IPS BUSINESS PROCESS USE CASES FULL SET

Buna – An Arab Regional Payment Platform

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Document information

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Document Revision History

Date	Author	Version	Change Reference
2020-05-25	CMA Small Systems AB	0.1	Initial Draft
2020-06-01	DXC	0.2	First review
2020-06-02	CMA Small Systems AB	0.3	IPS-PM-15 «IPS Final Settlement» - camt.053 sending was added IPS-LIQ-05 «Request Position IPS account Debit cap value» - new Use case was added
2020-06-09	DXC	0.4	Review
2020-06-15	CMA Small Systems AB	0.5	DXC comments were applied
2020-06-17	CMA Small Systems AB	0.6	Improvements applied after joint discussion
2020-06-24	DXC	1.0	Submission to AMF
2020-07-06	CMA Small Systems AB	1.1	Responses on AMF comments Use Cases: • Use Case CAS-REG-04: One-step Customer registration • Use Case CAS-REG-05: One-step Alias and Account registration • Use Case CAS-REG-06: Bulk upload of CAS information to DBO • Use Case IPS-CONS-01: • Use Case IPS-CONS-01: Request pre-validation and information from Counterparty for a single transfer • **Error! Reference source not found.** • **Error! Reference source not found.** • Use Case IPS-ETRAC-01: Report on Payment Status to the End-to-End Tracker Service • Use Case IPS-ETRAC-02: Request a Payment Status from the End-to-End Tracker Service • Use Case IPS-ETRAC-03: End-To-End Tracker in Proxy mode Were added • Use Case IPS-PM-02: IPS transaction automated timeout rejection for cases with authorization was changed

2020-08-24	CMA Small Systems AB	1.2	Corrections regarding to the DXC comments
2020-09-06	DXC	1.3	Clean version for second Buna review
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2020-10-11	CMA Small Systems AB	2.1	Updated version after joint online discussion with AMF
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2020-10-13	CMA Small Systems AB, DXC	2.4	Updated version after internal CMA checks and validations
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2020-11-13	CMA Small Systems AB	3.3	Updated version after Workshops
2020-12-08	CMA Small Systems AB	3.4	Batch splitting was added
2020-12-25	CMA Small Systems AB	3.5	UC part was removed from Use Cases names
2021-04-15	CMA Small Systems AB	4.0	• PSP was renamed to NSP • Timeout 1 was removed • Use Case IPS-LIQ-01: Manual top-up (increase) of Settlement limit account Debit cap was changed
2021-05-31	CMA Small Systems AB	4.2	• Use Case IPS-LIQ-06: «Top-up (increase) of Settlement limit account Debit cap after foreign exchange support operation» was added • Use Case IPS-PM-06: «Batch payments from RTGS account holder/NSP» was clarified
2021-06-22	CMA Small Systems AB	4.3	Use Case IPS-LIQ-06: «Top-up (increase) of Settlement limit account Debit cap after foreign exchange support operation» was extended
2021-07-22	CMA Small Systems AB	4.4	Use Case IPS-LIQ-01: «Manual top-up (increase) of Settlement limit account Debit cap» was changed was enriched with Funds/account status check Use Case IPS-LIQ-03: «Settlement limit account withdrawal (decrease)» was enriched with account status check
2021-08-05	CMA Small Systems AB	4.5	Use Case IPS-PM-15 «IPS Final Settlement». SLA account owners

				were added as addressees of account balance reports.
2021-08-24	DXC review + CMA Small Systems AB	4.6		Typos in the links were fixed
2021-10-07	CMA Small Systems AB	4.7		Use case IPS-CONS-01«Request pre-validation and information from counterparty for a single transfer» was updated according to the API specification. Use Case IPS-CONS-02 «Request pre-validation and information from counterparty for a batch» was deleted because of Batch split functionality
2022-10-06	CMA Small Systems AB	4.8		Use Case IPS-LIQ-06: Top-up (increase) of Settlement limit account Debit cap after foreign exchange support operation was moved to RTGS use cases document
2022-10-12	CMA Small Systems AB	4.9		Use Case IPS-CONS-03: Request exchange rate from the FX Provider was moved to RTGS use cases document

Distribution List

No.	Name	Position	Comment
1	BUNA <BUNA@amf.org.ae>		

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GLOSSARY

Abbreviation or term	Description
AMF	Arab Monetary Fund
Buna	Arab regional payment system
CAS	Central Addressing Scheme
CBS	Core Banking System
CEB	Central Banks, who are within the same country as a participant of Buna. Regulatory authority institutions for Direct Participants. They can also act as a Direct Participant sending their payments to the system
Direct Participant (DP)	Participant, registered at Buna with type "Direct Participant", having an account at Buna. Central Banks, should they choose to do so, may also be Direct Participants in Buna, submitting cross-border payments on their behalf or on behalf of their local market participants
EOD	End Of Day
FHI	Fund holding institution. It will be the Central Bank of issuance of a currency supported by Buna, if the currency passes Buna eligibility criteria. Where this is not possible (i.e. currencies outside the Arab region), commercial banks will be utilized as the fund holding institution
FX Provider	External Provider of Foreign Exchange rates
IPS	Instant Payments System
Non-Settlement Participant (NSP)	Financial or Non-Financial Institution having only Position account at Buna IPS. Uses RTGS account of Buna Direct Participant to cover IPS payment processing.
RTP	Request to Pay. The Request to Pay (RtP) feature allows any business or individual, wishing to receive a payment, to send an electronic request for that payment to the debtor account. The RtP is a new proposition designed to give consumers and businesses further flexibility when making payments and provides more control over and visibility over their cash flow.
SA	Settlement account
SOD	Start Of Day
Sponsored institution	Participant without account at Buna RTGS in current section having only Position account
Sponsoring bank	Buna RTGS DP having Settlement limit account at Buna IPS, who covers Payments on Position Account of the Participant without account at Buna RTGS in current section.
Settlement limit	Debit Cap on Settlement limit account

ASSUMPTIONS

All Use Cases below are described in the assumption that Parties involved in Use Cases support:

- IPS messaging via SWIFT network for individual transactions and for batches
- API calls as Service requestor via SWIFT network
- API calls as Service providers via SWIFT network (where necessary for IPS Proxy services and API Push mode))). Connectivity through VPN via API Gateway functions infrastructure should be ready and participants should be able to provide appropriate responses on API Gateway requests if VPN channel is eligible for this Participant.

1 ACCOUNT TOPOLOGY

1.1 ACCOUNTING SCHEME
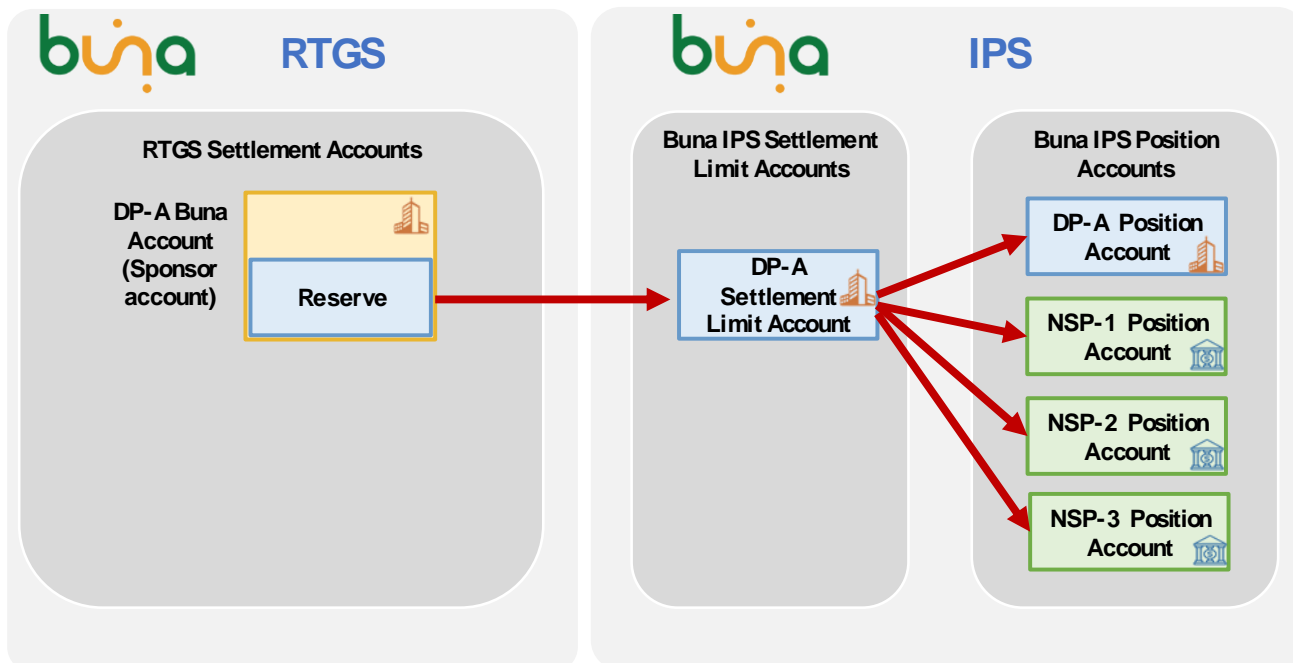
Figure 1: IPS Accounting scheme

IPS Settlement limit accounts can be opened for RTGS account holder only.
Debit cap (limit) of this account synchronizes with the Reserve for IPS operations on RTGS
Settlement Account.
Balance = Sum of IPS account positions.

Position accounts could be opened for RTGS account holders and Non-Settlement Participants
(not having RTGS account in Buna).
Position accounts has:
- Debit cap – limit of IPS operations for this account
- Position – positive or negative result of IPS operations
- Available Position = Debit cap + Position

Posting on Position accounts and settlement limit accounts will be done immediately after
successful processing of each IPS transaction.

Final Settlement on RTGS accounts will be done at cut-off times (several times during RTGS
working time).

2 BUSINESS PROCESS USE CASES LIST

2.1 PAYMENT PROCESSING USE CASES

ID	Name	Role
IPS-PM-01	Single Credit Transfer (with authorization by Counterparty) from RTGS account holder	Direct Participant, Non-Settlement Participant
IPS-PM-02	IPS transaction automated timeout rejection for cases with authorization	Direct Participants, Non-Settlement Participant
IPS-PM-03	Single Credit Transfer (without authorization by Counterparty) from RTGS account holder	Direct Participants, Non-Settlement Participant
IPS-PM-04	Single Credit Transfer (with authorization by Counterparty) from Non-Settlement Participant	Direct Participants, Non-Settlement Participant
IPS-PM-05	Single Credit Transfer (without authorization by Counterparty) from Non-Settlement Participant	Direct Participants, Non-Settlement Participant
IPS-PM-06	Batch payments (without authorization by Counterparty, one-to-one aggregation on IPS Participant level) from RTGS account holder	Direct Participants, Non-Settlement Participant
IPS-PM-07	Batch payments (without authorization by Counterparty, one-to-one aggregation on IPS Participant level) from Non-Settlement Participant	Direct Participants, Non-Settlement Participant
IPS-PM-08	RTP from Creditor to Debtor	Direct Participants, Non-Settlement Participant
IPS-PM-09	Request for Return	Direct Participants, Non-Settlement Participant
IPS-PM-10	Return payments from RTGS account holder	Direct Participants, Non-Settlement Participant
IPS-PM-11	Return payments from Non-Settlement Participant	Direct Participants, Non-Settlement Participant
IPS-PM-12	Payment Validation	Buna IPS
IPS-PM-13	Threshold check	Buna IPS
IPS-PM-14	Non-payment message validation	Buna IPS
IPS-PM-15	IPS Final Settlement	Buna IPS, Buna RTGS

2.2 LIQUIDITY MANAGEMENT USE CASES

ID	Name	Role
IPS-LIQ-01	Manual top-up (increase) of Settlement limit account Debit cap	Direct Participants
IPS-LIQ-02	Automatic top-up (increase) of Settlement limit account Debit cap	Direct Participants
IPS-LIQ-03	Settlement limit account withdrawal (decrease).	Direct Participants
IPS-LIQ-04	Position IPS account Debit cap set up	Direct Participants, Non-Settlement Participant

IPS-LIQ-05	Request the Position IPS account Debit cap value	Direct Participants, Non-Settlement Participant

2.3 CENTRAL ADDRESSING SCHEME USE CASES

2.3.1 Customer, Aliases and Accounts Registration Use Cases.

ID	Name	Role
CAS-REG-01	Register customer information	Participant's application
CAS-REG-02	Account registration	Participant's application
CAS-REG-03	Alias registration	Participant's application
CAS-REG-04	One-step Customer registration	Participant's application
CAS-REG-05	One-step Alias and Account registration	Participant's application
CAS-REG-06	Bulk upload of CAS information to DBO	Participant's application

2.3.2 Central addressing scheme. Management and Control of Customer data, Aliases and Accounts Use Cases.

ID	Name	Role
CAS-MAN-01	Suspend customer	Participant's application
CAS-MAN-02	Activate customer	Participant's application
CAS-MAN-03	Delete customer	Participant's application
CAS-MAN-04	Update customer information	Participant's application
CAS-MAN-05	Update alias	Participant's application
CAS-MAN-06	Delete alias	Participant's application
CAS-MAN-07	Suspend alias	Participant's application
CAS-MAN-08	Activate alias	Participant's application
CAS-MAN-09	Link alias and account	Participant's application
CAS-MAN-10	Unlink alias and account	Participant's application
CAS-MAN-11	Update account	Participant's application
CAS-MAN-12	Define "To be used by default" Account for Alias	Participant's application
CAS-MAN-13	Delete account	Participant's application

2.3.3 Central addressing scheme. Payment and RTP initiation Use Cases.

ID	Name	Role
CAS-PMT-01	Get default account by alias	Participant's application
CAS-PMT-02	Get the list of accounts by alias	Participant's application

2.3.4 Central addressing scheme. Access to Customer data Use Cases.

ID	Name	Role
CAS-MON-01	Get customer information	Participant's application
CAS-MON-02	Get customer aliases	Participant's application
CAS-MON-03	Get customer accounts	Participant's application
CAS-MON-04	Get account and customer info	Participant's application
CAS-MON-05	Get account information	Participant's application

CAS-MON-06	Get alias information	Participant's application
CAS-MON-07	Get aliases linked to account	Participant's application
CAS-MON-08	Get accounts linked to alias	Participant's application

2.4 END-TO-END TRACKER USE CASES

ID	Name	Role
IPS-ETRAC-01	Report on Payment Status to the End-To-End Tracker Service	Participant's application
IPS-ETRAC-02	Request a Payment Status from the End-To-End Tracker Service	Participant's application
IPS-ETRAC-03	End-To-End Tracker in Proxy mode	Participant's application

2.5 PRE-VALIDATION AND CONSULTATION SERVICE USE CASES

ID	Name	Role
IPS-CONS-01	Request pre-validation and information from Counterparty for a single transfer	Participant's application

2.6 MESSAGE TYPES

2.6.1 The incoming messages processed by the system

MX ISO 20022	Description
pacs.008	Single customer credit transfer
pacs.008	File with many single customer credit transfers inside
pacs.002	Payment Authorization
pain.013	Request to pay
pain.014	RTP status
pacs.004	Return payment
camt.056	Request for return
camt.029	Request for return approval/ rejection message
camt.011	Request to change Debit cap
camt.050	Request to increase reserve
camt.051	Request to decrease reserve
camt.009	Request of Position account Debit cap

2.6.2 The outgoing messages created by the system

MX ISO 20022	Description

pacs.008	Single customer credit transfer
camt.025	Processing error/Success notification
pacs.002	Payment Status
admi.002	Message rejection
pain.013	Request to pay
pain.014	RTP status
pacs.004	Return payment
camt.029	Request for return approval/ rejection message
camt.056	Request for return
camt.052	Notification about top-up needed
camt.010	Confirmation of Debit cap change/Current Debit cap value/Notification about top-up needed
pacs.009	Interbank Payment
camt.054	Debit confirmation
camt.053	Account statement

2.7 ERROR MESSAGES – TYPES TO ERROR CASES LINKS

MX Type	Error case
admi.002	Format error (xml structure), low level transport errors
camt.025	System can't create incoming document or transaction
pacs.002	Error after creation of incoming message or transaction
camt.029	In a case of unsuccessful validation of Request for return
pain.014	Rejection for request to pay

3 USE CASES SCHEMES NOTATION DESCRIPTION

The following legend will be used to describe all of the business process use cases.

Participant prepared payment message ⬤	Event triggered start of the process
Payment succeeded ⬤	Successful end of process
payment failed Ⓧ	Failed end of process
1. Block Customer funds	System function processed automatically – success flow
ER1. Send Refusal message	System function processed automatically – error flow
Author watches a report	Manual action of a user
1. Sub-process Validation	Process, described in another use case (because it is similar for many use cases). It's a part of current process.
⟶	Link from one step of business process to another
⇢	Link from step of business process to document
⇢	Link from step of business process to optional document
⟶◯	Go to another business process
Success Notification	Document
Account Statements	Set of Documents
◆	Gateway for choice of next step for different conditions
🕐	Timer or waiting for some event
Success Notification	Optional Document (according to the settings)

Figure 2: Use Cases Scheme Notation Description

4 BUSINESS PROCESS USE CASES

4.1 GENERIC FLOW

Overall description of IPS data flow
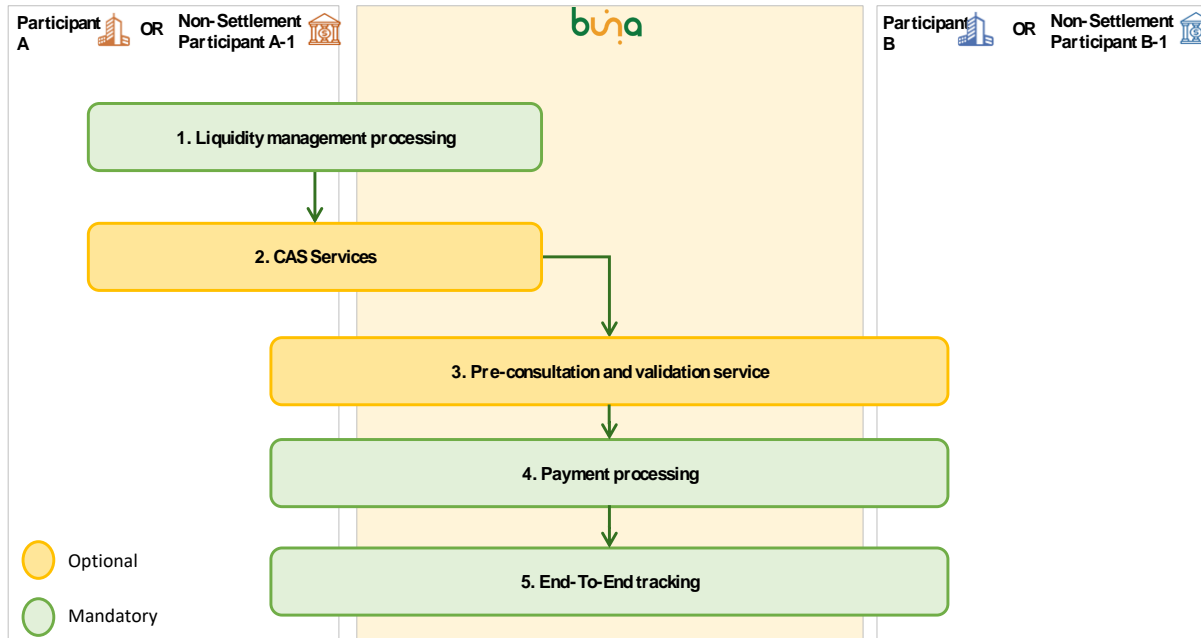
Figure 3: Overall description of IPS data flow

1. Before starting sending payments Buna IPS participant (Participant having settlement account at Buna RTGS or Non-Settlement Participant) has to ensure that it has enough funds for payment processing on its Position account.

Buna RTGS Participant – Sponsor of Position account has to ensure that it has enough funds for payment processing on its Settlement limit account.
For the details please refer to 4.3 Liquidity Management Use Cases
In case when threshold will be reached notification will be sent to Buna IPS Participant: 4.2.12
Use Case IPS-PM-13: Threshold check

2. Customers, accounts and aliases involved in Payments processing can be registered in Buna CAS module to make process of receiving customer's account data easier. This flow is optional, as bank can receive customer's account codes from other sources.

For the details please refer to 4.4 Central Addressing Scheme

3. Before sending a payment Buna IPS Participant A or NSP A (payment sender) could request information from the Participant B or NSP B or from FX provider. This informational request could be regarding fee costs that will be taken for Single transfer or Batch payment or regarding Exchange rate.

This flow is optional. Could not be used.
For the details please refer to 4.6 Pre-Validation and Consultation Service Use Cases

4. Buna IPS scope contains processing of payment types:
   - Single credit transfer with authorization by counterparty
   - Single credit transfer based on RtP – without authorization by counterparty
   - Batch payments - with a batch split functionality
   - Return payment (based on Request for return and on Original Payment's receiver initiative)

Final settlement for IPS obligations happens at BUNA RTGS after end of IPS session.

For the details please refer to 4.2 Payment processing Use Cases

5. Buna End-To-End tracker allows to report end request payment final status (crediting of End customer).

For the details please refer to 4.5 End-To-End Tracker Use Cases

Processing principles:
IPS Payments will be processed with the Priority = 100.
IPS Payments will be processed in Settle or Reject mode. In case of lack of funds payment will be rejected.
In case of Participant is suspended payment will be rejected.

4.2 PAYMENT PROCESSING USE CASES

4.2.1 Use Case IPS-PM-01: Single Credit Transfer (with authorization by Counterparty) from RTGS account holder
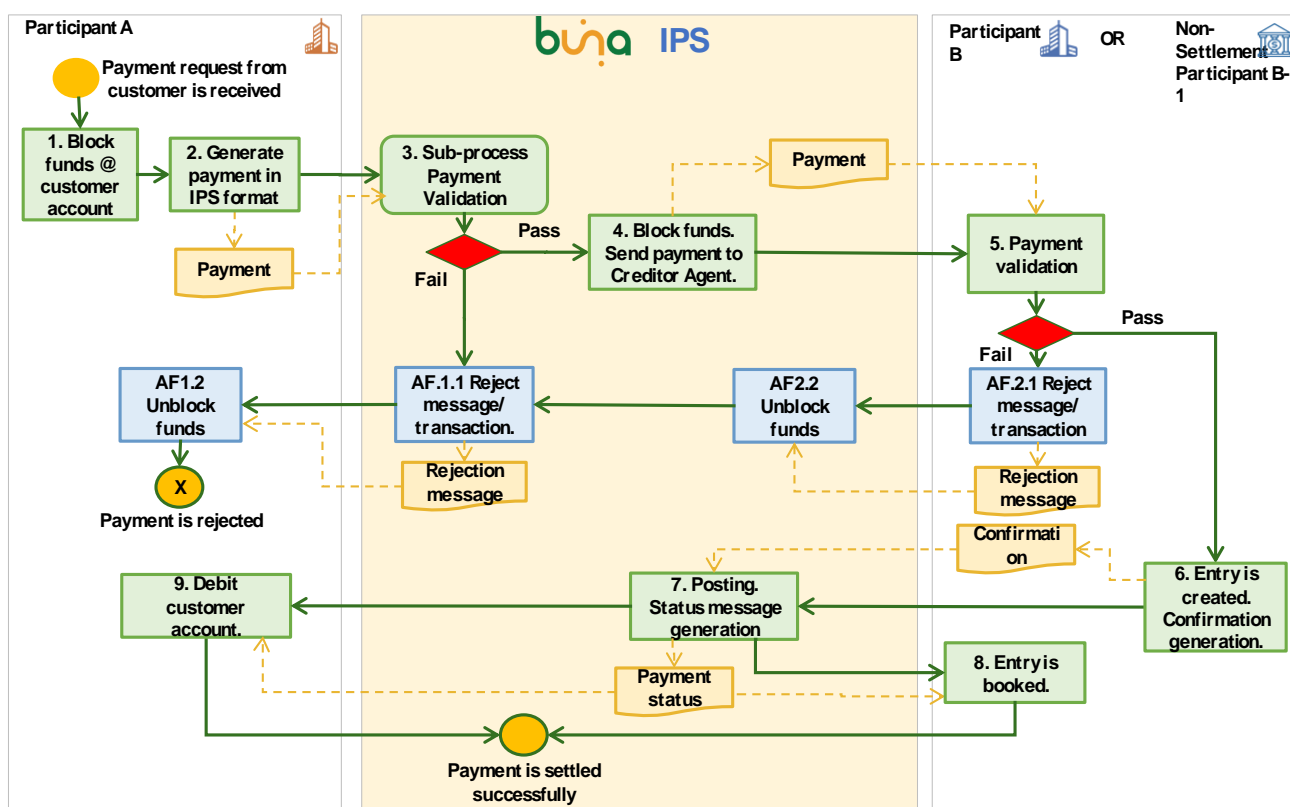
Figure 4: Single Credit Transfer (with authorization by Counterparty) from RTGS account holder

Use Case ID	**IPS-PM-01**
Use Case Name	Single Credit Transfer (with authorization by Counterparty) from RTGS account holder
Use Case Description	Single Credit Transfer (with authorization by Counterparty) from RTGS account holder (Instructing Agent) to other Buna Direct Participant or Non-Settlement Participant (Instructed Agent)
Primary Actors	Direct Participants, Non-Settlement Participant, Buna IPS
Trigger Event	Buna Direct Participant A (Instructing Agent) received Customer's IPS payment request via own channel
Use Case Business Rules	

- **Participants shall submit the payments after checking that the IPS instruction meets all its processing conditions (e.g., originator authentication and authorization, and availability of funds) and that the submitted participant's IPS request meets all the mandatory attributes for interbank processing.**

- **Buna IPS shall reject payment transactions if no sufficient funds are available.**

- **Buna IPS will post payment transactions immediately and shall not queue or hold payment transactions for later processing.**

- **Future dated payments are not allowed**

- **Buna IPS will temporarily queue transactions only if the maximum capacity of transactions processing has been reached. The queued transactions will automatically be processed on a first in first out basis as long as they do not exceed the time execution window set. If they exceed the execution window, the transactions will be rejected.**

- **Buna IPS will post payment transactions individually, without netting.**

- **Buna IPS will post the instructed amount with finality on Buna IPS accounts. Posting will be irrevocable.**

- **Buna IPS will post payment transactions directly after a successful validation of a positive receiving participant reply message.**

- **Buna IPS will always settle for the full amount as specified in the payment transaction.**

- **Buna IPS shall confirm the posting of transactions via payment confirmation messages to sender and receiver participants.**

- **Buna IPS will not support any recalls instead the Request for Return is supported (for details refer to section 4.2.8 Use Case IPS-PM-09: Request for Return). Request for return could also be requested through the inquery and communication module in Buna Portal.**

- **Final Settlement on RTGS accounts will be done at the end of IPS session.**

Pre-Conditions
Buna Direct Participant A (Instructing Agent) has an RTGS settlement account, a settlement limit account and a position account.   **Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) has at least a position account.**
Post Conditions
Payment is posted successfully

	Basic Flow
1	Buna Direct Participant A (Instructing Agent) accepts the payment request from its customer. Activities for this step include necessary validations of customer entered data (in CBS) and choice of Creditor account. Instructing Agent gets default account of Creditor from CAS (Use Case CAS-PMT-01: Get default account by alias) or list of accounts to represent them for customer's choice (Use Case CAS-PMT-02: Get the list of accounts by alias). After choosing the account CBS blocks funds required for payment processing till payment completion.
2	Buna Direct Participant A generates a payment in IPS format (pacs.008) and sends the payment to BUNA IPS.
3	Execute sub-process «Payment Validation» (Use Case IPS-PM-12: Payment Validation): • Passed - go to 4; • Failed- go to AF1.
4	Buna IPS blocks payment amount at the Participant A position account and sends the payment to the Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent).
5	The payment is delivered to Instructed Agent. The Instructed Agent performs validation of the payment: • Passed - go to 6; • Failed- go to AF2.
6	CBS of Instructed Agent creates entries and a payment confirmation notification, sends the payment confirmation notification (pacs.002) to Buna IPS
7	Buna IPS (in case the confirmation is received before timeout): • applies payment to the positions of the counterparties and settlement limit account

	• notifies counterparties on current status of the payment (pacs.002).
	But if confirmation from Instructed Agent is received after timeout execute Use Case IPS-PM-02: IPS transaction automated timeout rejection for cases with authorization
8	CBS of Instructed Agent finalizes entries. Customer account is credited.
9	CBS of Instructing Agent debits customer account.
	Alternate Flows
AF1	**Payment validation is failed at Buna IPS**
1	Buna IPS creates a rejection message (pacs.002 or camt.025 or admi.002) to Participant A
2	Rejection message is delivered to Participant A's CBS, customer's funds are unblocked
AF2	**Payment validation is failed at Instructed Agent's side**
1	Instructed Agent creates a rejection message (pacs.002) and sends it to Buna IPS
2	Buna IPS unblocks funds. Go to AF1

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant	pacs.008	Single Customer credit transfer
Buna Direct Participant, Non-Settlement Participant	pacs.002	Payment Authorization

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	pacs.008	Single Customer credit transfer
Buna Direct Participant	camt.025	Processing error
Buna Direct Participant, Non-Settlement Participant	pacs.002	Status of transfer
Buna Direct Participant	admi.002	Message rejection

4.2.2 Use Case IPS-PM-02: IPS transaction automated timeout rejection for cases with authorization
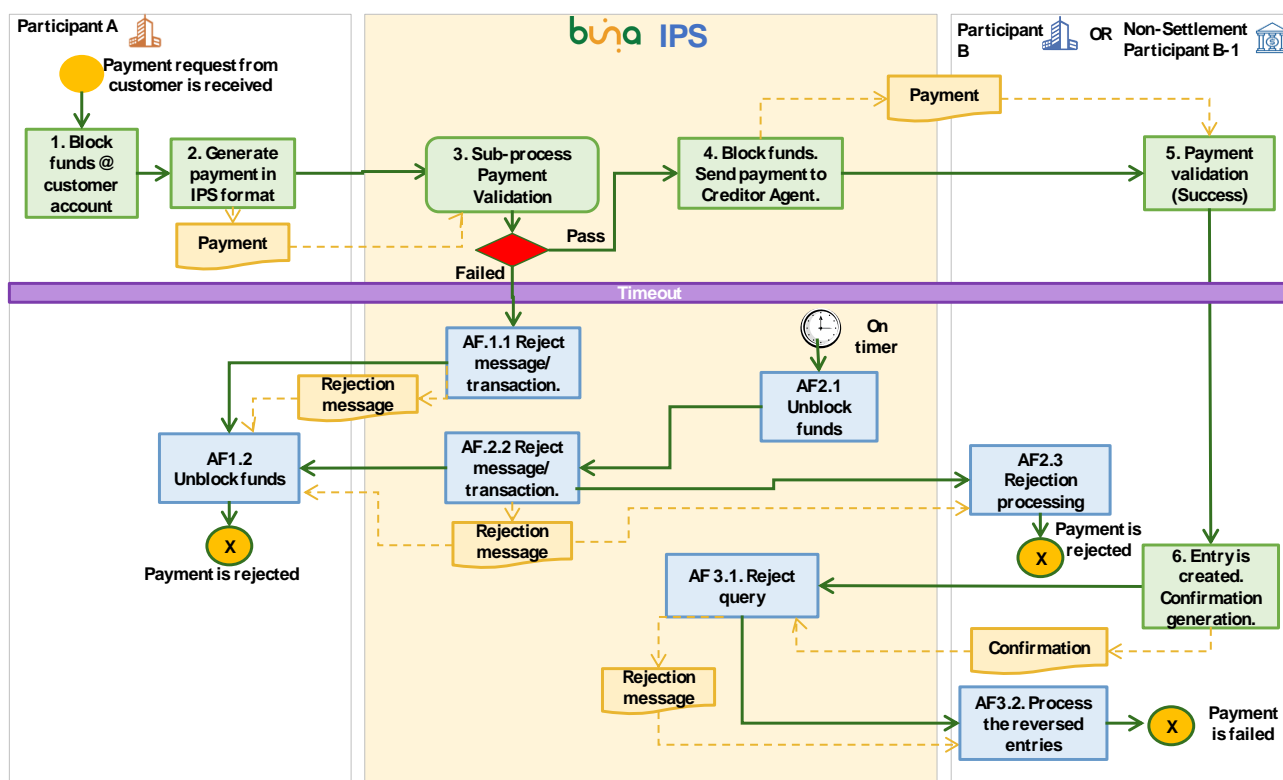
Figure 5: IPS transaction automated timeout rejection for cases with authorization

| Use Case ID	IPS-PM-02
Use Case Name	IPS transaction automated timeout rejection for cases with authorization
Use Case Description	IPS transaction automated timeout rejection for cases with authorization: - Use Case IPS-PM-01: Single Credit Transfer (with authorization by Counterparty) from RTGS account holder - Use Case IPS-PM-04: Single Credit Transfer (with authorization by Counterparty) from
Primary Actors	Direct Participants, Non-Settlement Participant, Buna IPS
Trigger Event	On receiving confirmation after timeout is exceeded
Use Case Business Rules	
If the receiving participant does not respond within a configurable timeframe, Buna should stop the outbound liquidity transfer process and will then reject the transaction. **Buna should offer a preconfigured timeframe (Timeout) end-to-end, which is calculated as a difference between sending transaction to the receiver and receiving a confirmation .** **In its initial phases, Buna might review the configurable window of the execution time to a higher value to allow participants to adapt to the speed of execution of the system.** **Timeouts are not applicable for Batch Payments.**	
Pre-Conditions	
Buna Direct Participant A (Instructing Agent) has an RTGS settlement account, a settlement limit account and a position account. Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) has at least a position account.	
Post Conditions	
Payment is rejected	

Basic Flow	
1-6	Basic flow is the same as in main Payment Use Cases with authorization
Alternate Flows	
AF1	**Reject Payment if payment message validation is failed**
1	Buna IPS rejects the payment and sends rejection payment to the message sender (Instructing Agent)
2	Instructing Agent unblocks funds
AF2	**Unblock funds on timer (for cases when IPS was not able to deliver payment to Buna Direct Participant B or Non-Settlement Participant B-1 on time, when confirmation was not received and when confirmation was received after timeout)**
1	Buna IPS unblocks funds
2	Buna IPS creates a rejection message (pacs.002) to Participant A and Participant B or Non-Settlement Participant B-1
3	Rejection message (pacs.002) is delivered to Participant A CBS, customer's funds are unblocked. Rejection message (pacs.002) is delivered to Participant B or Non-Settlement Participant B-1
4	Participant B or Non-Settlement Participant B-1 (Instructed Agent) rejects Payment if entries were not created yet.
AF3	**Reject Payment confirmation in case when it was received by Buna IPS after timeout**
1	Buna IPS rejects the Payment confirmation (camt.025). This rejection message can be received along with AF2.3 in case confirmation is received after the timeout.
2	CBS of Instructed Agent reverses the entry

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	pacs.002	Payment Authorization
Buna Direct Participant	pacs.008	Single Customer credit transfer

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	pacs.008	Single Customer credit transfer
Buna Direct Participant	camt.025	Processing error
Buna Direct Participant, Non-Settlement Participant	pacs.002	Status of transfer
Buna Direct Participant	admi.002	Message rejection

4.2.3 Use Case IPS-PM-03: Single Credit Transfer (without authorization by Counterparty) from RTGS account holder
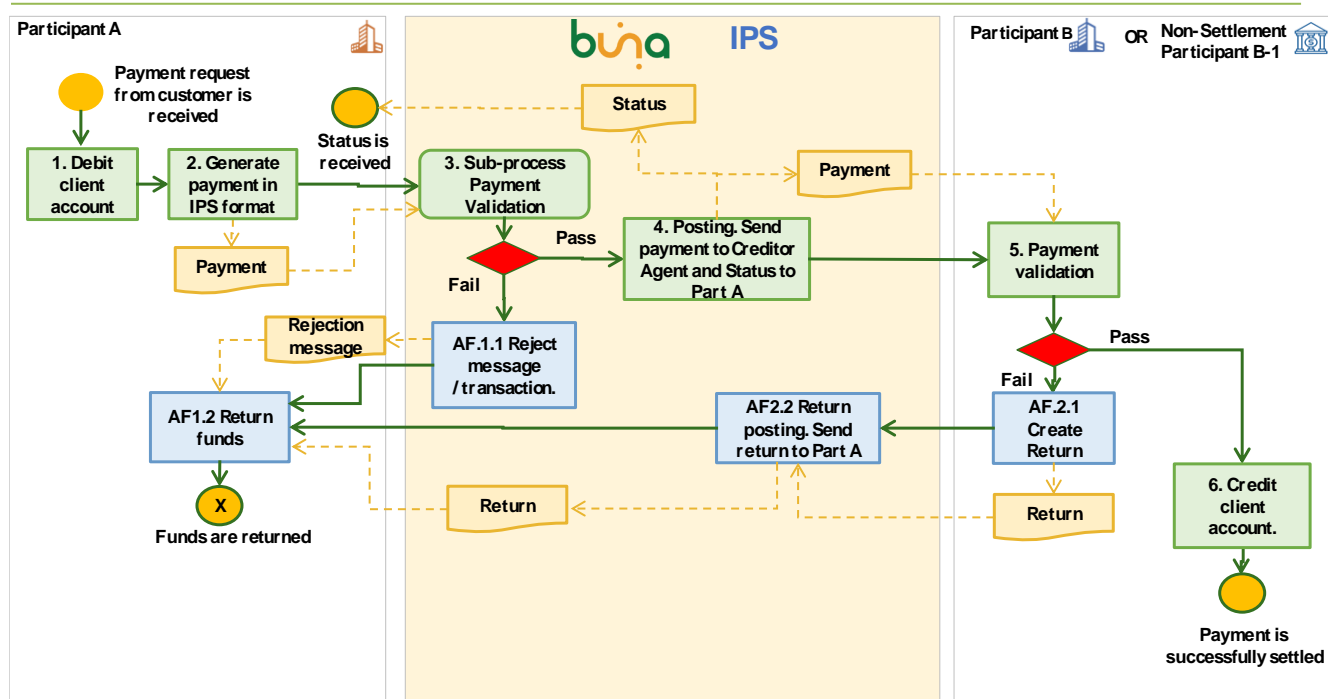
Figure 6: Single Credit Transfer (without authorization by Counterparty) from RTGS account holder

Use Case ID	**IPS-PM-03**
Use Case Name	Single Credit Transfer (without authorization by Counterparty) from RTGS account holder
Use Case Description	Single Credit Transfer (without authorization by Counterparty) from RTGS account holder (Buna RTGS Direct Participant – Instructing Agent) to other Buna Direct Participant or Non-Settlement Participant (Instructed Agent)
Primary Actors (Sender)	Direct Participants, Non-Settlement Participant, Buna IPS
Trigger Event	Buna Direct Participant A (Instructing Agent) received Customer's IPS payment via own channel following a Request to Pay
Use Case Business Rules	
This use case will be applicable only as a response on RTP (for details of differentiating between response on RtP and other payments , refer to IPS Message formats document, please). In other cases, confirmation will be required. Confirmation from Instructed Agent is not expected for this case.	
Pre-Conditions	
Buna Direct Participant A (Instructing Agent) has registered an RTGS settlement account, a settlement limit account and a position account. Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) has at least a position account.	
Post Conditions	
Payment is posted successfully	
Basic Flow	
1	Buna Direct Participant A (Instructing Agent) accepts the payment from customer. Activities for this step include necessary validations of customer entered data (in CBS). CBS debits customer's account.
2	Buna Direct Participant A generates payment in IPS format (pacs.008) and sends payment to BUNA IPS.

3	Execute sub-process «Payment Validation» (Use Case IPS-PM-12: Payment Validation) In addition to standard validation check the timeout of payment creation after RTP sending. • Passed - go to 4; • Failed- go to AF1.
4	Buna process the Payment: applies payment to the positions of the counterparties and settlement limit account BUNA sends status message (pacs.002) to Instructing Agent (Direct Participant A of Buna). BUNA sends copy of payment (pacs.008) to Instructed Agent (Buna Direct Participant B or Non-Settlement Participant B-1)
5	The payment is delivered to Instructed Agent. Instructed Agent performs validation of the payment • Passed - go to 6; • Failed- go to AF2.
6	CBS of Instructed Agent credits account of its customer.
Alternate Flows	
AF1	**Payment validation is failed at Buna IPS**
1	Buna IPS creates rejection message (pacs.002 or camt.025 or admi.002) to Participant A
2	Rejection message is delivered to Participant A CBS, customer's funds are returned
AF2	**Payment validation is failed at Instructed Agent's side**
1	Instructed Agent creates a return message (pacs.004) and sends it to Buna IPS. This has to be done before the end of retention period. For the details kindly refer to 4.2.9 Use Case IPS-PM-10: Return payments from RTGS account holder and Use Case IPS-PM-11: Return payments from
2	Buna IPS posts the return and sends its copy to Instructing Agent

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant	pacs.008	Single Customer credit transfer
Buna Direct Participant, Non-Settlement Participant	pacs.004	Return payment

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	pacs.008	Single Customer credit transfer
Buna Direct Participant	camt.025	Processing error
Buna Direct Participant, Non-Settlement Participant	pacs.002	Status of transfer
Buna Direct Participant	admi.002	Message rejection
Buna Direct Participant	pacs.004	Return payment

4.2.4 Use Case IPS-PM-04: Single Credit Transfer (with authorization by Counterparty) from Non-Settlement Participant
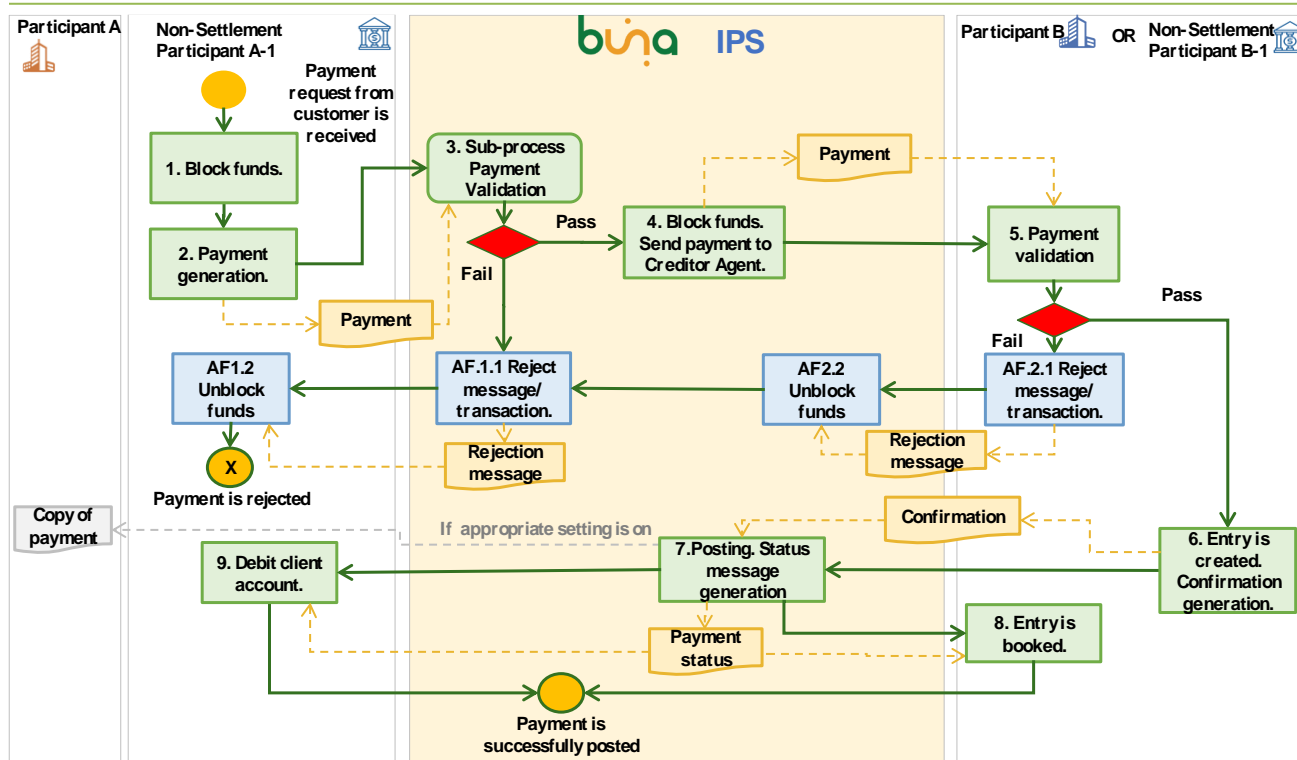
Figure 7: Single Credit Transfer (with authorization by Counterparty) from Non-Settlement Participant

Use Case ID	IPS-PM-04
Use Case Name	Single Credit Transfer (with authorization by Counterparty) from Non-Settlement Participant
Use Case Description	Single Credit Transfer (with authorization by Counterparty) from Non-Settlement Participant to other Buna Direct Participant or Non-Settlement Participant
Primary Actors	Direct Participants, Non-Settlement Participant, Buna IPS
Trigger Event	Non-Settlement Participant (Instructing Agent) received Customer's IPS payment via own channel
Use Case Business Rules	
The same as in Extended Use Case	
Extends	
Use Case IPS-PM-01: Single Credit Transfer (with authorization by Counterparty) from RTGS account holder	
Pre-Conditions	
Non-Settlement Participant (Instructing Agent) has a position account at Buna IPS. Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) has at least position account.	
Post Conditions	
Payment is posted successfully	
Basic Flow	
1-6	The same as in Use Case IPS-PM-01: Single Credit Transfer (with authorization by Counterparty) from RTGS account holder
7	In addition to extended Use case – Buna IPS checks notification settings. If Sponsor RTGS account owner wants to receive a copy of payment related to sponsored Position accounts, then buna sends copy of payment (pacs.008) to Direct Participant.

8-9	The same as in Extended Use Case
Alternate Flows	
AF	The same as in Extended Use Case

Incoming messages

Senders	MX ISO 20022	Description
Non-Settlement Participant	pacs.008	Single Customer credit transfer
Non-Settlement Participant	pacs.002	Status of transfer

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	pacs.008	Single Customer credit transfer (copy of payment)
Non-Settlement Participant	camt.025	Processing error
Non-Settlement Participant	pacs.002	Status of transfer
Non-Settlement Participant	admi.002	Message rejection

4.2.5 Use Case IPS-PM-05: Single Credit Transfer (without authorization by Counterparty) from Non-Settlement Participant
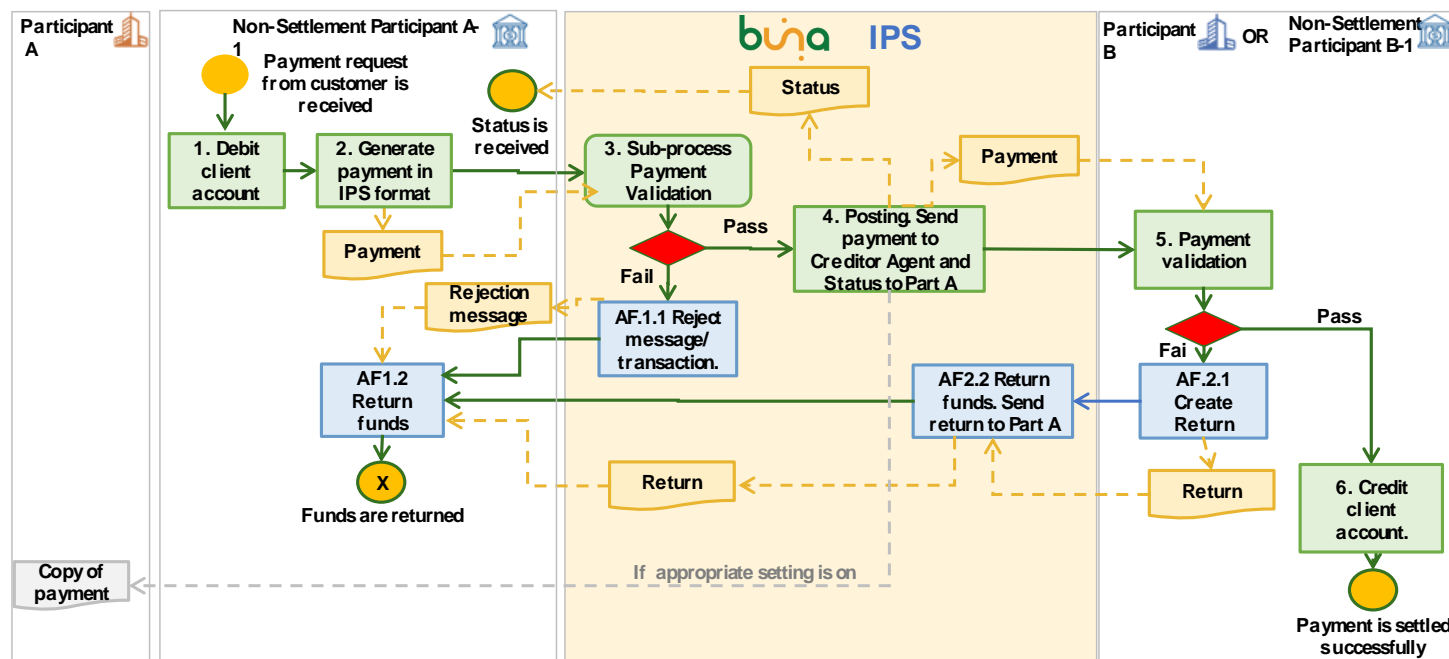
Figure 8: Single Credit Transfer (without authorization by Counterparty) from Non-Settlement Participant

Use Case ID	**IPS-PM-05**
Use Case Name	Single Credit Transfer (without authorization by Counterparty) from Non-Settlement Participant
Use Case Description	Single Credit Transfer (without authorization by Counterparty) from Non-Settlement Participant to other Buna Direct Participant or Non-Settlement Participant
Primary Actors	Direct Participants, Non-Settlement Participant, Buna IPS

Trigger Event	Non-Settlement Participant (Instructing Agent) received Customer's IPS payment via own channel
Use Case Business Rules	
This use case will be applicable only as a response on RTP. In other cases, confirmation will be required. The same as in Extended Use Case	
Extends	
Use Case IPS-PM-03: Single Credit Transfer (without authorization by Counterparty) from RTGS account holder	
Pre-Conditions	
Non-Settlement Participant (Instructing Agent) has a position account at Buna IPS. **Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) has at least a position account.**	
Post Conditions	
Payment is posted successfully	
Basic Flow	
1-6	The same as in Use Case IPS-PM-03: Single Credit Transfer (without authorization by Counterparty) from RTGS account holder
7	In addition to extended Use case, Buna IPS checks notification settings. If Sponsor RTGS account owner wants to receive copy of payments related to sponsored Position accounts, then Buna sends copy of payment (pacs.008) to the Direct Participant
Alternate Flows	
AF	The same as in Extended Use Case

Incoming messages

Senders	MX ISO 20022	Description
Non-Settlement Participant	pacs.008	Single Customer credit transfer
Buna Direct Participant, Non-Settlement Participant	pacs.002	Payment Authorization
Buna Direct Participant, Non-Settlement Participant	pacs.004	Return payment

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	pacs.008	Single Customer credit transfer (copy of payment)
Non-Settlement Participant	camt.025	Processing error
Non-Settlement Participant	pacs.002	Status of transfer
Non-Settlement Participant	admi.002	Message rejection
Non-Settlement Participant	pacs.004	Return payment

4.2.6   Use Case IPS-PM-06: Batch payments from RTGS account holder/NSP
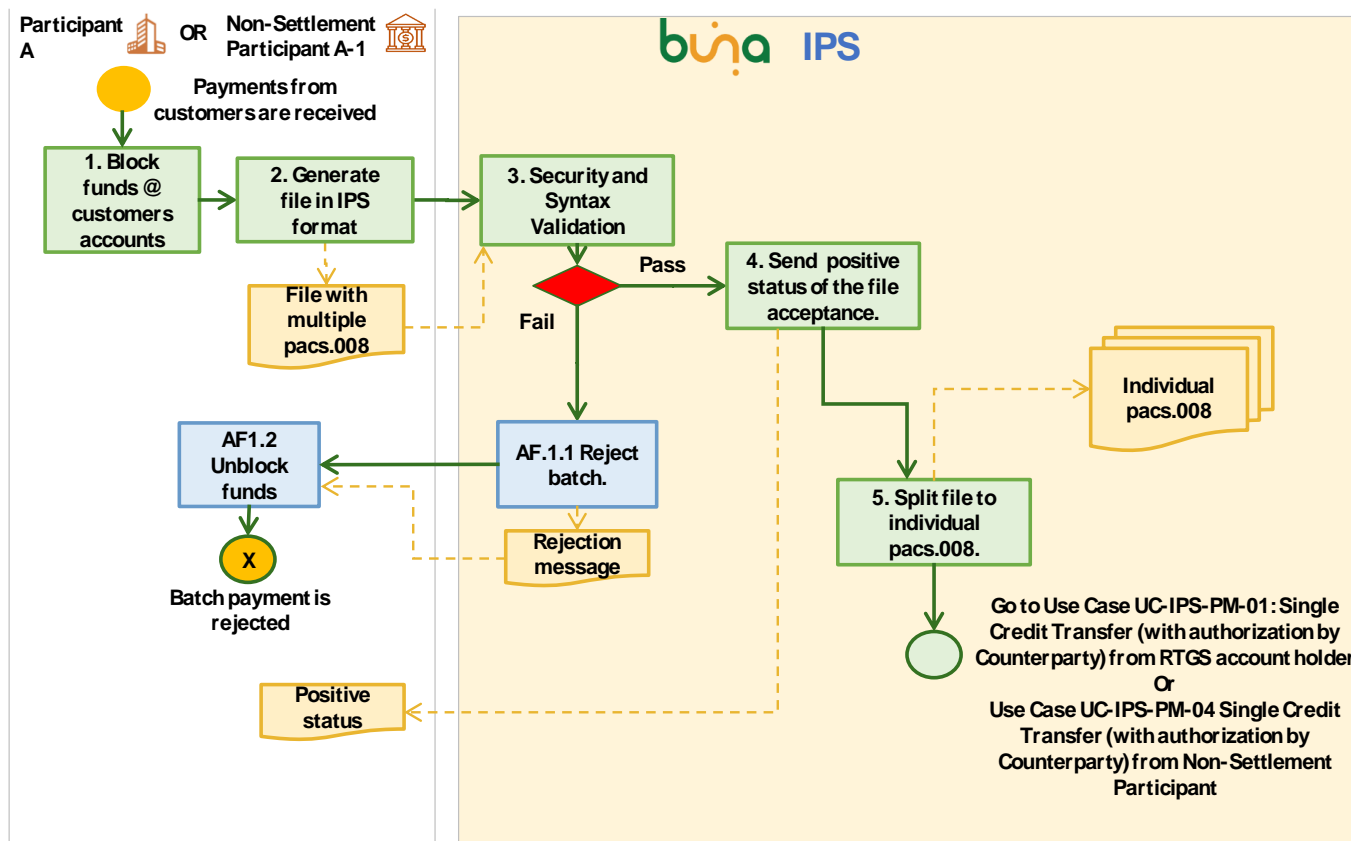
Figure 9: Batch payments from RTGS account holder/NSP
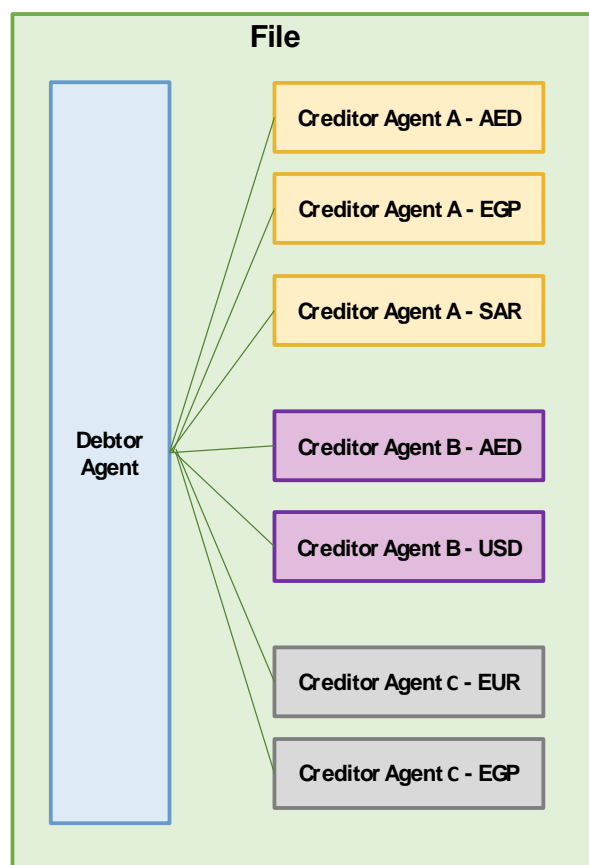
Figure 10: File structure scheme

Use Case ID	**IPS-PM-06**
Use Case Name	Batch payments from RTGS account holder/NSP
Use Case Description	Batch payments from RTGS account holder or Non-Settlement Participant to other Buna Direct Participant or Non-Settlement Participant
Primary Actors	Direct Participants, Non-Settlement Participant, Buna IPS
Trigger Event	Non-Settlement Participant (Instructing Agent) received Customer's IPS payment via own channel
Use Case Business Rules	

- **There will be a file with multiple pacs.008 Inside. Each pacs.008 inside the file will be a single pacs.008 (not a batch).**

- **Singe pacs.008s can have only the same Instructing Agent as other pacs.008 and different (from other pacs.008) Instructed Agents and currencies.**

- **File will be divided to individual pacs.008, each of them will be processed separately.**

- **Timeout for individual pacs.008 is starting from the moment of sending pacs.008 to receiver.**

- **After dividing the file status messages will be created for individual payments only, not for the whole file.**

	Whole file can be rejected during accepting the file.

Pre-Conditions
Buna Direct Participant A or Non-Settlement Participant A (Instructing Agent) has a position account at Buna IPS. **Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) has at a least position account.**

Post Conditions
Instructions from the file divided and processed at Buna IPS

Basic Flow	
1	Buna Direct Participant A/NSP A (Instructing Agent) groups payments into the file and blocks funds for the payments inside the file.
2	Buna Direct Participant A/ NSP A generates file in IPS format (file with multiple pacs.008 inside) and sends the file to BUNA IPS.
3	Buna IPS processes security and syntax checks. • Passed - go to 4; • Failed- go to AF1.
4	Buna IPS creates positive status of the file acceptance (camt.998) to Participant A/NSP A – one message for a whole file
5	Buna IPS divides the file to the individual pacs.008. Go to step 3 of the Use Case IPS-PM-01: Single Credit Transfer (with authorization by Counterparty) from RTGS account holder Or Go to step 3 of the Use Case IPS-PM-04 Single Credit Transfer (with authorization by Counterparty) from Non-Settlement Participant

Alternate Flows	
AF1	**File validation is failed at Buna IPS**
1	Buna IPS creates a rejection message (camt.998) to Participant A/NSP A – one message for a whole file
2	Rejection message is delivered to Participant A's CBS, customer's funds are unblocked

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant	File with multiple pacs.008 inside	Batch payment

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	Single pacs.008	Single Customer credit transfer
Buna Direct Participant	camt.998	Processing error

4.2.7   Use Case IPS-PM-08: RTP from Creditor to Debtor
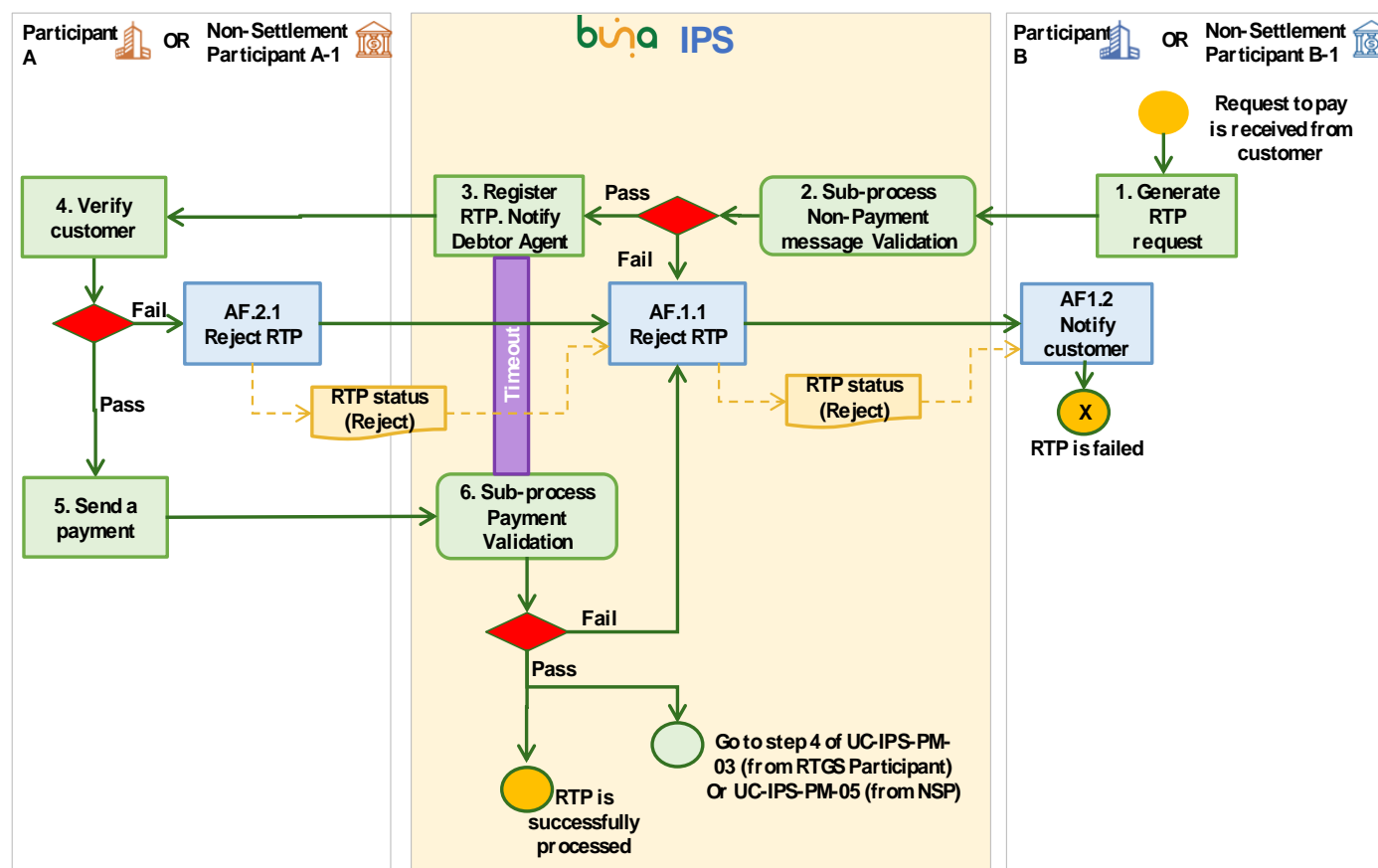
Figure 11: Request to Pay from Creditor to Debtor

Use Case ID	IPS-PM-08
Use Case Name	RTP from Creditor to Debtor
Use Case Description	Request to Pay from Creditor to Debtor
Primary Actors	Direct Participants, Non-Settlement Participants, Buna IPS
Trigger Event	Buna Direct Participant B or Non-Settlement Participant B-1 (Instructing Agent) received Customer's IPS RTP via own channel
Use Case Business Rules	
The RtP option is mostly used for mobile commerce and e-commerce.	
Pre-Conditions	
Buna Direct Participant A or Non-Settlement Participant A-1 (Instructing Agent) has at least a position account. Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) has at least a position account.	
Post Conditions	
Payment is processed successfully	
Basic Flow	
1	Instructed Agent (Buna Direct Participant B or Non-Settlement Participant B-1) accepts RTP from the customer. Activities for this step include necessary validations of customer entered data (in CBS). CBS sends RTP (pain.013) to Buna IPS.

2	Execute sub-process «Non-Payment message Validation» (Use Case IPS-PM-14: Non-payment message validation) Additional validation for this Use case is timeout between receiving RtP and Payment based on this RtP receiving. It couldn't be higher than System wide parameter. Passed - go to 3 Failed- go to AF1
3	Buna IPS registers RTP and notifies Instructing Agent (Buna Direct Participant A or Non-Settlement Participant A-1) with pain.013
4	Instructing Agent verifies customer. Passed - start to create paymentUse Case IPS-PM-03: Single Credit Transfer (without authorization by Counterparty) from RTGS account holder and Use Case IPS-PM-05: Single Credit Transfer (without authorization by Counterparty) from) Failed- go to AF2
5	CBS of Instructing Agent generates and sends payment message (pacs.008) to Buna IPS
6	Buna IPS validates the payment based on RTP. If validation is success – go to 7 If validation failed – go to AF1
7	Buna IPS processes the payment. Go to step 4 of Use Case IPS-PM-03: Single Credit Transfer (without authorization by Counterparty) from RTGS account holder or Use Case IPS-PM-05: Single Credit Transfer (without authorization by Counterparty) from
Alternate Flows	
AF1	**RTP validation is failed at Buna IPS or Payment based on RTP validation is failed at Buna IPS**
1	Buna IPS rejects RTP and creates rejection message (pain.014) to Instructed Agent
2	Rejection message is delivered to CBS of Instructed Agent, CBS sends notification to the customer
AF2	**RTP validation is failed at Instructing Agent's side**
1	Instructing Agent creates rejection message (pain.014) and sends it to Buna IPS. Go to AF1
AF3	**Timeout for payment based on RtP was exceeded**
1	Go to AF1

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	pain.013	Request to pay
Buna Direct Participant, Non-Settlement Participant	pain.014	RTP status

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	pain.013	Request to pay
Buna Direct Participant, Non-Settlement Participant	pain.014	RTP status

4.2.8   Use Case IPS-PM-09: Request for Return
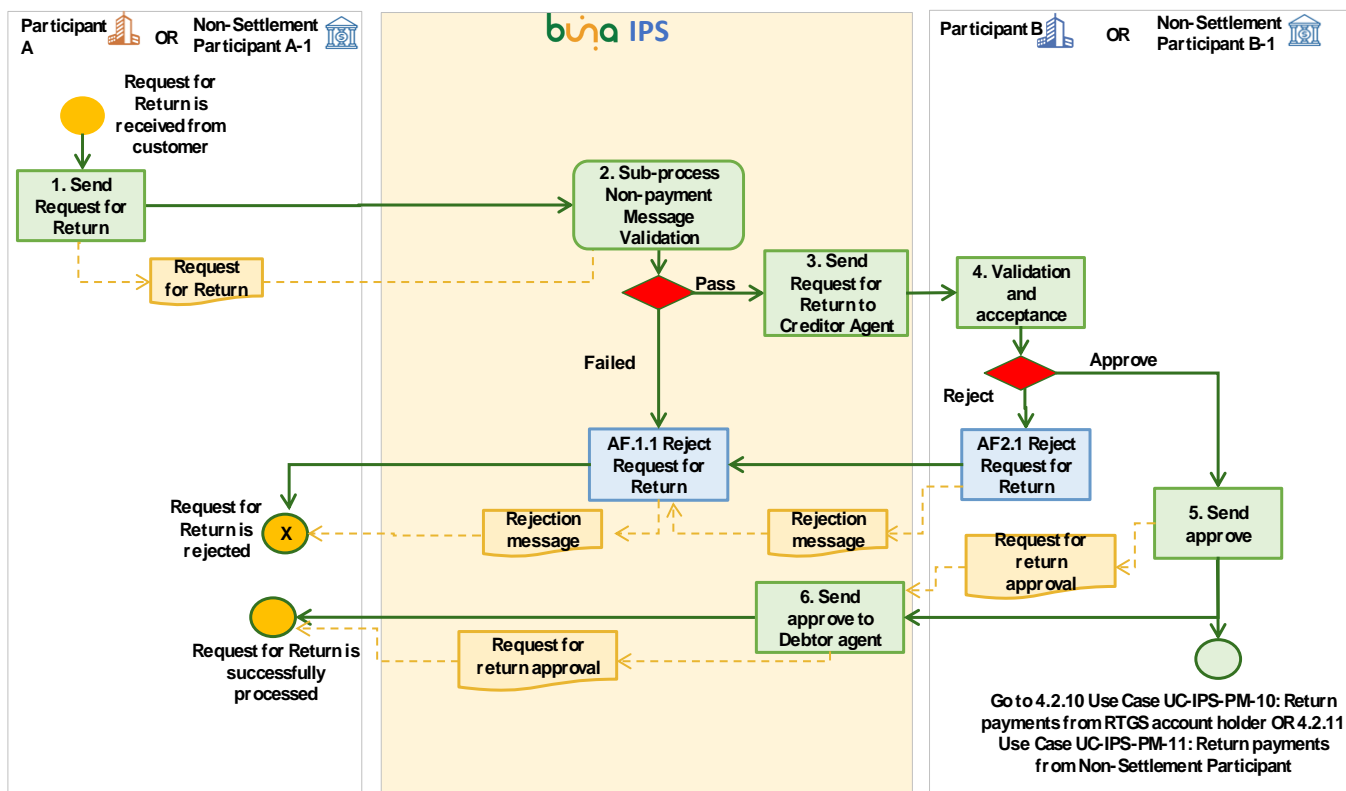
Figure 12: Request for Return

Use Case ID	IPS-PM-09
Use Case Name	Request for Return
Use Case Description	Request to Pay from Creditor to Debtor
Primary Actors	Direct Participants, Non-Settlement Participants, Buna IPS
Trigger Event	Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) received Customer's IPS Request for Return via own channel
Use Case Business Rules	
Original payment must be posted **Request for Return should be send during predefined Retention Period (after that Return will be Rejected)** **Return Payments based on the Request for Return should be send during predefined Retention Period (after that Return will be Rejected)** **Also participants are able to request return via Communication and Inquiry module (in this case no messages will be sent, API of this module will be used for communication and after that counterparty will send Return payment)**	
Pre-Conditions	
Buna Direct Participant A or Non-Settlement Participant A-1 (Instructing Agent) has at least a position account. **Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) has at least a position account.**	
Post Conditions	
Request for Return is processed successfully	
Basic Flow	

1	Instructing Agent (Buna Direct Participant A or Non-Settlement Participant A-1) accepts Request for Return. Activities for this step include necessary validations of customer entered data (in CBS). CBS sends Request for Return (camt.056) to Buna IPS.
2	Execute sub-process «Non-Payment message Validation» (Use Case IPS-PM-14: Non-payment message validation) and in addition check Original transaction status (it has to be settled). • Passed - go to 3 • Failed- go to AF1
3	Buna IPS registers Request for Return and notifies Instructed Agent (Buna Direct Participant B or Non-Settlement Participant B-1) with Request for Return (camt.056)
4	Instructed Agent verifies customer. Passed - go to 5 and start to create return payment (pacs.004) related to Request for Return: 4.2.9 Use Case IPS-PM-10: Return payments from RTGS account holder OR 4.2.10 Use Case IPS-PM-11: Return payments from Failed- go to AF2
5	CBS of Instructed Agent generates and sends Request for Return successful status (camt.029) to Buna IPS
6	Buna IPS sends Request for Return successful status (camt.029) to Instructing Agent
Alternate Flows	
AF1	**RTP validation is failed at Buna IPS**
1	Buna IPS rejects Request for Return and creates rejection message (camt.029) for Instructed Agent
AF2	**RTP validation is failed at Instructing Agent's side**
1	Instructing Agent creates rejection message (camt.029) and sends it to Buna IPS. Go to AF1

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	camt.056	Request for return
Buna Direct Participant, Non-Settlement Participant	camt.029	Request for return approval/ rejection message

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	camt.056	Request for return
Buna Direct Participant, Non-Settlement Participant	camt.029	Request for return approval/ rejection message

4.2.9   Use Case IPS-PM-10: Return payments from RTGS account holder

Payment scheme is the same as described in Use Case IPS-PM-01: Single Credit Transfer (with authorization by Counterparty) from RTGS account holder

Use Case ID	IPS-PM-10

Use Case Name	Return payments from RTGS account holder
Use Case Description	Return payments from RTGS account holder to other Buna Direct Participant or Non-Settlement Participant
Primary Actors	Direct Participants, Non-Settlement Participant, Buna IPS
Trigger Event	Buna IPS (Instructing Agent) received Return payment via own channel
Use Case Business Rules	
▪ **A participant cannot initiate a return payment unless the Original payment is settled or posted.** ▪ **There is a retention period for Return starting of the value date of Original payment. After this period Return payment will be rejected**	
Extends	
Use Case IPS-PM-03: Single Credit Transfer (without authorization by Counterparty) from RTGS account holder	
Pre-Conditions	
Buna Direct Participant A (Instructing Agent) has a position account at Buna IPS. **Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) has at least a position account.**	
Post Conditions	
Payment is posted successfully	
Basic Flow	
1-6	The same as in Use Case IPS-PM-03: Single Credit Transfer (without authorization by Counterparty) from RTGS account holder. Difference is that pacs.004 will be generated instead of pacs.008
Alternate Flows	
AF	The same as in Extended Use Case

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant	pacs.004	Return payment
Buna Direct Participant, Non-Settlement Participant	pacs.002	Payment Authorization

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant	camt.025	Processing error
Buna Direct Participant, Non-Settlement Participant	pacs.002	Status of transfer
Buna Direct Participant	admi.002	Message rejection
Buna Direct Participant, Non-Settlement Participant	pacs.004	Return payment

4.2.10 Use Case IPS-PM-11: Return payments from Non-Settlement Participant

Payment scheme is the same as described in Use Case IPS-PM-05: Single Credit Transfer (without authorization by Counterparty) from

Use Case ID	IPS-PM-11

Use Case Name	Return payments from Non-Settlement Participant
Use Case Description	Return payments from Non-Settlement Participant to other Buna Direct Participant or Non-Settlement Participant
Primary Actors	Direct Participants, Non-Settlement Participant, Buna IPS
Trigger Event	Non-Settlement Participant (Instructing Agent) received Customer's IPS Return payment via own channel

Use Case Business Rules
▪ **Original payment should be posted**

Extends
Use Case IPS-PM-05: Single Credit Transfer (without authorization by Counterparty) from

Pre-Conditions
Buna Direct Participant A (Instructing Agent) has a position account at Buna IPS. **Buna Direct Participant B or Non-Settlement Participant B-1 (Instructed Agent) has at least a position account.**

Post Conditions
Payment is posted successfully

Basic Flow	
1-6	The same as in Use Case IPS-PM-05: Single Credit Transfer (without authorization by Counterparty) from . Difference is that pacs.004 will be generated instead of pacs.008

Alternate Flows	
AF	The same as in Extended Use Case

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant	pacs.004	Return payment
Buna Direct Participant, Non-Settlement Participant	pacs.002	Payment Authorization

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant	camt.025	Processing error
Buna Direct Participant, Non-Settlement Participant	pacs.002	Status of transfer
Buna Direct Participant	admi.002	Message rejection
Buna Direct Participant, Non-Settlement Participant	pacs.004	Return payment

4.2.11 Use Case IPS-PM-12: Payment Validation
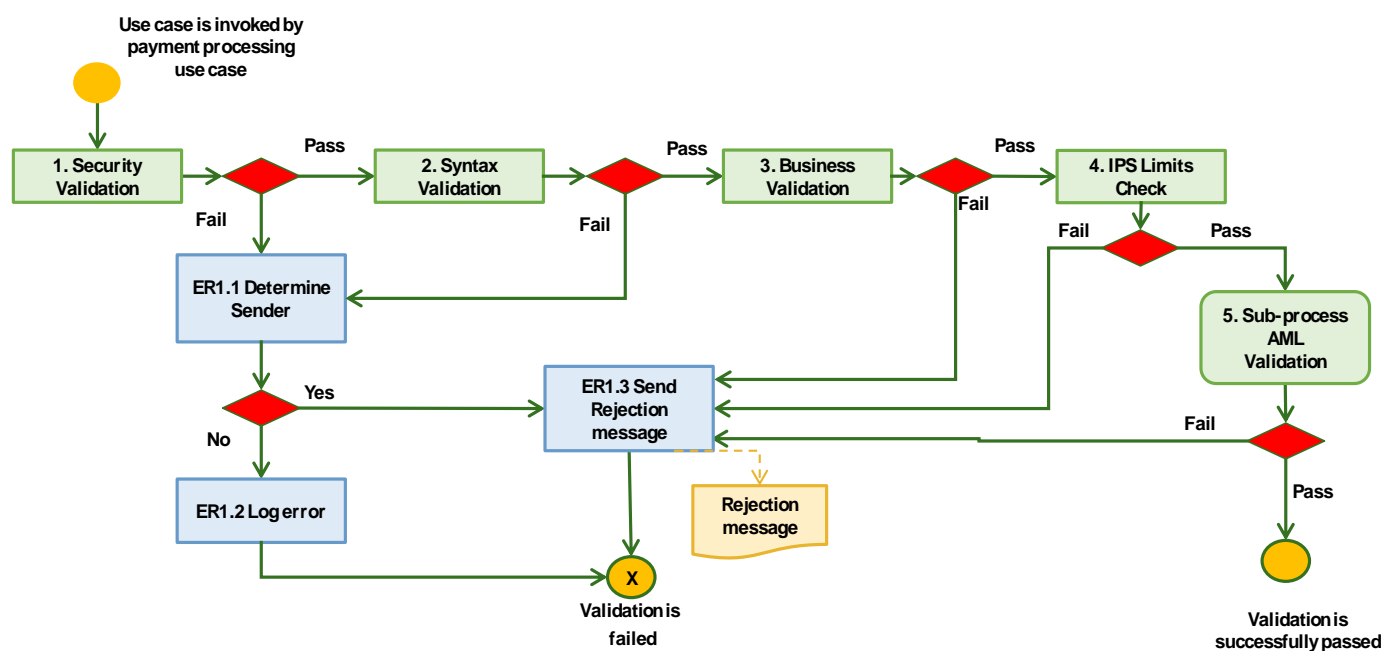
Figure 13: Payment Validation

Use Case ID	**IPS-PM-12**
Use Case Name	Payment Message validation
Use Case Description	General validation process for all incoming payment messages. Validation rules could be extended in other use cases for specific scenario's
Primary Actors	Validation is a sub process. It is invoked by primary use cases
Trigger Event	Incoming payment message.
Use Case Business Rules	

Security Validation:
1. Incoming message signature is valid for the sender

Structural Validation:
1. Incoming message conforms to the XSD scheme

Business Validation:
1. Message type is allowed in current window
2. Future value date is not allowed
3. Sender is in state "Active".
4. Incoming messages are not blocked for the sender.
5. Access Rights: The following rules have to be met:
   a. The sender has permission for the message type for current business day window
   b. The sender has permission to act on behalf of the originator
6. Currency of the payment is in a list of selected currencies
7. Check timestamp of message creation on Participant A or Non-Settlement Participant side with allowed timeout for message delivery (old payments will be rejected)
8. Buna IPS shall validate that the intended receiving participant of a payment transaction is reachable within Buna. Buna IPS shall validate that the receiving participant is also a participant in Buna.

9. Debited and credited accounts are not blocked for debit and credit.
10. Buna IPS shall validate that the payment transaction currency matches the currency defined for both the account of the sender and that of the receiver.
11. For returns – check if Retention period was not exceeded

IPS Limits check:

1. Check settlement limit amount
2. Check position limit amount

Settlement limit account or position account cannot be debited with the amount higher than current available position registered in Buna IPS for that account.

3. Buna IPS shall validate that the amount of the payment transaction does not exceed the transaction limit threshold of the respective currency. Different currencies are expected to have different threshold.

AML:

1. AML list check (via integration with en.filtering)

Pre-Conditions
Incoming message is received

Post Conditions
Incoming message is successfully validated or rejected.

Basic Flow	
1	Security Validation: Check signature against the sender of the message. On failure, execute ER1.1
2	Syntax Validation: Perform XSD validation of the incoming message. On failure, execute ER1.1
3	Business validation: Check all business rules. On failure, execute ER1.3
4	Limits check: check limits. On failure, execute ER1.3
5	AML Validation: The solution shall undertake checks through AML list (standard BUNA functionality) of all transactions in agreed sanctions lists. On failure, execute ER1.3

Alternate Flows	
	N/A

Exceptions	
ER1.1	Try to determine sender. If the sender of the message can be determined, then execute ER1.3. else execute ER1.2.
ER1.2	Log error. Manual handling and investigation by Buna Administrator.
ER1.3	Buna IPS creates a rejection message (pacs.002 or camt.025 or admi.002). Buna IPS Sends the rejection message to the sender of the incoming message. Transaction status becomes "Rejected".

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	camt.025	Processing error
Buna Direct Participant, Non-Settlement Participant	pacs.002	Status of transfer
Buna Direct Participant, Non-Settlement Participant	admi.002	Message rejection

4.2.12 Use Case IPS-PM-13: Threshold check
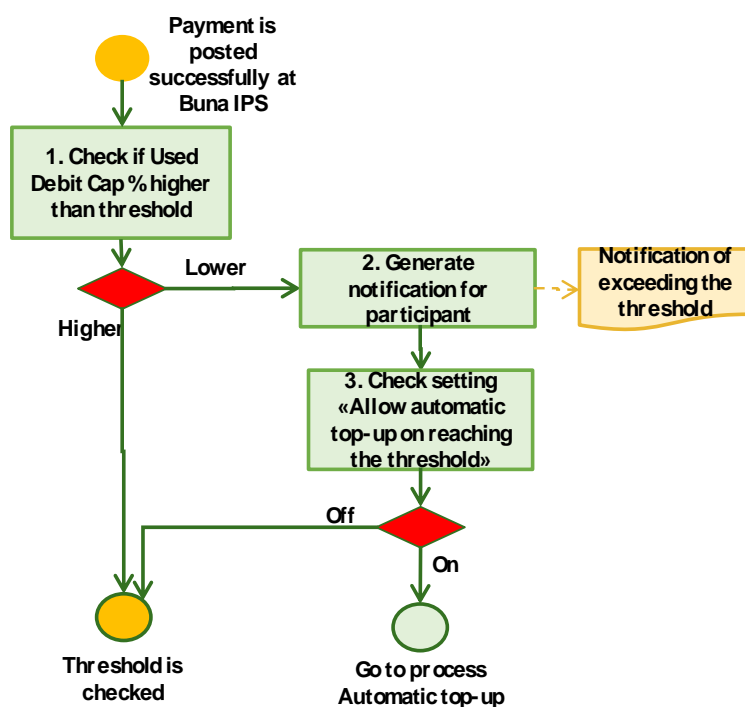
Figure 14: Threshold check

Use Case ID	**IPS-PM-13**
Use Case Name	Threshold check
Use Case Description	After each successful settlement Buna will check threshold on Settlement limit account
Primary Actors	Buna IPS
Trigger Event	IPS Payment successful posting
Use Case Business Rules	
N/A	
Pre-Conditions	
N/A	
Post Conditions	
Threshold is checked	
Basic Flow	
1	Check if used Debit Cap % higher than threshold parameter: • Higher – threshold is checked successfully • Lower – go to 2
2	Generate notification for Participant (camt.052)
3	Check setting «Allow automatic top-up on reaching the threshold» Off - threshold is checked, end of process On – Go to process «Automatic top-up (Use Case IPS-LIQ-02: Automatic top-up (increase) of Settlement limit account)
Alternate Flows	
	N/A
Exceptions	
	N/A

Receivers	MX ISO 20022	Description
Buna Direct Participant	camt.052	Notification about top-up needed

Outgoing messages

4.2.13 Use Case IPS-PM-14: Non-payment message validation
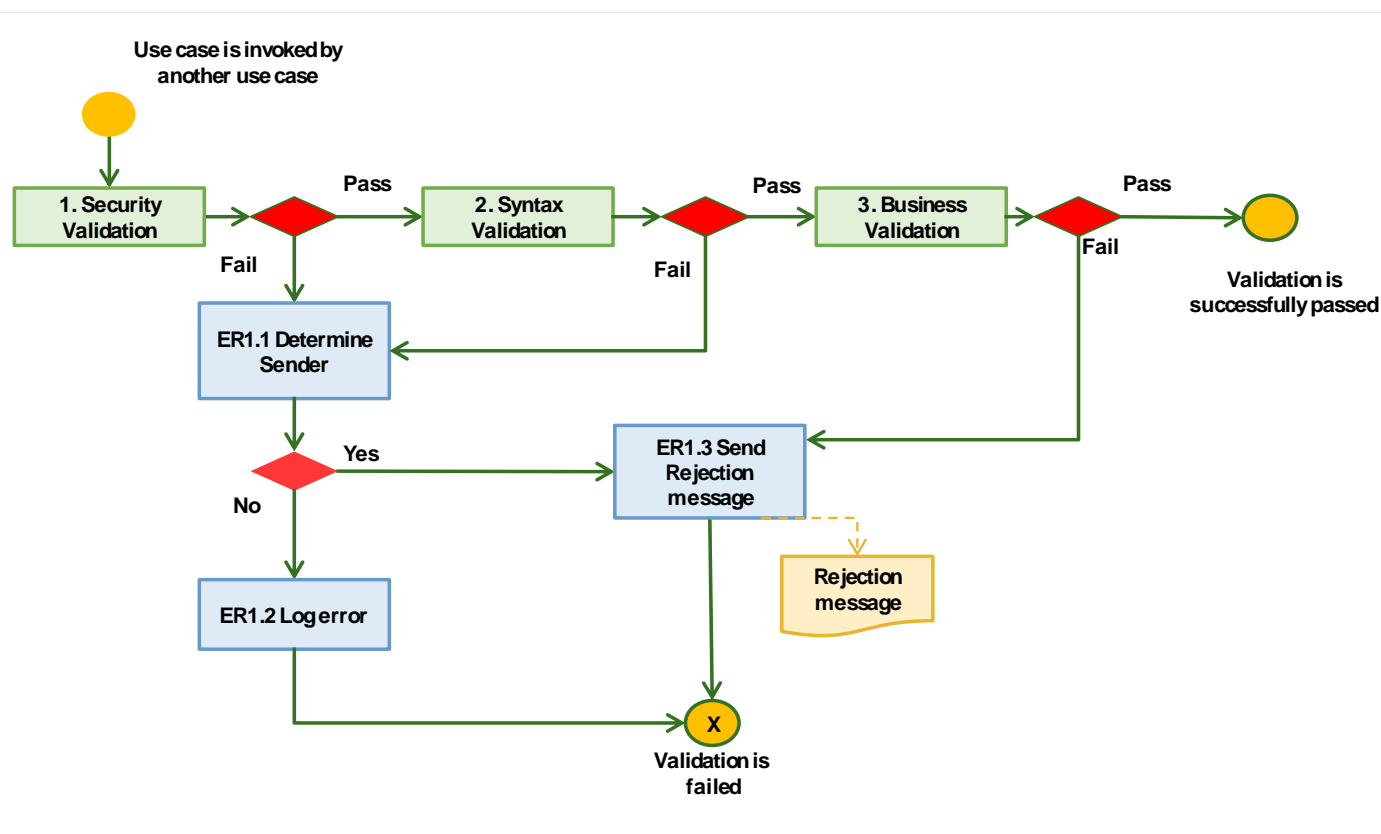
Figure 15: Non-payment message validation

Use Case ID	**IPS-PM-14**
Use Case Name	Non-payment Message validation
Use Case Description	General validation process for all incoming non-payment messages. Validation rules could be extended in other use cases for specific scenario's
Primary Actors	Validation is a sub process. It is invoked by primary use cases
Trigger Event	Incoming non-financial message including error messages
Use Case Business Rules	

Security Validation:
   1.   Incoming message signature is valid for the sender
Structural Validation:
   1.   Incoming message conforms to the XSD scheme
Business Validation:
   1.   Message type is allowed in current window (business day period)
   2.   Incoming messages are not blocked for the sender.
   3.   Access Rights: The following rules have to be met:

a.	The sender has permission for the message type for current business day window
b.	The sender has permission to act on behalf of the originator

Additional business validation rules can be defined in separate use cases

Pre-Conditions	
Incoming message is received	

Post Conditions	
Incoming message is successfully validated or rejected.	

Basic Flow	
1	Security Validation: Check signature against the sender of the message. On failure execute ER1.1
2	Syntax Validation: Perform XSD validation of the incoming message. On failure execute ER1.1
3	Business validation: Check all business rules. In case of failure execute ER1.4

Alternate Flows	
	N/A

Exceptions	
ER1.1	Try to determine sender. If the sender of the message can be determined, then execute ER1.4. else execute ER1.2.
ER1.2	Log error. Manual handling and investigation by Buna Administrator.
ER1.3	Send rejection message to the sender of the incoming message: camt.025 or admi.002.

4.2.14 Use Case IPS-PM-15: IPS Final Settlement
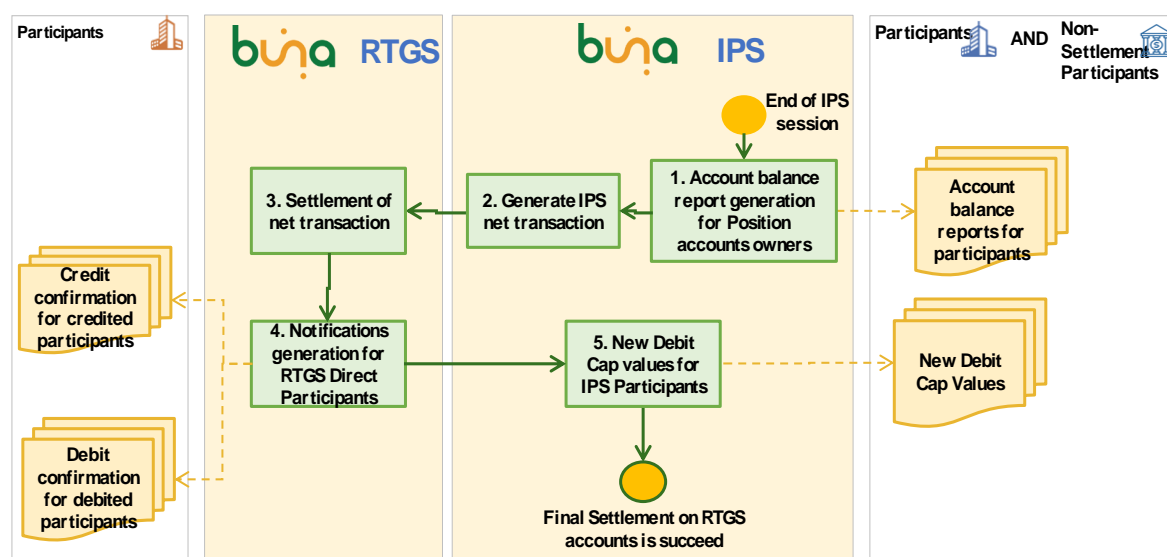
Figure 16: IPS Final Settlement

Use Case ID	**IPS-PM-15**
Use Case Name	IPS Final Settlement

Use Case Description	Final Settlement of obligations of participants on RTGS settlement accounts
Primary Actors	Buna Direct Participants, Buna IPS, Buna RTGS
Trigger Event	Buna end of IPS session action is activated
Use Case Business Rules	

Buna IPS calculates final positions for Buna Direct Participants posted since previous final settlement and sends it to Buna RTGS, where final settlement on RTGS accounts of Direct Participants will be done.

Pre-Conditions

There were posted transactions since previous final settlement

Post Conditions

IPS net transaction generated by Buna IPS is successfully settled at Buna RTGS.

Basic Flow	
1	Buna IPS generates and sends account balance reports (camt.052) for Position Accounts' owners and SLA account owners.
2	Buna IPS calculates final positions for Buna Direct Participants posted since previous final settlement, generates IPS net transaction and transmits it to Buna RTGS.
3	Settlement of Net transaction at Buna RTGS. RTGS accounts of Buna Direct Participants (Sponsor accounts) are Debited in case of Debit Positions and Credited in case of Credit Positions.

4	Buna RTGS generates and sends notifications:
	  1) Credit confirmation (camt.054) to credited Participants
	  2) Debit confirmation (camt.054) to debited Participants

5	Buna IPS generates and sends new Debit Cap values (camt.010) to IPS Participants which Debit Cap values were changed.
Alternate Flows	

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant	camt.054	Credit confirmation
Buna Direct Participant	camt.054	Debit confirmation
Buna Direct Participant/Non-Settlement Participant	camt.052	Account Balance Report
Buna Direct Participant/Non-Settlement Participant	camt.010	New Debit Cap Value

4.3 LIQUIDITY MANAGEMENT USE CASES

4.3.1 Use Case IPS-LIQ-01: Manual top-up (increase) of Settlement limit account Debit cap
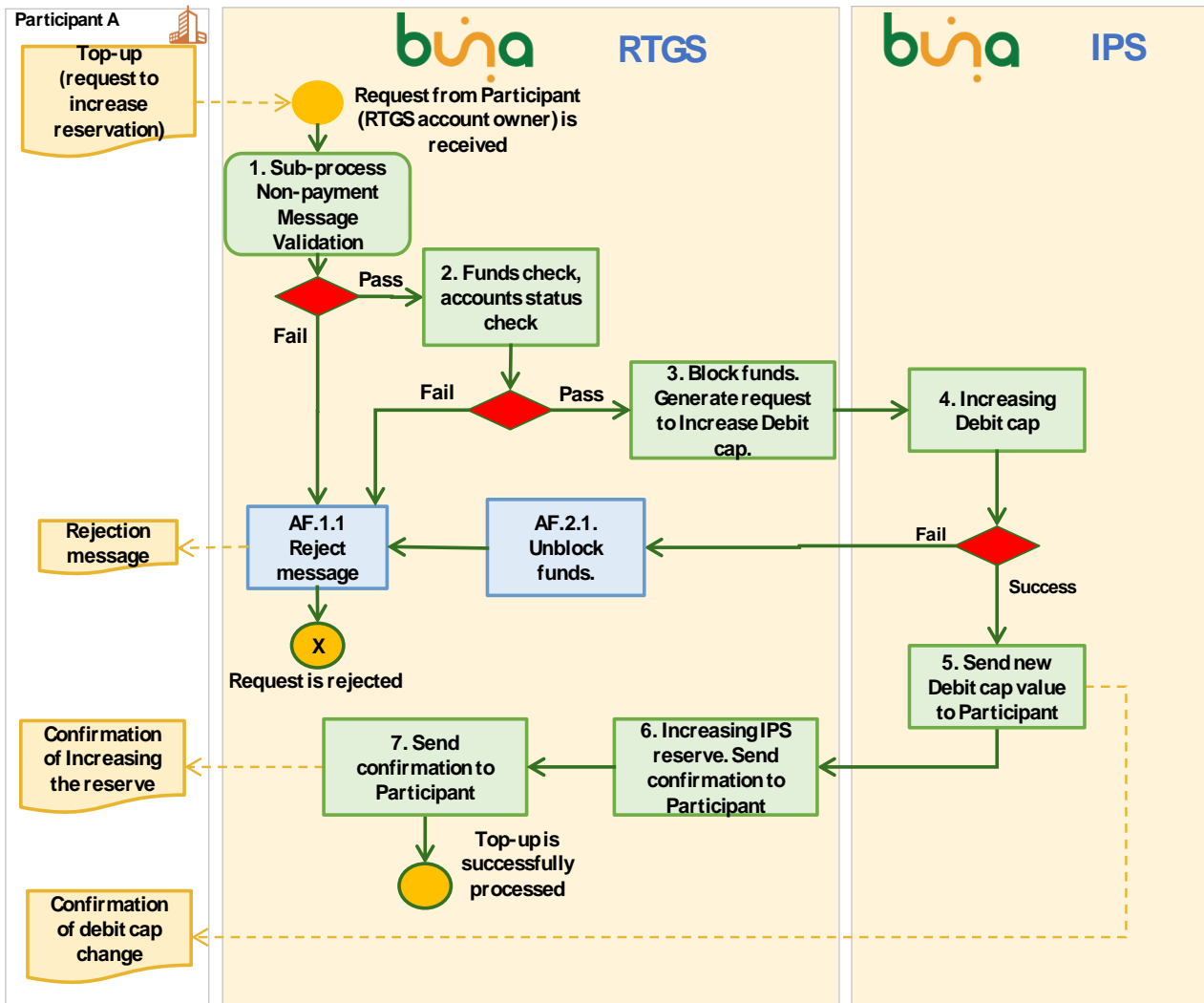
Figure 17: Manual top-up of Settlement limit account limit

Use Case ID	IPS-LIQ-01
Use Case Name	Manual top-up (increase) of Settlement limit account Debit cap
Use Case Description	Manual top-up (increase) of Settlement limit account Debit cap via request to change limit
Primary Actors	Direct Participants, Buna IPS, Buna RTGS
Trigger Event	Request to increase reserve (camt.050) is received from RTGS account holder
Use Case Business Rules	
Participants should maintain sufficient funds in their respective accounts in order not to interrupt the settlement of transactions, accounting for all non-operating hours (including weekends and holidays). If debiting account is locked for debit then Top-up will be Rejected.	
Pre-Conditions	
Settlement limit account is active.	
Post Conditions	
Debit cap of Settlement limit account is increased, Reserve is Increased	
Basic Flow	

1	Execute sub-process «Non-Payment message Validation» (Use Case IPS-PM-14: Non-payment message validation). In addition, Funds availability check is processed. Passed - go to 2 Failed- go to AF1
2	Funds check and account status check Passed - go to 2 Failed- go to AF1
3	Block funds. Generate request to increase Debit cap
4	Increasing the Debit cap. Success – go to 4 Failed – go to AF2
5	Send confirmation of debit cap change (camt.010) to Participant.
6	Increasing IPS reserve.
7	Send confirmation of IPS reserve increase (pacs.002) to Participant.
Alternate Flows	
AF1	**Request validation is failed at Buna**
1	Buna RTGS rejects Request and sends reject notification (pacs.002) to Settlement limit account holder
AF2	**Attempt to Increase IPS reserve was unsuccessful** (for example, account was locked for credit or some other reasons)
1	Buna RTGS unblocks funds. Go to AF1

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant	camt.050	Request to increase reserve*

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant	camt.010	Confirmation of Debit Cap Change
Buna Direct Participant	pacs.002	Status/ Rejection message

*Formats for the RTGS messages will be described at RTGS message formats handbook

4.3.2 Use Case IPS-LIQ-02: Automatic top-up (increase) of Settlement limit account Debit cap
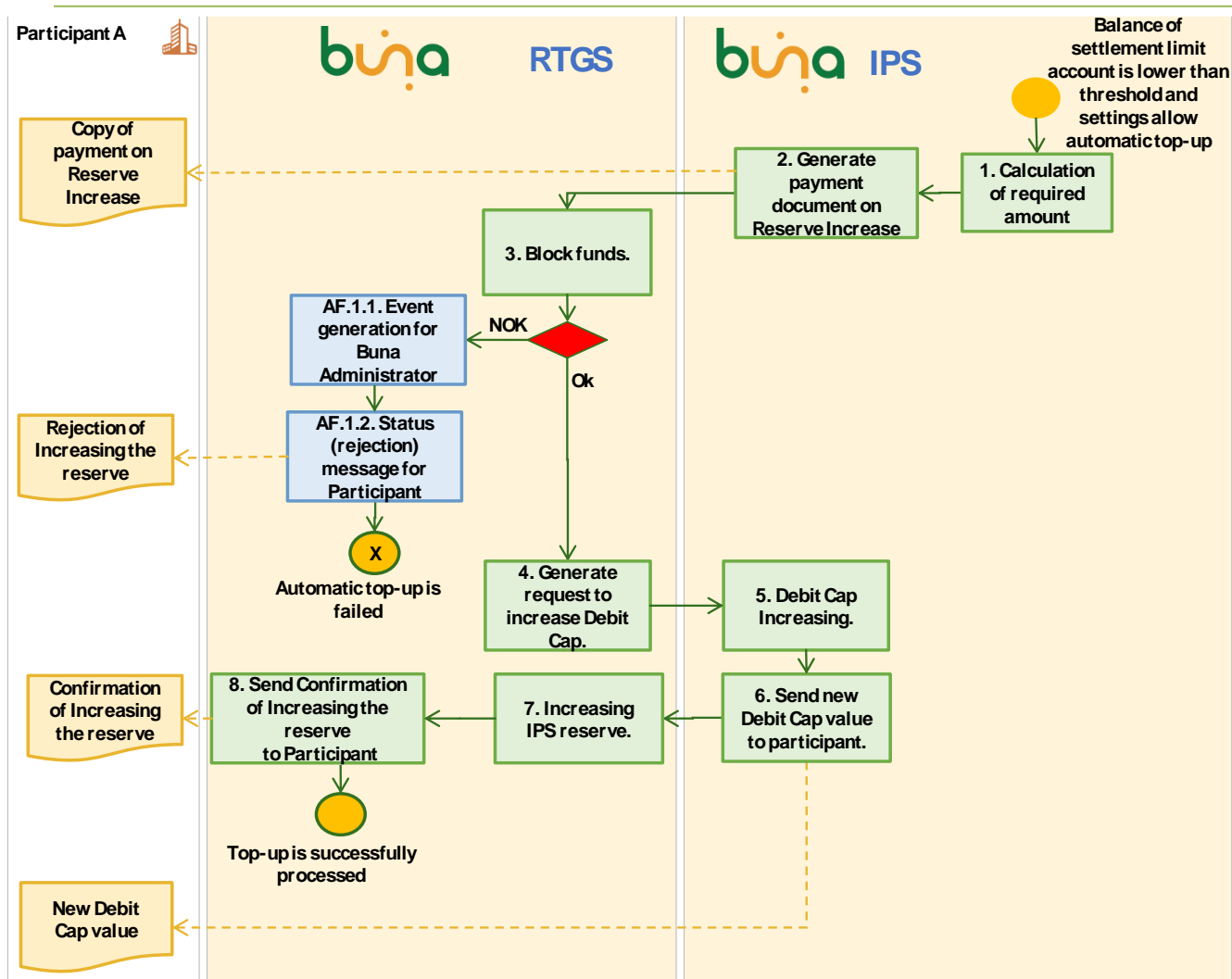
Figure 18: Automatic top-up of Settlement limit account limit

Use Case ID	IPS-LIQ-02
Use Case Name	Automatic top-up (increase) of Settlement limit account Debit cap
Use Case Description	Automatic top-up (increase) of Settlement limit account Debit cap on reaching the threshold
Primary Actors	Direct Participants, Buna IPS, Buna RTGS
Trigger Event	Invoked by Use case threshold check
Use Case Business Rules	

There will be settings:
- **to allow or NOT allow automatic top-up of Settlement limit account**
- **System wide % of automatic top-up (from Debit Cap value)**
- **Base watermark to which level automatic top-up will add money for each participant's Settlement limit account (this setting is of higher priority than system wide one, but when watermark is empty system settings will be used)**
- **Watermark % - percent from base watermark, after exceeding this level automatic top-up will be done.**

This settings are managed by Buna DBO Administrators.

| **Pre-Conditions** ||

	Settlement limit account is open
	Post Conditions
	Debit cap of Settlement limit account is increased, Reserve is Increased
	Basic Flow
1	Buna IPS calculates required amount for automatic top-up
2	Buna IPS generates payment document on Reserve Increase. Copy of this payment (camt.050) is sent to Participant.
3	Buna RTGS tries to execute Block of funds. Ok – go to 4 NOK – go to AF1
4	Buna RTGS generates the request to increase Debit cap.
5	Buna IPS Increases Debit cap of Settlement limit account
6	Generation of new Debit Cap value to participant (camt.010)
5	Buna RTGS Increases IPS reserve.
6	Buna RTGS sends notification on IPS reserve increase (pacs.002) to Buna RTGS Direct Participant.
	Alternate Flows
AF1	**Block of funds was failed**
1	Event generation for Buna Administrator
2	Send rejection status message (pacs.002) to participant

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant	camt.050	Copy of payment on reserve increase
Buna Direct Participant	pacs.002	Status/Rejection message
Buna Direct Participant	camt.010	New Debit cap value

4.3.3   Use Case IPS-LIQ-03: IPS Settlement limit account withdrawal (decrease).
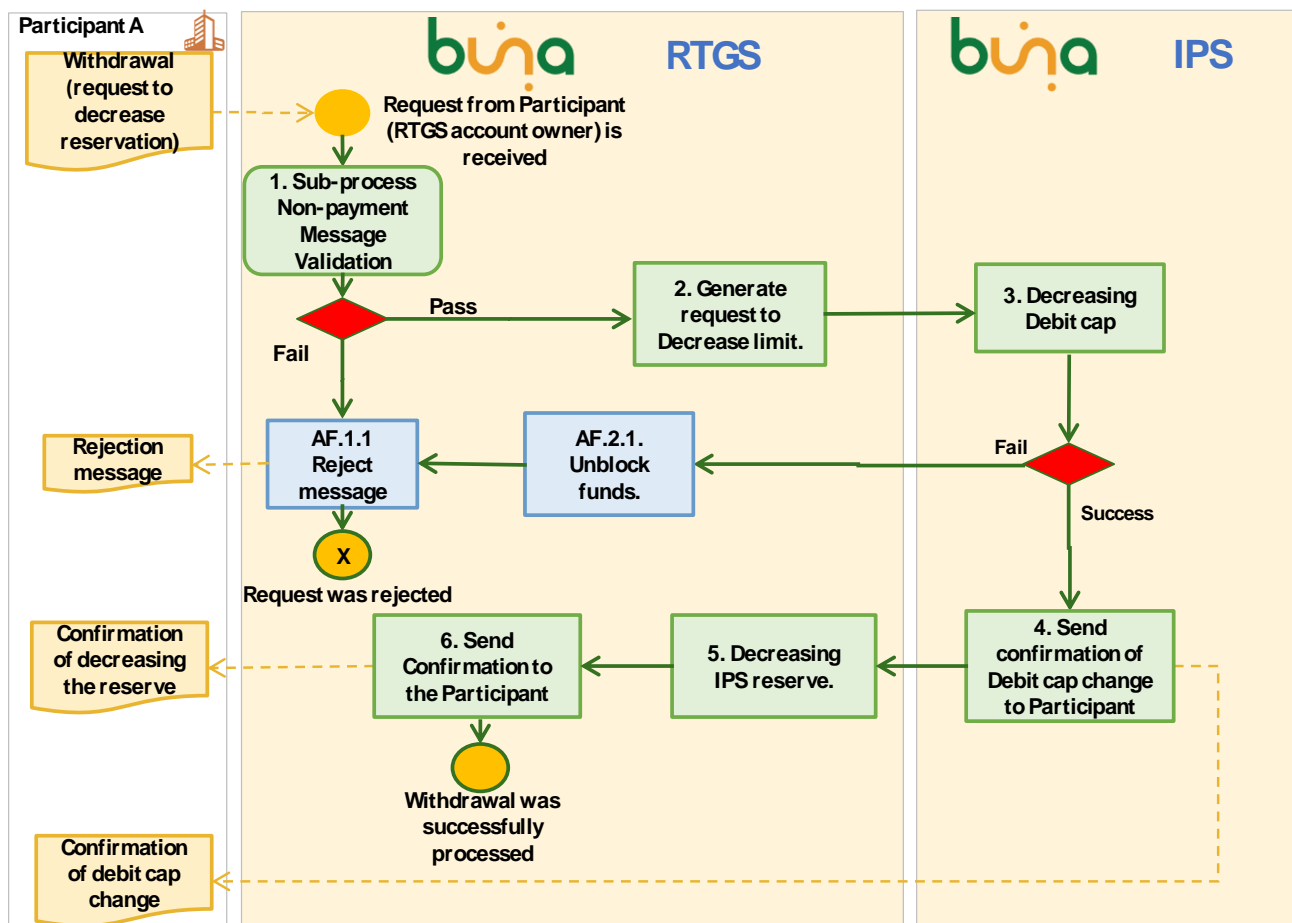
Figure 19: Settlement limit account withdrawal

Use Case ID	IPS-LIQ-03
Use Case Name	Settlement limit account withdrawal (decrease).
Use Case Description	Reducing Debit cap of Settlement limit account via request to reduce reserve
Primary Actors	Direct Participants, Buna IPS, Buna RTGS
Trigger Event	Request to decrease reserve (camt.051) is received from RTGS account holder
Use Case Business Rules	

Use Case Business Rules
The automatic defunding process will be disabled for funds reserved under the IPS position and participants can top-up or withdraw from their accounts at any point of time during the operating window of a given currency. **IPS Reserve = IPS Account Debit Cap** **In case Participant is in a debit position in IPS it means that some part of his Debit Cap is already used, and this part cannot be taken already from IPS reserve to RTGS settlement**

Pre-Conditions
Settlement limit account is open

Post Conditions
Debit cap of Settlement limit account is decreased, Reserve is decreased

Basic Flow	
1	Execute sub-process «Non-Payment message Validation» (Use Case IPS-PM-14: Non-payment message validation). Additional validation of accounts status.

	Passed - go to 2
	Failed- go to AF1
2	Generate request to decrease Debit cap
3	Attempt to decrease Debit cap (Check whether new limit value is less then negative aggregated position)
	Success - go to 4
	Fail- go to AF1
4	Send confirmation of Debit Cap change (camt.010) to Participant
5	Decreasing IPS reserve.
6	Send status (pacs.002) to Participant.
Alternate Flows
AF1	**Request validation is failed at Buna**
1	Buna IPS rejects Request and sends reject notification (pacs.002) to Settlement limit account holder
AF2	**Limit increase is failed at Buna**
1	Buna RTGS unblocks funds. Go to AF1.1

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant	camt.051	Request to decrease reserve*

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant	pacs.002	Status/Rejection message
Buna Direct Participant	camt.010	New Debit cap value

*Formats for the RTGS messages will be described at RTGS message formats handbook

4.3.4   Use Case IPS-LIQ-04: Position IPS account Debit cap change
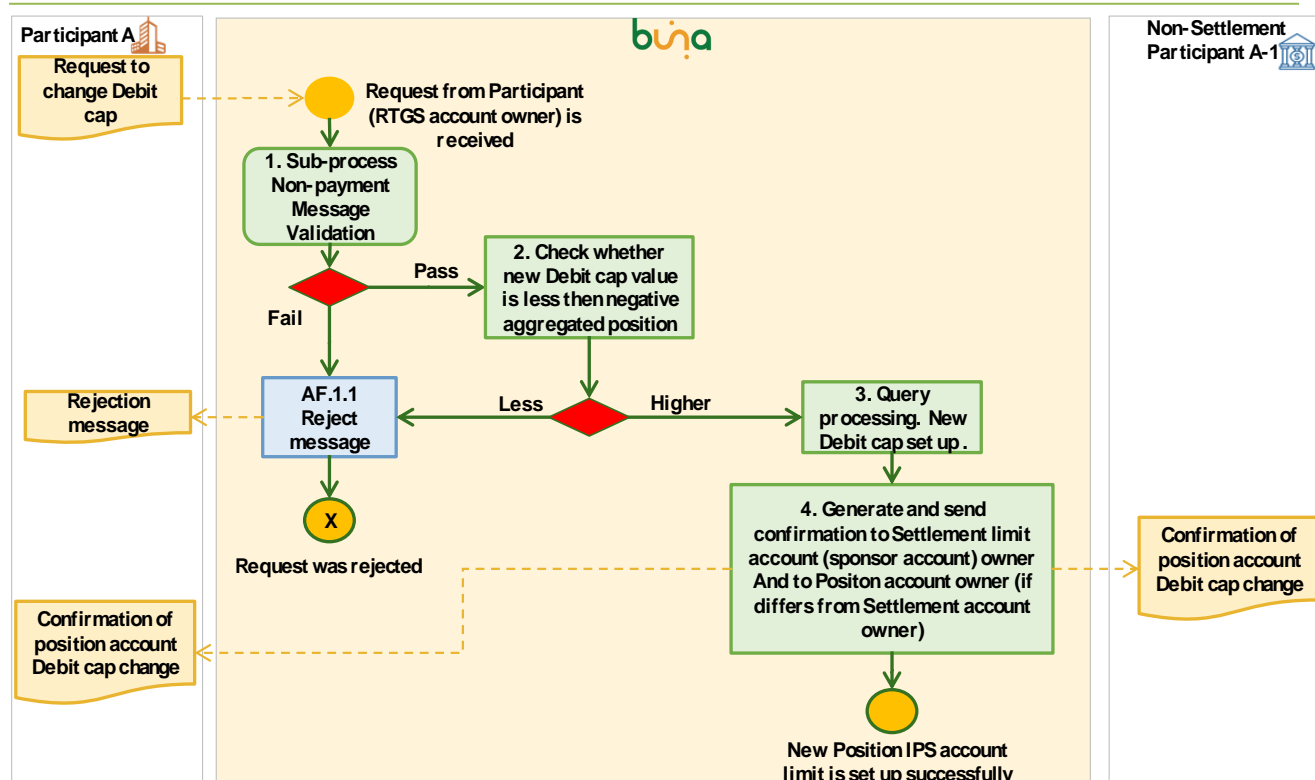
Figure 20: Position IPS account limit set up

Use Case ID	IPS-LIQ-04
Use Case Name	Position IPS account Debit cap change
Use Case Description	Position IPS account Debit cap change
Primary Actors	Direct Participants, Non-Settlement Participants, Buna IPS, Buna RTGS
Trigger Event	Request to change Debit cap (camt.011) on Position account of Direct Participant itself or Non-Settlement Participant is received from RTGS account holder
Use Case Business Rules	
Limit of the Position account could be changed only by Settlement limit account owner (Sponsor account)	
Pre-Conditions	
Position account is open	
Post Conditions	
Limit of Position account is changed	
Basic Flow	

1	Execute sub-process «Non-Payment message Validation» (Use Case IPS-PM-14: Non-payment message validation). Passed - go to 2 Failed- go to AF1
2	Check whether new Debit cap value is less then negative aggregated position Higher - go to 3 Less- go to AF1
3	Buna IPS set up new Debit cap on Position account
4	Buna IPS generates and sends confirmation (camt.010) to Participant (RTGS account owner) and Non-Settlement Participant

Alternate Flows	
AF1	Request validation is failed at Buna IPS
1	Buna IPS rejects Request and sends reject notification (camt.025) to RTGS account holder

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant	camt.011	Request to change Debit cap

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	camt.010	Confirmation of position account Debit cap change
Buna Direct Participant	camt.025	Status/Rejection message

4.3.5 Use Case IPS-LIQ-05: Request the Position IPS account Debit cap value
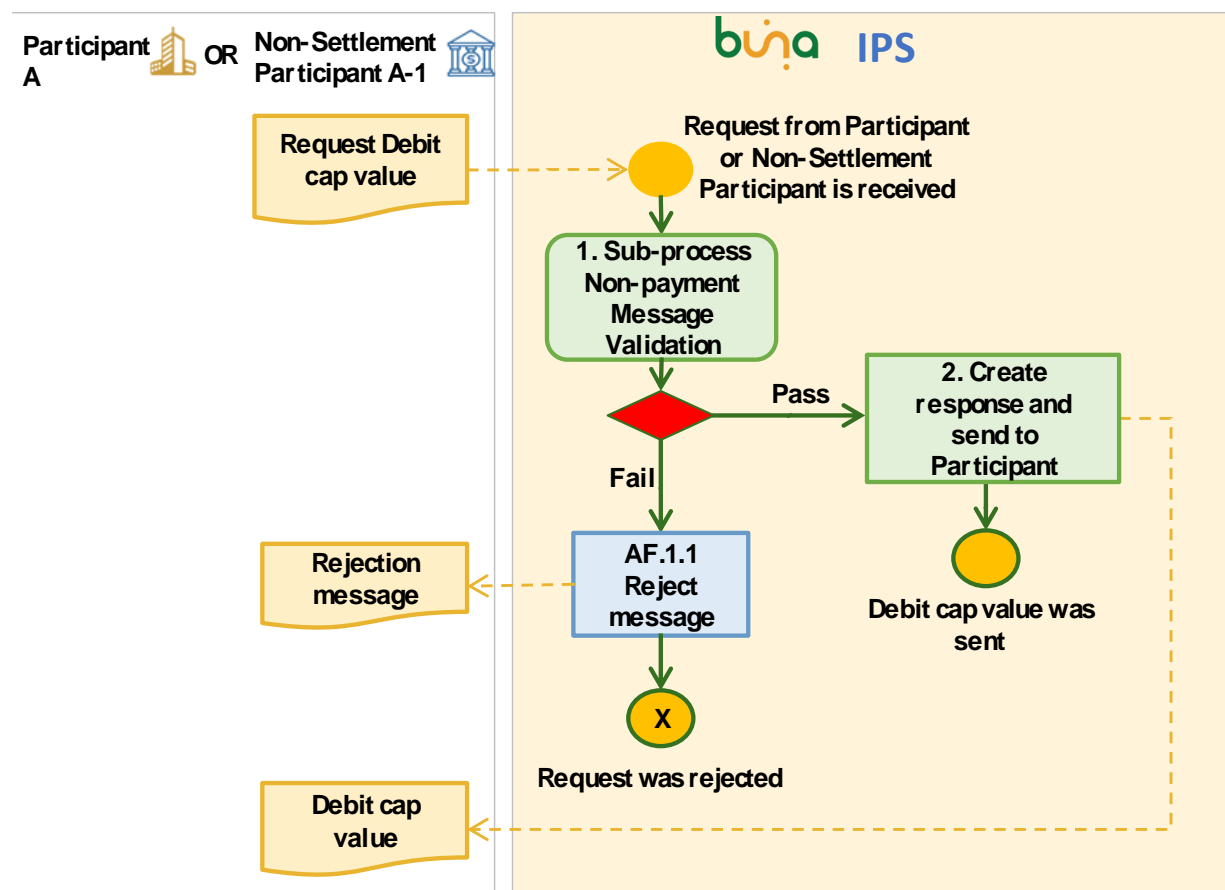
Figure 21: Position IPS account limit set up

Use Case ID	IPS-LIQ-05
Use Case Name	Request the Position IPS account Debit cap value

Use Case Description	Request the Position IPS account Debit cap value
Primary Actors	Direct Participants, Non-Settlement Participants, Buna IPS, Buna RTGS
Trigger Event	Request to receive Debit cap value (camt.009) of Position account of Direct Participant or Non-Settlement Participant is received

Use Case Business Rules
Buna Direct Participant can request Debit cap value for its own and sponsored accounts
Non-Settlement Participant can request Debit cap value only for its own Position accounts

Pre-Conditions
Position account is open

Post Conditions
Debit cap value was sent to the request's sender

Basic Flow	
1	Execute sub-process «Non-Payment message Validation» (Use Case IPS-PM-14: Non-payment message validation). Passed - go to 2 Failed- go to AF1
2	Buna IPS generates and sends Debit cap value (camt.010) to the request's sender

Alternate Flows	
AF1	**Request validation is failed at Buna IPS**
1	Buna IPS rejects Request and sends reject notification (camt.025) to the request's sender

Incoming messages

Senders	MX ISO 20022	Description
Buna Direct Participant	camt.009	Request of Position account Debit cap

Outgoing messages

Receivers	MX ISO 20022	Description
Buna Direct Participant, Non-Settlement Participant	camt.010	Debit cap value
Buna Direct Participant	camt.025	Rejection message

4.4 CENTRAL ADDRESSING SCHEME USE CASES

4.4.1 Central Addressing Scheme. Customer, Aliases and Accounts registration Use cases.

4.4.1.1 Use Case CAS-REG-01: Register customer information
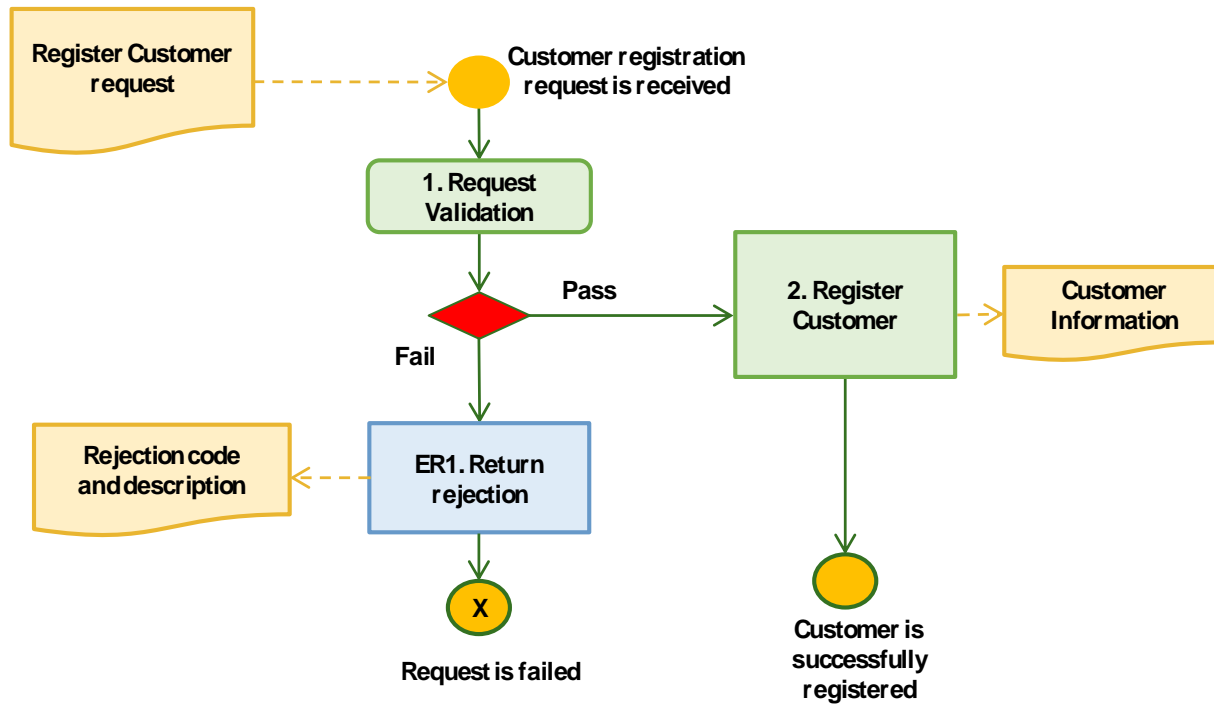
Figure 22: Register customer (individual person) information

Use Case ID	CAS-REG-01
Use Case Name	Register customer information
Use Case Description	Request to Register own customer (individual person or legal entity) information in CAS.
Primary Actors	Participant's application
Trigger Event	"Register customer" method is called by the participant's application
Use Case Business Rules	
Participant can register information on its own customer only.	
Pre-Conditions	
Participant must be registered in IPS database	
Post Conditions	
The Participant's customer's information (without aliases and accounts) is registered.	
Basic Flow	

1	Validations for the request:
	    1. Participant's BIC/Pseudo-BIC must be registered in the system;
	    2. Body fields values corresponds to required formats and value ranges;
	    3. Whether customer is already registered – in this case existing customer's data is just updated.
	If validation fails, go to ER1

2	Customer information is successfully registered and a notification with customer information is returned to the participant
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.1.2 Use Case CAS-REG-02: Account registration
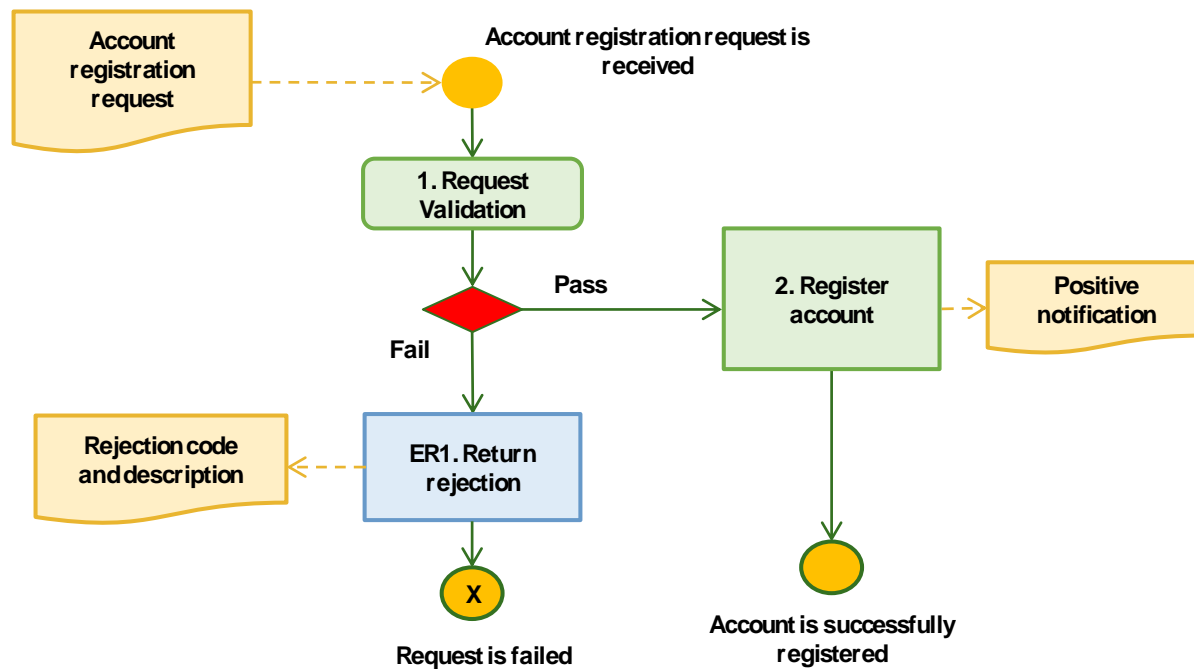
Figure 23: Account registration

Use Case ID	CAS-REG-02
Use Case Name	Account registration
Use Case Description	Request to add a customer account
Primary Actors	Participant's application
Trigger Event	"Create account" method is called by the participant's application.
Use Case Business Rules	
A participant that initiates the request can register account of its customer only.	
Pre-Conditions	
Customer (individual person or legal entity) must be registered in CAS	
Post Conditions	
Account of individual person or legal entity is registered in CAS	
Basic Flow	
1	Validations for the request:
	1. Participant BIC/Pseudo-BIC must be registered in the system;
	2. Customer must be registered in CAS;
	3. Body fields values corresponds to required formats and value ranges;
	4. Whether customer's account is already registered with the same information.
	If validation fails, go to ER1
2	Account of customer is registered in CAS.
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.1.3 Use Case CAS-REG-03: Alias registration
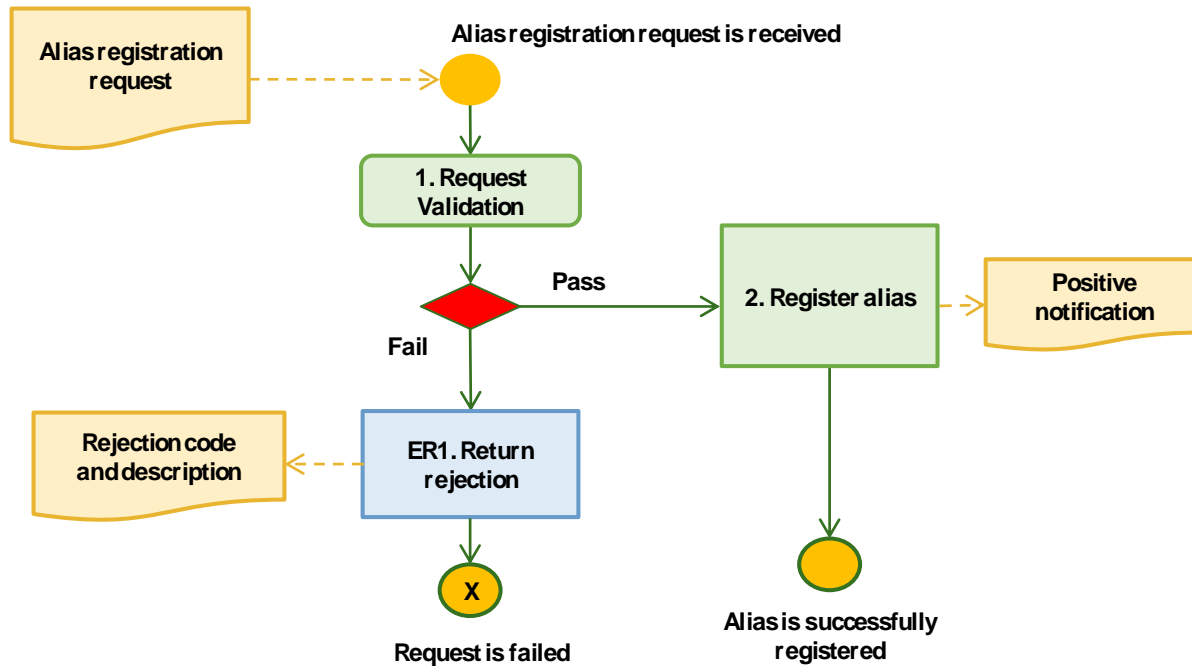
Figure 24: Alias registration

Use Case ID	CAS-REG-03
Use Case Name	Alias registration
Use Case Description	Request to add customer's alias
Primary Actors	Participant's application
Trigger Event	"Create alias" method is called by the participant's application
Use Case Business Rules	
A participant that initiates the request can register alias of its own customer only.	
Pre-Conditions	
Customer (individual person or legal entity) must be registered in CAS	
Post Conditions	
Alias of customer (individual person or legal entity) is registered in CAS	
Basic Flow	
1	Validations for the request: 1. Participant BIC/Pseudo-BIC must be registered in the system; 2. Customer must be registered in CAS; 3. Body fields values corresponds to required formats and value ranges; 4. Whether customer's alias is already registered. If validation fails, go to ER1
2	Alias of customer is registered in CAS.
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.1.4 Use Case CAS-REG-04: One-step Customer registration
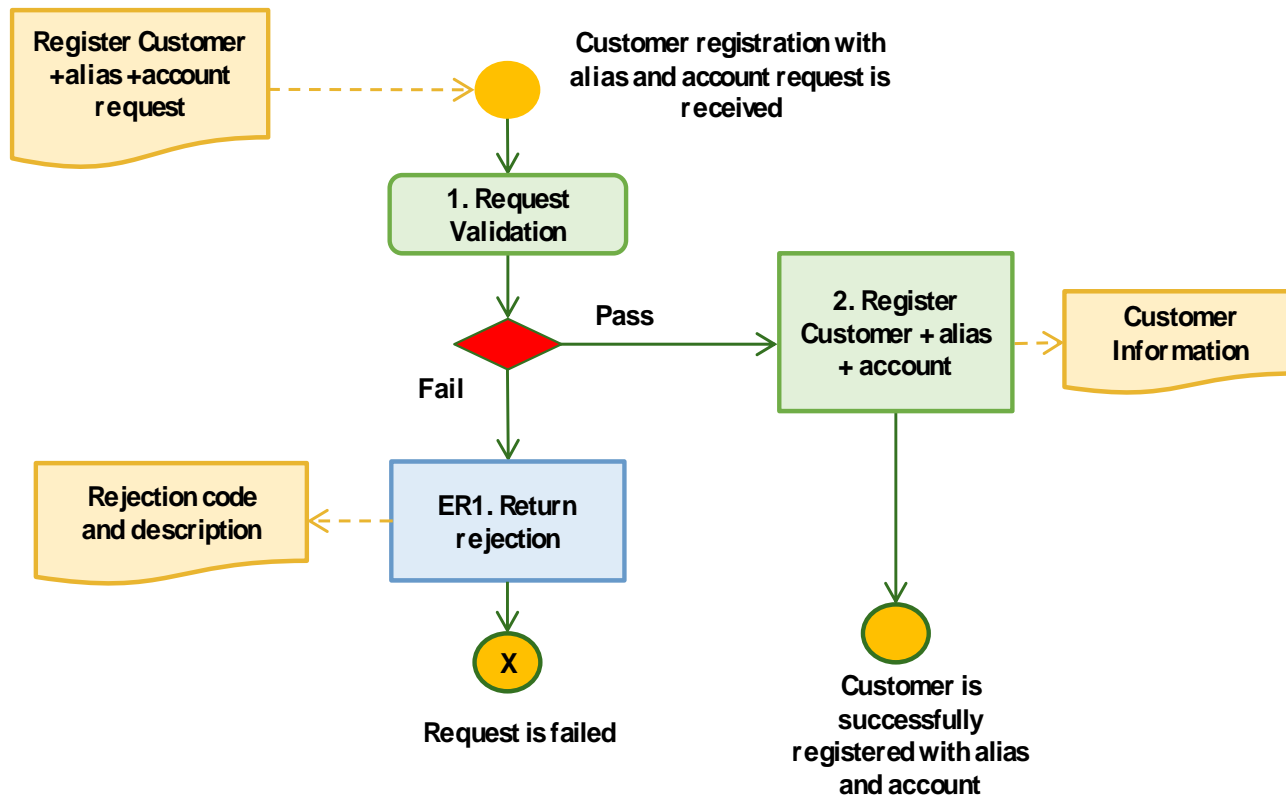
Figure 25: One-step Customer registration

Use Case ID	CAS-REG-04
Use Case Name	One-step Customer registration
Use Case Description	One-step registration of the Customer details, Alias details and Account details in one-step procedure via a single API call
Primary Actors	Participant's application
Trigger Event	"One-step Customer registration" method is called by the participant's application
Use Case Business Rules	
To ease registration process system allows registration of Customer details, Alias details and Account details in one-step procedure via a single API call	
Pre-Conditions	
Participant must be registered in IPS database	
Post Conditions	
The Participant's customer's information with alias and account is registered.	
Basic Flow	
1	Validations for the request: 1. Participant BIC/Pseudo-BIC must be registered in the system; 2. Body fields values corresponds to required formats and value ranges; 3. Whether customer and/or customer's alias and/or customer's account is already registered – in this case existing customer's data is just updated. If validation fails, go to ER1
2	Customer information is successfully registered.
Alternate Flows	
	N/A
Exceptions	

ER1	Participant's application receives an error code with description.

4.4.1.5   Use Case CAS-REG-05: One-step Alias and Account registration
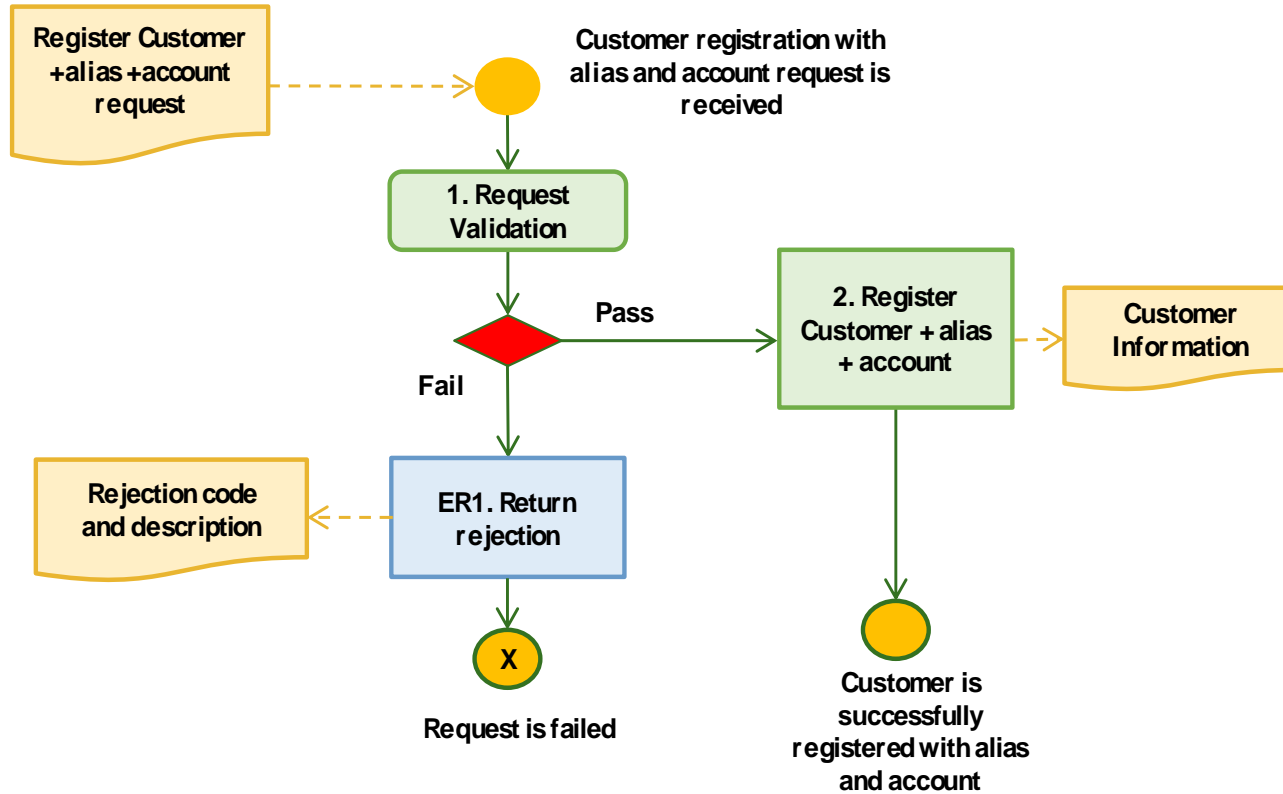
Figure 26: One-step Alias and Account registration

Use Case ID	CAS-REG-05
Use Case Name	One-step Alias and Account registration
Use Case Description	One-step registration of the Alias details and Account details in one-step procedure via a single API call
Primary Actors	Participant's application
Trigger Event	"One-step Customer registration" method is called by the participant's application
Use Case Business Rules	
If Customer has been onboarded already by a particular institution, then this institution can register additional aliases and links them to accounts in one step. This one-step alias and account registration request contains alias and account details as a single API call. If specified Alias already exists, then it is not created but existing Alias record is used. The system validates that all alias details (if present in the call) and account details (if present in the call) are the matched with details already if appropriate (alias or account) records exists.	
Pre-Conditions	
Participant must be registered in IPS database. Customer must be registered in CAS.	
Post Conditions	
Customer's alias and account are registered and linked.	
Basic Flow	

1	Validations for the request:
	1. Participant BIC/Pseudo-BIC must be registered in the system;
	2. Body fields values corresponds to required formats and value ranges;
	3. Whether customer and/or customer's alias and/or customer's account is already registered – in this case existing customer's data is just updated.
	4.
	If validation fails, go to ER1
2	Customer information is successfully registered.
	Alternate Flows
	N/A
	Exceptions
ER1	Participant's application receives an error code with description.

4.4.1.6 Use Case CAS-REG-06: Bulk upload of CAS information to DBO
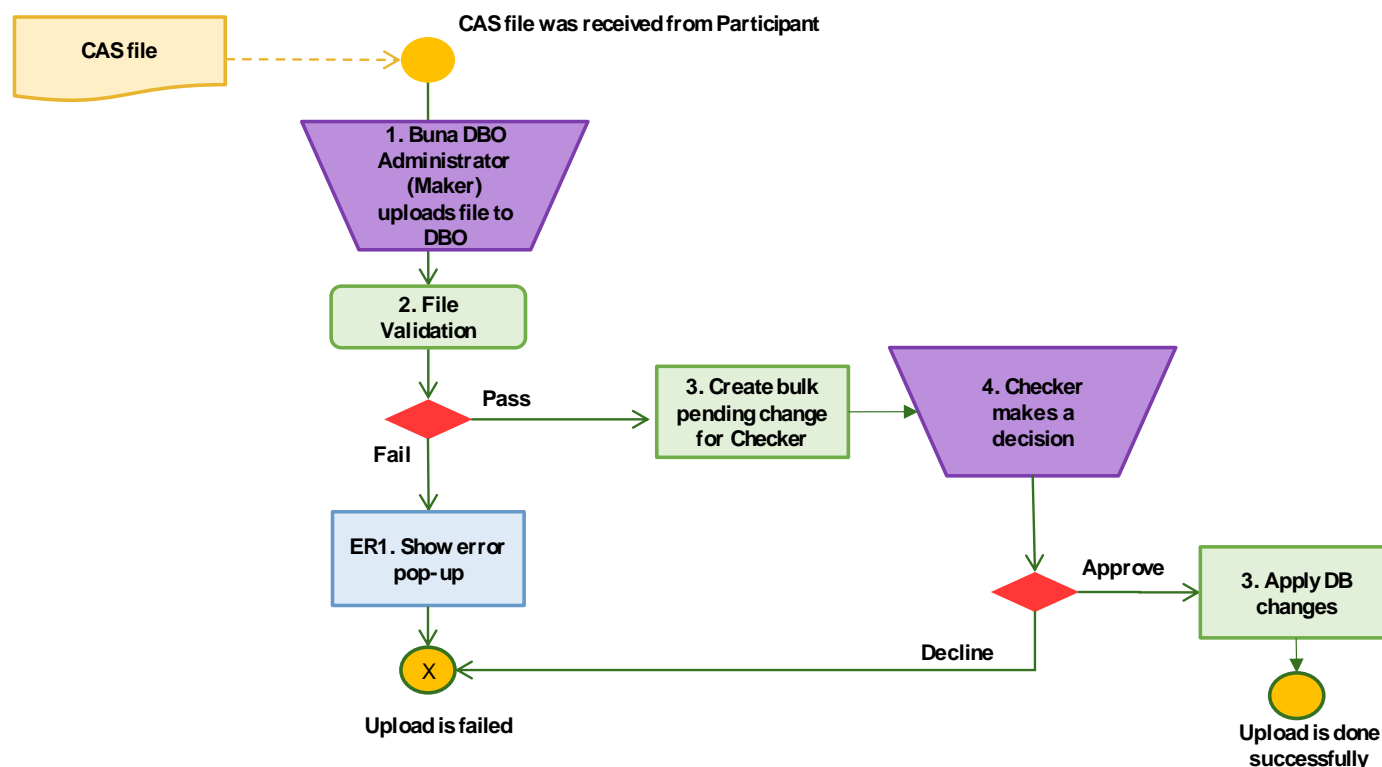
Figure 27: Bulk upload of CAS information to DBO

Use Case ID	**CAS-REG-06**
Use Case Name	Bulk upload of CAS information to DBO
Use Case Description	Bulk upload of CAS information to DBO
Primary Actors	Buna DBO Administrators
Trigger Event	CAS file was received from the Participant
Use Case Business Rules	
CAS Information can be uploaded to DBO in Maker/Checker mode	
Pre-Conditions	
N/A	
Post Conditions	

	CAS information was successfully uploaded.
	Basic Flow
1	Buna DBO Administrator(Maker) uploads file to DBO
2	DBO validates the file: 　　1. File structure; 　　2. Data formats. 　　3. If validation fails, go to ER1.
2	System creates a Bulk Pending change for the Buna DBO Administrator (Checker)
3	Buna DBO Administrator (Checker) approves upload, after that changes will finally update Database. (It can also decline according to the standard Maker/Checker mechanism in DBO).
	Alternate Flows
	N/A
	Exceptions
ER1	System shows error pop-up for Buna DBO Administrator.

4.4.2 Central addressing scheme. Management and control of customer data, aliases and accounts use cases.

4.4.2.1 Use Case CAS-MAN-01: Suspend customer
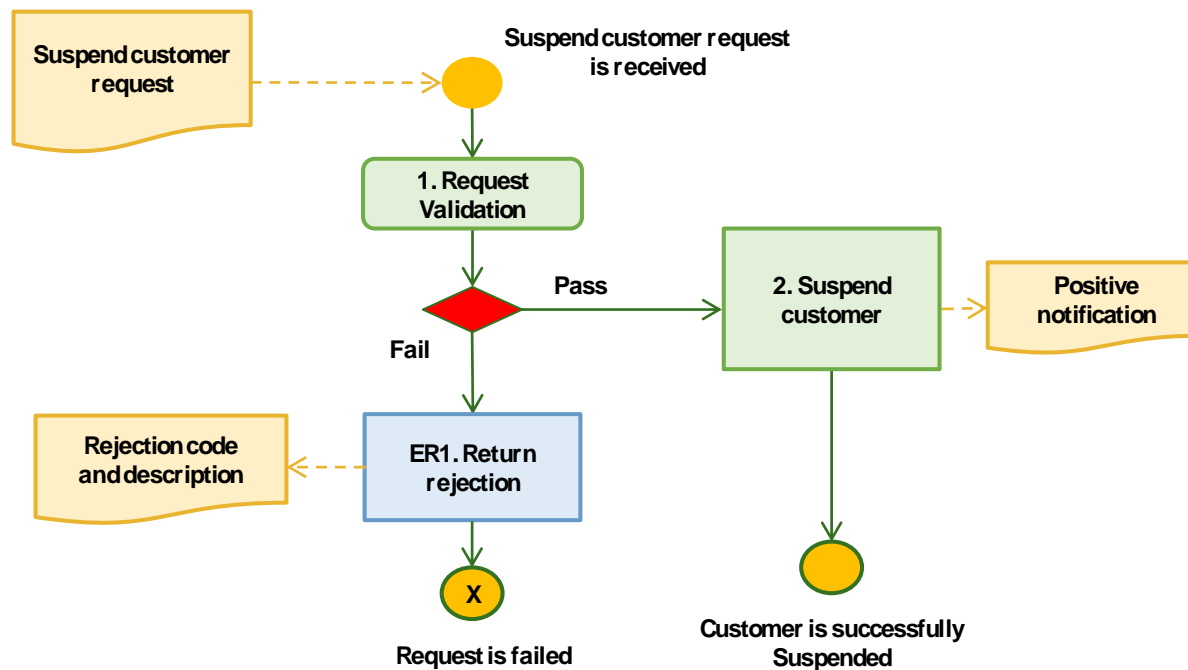
Figure 28: Suspend customer

Use Case ID	**CAS-MAN-01**
Use Case Name	Suspend customer
Use Case Description	Suspend own customer.
Primary Actors	Participant's application
Trigger Event	"Suspend customer" method is called by the participant's application
Use Case Business Rules	
Participant can suspend customer of its own customer only.	

	Pre-Conditions
	A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02).
	Post Conditions
	The Participant's application receives positive response on the request.
	Basic Flow
1	Validations for the request: 1. Customer must be registered in CAS; 2. Body fields values corresponds to required formats and value ranges. If validation fails, go to ER1
2	Customer is successfully suspended.
	Alternate Flows
	N/A
	Exceptions
ER1	Participant's application receives an error code with description.

4.4.2.2 Use Case CAS-MAN-02 : Activate customer
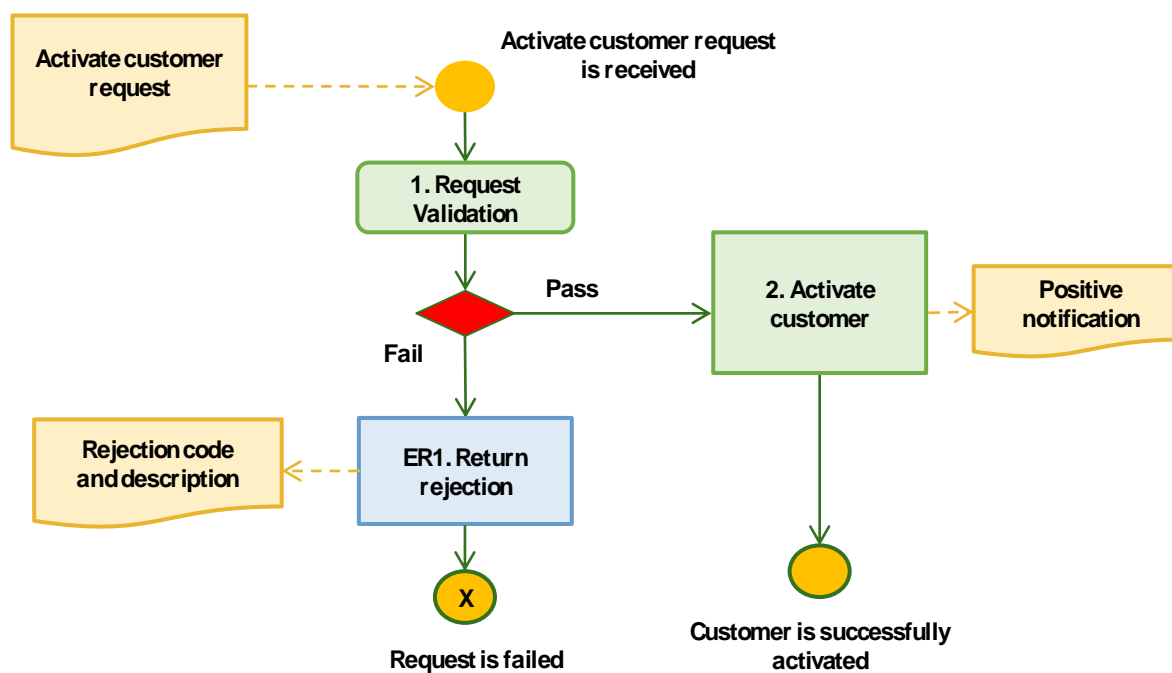
Figure 29: Activate customer

Use Case ID	CAS-MAN-02
Use Case Name	Activate customer
Use Case Description	Activating own customer.
Primary Actors	Participant's application
Trigger Event	"Activate customer" method is called by the participant's application
Use Case Business Rules	
Participant can activate customer of its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02).	
Post Conditions	
The Participant's application receives positive response on the request.	

Basic Flow	

1	Validations for the request:
	    1. Customer must be registered in CAS;
	    2. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1

2	Customer is successfully activated.
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.2.3 Use Case CAS-MAN -03: Delete customer
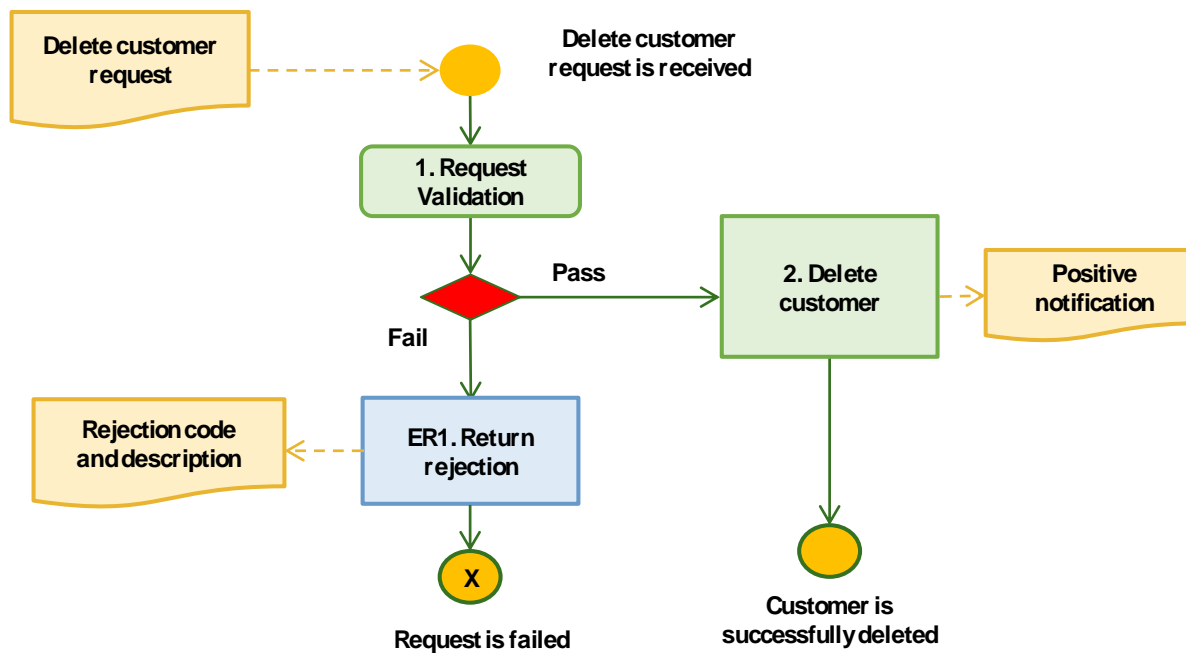
Figure 30: Delete customer

Use Case ID	CAS-MAN-03
Use Case Name	Delete customer
Use Case Description	Deleting own customer.
Primary Actors	Participant's application
Trigger Event	"Delete customer" method is called by the participant's application
Use Case Business Rules	
Participant can delete customer of its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02).	
Post Conditions	
The Participant's application receives positive response on the request.	
Basic Flow	
1	Validations for the request: 1. Customer must be registered in CAS;

	2. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1.
2	Customer is successfully marked as deleted (logically and not physically deleted) as well as the aliases and accounts linked to it.
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.2.4 Use Case CAS-MAN -04: Update customer information
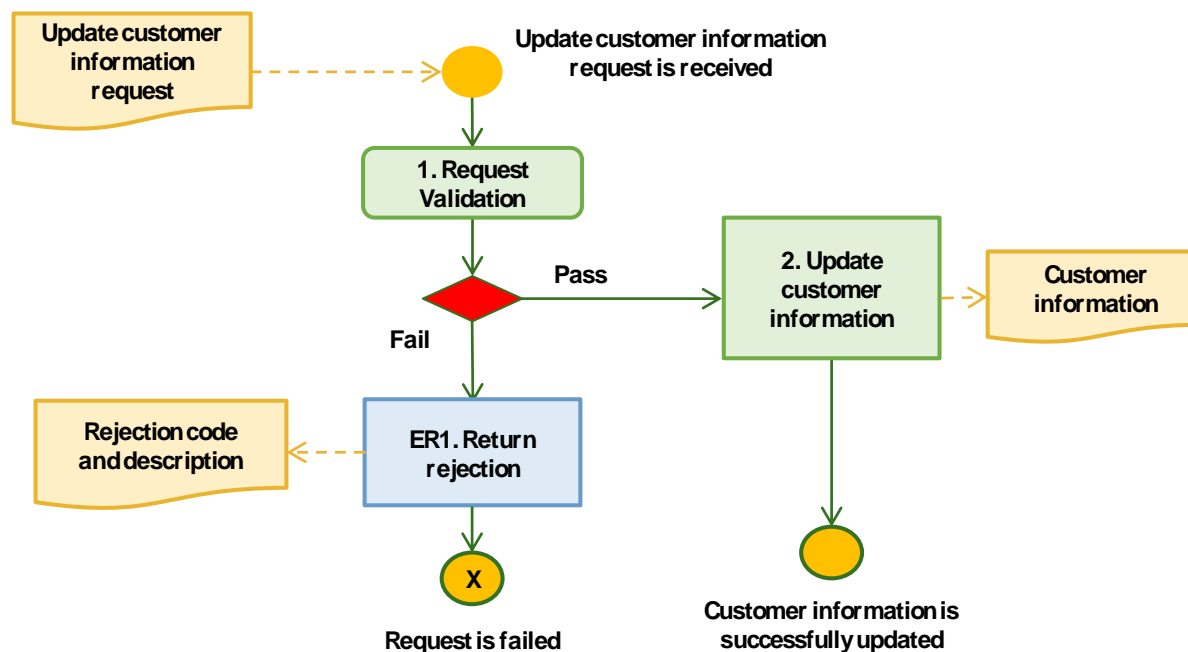
Figure 31: Update customer (individual person) information

Use Case ID	CAS-MAN-04
Use Case Name	Update customer information
Use Case Description	Updating own customer information
Primary Actors	Participant's application
Trigger Event	"Update customer information" method is called by the participant's application
Use Case Business Rules	
Participant can update information on its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01).	
Customer information can be requested (use case IPS-CAS-05) before update.	
Post Conditions	
The Participant's customer's information (without aliases and accounts) is updated	
Basic Flow	
1	Validations for the request:
	1. Customer must be registered in CAS;
	2. Body fields values corresponds to required formats and value ranges.

	If validation fails, go to ER1
2	Customer information is successfully updated.
	Alternate Flows
	N/A
	Exceptions
ER1	Participant's application receives an error code with description.

4.4.2.5 Use Case CAS-MAN -05: Update alias

Figure 32: Update alias

Use Case ID	CAS-MAN-05
Use Case Name	Update alias
Use Case Description	Updating own customer's alias.
Primary Actors	Participant's application
Trigger Event	"Update alias" method is called by the participant's application
Use Case Business Rules	
Participant can update alias of its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02). **Alias must be registered in CAS (use case IPS-CAS-04)**	
Post Conditions	
The Participant's application receives positive response on the request.	
Basic Flow	

1	Validations for the request:
	    1. Customer must be registered in CAS;
	    2. Alias must be registered in CAS;
	    3. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1

2	Alias is successfully updated.

Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.2.6 Use Case CAS-MAN -06: Delete alias
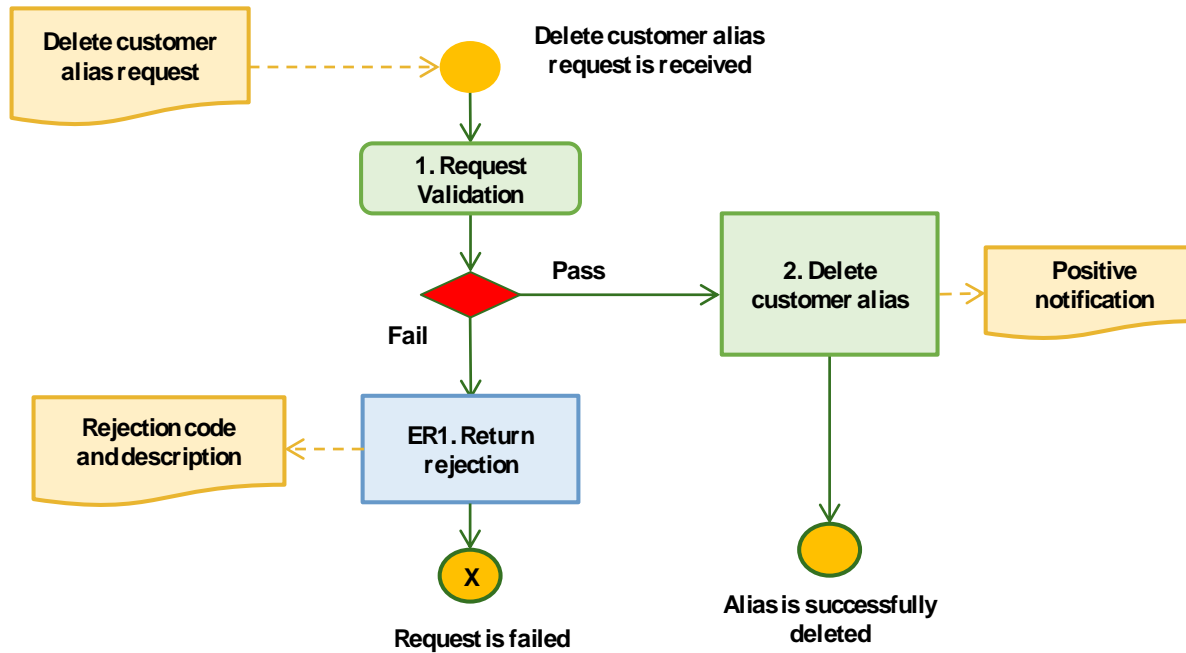
Figure 33: Delete alias

Use Case ID	**CAS-MAN-06**
Use Case Name	Delete alias
Use Case Description	Deleting own customer's alias.
Primary Actors	Participant's application
Trigger Event	"Delete alias" method is called by the participant's application
Use Case Business Rules	
Participant can delete alias of its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02).	
Alias must be registered in CAS (use case IPS-CAS-04)	
Post Conditions	
The Participant's application receives positive response on the request.	
Basic Flow	

1	Validations for the request:
	     1. Customer must be registered in CAS;
	     2. Alias must be registered in CAS;
	     3. Body fields values corresponds to required formats and value ranges.
	 If validation fails, go to ER1

2	Alias is successfully deleted.
Alternate Flows	
	N/A

	Exceptions
ER1	Participant's application receives an error code with description.

4.4.2.7 Use Case CAS-MAN -07: Suspend alias

Figure 34: Suspend alias

Use Case ID	**CAS-MAN-07**	
Use Case Name	Suspend alias	
Use Case Description	Suspending own customer's alias.	
Primary Actors	Participant's application	
Trigger Event	"Suspend alias" method is called by the participant's application	
Use Case Business Rules		
Participant can suspend alias of its own customer only.		
Pre-Conditions		
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02).		
Alias must be registered in CAS (use case IPS-CAS-04)		
Post Conditions		
The Participant's application receives positive response on the request.		
Basic Flow		
1	Validations for the request:	
	1. Customer must be registered in CAS;	
	2. Alias must be registered in CAS;	
	3. Body fields values corresponds to required formats and value ranges.	
	If validation fails, go to ER1	
2	Alias is successfully suspended.	
Alternate Flows		
	N/A	
Exceptions		
ER1	Participant's application receives an error code with description.	

4.4.2.8 Use Case CAS-MAN -08: Activate alias
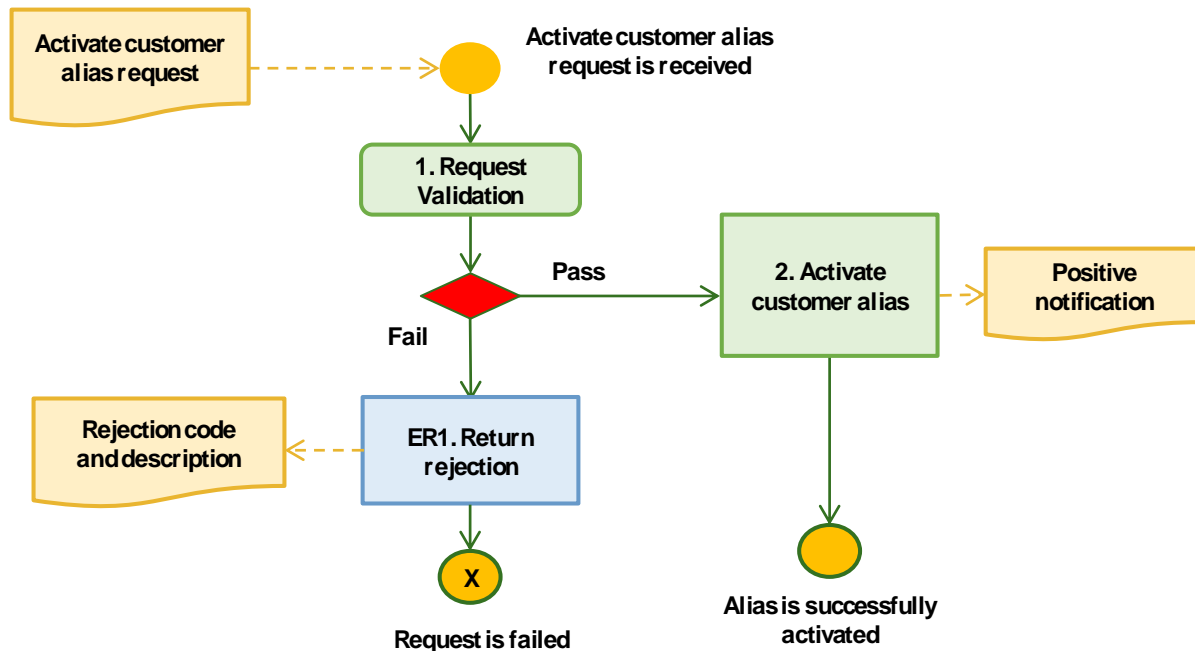
Figure 35: Activate alias

Use Case ID	CAS-MAN-08
Use Case Name	Activate alias
Use Case Description	Activating own customer's alias.
Primary Actors	Participant's application
Trigger Event	"Activate alias" method is called by the participant's application
Use Case Business Rules	
Participant can activate alias of its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02). Alias must be registered in CAS (use case IPS-CAS-04)	
Post Conditions	
The Participant's application receives positive response on the request.	
Basic Flow	
1	Validations for the request: 1. Customer must be registered in CAS; 2. Alias must be registered in CAS; 3. Body fields values corresponds to required formats and value ranges. If validation fails, go to ER1
2	Alias is successfully activated.
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.2.9 Use Case CAS-MAN-09: Link alias and account
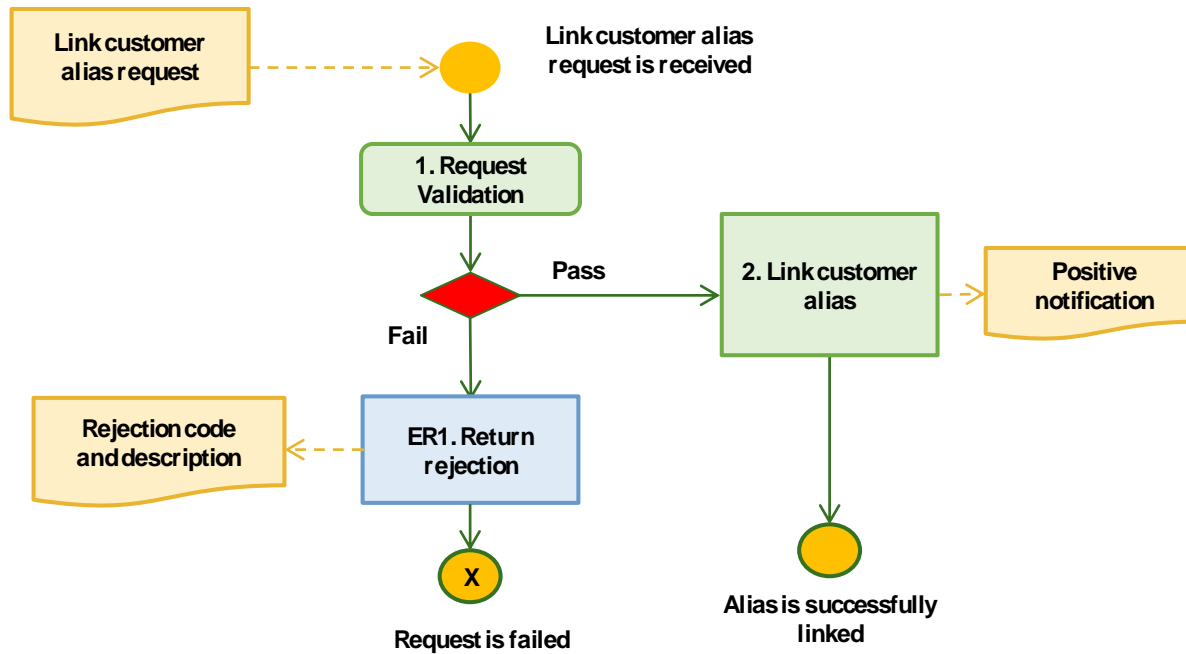
Figure 36: Link alias to account

Use Case ID	**CAS-MAN-09**
Use Case Name	Link alias to account
Use Case Description	Linking own customer's alias and customer's account.
Primary Actors	Participant's application
Trigger Event	"Link alias to account" or «Link account to alias» method is called by the participant's application
Use Case Business Rules	
Participant can link alias of its own customer only.	
Pre-Conditions	
A customer must be registered in CAS. **Account must be registered in CAS.** **Alias must be registered in CAS.**	
Post Conditions	
The Participant's application receives positive response on the request.	
Basic Flow	
1	Validations for the request: 1. Customer must be registered in CAS; 2. Account must be registered in CAS; 3. Alias must be registered in CAS; 4. Body fields values corresponds to required formats and value ranges. If validation fails, go to ER1
2	Alias is successfully linked.
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.2.10 Use Case CAS-MAN-10: Unlink alias and account
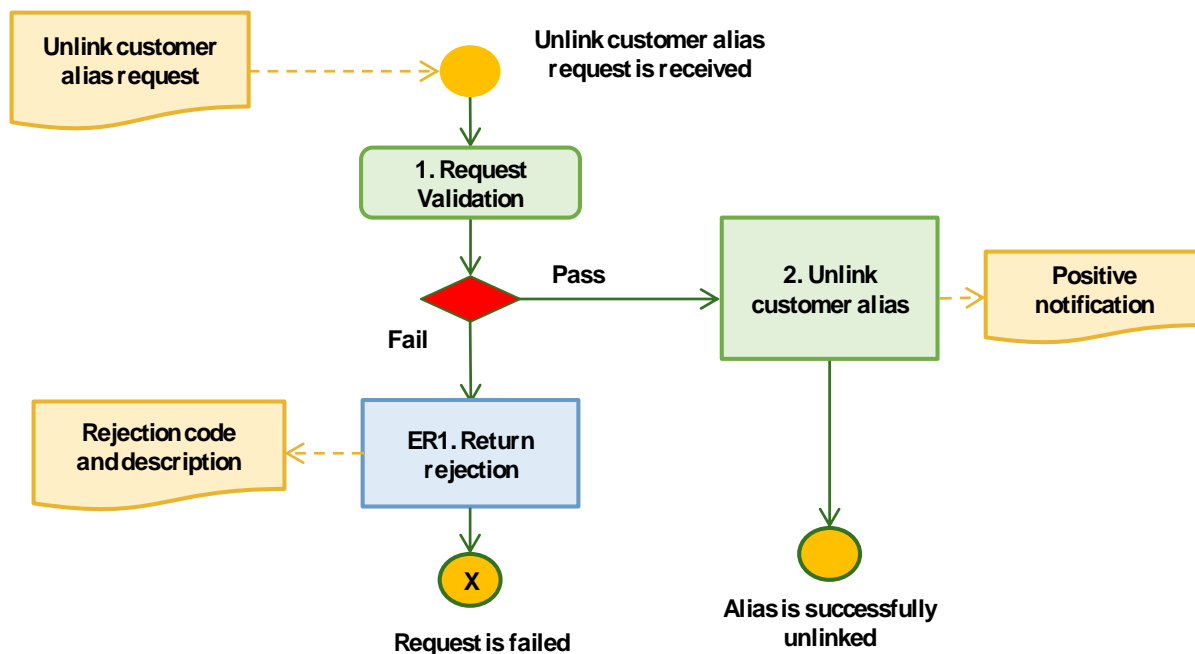
Figure 37: Unlink alias from account

Use Case ID	CAS-MAN-10
Use Case Name	Unlink alias from account
Use Case Description	Unlinking own customer's alias from the customer's account.
Primary Actors	Participant's application
Trigger Event	"Unlink alias from account" or «Unlink account from alias» method is called by the participant's application
Use Case Business Rules	
Participant can unlink alias of its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02). Account must be registered in CAS (use case IPS-CAS-03). Alias must be registered in CAS (use case IPS-CAS-04).	
Post Conditions	
The Participant's application receives positive response on the request.	
Basic Flow	
1	Validations for the request: 1. Customer must be registered in CAS; 2. Account must be registered in CAS; 3. Alias must be registered in CAS; 4. Body fields values corresponds to required formats and value ranges. If validation fails, go to ER1
2	Alias is successfully unlinked.
Alternate Flows	
	N/A
Exceptions	

ER1	Participant's application receives an error code with description.

4.4.2.11 Use Case CAS-MAN-11: Update account
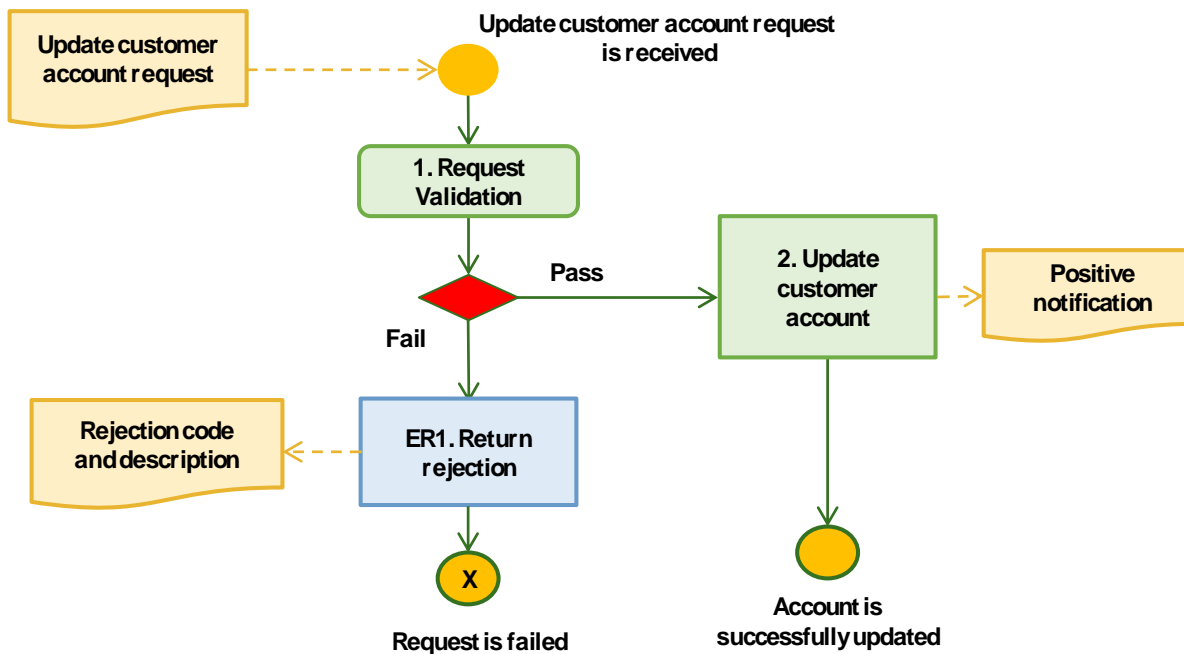
Figure 38: Update account

Use Case ID	**CAS-MAN-11**		
Use Case Name	Update account		
Use Case Description	Updating own customer's account.		
Primary Actors	Participant's application		
Trigger Event	"Update account" method is called by the participant's application		
Use Case Business Rules			
Participant can update account of its own customer only.			
Pre-Conditions			
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02).			
Account must be registered in CAS (use case IPS-CAS-03)			
Post Conditions			
The Participant's application receives positive response on the request.			
Basic Flow			
1	Validations for the request: 1. Customer must be registered in CAS; 2. Account must be registered in CAS; 3. Body fields values corresponds to required formats and value ranges. If validation fails, go to ER1		
2	Account is successfully updated.		
Alternate Flows			
	N/A		
Exceptions			
ER1	Participant's application receives an error code with description.		

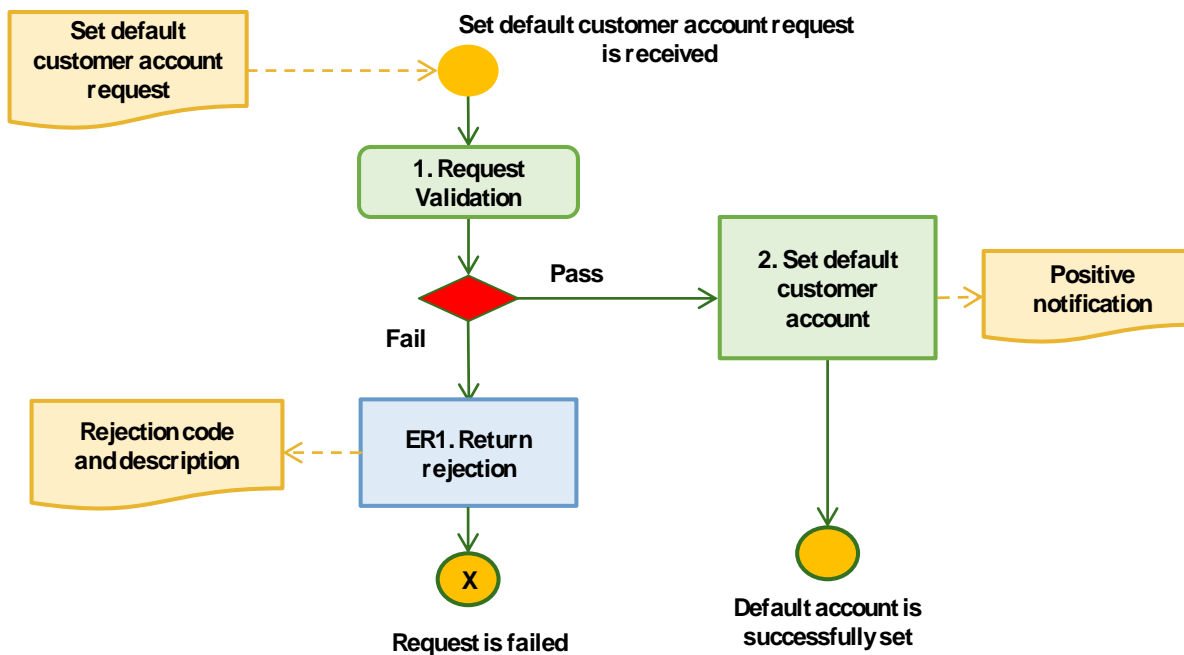#### 4.4.2.12 Use Case CAS-MAN-12: Define "To be used by default" Account for Alias

Figure 39: Define "To be used by default" Account for Alias

Use Case ID	CAS-MAN-12
Use Case Name	Define "To be used by default" Account for Alias
Use Case Description	Define "To be used by default" Account for Alias. When customer will have several accounts, default one will be used for the response on Get default account by alias request.
Primary Actors	Participant's application
Trigger Event	"Set account as default for alias" method is called by the participant's application
Use Case Business Rules	
Participant can set account as default for its own customer only.	
Pre-Conditions	
A customer must be registered in CAS. Account must be registered in CAS. Alias must be registered in CAS.	
Post Conditions	
The Participant's application receives positive response on the request.	
Basic Flow	

1	Validations for the request:
	    1. Customer must be registered in CAS;
	    2. Account must be registered in CAS;
	    3. Alias must be registered in CAS;
	    4. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1

2	Default account is successfully set.
Alternate Flows	
	N/A
Exceptions	

4.4.2.13 Use Case CAS-MAN-13: Delete account
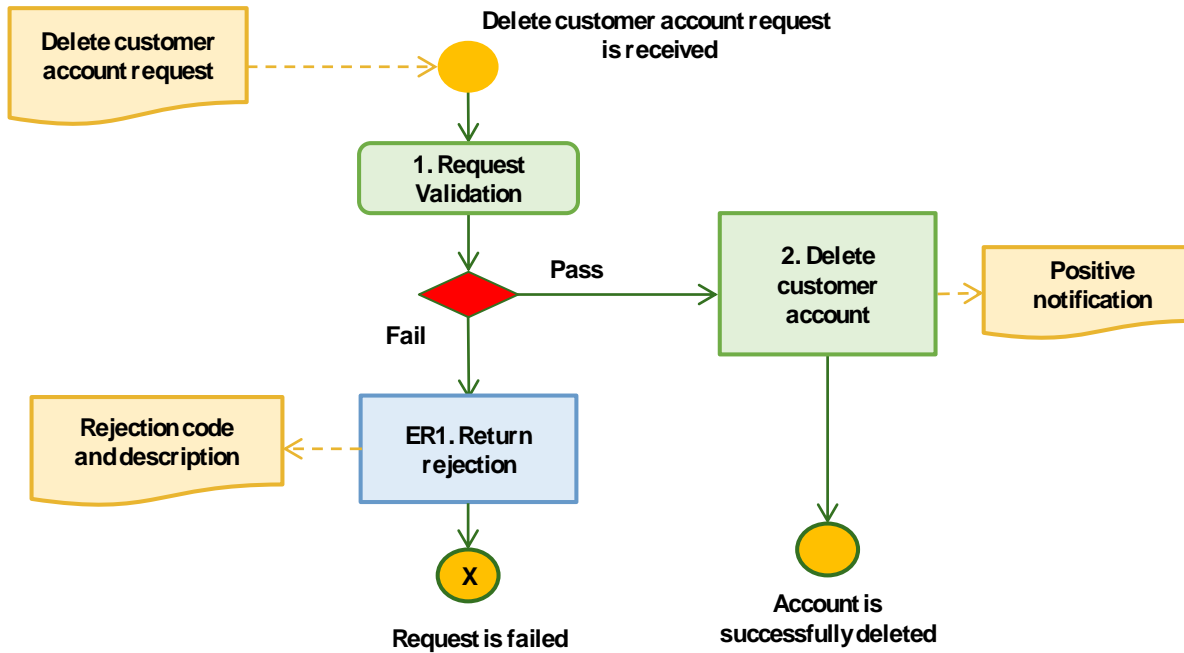
Figure 40: Delete account

Use Case ID	**CAS-MAN-13**
Use Case Name	Delete account
Use Case Description	Deleting own customer's account.
Primary Actors	Participant's application
Trigger Event	"Delete account" method is called by the participant's application
Use Case Business Rules	
Participant can delete account of its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02). Account must be registered in CAS (use case IPS-CAS-03).	
Post Conditions	
The Participant's application receives positive response on the request.	
Basic Flow	

1	Validations for the request:
	    1. Customer must be registered in CAS;
	    2. Account must be registered in CAS;
	    3. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1

2	Account is successfully deleted.
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.3 Central addressing scheme. Payment and RTP initiation use cases.

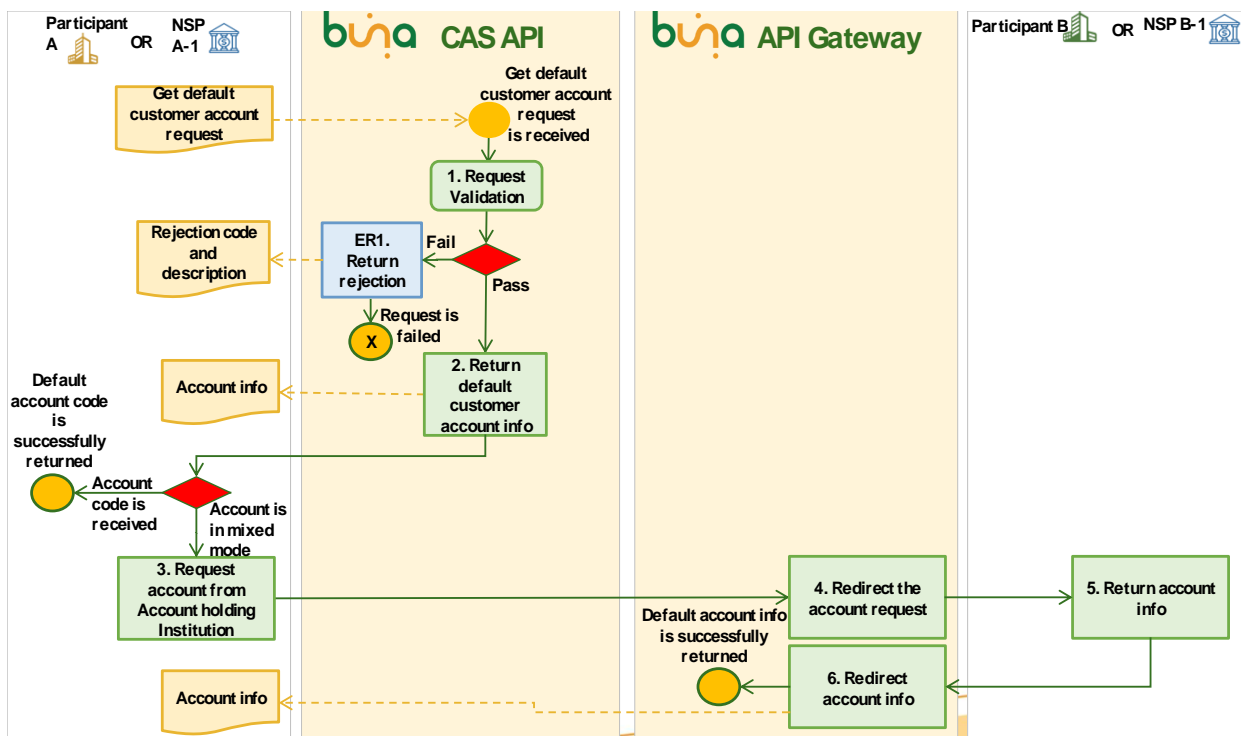#### 4.4.3.1 Use Case CAS-PMT-01: Get default account by alias

Figure 41: Get default account by alias

Use Case ID	CAS-PMT-01
Use Case Name	Get default account by alias
Use Case Description	Requesting customers' default account info and customer's info by specifying a customer's alias.
Primary Actors	Participant's application
Trigger Event	"Get account by alias" method is called by the participant's application
Use Case Business Rules	
Participant can receive default account info and customer short info.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02). Alias must be registered in CAS (use case IPS-CAS-04)	
Post Conditions	
The Participant's application receives default account and customer short info.	
Basic Flow	

1	CAS module validates for the request:
	    1. Customer must be registered in CAS;
	    2. Alias must be registered in CAS;
	    3. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1
	If validation is passed and account is registered in CAS Database, go to 2
	If validation is passed and account is in Mixed mode (account is registered without account code with special type), go to 3

2	CAS module returns default customer account information to the Participant (request sender)

3	If Participant A (or NSP A-1) received information that account is in mixed mode then it requests account information from the Participant B (or NSP B-1) via Buna API Gateway.
4	Buna API Gateway redirects the request to the Participant B (or NSP B-1)
5	Participant B (or NSP B-1) returns account information to the API Gateway
6	API Gateway redirects account information to the Participant A (or NSP A-1)
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.3.2 Use Case CAS-PMT-02: Get the list of accounts by alias
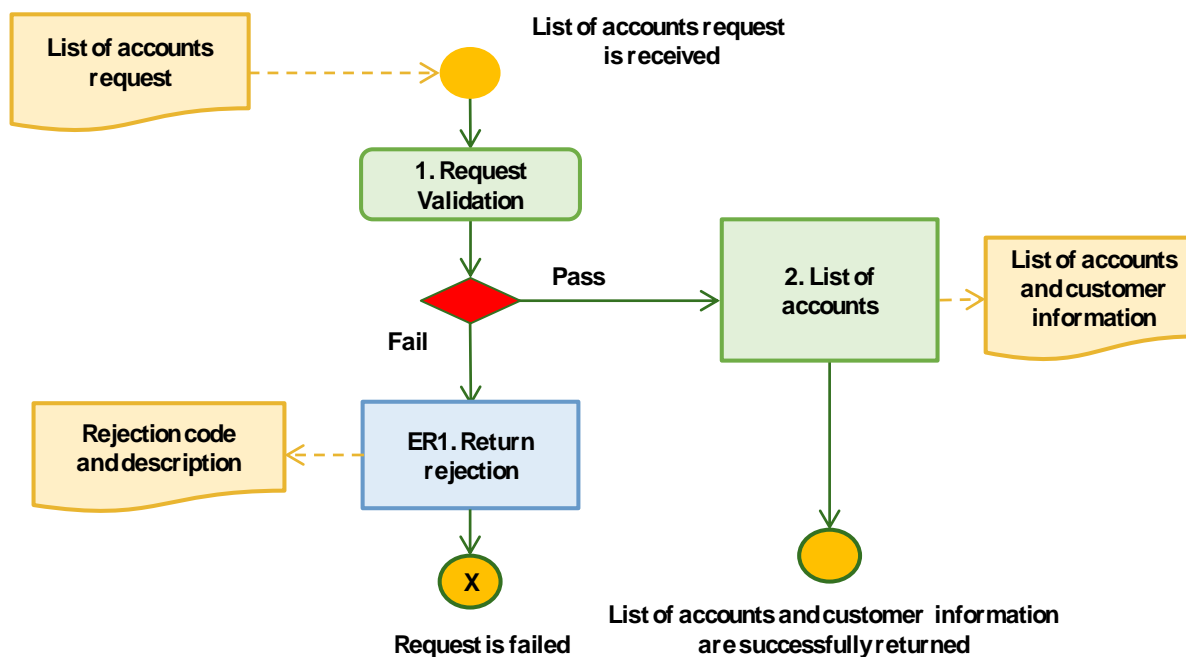
Figure 42: Get the list of accounts by alias

Use Case ID	CAS-PMT-02
Use Case Name	Get the list of accounts by alias
Use Case Description	Requesting customers' active accounts short info and customer's short info by specifying a customer's alias
Primary Actors	Participant's application
Trigger Event	"Get list of accounts by alias" method is called by the participant's application
Use Case Business Rules	
Participant can request accounts linked an alias. Account can services by any participant.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02). Alias must be registered in CAS (use case IPS-CAS-04)	
Post Conditions	
The Participant's application receives list of accounts linked to the alias and customer short info.	
Basic Flow	
1	Validations for the request: 1. Customer must be registered in CAS;

	2. Alias must be registered in CAS;
	3. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1
2	Accounts are successfully updated.
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.4 Central addressing scheme. Access to customer data use cases.

4.4.4.1 Use Case CAS-MON-01: Get customer information
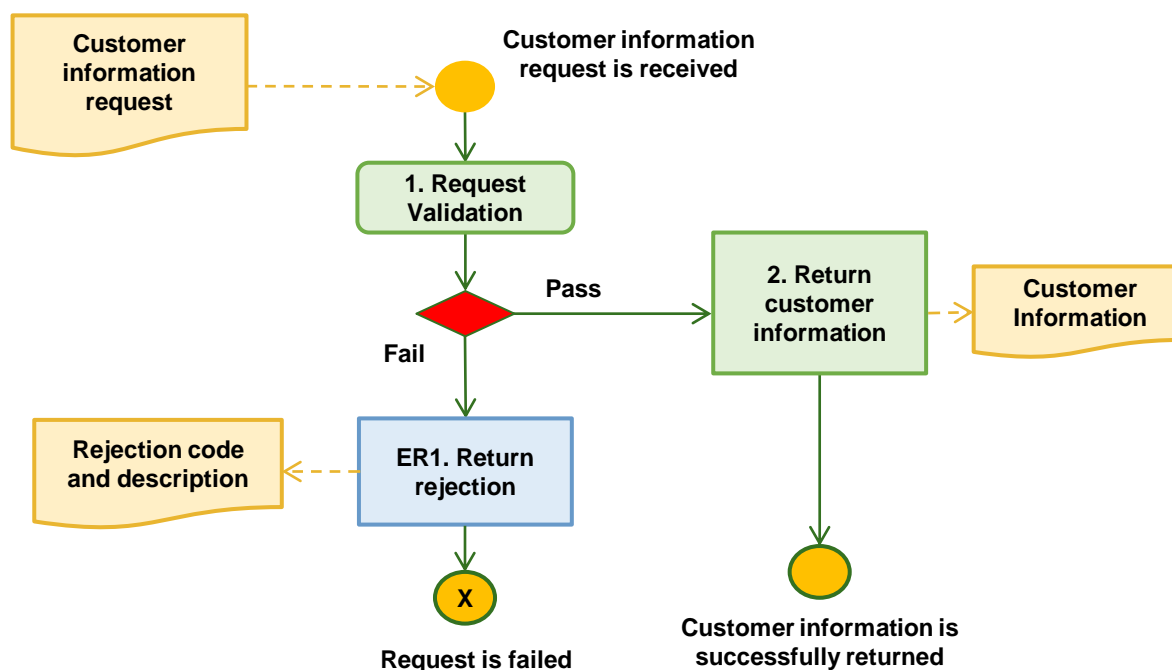
Figure 43: Get customer (individual person) information

Use Case ID	CAS-MON-01
Use Case Name	Get customer information
Use Case Description	Requesting own customer's information
Primary Actors	Participant's application
Trigger Event	"Get customer information" method is called by the participant's application
Use Case Business Rules	
Participant can request information on its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01).	
Post Conditions	
Participant's application receives the customer's information (without aliases and accounts)	
Basic Flow	
1	Validations for the request:
	1. Customer must be registered in CAS;

	2. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1
2	Customer information is successfully returned. In case customer does not have any of the requested data, the response will contain an error code and description.
	Alternate Flows
	N/A
	Exceptions
ER1	Participant's application receives an error code with description.

4.4.4.2 Use Case CAS-MON-02: Get customer aliases
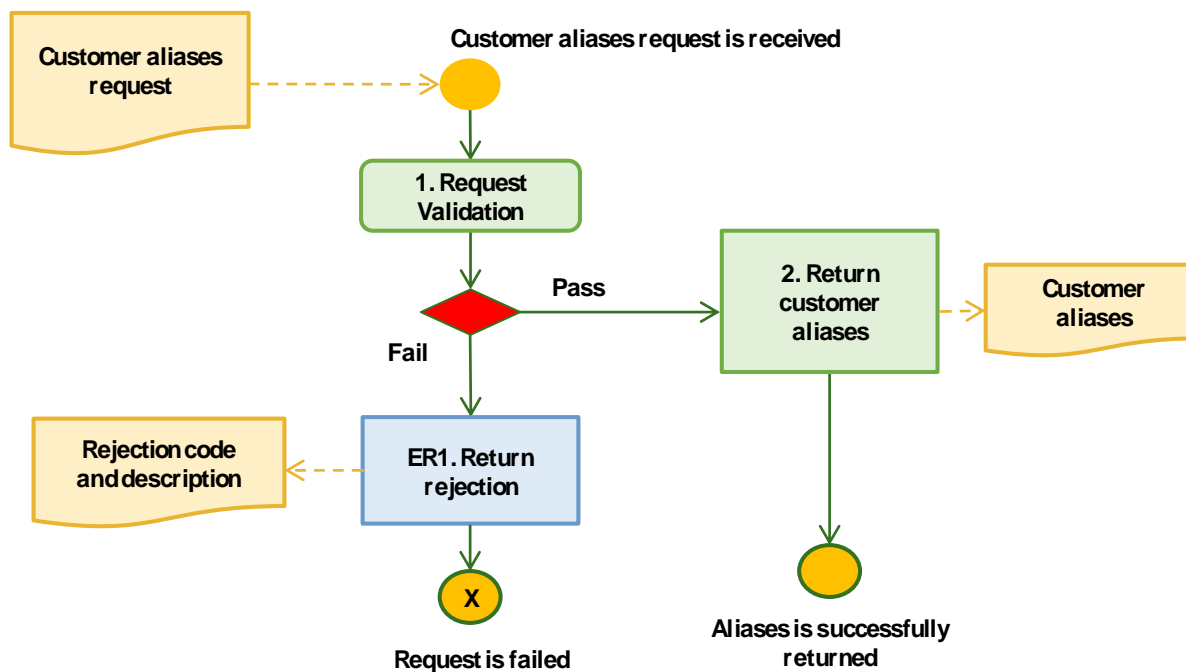
Figure 44: Get customer aliases

Use Case ID	**CAS-MON-02**
Use Case Name	Get customer aliases
Use Case Description	Requesting own customers' aliases.
Primary Actors	Participant's application
Trigger Event	"Get aliases" method is called by the participant's application
Use Case Business Rules	
Participant can request aliases of its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02).	
Post Conditions	
The Participant's application receives the customer's aliases and accounts linked to them	
Basic Flow	
1	Validations for the request:
	1. Customer must be registered in CAS;
	2. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1

2	Customer information (aliases and accounts linked to them) is successfully returned. In case customer does not have any of the requested data, the response is empty.
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.4.3 Use Case CAS-MON-03: Get customer accounts
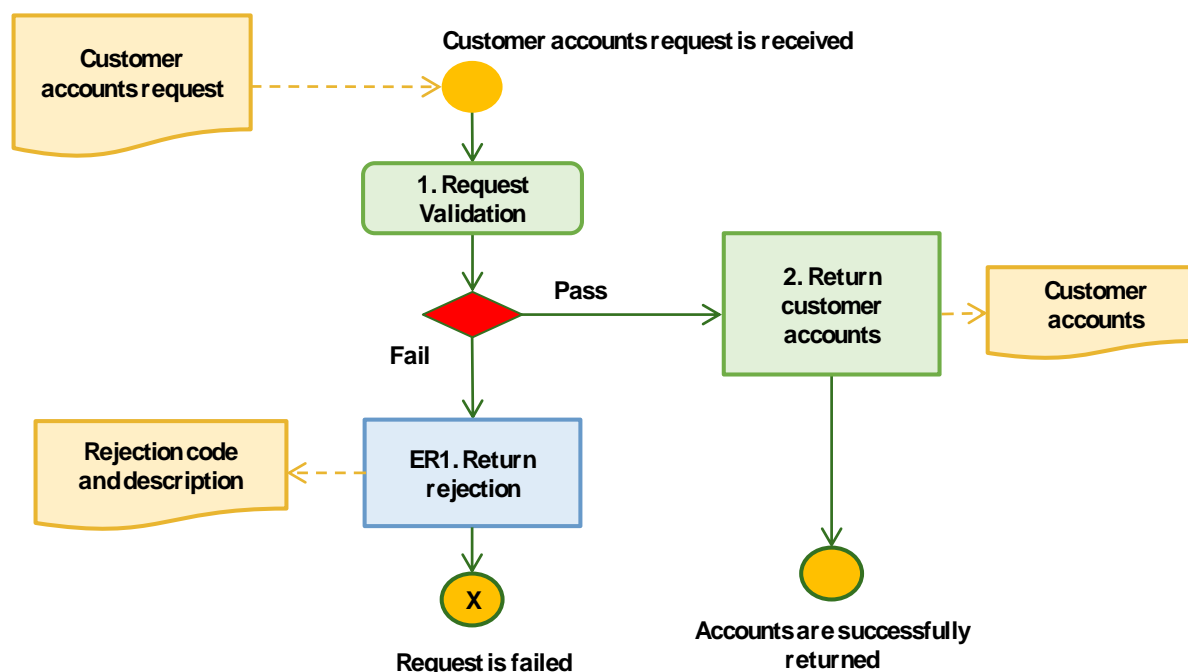
Figure 45: Get customer accounts

Use Case ID	**CAS-MON-03**
Use Case Name	Get customer accounts
Use Case Description	Request own customers' accounts.
Primary Actors	Participant's application
Trigger Event	"Get Accounts" method is called by the participant's application
Use Case Business Rules	
Participant can request own accounts for customer.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02).	
Post Conditions	
The Participant's application receives the customer's accounts	
Basic Flow	

1	Validations for the request:
	    1. Customer must be registered in CAS;
	    2. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1

2	Customer information is successfully returned. In case customer does not have any of the requested data, the response is empty.
Alternate Flows	

	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.4.4 Use Case CAS-MON-04: Get account and customer info
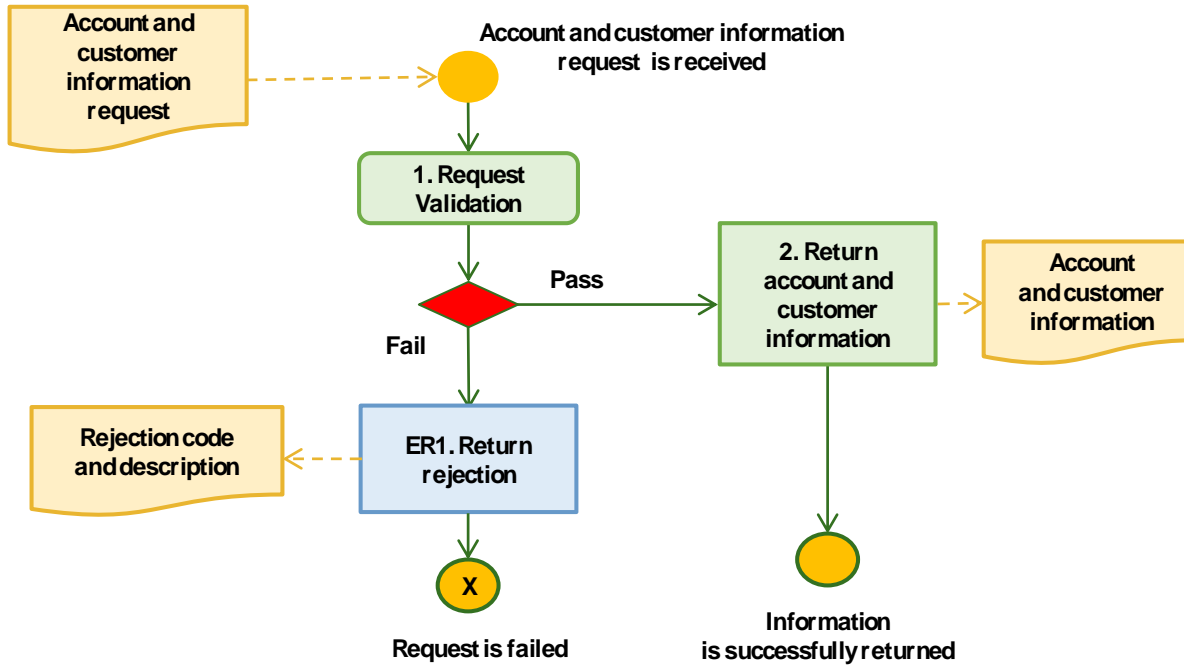

Figure 46: Get account and customer info

Use Case ID	CAS-MON-04
Use Case Name	Get account and customer information
Use Case Description	Requesting own customer's information and account information.
Primary Actors	Participant's application
Trigger Event	"Get account and customer info" method is called by the participant's application
Use Case Business Rules	
Participant can request information on its own customer only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02). A customer account must be registered in CAS (use case IPS-CAS-03).	
Post Conditions	
The Participant's application receives the customer's information (without aliases and accounts)	
Basic Flow	

1	Validations for the request:
	     1. Customer must be registered in CAS;
	     2. Account must be registered in CAS;
	     3. Body fields values corresponds to required formats and value ranges.
	 If validation fails, go to ER1

2	Customer and account information is successfully returned.
Alternate Flows	

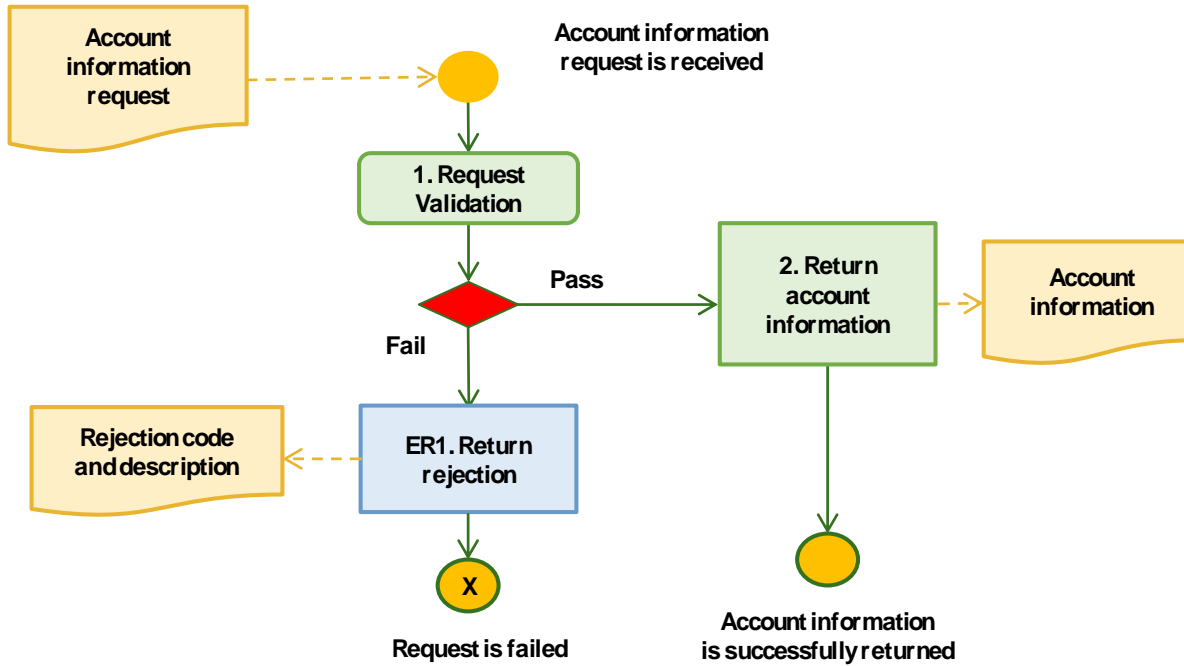|	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.4.4.5 Use Case CAS-MON-05: Get account information

Figure 47: Get account information

Use Case ID	**CAS-MON-05**
Use Case Name	Get account information
Use Case Description	Requesting own customers' account information.
Primary Actors	Participant's application
Trigger Event	"Get account info" method is called by the participant's application
Use Case Business Rules	
Participant can request information on its own customer account only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02). A customer account must be registered in CAS (use case IPS-CAS-03).	
Post Conditions	
The Participant's application receives the customer's account information	
Basic Flow	
1	Validations for the request: 1. Customer must be registered in CAS; 2. Account must be registered in CAS; 3. Body fields values corresponds to required formats and value ranges. If validation fails, go to ER1
2	Account information is successfully returned.
Alternate Flows	
	N/A
Exceptions	

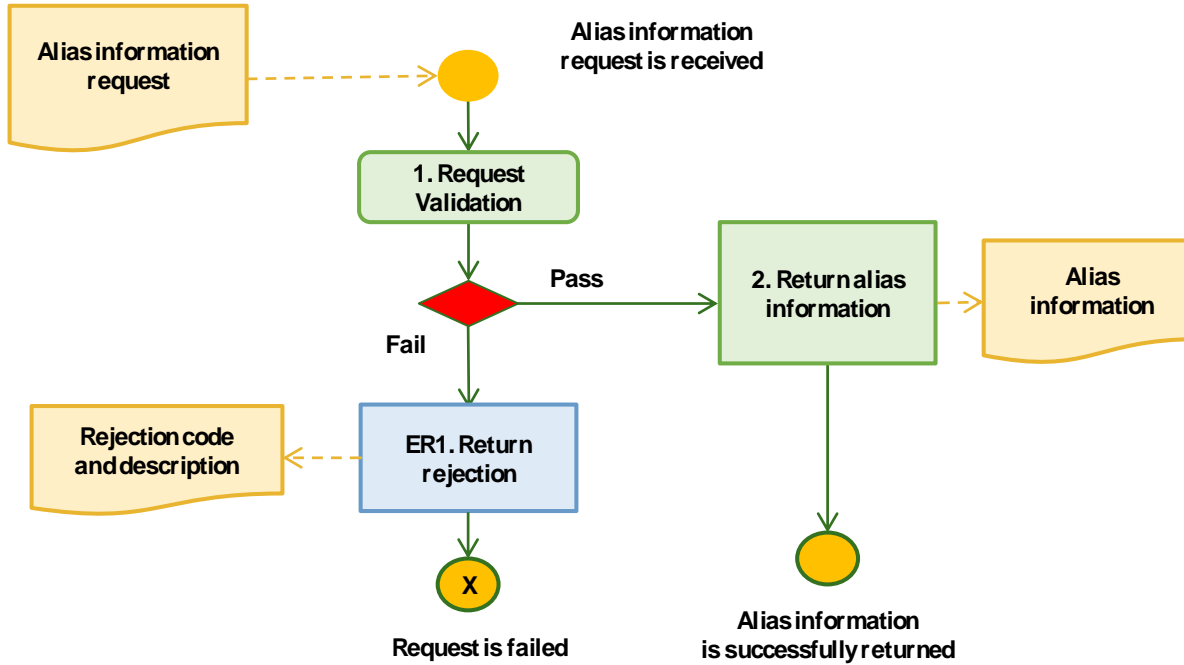| ER1	Participant's application receives an error code with description.

4.4.4.6 Use Case CAS-MON-06: Get alias information

Figure 48: Get alias information

Use Case ID	**CAS-MON-06**
Use Case Name	Get alias information
Use Case Description	Requesting own customers' alias information.
Primary Actors	Participant's application
Trigger Event	"Get Alias info" method is called by the participant's application
Use Case Business Rules	
Participant can request information on its own customer alias only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02). **A customer alias must be registered in CAS (use case IPS-CAS-04).**	
Post Conditions	
The Participant's application receives the customer's alias information	
Basic Flow	
1	Validations for the request: 1. Customer must be registered in CAS; 2. Alias must be registered in CAS; 3. Body fields values corresponds to required formats and value ranges. If validation fails, go to ER1
2	Alias information is successfully returned. In case customer does not have any of the requested data, the response is empty.
Alternate Flows	
	N/A
Exceptions	

ER1	Participant's application receives an error code with description.

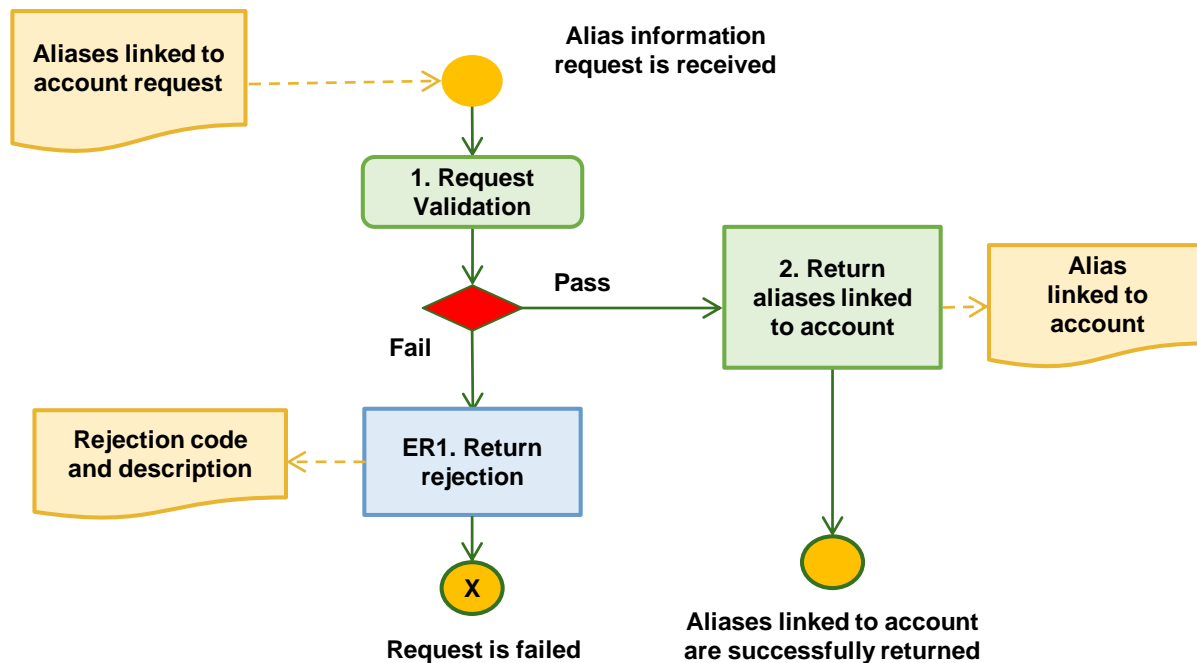### 4.4.4.7 Use Case CAS-MON-07: Get aliases linked to account

Figure 49: Get aliases linked to account

Use Case ID	**CAS-MON-07**
Use Case Name	Get aliases linked to account
Use Case Description	Request own customers' aliases linked to own customer's account.
Primary Actors	Participant's application
Trigger Event	"Get aliases of account" method is called by the participant's application
Use Case Business Rules	
Participant can request aliases of its own accounts only.	
Pre-Conditions	
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02).	
A customer account must be registered in CAS (use case IPS-CAS-03).	
Customer aliases must be registered in CAS (use case IPS-CAS-04).	
Post Conditions	
The Participant's application receives the customer's aliases linked to account	
Basic Flow	

1	Validations for the request:
	    1. Customer must be registered in CAS;
	    2. Customer account must be registered in CAS;
	    3. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1.

2	Aliases linked to account are successfully returned. In case no alias is linked to the account, the response is empty.
Alternate Flows	
	N/A
Exceptions	

| ER1 | Participant's application receives an error code with description. |

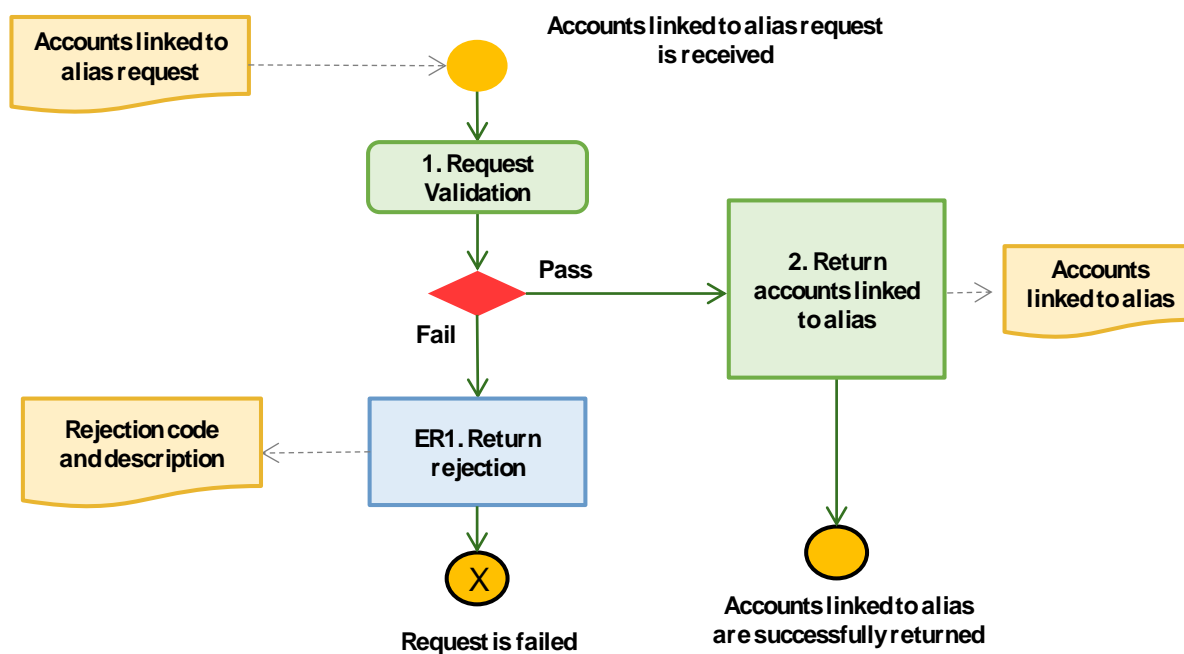### 4.4.4.8 Use Case CAS-MON-08: Get accounts linked to alias

Figure 50: Get accounts linked to alias

Use Case ID	**CAS-MON-08**
Use Case Name	Get accounts linked to alias
Use Case Description	Requesting own customers' accounts linked to alias.
Primary Actors	Participant's application
Trigger Event	"Get accounts for alias" method is called by the participant's application
Use Case Business Rules
Participant can request own accounts linked to an alias.
Pre-Conditions
A customer must be registered in CAS (use case IPS-CAS-01 or IPS-CAS-02). Customer accounts must be registered in CAS (use case IPS-CAS-03). A customer alias must be registered in CAS (use case IPS-CAS-04).
Post Conditions
The Participant's application receives the customer's accounts linked to alias
Basic Flow
1	Validations for the request: 1. Customer must be registered in CAS; 2. Customer alias must be registered in CAS; 3. Body fields values corresponds to required formats and value ranges. If validation fails, go to ER1.
2	Accounts linked to the alias are successfully returned. In case no account is linked to the alias, the response is empty.
Alternate Flows
	N/A
Exceptions

ER1	Participant's application receives an error code with description.

4.5 END-TO-END TRACKER USE CASES

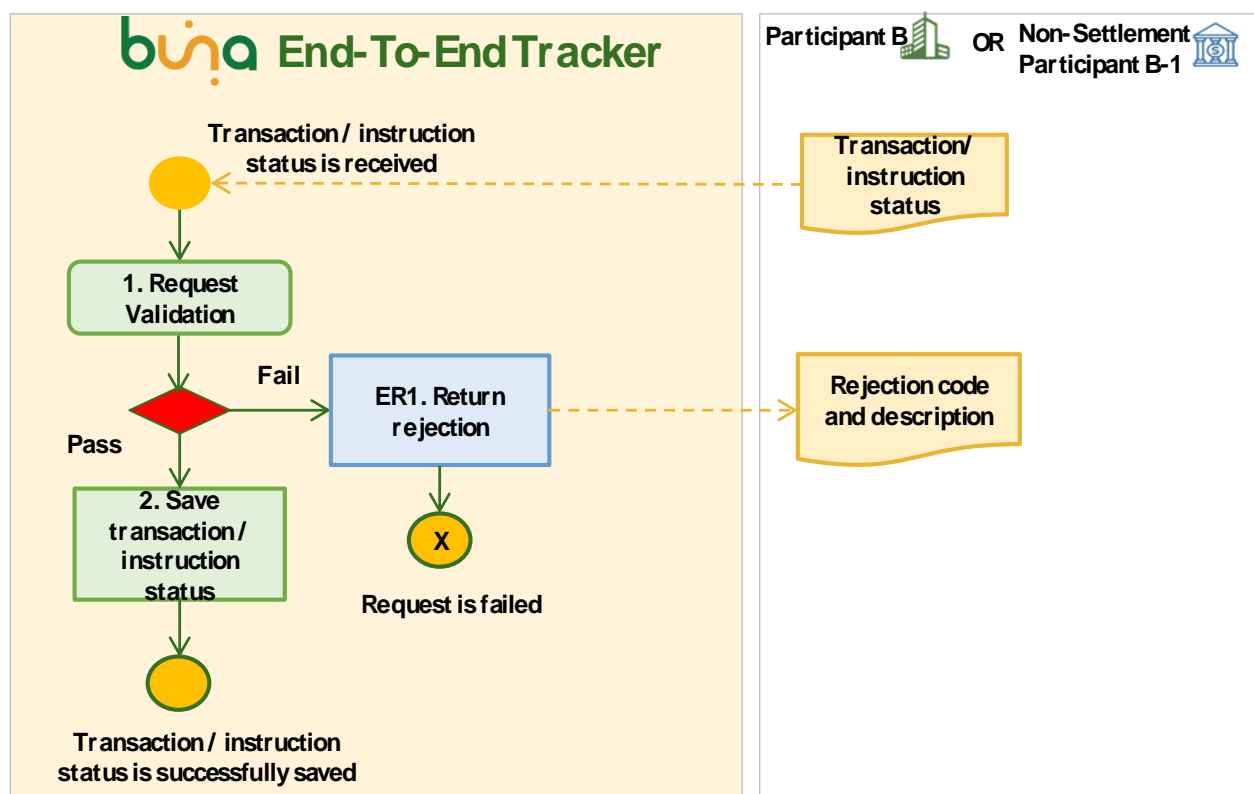### 4.5.1 Use Case IPS-ETRAC-01: Report on Payment Status to the End-to-End Tracker Service

Figure 51: Report on Payment Status to the End-to-End tracker Service

Use Case ID	IPS-ETRAC-01
Use Case Name	Report on Payment Status to the End-to-End tracker Service
Use Case Description	Report on Payment Status to the End-to-End tracker Service
Primary Actors	Participant's application
Trigger Event	"Status reply" method is called by the participant's application
Use Case Business Rules	
Instructed Agent has to reply to the End-to-End Tracker with the status changes. Status reply will be sent for individual transactions and for instructions inside the batch (for each instruction of the batch separately).	
Pre-Conditions	
Transaction was received by the Instructed Agent	
Post Conditions	
Transaction status was saved and in case of push mode was reported to Instructing Agent	
Basic Flow	
1	Validations for the request: 1. Body fields values corresponds to required formats and value ranges. 2. API call initiator is a Instructed Agent in current transaction

	If validation fails, go to ER1
2	Buna End-to-End Tracker saves transaction status from Instructed Agent side.
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.

4.5.2 Use Case IPS-ETRAC-02: Request a Payment Status from the End-to-End Tracker Service
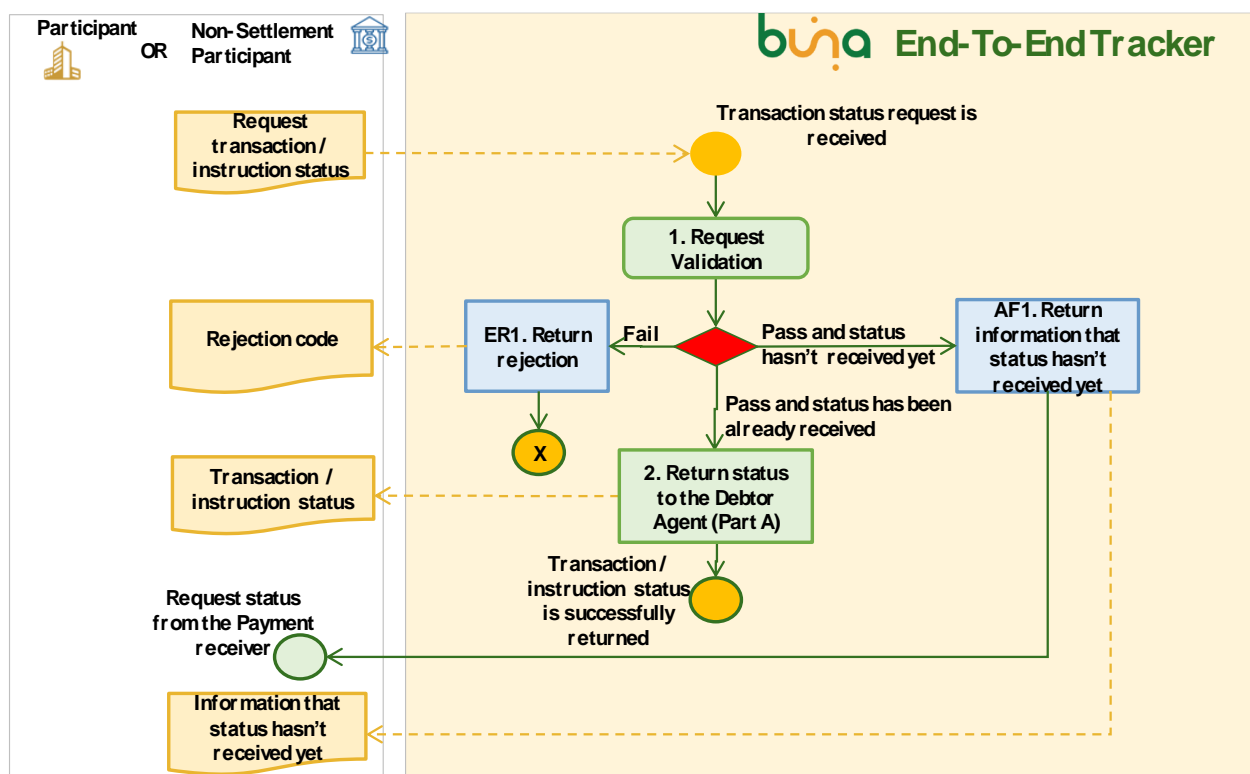

Figure 52: Request a Payment Status from the End-to-End tracker Service

Use Case ID	**IPS-ETRAC-02**
Use Case Name	Request a Payment Status from the End-to-End tracker Service
Use Case Description	Request a Payment Status from the End-to-End tracker Service via API
Primary Actors	Participant's application, End-To-End Tracker
Trigger Event	"Get instruction status" method is called by the participant's application
Use Case Business Rules	
Instructing Agent or Instructed Agent can request transaction status from the End-to-End tracker Service	
Pre-Conditions	
N/A	
Post Conditions	
Request Initiator received status response	
Basic Flow	
1	Validations for the request:

	1. Body fields values corresponds to required formats and value ranges.
	2. Request initiator is a Instructing Agent or Instructed Agent regarding the requested transaction/instruction
	3. Check if Status was received from the Payment Receiver
	If validation fails, go to ER1
	If Status hasn't received yet – go to AF1
2	Transaction status is successfully returned.
Alternate Flows	
AF1	If Status hasn't received yet End-To-End Tracker sends information about this situation to the Request Initiator. Request Initiator can request the status from the Instructed Agent via Buna API Gateway (Use Case IPS-ETRAC-03:)
Exceptions	
ER1	Participant's application receives an error code with description.

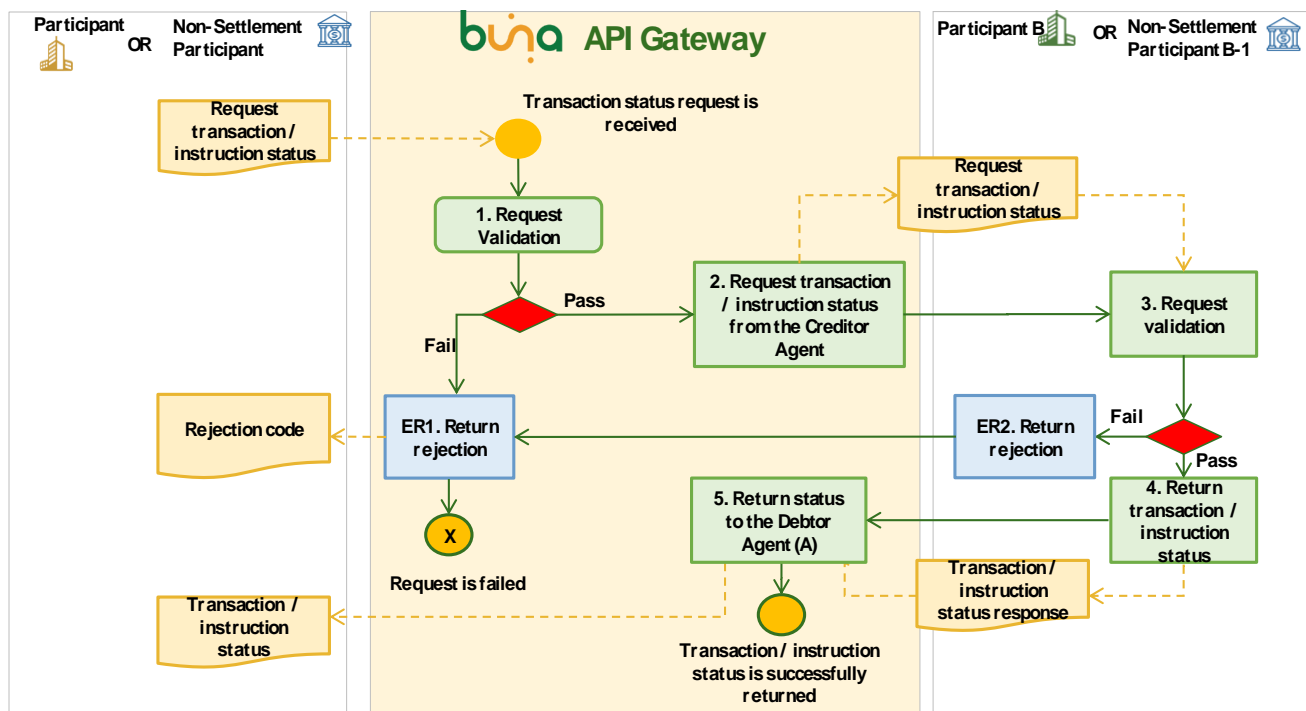### 4.5.3   Use Case IPS-ETRAC-03: End-To-End Tracker in Proxy mode

Figure 53: Request a Payment Status from the End-to-End tracker Service

Use Case ID	**IPS-ETRAC-03**
Use Case Name	End-To-End Tracker in Proxy mode
Use Case Description	Request a Payment Status from the Instructed Agent Service via API Gateway
Primary Actors	Participant's application, End-To-End Tracker
Trigger Event	"Get instruction status, direct request" method is called by the participant's application
Use Case Business Rules	
Instructing Agent can request transaction status from the Instructed Agent via Buna API Gateway	
Pre-Conditions	

N/A	
Post Conditions	
Request Initiator received status response	
Basic Flow	
1	Validations for the request:
	1. Body fields values corresponds to required formats and value ranges.
	If validation fails, go to ER1
2	Buna API Gateway requests transaction status from the Instructed Agent
3	The Instructed Agent validates the request
	If validation fails, go to ER2
4	The Instructed Agent returns transaction status
5	Buna API Gateway returns transaction status to the Instructing Agent
Alternate Flows	
	N/A
Exceptions	
ER1	Participant's application receives an error code with description.
ER2	Instructed Agent application returns Reject to Buna API Gateway. Go to ER1

4.6 PRE-VALIDATION AND CONSULTATION SERVICE USE CASES

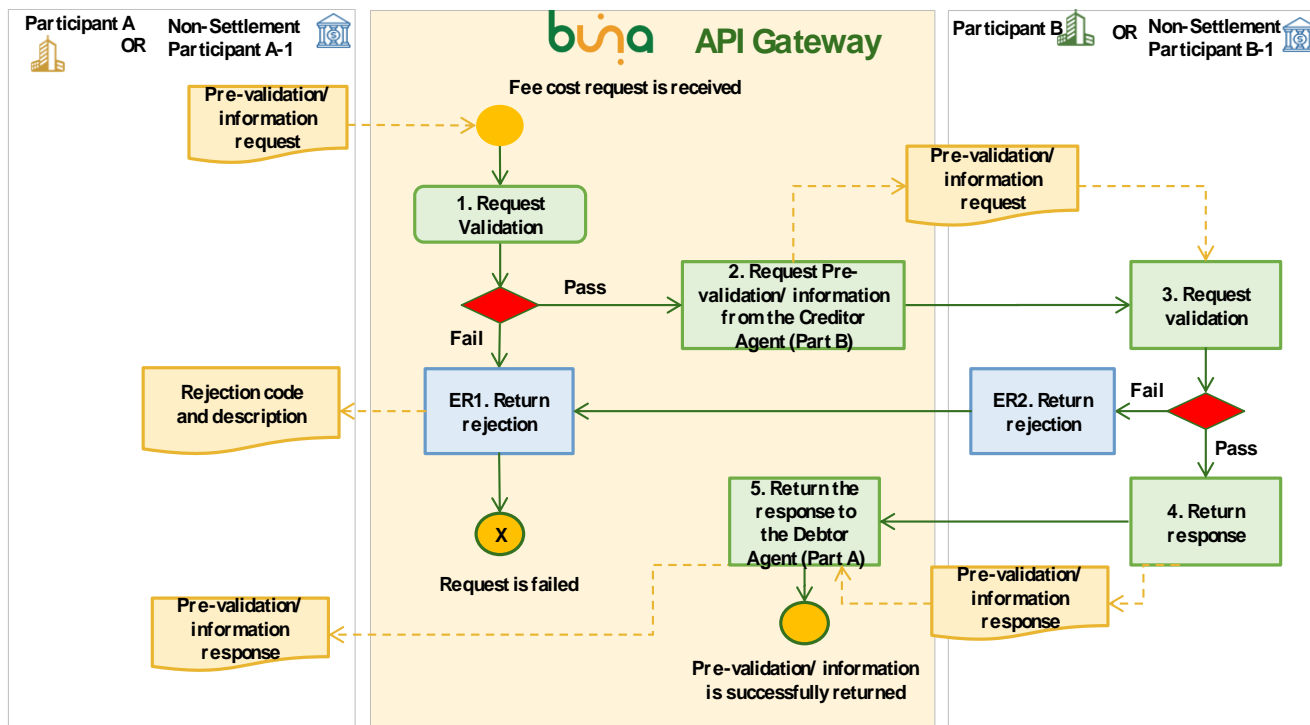### 4.6.1 Use Case IPS-CONS-01: Request pre-validation and information from Counterparty for a single transfer

Figure 54: Request fee cost from Instructed Agent

Use Case ID	**IPS-CONS-01**
Use Case Name	Request pre-validation from Counterparty for a single transfer

Use Case Description	Requesting pre-validation from Instructed Agent (Participant B or Non-Settlement Participant B-1)
Primary Actors	Participant's application
Trigger Event	«Get pre-validation» method is called by the participant's application

Use Case Business Rules
Instructing Agent can request pre-validation for the single transfer before sending it to the Instructed Agent. Instructed Agent has to provide a response with pre-validation results and fee cost if it is applicable to the payment (fee cost is optional in response)

Pre-Conditions
N/A

Post Conditions
Instructing Agent received information from API and provided it to the customer A (via its own communication channel outside the Buna).

Basic Flow	
1	Validations for the request: 1. Body fields values corresponds to required formats and value ranges. If validation fails, go to ER1
2	Buna API Gateway requests fee cost/pre-validation from the Instructed Agent
3	The Instructed Agent validates the request If validation fails, go to ER2
4	The Instructed Agent returns information to the Instructing Agent
5	Buna API Gateway returns pre-validation results with fee cost information to the Instructing Agent

Alternate Flows	
	N/A

Exceptions	
ER1	Participant's application receives an error code with description.
ER2	Instructed Agent application returns Reject to Buna API Gateway. Go to ER1

5 MONITORING

Dashboards and reports were moved to new document «IPS Dashboards and Reports».

6 SIGN-OFF

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By: **By**:

_____   _____
(Signature)   (Signature)

Print Name: **Print Name**:

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Title: **Title**:

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Date: **Date**:

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