

# **T2/T2S CONSOLIDATION**

## **USER REQUIREMENTS DOCUMENT**

**FOR**

## **CENTRAL LIQUIDITY MANAGEMENT (CLM)**

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# 1 CENTRAL LIQUIDITY MANAGEMENT (CLM)

## 1.1 OVERVIEW

### 1.1.1 Context Diagram

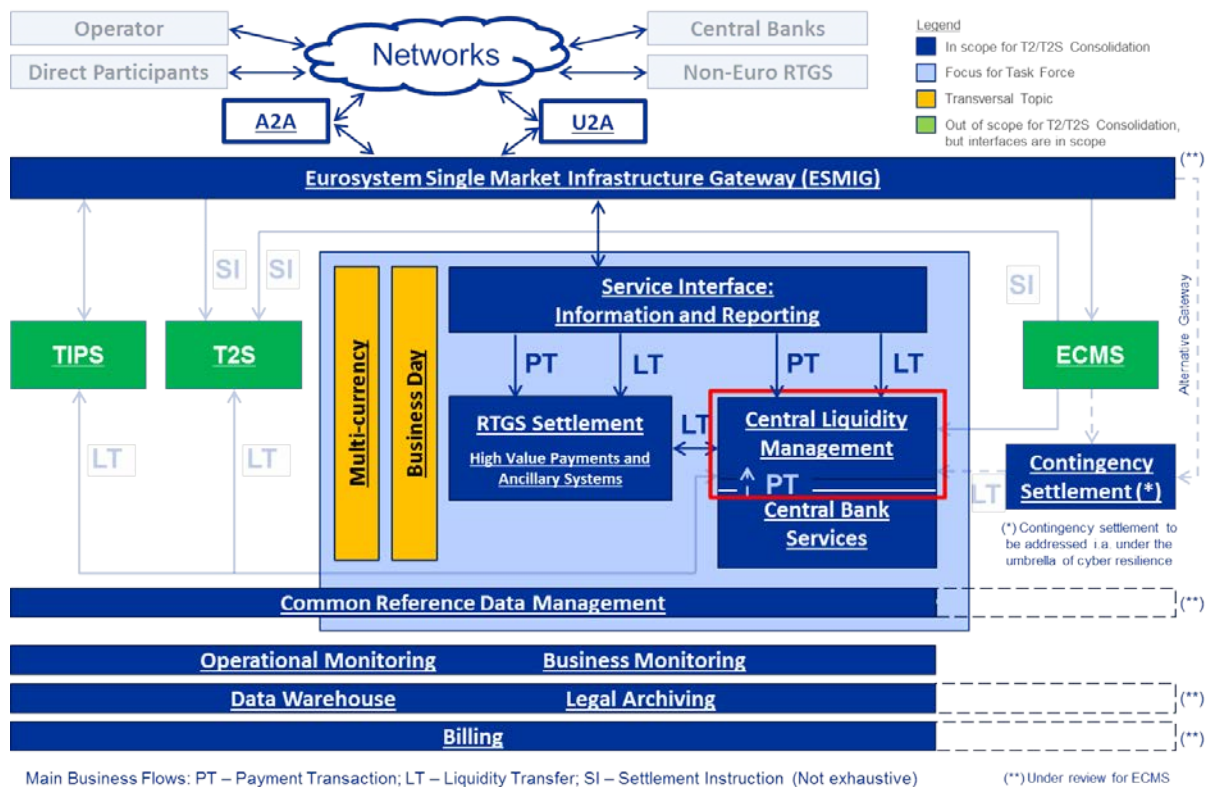


Figure 1: Context diagram for the Central Liquidity Management

CLM is the service that shall ensure:

- ▶ The efficient liquidity provisioning by liquidity transfers to the different settlement services: T2S, RTGS Services (i.e. High Value Payments (HVP) and Ancillary Systems (AS) Settlement) and TIPS; and
- ▶ The management of liquidity across these settlement services in a harmonised and generic way. The CLM shall optimise the efficient usage of liquidity for the different services and the transfers between them. Such re-allocations could either be done manually (based on individual liquidity transfers) or automatically (based on time-based or event-based standing orders) depending on the participant's needs.

The Main Cash Account (MCA) within the CLM shall be the central source of liquidity for the different settlement services with the participant's credit line linked to it. The settlement services T2S, TIPS and the Future RTGS services will use dedicated cash accounts for settling their specific transactions.

Moreover, the following Central Bank Operations (CBOs) will in principle be processed by the CLM and booked on the Main Cash Account:

- ▶ Update of the credit line (cash side);
- ▶ Standing Facilities (i.e. marginal lending and overnight deposits);
- ▶ Cash withdrawals;
- ▶ Monetary policy operations;
- ▶ Debit of billing amounts;
- ▶ Interest payment orders linked to marginal lending, overnight deposits, minimum reserves and excess of reserve; and
- ▶ Any other activity carried out by Central Banks in their capacity as Central Bank of issue.

### 1.1.2 Business Processes

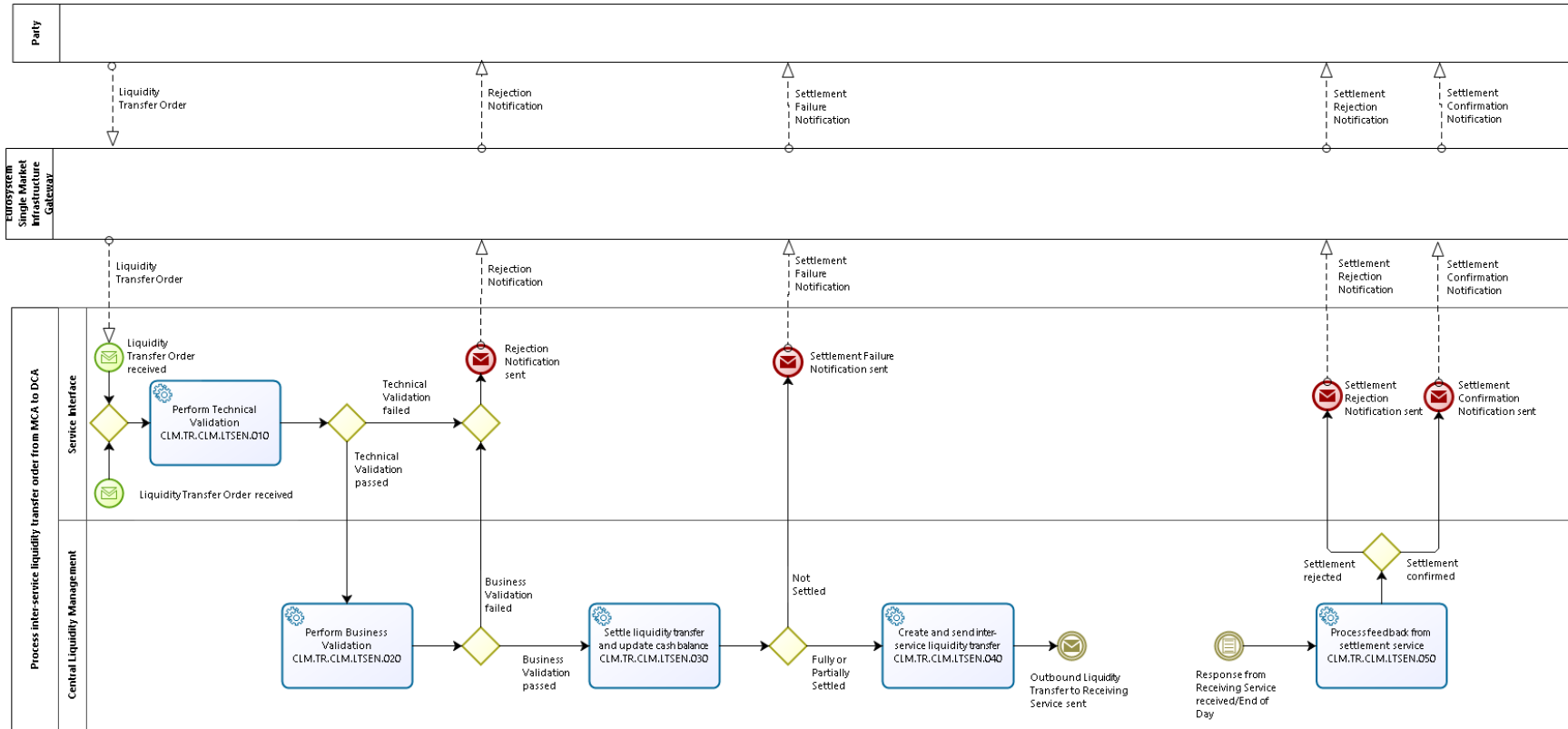
Business Process	BP Reference	Business Process Description
Process inter-service liquidity transfer from MCA to DCA	CLM.BP.CLM.LTSEN	Processing within CLM of an inter-service liquidity transfer order to move liquidity from a Main Cash Account (MCA) to a Dedicated Cash Account (DCA).
Process inter-service liquidity transfer from DCA to MCA	CLM.BP.CLM.LTRCV	Processing within CLM of an inter-service liquidity transfer order to move liquidity from a Dedicated Cash Account (DCA) to a Main Cash Account (MCA).
Process intra-service liquidity transfer	CLM.BP.CLM.ISLT	Processing within CLM of a liquidity transfer order between two MCAs.
Process liquidity transfer between two Dedicated Cash Accounts	CLM.BP.CLM.LTDCA	Processing within CLM of a liquidity transfer order to move liquidity from a Dedicated Cash Account in one service to a Dedicated Cash Account in another service.
Process payment order linked to Central Bank Operations	CLM.BP.CLM.PAYT	Processing within CLM of a payment order linked to Central Bank Operations.
Liquidity reservation	CLM.BP.CLM.LIQR	Processing of a liquidity reservation within CLM.

**Table 1: Business Processes for the Central Liquidity Management**

## 1.2 PROCESS INTER-SERVICE LIQUIDITY TRANSFER ORDER FROM MCA TO DCA

Business Process Ref: CLM.BP.CLM.LTSEN

### 1.2.1 Business Process Model



**Business Process Model 1: Process inter-service liquidity transfer order from MCA to DCA**

## 1.2.2 Process Overview

### Process goal:

The aim of the process is to allow one participant to transfer liquidity from one MCA within CLM to a DCA for the following settlement services (T2S, RTGS Services and TIPS). These settlement services will use this liquidity for settling their specific transactions.

### Pre-conditions:

A participant willing to initiate an intra-service liquidity transfer order needs to:

- ▶ Have a direct access to the CLM; and
- ▶ Hold an MCA in the CLM.

### Time constraints:

The processing schedule for inter-service liquidity transfers is described in the Business Day section.

### Expected results:

As intra-service liquidity transfer orders shall not be queued, three different scenarios are possible in terms of execution: full, partial and no execution.

### Triggers:

The inter-service liquidity transfer order can be initiated in two different ways:

- ▶ Immediate liquidity transfer orders initiated by a participant (owner of the MCA that will be debited) or by another Actor operating on its behalf under a contractual agreement; or
- ▶ Standing liquidity transfer orders set by the participant and triggered repeatedly by a given event/time.

## 1.2.3 User Requirements

### 1.2.3.1 PERFORM TECHNICAL VALIDATION

**Task Ref: CLM.TR.CLM.LTSEN.010**

At the reception of an inter-service liquidity transfer order, the service interface shall complete technical validation performing checks such as field level validation (fields shall have correct data type and size) and for duplicate messages.

<b>Id</b>	CLM.UR.CLM.LTSEN.010.010
<b>Name</b>	Check mandatory fields
<b>Description</b>	The service interface shall ensure that all mandatory fields in the message received are populated.

<b>Id</b>	CLM.UR.CLM.LTSEN.010.020
<b>Name</b>	Check for duplicate message
<b>Description</b>	The service interface shall ensure that the same message has not already been received. The duplicate check shall compare the reference of each incoming order with the reference of similar orders that have not settled yet and those orders settled in the past predetermined period of five business days. This period shall however be configurable.

<b>Id</b>	CLM.UR.CLM.LTSEN.010.030
<b>Name</b>	Perform all possible technical validations
<b>Description</b>	After encountering the first negative validation result, the service interface shall continue to validate as far as possible and report all negative results together in a single message. The service interface shall reject the order only after performing all possible technical validations.

<b>Id</b>	CLM.UR.CLM.LTSEN.010.040
<b>Name</b>	Processing in case of passed technical validation
<b>Description</b>	In case of a positive result of the technical validation, the order shall be sent to the CLM for further processing.



<b>Id</b>	CLM.UR.CLM.LTSEN.010.050
<b>Name</b>	Processing in case of failed technical validation
<b>Description</b>	In case of a negative result of the technical validation, the order shall be rejected and a notification shall be sent to the instructing participant or Actor in case of immediate liquidity transfer orders.

### 1.2.3.2 PERFORM BUSINESS VALIDATION

**Task Ref: CLM.TR.CLM.LTSEN.020**

In case of a positive result of the technical validation of the inter-service liquidity transfer order, CLM shall validate the message received against the reference data and perform additional checks/validations.

<b>Id</b>	CLM.UR.CLM.LTSEN.020.010
<b>Name</b>	Proxy check
<b>Description</b>	If the instructing party is not the owner of the MCA, CLM shall check that it is authorised to send inter-service liquidity transfer orders on behalf of the account owner.

<b>Id</b>	CLM.UR.CLM.LTSEN.020.020
<b>Name</b>	Business validations of the mandatory attributes
<b>Description</b>	CLM shall check that: <ul style="list-style-type: none"> <li>• All mandatory attributes are available and consistent; and</li> <li>• All provided values are valid according to pre-defined values or cross-field validations.</li> </ul>

<b>Id</b>	CLM.UR.CLM.LTSEN.020.030
<b>Name</b>	Account check
<b>Description</b>	CLM shall check that the MCA and DCA mentioned in the intra-service liquidity transfer order are existing and active.

<b>Id</b>	CLM.UR.CLM.LTSEN.020.040
<b>Name</b>	Processing in case of failed business validation
<b>Description</b>	<p>In case of a negative result of the business validation, the order shall be rejected and a notification shall be sent to the instructing participant or Actor in case of immediate liquidity transfer orders.</p> <p>In case of a manual input via the U2A screen or standing liquidity transfer order, the rejection notification shall be displayed directly on the screen.</p>

### 1.2.3.3 SETTLE LIQUIDITY TRANSFER AND UPDATE CASH BALANCE

**Task Ref: CLM.TR.CLM.LTSEN.030**

In case of a positive result of the business validation checks, CLM shall validate whether the booking of the inter-service liquidity transfer order is feasible. Three different scenarios are possible: full, partial and no execution.

<b>Id</b>	CLM.UR.CLM.LTSEN.030.010
<b>Name</b>	Settlement principles for inter-service liquidity transfer orders
<b>Description</b>	<p>The following principles shall apply for inter-service liquidity transfer orders:</p> <ul style="list-style-type: none"> <li>• There shall be an attempt to settle a single inter-service liquidity transfer order immediately after its submission;</li> <li>• Offsetting mechanisms to save liquidity are not required;</li> <li>• Inter-service liquidity transfer orders may not be revoked as they are not queued;</li> <li>• Inter-service liquidity transfer orders shall be processed according to the FIFO-principle;</li> <li>• Inter-service liquidity transfer orders shall only have access to the non-reserved pool of liquidity on the MCA; and</li> <li>• Limits do not apply to inter-service liquidity transfer orders.</li> </ul>

<b>Id</b>	CLM.UR.CLM.LTSEN.030.020
<b>Name</b>	Full execution
<b>Description</b>	<p>If the non-reserved available liquidity on the MCA to be debited is sufficient, CLM shall execute the inter-service liquidity transfer order and update:</p> <ul style="list-style-type: none"> <li>• The balances of the accounts involved on a gross basis: the requested MCA shall be debited and the Dedicated Transit Account shall be credited; and</li> <li>• The participant's credit line if it has been used.</li> </ul>

<b>Id</b>	CLM.UR.CLM.LTSEN.030.030
<b>Name</b>	Partial execution
<b>Description</b>	<p>If the non-reserved available liquidity on the MCA is only partially sufficient to settle the inter-service liquidity transfer order and if the order has been initiated by a standing liquidity transfer order, the inter-service liquidity transfer order shall be executed up to the cash amount which can be settled.</p> <p>No further settlement attempt shall take place for the cash amount which cannot be settled.</p>

<b>Id</b>	CLM.UR.CLM.LTSEN.030.040
<b>Name</b>	Debit notification
<b>Description</b>	<p>In case of full or partial execution CLM shall (optionally) send a debit confirmation to the participant stating the cash amount that has been debited.</p>

<b>Id</b>	CLM.UR.CLM.LTSEN.030.050
<b>Name</b>	No execution
<b>Description</b>	<p>In case there is not enough liquidity available on the MCA and if the order has been initiated by an immediate liquidity transfer order, the inter-service liquidity transfer order shall be rejected and no liquidity shall be transferred.</p> <p>Moreover, a settlement failure message shall be sent to the instructing party of the inter-service liquidity transfer order.</p>

<b>Id</b>	CLM.UR.CLM.LTSEN.030.060
<b>Name</b>	Number of Dedicated Transit Accounts
<b>Description</b>	<p>CLM shall have one Dedicated Transit Account per settlement service and currency.</p>

### 1.2.3.4 CREATE AND SEND INTER-SERVICE LIQUIDITY TRANSFER

**Task Ref: CLM.TR.CLM.LTSEN.040**

<b>Id</b>	CLM.UR.CLM.LTSEN.040.010
<b>Name</b>	Create and send inter-service liquidity transfer
<b>Description</b>	In case of full or partial execution of the inter-service liquidity transfer order, CLM shall create and send an inter-service liquidity transfer with the full or partial amount to the relevant settlement service for further processing (to credit the relevant DCA).

<b>Id</b>	CLM.UR.CLM.LTSEN.040.020
<b>Name</b>	Format of the inter-service liquidity transfer
<b>Description</b>	The format of the inter-service liquidity transfer shall comply with the rules set by the relevant settlement service.

### 1.2.3.5 PROCESS FEEDBACK FROM SETTLEMENT SERVICE

**Task Ref: CLM.TR.CLM.LTSEN.050**

CLM shall process the feedback received from the settlement service to which the inter-service liquidity transfer has been sent. Two different scenarios are possible: confirmation or rejection.

<b>Id</b>	CLM.UR.CLM.LTSEN.050.010
<b>Name</b>	Process positive confirmation feedback
<b>Description</b>	<p>A confirmation shall imply that the inter-service liquidity transfer has been booked successfully within the settlement service (i.e. that the relevant DCA has been credited with the amount specified in the inter-service liquidity transfer).</p> <p>CLM shall process this feedback by updating the status of the inter-service liquidity transfer order.</p> <p>Moreover, a confirmation notification shall (optionally) be sent to the instructing participant or Actor in case of immediate liquidity transfer orders. In case of a manual input via the U2A screen or standing liquidity transfer order, the notification shall be displayed directly on the screen.</p>

<b>Id</b>	CLM.UR.CLM.LTSEN.050.020
<b>Name</b>	Process negative confirmation feedback
<b>Description</b>	<p>A rejection shall imply that the inter-service liquidity transfer has not been successfully processed within the settlement service (i.e. that the settlement service has not been able to credit the relevant DCA for the specified amount). In such a case, CLM shall automatically create a reversal of the initial inter-service liquidity transfer in order to debit the relevant Transit Account and credit the MCA.</p> <p>Moreover, a reversal notification shall be sent to the instructing participant or Actor in case of immediate liquidity transfer orders. In case of a manual input via the U2A screen or standing liquidity transfer order, the notification shall be displayed directly on the screen.</p>

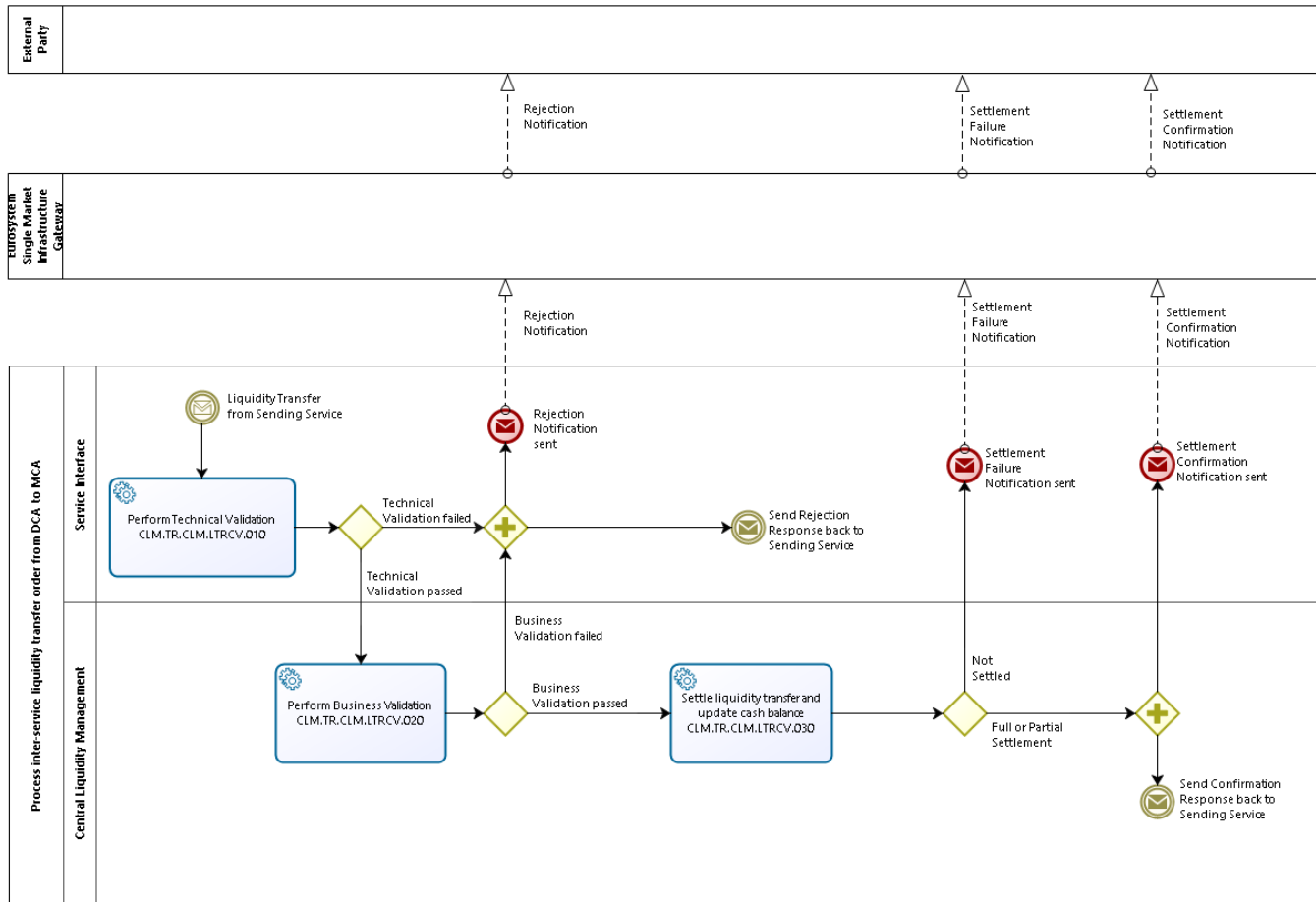
<b>Id</b>	CLM.UR.CLM.LTSEN.050.030
<b>Name</b>	Generate alert if no feedback received
<b>Description</b>	<p>If no feedback is received from the settlement service within a predefined timeframe, an alert message shall be generated by the CLM to the operational team for investigation purposes.</p>

<b>Id</b>	CLM.UR.CLM.LTSEN.050.040
<b>Name</b>	Automatic rejection during the End of Day processing
<b>Description</b>	<p>If CLM has not received any feedback by the end of the day, the pending inter-service liquidity transfers shall be rejected during the End of Day processing.</p> <p>A rejection notification shall be sent to the instructing participant or Actor in case of immediate liquidity transfer orders.</p>

### 1.3 PROCESS INTER-SERVICE LIQUIDITY TRANSFER ORDER FROM DCA TO MCA

Business Process Ref: CLM.BP.CLM.LTRCV

#### 1.3.1 Business Process Model



Business Process Model 2: Process inter-service liquidity transfer order from DCA to MCA

### 1.3.2 Process Overview

#### Process goal:

The goal is to process within CLM an inter-service liquidity transfer received from a settlement service that shall allow a participant to move liquidity from a Dedicated Cash Account (DCA) to a Main Cash Account (MCA).

#### Pre-conditions:

A participant wishing to receive liquidity on its MCA needs to:

- ▶ Have a direct access to the CLM; and
- ▶ Hold a MCA in the CLM.

#### Time constraints:

The processing schedule for inter-service liquidity transfer orders is described in the Business Day section.

#### Expected results:

CLM shall provide a feedback to the settlement service which has sent the inter-service liquidity transfer. Two different scenarios are possible: confirmation or rejection.

A confirmation shall imply that the inter-service liquidity transfer sent by the settlement service has been processed successfully within CLM (i.e. that the relevant MCA has been credited).

A rejection shall imply that the inter-service liquidity transfer sent by the settlement service has not been processed successfully within CLM (i.e. that the relevant MCA has not been credited).

#### Triggers:

The process starts with the reception of an inter-service liquidity transfer from the settlement service.

### 1.3.3 User Requirements

#### 1.3.3.1 PERFORM TECHNICAL VALIDATION

**Task Ref: CLM.TR.CLM.LTRCV.010**

At the reception of an inter-service liquidity transfer from the settlement service, the service interface shall complete technical validation performing checks such as field level validation (fields shall have correct data type and size) and for duplicate messages.

<b>Id</b>	CLM.UR.CLM.LTRCV.010.010
<b>Name</b>	Check mandatory fields
<b>Description</b>	The service interface shall ensure that all mandatory fields in the message received are populated.

<b>Id</b>	CLM.UR.CLM.LTRCV.010.020
<b>Name</b>	Check for duplicate message
<b>Description</b>	The service interface shall ensure that the same message has not already been received. The duplicate check shall compare the reference of each incoming order with the reference of similar orders that have not settled yet and those orders settled in the past predetermined period of five business days. This period shall however be configurable.

<b>Id</b>	CLM.UR.CLM.LTRCV.010.030
<b>Name</b>	Perform all possible technical validations
<b>Description</b>	After encountering the first negative validation result, the service interface shall continue to validate as far as possible and report all negative results together in a single message. The service interface shall reject the order only after performing all possible technical validations.

<b>Id</b>	CLM.UR.CLM.LTRCV.010.040
<b>Name</b>	Processing in case of passed technical validation
<b>Description</b>	In case of a positive result of the technical validation, the order shall be sent to the CLM for further processing.



<b>Id</b>	CLM.UR.CLM.LTRCV.010.050
<b>Name</b>	Processing in case of failed technical validation
<b>Description</b>	In case of a negative result of the technical validation, the order shall be rejected and a notification shall be sent to the instructing settlement service.

### 1.3.3.2 PERFORM BUSINESS VALIDATION

**Task Ref: CLM.TR.CLM.LTRCV.020**

In case of a positive result of the technical validation of the inter-service liquidity transfer, CLM shall validate the message received against the reference data and perform additional checks/validations.

<b>Id</b>	CLM.UR.CLM.LTRCV.020.010
<b>Name</b>	Business validations of the mandatory attributes
<b>Description</b>	<p>CLM shall check that:</p> <ul style="list-style-type: none"> <li>• All mandatory attributes are available and consistent; and</li> <li>• All provided values are valid according to pre-defined values or cross-field validations.</li> </ul>

<b>Id</b>	CLM.UR.CLM.LTRCV.020.020
<b>Name</b>	Account check
<b>Description</b>	CLM shall check that the MCA and DCA mentioned in the intra-service liquidity transfer order are existing and active.

<b>Id</b>	CLM.UR.CLM.LTRCV.020.030
<b>Name</b>	Processing in case of failed business validation
<b>Description</b>	In case of a negative result of the business validation, the order shall be rejected and a notification shall be sent to the instructing settlement service.

1.3.3.3 SETTLE LIQUIDITY TRANSFER AND UPDATE CASH BALANCE

Task Ref: **CLM.TR.CLM.LTRCV.030**

In case of a positive result of the business validations, CLM shall check whether the execution of the inter-service liquidity transfer is feasible. Two different scenarios are possible: full and no execution.

<b>Id</b>	CLM.UR.CLM.LTRCV.030.010
<b>Name</b>	Settlement principles for inter-service liquidity transfers
<b>Description</b>	<p>The following principles shall apply for inter-service liquidity transfers sent by settlement services:</p> <ul style="list-style-type: none"> <li>• There shall be an attempt to settle single liquidity transfer immediately after its submission;</li> <li>• Liquidity transfers may not be revoked as they are not queued; and</li> <li>• Liquidity transfers shall be processed according to the FIFO-principle.</li> </ul>

<b>Id</b>	CLM.UR.CLM.LTRCV.030.020
<b>Name</b>	Full execution
<b>Description</b>	<p>If the booking of the inter-service liquidity transfer is possible, CLM shall book it and update the balances of the accounts involved on a gross basis: the Dedicated Transit Account shall be debited and the requested MCA shall be credited.</p> <p>Once the booking has taken place, CLM shall send a confirmation notification to the instructing settlement service.</p>

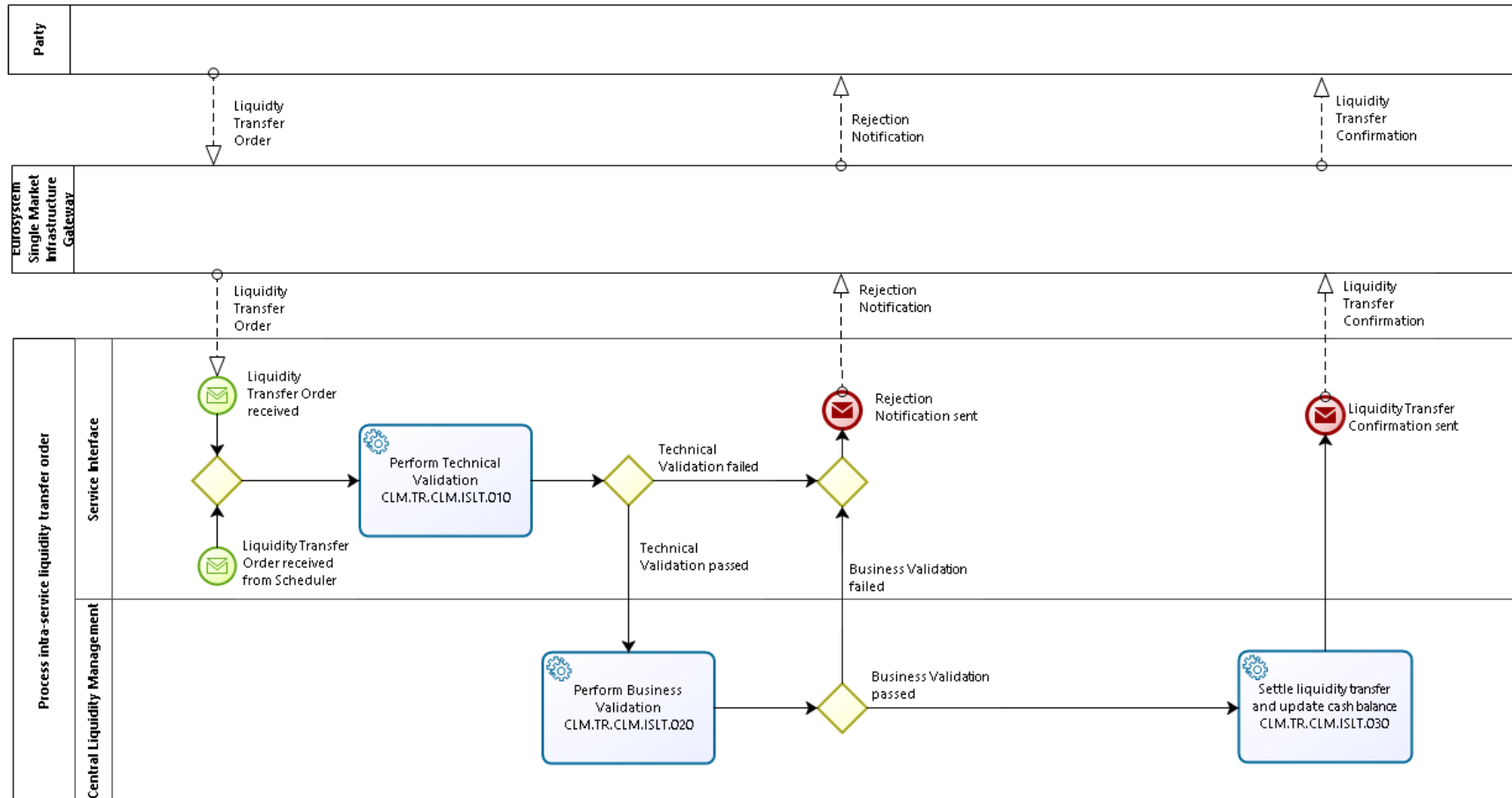
<b>Id</b>	CLM.UR.CLM.LTRCV.030.030
<b>Name</b>	No execution
<b>Description</b>	<p>If the booking of the inter-service liquidity transfer is not possible, CLM shall reject the intra-liquidity transfer and send a rejection notification to the instructing settlement service.</p>

<b>Id</b>	CLM.UR.CLM.LTRCV.030.040
<b>Name</b>	Credit confirmation
<b>Description</b>	<p>If the booking of the intra-service liquidity transfer is successful, CLM shall send (optionally) a credit confirmation to the participant owning the MCA or another Actor operating on its behalf under a contractual agreement.</p>

## 1.4 PROCESS INTRA-SERVICE LIQUIDITY TRANSFER ORDER

Business Process Ref: CLM.BP.CLM.ISLT

### 1.4.1 Business Process Model



Business Process Model 3: Process intra-service liquidity transfer order

## 1.4.2 Process Overview

### Process goal:

The aim is to describe how CLM processes liquidity transfers between two MCAs within CLM. Intra-service liquidity transfer orders shall only be allowed if the two MCAs belong to the same banking group.

### Pre-conditions:

A participant willing to initiate an intra-service liquidity transfer order needs to:

- ▶ Have a direct access to the CLM;
- ▶ Hold MCA(s) in the CLM; and
- ▶ Link these MCA(s) to the same banking group.

### Time constraints:

The processing schedule for intra-service liquidity transfer orders shall be similar to the processing schedule of inter-service liquidity transfer orders.

### Expected results:

This process shall allow one participant to transfer liquidity between two MCAs within CLM.

As intra-service liquidity transfer orders shall not be queued, three different scenarios are possible in terms of booking: full, partial and no execution.

### Triggers:

Intra-service liquidity transfer orders can be initiated in two different ways:

- ▶ Immediate liquidity transfer orders initiated by a participant (owner of the MCA that will be debited) or by another Actor operating on its behalf under a contractual agreement; or
- ▶ Standing liquidity transfer orders set by the participant and triggered repeatedly by a given event/time.

### 1.4.3 User Requirements

#### 1.4.3.1 PERFORM TECHNICAL VALIDATION

**Task Ref: CLM.TR.CLM.ISLT.010**

At the reception of an intra-service liquidity transfer order, the service interface shall complete technical validation performing checks such as field level validation (fields shall have correct data type and size) and for duplicate messages.

<b>Id</b>	CLM.UR.CLM.ISLT.010.010
<b>Name</b>	Check mandatory fields
<b>Description</b>	The service interface shall ensure that all mandatory fields in the message received are populated.

<b>Id</b>	CLM.UR.CLM.ISLT.010.020
<b>Name</b>	Check for duplicate message
<b>Description</b>	The service interface shall ensure that the same message has not already been received. The duplicate check shall compare the reference of each incoming order with the reference of similar orders that have not settled yet and those orders settled in the past predetermined period of five business days. This period shall however be configurable.

<b>Id</b>	CLM.UR.CLM.ISLT.010.030
<b>Name</b>	Perform all possible technical validations
<b>Description</b>	After encountering the first negative validation result, the service interface shall continue to validate as far as possible and report all negative results together in a single message. The service interface shall reject the order only after performing all possible technical validations.

<b>Id</b>	CLM.UR.CLM.ISLT.010.040
<b>Name</b>	Processing in case of passed technical validation
<b>Description</b>	In case of a positive result of the technical validation, the order shall be sent to the CLM for further processing.

<b>Id</b>	CLM.UR.CLM.ISLT.010.050
<b>Name</b>	Processing in case of failed technical validation
<b>Description</b>	In case of a negative result of the technical validation, the order shall be rejected and a notification shall be sent to the instructing participant or Actor in case of immediate liquidity transfer orders.

#### 1.4.3.2 PERFORM BUSINESS VALIDATION

**Task Ref: CLM.TR.CLM.ISLT.020**

In case of a positive result of the technical validation of the intra-service liquidity transfer order, CLM shall validate the message received against the reference data and perform additional checks/validations.

<b>Id</b>	CLM.UR.CLM.ISLT.020.010
<b>Name</b>	Proxy check
<b>Description</b>	If the instructing party is not the owner of the MCA, CLM shall check that it is authorised to send intra-service liquidity transfer orders on behalf of the account owner.

<b>Id</b>	CLM.UR.CLM.ISLT.020.020
<b>Name</b>	Business validations of the mandatory attributes
<b>Description</b>	CLM shall check that: <ul style="list-style-type: none"> <li>• All mandatory attributes are available and consistent; and</li> <li>• All provided values are valid according to pre-defined values or cross-field validations.</li> </ul>

<b>Id</b>	CLM.UR.CLM.ISLT.020.030
<b>Name</b>	Account check
<b>Description</b>	CLM shall check that the MCA(s) mentioned in the intra-service liquidity transfer order are existing and active.

<b>Id</b>	CLM.UR.CLM.ISLT.020.040
<b>Name</b>	Banking group check
<b>Description</b>	CLM shall check that the MCA(s) mentioned in the intra-service liquidity transfer order belong to the same banking group.

<b>Id</b>	CLM.UR.CLM.ISLT.020.050
<b>Name</b>	Processing in case of failed business validation
<b>Description</b>	In case of a negative result of the business validation, the order shall be rejected and a notification shall be sent to the instructing participant or Actor in case of immediate liquidity transfer orders.

#### 1.4.3.3 SETTLE LIQUIDITY TRANSFER AND UPDATE CASH BALANCE

##### Task Ref: **CLM.TR.CLM.ISLT.030**

In case of a positive result of the business validation checks, CLM shall validate whether the booking of the intra-service liquidity transfer order is feasible. Three different scenarios are possible: full, partial and no execution.

<b>Id</b>	CLM.UR.CLM.ISLT.030.010
<b>Name</b>	Settlement principles for intra-service liquidity transfer orders
<b>Description</b>	<p>The following principles shall apply for intra-service liquidity transfer orders:</p> <ul style="list-style-type: none"> <li>• There shall be an attempt to settle a single liquidity transfer order immediately after its submission;</li> <li>• Offsetting mechanisms to save liquidity are not required;</li> <li>• Liquidity transfer orders may not be revoked as they are not queued;</li> <li>• Liquidity transfer orders shall be processed according to the FIFO-principle;</li> <li>• Liquidity transfer orders shall only have access to the non-reserved pool of available liquidity within CLM; and</li> <li>• Limits do not apply to liquidity transfer orders.</li> </ul>

<b>Id</b>	CLM.UR.CLM.ISLT.030.020
<b>Name</b>	Full execution
<b>Description</b>	If the non-reserved pool of liquidity on the MCA to be debited is sufficient, CLM shall execute the intra-service liquidity transfer order and update the balances of the accounts involved on a gross basis: the requested MCA shall be debited and the requested MCA shall be credited.

<b>Id</b>	CLM.UR.CLM.ISLT.030.030
<b>Name</b>	Partial execution
<b>Description</b>	<p>If the non-reserved pool of liquidity on the MCA to be debited is only sufficient to settle the intra-service liquidity transfer order partially and if the order has been initiated by a standing liquidity transfer order, the intra-service liquidity transfer order shall be executed up to the cash amount which can be settled.</p> <p>No further settlement attempt shall take place for the cash amount which cannot be settled.</p>

<b>Id</b>	CLM.UR.CLM.ISLT.030.040
<b>Name</b>	No execution
<b>Description</b>	<p>In case there is not enough liquidity available and if the order has been initiated by an immediate liquidity transfer order, the intra-service liquidity transfer order shall be rejected and no liquidity shall be transferred.</p> <p>Moreover, a failure notification shall be sent to the instructing participant or Actor in case of immediate liquidity transfer orders.</p>

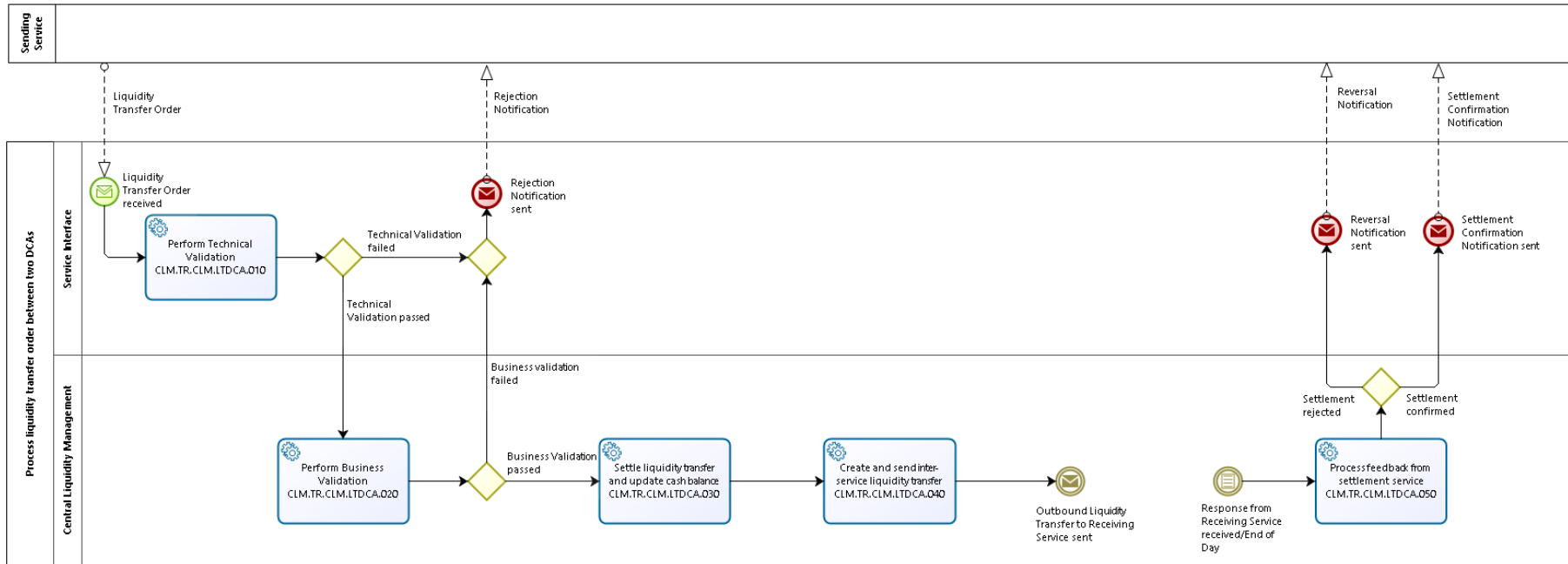
<b>Id</b>	CLM.UR.CLM.ISLT.030.050
<b>Name</b>	Credit and debit confirmation
<b>Description</b>	In case of full or partial settlement, a credit and debit confirmation shall be (optionally) sent to the participants owning the MCAs with the indication of the amount that has settled.



## 1.5 PROCESS LIQUIDITY TRANSFER ORDER BETWEEN TWO DCAs

Business Process Ref: CLM.BP.CLM.LTDCA

### 1.5.1 Business Process Model



Business Process Model 4: Process liquidity transfer order between two DCAs

## 1.5.2 Process Overview

### Process goal:

This process describes how a liquidity transfer order between two DCAs belonging to different settlement services shall be handled within CLM.

### Pre-conditions:

A participant wishing to initiate one liquidity transfer order between two DCAs needs to:

- ▶ Have a direct access to at least the settlement service in which the DCA shall be debited; and
- ▶ Hold (or act on behalf of a participant holding) at least the DCA to be debited.

There shall be no obligation to hold an MCA.

### Time constraints:

The processing schedule for liquidity transfer orders between two DCA(s) shall be similar to the processing schedule of inter-service and intra-service liquidity transfer orders.

### Expected results:

A liquidity transfer between two DCAs shall consist in the combination of two inter-service liquidity transfers. The settlement service with the DCA to be debited shall generate a first inter-service liquidity transfer order to debit DCA and credit the relevant Dedicated Transit Account in the CLM. CLM shall then generate a second inter-service liquidity transfer order to debit the relevant Dedicated Transit Account and credit the DCA in the other settlement service.

### Triggers:

A liquidity transfer between two DCAs shall be initiated by the participant owning the DCA to be debited or by another Actor operating on its behalf under a contractual agreement.

We do not foresee any standing liquidity transfer orders between two DCAs.

### 1.5.3 User Requirements

#### 1.5.3.1 GENERAL USER REQUIREMENTS FOR PROCESS LIQUIDITY TRANSFER ORDER BETWEEN TWO DCAS

<b>Id</b>	CLM.UR.CLM.LTDCA.000.010
<b>Name</b>	Initiate liquidity transfer order between two DCA(s)
<b>Description</b>	<p>A liquidity transfer order between two DCAs shall consist in the combination of two inter-service liquidity transfers and shall be initiated by the participant whose DCA shall be debited or any Actor acting on its behalf.</p> <p>Once the liquidity transfer has been triggered, the sending settlement service that receives the request shall:</p> <ul style="list-style-type: none"> <li>• Debit the DCA and credit the CLM Dedicated Transit Account; and</li> <li>• Initiate and send to CLM an intra-service liquidity transfer to debit the settlement service Dedicated Transit Account in CLM and to credit the receiving settlement service Dedicated Transit Account in the CLM. The intra-service liquidity transfer shall also mention the DCA to be credited.</li> </ul>

#### 1.5.3.2 PERFORM TECHNICAL VALIDATION

**Task Ref: CLM.TR.CLM.LTDCA.010**

At the reception of the inter-service liquidity transfer from the sending settlement service, the service interface shall complete technical validation performing checks such as field level validation (fields shall have correct data type and size) and for duplicate messages.

<b>Id</b>	CLM.UR.CLM.LTDCA.010.010
<b>Name</b>	Check mandatory fields
<b>Description</b>	The service interface shall ensure that all mandatory fields in the message received are populated.

<b>Id</b>	CLM.UR.CLM.LTDCA.010.020
<b>Name</b>	Check for duplicate message
<b>Description</b>	The service interface shall ensure that the same message has not already been received. The duplicate check shall compare the reference of each incoming order with the reference of similar orders that have not settled yet and those orders settled in the past predetermined period of five business days. This period shall however be configurable.

<b>Id</b>	CLM.UR.CLM.LTDCA.010.030
<b>Name</b>	Perform all possible technical validations
<b>Description</b>	After encountering the first negative validation result, the service interface shall continue to validate as far as possible and report all negative results together in a single message. The service interface shall reject the order only after performing all possible technical validations.

<b>Id</b>	CLM.UR.CLM.LTDCA.010.040
<b>Name</b>	Processing in case of passed technical validation
<b>Description</b>	In case of a positive result of the technical validation, the order shall be sent to the CLM for further processing.

<b>Id</b>	CLM.UR.CLM.LTDCA.010.050
<b>Name</b>	Processing in case of failed technical validation
<b>Description</b>	In case of a negative result of the technical validation, the order shall be rejected and a notification shall be sent to the sending settlement service.

### 1.5.3.3 PERFORM BUSINESS VALIDATION

**Task Ref: CLM.TR.CLM.LTDCA.020**

In case of a positive result of the technical validation of the inter-service liquidity transfer, CLM shall validate the message received against the reference data and perform additional checks/validations.

<b>Id</b>	CLM.UR.CLM.LTDCA.020.010
<b>Name</b>	Business validations of the mandatory attributes
<b>Description</b>	<p>CLM shall check that:</p> <ul style="list-style-type: none"> <li>• All mandatory attributes are available and consistent; and</li> <li>• All provided values are valid according to pre-defined values or cross-field validations.</li> </ul>

<b>Id</b>	CLM.UR.CLM.LTDCA.020.020
<b>Name</b>	Account check
<b>Description</b>	CLM shall check that the Dedicated Transit Accounts and the DCA mentioned in the liquidity transfer order are existing and active.

<b>Id</b>	CLM.UR.CLM.LTDCA.020.030
<b>Name</b>	Processing in case of failed business validation
<b>Description</b>	In case of a negative result of the business validation, the order shall be rejected and a notification shall be sent to the sending settlement service.

#### 1.5.3.4 SETTLE LIQUIDITY TRANSFER AND UPDATE CASH BALANCE

**Task Ref:** CLM.TR.CLM.LTDCA.030

In case of a positive result of the business validations, CLM shall check whether the booking of the inter-service liquidity transfer is feasible. Two different scenarios are possible: full and no execution.

<b>Id</b>	CLM.UR.CLM.LTDCA.030.010
<b>Name</b>	Settlement principles
<b>Description</b>	<p>The following principles shall apply:</p> <ul style="list-style-type: none"> <li>• There shall be an attempt to settle single liquidity transfer immediately after its submission;</li> <li>• Liquidity transfers may not be revoked as they are not queued; and</li> <li>• Liquidity transfers shall be processed according to the FIFO-principle.</li> </ul>

<b>Id</b>	CLM.UR.CLM.LTDCA.030.020
<b>Name</b>	Full execution
<b>Description</b>	If the booking of the liquidity transfer is possible, CLM shall book it and update the balances of the accounts involved on a gross basis: the sending settlement service's Dedicated Transit Account for shall be credited and the receiving settlement service's Dedicated Transit Account shall be debited.

<b>Id</b>	CLM.UR.CLM.LTDCA.030.030
<b>Name</b>	No execution
<b>Description</b>	If the booking of the liquidity transfer is not possible, CLM shall reject the intra-liquidity transfer and send a rejection notification to the sending settlement service.

### 1.5.3.5 CREATE AND SEND INTER-SERVICE LIQUIDITY TRANSFER

**Task Ref: CLM.TR.CLM.LTDCA.040**

<b>Id</b>	CLM.UR.CLM.LTDCA.040.010
<b>Name</b>	Create and send inter-service liquidity transfer
<b>Description</b>	<p>In case of successful settlement of the first liquidity transfer (see CLM.UR.CLM.LTDCA.030.020), CLM shall:</p> <ul style="list-style-type: none"> <li>• Create an inter-service liquidity transfer to credit the DCA in the receiving settlement service; and</li> <li>• Send this liquidity transfer to the receiving settlement service.</li> </ul>

### 1.5.3.6 PROCESS FEEDBACK FROM RECEIVING SETTLEMENT SERVICE

**Task Ref: CLM.TR.CLM.LTDCA.050**

CLM shall process the feedback received from the receiving settlement service to which the inter-service liquidity transfer has been sent. Two different scenarios are possible: confirmation or rejection.

<b>Id</b>	CLM.UR.CLM.LTDCA.050.010
<b>Name</b>	Process positive confirmation feedback
<b>Description</b>	<p>A confirmation shall imply that the inter-service liquidity transfer has been booked successfully within the receiving settlement service (i.e. that the relevant DCA has been credited with the amount specified in the inter-service liquidity transfer).</p> <p>CLM shall process this feedback and send a confirmation notification to the sending settlement service.</p>

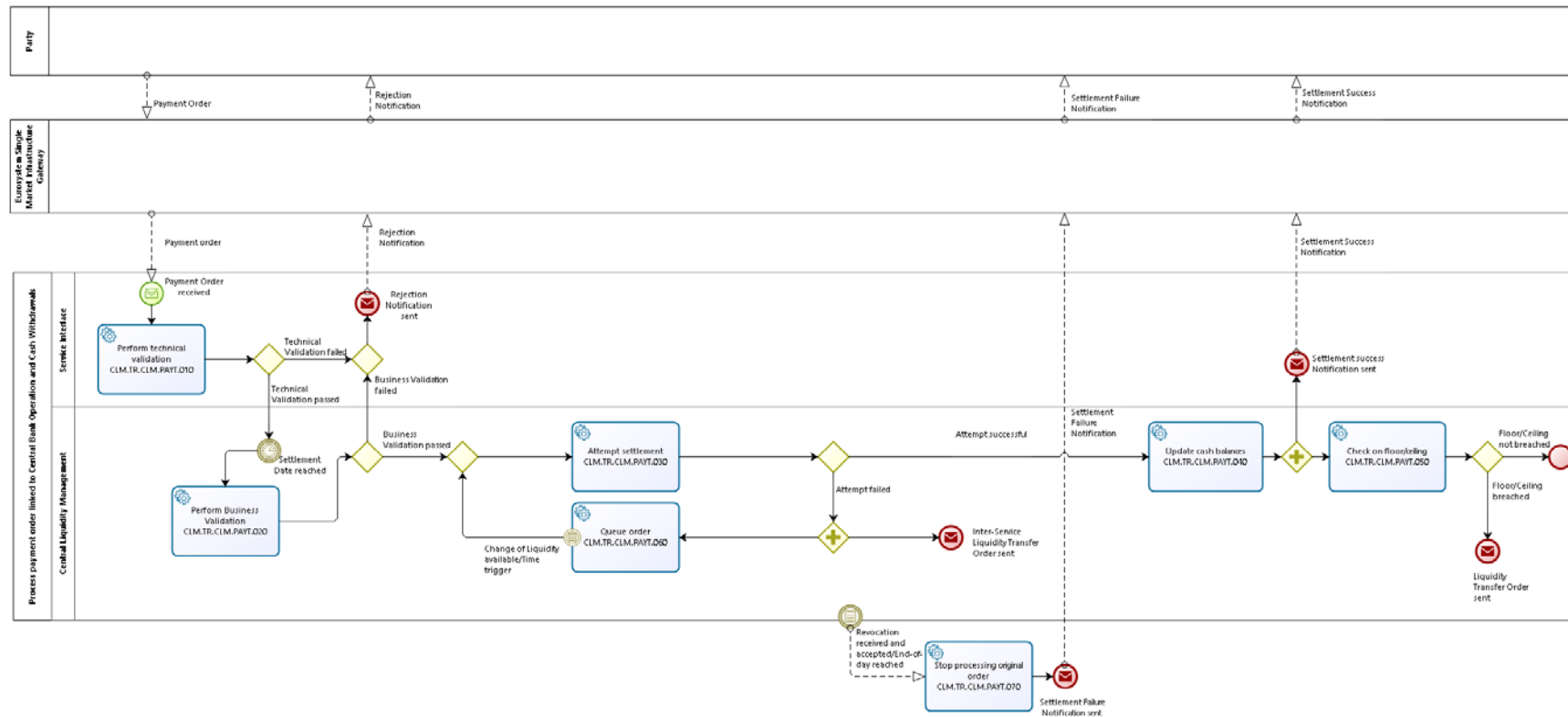
<b>Id</b>	CLM.UR.CLM.LTDCA.050.020
<b>Name</b>	Process negative confirmation feedback
<b>Description</b>	<p>A rejection shall imply that the inter-service liquidity transfer has not been successfully processed within the receiving settlement service (i.e. that the receiving settlement service has not been able to credit the relevant DCA for the specified amount). In such a case, CLM shall automatically create a reversal of the initial liquidity transfer within CLM.</p> <p>Moreover, CLM shall send a reversal notification to the sending settlement service.</p>

<b>Id</b>	CLM.UR.CLM.LTDCA.050.030
<b>Name</b>	Automatic rejection during the End of Day processing
<b>Description</b>	<p>If CLM has not received any feedback by the end of the day, the pending inter-service liquidity transfers shall be rejected during the End of Day processing.</p> <p>A rejection shall be sent to the sending settlement service.</p>

## 1.6 PROCESS PAYMENT ORDER LINKED TO CENTRAL BANK OPERATION AND CASH WITHDRAWALS

Business Process Ref: CLM.BP.CLM.PAYT

### 1.6.1 Business Process Model



Business Process Model 5: Process payment order linked to Central Bank Operation and Cash Withdrawals



## 1.6.2 Process Overview

### Process goal:

This process describes how a payment order linked to a Central Bank Operation shall be handled within CLM.

### Pre-conditions:

A participant wishing to initiate one payment order linked to a Central Bank Operation needs to:

- ▶ Have a direct access to the CLM; and
- ▶ Hold one MCA.

### Time constraints:

The processing schedule for payment orders linked to Central Bank Operations is described in the Business Day section.

### Expected results:

A payment order linked to a Central Bank Operation shall lead to a debit (or credit) of the MCA with the simultaneous credit (debit) of CB account/marginal lending account/overnight deposit account.

### Triggers:

A payment order linked to a Central Bank Operation or to a Cash Withdrawal can be initiated in two different ways:

- ▶ Cash Withdrawal initiated by a participant/another Actor operating on its behalf under a contractual agreement or CB; and
- ▶ Payment order generated by CBS in the context of Standing Facilities (i.e. marginal lending and overnight deposits) and minimum reserves or other Central Bank operations.

### 1.6.3 User Requirements

#### 1.6.3.1 GENERAL USER REQUIREMENTS FOR PROCESS PAYMENT ORDER LINKED TO CENTRAL BANK OPERATION AND CASH WITHDRAWALS

<b>Id</b>	CLM.UR.CLM.PAYT.000.010
<b>Name</b>	Settlement principles for payment orders linked to Central Bank Operations and cash withdrawals
<b>Description</b>	<p>The following principles shall apply for payment orders linked to Central Bank Operations:</p> <ul style="list-style-type: none"> <li>• Every payment should be marked as “normal“ or “urgent“. If no priority class is selected, payments will be handled as normal payments;</li> <li>• Attempt to settle single payment order immediately after its submission;</li> <li>• Offsetting mechanisms to save liquidity are not required;</li> <li>• Payment orders may be revoked as long as they are not executed;</li> <li>• Queuing of payment orders, which cannot settle immediately, according to their type in different queues (urgent queue, normal queue);</li> <li>• Continuous attempt to settle payments in the queues;</li> <li>• Payment orders shall be processed according to the FIFO-principle. Normal payments shall not settle in the case that urgent payments are queued;</li> <li>• CLM offers one type of reservations for all Central Bank Operations; and</li> <li>• Limits do not apply to payment orders.</li> </ul>

#### 1.6.3.2 PERFORM TECHNICAL VALIDATION

**Task Ref: CLM.TR.CLM.PAYT.010**

At the reception of a payment order sent by the participant/CB or CBS, the service interface shall complete technical validation performing checks such as field level validation (fields shall have correct data type and size) and for duplicate messages.

<b>Id</b>	CLM.UR.CLM.PAYT.010.010
<b>Name</b>	Check mandatory fields
<b>Description</b>	The service interface shall ensure that all mandatory fields in the message received are populated.

<b>Id</b>	CLM.UR.CLM.PAYT.010.020
<b>Name</b>	Check for duplicate message
<b>Description</b>	The service interface shall ensure that the same message has not already been received. The duplicate check shall compare the reference of each incoming order with the reference of similar orders that have not settled yet and those orders settled in the past predetermined period of five business days. This period shall however be configurable.

<b>Id</b>	CLM.UR.CLM.PAYT.010.030
<b>Name</b>	Perform all possible technical validations
<b>Description</b>	After encountering the first negative validation result, the service interface shall continue to validate as far as possible and report all negative results together in a single message. The service interface shall reject the order only after performing all possible technical validations.

<b>Id</b>	CLM.UR.CLM.PAYT.010.040
<b>Name</b>	Processing in case of passed technical validation
<b>Description</b>	In case of a positive result of the technical validation, the order shall be sent to the CLM for further processing.

<b>Id</b>	CLM.UR.CLM.PAYT.010.050
<b>Name</b>	Processing in case of failed technical validation
<b>Description</b>	<p>In case of a negative result of the technical validation, the order shall be rejected and a notification shall be sent to the instructing participant/CB or CBS.</p> <p>In case of a manual input via the U2A screen, the rejection notification shall be displayed directly on the screen.</p>

1.6.3.3 PERFORM BUSINESS VALIDATION

Task Ref: **CLM.TR.CLM.PAYT.020**

In case of a positive result of the technical validation of the payment order, CLM shall validate the message received against the reference data and perform additional checks/validations.

<b>Id</b>	CLM.UR.CLM.PAYT.020.010
<b>Name</b>	Proxy check
<b>Description</b>	If the instructing party is not the owner of the MCA, CLM shall check that it is authorised to send a payment order on behalf of the account owner.

<b>Id</b>	CLM.UR.CLM.PAYT.020.020
<b>Name</b>	Business validations of the mandatory attributes
<b>Description</b>	<p>CLM shall check that:</p> <ul style="list-style-type: none"> <li>• All mandatory attributes are available and consistent; and</li> <li>• All provided values are valid according to pre-defined values or cross-field validations.</li> </ul>

<b>Id</b>	CLM.UR.CLM.PAYT.020.030
<b>Name</b>	Account check
<b>Description</b>	CLM shall check that the MCA and the other accounts (CB account, marginal lending account or overnight deposit account) mentioned in the payment order are existing and active.

<b>Id</b>	CLM.UR.CLM.PAYT.020.040
<b>Name</b>	Processing in case of failed business validation
<b>Description</b>	<p>In case of a negative result of the business validation, the order shall be rejected and a notification shall be sent to the instructing participant/CB or CBS.</p> <p>In case of a manual input via the U2A screen, the rejection notification shall be displayed directly on the screen.</p>

#### 1.6.3.4 ATTEMPT SETTLEMENT

**Task Ref: CLM.TR.CLM.PAYT.030**

In case of a positive result of the business validation checks, CLM shall validate whether the booking of the payment order is feasible. Two different scenarios are possible: full and no execution.

<b>Id</b>	CLM.UR.CLM.PAYT.030.010
<b>Name</b>	Sequence of settlement checks
<b>Description</b>	<p>CLM shall apply the following sequence of settlement checks:</p> <ol style="list-style-type: none"><li>1. CLM shall check whether there are existing operations of an equal or higher priority level in the queue.</li><li>2. If existing operations of an equal or higher priority are in the queue, the payment order shall also be put in the queue.</li><li>3. If existing operations of an equal or higher priority are not in the queue, the payment shall settle if reservations are not breached. If reservations are breached, the payment order shall be put in the queue.</li></ol>

#### 1.6.3.5 UPDATE CASH BALANCES

**Task Ref: CLM.TR.CLM.PAYT.040**

<b>Id</b>	CLM.UR.CLM.PAYT.040.010
<b>Name</b>	Booking of payment order
<b>Description</b>	<p>If the settlement of the payment order is possible, CLM shall book it and update the balances of the accounts involved on a gross basis: the requested participant's MCA shall be debited and the relevant Central Bank account shall be credited or the relevant Central Bank account shall be debited and the requested participant's MCA shall be credited</p> <p>A credit and/or debit confirmation shall (optionally) be sent to the participant and/or Central Bank.</p>

### 1.6.3.6 CHECK ON FLOOR/CEILING

**Task Ref: CLM.TR.CLM.PAYT.050**

An account owner can define a minimum (“floor”) or maximum (“ceiling”) amount for its MCA(s).

<b>Id</b>	CLM.UR.CLM.PAYT.050.010
<b>Name</b>	Floor balance order
<b>Description</b>	In case the cash balance of a MCA falls below the defined floor amount after a payment order, CLM shall create and release an inter-service liquidity transfer to pull an amount of liquidity from a defined RTGS account.

<b>Id</b>	CLM.UR.CLM.PAYT.050.020
<b>Name</b>	Ceiling balance order
<b>Description</b>	In case the cash balance of a MCA exceeds the defined floor amount after a payment order, CLM shall create and release an inter-service liquidity transfer to push an amount of liquidity to a defined RTGS account.

### 1.6.3.7 QUEUE ORDER

**Task Ref: CLM.TR.CLM.PAYT.060**

<b>Id</b>	CLM.UR.CLM.PAYT.060.010
<b>Name</b>	Resolve queue of urgent payments
<b>Description</b>	<p>The urgent queue shall be continuously resolved thanks to a liquidity increase in the MCA starting with the transaction at the top.</p> <p>The liquidity increase shall be achieved through:</p> <ul style="list-style-type: none"><li>• Settlement of incoming (urgent and normal) payments;</li><li>• Liquidity transfers from settlement services; or</li><li>• Increase of credit line.</li></ul>

<b>Id</b>	CLM.UR.CLM.PAYT.060.020
<b>Name</b>	Resolve queue of normal payments
<b>Description</b>	<p>The normal queue shall be continuously resolved thanks to a liquidity increase coming from:</p> <ul style="list-style-type: none"><li>• Settlement of incoming (urgent and normal) payments;</li><li>• Settlement of pending (urgent) payments;</li><li>• Liquidity transfers from settlement services; or</li><li>• Increase of credit line.</li></ul>

<b>Id</b>	CLM.UR.CLM.PAYT.060.030
<b>Name</b>	Automatic trigger of liquidity transfer between RTGS DCA and MCA
<b>Description</b>	<p>In case there is insufficient liquidity on the participant's MCA to settle a payment linked to a CB operation or a cash withdrawal, CLM shall automatically trigger a liquidity transfer with the missing amount from the participant's default RTGS DCA to the same participant's MCA. The respective liquidity transfer shall be placed on top of the queue of all pending payments and liquidity transfers on the RTGS DCA.</p> <p>If only a partial settlement of the liquidity transfer is possible, then CLM shall execute the liquidity transfer and shall create a new liquidity transfer order for the remaining part that shall be queued in the RTGS settlement service until it can be entirely processed.</p>

<b>Id</b>	CLM.UR.CLM.PAYT.060.040
<b>Name</b>	Intervention on queued payments
<b>Description</b>	<p>Cancellation of a queued payment order shall be available on queued payment orders.</p>

1.6.3.8 STOP PROCESSING ORIGINAL ORDER

Task Ref: **CLM.TR.CLM.PAYT.070**

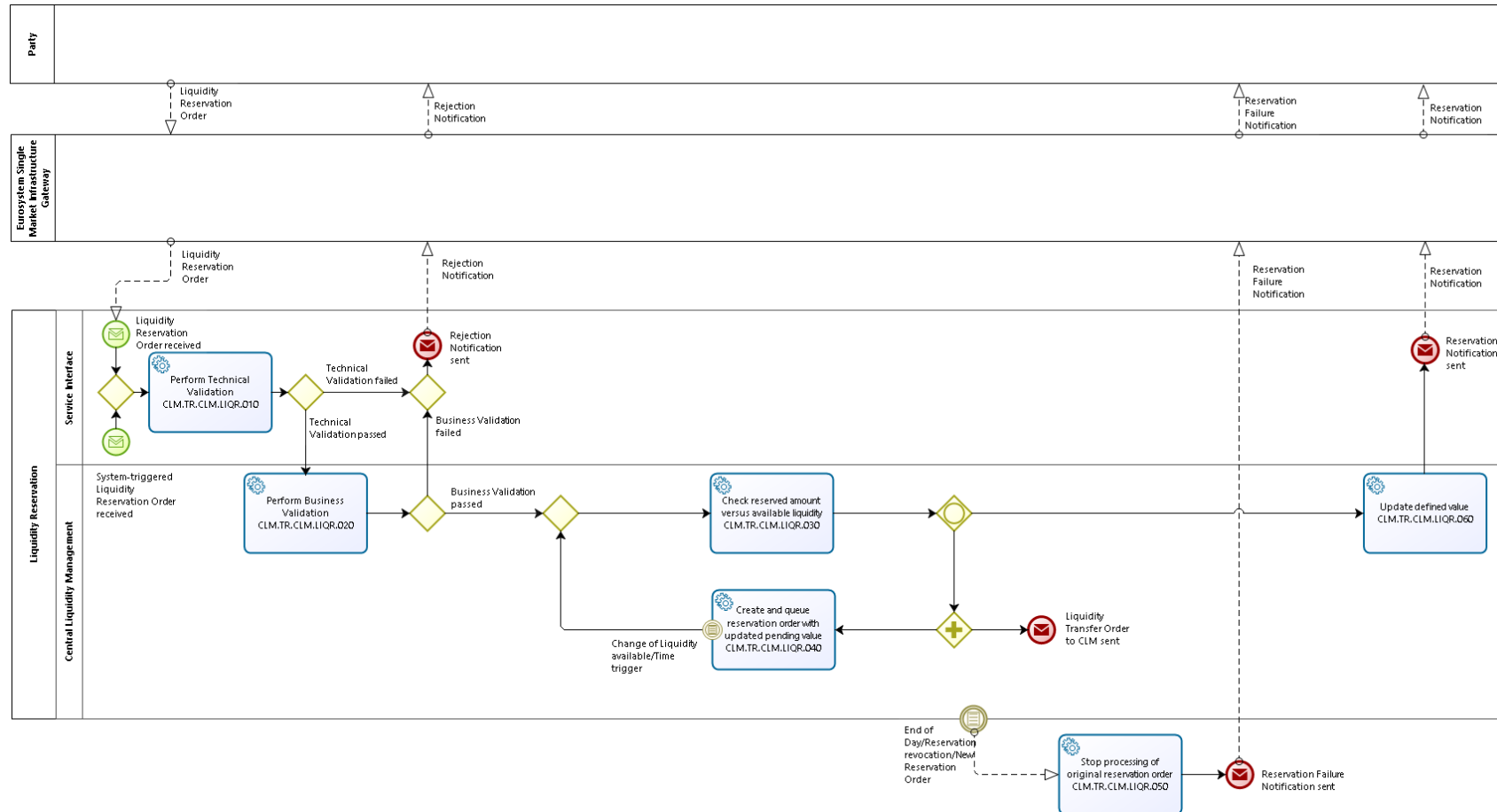
<b>Id</b>	CLM.UR.CLM.PAYT.070.010
<b>Name</b>	Stop processing by the End of Day
<b>Description</b>	<p>If payments are still queued by the end of the day due to lack of liquidity, these payments shall be rejected during the End of Day processing.</p> <p>A rejection notification shall be sent to the participant and Central Bank.</p>



## 1.7 LIQUIDITY RESERVATION

Business Process Ref: CLM.BP.CLM.LIQR

### 1.7.1 Business Process Model



Business Process Model 6: Liquidity reservation

## 1.7.2 Process Overview

### Process goal:

The aim of the process is to control the use of the supplied liquidity by means of a reservation mechanism.

### Process context:

This business process describes the check by CLM, after receipt of the reservation request sent by CRDM, whether the amount of liquidity on the participant's MCA is sufficient for the reservation. Moreover, it describes the reservation of the requested amount.

### Pre-conditions:

A participant willing to control the use of the supplied liquidity by means of a reservation needs to:

- ▶ Have a direct access to the CLM; and
- ▶ Hold MCA(s) in the CLM.

### Time constraints:

- ▶ None

### Expected results:

Reservation shall allow a participant to control part of the liquidity for a specific purpose. In case no reservation is defined, the participant's liquidity is available for each payment.

### Triggers:

Participants shall be able to manage reservations using the CRDM GUI on a U2A and A2A basis.

### 1.7.3 User Requirements

#### 1.7.3.1 GENERAL USER REQUIREMENTS FOR LIQUIDITY RESERVATION

<b>Id</b>	CLM.UR.CLM.LIQR.000.010
<b>Name</b>	Type of reservation requests
<b>Description</b>	<p>When managing reservations, participants shall be able to:</p> <ul style="list-style-type: none"> <li>• “Reset“ to zero the liquidity reserved;</li> <li>• Change the amount on demand during the day with immediate effect;</li> <li>• Establish a specific amount during the current day with immediate effect; and</li> <li>• Input a default amount for the following day(s) (valid until next change).</li> </ul>

#### 1.7.3.2 PERFORM TECHNICAL VALIDATION

**Task Ref: CLM.TR.CLM.LIQR.010**

At the reception of a reservation request from CRDM, the service interface shall complete technical validation performing checks such as field level validation (fields shall have correct data type and size).

<b>Id</b>	CLM.UR.CLM.LIQR.010.010
<b>Name</b>	Check mandatory fields
<b>Description</b>	The service interface shall ensure that all mandatory fields in the message received are populated.

<b>Id</b>	CLM.UR.CLM.LIQR.010.020
<b>Name</b>	Processing in case of passed technical validation
<b>Description</b>	In case of a positive result of the technical validation, the request shall be sent to the CLM for further processing.

<b>Id</b>	CLM.UR.CLM.LIQR.010.030
<b>Name</b>	Processing in case of failed technical validation
<b>Description</b>	In case of a negative result of the technical validation, the request shall be rejected and a notification shall be sent to CRDM.

### 1.7.3.3 PERFORM BUSINESS VALIDATION

**Task Ref: CLM.TR.CLM.LIQR.020**

In case of a positive result of the technical validation of the reservation request, CLM shall validate the message received against the reference data and perform additional checks/validations.

<b>Id</b>	CLM.UR.CLM.LIQR.020.010
<b>Name</b>	Business validations of the mandatory attributes
<b>Description</b>	<p>CLM shall check that:</p> <ul style="list-style-type: none"> <li>• All mandatory attributes are available and consistent; and</li> <li>• All provided values are valid according to pre-defined values or cross-field validations.</li> </ul>

<b>Id</b>	CLM.UR.CLM.LIQR.020.020
<b>Name</b>	Account check
<b>Description</b>	CLM shall check that the MCA mentioned in the reservation request is existing and active.

<b>Id</b>	CLM.UR.CLM.LIQR.020.030
<b>Name</b>	Processing in case of failed business validation
<b>Description</b>	In case of a negative result of the business validation, the request shall be rejected and a notification shall be sent to CRDM.

### 1.7.3.4 CHECK RESERVED AMOUNT VERSUS AVAILABLE LIQUIDITY

**Task Ref: CLM.TR.CLM.LIQR.030**

<b>Id</b>	CLM.UR.CLM.LIQR.030.010
<b>Name</b>	Check whether amount of liquidity is sufficient
<b>Description</b>	In case of a positive result of the business validation of the reservation request, CLM shall check whether the amount of liquidity on the participant's MCA is sufficient for the reservation.

### 1.7.3.5 CREATE AND QUEUE RESERVATION ORDER WITH UPDATED PENDING VALUE

Task Ref: **CLM.TR.CLM.LIQR.040**

<b>Id</b>	CLM.UR.CLM.LIQR.040.010
<b>Name</b>	Processing if not enough liquidity is available
<b>Description</b>	<p>In case not enough liquidity is available, CLM shall:</p> <ul style="list-style-type: none"><li>• Reserve the liquidity available on the account;</li><li>• Notify CRDM that the total amount could not be reserved; and</li><li>• Queue the remaining reservation request.</li></ul>

<b>Id</b>	CLM.UR.CLM.LIQR.040.020
<b>Name</b>	Process pending reservation request
<b>Description</b>	<p>In case of an increase of the available liquidity, an asynchronous resolving process shall attempt to process the pending reservation request.</p> <p>Even if the increase of the available liquidity is not sufficient for the complete processing, the pending reservation shall be processed partly (the pending reservation shall be decreased and the existing reservation shall be increased).</p> <p>New reservation requests related to the participant's MCA shall replace pending reservation requests.</p>

<b>Id</b>	CLM.UR.CLM.LIQR.040.030
<b>Name</b>	Create and release inter-service liquidity transfers
<b>Description</b>	<p>In case of a pending reservation request, CLM shall automatically trigger a liquidity transfer with the missing amount from the participant's default RTGS DCA to the same participant's MCA. The respective liquidity transfer shall be placed on top of the queue of all pending payments and liquidity transfers on the RTGS DCA.</p> <p>If only a partial settlement of the liquidity transfer is possible, then CLM shall execute the liquidity transfer and shall create a new liquidity transfer order for the remaining part that shall be queued in the RTGS settlement service until it can be entirely processed.</p>

1.7.3.6 STOP PROCESSING OF ORIGINAL RESERVATION ORDER

Task Ref: **CLM.TR.CLM.LIQR.050**

<b>Id</b>	CLM.UR.CLM.LIQR.050.010
<b>Name</b>	Automatic stopping of the pending reservation request during the End of Day processing
<b>Description</b>	<p>If the reservation request is pending by the end of the day, CLM shall stop the processing of the reservation request during the End of Day processing.</p> <p>A notification shall be sent to CRDM to inform on the halt of the reservation request processing.</p>

1.7.3.7 UPDATE DEFINED VALUE

Task Ref: **CLM.TR.CLM.LIQR.060**

<b>Id</b>	CLM.UR.CLM.LIQR.060.010
<b>Name</b>	Update defined value
<b>Description</b>	<p>In case enough liquidity is available, CLM shall reserve the requested liquidity for the requested reservation type.</p> <p>CLM shall send a notification to CRDM to inform that the total amount could be reserved.</p>

## 2 NON-FUNCTIONAL REQUIREMENTS FOR THE CENTRAL LIQUIDITY MANAGEMENT

### 2.1 AVAILABILITY

<b>Id</b>	CLM.UR.NFR.ALL.010
<b>Name</b>	System Opening Hours
<b>Description</b>	The CLM shall be opened 02:30-00:30 on business days.

<b>Id</b>	CLM.UR.NFR.ALL.020
<b>Name</b>	Unplanned Downtime
<b>Description</b>	Unplanned downtime, calculated on a quarterly basis, shall not exceed xxxx hours, equivalent to an availability of xxxx%.

The CLM service may be subject to incidents or failures, which may cause a temporary and unforeseen interruption of the service. Regardless of the total number of such unplanned interruptions, the overall amount of service unavailability time calculated on a quarterly basis shall not exceed xxxx hours.

<b>Id</b>	CLM.UR.NFR.ALL.030
<b>Name</b>	Planned Downtime
<b>Description</b>	The CLM will provide a maintenance window between 00:30 and 02:30.

On TARGET2 opening days a maintenance window of at max two hours is foreseen for any kind of technical or functional maintenance.

## 2.2 DISASTER RECOVERY

<b>Id</b>	CLM.UR.NFR.ALL.040
<b>Name</b>	Recovery Point Objective
<b>Description</b>	The CLM shall ensure a recovery point objective value of zero in case of site failures. In case of a loss of a complete region the RPO shall not exceed two minutes.

The recovery point objective (RPO) is a point of consistency to which a user wants to recover or restart the service. It is measured as the amount of time between the moment when the point of consistency was created and the moment when the failure occurred.

The CLM ensures synchronous point of consistency creations and, as a consequence, no data loss in case of failures, unless the service can't be restarted in the same region and a failover to the backup-region has to be conducted. In this case a data loss of two minutes will be tolerated.

<b>Id</b>	CLM.UR.NFR.ALL.050
<b>Name</b>	Recovery Time Objective
<b>Description</b>	The CLM shall ensure a recovery time objective value of one hour in case of site failures. In case of a loss of a complete region the RTO shall not exceed two hours.

The recovery time objective (RTO) is the maximum amount of time required for recovery or restart of the service to a specified point of consistency. In case of a site failure, CLM shall ensure maximum time of unavailability of one hour starting from the time when the decision to restart the service is made up to the time the service is restored. In case of a major failure or a regional disaster, CLM shall ensure maximum time of unavailability of two hours starting from the time when the decision to restart the service is made up to the time the service is restored.

## 2.3 PERFORMANCE REQUIREMENTS

<b>Id</b>	CLM.UR.NFR.ALL.060
<b>Name</b>	Response Time Goals
<b>Description</b>	CLM shall process xxxx% of the transactions in under xxxx minutes and xxxx% of the transactions in under xxxx minutes.



<b>Id</b>	CLM.UR.NFR.ALL.070
<b>Name</b>	Peak Workload per second
<b>Description</b>	CLM shall be able to process xxxx transactions per second, enduring the peak load for at least xxxx minutes.

<b>Id</b>	CLM.UR.NFR.ALL.080
<b>Name</b>	Upward Scalability
<b>Description</b>	CLM shall be scalable to handle: <ul style="list-style-type: none"><li>• A xxxx% higher workload within xxxx minutes; and</li><li>• A xxxx of the workload within xxxx.</li></ul>

In the course of the service's lifecycle the number of transactions to be handled might change due to market changes or adapted business behaviour. CLM must be scalable to handle higher throughputs in order to cope with e.g. short-term market shocks and foreseeable increases.

<b>Id</b>	CLM.UR.NFR.ALL.090
<b>Name</b>	No Degradation of Service Level
<b>Description</b>	CLM shall scale linear.

CLM shall scale linear. This means that there shall be no degradation of the response time due to higher workload.

### 3 USER INTERACTION

The objective of this section is to provide the user requirements related to user interactions covering the usage of U2A or A2A mode. A Graphical User Interface (GUI) would be provided, offering functionalities to access information in U2A mode.

These requirements do not imply any particular consideration with regard to design and the implementation of the actual screens.

#### 3.1 GENERAL USER REQUIREMENTS FOR USER INTERACTION

##### 3.1.1 Query

<b>Id</b>	CLM.UR.ALL.UI.010
<b>Name</b>	Query Audit Trail
<b>Description</b>	All services shall provide the functionality to query the modified data at the attribute level, the user performing the change and the timestamp of the change through U2A and A2A interface.

<b>Id</b>	CLM.UR.ALL.UI.020
<b>Name</b>	Query System time
<b>Description</b>	All services shall provide the functionality to query system time to align the time of a connected application through an application-to-application interface (A2A).

##### 3.1.2 Action

<b>Id</b>	CLM.UR.ALL.UI.030
<b>Name</b>	Confirm/Reject Task(s)
<b>Description</b>	All services shall provide the functionality to confirm/reject task(s) through the U2A and A2A interfaces.

<b>Id</b>	CLM.UR.ALL.UI.040
<b>Name</b>	Act on behalf
<b>Description</b>	All services shall provide the functionality to act on behalf through U2A and A2A interfaces for: <ul style="list-style-type: none"><li>• Central Banks, to act on behalf of any party belonging to their banking community</li><li>• The Operator, to act on behalf of any party</li></ul>

<b>Id</b>	CLM.UR.ALL.UI.050
<b>Name</b>	Access rights
<b>Description</b>	All services shall ensure that a user can only access functionality and data that is allowed by the access rights granted to the user through the Roles and Privileges associated with the user.

<b>Id</b>	CLM.UR.ALL.UI.060
<b>Name</b>	Four-eyes (confirm, revoke, amend)
<b>Description</b>	All services shall provide the functionality to use four-eyes approval, allowing the authoriser to confirm, revoke or amend.

## 3.2 USER INTERACTION FOR THE CENTRAL LIQUIDITY MANAGEMENT

### 3.2.1 Query

All described queries in this section shall be provided in U2A and A2A mode unless otherwise stated. The selection criteria of a query shall be deducted from scope of the user, if they are not explicitly mentioned.

<b>Id</b>	CLM.UR.CLM.UI.010
<b>Name</b>	Query Transactions
<b>Description</b>	<p>The CLM service shall provide the functionality to query the status and details of all transactions on the Main Cash Account (MCA). The user shall specify at least one of the following mandatory selection criteria. In addition the query shall allow the user to specify any combination of mandatory or optional selection criteria.</p> <p><u>The following transaction types can be queried:</u></p> <ul style="list-style-type: none"> <li>• Payments</li> <li>• Overnight Deposit</li> <li>• Marginal Lending</li> <li>• Liquidity Transfer</li> <li>• Credit Line</li> </ul> <p><u>Mandatory selection criteria:</u></p> <ul style="list-style-type: none"> <li>• MCA account number</li> <li>• Party BIC</li> <li>• Entry date or range of date (current business day as default)</li> </ul> <p><u>Optional selection criteria:</u></p> <ul style="list-style-type: none"> <li>• Message type</li> <li>• Transaction Reference</li> <li>• Value Date (from-to)</li> <li>• Debit/Credit</li> <li>• Specific amount or amount range (from - to)</li> <li>• Priority</li> <li>• Payment Type</li> <li>• Execution Date</li> <li>• Error Code (U2A)</li> <li>• Business Relation (U2A)</li> <li>• Status</li> <li>• Counterparty Country</li> </ul> <p>The query shall return all business attributes of the transaction, including its processing status.</p>

<b>Id</b>	CLM.UR.CLM.UI.020
<b>Name</b>	Query Reservations
<b>Description</b>	<p>The CLM service shall provide the functionality to query all reservations on the MCA.</p> <p>The query shall return all reservation set up information for the current business day, including:</p> <ul style="list-style-type: none"><li>• Party BIC</li><li>• Party Name</li><li>• MCA number</li><li>• Value of Highly Urgent reservation</li><li>• Value of Urgent reservation</li><li>• Value of pending Highly Urgent reservation</li><li>• Value of pending Urgent reservation</li></ul>

<b>Id</b>	CLM.UR.CLM.UI.030
<b>Name</b>	Query Available Liquidity
<b>Description</b>	<p>The CLM service shall provide the functionality to query the available liquidity on all accounts. The user shall specify the following mandatory selection criteria.</p> <p>The query shall return all relevant information about available liquidity for all services, including:</p> <ul style="list-style-type: none"><li>• Party BIC</li><li>• Balance on MCA</li><li>• Credit Line on MCA</li><li>• Balance on RTGS DCA</li><li>• Balance on TIPS DCA</li><li>• Balance on T2S DCA</li><li>• SF accounts (Marginal Lending and Overnight Deposit)</li><li>• Collateral value for available collateral in T2S</li><li>• Pending transactions (Debits and Credits)</li><li>• Settled transactions (Debit and Credits)</li><li>• Aggregated View on CLM</li></ul> <p>If the user selects a specific banking group, the function shall return details of the available liquidity of a banking group. Further, if the user select a group of account, the query shall return information about the available liquidity of a group of accounts.</p>

<b>Id</b>	CLM.UR.CLM.UJ.040
<b>Name</b>	Query Minimum Reserve
<b>Description</b>	<p>The CLM service shall provide the functionality to query the minimum reserve information. The information should be aggregated by service. The user shall specify at least one of the following mandatory selection criteria.</p> <p><u>Mandatory selection criteria:</u></p> <ul style="list-style-type: none"><li>• Party BIC</li><li>• Party Name</li></ul> <p>The query shall return all business attributes of the minimum reserve requirement including its fulfilment for the current maintenance period: including:</p> <ul style="list-style-type: none"><li>• Party BIC</li><li>• Party Name</li><li>• Account</li><li>• Current Maintenance Period</li><li>• Value of Minimum Reserve</li><li>• Value of Running Average</li></ul>

<b>Id</b>	CLM.UR.CLM.UI.050
<b>Name</b>	Query Account Statement
<b>Description</b>	<p>The CLM service shall provide the functionality to query an account statement. The user shall specify at least one of the following mandatory selection criteria. In addition the query shall allow the user to specify any combination of mandatory or optional selection criteria.</p> <p><u>Mandatory selection criteria:</u></p> <ul style="list-style-type: none"><li>• Party BIC</li><li>• Party Name</li><li>• Cash Account Number</li></ul> <p><u>Optional selection criterion:</u></p> <ul style="list-style-type: none"><li>• Entry date or range of date (current business day as default)</li></ul> <p>The query shall return all business attributes of the account statement.</p> <p>This query shall only be provided in U2A mode because the available corresponding A2A report should be used as default. Therefore, it should be checked that one participant is using either the A2A report or the U2A query.</p>

<b>Id</b>	CLM.UR.CLM.UI.060
<b>Name</b>	Query to request a copy of a Report on Account Statement
<b>Description</b>	<p>The CLM service shall provide the functionality to request a copy of a Report on Account Statement through U2A and A2A interface. The user shall specify at least one of the following mandatory selection criteria.</p> <p><u>Mandatory selection criteria:</u></p> <ul style="list-style-type: none"><li>• Party BIC</li><li>• Party Name</li><li>• Cash Account Number</li></ul> <p><u>Optional selection criterion:</u></p> <ul style="list-style-type: none"><li>• Entry date or range of date (current business day as default)</li></ul> <p>The query shall return all business attributes of the account statement.</p>



### 3.2.2 Action

<b>Id</b>	CLM.UR.CLM.UI.070
<b>Name</b>	Amend Immediate Reservation
<b>Description</b>	The CLM service shall provide the functionality to modify an Immediate Reservation through U2A and A2A interface for the Main Cash Account (MCA).

<b>Id</b>	CLM.UR.CLM.UI.080
<b>Name</b>	Creation of Immediate Liquidity Transfer
<b>Description</b>	The CLM service shall provide the functionality to create an Immediate Liquidity Transfer through U2A and A2A interface for the Main Cash Account (MCA).

<b>Id</b>	CLM.UR.CLM.UI.090
<b>Name</b>	Revoke transaction
<b>Description</b>	The CLM service shall provide the functionality to revoke a transaction through U2A and A2A interface for the Main Cash Account (MCA).

<b>Id</b>	CLM.UR.CLM.UI.100
<b>Name</b>	Creation of Overnight Deposit
<b>Description</b>	The CLM service shall provide the functionality to create an Overnight Deposit request through U2A and A2A interface for the Main Cash Account (MCA).

## 4 BUSINESS DATA DEFINITIONS

### 4.1 ENTITIES AND ATTRIBUTES

The following Entities are referred to within the User Requirements Document for Central Liquidity Management but are defined in the User Requirements Document for Shared Services as they are also referred to elsewhere:

- ▶ Party
- ▶ Party Name
- ▶ Party Address
- ▶ Party Code
- ▶ Banking Group
- ▶ Limit
- ▶ Cash Account
- ▶ Payment
- ▶ Liquidity Transfer
- ▶ Standing Order
- ▶ Direct Debit Instruction
- ▶ Reservation
- ▶ Standing Order for Reservation
- ▶ Whitelist
- ▶ Report Subscription
- ▶ Message Subscription
- ▶ Scheduled Event
- ▶ Currency
- ▶ SWIFT BIC Directory
- ▶ Service
- ▶ User
- ▶ Distinguished Name
- ▶ Role
- ▶ Privilege

- ▶ Access Rights

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