------|--|
| Event Name       | CS/MISE sends an email to the registered National Administrator regarding the refusal of the Business Process Unavailability message |
| Event Type       | End event  |
| Description      | CS/MISE sends an email to the registered National Administrator regarding the refusal of the Business Process Unavailability message |
| Previous Objects | What is the Business Process Unavailability message validation result?   |

Table 5.16: Event CS/MISE sends an email to the registered National Administrator regarding the refusal of the Business Process Unavailability message

### Event Business Process Unavailability message recorded

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE  |
|----------------------|--|
| Event Name           | Business Process Unavailability message recorded               |
| Event Type           | End event  |
| Description          | The valid Business Process Unavailability message is recorded. |
| Previous Objects     | Record valid Business Process Unavailability message           |

Table 5.17: Event Business Process Unavailability message recorded

### Task Notify CS/MISE MSA Central Services of Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message

| TASK ATTRIBUTE NAME  | TASK ATTRIBUTE VALUE   |
|----------------------|--|
| Task Name            | Notify CS/MISE MSA Central Services of Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message              |
| Task Type            | Send task  |
| Description          | CS/MISE notifies the concerned MSA of the Negative Acknowledgement of XML Receipt refusal message (IE917), for an invalid Business Process Unavailability message. |
| Actor                | CS/MISE  |
| Input Data           |  |
| Output Data          |  |
| Previous Objects     | Record the Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message  |
| Information Exchange | Negative Acknowledgement of XML Receipt message<br>Negative Acknowledgement of XML Receipt message   |
| Requirements         | AVM_FUR_0009   |

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| PROCESS MODELS                                    |

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| Data Set |  |
| Events   |  |
| State    |  |

Table 5.18: Task Notify CS/MISE MSA Central Services of Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message

### Event Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message sent to MSA Central Services

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE   |
|----------------------|---|
| Event Name           | Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message sent to MSA Central Services           |
| Event Type           | End event   |
| Description          | Negative Acknowledgement of XML Receipt refusal message (IE917) for an invalid Business Process Unavailability message sent to MSA Central Services.  |
| Previous Objects     | Notify CS/MISE MSA Central Services of Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message |

Table 5.19: Event Negative Acknowledgement of XML Receipt refusal message for an invalid Business Process Unavailability message sent to MSA Central Services

## 5.3. Process L4-AVM-01-02-Perform validation of Business Process Unavailability message

### 5.3.1. Objective of Process

The purpose of this sub process is to describe all possible steps during the validation of a Business Process Unavailability message, in accordance with the current Common Specifications (DDNEA).

The current sub process is triggered when a Business Process Unavailability message is received. After the Business Process Unavailability is received, a Syntactic validation of this message is performed:

- In case the message is found invalid due to Syntactic violation(s), the sub process ends here;
- In case the message is found valid, the sub process continues.

Following, Semantic validation of the message is performed:

- In case the message is found invalid due to Semantic violation(s), the sub process ends;
- In case the message is found valid, the sub process continues.

### 5.3.2. Process Details

| PROCESS ATTRIBUTE NAME | PROCESS ATTRIBUTE VALUE                                       |
|------------------------|---|
| Process ID             | L4-AVM-01-02  |
| Full Name              | Perform validation of Business Process Unavailability message |

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|                         |   |
|-------------------------|---|
| Assumptions             | N/A   |
| Constraints             | No constraints.   |
| L3 Reference Models     | N/A   |
| Existing Specifications | Design Document for<br>National Excise Applications - v3.02 |

Table 5.20: Process Details

### 5.3.3. Tasks and Events

#### Event Business Process Unavailability message received

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE  |
|----------------------|--|
| Event Name           | Business Process Unavailability message received                                       |
| Event Type           | Start event  |
| Description          | The current process starts when a Business Process Unavailability message is received. |
| Previous Objects     |  |

Table 5.21: Event Business Process Unavailability message received

#### Task Perform Syntactic validation of Business Process Unavailability message

| TASK ATTRIBUTE NAME | TASK ATTRIBUTE VALUE  |
|---------------------|---|
| Task Name           | Perform Syntactic validation of Business Process Unavailability message   |
| Task Type           | Service task  |
| Description         | <p>The following validations are defined as the Syntactic layer validations and when any of the aforementioned validations fails for a given Common Domain XML message, then that message is defined as syntactically invalid:</p> <ul style="list-style-type: none"> <li>• After the reception of a Common Domain XML message and before the message is further processed the receiver validates the size of the received message (defined in DDNEA and TESS), in order to avoid unresponsiveness or abrupt failure of the receiving application;</li> <li>• In the case that the received message is within the acceptable size limit, the receiver validates that its content conforms to the XML standard (deinfed in DDNEA) and that it is UTF-8 encoded;</li> <li>• Then, the receiver validates the structure of the received Common Domain XML message against the corresponding XSD defined in Appendix H of DDNEA.</li> </ul> |

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| Excise Functional Requirements BPM Report-CS/MISE |
| PROCESS MODELS                                    |

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|                      | CS/MISE always validates the message structure of all received IE770 messages for XML conformance and XSD compliance.<br>If any syntactic validation fails, then CS/MISE sends an IE917 (C_XML_NCK) to the MSA that originally sent the syntactically invalid message. In addition, syntactically invalid messages are not be processed by CS/MISE and no part of such messages is registered in CS/MISE, hence no changes to the Availability Schedule occur by syntactically invalid messages |
| Actor                |   |
| Input Data           |   |
| Output Data          | Result Identify if the Business Process Unavailability message is Syntactically valid   |
| Previous Objects     | Business Process Unavailability message received  |
| Information Exchange | business process unavailability   |
| Requirements         | AVM_FUR_0004  |
| Data Set             |   |
| Events               |   |
| State                |   |

Table 5.22: Task Perform Syntactic validation of Business Process Unavailability message

#### Event Business Process Unavailability message found invalid due to syntactic violation(s)

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE  |
|----------------------|--|
| Event Name           | Business Process Unavailability message found invalid due to syntactic violation(s)                              |
| Event Type           | End event  |
| Description          | The Business Process Unavailability message was found invalid due to Syntatic violation(s) and the process ends. |
| Previous Objects     | Has the Business Process Unavailability message passed Syntactic validation successfully?                        |

Table 5.23: Event Business Process Unavailability message found invalid due to syntactic violation(s)

#### Task Perform Semantic validation of Business Process Unavailability message

| TASK ATTRIBUTE NAME | TASK ATTRIBUTE VALUE   |
|---------------------|--|
| Task Name           | Perform Semantic validation of Business Process Unavailability message |
| Task Type           | Service task   |

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| Excise Functional Requirements BPM Report-CS/MISE |
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| Description | <p>CS/MISE semantically validates incoming IE770 messages. In the case where a semantically invalid IE770 message is received, the MSA Administrator is notified via email.</p> <p>The semantically invalid messages are not processed by CS/MISE and no part of such messages will be registered in CS/MISE, hence no changes to the Availability Schedule occur by semantically invalid messages.</p> <p>CS/MISE raises a semantic validation error:</p> <ol style="list-style-type: none"> <li>1. If the &lt;Message Sender&gt; Data Item does not contain a value of the form “NDEA.&lt;Member State Code&gt;”, where “&lt;Member State Code&gt;” is a value from the Member State Codes Business Codelist (this validation is in accordance to see Section VII.I.4 “Common message header”) that also corresponds to the MSA sending (or uploading) the IE770 message.</li> <li>2. If the &lt;Message Receiver&gt; Data Item does not contain the value “CSMISE.EC” (when CS/MISE sends an IE770, it is the &lt;Message Sender&gt; that will have the value “CSMISE.EC”).</li> <li>3. If another IE770 message from the same MSA and with the same &lt;Message Identifier&gt; value has already been received (this validation is in accordance to Section VIII.I.3.2.3.1 “Coordination protocol validations”).</li> <li>4. If the value of the &lt;HEADER&gt;.&lt;Unavailability Schedule Message Type&gt; Data Item is “2: Notification to national domains” (the IE770 messages received by CS/MISE should have the value “1: Notification to common domain Central Services” and only the messages sent by CS/MISE should have the value “2: Notification to national domains”).</li> <li>5. If the value of the &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;Member State Code&gt; Data Item is not a valid code of the Member States Codelist (BC11) or does not correspond to the MSA sending (or uploading) the IE770 message (see also semantic validation 1).</li> <li>6. If the value of the &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;Operation&gt; Data Item is not a valid code according to rule R086, stating the following:<br/>The &lt;Operation&gt; attribute is used to indicate what action is applied: ‘C’ (create), ‘D’ (delete).<br/>In case of “updates”, the Data Group ‘SYSTEM UNAVAILABILITY’ to be updated will be first deleted and then (re-)created.</li> <li>7. If the &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;Operation&gt; Data Item “C: Create”, but the contents of a &lt;SYSTEM UNAVAILABILITY&gt; descendant have the same business process code and the same starting date and time: <ul style="list-style-type: none"> <li>· with another &lt;SYSTEM UNAVAILABILITY&gt; within the same IE770 message (i.e. not necessarily a descendant of the same &lt;(US) ACTION&gt; or &lt;UNAVAILABILITY SCHEDULE&gt;), or</li> <li>· with another entry of the Availability Schedule of CS/MISE (i.e. an entry has already been registered in CS/MISE via any means) concerning the same Member State and being the Scheduled or the Unscheduled type.</li> </ul> </li> <li>8. If the &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;Operation&gt; Data Item “C: Create”, but the contents of a &lt;SYSTEM UNAVAILABILITY&gt; descendant have the same business</li> </ol> |
|-------------|---|

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| Excise Functional Requirements BPM Report-CS/MISE |
| PROCESS MODELS                                    |

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|--|---|
|  | <p>process code overlap:</p> <ul style="list-style-type: none"> <li>· with another &lt;SYSTEM UNAVAILABILITY&gt; of Non-implemented type within the same IE770 message (i.e. not necessarily a descendant of the same &lt;(US) ACTION&gt; or &lt;UNAVAILABILITY SCHEDULE&gt;), or</li> <li>· with another entry of the Availability Schedule of CS/MISE (i.e. an entry has already been registered in CS/MISE via any means) concerning the same Member State and being the Non-implemented type.</li> </ul> <p>It is said that two unavailability entries overlap when their periods defined by the starting and ending date and time are overlapping.</p> <p>9. If the &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;Operation&gt; Data Item “C: Create”, but the contents of a &lt;SYSTEM UNAVAILABILITY&gt; descendant overlap:</p> <ul style="list-style-type: none"> <li>· with another &lt;SYSTEM UNAVAILABILITY&gt; of Non-implemented type having business process code “All” within the same IE770 message (i.e. not necessarily a descendant of the same &lt;(US) ACTION&gt; or &lt;UNAVAILABILITY SCHEDULE&gt;), or</li> <li>· with another entry of the Availability Schedule of CS/MISE (i.e. an entry has already been registered in CS/MISE via any means) concerning the same Member State, being the Non-implemented type, and having business process code “All”.</li> </ul> <p>10. If the &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;Operation&gt; Data Item “D: Delete”, but the contents of a &lt;SYSTEM UNAVAILABILITY&gt; descendant are not identical with an already existing entry in the Availability Schedule of CS/MISE (i.e. the same entry has not been registered in CS/MISE via any means).</p> <p>11. If the Data Item &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;SYSTEM UNAVAILABILITY&gt;.&lt;Type&gt; is “S:Scheduled” and the Data Item &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;SYSTEM UNAVAILABILITY&gt;.&lt;Downtime End Date and Time&gt; is missing, thus violating Condition C059, which states the following:</p> <p>IF &lt;Type&gt; is "Scheduled"</p> <p>THEN &lt;Downtime TO&gt; is ‘R’</p> <p>ELSE &lt;Downtime TO&gt; is ‘O’</p> <p>12. If the &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;SYSTEM UNAVAILABILITY&gt;.&lt;Downtime End Date and Time&gt; exists and is earlier or equal to &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;SYSTEM UNAVAILABILITY&gt;.&lt;Downtime Start Date and Time&gt;.</p> <p>13. If the value of the &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;SYSTEM UNAVAILABILITY&gt;.&lt;Explanation&gt; Data Item is provided and the &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;SYSTEM UNAVAILABILITY&gt;.&lt;Explanation_LNG&gt; Data Item is not a valid code of the Language Codes Codelist (BC12).</p> <p>14. If the Data Item &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;SYSTEM UNAVAILABILITY&gt;.&lt;Type&gt; is “S:Scheduled” and the value of the &lt;UNAVAILABILITY SCHEDULE&gt;.&lt;(US) ACTION&gt;.&lt;SYSTEM UNAVAILABILITY&gt;.&lt;Downtime Start Date and Time&gt; is less than the 48 hours from the date and time that the IE770</p> |
|--|---|



|  |                       |
|--|-----------------------|
|  | message is processed. |
|--|-----------------------|

|            |   |
|------------|---|
|            |   |
| Actor      |   |
| Input Data | Result Identify if the Business Process Unavailability message is Syntactically valid |

|   |
|---|
| Excise Functional Requirements BPM Report-CS/MISE |
| PROCESS MODELS                                    |

|                      |   |
|----------------------|---|
|                      |   |
| Output Data          | Result Identify if the Business Process Unavailability message is Semantically valid      |
| Previous Objects     | Has the Business Process Unavailability message passed Syntactic validation successfully? |
| Information Exchange | business process unavailability   |
| Requirements         | AVM_FUR_0005  |
| Data Set             |   |
| Events               |   |
| State                |   |

Table 5.24: Task Perform Semantic validation of Business Process Unavailability message

#### Event Business Process Unavailability message found valid

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE  |
|----------------------|--|
| Event Name           | Business Process Unavailability message found valid                                      |
| Event Type           | End event  |
| Description          | The Business Process Unavailability message was found valid and the process ends.        |
| Previous Objects     | Has the Business Process Unavailability message passed Semantic validation successfully? |

Table 5.25: Event Business Process Unavailability message found valid

#### Event Business Process Unavailability message found invalid due to Semantic violation(s)

| EVENT ATTRIBUTE NAME | EVENT ATTRIBUTE VALUE  |
|----------------------|--|
| Event Name           | Business Process Unavailability message found invalid due to Semantic violation(s)                       |
| Event Type           | End event  |
| Description          | The Business Process Unavailability was found invalid due to Semantic violation(s) and the process ends. |
| Previous Objects     | Has the Business Process Unavailability message passed Semantic validation successfully?                 |

Table 5.26: Event Business Process Unavailability message found invalid due to Semantic violation(s)