



## Global PAYplus Version 4.6.3

# Mass Payments

## Business Guide

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Catalog ID: GPP4.6-00-B23-03-201606

**Version Control**

<b>Version</b>	<b>Date</b>	<b>Summary of Changes</b>
1.0		Document Created
2.0	August 2015	New structure and amended contents
3.0	November 2015	Updated for rebranding

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# 1 Introduction

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Note: This Business Guide is currently being certified for GPP V4.5; therefore, there may be amendments in the future. For more information, please contact your D+H Project Manager.

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## 1.1 Overview

Global PAYplus (GPP) Mass Payments enables Financial Institutions (FI) to receive, process, and send files that contain multiple payment, collection, and related transactions.

The GPP Mass Payments functionality:

- Receives files that contain multiple transactions from clients, clearing partners/partner banks and clearing systems
- Distributes transactions into chunks (manageable groups) and handles the chunks simultaneously using parallel processing
- Generates single or consolidated postings
- Generates outgoing files

GPP supports the following Mass Payment Instruments:

- **Credit Transfer:** An initiating party (debtor) sends payment instructions to the bank ordering the transfer of funds from a debtor account to a creditor account. In a mass payment scenario, the FI receives a file containing multiple credit transactions. The transactions instruct the FI to transfer funds from a single debtor account to multiple creditor accounts held at clearing participant FIs.

For example, a company pays employee salaries using monthly mass payment credit transfers. After processing to completion, the company's account is debited for the total amount of all transactions and each employee's bank account is credited for the amount specified in the relevant individual transaction at the relevant bank.

- **Direct Debit:** An initiating party (creditor) sends collection instructions to the bank requesting the transfer of funds from a debtor account to a creditor account. In a mass payment scenario, the initiating party, such as a FI customer or clearing partner, sends a file containing multiple direct debit transactions. The transactions instruct the FI to collect funds from multiple debtor accounts, held at clearing participant banks, and credit a single creditor account.

For example, a utility company, bills its customers using a monthly mass payment direct debit. After processing to completion, the company's account is credited for the total amount of all transactions and each customer bank account is debited for the amount specified in the relevant individual transaction.

- To process a direct debit, a valid mandate must exist between a debtor and creditor. Authorized GPP users can create and manage mandates using Mandate profiles in the GPP GUI. For information about mandates, see [Direct Debit Mandate Management](#).

Upon receipt of a direct debit, GPP verifies that a valid mandate exists by implementing the Direct Debit Mandate Validation processing. For information about the service, see [Mandate Validation](#).

- **R Messages:** GPP supports all R messages including Reject, Return, and Recall. For more information, see [Credit Transfer R Messages](#) and [Direct Debit R Messages](#).

## 1.2 Mass Payments File Levels

GPP supports the following file levels:

- Bulk: GPP processes one bulk (one group header) per file and stores it in the File Summary.
- Payment Information (Batch): Each bulk can have one or multi payment information (PaymentInf)

- Individual: Each payment information contains one or multi individual transactions.
- Bulk, payment information and individual transactions are visible in the GPP User Interface (UI).

### 1.3 Message Types

GPP Mass Payments supports both credit transfers and direct debits. Both message types, based on ISO20022 standards, can be exchanged between the following parties:

- **Initiating Party and Financial Institution (FI):** Messages exchanged between an initiating party (usually a bank customer) and a financial institution (a bank) are usually in Payment Initiation (pain) format. A pain message can be either a credit transfer (pain.001) or direct debit (pain.008).
- **Financial Institutions (FI):** Messages exchanged between two financial institutions (a bank and a CSM) are usually in Payment Clearing and Settlement (pacs) format.

#### 1.3.1 Payment Initiation

Message Type	Description
pain.001	<p>Customer Credit Transfer Initiation</p> <p>This message is sent by the initiating party to the forwarding agent or debtor agent. It is used to request movement of funds from the debtor account to a creditor. It can contain one or more customer credit transfer instructions.</p>
pain.002	<p>Customer Payment Status Report</p> <p>This message is sent by an instructed agent to the previous party in the payment chain. It is used to inform this party about the positive or negative status of an instruction (either single or file). It is also used to report on a pending instruction.</p>
pain.007	<p>Customer Payment Reversal</p> <p>This message is sent by the initiating party to the next party in the payment chain. It is used to reverse a payment previously executed.</p>
pain.008	<p>Customer Direct Debit Initiation</p> <p>This message is sent by the initiating party to the forwarding agent or creditor agent. It is used to request single or bulk collection(s) of funds from one or various debtor's account(s) for a creditor.</p>

#### 1.3.2 Payment Clearing and Settlement

Message Type	Description
pacs.002	<p>FI To FI Payment Status Report</p> <p>This message is sent by an instructed agent to the previous party in the payment chain. It is used to inform this party about the positive or negative status of an instruction (either single or file). It is also used to report on a pending instruction.</p>
pacs.003	<p>FI To FI Customer Direct Debit</p> <p>This message is sent by the creditor agent to the debtor agent, directly or through other agents and/or a payment clearing and settlement system. It is used to collect funds from a debtor account for a creditor.</p>
pacs.004	<p>Payment Return</p> <p>This message is sent by an agent to the previous agent in the payment chain to undo a payment previously settled.</p>

Message Type	Description
pac.007	<p>FI To FI Payment Reversal</p> <p>This message is sent by an agent to the next party in the payment chain. It is used to reverse a payment previously executed.</p>
pac.008	<p>FI To FI Customer Credit Transfer</p> <p>This message is sent by the debtor agent to the creditor agent, directly or through other agents and/or a payment clearing and settlement system. It is used to move funds from a debtor account to a creditor.</p>

### 1.3.3 Exceptions and Investigations

Message Type	Description
camt.029	<p>Resolution Of Investigation</p> <p>This message is sent by a case assignee to a case creator/case assigner. It is used to inform of the resolution of a case, and optionally provides details about:</p> <ul style="list-style-type: none"> <li>the corrective action undertaken by the case assignee</li> <li>information on the return where applicable</li> </ul>
camt.056	<p>FI To FI Payment Cancellation Request</p> <p>This message is sent by a case creator/case assigner to a case assignee. It is used to request the cancellation of an original payment instruction. It is exchanged between the instructing agent and the instructed agent to request the cancellation of an interbank payment previously sent.</p>

### 1.3.4 Bank to Customer Cash Management

Message Type	Description
camt.054	<p>Bank To Customer Debit Credit Notification</p> <p>This message is sent by the account servicer to an account owner or to a party authorized by the account owner to receive the message. It can be used to inform the account owner, or authorized party, of single or multiple debit and/or credit entries reported to the account.</p>

### 1.3.5 Credit Transfer R Messages

GPP supports these Credit Transfer R messages.

R-Message	Initiating Party	Description
Recall	Debtor Bank	A debtor bank requests to cancel a previously transmitted credit transfer.
Rejection	Creditor Bank	A creditor bank rejects a transaction received from an initiating party, such as a bank customer. The rejection is sent to CSM which in turn is sent back to the debtor bank.
Return	Creditor Bank	A creditor bank approves a recall message received from a debtor bank, which results in the generation of a return message. In addition, a creditor bank returns a received post-settlement transaction that cannot be processed to completion.



R-Message	Initiating Party	Description
Recall Rejection	Creditor Bank	A creditor bank rejects a recall message received from a debtor bank, which results in the generation of a recall rejection message. A debtor bank receives a recall rejection as a negative response for a recall message.

### 1.3.6 Direct Debit R Messages

GPP supports the following categories of R messages:

- Pre-Settlement: The R message is sent before the transaction is settled in the ACH.
- Post-Settlement: The R message is sent after a transaction is settled in the ACH.

Settlement Date	R Message	Initiating Party	Description
Pre-Settlement	Cancellation	Creditor Bank	A creditor bank requests to cancel a previously sent direct debit message by sending a cancellation message to the ACH.
Pre-Settlement	Rejection	Debtor Bank	A debtor bank rejects a direct debit message received from a creditor bank by sending a rejection message to the ACH.
Pre-Settlement	Refusal	Debtor Bank	A debtor bank refuses to honor a direct debit message by sending a refusal message to the ACH. A debtor bank can refuse to honor a direct debit for a reason such as an invalid mandate.
Post-Settlement	Reversal	Creditor Bank	A creditor bank generates a reversal after determining that a payment was received due to an invalid direct debit message.
Post-Settlement	Return	Debtor Bank	A debtor bank returns a direct debit message to a creditor bank for a reason such as insufficient funds in the debtor account.
Post-Settlement	Refund	Debtor Bank	A debtor bank requests a refund from a creditor after transaction settlement when the debtor disagree to the direct debit.

### 1.3.7 Mixed Files

GPP supports mixed file processing for both incoming and outgoing files. A mixed file is a file that contains both credit transfers and direct debit messages (in addition to related transactions, such as return messages) in a single file. A mixed file can contain either PAIN or PACS messages, but not both.

## 1.4 GPP Message Types Terminology

During GPP mass payment processing, GPP generates the following messages for different purposes like posting, advising, etc. These message types are used in GPP terminology and during the MP BG descriptions.

These messages can be one of the following types:

Type	Message	Details
I	Individual	GPP generates I payment for an individual transaction that was received in a bulk.
S	Sub-Batch	GPP generates S payment for consolidated payments that share common attributes like account, request date.
R	R-messages	GPP generates an Individual R payment for rejection, reversal, recall, refund, return.
A	Aggregation	GPP generates an A payment for the consolidated payments sent out in a file.
F	Funding	GPP generates an F payment for Inter-office transaction, when the initiating office differs from the destination office, but both are in GPP.
RF	Reverse Funding	GPP generates an RF message to reverse F message.
RS	Reverse Sub-Batch	GPP generates an RS message to reverse S message.

## 2 Processing

This section provides details of the end to end GPP processes describing each step in the Mass Payments flow. GPP processes incoming and outgoing credit and debit files and R messages.

Note: For a description of the legend used in all the workflows, see [Appendix C: Flow Legend](#).

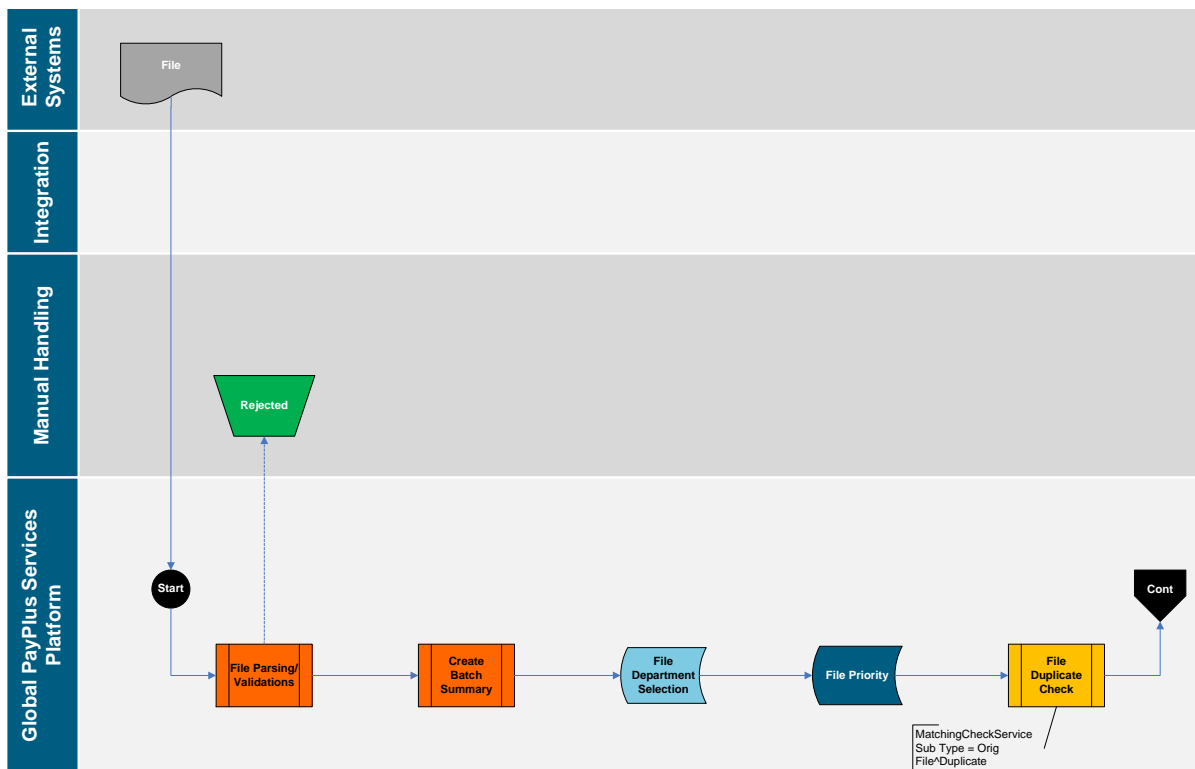
### 2.1 Credit Transfer Process

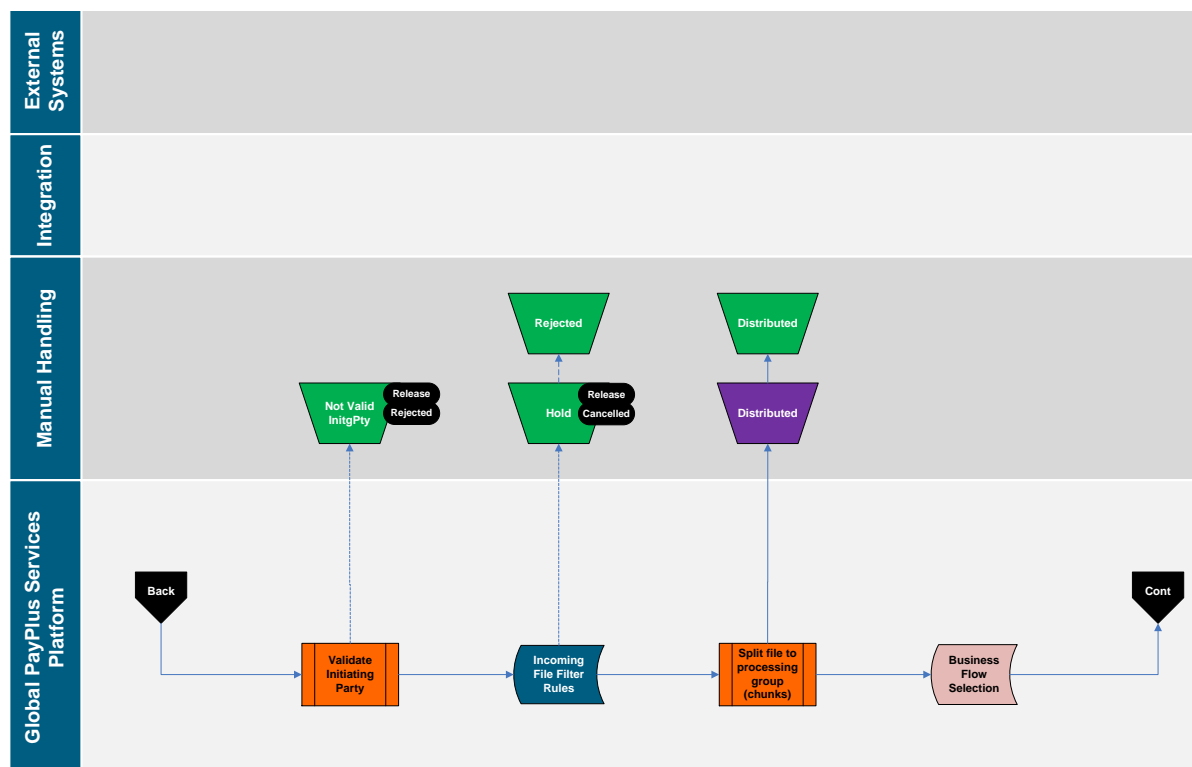
#### 2.1.1 Incoming File Handling

GPP receives and processes incoming files that contain transaction messages.

Processing begins upon the receipt of a mass payment file, such as a file containing pain.001 or pain.008 messages.

##### 2.1.1.1 File Processing Workflow





### 2.1.1.2 File Parsing/Validations

When GPP receives a mass payments file, GPP:

- Parses the file to bulks and validates the format and contents of the file.
  - If parsing fails, GPP rejects the file
  - If parsing is successful, GPP continues to process the file
- Assigns a unique file ID to each received file and registers the file in the File Summary.
- Checks that the initiating party (the party who sent the mass payment file) is a customer of the FI.

GPP continues processing a mass payment file only if all file validations succeed.

If an incoming file does not pass file validation, GPP generates a file-level error and does not continue processing the file. GPP can also generate a payment status report file and send it to the initiating party to indicate that the file was rejected. The report file includes a reason for the file rejection. For more information, see [Acknowledgment Reporting](#)

### 2.1.1.3 Create Batch (Payment Information) Summary

Each incoming file received from a customer can contain multiple batches. GPP delimit the batches by specific parameters, for example:

- Debtor Account ID (for credit transfer files)
- Execution Date/Due Date

GPP determines specific batch processing preferences using the following:

- **Batch Control Profile:** Enables a bank to define specific file processing preferences for each batch in an incoming file. For more information, see [Batch Control Profile](#).
- **Incoming File:** Can contain specific batch processing instructions such as batch booking indicator.

- **Parties Profile:** Enables a bank to define specific processing preferences in the Acknowledgment Preferences section. For more information, see [Parties Profile](#).

GPP users can view information about the batches in a file received from a customer. For more information, see [Batch Summary](#).

#### 2.1.1.4 File Department Selection

GPP derives and identifies payment attributes (for example, office, department, creation date) during the initial process in the business flow.

Once the Office is selected, the Department Selection rules for this Office, are evaluated to select the relevant Department. A default department is selected when there are no specific rules setup.

#### 2.1.1.5 File Priority

The order in which GPP processes each file can be prioritized using the File Priority rules. Each File Priority rule is attached to a specific office.

After validating an incoming file, when two or more files are waiting for processing, GPP invokes the File Priority rules to assign a priority to the incoming file. GPP first processes the file with the highest priority and continues processing subsequent files according to the priority of each, as determined by the rule. For example, high priority can be assigned to files received from a specific customer.

Each payment in an incoming file inherits its file-level priority.

If a file-level priority is not assigned to an incoming file, GPP determines the payment-level priority for each payment in the file using Prioritization rules. These rules enable a bank to assign a priority to an individual payment.

When viewing payments in a manual queue, an authorized GPP user can sort messages by the assigned priority to assist in handling higher priority payments first.

For File priority Codes, see [File Priority Rules](#).

#### 2.1.1.6 File Duplicate Check

GPP checks whether the incoming file is duplicated and has already been received and processed. This check is based on parameters which are configurable in GPP (system configuration).

- If a duplicate file is found, GPP routes the file to the Duplicate queue for manual handling. A user can perform one of these actions:
  - Release the file to continue processing
  - Cancel the file
- If a duplicate file is not found; GPP continues to process the payment.

#### 2.1.1.7 Validate Initiating Party

GPP checks that the initiating party is registered for submitting files.

- If the Initiating Party is not valid, GPP changes the status of the file to Not Valid Integrity. The user can perform one of these actions:
  - Release the file for continued system processing
  - Reject the file
- If the Initiating Party is valid; GPP continues to process the payment.

### 2.1.1.8 Incoming File Filter Rules

GPP invokes Incoming File Filter rules to enable a bank to prevent STP processing of an incoming file. The Incoming File Filter rules are attached to an initiating party.

If GPP determines that an incoming file meets the conditions defined in an Incoming File Filter rule, GPP stops processing the file and performs an action defined in the rule. A rule can have one of the following actions:

- Hold: GPP routes the incoming file to a queue for manual handling.
- Reject: GPP rejects the incoming file.

Example: A rule is defined that holds all files received from a specific bank customer and routes them to a queue for manual handling.

In addition to an action definition, each Incoming File Filter rule has an optional usage definition that enables a bank to define an error code for each incoming file that meets the conditions of the rule. GPP generates a file-level NAK to the initiating party, which contains error message details as specified in the business rule.

### 2.1.1.9 Split File to Processing Group (Chunks)

GPP distributes transactions received in files into manageable group of transactions to increase system performance and maximize system resource utilization.

After initial validation that includes duplicate checking, GPP distributes the transactions into physical groups. A system parameter defines the number of individual transactions that GPP includes in each group.

The GPP mass payment functionality can handle incoming files that contain multiple message types. A GPP mechanism ensures that all groups are processed in the correct order based on message type. This prevents illogical processing situations, such as processing a message recall before the corresponding payment received in the same file.

After distributing incoming transactions into groups, GPP processes each group of transactions using parallel processing to increase TPS (Transactions per seconds).

The number of running parallel processes is directly related to specific system configuration.

### 2.1.1.10 Business Flow Selection

For Customers processing Mass Payments, the business flow selection is defaulted to Mass Payments per customer specific requirements.

## 2.1.2 Preprocessing Transactions

Once the Payment Information (PaymentInf) is validated successfully, GPP generates the individual transactions related to the validated Payment Information. Any changes to PaymentInf level information, as a result of processing within GPP is applied to the related individual transactions (for example, changes to the initiating party account).

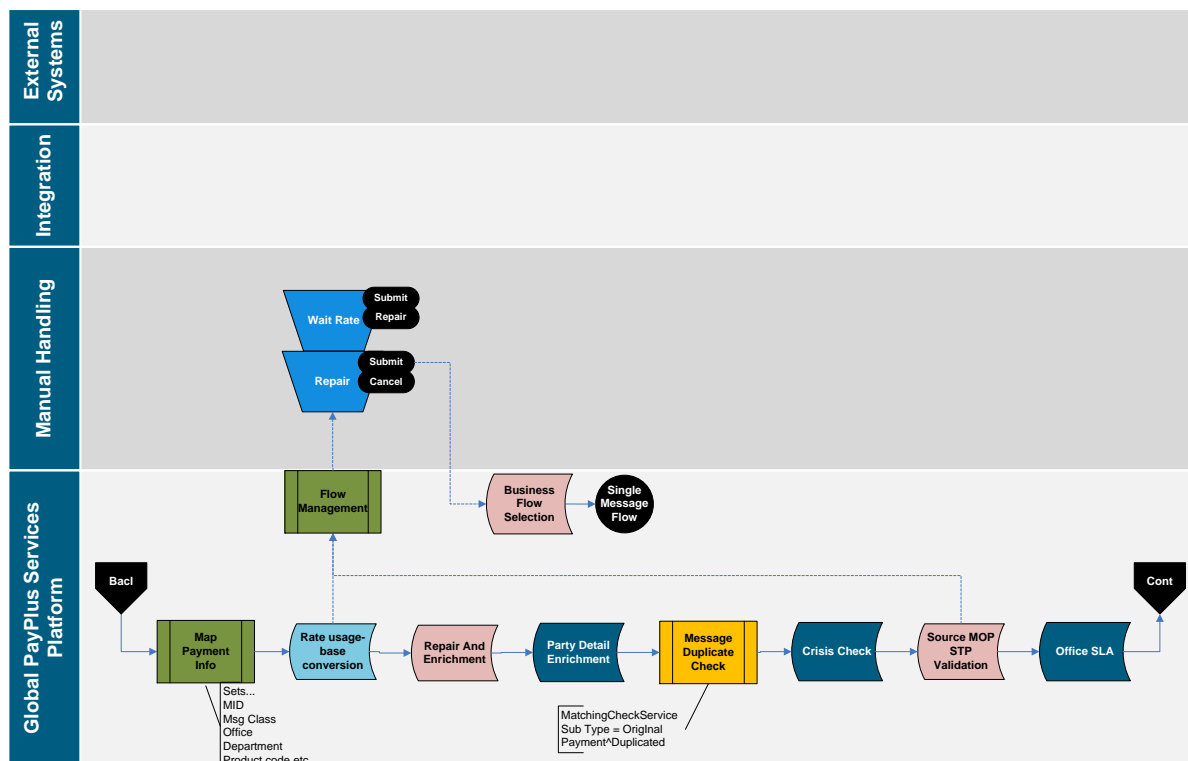
During the pre-processing flow, GPP generates a Unique Grouping ID (UGID) to identify and group individual transactions that share common attributes. GPP uses the UGID when generating an S message as part of the mass payment functionality.

Individual transactions that generate errors, such as duplicate transactions, are routed to the Rejected Duplicate queue.

### 2.1.2.1 Payment Initiation

For a detailed description of the Payment Initiation, see Payment Initiation Business Guide.

#### 2.1.2.1.1 Payment Initiation Workflow



#### 2.1.2.1.2 Map Payment Information

GPP derives and identifies fundamental payment attributes, for example, Department, and Message Class, during the initial process in the business flow.

#### 2.1.2.1.3 Rate Usage - Base Conversion

GPP converts all transactions to a base currency equivalent, which enables security checks, threshold limit checks, and other validations.

#### 2.1.2.1.4 Repair and Enrichment

GPP utilizes the Repair and Enrichment Rules and Repair and Enrichment Selection Rules to automatically repair messages, which increases STP rates. GPP also enriches specific message fields by deriving required information.

Transactions can be automatically repaired and enriched using the Repair and Enrichment rules, which can derive missing information that was not included in the original payment message.

GPP can use these rules to do the following:

- Set values of missing transaction attributes
- Remove values from transaction attributes
- Update transaction statuses

GPP determines the relevant rule by invoking Repair and Enrichment Selection rules for specific transactions.

At a determined point in the workflow, GPP invokes a Repair and Enrichment Selection rule that checks for specific conditions, such as a specific payment message type. If a transaction matches the defined conditions, GPP invokes the relevant Repair and Enrichment rule, which can perform an action such as setting a message attribute with a specific value.

For example, GPP can invoke a Repair and Enrichment Selection rule for all pacs.008 payment messages. The invoked Repair and Enrichment rule can be defined to perform an action such as removing the values in the creditor agent message attributes.

#### 2.1.2.1.5 Party Detail Enrichment

GPP identifies and loads relevant account information for the first in chain party.

For incoming files received from a customer or from ACH, GPP identifies and loads the first in chain debit or credit account. GPP applies derived party attributes to all transactions in the batch (ISO Payment Information block).

#### 2.1.2.1.6 Message Duplicate Check

Duplicate checking is executed on payments that are either received by GPP from external networks (ACH) or internal applications or are manually entered or handled by a user. Based on the selected algorithm (key message fields such as message type, currency, amount and beneficiary) GPP examines every payment for possible duplication.

GPP determines whether a payment is a duplicate using the Automatic Matching Algorithm rule.

- If a payment is a duplicate, GPP routes the payment to the Dupex queue for manual handling. A user can perform one of these actions:
  - Accept to continue processing
  - Cancel the payment
- If a duplicate payment is not found; GPP continues to process the payment.

#### 2.1.2.1.7 Crisis Check

Crisis Check processing is required to hold transactions, which are in process but due to extraordinary circumstances need to be stopped from processing further. It is intended as a temporary measure and more permanent parameters should be set to deal with longer term scenarios, for example, posting restrictions, static data changes, and non-STP rules.

The Crisis Hold rule is applied to all individual transactions, transactions received via bulk files and across offices. Any transactions meeting filter conditions are stopped from processing further until a decision is made to continue processing or cancel.

When a Crisis Hold rule that is attached to an object is changed or detached from an object, the Release Crisis Filter activity will be triggered and payments will be released.

#### 2.1.2.1.8 Source MOP STP Validation

Source MOP selection identifies the debit MOP. For more information, see GPP Payment Initiation Business Guide.

The Source MOP can be:

- Book for files received from Channels
- Low Value clearing

GPP perform MOP STP validation for a specific MOP to increase its STP and to adhere to the MOP and/or clearing rules, for example, SEPA EPC rulebook regulations.



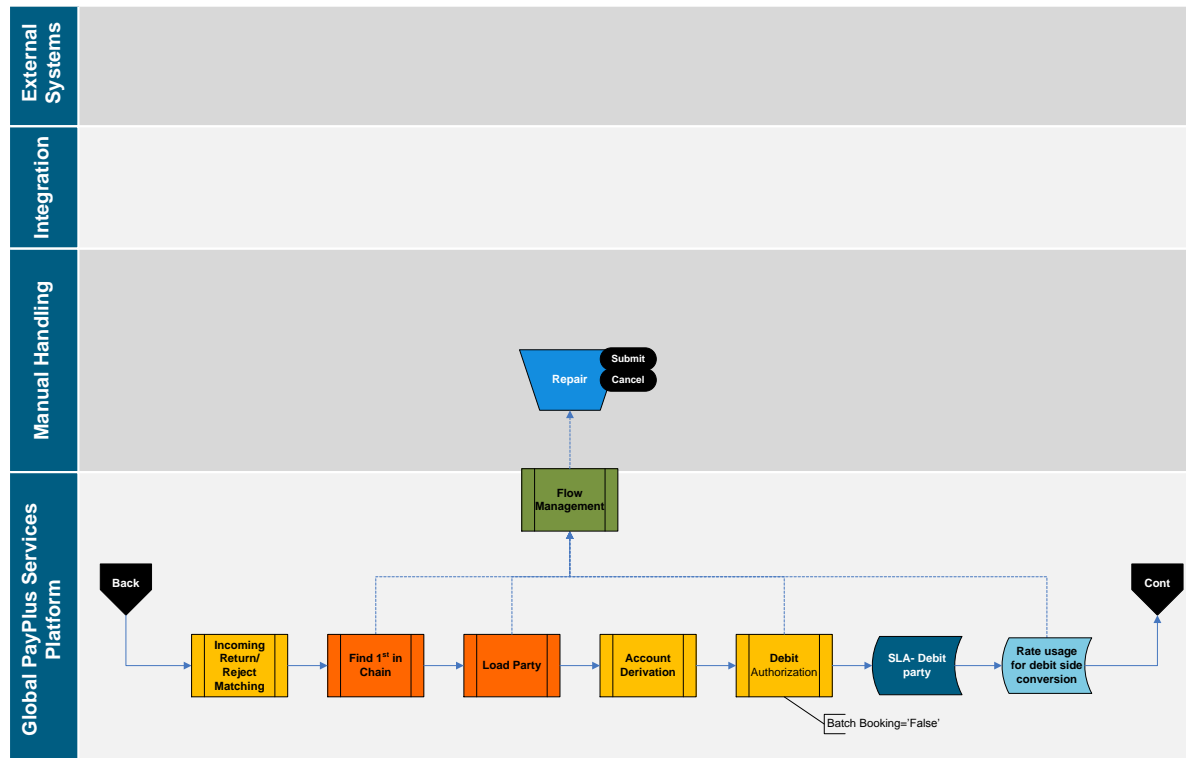
2.1.2.1.9 Office SLA

Ensures as early as possible in the payment processing flow whether the payment may be associated with a specific SLA profile. For example, not processing the credit transfer file before a certain time of the day when cross border credits are usually received.

For more information, see GPP Payment Initiation Business Guide.

2.1.2.2 Credit Transfer (Individual) Processing

2.1.2.2.1 Debit Party Workflow



2.1.2.2.1.1 Incoming Return/Reject Matching

GPP automatically attempts to match the incoming R message to its related message using system configurable criteria as defined in a Matching Check profile. Once matched, authorized users can view all related messages in the GPP user interface.

For more information, see GPP R-Messages Business Guide.

2.1.2.2.1.2 Find First in Chain

GPP identifies the transaction destination (from where the payment is being sent) for the first party in the debit chain. When the First in Chain party cannot be identified, the transaction is sent to Repair for manual handling.

For more information, see GPP Parties Identification Business Guide.

2.1.2.2.1.3 Load Party

GPP identifies and loads relevant account information for the first in debit chain party. If there is an issue with identifying the party, the transaction is routed to the Repair queue for manual handling.

For more information, see GPP Parties Identification Business Guide.

**2.1.2.2.1.4 Account Derivation**

GPP derives relevant accounts (debit account of a credit transfer) and performs currency conversions (if required) when the payment currency is different to account currency.

If there is an issue with identifying the account, the payment is routed to the Repair queue for manual handling.

For more information, see GPP Parties Identification Business Guide.

**2.1.2.2.1.5 Debit Authorization**

Credit Transfer Debit Authorization verifies that the FI is authorized to debit the debtor account. This is performed on the individual transaction only when posting is performed for each individual transaction.

For more information, see GPP Parties Identification Business Guide.

**2.1.2.2.1.6 SLA Debit Party**

Ensures whether the payment is associated with a specific SLA Debit Party profile. For example, not processing the credit transfer file before a certain time of the day when cross border credits are usually received.

**2.1.2.2.1.7 Rate Usage for Debit Side Conversion**

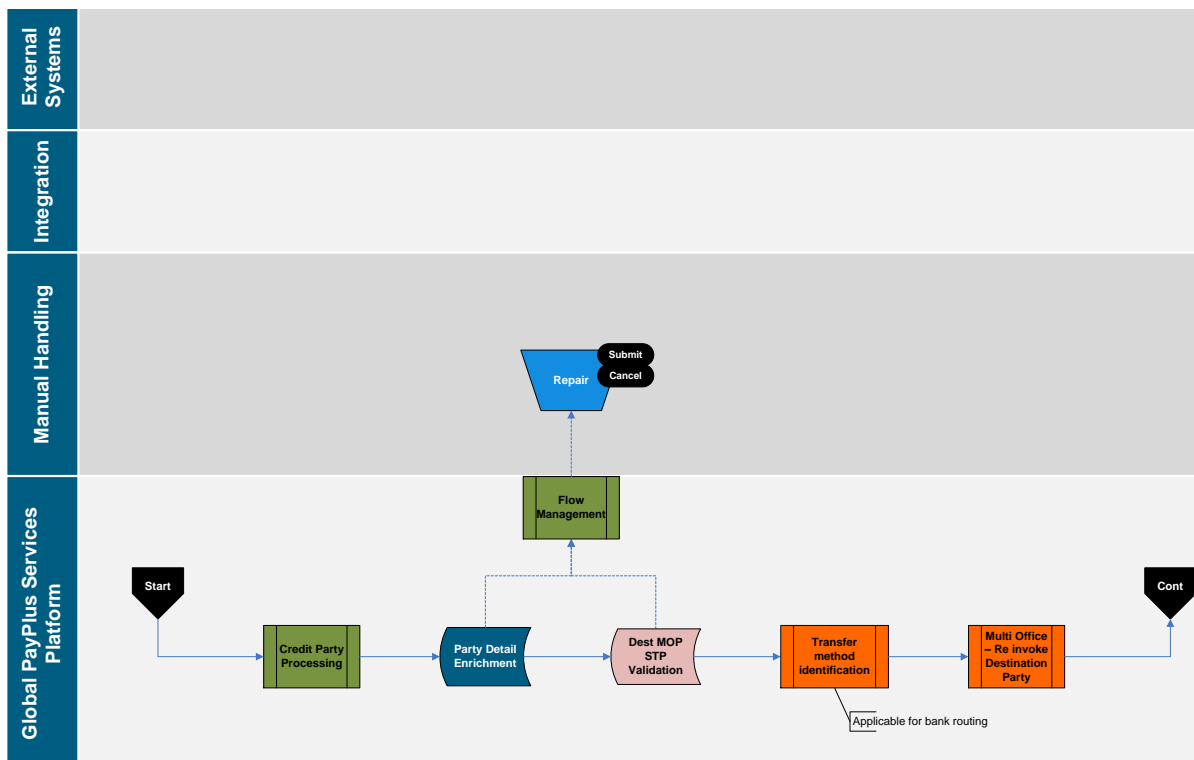
If a currency conversion is required GPP invokes Rate Usage rules to determine the relevant foreign currency exchange rate for each transaction.

Based on the type of conversion, the following types of Rate Usage Conversion rules may be invoked:

- Base Amount Conversion: Determines the base amount foreign currency conversion rate for transactions.
- Debit Side Conversion: Determines the debit-side foreign currency conversion rate for payments.

For more information, see GPP Currency Conversion Business Guide.

**2.1.2.2.2 Credit Side Workflow**



#### 2.1.2.2.2.1 Credit Party Processing

During the credit party processing, GPP identifies the first in the credit chain, loads the party and the credit account.

For more information, see GPP Parties Identification Business Guide.

#### 2.1.2.2.2.2 Party Detail Enrichment

GPP identifies and loads relevant account information for the first party in the chain - credit side of a credit transfer.

GPP invokes Credit Account Enrichment rules to determine the credit account number and usage instructions for that account for Credit Transfer. These rules enable a FI to define the relevant credit account for a payment.

#### 2.1.2.2.2.3 Destination MOP Selection and MOP STP Validation

GPP uses Method of Payment (MOP) selection rules defined in GPP, to determine the best route for the payment to be delivered, for example, via clearing, SWIFT. The MOP parameters are also used to determine whether the transaction continues processing as a single message or should be sent out in a file.

For more information, see GPP Method of Payment Business Guide.

#### 2.1.2.2.2.4 Transfer Method Identification

This step is relevant for transactions received in a file and executed via High Value/Individual processing. During this process, GPP indicates if the transaction's transfer method is Serial or Cover.

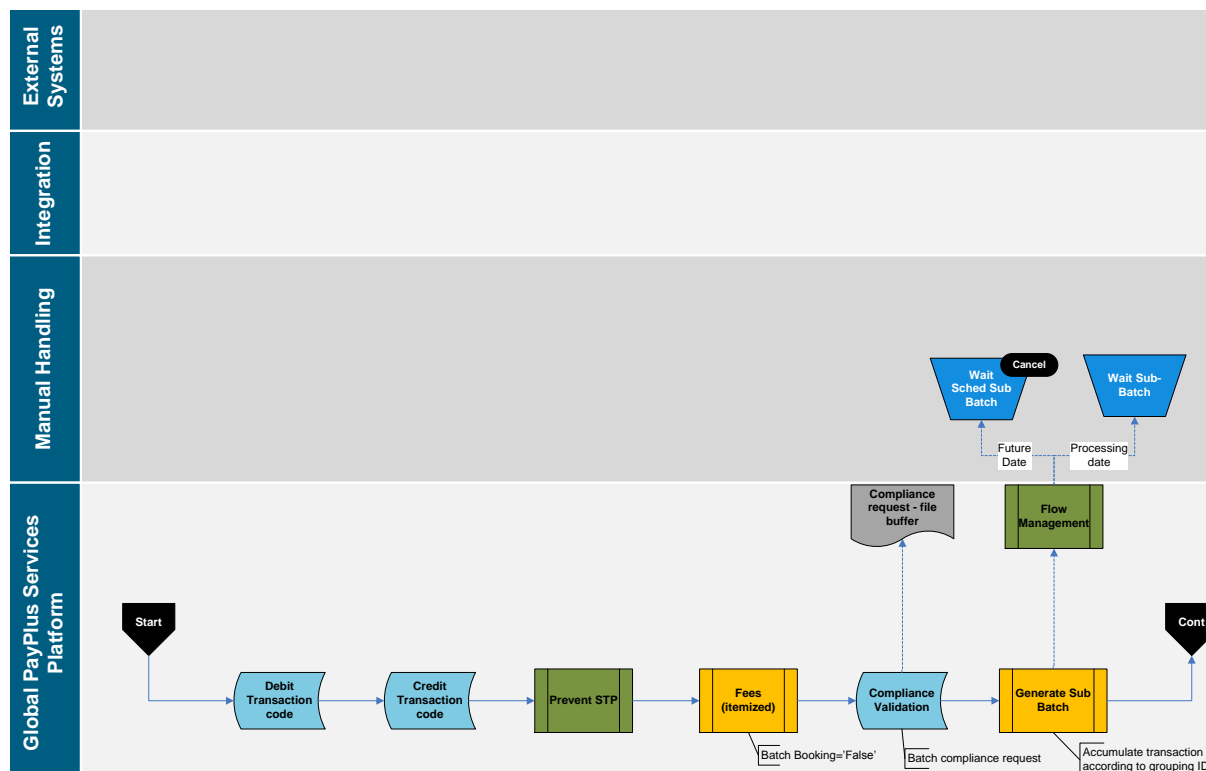
For more information, see GPP Building Correspondent Chain Business Guide.

#### 2.1.2.2.2.5 Multi Office - Re Invoke Destination Party

In a multi office scenario where the creditor is located in a different office than the debtor, the credit side is re-processed and re-evaluates all the rules in the destination office.

### 2.1.2.3 Post MOP

#### 2.1.2.3.1 Post MOP Workflow



#### 2.1.2.3.2 Debit Transaction Code

In this process GPP selects a debit code per transaction. This code can be exposed for external systems in a structured way. Examples of the code are type of transaction, type of customer, and fees.

#### 2.1.2.3.3 Credit Transaction Code

In this process GPP selects a credit code per transaction. This code can be exposed for external systems in a structured way. Examples of the code are type of transaction, type of customer, and fees.

#### 2.1.2.3.4 Prevent STP

GPP uses Override STP profiles to prevent Straight-Through Processing (STP) of specific payments. The Override STP profile can be defined for the following:

- Special Instruction: Prevent STP processing of a payment with specific characteristics, such as a settlement amount greater than a defined value.
- Validation: Prevent STP processing of a payment that is invalid as defined by the specific conditions, such as a missing product code.

For a list of error statuses, see [Appendix B: STP Validation Error Statuses](#).

For more information, see GPP Special Instructions Business Guide.

#### 2.1.2.3.5 Fees (Itemized)

The relevant fees are determined for each party in the transaction. This is performed when posting is required on the transaction level (Batch Booking is false).

For more information, see GPP Fees - Core Processing Business Guide

#### 2.1.2.3.6 Compliance Validation

GPP invokes Compliance Validation rules to determine whether to send a specific payment for compliance to verify that a payment complies with various anti-money laundering regulations.

GPP enables the following types of Compliance Validation rules:

- **Submit:** If a payment meets the conditions defined in the rule, GPP sends the transaction for compliance verification.
- **Bypass:** If a payment does not meet the conditions defined in the rule, GPP does not send the transaction for compliance verification.

#### 2.1.2.3.7 Generate Grouped Transaction (Sub Batch)

As part of this processing GPP groups number of payments which have similar parameters in order to allow single posting on the account or perform single currency conversion for the entire S message.

When GPP completes preprocessing for all individual transactions, additional file validations are invoked as follows:

- **Number of Transactions:** Validates that the total number of transactions counted in an incoming file matches the declared number of transactions in the file.
- **Control Sum:** Validates that the total amount of all transactions contained in the incoming file is equal to the amount defined in the file header. GPP includes all payment amounts when checking the control sum, regardless of the defined currency for an individual transaction.
- **Rejected Transactions:** Validates that the total number of transactions (expressed as a percentage) in an incoming file that are rejected by GPP does not exceed a threshold set by the bank.

Transactions that successfully complete these file validations continue to be processed in the Sub-Batch Generation.

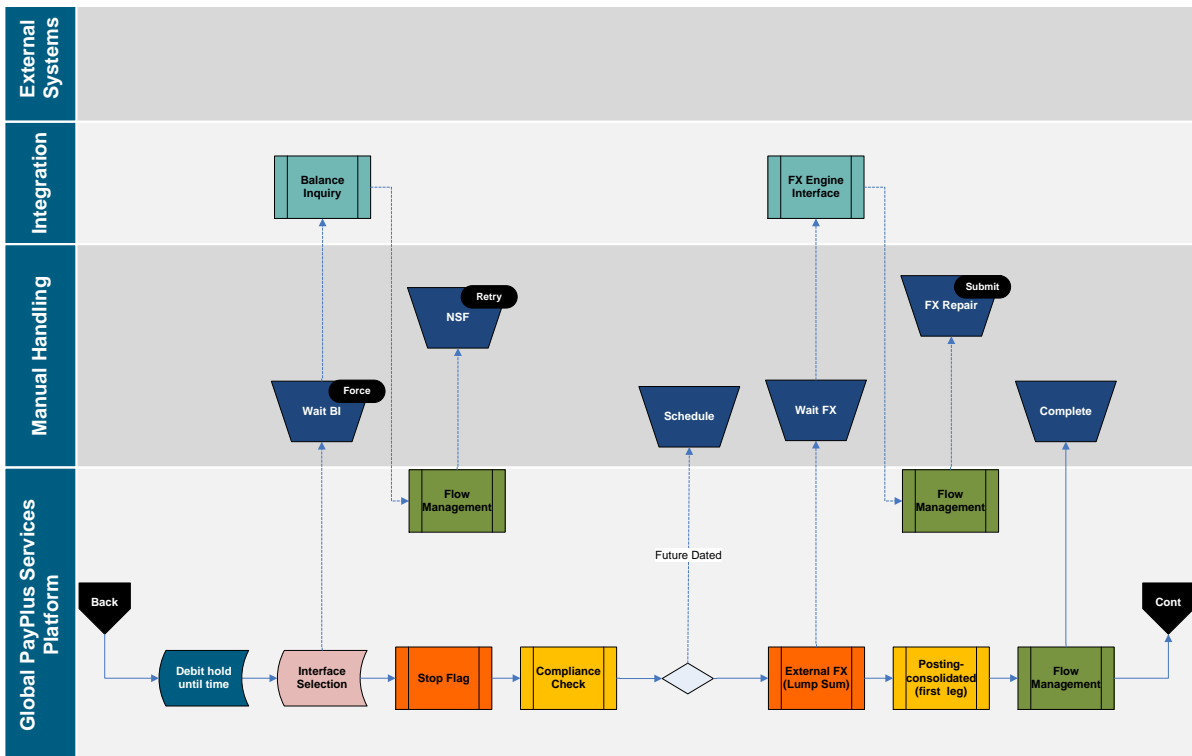
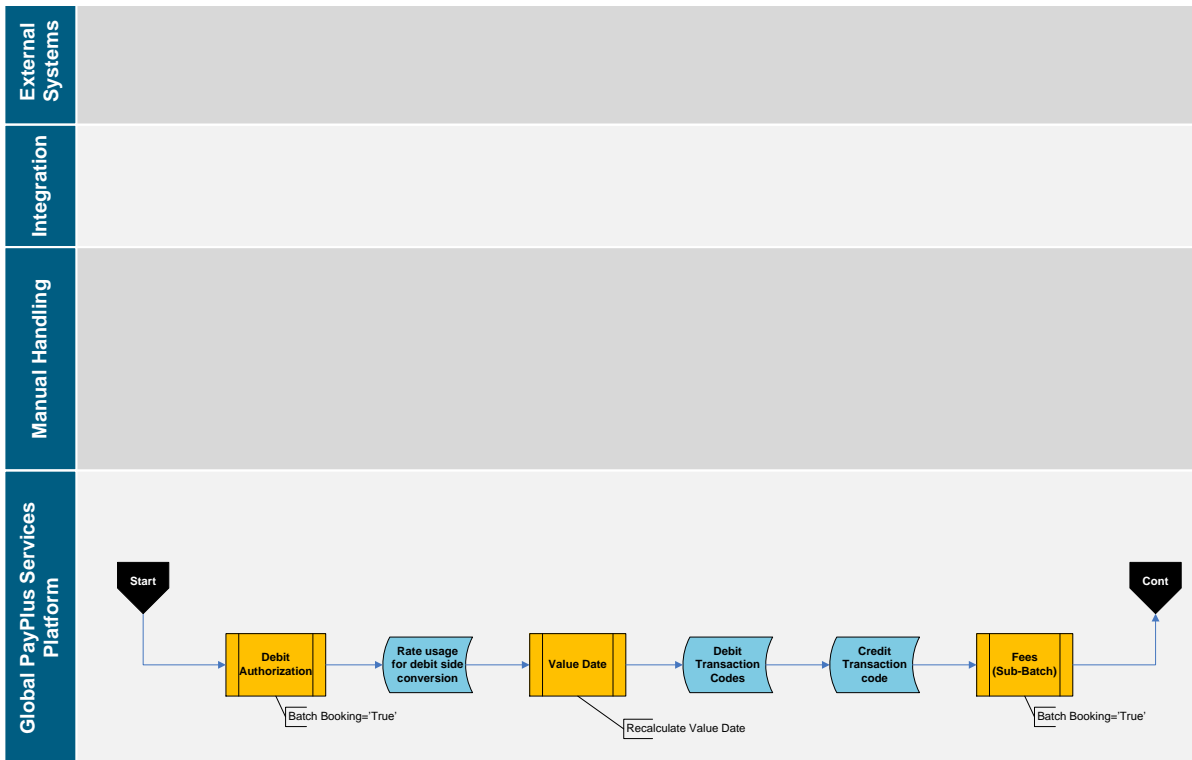
If the additional validations are not successful, GPP stops processing the transactions, and might hold the file for manual handling or reject it.

### 2.1.3 Payment Grouping (Sub Batch) Generation

Sub-Batch generation accumulates transactions that are sent out in files and completes processing on individual transactions.

GPP collects and group transactions originated in a file into groups based on definable criteria in order to apply actions on the entire group for example, posting, fees, and foreign exchange.

2.1.3.1 Sub Batch Generation (S) Workflow



### 2.1.3.2 Debit Authorization

Debit Authorization verifies that the FI is authorized to debit the debtor account. This is performed on the S message only when posting is required to be performed for the S message (Batch Booking flag is true).

For more information, see GPP Parties Identification Business Guide.

### 2.1.3.3 Rate Usage for Debit Side Conversion

GPP uses Rate Usage rules to determine the relevant foreign currency exchange rate for each transaction, if a currency conversion is required.

The Debit Side Conversion determines the debit-side foreign currency conversion rate for transactions.

### 2.1.3.4 Value Date

GPP recalculates the Value Date for the S message.

For more information, see Value Date and Cutoff Business Guide.

### 2.1.3.5 Debit Transaction Code

In this process GPP selects a debit code per transaction. This code can be exposed for external systems in a structured way. Examples of the code are type of transaction, type of customer, fees.

### 2.1.3.6 Credit Transaction Code

In this process GPP selects a credit code per transaction. This code can be exposed for external systems in a structured way. Examples of the code are type of transaction, type of customer, fees.

### 2.1.3.7 Fees (Sub Batch)

The relevant fees are determined for each party in the S message. This is performed if posting is done on the S message (Batch Booking flag is true).

For more information, see Fees – Core Processing Business Guide.

### 2.1.3.8 Debit Hold Until Time

GPP provides a mechanism of stopping S message processing up until a pre-defined time. This is performed using the Hold Until Time rule. When a rule is selected to a sub batch, based on specific attribute, the sub batch is held until a pre-defined time (and as a result, all of the transactions related to the Sub batch are held until its completion). On the selected time, Sub batch is released back to processing.

### 2.1.3.9 Interface Selection

GPP uses Interface Selection rules to interact with external interfaces at specific stages during the payment processing. At this stage the Balance Inquiry Interface can be selected.

If GPP determines that a payment matches the defined rule conditions, the defined action of the rule is executed, which can be one of the following:

- **Bulk Interface Request:** Message attributes are accumulated and stored, which GPP later uses to generate a bulk request to an external interface.
- **Individual Interface Request:** Individual message attributes are stored and GPP generates a single request to an external interface.

The action for an Interface Selection rule implements an Interface profile that includes definitions for interface requests and responses such as:

- **Protocol:** The protocol used by GPP to communicate with the external interface.
- **Format Type:** The format of the incoming response or outgoing request.
- **Connection Point:** The location of the request that is sent or of the response that is received.

#### 2.1.3.10 Stop Flag

Account stop flag check is performed on the S message account. The stop flag is either received from Balance Inquiry response or setup in the account profile.

#### 2.1.3.11 Compliance Check

A GPP Compliance service ensures compliance with various anti-money laundering regulations and foreign asset controls. GPP verifies that all incoming and outgoing payments in the S message comply with the latest regulations, such as embargoes and anti-terrorist financing regulations.

GPP performs the compliance check in a two-step process:

1. **Initial Response:** GPP sends an initial request to the compliance interface, for all transactions in the bulk as a single request. The interface returns one of the following types of Initial Responses:
  - **No Hit:** The interface determines that the payment complies with all relevant regulations. GPP continues processing the payment.
  - **Possible Hit:** The interface determines that the payment might not comply with all relevant regulations. GPP does not continue processing the payment. It is pending receipt of a Final Response.
2. **Final Response:** The interface returns one of the following types of Final Responses:
  - **Passed:** The interface determines that the payment complies with all relevant regulations. GPP continues processing the payment.
  - **Rejected:** The interface determines that the payment does not comply with all relevant regulations and returns a rejected indicator. GPP rejects the payment by setting the payment status to Rejected and routing the message to the Rejected queue. GPP does not continue processing the message.
  - **Seized:** The interface determines that the payment does not comply with all relevant regulations and returns a seized indicator. GPP implements a process to seize the payment by setting the payment status to Seized and routing the message to the Seized queue. This is a final status and GPP does not continue processing the message.

#### 2.1.3.12 External FX (Lump Sum)

GPP Performs currency conversion for the lump sum amount when the payment currency is different to the account currency. .

GPP calculate conversions using an FX rate obtained from GPP or using a rate from an external system.

#### 2.1.3.13 Posting Consolidation (First Leg)

GPP triggers the relevant interface to perform required posting.

In a credit transfer, debits the debtor or clearing participant and credits the relevant suspense account.



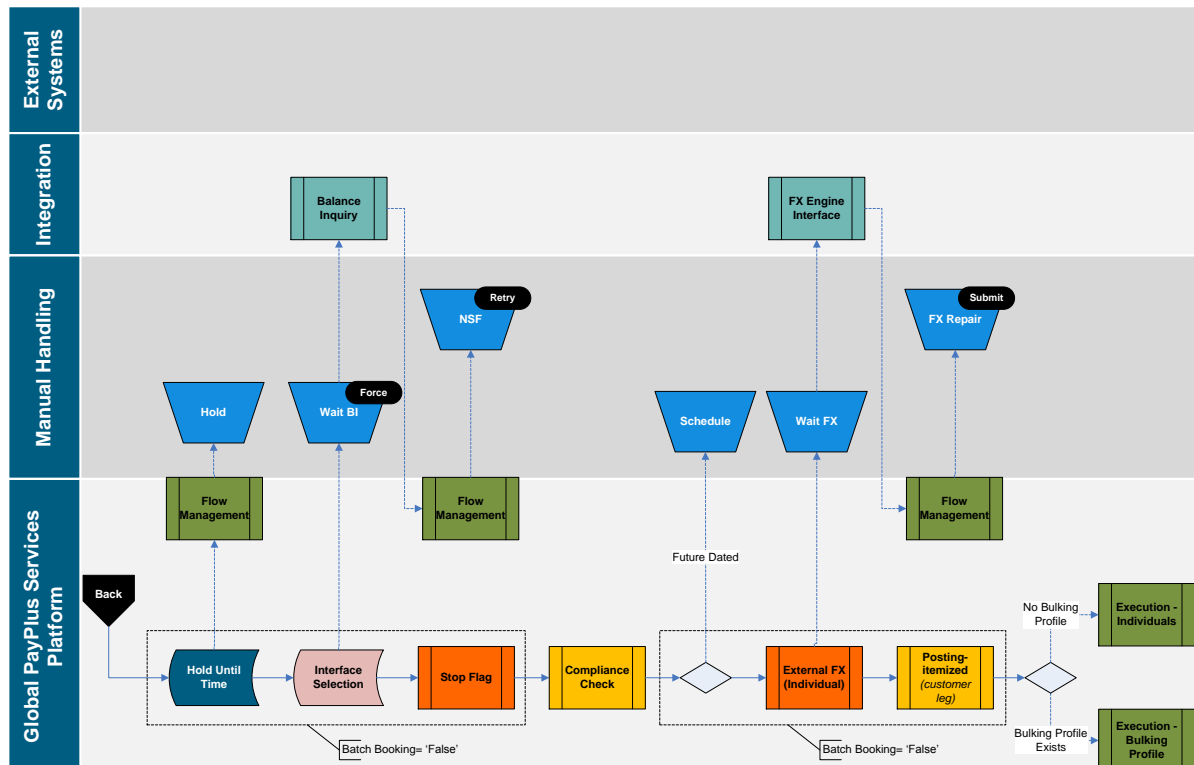
### 2.1.3.14 Flow Management

As part of the flow management the S message is routed to Complete after posting and GPP continues the execution processing on the individual transactions.

## 2.1.4 Execution

GPP generates posting and processes the outgoing file during the execution stage. GPP performs a few generic steps and then based on bulking profile existence, GPP process individual executions and bulk executions.

### 2.1.4.1 Execution Workflow



### 2.1.4.2 Hold Until Time

GPP provides a mechanism of stopping selected transaction processing up until a pre-defined time. This is performed using the Timed Hold rule. When a rule is selected to a sub batch, based on specific attribute, the sub batch is held until a pre-defined time (and as a result, all of the transactions related to the Sub batch are held until its completion). On the selected time, Sub batch is released back to processing.

### 2.1.4.3 Interface Selection (Balance Inquiry)

GPP uses the interface selection rules to generate an external balance inquiry request. For Balance Inquiry standard interface information, see GPP Technical Guide Balance Inquiry Interface.

### 2.1.4.4 Stop Flag

Account stop flag check is performed on the individual account. The stop flag is either received from a Balance Inquiry response or setup in the account profile.

### 2.1.4.5 Compliance Check

GPP performs a compliance request on the individual payment.

### 2.1.4.6 External FX (Individual)

GPP generates an external FX request for individual payments, when posting indicator refers to individual payments.

### 2.1.4.7 Posting Itemized (Customer Leg)

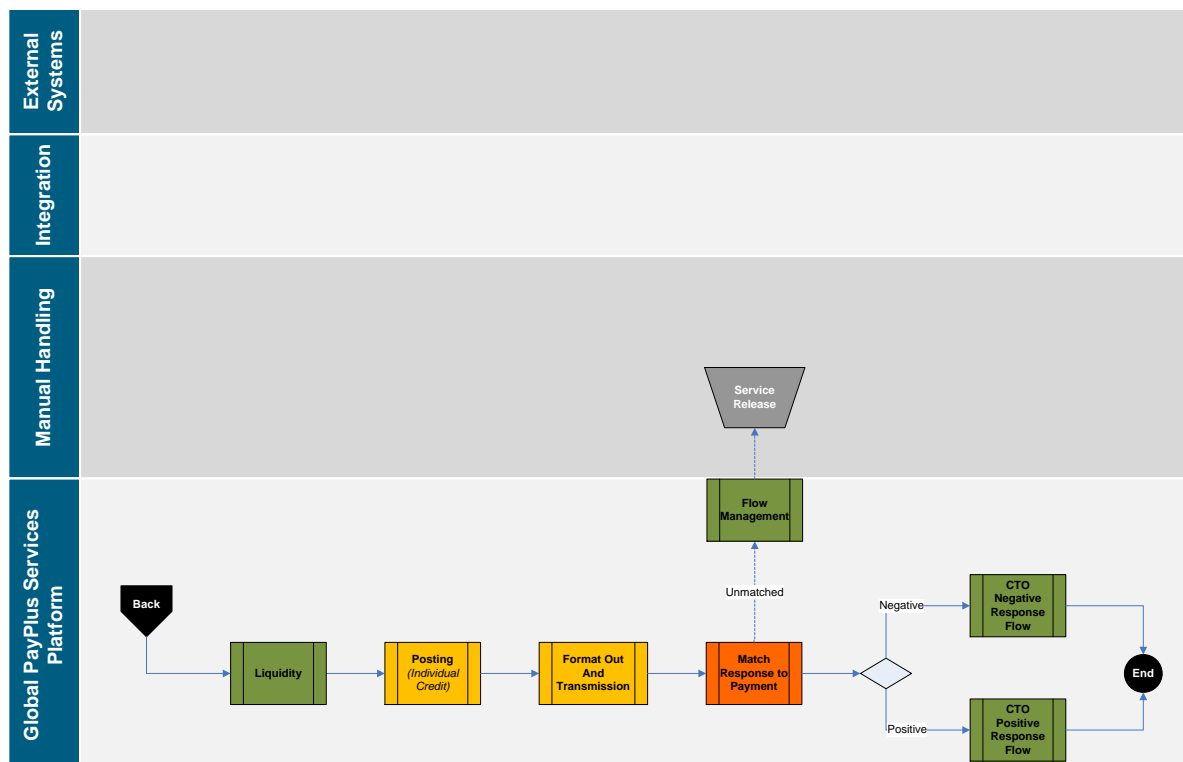
GPP triggers the relevant interface to perform required posting. For example for CTO GPP perform the debit posting per transaction.

For more information, see Mass Payments Accounting

## 2.1.5 Execute Individual

During this process, GPP process individual executions.

### 2.1.5.1 Execute Individual Files Workflow



### 2.1.5.2 Liquidity

In this step, GPP checks the liquidity status for clearing the settlement account.

For more information, see GPP Liquidity & Risk Management Business Guide

### 2.1.5.3 Posting (Individual Credit)

GPP triggers the relevant interface to perform the required posting.

For more information, see [Mass Payments Accounting](#)

### 2.1.5.4 Format Out and Transmission

GPP generates the out payment.

### 2.1.5.5 Match Response to Payment

GPP matches the response to the individual payment

### 2.1.5.6 Response Handling

#### 2.1.5.6.1 CTO Negative Response

Upon receipt of a negative response, the CTO is routed to the Rejected queue.

#### 2.1.5.6.2 CTO Positive Response

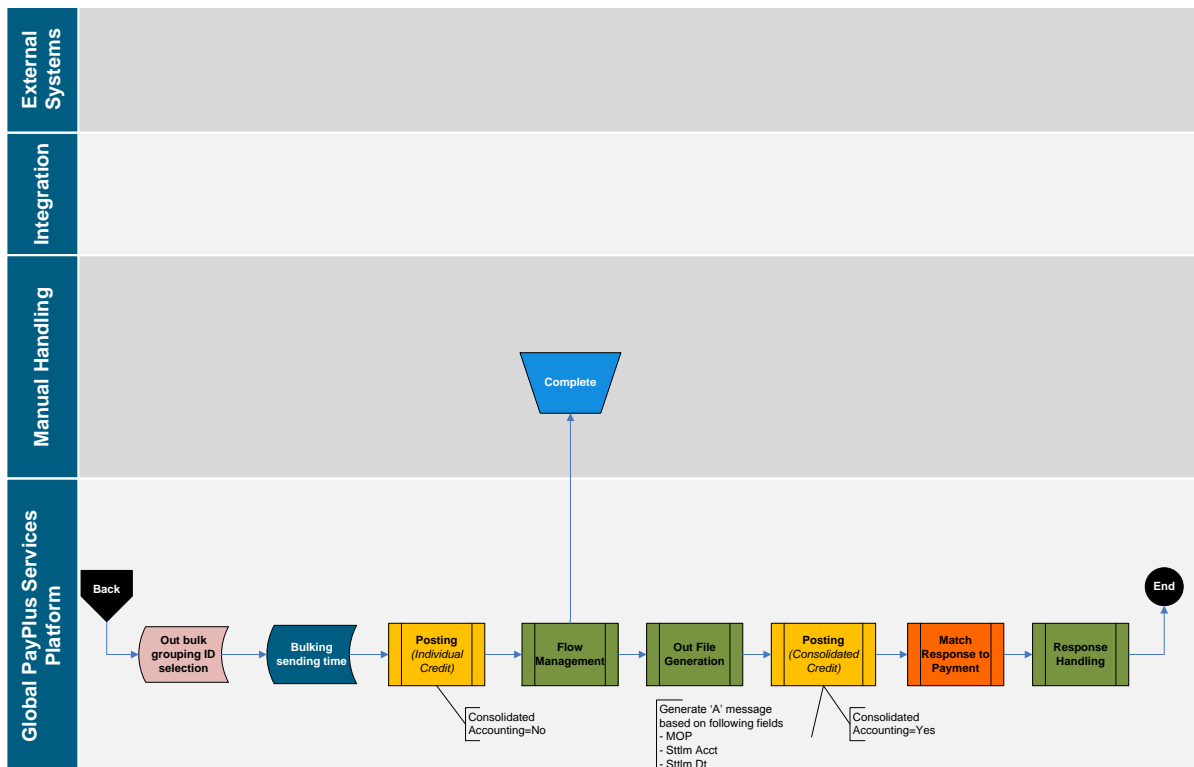
Upon receipt of a positive response, the CTO remains in the Complete queue.

### 2.1.6 Execute Bulk Destination

GPP collects and organizes transactions destined for a file-based clearing system into bulks based on definable criteria. An outgoing file can contain multiple message types. For example, a single outgoing file can contain credit transfers, recall requests, and recall returns. An outgoing file can also contain transactions that were received individually and transactions that were received in files.

GPP uses the specific bulking parameters for each Method of Payment (MOP) that handles transaction bulking. These parameters are defined in the Bulking profile that is associated with the MOP.

#### 2.1.6.1 Execute Bulk Workflow



### 2.1.6.2 Out Bulk Grouping ID Selection

GPP invokes Out Bulk Grouping ID Selection rules to determine the Group ID - Out data manipulation rule that GPP uses to build the OFID, and OGID.

- The OFID (outgoing file ID) is used to place transactions into the relevant outgoing file.
- The OGID (outgoing group ID) is used to place transactions with common attributes into relevant groups in the outgoing file.

When generating an outgoing customer file (pain.001 and pain.008), GPP determines:

1. The relevant file into which the transaction should be placed using the OFID. The OFID determines, for example, if a file must only contain transactions of a single message type or value date.
2. The relevant Group Header within the outgoing file into which the transaction should be placed using the OGID.

### 2.1.6.3 Bulking Sending Time

GPP invokes Bulking Sending Time rules to determine the appropriate time to generate and send outgoing files of payment messages. Each sending time defined in the Bulking profile must have a corresponding Bulking Sending Time rule.

This rule also enables authorized GPP users to define a last sending time for a specific message type.

Bulking profile can be configured to send out the relevant transaction upon incoming file processing. In this case, Bulking sending time rules are not evaluated and Out file generation is triggered once incoming file processing is completed (i.e. all transactions received in the incoming file are processed).

### 2.1.6.4 Posting (individual Credit)

GPP triggers the relevant interface to perform required posting.

For more information, see [Mass Payments Accounting](#).

### 2.1.6.5 Flow Management

GPP routes all individual transactions to the Complete queue and creates the A message for file generation.

### 2.1.6.6 Out File Generation

GPP invokes Bulking Sending Time rules to determine the time to generate and send outgoing files of payments. Each sending time defined in the Bulking profile must have a corresponding Bulking Sending Time rule.

This rule also enables authorized GPP users to define a last sending time for a specific message type.

For more information about Bulking profiles and sending times, see [Bulking Profile](#).

GPP also enables authorized users to generate outgoing files containing groups of transactions that have successfully completed processing and send them to a CSM, regardless of the defined sending time. For more information, see [Pending Outgoing File](#).

### 2.1.6.7 Posting (Consolidated Credit)

GPP triggers the relevant interface to perform required posting.

For more information, see [Mass Payments Accounting](#)

### 2.1.6.8 Match Response to Payment

GPP matches the response to the file level.

### 2.1.6.9 Response Handling

#### 2.1.6.9.1 CTO Negative Response

Upon receipt of a negative response, the CTO is routed to the Rejected queue.

#### 2.1.6.9.2 CTO Positive Response

Upon receipt of a positive response, the CTO remains in the Complete queue.

## 2.1.7 Acknowledgment Reporting

GPP can generate file status reports for FI customers that enable the customers to track file and transaction processing. GPP can generate these reports at different stages of the processing workflow using Advising Type Selection rules. For more information about the rule, see [Advising Type Selection Rules](#).

GPP enables a bank to generate a Customer Acknowledgment report for a customer. The report is a file that contains details of all accepted and rejected transactions for a customer that a bank receives in a single file. GPP generates a Customer Acknowledgment upon completion of individual transaction validation during the specific payment processing workflows and stores it in a specific location, after which an external interface sends it to the initiating party (bank customer).

GPP generates the following types of acknowledgments (both in pain.002 format):

- **ACK:** A positive acknowledgment message
- **NAK:** A negative acknowledgment message

The Parties profile enables a bank to define the types and XSD versions of acknowledgment messages that GPP generates for each customer. For more information, see [Parties Profile](#).

GPP invokes Advising Type Selection rules to determine whether an advice message must be generated at a specific point in the workflow. For example, this rule type is used to generate file-level acknowledgments or message acknowledgments in response to a file received file from a corporate customer.

Predefined rules are included to generate a pain.002 acknowledgment message to an initiating party that sent a mass payment file and is defined to receive a Customer Acknowledgment (see [Parties Profile](#)) when the following occur:

- **File Rejected by User:** If a file does not pass validation (see [File Parsing/Validations](#)), GPP can hold it for manual handling. If an authorized GPP user chooses to reject the file, GPP generates an advice message file with an RJCT file rejection code. Individual transactions are not included in the file.
- **Preprocessing:** During Preprocessing (see [Preprocessing Transactions](#)), GPP accumulates information for the following:

- Positive Acknowledgments: Generated for successfully processed transactions
- Negative Acknowledgments: Generated for transactions that failed processing, each advice message includes a reason for the failure
- **Additional File Validation and Request File Generation:** During the process, GPP performs additional file validations, which can result in the following:
  - Complete or Partial File Acceptance: If a file passes additional file validations, completely or partially, GPP generates an acknowledgment file in pain.002 format. The file contains accumulated information for each individual transaction with an ACTC reason code for each accepted transaction and an RJCT reason code for each rejected transaction.
  - File Rejection: If a file does not pass additional file validations, GPP rejects the entire file, sets the file rejection code to RJCT, and generates a file-level rejection. The file does not contain individual transactions.
- **Sub-Batch:** During the Sub-Batch flow, GPP invokes Advising Type Selection rules to generate an individual pain.002 NAK for each transaction that received a negative compliance response. For more information about the GPP Compliance Service, see [Compliance Check](#).

The Advising Type Selection rules can also be used to set up event notifications when the information provided in each event is by a predetermined structure, such as a configurable XML tag or value.

## 2.1.8 Mass Payments Accounting

### 2.1.8.1 Outward Credit Transfer Accounting Models

GPP generates a single or consolidated posting.

When a file of credit transfers is received from a corporate customer, GPP can perform a consolidated debit to the debtor's account. Consolidated postings, are offset against a suspense account. When the transactions are sent out, for example, to clearing, GPP debits the same suspense account previously credited and credits a clearing account.

	Accounting Model	Description	Exceptions Scenarios
Customer Leg (Debit Customer)	Itemized	For each transaction within a file, individual posting entries and accounting requests will be generated.	Any payments rejected/cancelled at a later stage perform reverse accounting
	Consolidated Net Accounting	Performs lump sum accounting (debit customer) for processed transactions only (for example, transactions which successfully completed pre-processing)  Posting is not performed for rejected or canceled transactions.	Payments included in the lump sum posting, and rejected/cancelled at a later stage are posted separately as offsets to the account (reverse accounting)
	Consolidated Gross Accounting	Performs Lump sum accounting which debits customer for all transactions which were not rejected during pre-processing. For example, transactions which completed pre-processing/in repair/sanctions hold.	Any payments rejected/cancelled after posting are posted separately as offsets to the account (reverse accounting).

	Accounting Model	Description	Exceptions Scenarios
Clearing Leg/Book (Credit Settlement account)	Itemized	For each transaction, individual posting entries and accounting requests are generated to credit the settlement account / customer.	Rejected/cancelled payments perform reverse accounting.
	Consolidated Credit - Gross	GPP performs consolidated credit-side posting, in which posting debits the relevant suspense account and credits the clearing account associated with the MOP.	Any payments rejected by the scheme are posted separately as offsets to the account (reverse accounting).

### 2.1.8.2 Inward Credit Transfer Accounting Models

	Accounting Model	Description	Exceptions Scenarios
Clearing Leg (Debit Settlement account)	Itemized	Any payment rejected/cancelled at a later stage performs reverse accounting.	Any payments rejected/cancelled at a later stage perform reverse accounting.
	Consolidated Gross Accounting	Lump sum accounting debits settlement account for lump sum amount of all transactions received from the clearing.	Any payments rejected at a later stage are posted separately as offsets to the account (reverse accounting).
Customer Leg (Credit Customer)	Itemized	For each transaction within a file, individual posting entries and accounting requests are generated to credit the customers.	
	Consolidated Credit - Gross	GPP performs consolidated credit-side posting, in which posting debits the relevant suspense account and credits the clearing account associated with the MOP.	Any payments rejected by the scheme are posted separately as offsets to the account (reverse accounting).

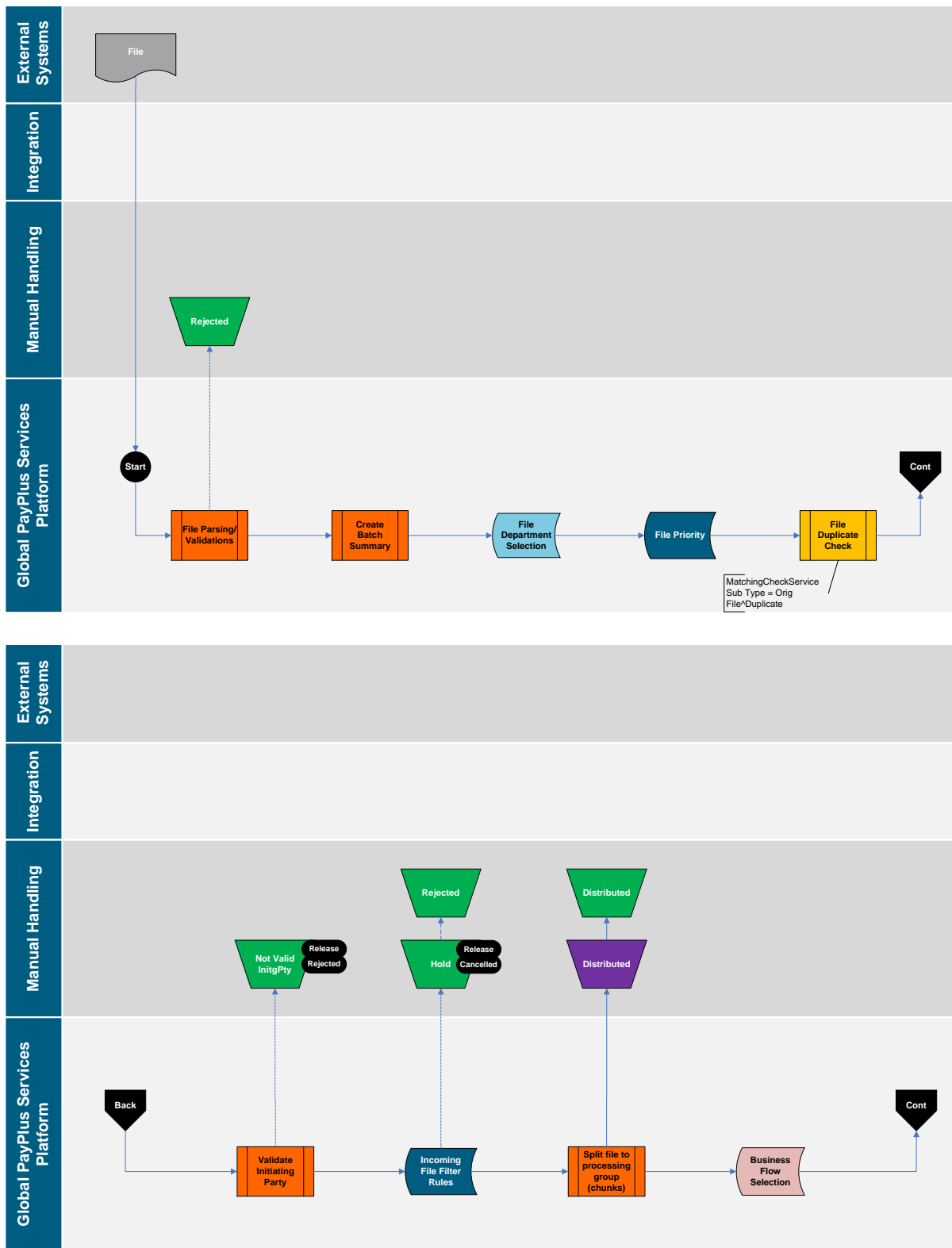
## 2.2 Direct Debit Process

### 2.2.1 Incoming File Handling

GPP receives and processes incoming files that contain transaction messages.

Processing begins upon the receipt of a mass payment file, such as a file containing pain.001 or pain.008 messages.

### 2.2.1.1 File Processing Workflow





### 2.2.1.2 File Parsing/Validations

When GPP receives a mass payments file, GPP:

- Parses the file to bulks and validates the format and contents of the file.
    - If parsing fails, GPP rejects the file
    - If parsing is successful, GPP continues to process the file
  - Assigns a unique file ID to each received file and registers the file in the File Summary.
  - Checks that the initiating party (the party who sent the mass payment file) is a customer of the FI.
- GPP continues processing a mass payment file only if all file validations succeed.

If an incoming file does not pass file validation, GPP generates a file-level error and does not continue processing the file. GPP can also generate a payment status report file and send it to the initiating party to indicate that the file was rejected. The report file includes a reason for the file rejection. For more information, see [Acknowledgment Reporting](#)

### 2.2.1.3 Create Batch (Payment Information) Summary

Each incoming file received from a customer can contain multiple batches. GPP delimit the batches by specific parameters, for example:

- Creditor Account ID (for direct debit files)
- Execution Date/Due Date

GPP determines specific batch processing preferences using the following:

- **Batch Control Profile:** Enables a bank to define specific file processing preferences for each batch in an incoming file. For more information, see [Batch Control Profile](#).
- **Incoming File:** Can contain specific batch processing instructions such as batch booking indicator.
- **Parties Profile:** Enables a bank to define specific processing preferences in the Acknowledgment Preferences section. For more information, see [Parties Profile](#).

GPP users can view information about the batches in a file received from a customer. For more information, see [Batch Summary](#).

### 2.2.1.4 File Department Selection

GPP derives and identifies payment attributes (for example, office, department, creation date) during the initial process in the business flow.

Once the Office is selected, the Department Selection rules for this Office, are evaluated to select the relevant Department. A default department is selected when there are no specific rules setup.

### 2.2.1.5 File Priority

The order in which GPP processes each file can be prioritized using the File Priority rules. Each File Priority rule is attached to a specific office.

After validating an incoming file, when two or more files are waiting for processing, GPP invokes the File Priority rules to assign a priority to the incoming file. GPP first processes the file with the highest priority and continues processing subsequent files according to the priority of each, as determined by the rule. For example, high priority can be assigned to files received from a specific customer.

Each payment in an incoming file inherits its file-level priority.

If a file-level priority is not assigned to an incoming file, GPP determines the payment-level priority for each payment in the file using Prioritization rules. These rules enable a bank to assign a priority to an individual payment.

When viewing payments in a manual queue, an authorized GPP user can sort messages by the assigned priority to assist in handling higher priority payments first.

For File priority Codes, see [File Priority Rules](#).

#### 2.2.1.6 File Duplicate Check

GPP checks whether the incoming file is duplicated and has already been received and processed. This check is based on parameters which are configurable in GPP (system configuration).

- If a duplicate file is found, GPP routes the file to the Duplicate queue for manual handling. A user can perform one of these actions:
  - Release the file to continue processing
  - Cancel the file
- If a duplicate file is not found; GPP continues to process the payment.

#### 2.2.1.7 Validate Initiating Party

GPP checks that the initiating party is registered for submitting files.

- If the Initiating Party is not valid, GPP changes the status of the file to Not Valid Integrity. The user can perform one of these actions:
  - Release the file for continued system processing
  - Reject the file
- If the Initiating Party is valid; GPP continues to process the payment.

#### 2.2.1.8 Incoming File Filter Rules

GPP invokes Incoming File Filter rules to enable a bank to prevent STP processing of an incoming file. The Incoming File Filter rules are attached to an initiating party.

If GPP determines that an incoming file meets the conditions defined in an Incoming File Filter rule, GPP stops processing the file and performs an action defined in the rule. A rule can have one of the following actions:

- Hold: GPP routes the incoming file to a queue for manual handling.
- Reject: GPP rejects the incoming file.

Example: A rule is defined that holds all files received from a specific bank customer and routes them to a queue for manual handling.

In addition to an action definition, each Incoming File Filter rule has an optional usage definition that enables a bank to define an error code for each incoming file that meets the conditions of the rule. GPP generates a file-level NAK to the initiating party, which contains error message details as specified in the business rule.

#### 2.2.1.9 Split File to Processing Group (Chunks)

GPP distributes transactions received in files into manageable group of transactions to increase system performance and maximize system resource utilization.

After initial validation that includes duplicate checking, GPP distributes the transactions into physical groups. A system parameter defines the number of individual transactions that GPP includes in each group.

The GPP mass payment functionality can handle incoming files that contain multiple message types. A GPP mechanism ensures that all groups are processed in the correct order based on message type. This prevents illogical processing situations, such as processing a message recall before the corresponding payment received in the same file.

After distributing incoming transactions into groups, GPP processes each group of transactions using parallel processing to increase TPS (Transactions per seconds).

The number of running parallel processes is directly related to specific system configuration.

#### **2.2.1.10 Business Flow Selection**

For Customers processing Mass Payments, the business flow selection rule is defaulted to Mass Payments per customer specific requirements.

### **2.2.2 Preprocessing Transactions**

Once the Payment Information (PaymentInf) is validated successfully, GPP generates the individual transactions related to the validated Payment Information. Any changes to PaymentInf level information, as a result of processing within GPP is applied to the related individual transactions (for example, changes to the initiating party account).

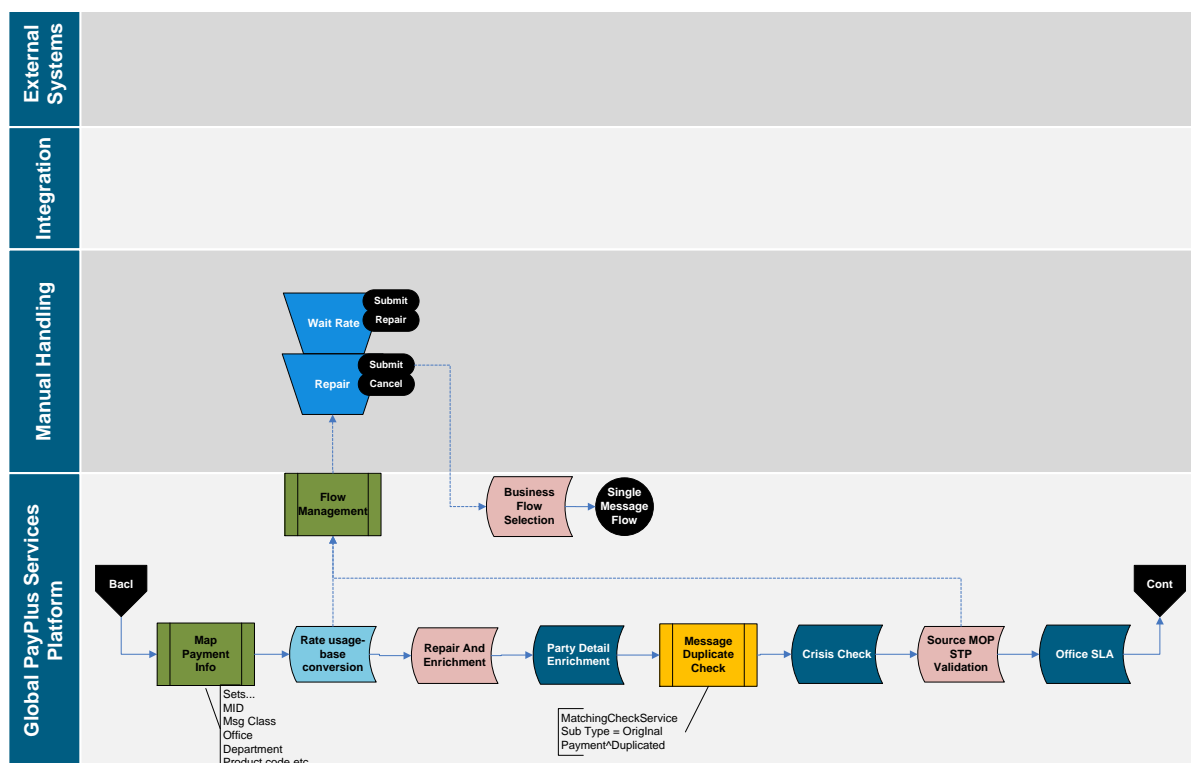
During the pre-processing flow, GPP generates a Unique Grouping ID (UGID) to identify and group individual transactions that share common attributes. GPP uses the UGID when generating an S message as part of the mass payment functionality.

Individual transactions that generate errors, such as duplicate transactions, are routed to the Rejected Duplicate queue.

#### **2.2.2.1 Payment Initiation**

For a detailed description of the Payment Initiation, see Payment Initiation Business Guide.

### 2.2.2.1.1 Payment Initiation Workflow



#### 2.2.2.1.2 Map Payment Information

GPP derives and identifies fundamental payment attributes, for example, Department, and Message Class, during the initial process in the business flow.

#### 2.2.2.1.3 Rate Usage - Base Conversion

GPP converts all transactions to a base currency equivalent, which enables security checks, threshold limit checks, and other validations.

#### 2.2.2.1.4 Repair and Enrichment

GPP utilizes the Repair and Enrichment Rules and Repair and Enrichment Selection Rules to automatically repair messages, which increases STP rates. GPP also enriches specific message fields by deriving required information.

Transactions can be automatically repaired and enriched using the Repair and Enrichment rules, which can derive missing information that was not included in the original payment message.

GPP can use these rules to do the following:

- Set values of missing transaction attributes
- Remove values from transaction attributes
- Update transaction statuses and direct debit mandate statuses

GPP determines the relevant rule by invoking Repair and Enrichment Selection rules for specific transactions.

At a determined point in the workflow, GPP invokes a Repair and Enrichment Selection rule that checks for specific conditions, such as a specific payment message type. If a transaction matches the

defined conditions, GPP invokes the relevant Repair and Enrichment rule, which can perform an action such as setting a message attribute with a specific value.

For example, GPP can invoke a Repair and Enrichment Selection rule for all pacs.008 payment messages. The invoked Repair and Enrichment rule can be defined to perform an action such as removing the values in the creditor agent message attributes.

#### 2.2.2.1.5 Party Detail Enrichment

GPP identifies and loads relevant account information for the first in chain party.

For incoming files received from a customer or from ACH, GPP identifies and loads the first in chain debit or credit account. GPP applies derived party attributes to all transactions in the batch (ISO Payment Information block).

#### 2.2.2.1.6 Message Duplicate Check

Duplicate checking is executed on payments that are either received by GPP from external networks (ACH) or internal applications or are manually entered or handled by a user. Based on the selected algorithm (key message fields such as message type, currency, amount and beneficiary) GPP examines every payment for possible duplication.

GPP determines whether a payment is a duplicate using the Automatic Matching Algorithm rule.

- If a payment is a duplicate, GPP routes the payment to the Dupex queue for manual handling. A user can perform one of these actions:
  - Accept to continue processing
  - Cancel the payment
- If a duplicate payment is not found; GPP continues to process the payment.

#### 2.2.2.1.7 Crisis Check

Crisis Check processing is required to hold transactions, which are in process but due to extraordinary circumstances need to be stopped from processing further. It is intended as a temporary measure and more permanent parameters should be set to deal with longer term scenarios, for example, posting restrictions, static data changes, and non-STP rules.

The Crisis Hold rule is applied to all individual transactions, transactions received via bulk files and across offices. Any transactions meeting filter conditions are stopped from processing further until a decision is made to continue processing or cancel.

When a Crisis Hold rule that is attached to an object is changed or detached from an object, the Release Crisis Filter activity will be triggered and payments will be released.

#### 2.2.2.1.8 Source MOP STP Validation

Source MOP selection identifies the debit MOP. For more information, see GPP Payment Initiation Business Guide.

The Source MOP can be:

- Book for files received from Channels
- Low Value clearing

GPP perform MOP STP validation for a specific MOP to increase its STP and to adhere to the MOP and/or clearing rules, for example, SEPA EPC rulebook regulations.

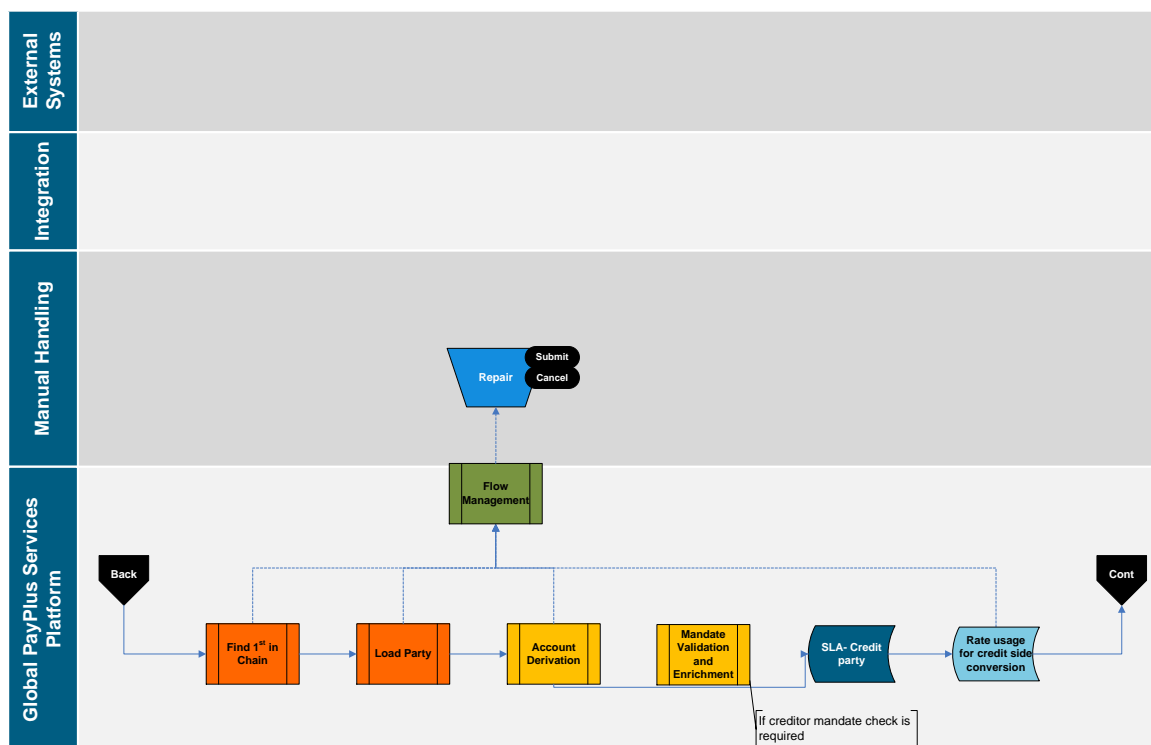
2.2.2.1.9 Office SLA

Ensures as early as possible in the payment processing flow whether the payment may be associated with a specific SLA profile. For example, not processing the direct debit file before a specific time of the day when cross border debits are usually received.

For more information, see GPP Payment Initiation Business Guide.

2.2.2.2 Direct Debit (Individual) Processing

2.2.2.2.1 Credit Party Workflow



2.2.2.2.1.1 Find First in Chain

GPP identifies from where the payment is being sent for the first party in the credit chain. When the First in Chain party cannot be identified, the transaction is sent to Repair for manual handling.

For more information, see GPP Parties Identification Business Guide.

2.2.2.2.1.2 Load Party

GPP identifies and loads relevant account information for the first in debit chain party. If there is an issue with identifying the party, the payment is routed to the Repair queue for manual handling.

For more information, see GPP Parties Identification Business Guide.

2.2.2.2.1.3 Account Derivation

GPP derives relevant accounts (credit account of a direct debit) and performs currency conversions (if required) when the payment currency is different to the account currency.

If there is an issue with identifying the account, the payment is routed to the Repair queue for manual handling.

For more information, see GPP Parties Identification Business Guide.

2.2.2.2.1.4 Creditor ID Validation (Outgoing Flow)

The unique CID enables GPP to identify a creditor as part of the mass payment direct debit functionality.

The CID also enables debtors and debtor Financial Institutions to do the following:

- Check for a valid mandate
- Identify a creditor to execute a debit refund

GPP invokes the CID Validation when a CID is input or accessed. For example, when a user creates or updates a profile that contains a CID, such as a Creditor Account profile.

During CID validation, GPP searches for and selects the relevant Creditor ID Structure profile and does the following:

- Validates that the CID does not exceed the defined maximum length
- Checks for optional discretionary data included in the CID
- Derives the CID key, which is the CID without discretionary data
- Validates the CID using the defined check digit algorithm

The CID Validation indicate if the CID is valid or invalid. When the CID is invalid, an error message is generated.

The invoking process is responsible for handling the returned information correctly. For example:

- If a GPP user types an invalid CID, the user interface displays an error message and prevents the user from creating or updating the relevant profile.
- If an incoming direct debit message contains an invalid CID, GPP stops processing the message and automatically rejects it.

GPP validates that a CID is structured for the debit MOP in an outgoing direct debit message and validates that the required relationships between a scheme, party, and CID exist in GPP, as defined in the Creditor ID Structure and Creditor ID profiles.

GPP attempts to identify the Parameters profile using the relevant scheme, party, and CID key in the following order of priority:

1. Scheme, party code, and CID
2. Scheme and party code
3. Party code only
4. Scheme only

If GPP cannot identify a matching Parameters profile, an error message is returned and GPP does not continue to process the direct debit.

Upon identifying a matching Parameters profile, which defines the level of validation, GPP performs one of the following:

- **No Validation:** No additional validations are performed and the CID Processing service is terminated.
- **Validate Creditor ID:** GPP verifies that the CID is defined for the relevant party code, returns an error message if the CID is not defined, and terminates the service.
- **Validate Creditor ID Account:** GPP verifies that the CID is defined for the relevant creditor ID account, returns an error message if the CID is not defined, and terminates the service.

Upon termination, the service returns one of the following:

- A successful validation indicator
- An unsuccessful validation indicator and an error message

#### 2.2.2.2.1.5 Mandate Validation and Enrichment

Mandate validation is performed on the creditor side only if a creditor mandate check is required.

GPP validates on the creditor side that a mandate exists. If a mandate exists between the relevant parties, the following validations are performed:

- Time Frame: Validates that the date and time of the mandate is valid in relation to the current debit payment
- Debit Amount: Validates that the payment amount does not exceed the amount defined in the mandate

#### 2.2.2.2.1.6 SLA Credit Party

Ensures whether the payment is associated with a specific SLA Credit Party profile.

#### 2.2.2.2.1.7 Rate Usage for Debit Side Conversion

If a currency conversion is required GPP invokes Rate Usage rules to determine the relevant foreign currency exchange rate for each transaction.

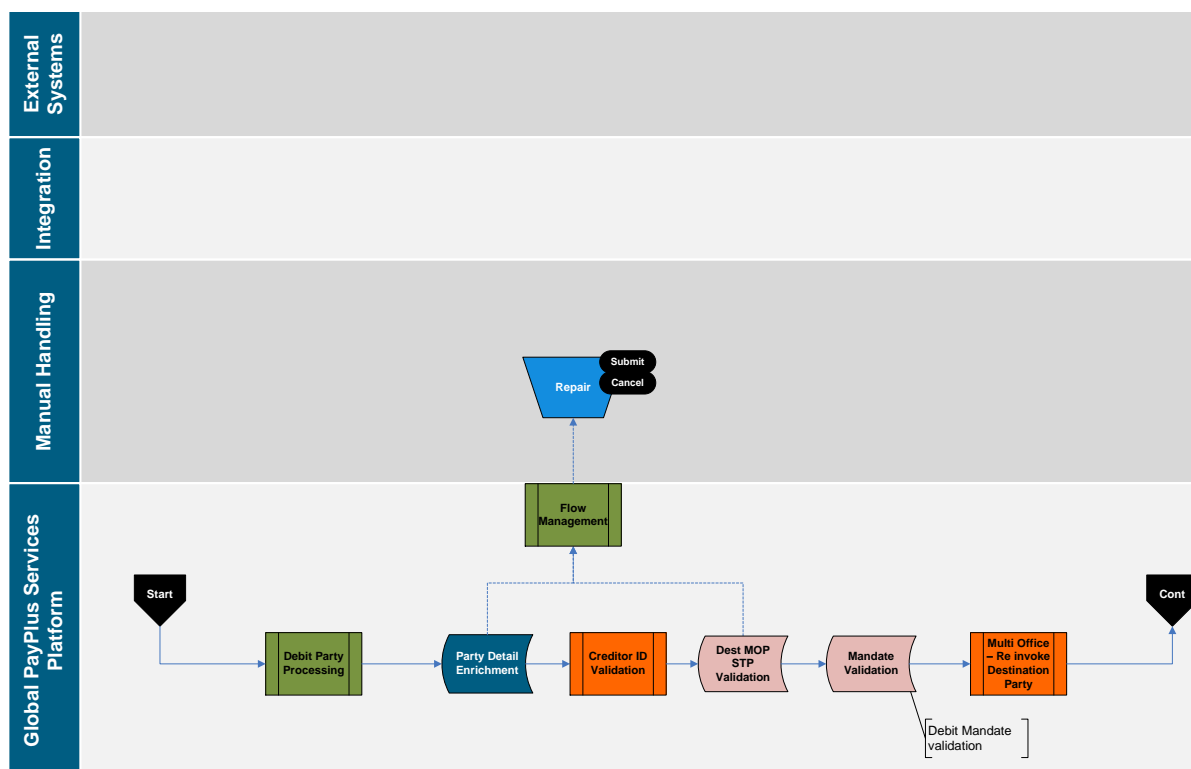
Based on the type of conversion, the following types of Rate Usage Conversion rules may be invoked:

- Base Amount Conversion: Determines the base amount foreign currency conversion rate for transactions.
- Debit Side Conversion: Determines the Debit-side foreign currency conversion rate for payments.

For more information, see GPP Currency Conversion Business Guide.



2.2.2.2.2 Debit Side Workflow



2.2.2.2.2.1 Debit Party Processing

During the debit party processing, GPP identifies first in debit chain, loads the party and the debit account.

For more information, see GPP Parties Identification Business Guide.

2.2.2.2.2.2 Party Detail Enrichment

GPP identifies and loads relevant account information for the first party in the chain - debit side of a direct debit.

GPP invokes Debit Account Enrichment rules to determine the debit account number and usage instructions for that account for Direct Debit. These rules enable a bank to define the relevant debit account for a payment.

2.2.2.2.2.3 Creditor ID (CID) Validation (Incoming Flow)

The unique CID enables GPP to identify a creditor as part of the mass payment direct debit functionality.

The CID also enables debtors and debtor Financial Institutions to do the following:

- Check for a valid mandate
- Identify a creditor to execute a debit refund

GPP invokes the CID Validation when a CID is input or accessed. For example, when a user creates or updates a profile that contains a CID, such as a Creditor Account profile.

During CID validation, GPP searches for and selects the relevant Creditor ID Structure profile and does the following:

- Validates that the CID does not exceed the defined maximum length

- Checks for optional discretionary data included in the CID
- Derives the CID key, which is the CID without discretionary data
- Validates the CID using the defined check digit algorithm

The CID Validation indicate if the CID is valid or invalid. When the CID is invalid, an error message is generated.

The invoking process is responsible for handling the returned information correctly. For example:

- If a GPP user types an invalid CID, the GUI displays an error message and prevents the user from creating or updating the relevant profile.
- If an incoming direct debit message contains an invalid CID, GPP stops processing the message and automatically rejects it.

GPP validates that a CID is structured for the debit MOP in an outgoing direct debit message and validates that the required relationships between a scheme, party, and CID exist in GPP, as defined in the Creditor ID Structure and Creditor ID profiles.

GPP attempts to identify the Parameters profile using the relevant scheme, party, and CID key in the following order of priority:

1. Scheme, party code, and CID
2. Scheme and party code
3. Party code only
4. Scheme only

If GPP cannot identify a matching Parameters profile, an error message is returned and GPP does not continue to process the direct debit.

Upon identifying a matching Parameters profile, which defines the level of validation, GPP performs one of the following:

- **No Validation:** No additional validations are performed and the CID Processing service is terminated.
- **Validate Creditor ID:** GPP verifies that the CID is defined for the relevant party code, returns an error message if the CID is not defined, and terminates the service.
- **Validate Creditor ID Account:** GPP verifies that the CID is defined for the relevant creditor ID account, returns an error message if the CID is not defined, and terminates the service.

Upon termination, the service returns one of the following:

- A successful validation indicator
- An unsuccessful validation indicator and an error message

#### 2.2.2.2.4 Destination MOP Selection and MOP STP Validation

GPP uses Method of Payment (MOP) selection rules defined in GPP, to determine the best route for the payment to be delivered, for example, via clearing, SWIFT. The MOP parameters are also used to determine whether the transaction continues processing as a single message or should be sent out in a file.

For more information, see GPP Method of Payment Business Guide.

#### 2.2.2.2.5 Mandate Validation and Enrichment

GPP invokes Mandate Validation rules to validate the mandate-related attributes.

- **GPP Mandate Validation:** Validates that the creditor party of an incoming direct debit is authorized to collect a payment from a debtor party. GPP validates the mandate using reference data defined in Mandate profiles and Mandate Validation rules. GPP implements the validation at the following times:
  - Time of Receipt: Upon receipt of an incoming direct debit message
  - Processing Day: On the specific processing day of a direct debit
- Upon receipt of an incoming direct debit, the GPP does the following:
  - Verifies that a valid mandate exists between the creditor and debtor. The UMR (Unique Mandate Reference) and CID (Creditor ID) of the incoming direct debit is used to search for and match a direct debit to a mandate.
  - Evaluates Mandate Validation business rules to check that the incoming direct debit meets the requirements of the mandate. The business rules might implement an Override STP profile to generate error messages and message mapping. The Mandate Validation rules can be attached to a MOP or to the local office.
  - Creates a mandate if a valid mandate does not exist and the incoming direct debit contains the required information.
  - Updates an existing mandate with information contained in an incoming direct debit if the incoming direct debit contains specific mandate amendment information.
- **Mandate Enrichment:** Enriches mandatory fields in an outgoing direct debit that GPP generates and sends to a Clearing. After receiving a direct debit (such as a pain.008 message) from an initiating creditor party, GPP implements the Mandate Enrichment process if the following are true:
  - The direct debit is missing mandatory information
  - A valid mandate has been identified for the direct debit

GPP extracts the missing information from the mandate and inserts it into the direct debit, which GPP sends to a Clearing. GPP uses the mandate to enrich the outgoing direct debit with the following information:

- **UMR:** Unique mandate identification code supplied by a creditor. GPP generates this unique key for every mandate that is created.
- **CID:** Unique creditor identification code supplied by a creditor bank .
- **Signing Date:** Date that the debtor customer signed or authorized the creditor to debit the debtor customer's account.

GPP validates the mandate:

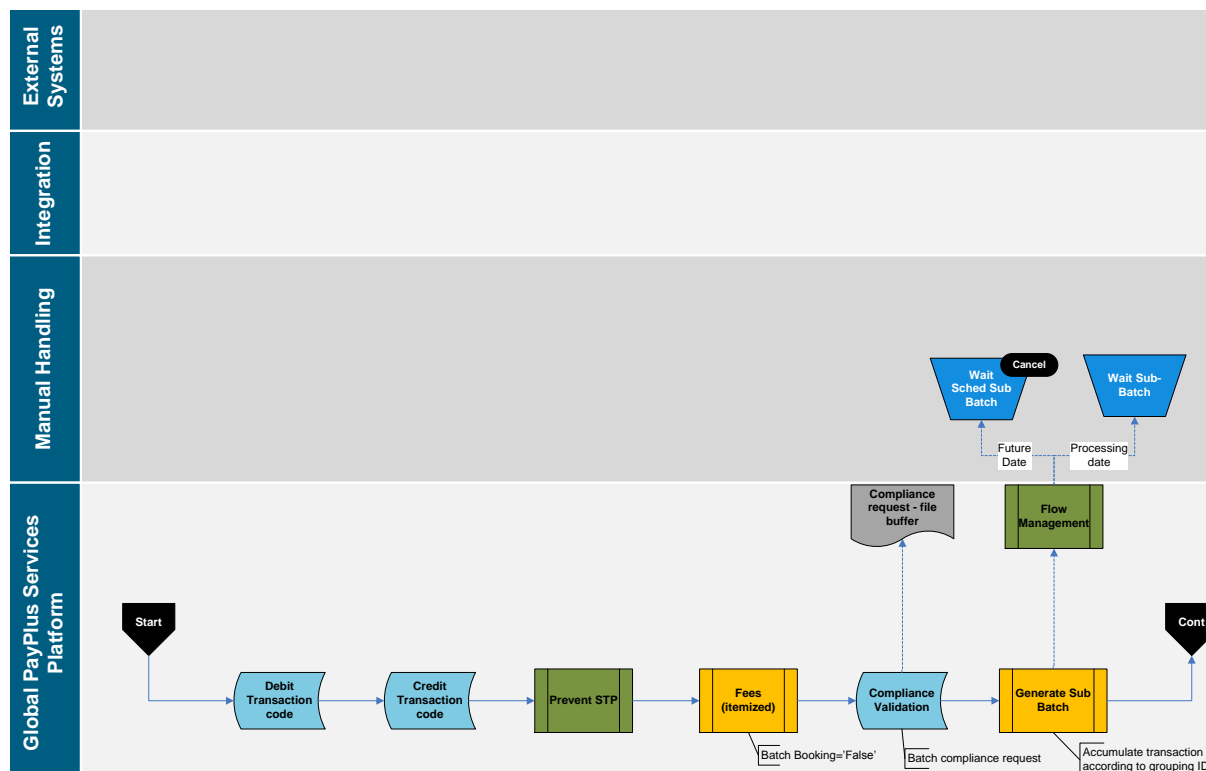
- If the mandate is not valid the payment is moved to the Rejected Queue, as defined in the Override STP profile for the specific Mandate Validation rule. The Override STP profile must have a Mandate Validation type.
- If the mandate is valid (attributes match the defined rule conditions), GPP routes the direct debit message to the queue as defined in the relevant Override STP profile and stops evaluating additional Mandate Validation rules.

#### 2.2.2.2.6 Multi Office - Re Invoke Destination Party

In a multi office scenario where the debtor is located in a different office than the creditor, the debit side is re-processed and re-evaluates all the rules on the destination office.

### 2.2.2.3 Post MOP

#### 2.2.2.3.1 Post MOP Workflow



#### 2.2.2.3.2 Debit Transaction Code

In this process GPP selects a debit code per transaction. This code can be exposed for external systems in a structured way. Examples of the code are type of transaction, type of customer, and fees.

#### 2.2.2.3.3 Credit Transaction Code

In this process GPP selects a credit code per transaction. This code can be exposed for external systems in a structured way. Examples of the code are type of transaction, type of customer, and fees.

#### 2.2.2.3.4 Prevent STP

GPP uses Override STP profiles to prevent Straight-Through Processing (STP) of specific payments. The Override STP profile can be defined for the following:

- Special Instruction: Prevent STP processing of a payment with specific characteristics, such as a settlement amount greater than a defined value.
- Validation: Prevent STP processing of a payment that is invalid as defined by the specific conditions, such as a missing product code.

For a list of error statuses, see [Appendix B: STP Validation Error Statuses](#).

For more information, see GPP Special Instructions Business Guide.

#### 2.2.2.3.5 Fees (Itemized)

The relevant fees are determined for each party in the transaction. This is performed when posting is required on the transaction level (Batch Booking is false).

For more information, see GPP Fees - Core Processing Business Guide

#### 2.2.2.3.6 Compliance Validation

GPP invokes Compliance Validation rules to determine whether to send a specific payment for compliance to verify that a payment complies with various anti-money laundering regulations.

GPP enables the following types of Compliance Validation rules:

- **Submit:** If a payment meets the conditions defined in the rule, GPP sends the transaction for compliance verification.
- **Bypass:** If a payment does not meet the conditions defined in the rule, GPP does not send the transaction for compliance verification.

#### 2.2.2.3.7 Generate Grouped Transaction (Sub Batch)

As part of this processing GPP groups number of payments which have similar parameters in order to allow single posting on the account or perform single currency conversion for the entire S message.

When GPP completes preprocessing for all individual transactions, additional file validations are invoked as follows:

- **Number of Transactions:** Validates that the total number of transactions counted in an incoming file matches the declared number of transactions in the file.
- **Control Sum:** Validates that the total amount of all transactions contained in the incoming file is equal to the amount defined in the file header. GPP includes all payment amounts when checking the control sum, regardless of the defined currency for an individual transaction.
- **Rejected Transactions:** Validates that the total number of transactions (expressed as a percentage) in an incoming file that are rejected by GPP does not exceed a threshold set by the bank.

Transactions that successfully complete these file validations continue to be processed in the Sub-Batch Generation.

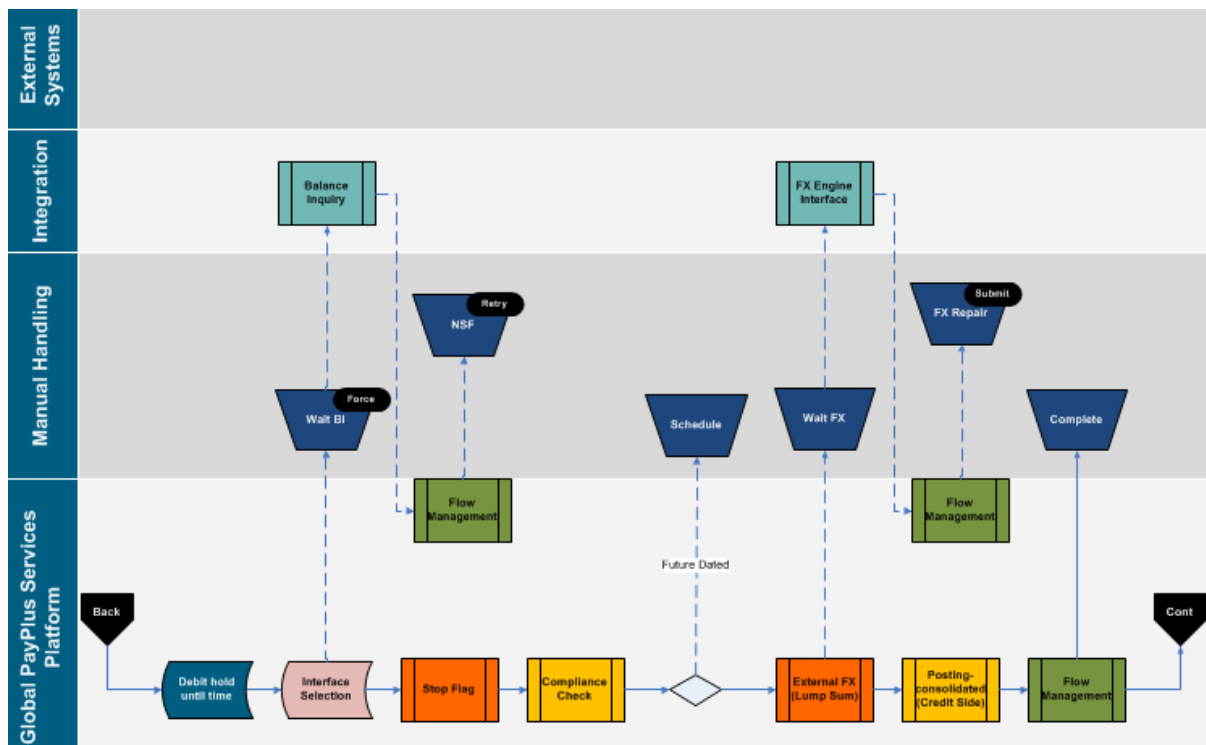
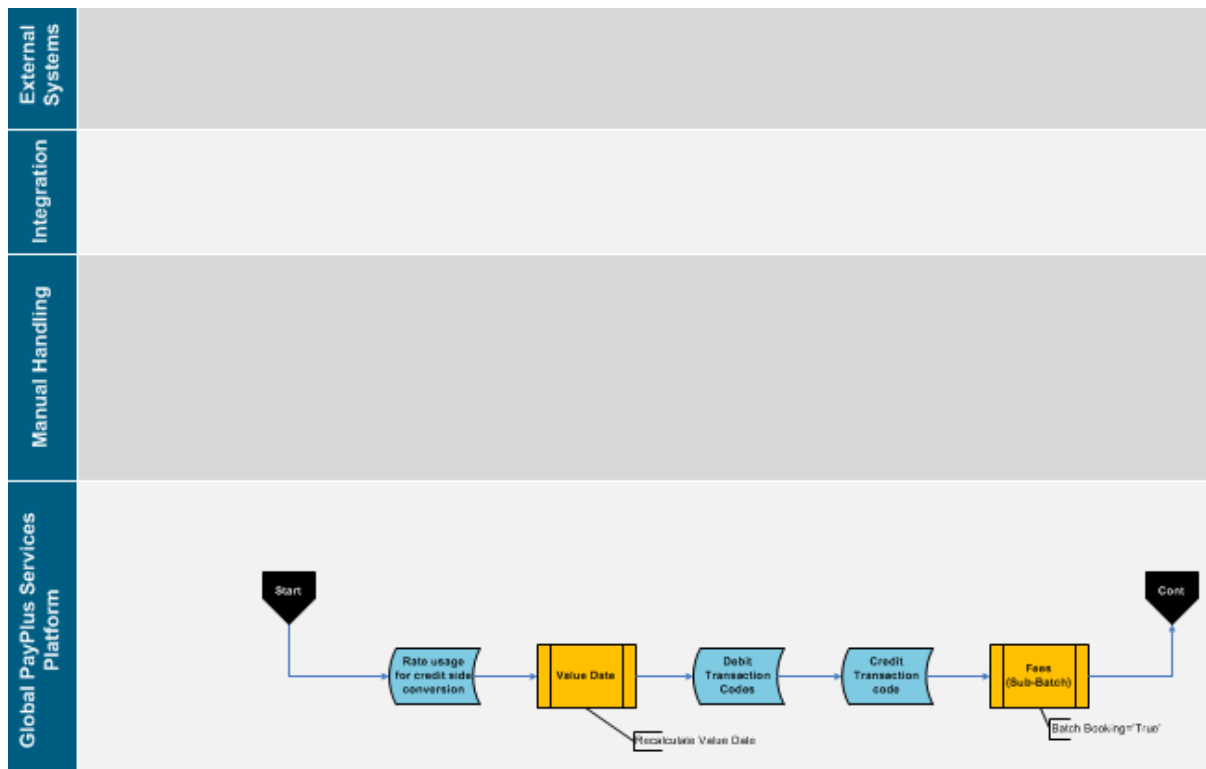
If the additional validations are not successful, GPP stops processing the transactions, and might hold the file for manual handling or reject it.

### 2.2.3 Payment Grouping (Sub Batch) Generation

Sub-Batch generation accumulates transactions that are sent out in files and completes processing on individual transactions.

GPP collects and group transactions originated in a file into groups based on definable criteria in order to apply actions on the entire group for example, posting, fees, and foreign exchange.

2.2.3.1 Sub Batch Generation (S) Workflow



2.2.3.2 Rate Usage for Debit Side Conversion

GPP uses Rate Usage rules to determine the relevant foreign currency exchange rate for each transaction, if a currency conversion is required.

The Debit Side Conversion determines the debit-side foreign currency conversion rate for transactions.

### 2.2.3.3 Value Date

GPP recalculates the Value Date for the S message.

For more information, see Value Date and Cutoff Business Guide.

### 2.2.3.4 Debit Transaction Code

In this process GPP selects a debit code per transaction. This code can be exposed for external systems in a structured way. Examples of the code are type of transaction, type of customer, fees.

### 2.2.3.5 Credit Transaction Code

In this process GPP selects a credit code per transaction. This code can be exposed for external systems in a structured way. Examples of the code are type of transaction, type of customer, fees.

### 2.2.3.6 Fees (Sub Batch)

The relevant fees are determined for each party in the S message. This is performed if posting is done on the S message (Batch Booking flag is true).

For more information, see Fees – Core Processing Business Guide.

### 2.2.3.7 Debit Hold Until Time

GPP provides a mechanism of stopping S message processing up until a pre-defined time. This is performed using the Hold Until Time rule. When a rule is selected to a sub batch, based on specific attribute, the sub batch is held until a pre-defined time (and as a result, all of the transactions related to the Sub batch are held until its completion). On the selected time, Sub batch is released back to processing.

### 2.2.3.8 Interface Selection

GPP uses Interface Selection rules to interact with external interfaces at specific stages during the payment processing. At this stage the Balance Inquiry Interface can be selected.

If GPP determines that a payment matches the defined rule conditions, the defined action of the rule is executed, which can be one of the following:

- **Bulk Interface Request:** Message attributes are accumulated and stored, which GPP later uses to generate a bulk request to an external interface.
- **Individual Interface Request:** Individual message attributes are stored and GPP generates a single request to an external interface.

The action for an Interface Selection rule implements an Interface profile that includes definitions for interface requests and responses such as:

- **Protocol:** The protocol used by GPP to communicate with the external interface.
- **Format Type:** The format of the incoming response or outgoing request.
- **Connection Point:** The location of the request that is sent or of the response that is received.

### 2.2.3.9 Stop Flag

Account stop flag check is performed on the S message account. The stop flag is either received from the Balance Inquiry response or setup in the account profile.

### 2.2.3.10 Compliance Check

A GPP Compliance service ensures compliance with various anti-money laundering regulations and foreign asset controls. GPP verifies that all incoming and outgoing payments in the S message comply with the latest regulations, such as embargoes and anti-terrorist financing regulations.

GPP performs the compliance check in a two-step process:

5. **Initial Response:** GPP sends an initial request to the compliance interface, for all transactions in the bulk as a single request. The interface returns one of the following types of Initial Responses:
  - No Hit: The interface determines that the payment complies with all relevant regulations. GPP continues processing the payment.
  - Possible Hit: The interface determines that the payment might not comply with all relevant regulations. GPP does not continue processing the payment. It is pending receipt of a Final Response.
6. **Final Response:** The interface returns one of the following types of Final Responses:
  - Passed: The interface determines that the payment complies with all relevant regulations. GPP continues processing the payment.
  - Rejected: The interface determines that the payment does not comply with all relevant regulations and returns a rejected indicator. GPP rejects the payment by setting the payment status to Rejected and routing the message to the Rejected queue. GPP does not continue processing the message.
  - Seized: The interface determines that the payment does not comply with all relevant regulations and returns a seized indicator. GPP implements a process to seize the payment by setting the payment status to Seized and routing the message to the Seized queue. This is a final status and GPP does not continue processing the message.

### 2.2.3.11 External FX (Lump Sum)

GPP Performs currency conversion for the lump sum amount when the payment currency is different to the account currency. .

GPP calculate conversions using an FX rate obtained from GPP or using a rate from an external system.

### 2.2.3.12 Posting Consolidation (Credit Side)

GPP triggers the relevant interface to perform required posting.

In a direct debit, credits the creditor or clearing participant and debits the relevant suspense account.

### 2.2.3.13 Flow Management

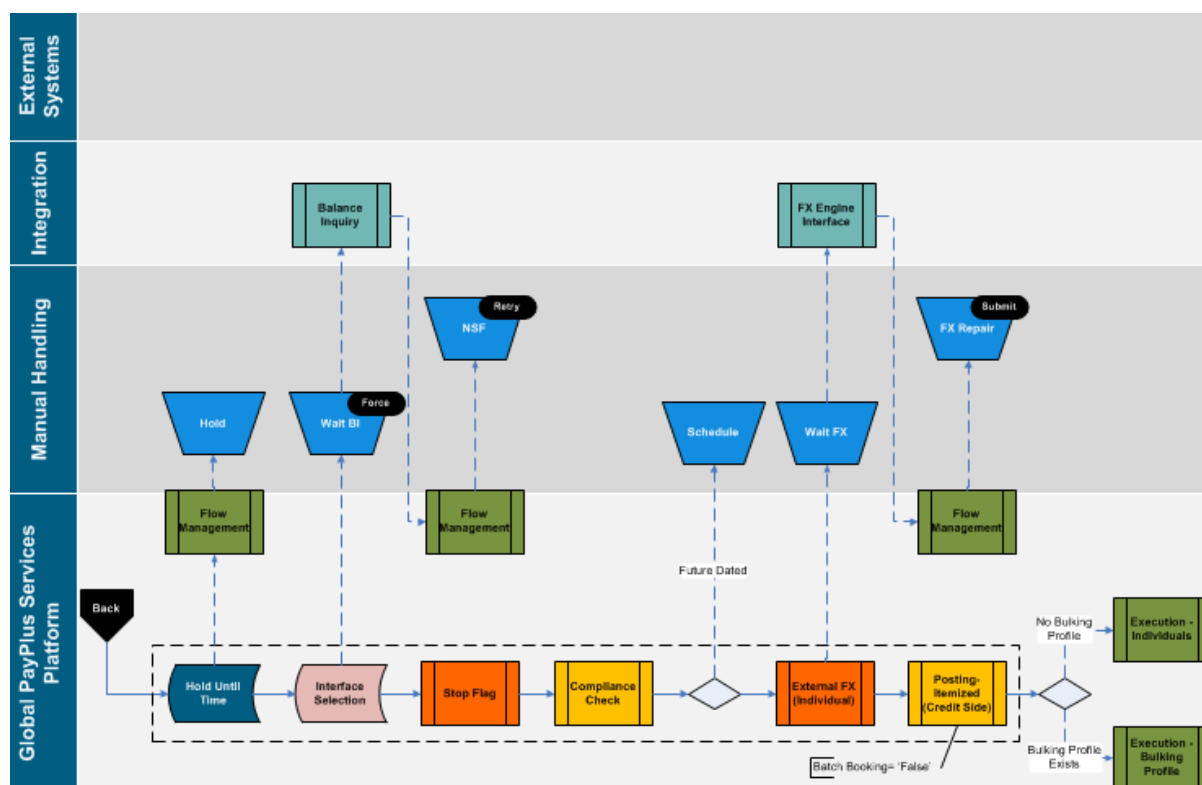
As part of the flow management the S message is routed to Complete after posting and GPP continues the execution processing on the individual transactions.

## 2.2.4 Execution

GPP generates posting and processes the outgoing file during the execution stage. GPP performs a few generic steps and then based on bulking profile existence, GPP process individual executions and bulk executions.



### 2.2.4.1 Execution Workflow



### 2.2.4.2 Hold Until Time

GPP provides a mechanism of stopping selected transaction processing up until a pre-defined time. This is performed using the Timed Hold rule. When a rule is selected to a sub batch, based on specific attribute, the sub batch is held until a pre-defined time (and as a result, all of the transactions related to the Sub batch are held until its completion). On the selected time, Sub batch is released back to processing.

### 2.2.4.3 Interface Selection (Balance Inquiry)

GPP use the interface selection rules to generate an external balance inquiry request. For Balance Inquiry standard interface information, see GPP Technical Guide Balance Inquiry Interface.

### 2.2.4.4 Stop Flag

Account stop flag check is performed on the individual profile. The stop flag is either received from Balance Inquiry response or setup in the account profile.

### 2.2.4.5 Compliance Check

GPP performs a compliance request on the individual payment.

### 2.2.4.6 External FX (Individual)

GPP generates an external FX request for individual payments, when posting indicator refers to individual payments.

### 2.2.4.7 Posting Itemized (Credit Side)

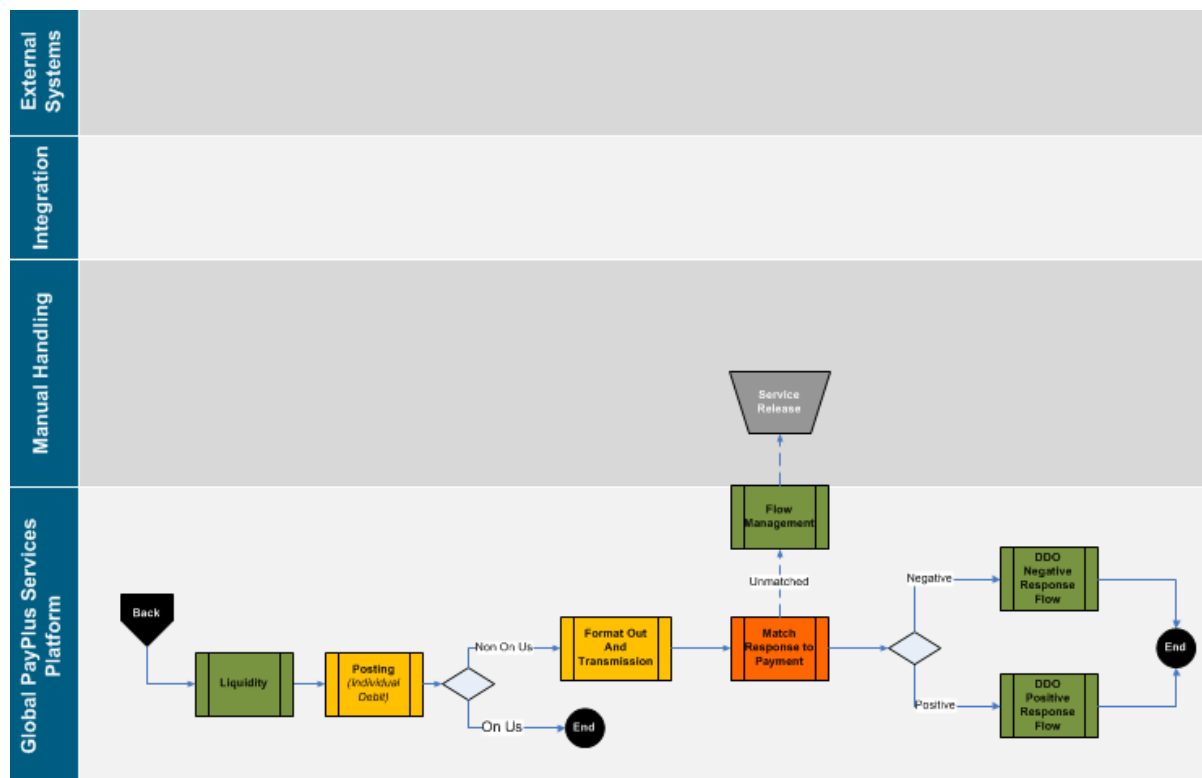
GPP triggers the relevant interface to perform required posting. For example for CTO GPP perform the debit posting per transaction.

For more information, see [Mass Payments Accounting](#)

### 2.2.5 Execute Individual

During this process, GPP process individual executions.

#### 2.2.5.1 Execute Individual Files Workflow



#### 2.2.5.2 Liquidity

In this step, GPP checks the liquidity status for clearing the settlement account.

For more information, see GPP Liquidity & Risk Management Business Guide

#### 2.2.5.3 Posting (Individual Debt)

GPP triggers the relevant interface to perform the required posting.

For more information, see [Mass Payments Accounting](#)

#### 2.2.5.4 Format Out and Transmission

GPP generates the out payment.

#### 2.2.5.5 Match Response to Payment

GPP matches the response to the individual payment

#### 2.2.5.6 Response

##### 2.2.5.6.1 DDO Negative Response

Upon receipt of a negative response, the DDO is routed to the Reject queue.

### 2.2.5.6.2 DDO Positive Response

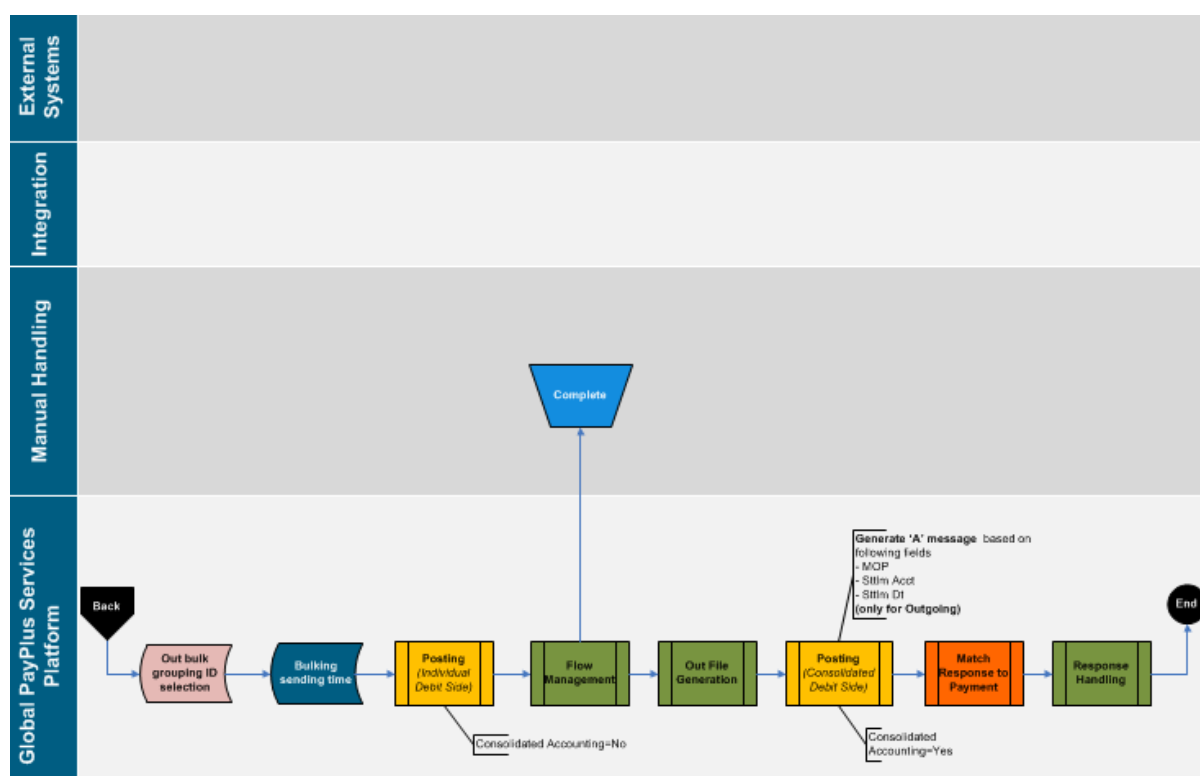
Upon receipt of a positive response, the DDO remains in the Complete queue.

## 2.2.6 Execute Bulk Destination

GPP collects and organizes transactions destined for a file-based clearing system into bulks based on definable criteria. An outgoing file can contain multiple message types. For example, a single outgoing file can contain direct debits, recall requests, and recall returns. An outgoing file can also contain transactions that were received individually and transactions that were received in files.

GPP uses the specific bulking parameters for each Method of Payment (MOP) that handles transaction bulking. These parameters are defined in the Bulking profile that is associated with the MOP.

### 2.2.6.1 Execute Bulk Workflow



### 2.2.6.2 Out Bulk Grouping ID Selection

GPP invokes Out Bulk Grouping ID Selection rules to determine the Group ID - Out data manipulation rule that GPP uses to build the OFID, and OGID.

- The OFID (outgoing file ID) is used to place transactions into the relevant outgoing file.
- The OGID (outgoing group ID) is used to place transactions with common attributes into relevant groups in the outgoing file.

When generating an outgoing customer file (pain.001 and pain.008), GPP determines:

7. The relevant file into which the transaction should be placed using the OFID. The OFID determines, for example, if a file must only contain transactions of a single message type or value date.
8. The relevant Group Header within the outgoing file into which the transaction should be placed using the OGID.

### 2.2.6.3 Bulking Sending Time

GPP invokes Bulking Sending Time rules to determine the appropriate time to generate and send outgoing files of payment messages. Each sending time defined in the Bulking profile must have a corresponding Bulking Sending Time rule.

This rule also enables authorized GPP users to define a last sending time for a specific message type.

Bulking profile can be configured to send out the relevant transaction upon incoming file processing. In this case, Bulking sending time rules are not evaluated and Out file generation is triggered once incoming file processing is completed (i.e. all transactions received in the incoming file are processed).

### 2.2.6.4 Posting (Individual Debit Side)

GPP triggers the relevant interface to perform required posting.

For more information, see [Mass Payments Accounting](#)

### 2.2.6.5 Flow Management

GPP routes all individual transactions to the Complete queue and creates the A message for file generation.

### 2.2.6.6 Out File Generation

GPP invokes Bulking Sending Time rules to determine the time to generate and send outgoing files of payments. Each sending time defined in the Bulking profile must have a corresponding Bulking Sending Time rule.

This rule also enables authorized GPP users to define a last sending time for a specific message type.

For more information about Bulking profiles and sending times, see [Bulking Profile](#).

GPP also enables authorized users to generate outgoing files containing groups of transactions that have successfully completed processing and send them to a CSM, regardless of the defined sending time. For more information, see [Pending Outgoing File](#).

### 2.2.6.7 Posting (Consolidated Debit)

GPP triggers the relevant interface to perform required posting.

For more information, see [Mass Payments Accounting](#)

### 2.2.6.8 Match Response to Payment

GPP matches the response to the file level.

### 2.2.6.9 Response Handling

#### 2.2.6.9.1 DDO Negative Response

Upon receipt of a negative response, the DDO are routed to the Reject queue.

#### 2.2.6.9.2 DDO Positive Response

Upon receipt of a positive response, the DDO remains in the Complete queue.

## 2.2.7 Acknowledgment Reporting

GPP can generate file status reports for FI customers that enable the customers to track file and transaction processing. GPP can generate these reports at different stages of the processing workflow.

It is the same process for Credit Transfer and Direct Debit. For more information, see [Acknowledgment Reporting](#).

## 2.2.8 Compensation Calculation

The GPP Compensation functionality calculates the amount of compensation due on a direct debit refund. In this process GPP uses defined Interest Rates and Interest Types profiles, as determined by the relevant MOP, to calculate the number of days of interest and amount of interest to add to the amount of the original payment.

GPP does following:

- Calculates the number of relevant calendar days.
- Calculates the amount of compensation due on a direct debit refund.

After performing the required calculations, GPP invokes STP Validation rules to determine if the compensation amount meets minimum and maximum amounts defined by the bank.

### 2.2.8.1 Number of Days Calculation

GPP calculates the number of calendar days for each month between the original settlement date and the refund message date. GPP uses these days, for each specific month, to calculate the amount of interest due on a direct debit refunded.

GPP calculates the number of calendar days using one of the following methods, as defined in the relevant Interest Types profile:

- **30 360**: Calculations use a 30-day month and 360-day year.
- **Actual 360**: Calculations use the actual number of days in each month and a 360-day year.
- **Actual 365**: Calculations use the actual number of days in each month and a 365-day year.

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In each method, GPP does not count the refund message day in the calculation.

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### 2.2.8.2 Number of Days Calculation Comparison

Authorized GPP users can define different methods to calculate the number of calendar days to use when calculating the amount of compensation due on a direct debit refund.

### 2.2.8.3 Compensation Calculation

Compensation calculation is performed in conjunction with the following variables:

- **Interest Rate**: The interest rate for each month as defined in the Interest Rates profile (see [Interest Rates Profile](#)). GPP calculates the amount of interest for each month by multiplying the Days in Month to Days in Year Ratio by the Interest Rate for the specific month.
- **Number of Calendar Days**: The number of calendar days for each month between the original settlement date and the refund message date.
- **Number of Days in Year**: The number of days in a year as defined in the Method field of the Interest Types profile (see [Interest Rates Profile](#)). GPP divides the Number of Days by the month to the Number of Days in Year to calculate the Days in Month to Days in Year Ratio.

- **Settlement Amount:** GPP adds the total amount of interest from all months to the Original Settlement amount to calculate the full Compensation Amount.

GPP uses definitions from the relevant Interest Types and Interest Rates profiles to determine the values of the variables. The amount of compensation calculated by GPP depends on the value of each variable.

For example, the following table shows the compensation amounts for each method type for a sample refund message generated on June 30, 2013. The sample message is a 500 euro direct debit with an original settlement date of April 5, 2013.

Method	Calculated Compensation Amount	Calculation
Actual 360 Method	508.45	See <a href="#">Example: Actual 360 Compensation Calculation</a>
Actual 365 Method	508.33	See <a href="#">Example: Actual 365 Compensation Calculation</a>
30 360 Method	508.36	See <a href="#">Example: 30 360 Compensation Calculation</a>

All calculations use the following interest rates:

- April 2013: 0.05%
- May 2013: 0.07%
- June 2013: 0.09%

#### 2.2.8.3.1 Example: Actual 360 Compensation Calculation

The following table shows the Actual 360 calculations for a sample direct debit refund message.

Month	Number of Days	Calculation	Interest Amount
April 2013	26	$((26/360)*0.05)*500$	1.81
May 2013	31	$((31/360)*0.07)*500$	3.01
June 2013	29	$((29/360)*0.09)*500$	3.63
Total	86		8.45
Total Compensation			508.45

#### 2.2.8.3.2 Example: Actual 365 Compensation Calculation

The following table shows the Actual 365 calculations for a sample direct debit refund message.

Month	Number of Days	Calculation	Interest Amount
April 2013	26	$((26/365)*0.05)*500$	1.78
May 2013	31	$((31/365)*0.07)*500$	2.97
June 2013	29	$((29/365)*0.09)*500$	3.58
Total	86		8.33
Total Compensation			508.33

### 2.2.8.3.3 Example: 30 360 Compensation Calculation

The following table shows the 30 360 calculations for a sample direct debit refund message.

Month	Number of Days	Calculation	Interest Amount
April 2013	26	$((26/360)*0.05)*500$	1.81
May 2013	30	$((30/360)*0.07)*500$	2.92
June 2013	29	$((29/360)*0.09)*500$	3.63
Total	85		8.36
Total Compensation			508.36

## 2.2.9 Mandate Management, Validation & Enrichment

### 2.2.9.1 Direct Debit Mandate Management

A mandate is an agreement between a debtor and creditor that authorizes a creditor to collect a payment from a debtor. A mandate also authorizes a debtor's bank to pay a direct debit (collection).

GPP supports the following types of mandates:

- **Manually-Created:** A mandate created by an authorized GPP user. A user can create a mandate via the GPP user interface using information received from a creditor or debtor.
- **Live:** A mandate created or amended by GPP using information from an incoming direct debit message. A manually-created mandate becomes a live mandate upon receipt of a direct debit that contains amendment information, which causes GPP to update the mandate.

The GPP user interface enables authorized users to create and manage mandates. GPP identifies each mandate using the following unique identifiers:

- **Unique Mandate Reference (UMR):** Unique mandate identification code supplied by a creditor. GPP uses this field and the Creditor ID field to identify a mandate.
- **Creditor ID (CID):** Unique creditor identification code supplied by a creditor bank. GPP uses this field and the UMR field to identify a mandate. For more information, see [Creditor ID \(CID\) Validation](#) (Incoming Flow)

GPP enables authorized users to create mandates using Mandate profiles to define the relationship between a creditor and a debtor. This information, such as the UMR and CID, is supplied by the FI. GPP uses these two fields to search for and validate mandates upon receipt of incoming direct debit messages.

Authorized users can define additional mandate validations. These include:

- Maximum debit amounts for a single transaction
- Maximum aggregate amount
- Maximum number of debits for a mandate

Each incoming direct debit message must include the type of direct debit. Upon receipt of a direct debit, the GPP Mandate Validation process checks for an existing mandate and does one of the following as per the type of debit:

- **Initial and One-Off Debits:**
  - If a valid mandate does not exist, GPP automatically creates one with information contained in the incoming debit message and continues message processing. For a Back to Back (B2B) scheme type, a mandate must be defined before a collection arrives.
  - If a valid mandate exists, GPP continues message processing and might update the mandate if the incoming debit message contains amendment information.
- **Recurring and Final Debits:**
  - If a valid mandate does not exist, GPP rejects the incoming debit message.
  - If a valid mandate exists, GPP continues message processing and might update the mandate if the incoming debit message contains amendment information.

### 2.2.9.2 Mandate Validation

The Mandate Validation processing enables GPP to validate that the creditor party of an incoming direct debit has authorization to collect a payment from a debtor party, as part of GPP mass payment direct debit functionality. GPP implements the service using reference data defined in Mandate profiles and Mandate Validation rules.

GPP implements this processing at the following times:

- **Time of Receipt:** Upon receipt of an incoming direct debit message
- **Processing Day:** On the specific processing day of a direct debit

Upon receipt of an incoming direct debit, GPP does the following:

- Verifies that a valid mandate exists between the creditor and debtor. GPP uses the message UMR and CID of the incoming direct debit to search for and match a direct debit to a mandate. GPP can track and handle updates to an incoming UMR and CID as follows:

- If a UMR has changed, GPP searches for a valid mandate using the original UMR. GPP tracks UMR changes in the audit trail.
- If a CID has changed, GPP invokes the CID Validation to determine the relevant CID key. GPP tracks CID changes in the audit trail.

- Evaluates Mandate Validation business rules to check that the incoming direct debit meets the requirements of the mandate. The business rules might implement an Override STP profile to generate error messages.
- Creates a mandate if a valid mandate does not exist and the incoming direct debit contains the required information.
- Updates an existing mandate with information contained in an incoming direct debit if the incoming direct debit contains specific mandate amendment information.

After GPP verifies that a mandate exists between the relevant parties, GPP can then perform the following validations:

- **Time Frame:** Validates that the date and time of the mandate is valid in relation to the current debit payment
- **Debit Amount:** Validates that the transaction amount does not exceed the amount defined in the mandate

### 2.2.9.3 Mandate Enrichment

The Mandate Enrichment process enables GPP to provide mandatory fields in an outgoing direct debit that GPP generates and sends to a CSM.



After receiving a direct debit (such as a pain.008 message) from an initiating creditor party, GPP implements the Mandate Enrichment process if the following are true:

- The direct debit is missing mandatory information.
- GPP has identified a valid mandate for the direct debit.

When GPP in the creditor bank generates an outgoing direct debit (such as a pacs.003 message), GPP identifies that mandatory information is missing. GPP extracts the missing information from the mandate and inserts it into the direct debit, which GPP sends to a CSM.

GPP implements the Mandate Enrichment process only after it identifies a valid mandate for a direct debit. The mandate enriches the outgoing direct debit with the following information:

- **UMR:** Unique mandate identification code supplied by a creditor
- **CID:** Unique creditor identification code supplied by a creditor bank
- **Signing Date:** Date that the debtor customer signed or authorized the creditor to debit the debtor customer's account

## 3 Manual Handling

### 3.1 Manual Repair

GPP mass payment functionality has the ability to process files of transactions with a minimal need for manual intervention, which reduces processing overhead and increases STP rates. In rare cases where a payment cannot be automatically processed, GPP rejects or returns the problematic message and continues processing the remaining messages in the mass payment file.

In specific instances, GPP also enables FIs to route problematic individual payments to a queue for manual handling. Depending on the type of manual repair, GPP performs the required account posting, as described in [Mass Payments Accounting](#).

During the Preprocessing flow, GPP can be configured to route payments with the following conditions to a queue for manual handling:

- Possible duplicate messages
- Invalid credit or debit party
- Invalid credit or debit account
- MOP selection failure
- Mandate validation failure
- Value date determination failure

Authorized GPP users can manually repair payments in one of the following ways:

- **Cancel:** A user can cancel a payment in only very specific instances. GPP invokes business rules on each such payment that can require a second or third approval before routing the payment to a cancellation workflow for processing.
- **Submit:** A user manually repairs a payment as required. GPP invokes business rules on each such payment that can require a second or third approval before routing the payment to an individual payment workflow for processing.

### 3.2 Manual Repair Accounting

The type of accounting configured for GPP determines how it handles repaired payments. GPP uses one of the following accounting types:

- **Gross:** Using this accounting method, GPP includes all relevant payments in the (S) message and generates a reverse posting, individual (I) message for each transaction that is manually rejected or canceled.
- **Net:** Using this accounting method, GPP includes in the S message only those transactions that complete preprocessing. GPP generates an I message for each transaction that is manually rejected, or canceled.

### 3.3 Manual Cancellation

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Note: In GPP dual control is configured. That means that, an authorized user must approve the cancellation action before GPP initiates the cancellation process.

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#### 3.3.1 Incoming File Cancellation

The File Summary Detail - Incoming page in GPP enables authorized users to view and initiate actions on an incoming mass payment file. One of the actions can be to cancel an incoming file.

To cancel a file, a user accesses the relevant incoming file via the File Summary Detail - Incoming page and selects Canceled from the Send File To dropdown list. Upon clicking Save, GPP initiates the file cancellation process.

A user can cancel an incoming file only if all the following conditions apply:

- The user has write permission for the File Summary Detail page.
- The file is an incoming file received directly from an originator. A file received from an ACH cannot be cancelled.
- The file does not contain reject, return, or Notification of Changes (NOC) messages.
- The file is not pending a previous cancellation action.
- The file has one of the following statuses:
  - Completed
  - Duplicate
  - Hold
  - NotValidCtrlSum
  - NotValidInitgPty
  - NotValidNbOfTxS
  - StopPreprocessing

Upon completion of the cancellation process, GPP does the following:

- Generates a relevant Audit Trail entry for the file
- Generates a relevant Audit Trail entry for every batch in the file
- Generates a relevant Audit Trail entry for every transaction in the file
- Updates the file status to Cancelled
- Updates the status of every batch of transactions in the file to BatchCanceled
- Updates the status of every transaction in the file to Cancelled or Reversed, depending on the MOP and whether the payment is released to an ACH
- Generates reverse posting for every transaction, as required

For more information about the File Summary Detail page, see [File Summary](#).

### 3.3.2 Incoming Batch Cancellation

The Batch Summary Detail page in the GPP GUI enables authorized users to view and initiate actions on a specific batch of transactions in an incoming mass payment file. One of the actions is to cancel a specific batch of transactions.

To cancel a batch, a user accesses the relevant batch of transactions via the Batch Summary Detail page and selects BatchCanceled from the Send Batch To dropdown list. Upon clicking Save, GPP initiates the batch cancellation process.

A user can cancel an incoming batch of transactions only if all the following conditions are true:

- The user has write permission for the Batch Summary Detail page.
- The batch is in an incoming file received directly from an originator. A batch in a file received from an ACH cannot be cancelled.
- The batch does not contain reject, return, or Notification of Changes (NOC) messages.

- Neither the batch nor the file that contains the batch is pending a previous cancellation action.
- The file that contains the batch is not pending an approval of cancellation action.
- The batch has one of the following statuses:
  - BatchCompleted
  - BatchHold
  - Duplicate
  - Skip

Upon completion of the cancellation process, GPP does the following:

- Generates a relevant Audit Trail entry for the batch
- Generates a relevant Audit Trail entry for every transaction in the batch
- Updates the status of the batch to BatchCanceled
- Updates the status of every transaction in the batch to Cancelled or Reversed, depending on the MOP and whether the payment is released to an ACH
- Generates reverse posting for every transaction in the batch, as required

For more information about the Batch Summary Detail page, see [Batch Summary](#).

### 3.3.3 Incoming Transaction Cancellation and Reversal

The Transaction Data page in the GPP GUI enables authorized users to view and initiate actions on a specific transaction in an incoming file. One of the actions is to cancel or reverse a transaction.

A user can access the relevant transaction via the Transaction Data page to do one of the following:

- **Cancel a Transaction:** A user can initiate a cancellation on a transaction before it is released to an ACH.
- **Reverse a Transaction:** A user can initiate a reversal on a transaction after it is released to an ACH or if the status is Completed.

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Note: If a transaction is designated with a BOOK MOP, a user can cancel the transaction before payment posting or reverse the transaction after payment posting.

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A user can cancel or reverse a transaction only if all the following conditions are true:

- The transaction does not have one of the following statuses:
  - Approve\_Cancel
  - Cancelled
  - Released
  - Returned
  - Reversed
  - Rejected
  - Verify
- The transaction is in an incoming file received directly from an originator. A transaction in a file received from an ACH cannot be cancelled or reversed.
- Neither the batch that contains the transaction nor the file that contains the transaction is pending a previous cancellation action.

- Neither the batch that contains the transaction nor the file that contains the transaction is pending a previous approval of cancellation action.
- The transaction is a monetary transaction. For example, an NOC cannot be canceled or reversed.

Upon completion of the cancellation or reversal process, GPP does the following:

- Generates a relevant Audit Trail entry for the transaction
- Updates the status of the original payment to Cancelled or Reversed
- Generates reverse posting for the transaction, as required
- Generates an outgoing payment reversal message and links it to the original payment, as required

### 3.4 GPP Mass Payments User Interface

The GPP User Interface mentioned in this section enables access to mass payment functionality.

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Note: For a detailed description of all the fields, see GPP Online Help.

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#### 3.4.1 File Summary

##### 3.4.1.1 File Summary Page: Incoming Files

The Incoming File Summary page provides information about incoming files. It includes the following information and access areas:

- **General File Information:** Displays general information about the selected file, for example, internal file ID, file name, location, status (Completed, Duplicate), and file direction.
- **Incoming File Information:** Displays additional information about the selected incoming file, such as file reference, initiating party, file creation date, and file priority. It also includes indicator that enables an authorized user to send the file for continued processing. The available options for continued processing are dependent on the current status of the file. For example, a file that currently has a Hold status can be canceled by selecting Canceled from the available options in this field.
- **Action Buttons:** Provides access to specific types of information about the selected file.

##### 3.4.1.2 File Summary Page: Outgoing Files

The Outgoing File Summary page provides information about individual outgoing mass payment files. It includes the following information and access areas:

- **General File Information:** Displays general information about the selected mass payment file for example, Internal File ID, File Name, location, status (for example, ReadyToBeSent) and file direction.
- **Outgoing File Information:** Displays additional information about the selected outgoing mass payment file, such as file type, number of payments, MOP, associated bulking profile, and sending/receiving institutions. It also indicates whether a validation file is expected for the outgoing file.
- **Action Buttons:** Provides access to specific types of information about the selected mass payment file.

### 3.4.1.3 File Summary Action Buttons

The following table provides details of the action buttons in the Incoming and Outgoing File Summary pages.

Button Name	Incoming/ Outgoing	Description
View Sub Batch	Incoming	Displays information about an incoming file grouped by UGID, in the Sub Batch page. It includes information related to the Sub Batch such as Unique grouping ID, MID of the S message, Debit Account/Total Debit Amount of the S message, Debit/Credit Currency of the S message, Total Message Count, MID of the individual message included in the Sub Batch.
View Batch Summary	Incoming	Displays information about batches in the selected file.
Outward Recall	Incoming	Enables access to recall mass payments files matched to the selected file.
Message Errors	Incoming	Displays message errors generated for the selected file.
Audit Trails	Incoming	Displays the audit trail of the selected file.
Rule Logs	Incoming	Displays the business rules invoked on the selected file.
View Compliance Files	Incoming	Displays information about each request sent to the compliance interface for payments in the selected file.
View Out Buffer	Outgoing	Displays information about the chunks of messages in the selected file.
Bulking Profile	Outgoing	Enables access to the Bulking profile attached to the outgoing file.

### 3.4.2 Batch Summary

The GPP Batch Summary page enables authorized users to view information about all batches contained in a specific incoming mass payment file. The information is presented in the form of a grid.

When clicking on a record in the grid the Batch Summary Detail page is opened, which enables authorized users to view information about a specific batch of payments from an incoming mass payment file. The available information is internal file ID, batch ID, number of transactions in the batch, number of rejects in the batch, and batch status.

The following table provides details of the action buttons in the Incoming Batch Summary pages.

Button Name	Description
Message Errors	Displays message errors generated for the selected batch
Audit Trails	Displays the audit trail of the selected batch
Rule Logs	Displays the business rules invoked on the selected batch

### 3.4.3 Pending Outgoing Files Summary

The Pending Outgoing Files Summary page displays a record for each group of transactions that have successfully completed processing and are available for inclusion in an outgoing file, which GPP sends to a CSM in a defined structure and at a defined sending time.

GPP groups each record by MOP, Bulking profile, and sending time. For more information, see [Bulking Profile](#).

### 3.4.4 Pending Outgoing File

The Pending Outgoing File page displays information about an individual group of transactions that have successfully completed processing and are available for inclusion in an outgoing file, which GPP sends to a CSM in a defined structure and at a defined sending time. For more information, see [Bulking Profile](#).

GPP groups each record by MOP, Bulking profile, and sending time.

The File Action field generates outgoing files containing groups of transactions and sends them to a CSM, regardless of the defined sending time.

An authorized user can select one of the following actions:

- **Send Immediately Only This Window:** GPP generates outgoing files for all records displayed in the Pending Outgoing Files Summary page that have a sending time identical to the sending time of the selected record, and then sends each file to the relevant CSM.
- **Send Immediately All Up To This Window:** GPP generates outgoing files for all records displayed in the Pending Outgoing Files Summary page that have a sending time that is identical to or prior to the sending time of the selected record, and then sends each file to the relevant CSM.
- **Send All:** GPP generates outgoing files for all records displayed in the Pending Outgoing Files Summary page, and then sends each file to the relevant CSM.

The Pending Outgoing Files Summary page enables access to this page.

### 3.4.5 Transaction Data

The Transaction Data page provides all detailed data that is associated with a transaction.

## 4 Business Setup

### 4.1 Profiles

These are the details of the required setup in GPP profiles for Mass Payments.

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Note: For a detailed description of all the fields in the profiles, see GPP Online Help.

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#### 4.1.1 Accounts Profile

GPP Accounts profile holds information about accounts maintained in GPP. To implement mass payment functionality, the Accounts profile includes Account Scheme Usage field which allows an authorized user to designate an account as one of the following:

- **Both:** The account is used for both credit transfers and direct debits
- **Credit Transfer:** The account is used for credit transfers only
- **Direct Debit:** The account is used for direct debits only

#### 4.1.2 Batch Control Profile

The GPP Batch Control profile defines processing preferences for each batch in an incoming mass payment file. This enables a Financial Institution to control the processing workflow for individual transactions contained in a specific batch.

These processing preferences can be defined:

- Set a dedicated duplicate check profile for a batch
- Select an alternative MOP for when the ACH is not applicable
- Control whether or not the Value date can be rolled forward when it is a Weekend/Holiday
- Control whether or not an individual transaction within a batch can be repaired

Authorized GPP users can view information about batches in incoming mass payment files. For more information, see [Batch Summary](#).

#### 4.1.3 Bulking Profile

The Bulking profile defines bulking attributes for outgoing mass payment files. A Bulking profile can be associated with a specific MOP or with a specific receiving party.

GPP users can associate a Bulking profile with a MOP using the Bulking Profile field in the Method of Payment profile. GPP uses this field to determine the appropriate Bulking profile as follows:

- If the field contains a value, GPP invokes Parties Bulking Profile Selection rules during Preprocessing to determine if a Bulking profile is defined to override the default Bulking profile that is defined in the Method of Payment profile. The Parties Bulking Profile Selection rules enable a Financial Institution to define multiple Bulking profiles for a single MOP type.
- If the field is blank, GPP does not access a Bulking profile for the specific MOP. For example, BOOK MOP transactions, which are not transmitted to an external ACH or bank, do not require a Bulking profile.

The Bulking profile defines:

- Line delimiter used by GPP when generating an outgoing file
- Destination folder



- Minimum number of transactions that GPP includes in a single outgoing file for a specific Bulking profile
- Maximum number of transactions that GPP includes in a single bulk for a specific Bulking profile
- Maximum number of bulks of transactions that GPP includes in a single outgoing file
- Maximum number of files in a single day that GPP generates for a specific Bulking profile
- Maximum transaction amount of all transactions in a single bulk

#### 4.1.4 Direct Debits

GPP uses the profiles mentioned in this section to enable direct debit functionality.

##### 4.1.4.1 Creditor ID Structure Profile

The Creditor ID Structure profile enables authorized GPP users to define the structure of the CID. This structure is unique to a specific direct debit scheme and can include discretionary data, which is defined in the profile.

The profile, which is used by the CID Validation, defines the specific MOP to which the CID is related, along with the maximum length of the CID and the beginning and ending positions of discretionary data contained in the CID. Discretionary data is optional data that might be included in the CID. The CID Validation removes this data to derive the CID key, which GPP uses during search and identification processes.

##### 4.1.4.2 Creditor ID Profile

The Creditor ID profile defines the relationship between a party and a CID.

##### 4.1.4.3 Creditor ID Account Profile

The Creditor ID Account profile defines the relationship between a party's direct debit accounts and a CID.

##### 4.1.4.4 Mandates Profile

GPP Mandate profiles are used to manually create mandates, which GPP uses to check the validity of direct debits.

The Mandate profile page includes this information:

- **Unique mandate reference (UMR):** Unique mandate identification code. GP uses this field and the Creditor ID field to identify a mandate. When manually creating a mandate, an authorized GPP user can type a value for this field. This field cannot be updated for an existing mandate.
- **Creditor ID:** Unique creditor identification code. GPP uses this field and the UMR field to identify a mandate. When manually creating a mandate, an authorized GPP user can type a value for this field, which must pass validation by the Creditor ID Validation service. This field cannot be updated for an existing mandate.

In addition, the Mandate Profile has the following tabs, each of which contains relevant fields used to define a Mandate profile:

- **Mandate Profile - Details Tab:** Provides information such as Mandate Signing Date, Scheme/Scheme type, Recurrence type (One-Off/Recurring mandate), Mandate Cancellation information, and Collection Rejection instructions.
- **Mandate Profile - Debtor/Creditor Tab:** Provides detailed information about the Debtor/Creditor. It includes Debtor/Creditor ID, Name, Account, Address, and BIC.
- **Mandate Profile - History Tab:** Provides details of the Mandate history, such as

- Maximum single collection amount allowed for a mandate
- Total amount of all collections allowed for a mandate
- Maximum number of collections
- Last amendment date triggered by incoming collection
- Last activity date of mandate which can be either collection on mandate, or mandate deletion/update
- MID of the last collection of the mandate

For more information about mandates, see [Mandate Management, Validation & Enrichment](#)

#### 4.1.4.5 Parameters Profile

The Parameters profile enables authorized GPP users to define the following:

- Various parameters using a combination of scheme, party, and CID.
- A level of validation that GPP performs on a CID, which can be one of the following:
  - No Validation: GPP does not validate that the CID in an incoming direct debit is valid for the defined party.
  - Validate creditor ID: GPP validates that the CID in an incoming direct debit is valid for the defined party.
  - Validate creditor ID Account: GPP validates that the CID and the creditor ID account in an incoming direct debit are valid for the defined party.
- The type of Party Limit handling.

For more information about CIDs, see [Creditor ID \(CID\) Validation](#) (Incoming Flow)

#### 4.1.5 Override STP Profiles

GPP uses Override STP profiles to prevent Straight-Through Processing (STP) of specific payments that meet defined business rule conditions (see [Mandate Validation Rules](#)).

To implement mass payment direct debit functionality, the Override STP profile includes the following fields:

- **Type:** The type of STP Override profile, which is Mandate Validation. This is used to prevent STP processing of a payment that does not have a valid mandate.
- **Error code:** The relevant error code for the defined Type field.

For statuses of direct debit Override STP profiles, see [Appendix B: STP Validation Error Statuses](#).

#### 4.1.6 Interest Rates Profile

GPP Interest Rates profiles enable authorized GPP users to define monthly interest rates used by the Compensation Calculation service to calculate the amount of compensation due on a direct debit payment refund. For more information, see [Compensation Calculation](#).

The Interest Rates profile has the following fields:

- **Interest type:** Name of the specific Interest Types profile associated with the Interest Rates profile.
- **Rate:** Monthly interest rate, defined as a percent.
- **Year:** Specific year of the defined interest rate.
- **Month:** Specific month of the defined interest rate.

### 4.1.7 Interest Types Profile

GPP Interest Types profiles are used to associate a MOP with defined interest rates, which the Compensation Calculation uses to calculate the amount of compensation due on a direct debit payment refund. For more information, see [Compensation Calculation](#).

The Interest Types profile includes this information:

- **Name:** Unique name used by GPP to identify each Interest Types profile.
- **Description:** Description of the profile.
- **Method:** Method used to calculate the number of days. One of the following method:
  - 30 360: Calculations use a 30-day month and 360-day year.
  - Actual 360: Calculations use the actual number of days in each month and a 360-day year.
  - Actual 365: Calculations use the actual number of days in each month and a 365-day year.
- **Decimal digits:** Number of digits after the decimal point in the calculated compensation amount.

### 4.1.8 Method of Payment Profile

GPP Method of Payment profiles enable authorized GPP users to control how GPP interacts with each MOP defined in GPP.

The following fields in the Method of Payment profile, Processing tab, are relevant to mass payment processing:

- **Bulking Profile:** Define a Bulking profile for a MOP.
- **Interest Type:** Associate an Interest Types profile with each MOP.

### 4.1.9 Parties Profile

GPP uses a Parties profile at the following stages of mass payment processing:

- **Initial File Validation:** GPP checks that the initiating party (the party who sent the mass payment file) is a FI's customer.
- **Acknowledgment Reporting:** GPP checks the file status reporting preferences for each of the FI's customers and generates a Customer Acknowledgment as defined in the Parties profile. GPP uses the fields in the Acknowledgment section on the Preferences page in the Parties profile to determine the types of Customer Acknowledgments to send to each customer. GPP also enables a FI to define the version of the generated acknowledgment messages. For more information, see [Acknowledgment Reporting](#).
- **Acknowledgment Preference:** Defines the type of acknowledgment messages (ACK and NAK) that GPP automatically generates and sends to each customer. Possible values:
  - None: GPP does not generate acknowledgment messages for incoming payments received from the specific customer. This is the default value for each customer.
  - Both ACK/NAK: GPP generates and sends both ACK and NAK messages for each incoming payment received from the specific customer. GPP generates each ACK and NAK in the defined customer-specific version.
  - NAK Only: GPP generates and sends only NAK messages for incoming payments received from the customer. GPP generates each NAK in the defined customer-specific version.

GPP generates and sends an acknowledgment message only if an Advising Type Selection rule and an Interface Selection rule are evaluated and applied to a payment.

- **Version:** Defines the XSD version of the generated ACK and NAK messages. If a version is not defined, GPP generates each ACK and NAK in the current version.

## 4.2 Rules

Each GPP business rule has a set of conditions and a related action. The conditions refer to attributes of messages or other associated reference data in GPP. GPP performs the defined action if a payment meets the defined rule conditions.

### 4.2.1 Advising Type Selection Rules

This rule is used to generate file status reports for FI customers at different stages of the processing to enable the customers to track file and transaction processing. For more information, see [Acknowledgment Reporting](#).

### 4.2.2 Batch Validation

For each incoming mass payment file that GPP determines as valid (see Sub-Batch Filter Rules), GPP invokes Batch Validation rules. GPP invokes these rules on each batch in a file. If a file meets the defined conditions of a rule, GPP sets the batch with a status as defined in the rule's action and routes it to a specific queue for manual handling.

GPP invokes Batch Validation rules that do the following:

- Verifies that the total calculated amount of all transactions in a batch is equal to the amount defined in the batch header
- Verifies that the actual number of transactions in a batch is equal to the number defined in the batch header
- Verifies that the number of rejected transactions in a batch does not exceed a defined percentage of the total number of transactions in the batch

### 4.2.3 Bulking Sending Time Rules

This rule determines the time to generate and send outgoing files. Each sending time defined in the Bulking profile must have a corresponding Bulking Sending Time rule.

This rule also enables authorized GPP users to define a last sending time for a specific message type. For more information about Bulking profiles and sending times, see [Bulking Profile](#).

GPP also enables authorized users to generate outgoing files containing groups of transactions that have successfully completed processing and send them to a CSM, regardless of the defined sending time.

### 4.2.4 File Department Rule

A rule type 'department' is invoked to assign department at a file level. Similar to department selection at individual transaction level, the action to this rule is a department to be assigned to a file.

If no rule is found, the department is defaulted from the system parameter DEF\_DEPT defined for local office. Department Selection rules are also invoked for individual transactions in the file. There is no direct relation between department at file level and departments at individual transaction level.

### 4.2.5 File Priority Rules

File Priority rules enable a bank to prioritize incoming mass payment files to determine the order in which GPP processes each file. For example, a bank can define a rule that assigns a high priority to

files received from a specific bank customer. When multiple files are waiting for processing, GPP first processes files received from this customer.

Each File Priority rule is attached to a specific office.

These priority codes can be assigned by File Priority rules.

Code	Description
100	Lowest
200	Low
300	Low medium
400	Medium
500	High medium
600	High
700	Extra high
800	Special
900	Extra special

#### 4.2.6 Incoming File Filter Rules

GPP Incoming File Filter rules enable a bank to prevent STP processing of an incoming mass payment file. If GPP determines that an incoming file meets the conditions defined in an Incoming File Filter rule, GPP stops processing the file and performs an action defined in the rule. A rule can have one of the following actions:

- **Cancel:** GPP cancels the incoming file.
- **Hold:** GPP routes the incoming file to a queue for manual handling.
- **Reject:** GPP rejects the incoming file.

For example, a bank can define a rule that holds all files received from a specific bank customer and routes them to a queue for manual handling.

In addition to an action definition, each Incoming File Filter rule has an optional usage definition that enables a bank to define an error code for each incoming file that meets the conditions of the rule. GPP generates a file-level NAK to the initiating party, which contains error message details as specific in the business rule.

GPP invokes Incoming File Filter rules after checking whether an incoming file is a duplicate. Each Incoming File Filter rule is attached to an initiating party.

#### 4.2.7 Parties Bulking Profile Selections Rules

Parties Bulking Profile Selections rules enable a FI to define multiple Bulking profiles for a single MOP.

GPP invokes Parties Bulking Profile Selections rules during the Preprocessing flow to determine whether a Bulking profile is defined to override a default Bulking profile. The default profile is defined in the Method of Payment profile.

---

**Note:** Parties Bulking Profile Selections rules are defined to meet specific customer requirements and are not included in the basic mass payment setup.

---

For more information, see [Bulking Profile](#).

#### 4.2.8 Sub-Batch Filter Rules

GPP invokes Sub-Batch Filter rules on incoming mass payment files to prevent STP processing. If a file meets the defined conditions of a rule, GPP sets the file with a status as defined in the rule's action and can do one of the following:

- Route the file to a specific queue for manual handling
- Reject the file

GPP invokes Sub-Batch Filter rules that do the following:

- Verifies that the total calculated amount of all transactions in an incoming mass payment file is equal to the amount defined in the file header
- Verifies that the actual number of transactions in an incoming mass payment file is equal to the number defined in the file header
- Verifies that the number of rejected transactions in an incoming mass payment file does not exceed a defined percentage of the total number of transactions in the file

#### 4.2.9 Fee Type Selection Rule/Fee Formula Selection Rule

GPP invokes Fee Type Selection rules and Fee Formula rules to enable a FI to set fees on a specific incoming payment or group of payments (S message). GPP enables authorized GPP users to set a specific fee type or fee formula for the S message using the batch message type attribute or the batch booking indicator.

#### 4.2.10 Mandate Validation Rules

GPP invokes Mandate Validation rules to validate mandate-related attributes in mass payment direct debit messages.

If GPP determines that a direct debit message meets the defined conditions of a Mandate Validation rule, GPP does not process the message via STP, but instead rejects the payment message, as defined in the Override STP profile for the specific Mandate Validation rule. The Override STP profile must have a Mandate Validation type.

After the Mandate Validation selects the relevant mandate for a direct debit message, GPP begins evaluating each Mandate Validation rule by the order of attachment. If a message's attributes match the defined rule conditions, GPP attaches the rule to the message. After a successful match, GPP does the following:

- Routes the direct debit message to the queue as defined in the relevant Override STP profile
- Stops evaluating additional Mandate Validation rules

Authorized GPP users can attach Mandate Validation rules to the local office.

## Appendix A: Mass Payment File Header

GPP requires a specific XML file header to identify an incoming file as a mass payment file. The following example shows the structure of an incoming mass payment file header for a pacs.008 payment.

```
<FTInbound:FTInBlkCredTrf xsi:schemaLocation="urn:FTInbound:xsd:$FTInBlkCredTrf
FTInBlkCredTrf.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:FTInbound="urn:FTInbound:xsd:$FTInBlkCredTrf">
  <FTInbound:SndgInst></FTInbound:SndgInst>
  <FTInbound:SndgMne>L</FTInbound:SndgMne>
  <FTInbound:SndgNm></FTInbound:SndgNm>
  <FTInbound:RcvgInst></FTInbound:RcvgInst>
  <FTInbound:RcvgMne></FTInbound:RcvgMne>
  <FTInbound:RcvgNm></FTInbound:RcvgNm>
  <FTInbound:InitPtyId></FTInbound:InitPtyId>
  <FTInbound:FileRef></FTInbound:FileRef>
  <FTInbound:FSrc></FTInbound:FSrc>
  <FTInbound:FType></FTInbound:FType>
  <FTInbound:FDtTm></FTInbound:FDtTm>
  <FTInbound:PDtTm></FTInbound:PDtTm>
  <FTInbound:NumCTBlk></FTInbound:NumCTBlk>
  <FTInbound:NumDDBlk></FTInbound:NumDDBlk>
  <FTInbound:NumREJBlk></FTInbound:NumREJBlk>
  <FTInbound:NumAPIBlk></FTInbound:NumAPIBlk>
  <FTInbound:NumRFRBlk></FTInbound:NumRFRBlk>
  <FTInbound:FundInd></FTInbound FundInd>
  <FTInbound:SndgTm></FTInbound SndgTm>
  <FTInbound:TtlDbtAmt></FTInbound TtlDbtAmt>
  <FTInbound:TtlCdtAmt></FTInbound TtlCdtAmt>
  <FTInbound:NumCTTrx></FTInbound NumCTTrx>
  <FTInbound:NumDDTrx></FTInbound NumDDTrx>
</FTInbound:FIToFICstmrCdtTrf xmlns="urn:iso:std:iso:20022:tech:xsd:pacs.008.001.02">
```

The following table details the elements in a GPP mass payment file header.

XML Element	Field Name	Mandatory	Description
SndgInst	Sender Identifier	Yes	Main sender NCC code (without a branch code)
SndgMne	Sender Mnemonic	Yes	Sender mnemonic
SndgNm	Sender Name	No	Sender name
RcvgInst	Receiver Identifier	Yes	NCC code
RcvgMne	Receiver Mnemonic	Yes	Mnemonic
RcvgNm	Receiver Name	No	Receiver name
InitPtyId	User Identifier	For PAIN messages only	User identifier
FileRef	File Reference	Yes	Unique file identifier
FSrc	File Source	Yes	Source system that sent the file
FType	File Type	Yes	File type
FDtTm	File Date and Time	Yes	File date and time
PDtTm	Processing Date	No	Processing date
NumCTBlk	Number of Credit Instructions Bulks	Yes	Accumulated number of pacs.008 or pain.001 bulks of in the file

<b>XML Element</b>	<b>Field Name</b>	<b>Mandatory</b>	<b>Description</b>
NumDDBIk	Number of Debit Instructions Bulks	Yes	Accumulated number of pacs.003 or pain.008 bulks in the file
NumREJBik	Number of pacs.002 Messages	Yes	Accumulated number of pacs.002 bulks in the file
NumAPIBik	Number of camt.056 Payment Cancellation Request bulks	Yes	Accumulated number of camt.056 bulks in the file
NumRFRBik	Number of pacs.004 Messages	Yes	Accumulated number of pacs.004 bulks in the file
NumRFSBik	Number of pacs.007 Reversal Bulks	Yes	Accumulated number of pacs.007 reversal bulks in the file
FundInd	Funding Indicator	Yes	Indicator that the file contains funding messages, possible values: 1=Funding, 0=Non-Funding
SndgTm	Sending Time	No	Empty for incoming files
TtlDbtAmt	Total Debit Amount	Yes	Total amount of all debit transactions in the file
TtlCdtAmt	Total Credit Amount	Yes	Total amount of all credit transactions in the file
NumCTTrx	Total Credit Transaction Count	Yes	Total number of all credit transactions in the file
NumDDTrx	Total Debit Transaction Count	Yes	Total number of all debit transactions in the file

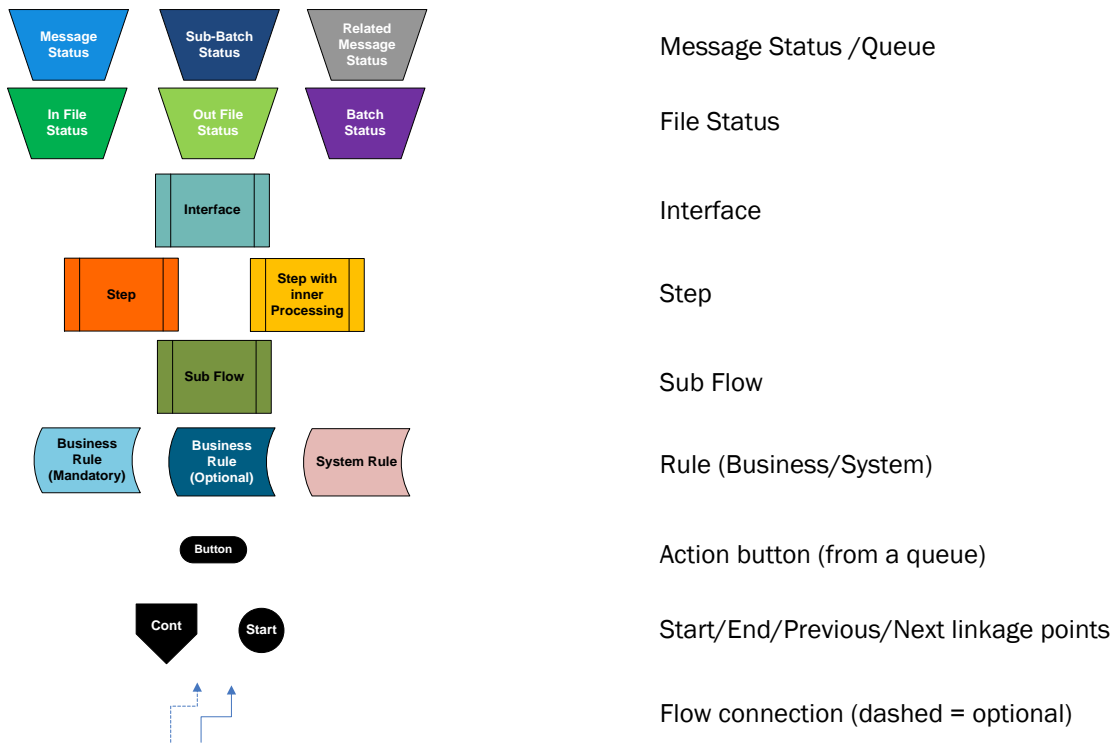


## Appendix B: STP Validation Error Statuses

The table lists the definitions for direct debit Override STP profiles.

Profile Name	Error Code	Status
Mandate Not Found for Subsequent B2B Direct Debit	99010	Reject
Mandate Not Found for Subsequent Core Direct Debit	99010	Reject
Mandate Exists for First Time Direct Debit	99011	Invalid Mandate
Live Mandate Does Not Exist	99012	Invalid Mandate
Canceled Mandate	99013	Invalid Mandate
Mandate Scheme Does Not Match Direct Debit Scheme	99014	Invalid Mandate
Invalid Recurrence Type for B2B Mandate	99015	Invalid Mandate
Invalid Debtor Agent BIC	99017	Invalid Mandate
Invalid Debtor Agent Account	99016	Invalid Mandate
Invalid Sequence Type	99018	Invalid Mandate
Mandate Does Not Exist on Processing Day	99019	Reject
Live Mandate Does Not Exist on Processing Day	99019	Reject
Reject Collection Specified	99020	Reject
Maximum Amount Exceeded	99021	Invalid Mandate
Maximum Aggregate Amount Exceeded	99022	Invalid Mandate
Maximum Number of Collections Exceeded	99023	Invalid Mandate

## Appendix C: Flow Legend



## Appendix D: Glossary

This table describes the terms used in this document.

Term	Description
GPP	Global PAYplus
MP	Mass Payments
FI	Financial Institutions
ACH	Automated Clearing House A system that receives and sends files of transactions from and to participating parties, nets the amounts, and initiates settlement between banks.
CSM	Clearing and Settlement Mechanism
ACTC	File Acceptance. A file reason code indicating an accepted technical validation, which means successful authentication, both syntactically and semantically.
BSA	Batch Suspense Account. A posting account used to accumulate transactions for consolidated posting.
CID	Creditor ID. Unique creditor identification code supplied by a creditor bank. GPP uses the CID and the UMR to identify a mandate.
DFI	Depository Financial Institution A bank or other financial institution.
Direct Deposit	A credit transfer in a NACHA-based system.
Direct Payment	A direct debit in a NACHA-based system.
Gross Accounting	Accounting method that performs postings for all transactions, regardless of whether a transaction was processed, rejected, or canceled. Rejected and canceled transactions are also posted separately as offsets to the account, either in bulk (lump sum) or individually as defined in the party profile.
MOP	Method of Payment. The means via which a payment is executed, such as BOOK or SWIFT
Net Accounting	Accounting method that performs postings for processed transactions only. Posting is not performed for rejected or canceled transactions.
PART	Partial File Rejection. A file reason code indicating that one or more payments are rejected.
PDO	Payment Data Object. Data object that holds all payment data, including: <ul style="list-style-type: none"> <li>• XML message date (original and enriched)</li> <li>• Relational data</li> <li>• Reference data</li> <li>• Rates, fees, errors, and so on</li> </ul>
R Message	GPP supports recall, return, and reject messages for both the originating bank and the receiving bank.
RJCT	File Rejection. A file reason code indicating a rejected settlement, rejected payment initiation, or rejected individual transaction.
RTGS	Real-Time Gross Settlement. A settlement system that transfers funds in real-time, processes each transaction upon receipt, and settles each transaction individually.
SEPA	Single Euro Payments Area. A European financial infrastructure that creates a zone in which Euro payments (or any other agreed upon currency) are considered domestic.

<b>Term</b>	<b>Description</b>
STEP2	The Pan-European Automated Clearing House (PE-ACH), a platform that process bulk payments in euro.
STP	Straight-Through Processing. The concept that enables GPP to process transactions to completion without the need for manual intervention. STP enables shortened processing cycles, reduced settlement risk, and lower operating costs.
SWIFT	A member-owned cooperative that provides the communications platform, products, and services to connect over 8,600 banking organizations, securities institutions, and corporate customers in more than 208 countries.
TPS	Transactions Per Second. The number of transactions GPP is able to process per second.
UMR	Unique Mandate Reference. Unique mandate identification code supplied by a creditor. GPP uses the UMR and the CID to identify a mandate.
CTO	Credit Transfer Outgoing
DDO	Direct Debit Outgoing