Functional Specification for Payment Request Automation Enhancement

Version 2.0

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Document Control

Revision History

Version	Revision Date	Author	Change Summary	Sections Changed
V1	1-June-2025	Kelvin	Creation	All
V2	5-June-2025	Kelvin	Revision	All
V3	6-June-2025	Kelvin	Remove Finance Approval related content and some typo fix	5

Reviewed and Approved By

Name	Responsibility	Date	Version

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A. Introduction

1. Purpose

Develop a series of programs to support the Payment Request Automation.

2. Audience

- Consultants
- Department Managers
- Project Team
- Developers

3. Major Scope of Work

The major working items for this enhancement are as follows:

- Key PO information report (JDE UBE)
- Payment Request Application (JDE APPL)
- Generate Invoice Notification List (JDE UBE)
- Invoice Notification (FormScape)
- Handle Incoming Invoice Email (Power Automate Flow with AI Builder)
- Generate Invoice Data File (Power Automate)
- Import Invoice Data to JDE (JDE TC)
- Review Submitted Invoices Information (JDE APPL)
- Voucher Match Processor (JDE UBE)

B. Details

4. Key PO Information UBE

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4.1.1 Show the Key PO Information to assist the user for Payment Request creation.

4.2. Data Selection

4.2.1 Last Status >= “280”

4.2.2 Next Status <=”400”

4.2.3 Order Type = “OS”

4.2.4 Order Company = blank

4.2.5 Order Number = blank

4.3. Data Sequencing

4.3.1 Sub-Con Address Number

4.3.2 Order Number

4.3.3 Order Line Number

4.4. Field to Display

1. Sub-Con Address Number 2. Sub-Con Name 3. Order Company 4. Order Type 5. Order Number 6. Order Line Number 7. Request Date 8. 3rd Item Number 9. Item Description 1 & 2	10. Open Quantity 11. Open Amount 12. Account Code (BU, Object Account, Subsidiary) 13. BU Description 14. Account Description 15. Sub-ledger, Sub-ledger Type

5. Payment Request Application

5.1. Purpose

5.1.1 Provide different functions to support the Payment Request Maintenance. Major functions include creation, review and approval processing.

5.2. Processing Option

5.2.1 Default Company Code

5.3. Payment Request Inquiry Form (Form 1)

5.3.1 Allow searching for existing Payment Requests and shows its detail lines.

5.3.2 Show below search fields for filtering.

1. Order Number	6. Company
2. Order Type	7. Job Number
3. Order Company	8. Job's PM
4. Sub-Con Address Number	9. Job's Supervisor
5. Creator	10. Job's Engineer

5.3.3 Display the Payment Request Details in Payment Request line level with the following fields in the data grid. JDE is allowed to export the grid data to excel format,

1. Company	15. Order Company
2. Batch Period	16. Order Type
3. Payment Request Batch Number	17. Order Number
4. Payment Request ID	18. Order Line ID
5. Payment Request Status	19. Payment Request Line ID
6. Create By	20. Payment Request Line Status
7. Create Date	21. Certified Work Done Amount
8. Sub-Con Address Number	22. Retention Amount
9. Sub-Con Name	23. Contra Charge Amount
10. Division	24. EC Amount
11. Job Number	25. EC%
12. Job's PM Number	26. Net Payment Amount (Notify sub-con for this amount)
13. Job's Supervisor Number	
14. Job's Engineer Number	

27. Next Approver 28. BU Approve Route Code 29. BU Final Approved 30. D1/D2 Hold Code 31. D1/D2 Hold Approved	32. Sub-Con Notification Date 33. Invoice Submission Key 34. Invoice Date 35. Invoice Number 36. Invoice Amount 37. Voucher Match Method (Auto/ Manual) 38. Voucher Match Date (for auto match only) 39. Voucher Matched Amount (for auto match only) 40. Voucher Match Result (Full/ Partial/ Nil, for auto match only)

5.3.4 Provide an “Add” function to direct users to Select PO Line for Payment Request Creation.

5.3.5 Provide a “Payment Request Details” function to direct users to Payment Request Details Form for reviewing the Payment Request Details.

5.3.6 Provide a “Cancel” function to cancel an existing Payment Request. The canceled Payment Request will be updated to status of “Cancelled”.

5.3.7 Provide an “Approval” function to direct user to an Approval Form for approval processing.

5.3.8 Provide a “D1/D2 Approval” function to direct user to a D1/D2 Hold Approval Form for D1/D2 Approval.

5.3.9 Provide an “Approval History” function to direct user to Approval History Form to review the approval history.

5.3.10 Payment Request Statuses are as below:

10 – WIP (system use) 20 – Confirmed (system use) 30 – BU Approval (i.e. waiting for BU Approval) 35 – UBR Hold (waiting for user to submit the approval) 40 – UBR Hold Approval (i.e. waiting for UBR approval) 50 – Approval Completed	60 – Sub-Con Notified 70 – Auto Voucher Matched 80 – Manual Voucher Handling 98 - Rejected 99 – Cancelled

5.3.11 Payment Request can only not be revised after creation. For any changes are required, it is required to reject the Payment Request and recreate it.

5.3.12 Default the current login’s address number in the Job’s PM Address Number in form header for filtering.

5.3.13 When multiple conditions are entered in the form header search fields, those condition will be using an “and” handling.

5.4. Payment Request Details Form (Form 2)

5.4.1 For reviewing the Payment Request details.

5.4.2 Show Payment Request Summary Information in the header.

1. Company
2. Payment Request Batch Number
3. Batch Period
4. Payment Request ID
5. Sub-Con Address Number
6. Payment Request Status
7. Order Company
8. Order Type
9. Order Number
10. Job Number
11. Division
12. Create By
13. Create Date
14. Total Request Amount – Sum of Certified Work Done Amount for all selected PO lines
15. Total Retention Amount – Sum of Retention Amount for all selected PO lines
16. Total Contra Charge Amount – Sum of Contra Charge Amount for all selected PO lines
17. Total EC Amount – Sum of EC Amount for all selected PO lines
18. Total Net Payment Amount – Sum of Net Payment Amount for all selected PO lines
19. Sub-Con Notification Date – Updated by program when notification is generated
20. Notification Amount – Sum of Net Payment Amount for all selected PO lines
21. Invoice Date – Invoice Date from Sub-Con submitted invoice
22. Invoice Number – Invoice Number from Sub-Con submitted invoice
23. Voucher Match Method (Auto/ Manual) – Updated by program based on invoice validation result.
24. Voucher Match Date (for auto match only) – Updated by program if required auto match
25. Voucher Matched Amount (for auto match only) – Updated by program if required auto match
26. Voucher Match Result (Full/ Partial/ Nil, for auto match only) – Updated by program based on invoice validation result

27. BU Approve Route Code – Approval route code of the Order for BU approval
28. BU Final Approved – Updated by program during approval process
29. D1/D2 Hold Approved – Updated by program during approval process
30. Next Approver – Retrieved by program based on approval route
31. Emailed Supporting to D1/D2 Approver – User input

5.4.3 Display the following fields in the data grid for the Payment Request Line.

1. Payment Request Line Number	11. Vouchered Amount
2. Payment Request Line Status	12. Retention Vouchered Amount
3. Order Line Number	13. Contra Charge Vouchered Amount
4. Reference Open Amount	14. EC Vouchered Amount
5. Certified Work Done Amount	
6. Retention Amount	
7. Contra Charge Amount	
8. EC Amount	
9. EC Percentage	
10. Net Payment Amount	

5.4.4 Payment Request Line Statuses are as below:

10 – Open	80 – Manual Voucher Handling
70 – Auto Voucher Matched	99 – Cancelled

5.4.5 When the Payment Request Status is “UBR Hold”, the “Emailed Supporting to D1/D2 Approver” will be enabled in this form and the requestor can “Tick” this checkbox to submit the UBR approval request, and then the Payment Request Status will be changed to “UBR Hold Approval” for D1/D2 approver to approve.

5.4.6 Net Payment Amount is auto calculated as [Certified Work Done Amount – Retention Amount – Contra Charge Amount – EC Amount].

5.5. Select PO Line Form (Form 3)

5.5.1 For selecting the outstanding PO lines for Payment Request creation.

5.5.2 Show below fields in the form header.

1. Order Number	6. Job Number
2. Order Type	7. Job’s PM
3. Order Company	8. Job’s Supervisor

4. Sub-Con Address Number 5. Sub-Con Name	9. Job's Engineer

5.5.3 Display the following PO fields in the data grid.

1. Sub-Con Address Number 2. Sub-Con Name 3. Order Company 4. Order Type 5. Order Number 6. Order Line Number 7. PO Header Order Date 8. 3rd Item number 9. Item Description 1 & 2 10. Open Quantity 11. Open Amount	12. Job Number 13. Job's PM 14. Job's Supervisor 15. Job's Engineer Account Code (BU, Object Account, Subsidiary) 16. BU Description 17. Account Description 18. Sub-ledger, Sub-ledger Type 19. UBR Hold Code 20. Payment Request ID in Current Period

5.5.4 Only display the PO line with Last Status >= "280", Next Status <="400", Open Amount <> 0, Order Type = "OS".

5.5.5 User must enter at least one of the below search fields to filter the PO

- Order Company + Order Type + Order Number
- Sub-Con Address Number
- Job Number
- Job's Project Manager
- Job's Supervisor
- Job's Engineer

5.5.6 Provide a "Select" function for users to select the current highlighted row to the Payment Request.

5.5.7 If the order is under UBR D1/D2 hold (even it is released by the user manually), still allow to select it for Payment Request creation.

5.5.8 If a PO line is already in an existing Payment Requests of current period, show the that Payment Request's ID(if multiple found, show the one with latest cre ation date) in the grid, but it is still allowed to add it into the current Payment Request.

5.6. Payment Request Creation Form (Form 4)

5.6.1 Provide an “Add PO Line” function to direct user to Select PO Line Form for adding PO line to this form for Payment Request creation.

5.6.2 Display the following fields in the header section.

1. Batch Period	2. EC Required (Checkbox) 3. Certify All (Check box)

5.6.3 Display the following PO fields in the data grid and sort the data by Order Number, Order Line Number in ascending order.

1. Order Company	11. Reference Open Amount
2. Order Type	12. Certified Work Done Amount (User Input)
3. Order Number	13. Retention Amount (User Input)
4. Order Line Number	14. Contra Charge Amount(DN) (User Input)
5. 3rd Item Number	15. EC Amount
6. PO Line Desc 1 & 2.	16. Net Payment Amount
7. Job Number in PO Detail (F4311)	17. EC Percentage
8. PO Header Order Date (F4301)	18. Reference DN Number (User Input)
9. BU Approval Route	
10. UBR Hold Code	

5.6.4 Provide a "Certify All" function to set the Certified Work Done Amount equal to the PO line’s Open Amount. This function applies to all PO lines with a single click.

5.6.5 Provide a "Generate Payment Request" function to base on the grid data to generate Payment Request by PO Number. When generating the Payment Request:-

- For BU Approval, the approval route is based on the related Order for that Payment Request. It may have multiple levels of approvers, and assume each level has only one approver.
- Payment Request Batch Number will be Generated as [Company Code] + [Year in 4 digit] + [Period in 2 digit], based on current date during creation

  e.g. 00300-2025-06
- Payment Request Id will be “PReq” + [Sub-Con Address Number] + “-“+ [Current Timestamp in YYMMDD-HHMMSS format].

  e.g. PReq30001234-250530-123456

- Batch Period value's format will be [Year in 4 digit] + [Period in 2 digit], based on current date during creation.

  e.g. 2025-06
- Division will be based on the Cat Code 01 of Job Number's cat code 01.
- Sub Con Address Number is based on the related PO's header address number.
- If "EC Required" is ticked, retrieve the EC percentage by Job Number from a specific UDC.
- Once the Payment Request is generated, it Payment Request Status will be "BU Approval" (i.e. waiting for BU Approval).

5.6.6 Provide a "Delete" function to delete the selected PO line.

5.6.7 When a PO line is being added to the Payment Request, the PO line's Open Amount at that moment will be stored in the Payment Request Line as Reference Open Amount for reference purpose. (i.e. if the Open Amount is being changed in the PO Detail (F4311) after it is being added to the Payment Request, it will not affect this Reference Open Amount in the Payment Request)

5.6.8 Certified Work Done Amount, Retention Amount, Contra Charge Amount, Reference DN Number is entered by user.

5.6.9 Certified Work Done Amount should be less than or equal to the Reference Open Amount of the PO Line.

5.6.10 Retention Amount should be less than Certified Work Done Amount.

5.6.11 EC Amount is auto calculated as [Certified Work Done Amount * EC Percentage].

5.6.12 Net Payment Amount is auto calculated as [Certified Work Done Amount – Retention Amount – Contra Charge Amount – EC Amount].

5.7. Approval Form (Form 5)

5.7.1 For processing the approval of the Payment Request

5.7.2 Display the following fields in the header section for filtering purpose.

1. Company 2. Batch Period 3. Job Number 4. Payment Request ID	5. Address Number (radio button to control to filter by Approver or Requester) 6. Payment Request Status

5.7.3 Display the following PO fields in the data grid.

1. Payment Request Batch Number	8. Order Company
2. Batch Period	9. Order Type
3. Payment Request ID	10. Order Number
4. BU Approval Route Code	11. Create Date/ Time
5. UBR Hold Code	12. Approval Action (Approve/ Reject)
6. Requestor Address Number	13. Approved By
7. Approver Address Number	14. Approval Date/ Time

5.7.1 Provide an “Approve” function for users to approve the Payment Request if the login user is the Next Approver.

- If the user is the last approver in the BU approval route, also update the BU Final Approved flag to “Y”. After that, check if the order is under UBR D1/D2 hold in the last UBR checking. If it is D1/D2 hold, update the Payment Request status to “UBR Hold Approval “. Otherwise, update the status to “Approval Completed”.

5.7.2 Provide a “Reject” function for users to reject the Payment Request if the login user is the Next Approver. Update the Payment Request Status to “Rejected”.

5.7.3 When a user “Approve” or “Reject” the Payment Request, update the existing approval record and then create the next approval record if he/she is not the Final Approver.

5.7.4 Provide an “Approval History” function to direct user to Approval History Form to review the approval history.

Provide a “Payment Request Details” function to direct users to Payment Request Details Form for reviewing the Payment Request Details.

5.8. D1/D2 Hold Approval Form (Form 6)

5.8.1 For the handling of D1/D2 Hold Approval for the Payment Request.

5.8.2 Display the following fields in the header section for filtering purpose.

1. Company 2. Batch Period 3. Job Number 4. Payment Request ID	5. Address Number (radio button to control to filter by Approver or Requester) 6. Payment Request Status

5.8.3 Display the following PO fields in the data grid.

1. Payment Request Batch Number 2. Batch Period 3. Payment Request ID 4. BU Approval Route Code 5. UBR Hold Code 6. Requestor Address Number 7. Approver Address Number	8. Order Company 9. Order Type 10. Order Number 11. Create Date/ Time 12. Approval Action (Approve/ Reject) 13. Approved By 14. Approval Date/ Time

5.8.4 For D1 hold, only related job's project manager or D2 approver can approve the D1 hold. For D2 hold, only D2 approver can approve the D2 hold.

5.8.5 Provide an "Approve" function to update the Payment Request Status to "Approval Completed".

5.8.6 Provide a "Reject" function to update the Payment Request Status to "Rejected"

5.8.7 Provide a "Payment Request Details" function to direct users to Payment Request Details Form for reviewing the Payment Request Details.

5.9. Approval History Form (Form 7)

5.9.1 For reviewing the approval history of the Payment Request

5.9.2 Display the following fields in the header section.

1. Company 2. Batch Period 3. Payment Request ID 4. Job Number	5. Order Company 6. Order Type 7. Order Number 8. Requestor Address Number 9. Payment Request Status

5.9.3 Display the following PO fields in the data grid.

1. BU Approval Route Code 2. UBR Hold Code 3. Create Date/ Time	4. Approval Action (Approve/ Reject) 5. Approved By 6. Approval Date/ Time

5.10. Table Structure

5.10.1 Payment Request Header (F590xxx)

1. Batch Period (PNM01) 2. Payment Request Batch Number (BATCHN) 3. Payment Request ID (CTLID) 4. Payment Request Status (REQS) 5. Create By (CRTU) 6. Create Date/ Time (CRTJ/ CRTT) 7. Sub-Con Address Number (AN8) 8. Division (RP01) 9. Job Number (OMCU) 10. Order Company (KCOO) 11. Order Type (DCTO) 12. Order Number (DOCO) 13. Order Suffix (SFXO) 14. Total Request Amount (BA01) 15. Total Retention Amount (BA02) 16. Total Contra Charge Amount (BA03) 17. Total EC Amount (BA04) 18. Total Net Payment Amount (Notify sub-con for this amount) (BA05) 19. EC % 20. Next Approver	21. BU Approver Route Code (ARTG) 22. BU Final Approved (GFL1) 23. BU Final Approve UKID 24. UBR Hold Code (HOLD) 25. UBR Approve (GFL2) 26. UBR Final Approve UKID 27. Sub-Con Notification Date 28. Invoice Submission Key 29. Invoice Date 30. Invoice Number 31. Invoice Amount 32. Voucher Match Date 33. Voucher Match Method (Auto/ Manual) 34. Total Voucher Matched Amount (for auto match only) 35. Voucher Match Result (Full/ Partial/ Nil, for auto match only) 36. User Reserved Fields (5 fields) 37. Update By Fields (4 fields)

5.10.2 Payment Request Details (F590xxx)

1. Batch Period	14. EC Amount
2. Payment Request Batch Number	15. EC Percentage
3. Payment Request ID	16. Net Payment Amount
4. Payment Request Line Number	17. Reference DN Number
5. Payment Request Line Status	18. Invoice Submission ID
6. Order Company	19. Voucher Amount
7. Order Type	20. Retention Vouchered Amount
8. Order Number	21. Contra Charge Vouchered Amount
9. Order Line Number	22. EC Vouchered Amount
10. Create Date	23. User Reserved Fields (5 fields)
11. Certified Work Done Amount	24. Update By Fields (4 fields)
12. Retention Amount	
13. Contra Charge Amount	

5.10.3 Approval History (F590xxx)

1. UKID	12. Order Company
2. Batch Period	13. Order Type
3. Payment Request Batch Number	14. Order Number
4. Payment Request ID	15. Create Date
5. Approval Type (BU/ UBR)	16. Create Time
6. UBR Hold Code	17. Approved By
7. BU Approval Route Code	18. Approval Date/ Time
8. Requestor Address Number	19. Total Certified Work Done Amount
9. Approver Address Number	20. Total net Payment Amount
10. Approval Status Code	21. User Reserved Fields (5 fields)
11. Approval Action (Approve/ Reject)	22. Update By Fields (4 fields)

6. Generate Invoice Notification List (UBE)

6.1. Purpose

6.1.1 Output the Payment Request information for sending email notification to the Sub-Con.

6.2. Processing Option

6.2.1 Send Email Flag – 1 = Send, 0 = Not Send

6.2.2 Who's Who Type Code for Sub-Con Email Information

6.2.3 Who's Who Type Code for Sub-Con CC Email Information

6.2.4 Sender Email Address

6.2.5 CC Email Address

6.2.6 Email Address for Batch Summary

6.3. Data Selection

6.3.1 Company Code = blank

6.3.2 Payment Request Status = "Approval Completed"

6.3.3 Sub-Con Notification Date = blank (i.e. email notification not yet send)

6.4. Data Sequencing

6.4.1 Sub-Con Address Number

6.4.2 Payment Request Id

6.5. Logic

6.5.1 Based on the selected Payment Request Period, all Payment Requests in "Approval Completed" status will be selected for processing.

6.5.2 Report output will be in csv format.

6.5.3 Based on the Who's Who Type Code defined in processing option to retrieve the

- Sub-Con Primary Email
- Sub-Con Contact Name (Who's Who Attention To)
- Sub-Con CC Email address.

6.5.4 Program will only sent the Payment Request Notification email to the Sub-Con when below conditions are all met

- Send Email Flag = 1

- Sender Email Address is not blank
- Sub-Con Primary Email Address is not blank

6.5.5 Program will only sent out the Payment Request Summary email when below conditions are all met

- Send Email Flag = 1
- Sender Email Address is not blank
- Email Address for Batch Summary is not blank

6.5.6 The Payment Request Notification Email is set out per Payment Request.

6.5.7 The information below will be output to the report and also sent to FormScape for email processing. These output records will be written to the customized table “Invoice Notification History” (F590xxx) as an audit trail.

1. Send Email Flag	13. Order Number
2. CC Email Address	14. PO Order Date
3. Email Address for Batch Summary	15. Payment Request Date
4. Sub-Con Email Address	16. Notification Date
5. Sub-Con Email Attention	17. Notification Amount (i.e. Payment Request’s Total Net Payment Amount)
6. Sub-Con CC Email Address	18. Total Request Amount
7. Sub-Con Name	19. Total Retention Amount
8. Payment Request Batch Number	20. Total Contra Charge Amount
9. Batch Period	21. Total EC Amount
10. Payment Request ID	22. Total Net Payment Amount
11. Order Company	
12. Order Type	

7. Invoice Notification (FormScape)

7.1. Purpose

7.1.1 Based on the data from "Generate Invoice Notification List" to send email notification to Sub-Con for every Payment Request.

7.2. Logic

7.2.1 Create a new transform definition to transform the JDE data for FormScape processing.

7.2.2 If Send Email Flag = 1, Sender Email is not blank, send email for every Payment Request.

- For every Payment Request
  - If Sub-Con Email Address is not blank and Notification Amount > 0
    - Compose an email with below information and send to Sub-Con email address.
      - To = Sub-Con Email Address
      - CC = CC Email Address and Sub-Con CC Email Address

        Subject = "Payment Request " + [Payment Request ID] + " with Amount of " + [$ Notification Amount] + " for Order " + [Order Number] + " Created on " + [PO Order Date in DD-MM-YYYY format] + " is Approved"

        E.g. Payment Request [PReq38001234-250122-123456] with Amount of [$123,456] for Order [OS-25001234] Created on [31-05-2024] is Approved.
      - Email Body

Dear [Email Attention],

In order to speed up the invoice processing, please follow the instructions below for invoice submission.

1. Prepare an invoice in accordance with the information in below table.
2. Reply to this email with your invoice and **keep the Subject Untouched.**

Items	**Amount $ HKD**
Total Certified Work Done Amount	[Total Request Amount]
Total Retention Amount	[Total Retention Amount]
Total Contra Charge Amount	[Total Contra Charge Amount]
Total EC Amount	[Total EC Amount]
Total Net Payment Amount	[Total Net Payment Amount]

This is a computer generated email.

Should you have further inquiries, please contact ??? at 1234 2234.

7.2.3 If Send Email Flag = 1, Sender Email is not blank and Email Address for Batch Summary is not blank, compose a summary email as follow and send to the Email Address for Batch Summary

- To = Email Address for Batch Summary
- CC = CC Email Address
- Subject = "Payment Request Summary of Batch " + [Payment Request Batch Number] + " for Period " + [Batch Period]

  E.g. Payment Request Summary of Batch [300_202504] for Period [2025-04]
- Email Body

Dear Recipient,

Below are the email notification details for Payment Request Batch - [Payment Request Batch Number].

Show below information for every Payment Request in row format

1. Payment Request ID	9. Payment Request Date
2. Sub-Con Email Address	10. Notification Date
3. Sub-Con Email Attention	11. Notification Amount
4. Sub-Con Name	12. Total Request Amount
5. Order Company	13. Total Retention Amount
6. Order Type	14. Total Contra Charge Amount
7. Order Number	15. Total EC Amount
8. PO Order Date	16. Total Net Payment Amount

8. Handle Incoming Sub-Con Invoice (Power Automate)

8.1. Flow Trigger

8.1.1 Start the flow processing when a new email arrives in a specific email account.

8.2. Flow Processing

8.2.1 If the email subject contains specific keywords (Payment Request), proceed to process it. Otherwise, the flow ends.

8.2.2 Check the email contains only 1 PDF attachment. If it is not a PDF attachment or has no attachment or more than 1 attachment, send a reject email to the sender to notify the Payment Request was not processed due to invalid attachment.

8.2.3 Scan the pdf attachment and extract the below key invoice information

- Invoice Number
- Invoice Date
- Invoice Total Amount
- PO Number

8.2.4 Compare the extracted key invoice information using AI Builder for Invoice and against the email subject. If any of the conditions below are met, consider it an invalid invoice file, and then send a rejection email (with the error code and error message) to the sender to notify that the Payment Request is rejected. If any of the conditions below are met, set the Submission Status to “Rejected”; otherwise set to “Accepted”.

- Invoice File’s extension is not PDF (Error Code 01)
- Invoice Number not found (Error Code 02)
- Invoice Date earlier than the Order Date (Error Code 03)
- Invoice Total Amount is greater than the Notification Amount (Error Code 04)
- PO Number not match to the PO Number in Email Subject (Error Code 05)

8.2.5 Regardless of whether the invoice attachment is valid or not, rename the invoice file and save it to a SharePoint folder with the details below:

- Rename the file: Email Receive Date Time in YYYYMMDD-HHMMSS format + Payment Request ID
- Put the file in Reject Folder if it is an invalid invoice file.
- Put the file in Accept Folder if it is a valid invoice file.

8.2.6 Regardless of whether the invoice attachment is valid or not, writes an invoice submission record in Azure Database with below information.

8.2.7 Generate the Invoice Submission ID as Email Receive Date Time in YYYYMMDD-HHMMSS format + "-" + Payment Request ID

1. Submission Date	11. Email Subject
2. Payment Request ID	12. Order Number (from email subject)
3. Invoice Submission ID	13. Notification Date (from email subject)
4. Email Receive Date	14. Notification Amount (from email subject)
5. Invoice Attachment Filename	15. Invoice Number
6. Invoice Attachment Path	16. Invoice Date
7. Submission Status (Rejected, Accepted)	17. Invoice Total Amount
8. Remarks	18. Update Date
9. Export Status (E=Exported, N=Not Exported)	19. Update User
10. Export Date	

9. Export Invoice Submission Data (Power Automate)

9.1. Flow Trigger

9.1.1 Recurrence for by a specific interval (e.g. every day's 7:00 PM, TBC)

9.2. Flow Processing

9.2.1 Access the Invoice Submission record in Azure DB to retrieve those records with Export Status = "N" (Not Exported), then update their Export Status to "U" (In use).

9.2.2 Loop through the Invoice Submission records with Export Status = "U" (in Use). For every record, output the below data to a temporary file (InvoiceSubmission.tmp) in CSV format and then update its Exports Status to "E" (Exported) and Export Date.

1. Submission Date	9. Email Subject
2. Payment Request ID	10. Order Number (from email subject)
3. Invoice Submission ID	11. Notification Date (from email subject)
4. Email Receive Date	12. Notification Amount (from email subject)
5. Invoice Attachment Filename	13. Invoice Number
6. Invoice Attachment Path	14. Invoice Date
7. Submission Status (Rejected, Accepted)	15. Invoice Total Amount
8. Remarks	

9.2.3 After all Invoice Submission records are processed, rename the temporary file to "InvoiceSubmission.txt"

10. Import Invoice Data (TC)

10.1. Purpose

10.1.1 Import the data from data file "InvoiceSubmission.txt" generated by the Power Automate Flow to a JDE staging table for further processing.

10.2. Logic

10.2.1 Read the "InvoiceSubmission.txt" and output the data to JDE table "InvoiceSubmission".

10.2.2 Write an attachment record (link type) to F00165 for the Invoice Submission Record.

10.2.3 Default the Record Status to "Pending".

10.2.4 If Submission Status is "Rejected", set the Voucher Match Mode to "NA".

10.2.5 If Submission Status is" Accepted ", set the Voucher Match Mode to "Auto".

10.3. Table Structure

10.3.1 Invoice Submission (F590xxx)

1. Submission Date	12. Email Subject
2. Payment Request ID	13. Order Number (from email subject)
3. Invoice Submission ID	14. Notification Date (from email subject)
4. Email Receive Date	15. Notification Amount (from email subject)
5. Invoice Attachment Filename	16. Invoice Number
6. Invoice Attachment Path	17. Invoice Date
7. Submission Status (Rejected, Accepted)	18. Invoice Total Amount
8. Remarks	19. Voucher Matched PReq Line Count
9. Record Status	20. Non Voucher Matched PReq Line count
10. Review Remarks	21. Voucher Creation Count
11. Voucher Match Mode (Auto, Manual, NA)	22. Failed Voucher Creation Count
	23. User Reserved Fields (5 fields)
	24. Update By Fields (4 fields)

10.3.2 Invoice Submission Voucher Match (F590xxx)

1. Submission Date	12. Open Amount before Voucher Match
2. Payment Request ID	13. Voucher Match Result (Full/ Nil)
3. Invoice Submission ID	14. Voucher Creation Flag (Y/N/F)
4. Order Company	15. Voucher Doc Company
5. Order Type	16. Voucher Doc Type
6. Order Number	17. Voucher Doc Number
7. Order Line Number	18. Voucher Pay Item
8. Voucher Sequence	19. User Reserved Fields (5 fields)
9. Voucher Category	20. Update By Fields (4 fields)
10. Voucher Date	
11. Voucher Amount	

11. Invoice Submission Review Application (APPL)

11.1. Purpose

11.1.1 Provide inquiry and review functions on the Invoice Submission records

11.2. Processing Option

11.2.1 Default Company Code

11.3. Inquiry Form (Form 1)

11.3.1 Filter records based on Company Code in processing option.

11.3.2 Display the following fields in the data grid

1. Submission Date 2. Payment Request ID 3. Invoice Submission ID 4. Email Receive Date 5. Invoice Attachment Filename 6. Invoice Attachment Path 7. Submission Status (Rejected, Accepted) 8. Remarks 9. Record Status 10. Reviewed By 11. Reviewed Date/ Time	12. Voucher Match Mode (Auto, Manual) 13. Email Subject 14. Order Number (from email subject) 15. Notification Date (from email subject) 16. Notification Amount (from email subject) 17. Invoice Number 18. Invoice Date 19. Invoice Total Amount 20. Voucher Matched PReq Line Count 21. Non Voucher Matched PReq Line count 22. Voucher Creation Count 23. Failed Voucher Creation Count

11.3.1 "Reviewed" button, after user review an Invoice Submission record; user can press this button to update the Status to "Reviewed".

11.3.2 A "Manual Mode" button for users to update the Voucher Mode to "Manual" if they want to skip the Auto Voucher Match for this Invoice. This function only enabled when the current Voucher Mode is "Auto" and the Status is "Pending".

11.3.3 A "View Attachment" function for viewing the incoming invoice's PDF file.

11.3.4 Record Statuses are as below:

10 – Pending 20 – Reviewed	30 – Processed

11.4. Details Form (Form 2)

11.4.1 Show the Voucher Match details for the selected Invoice Submission record.

11.4.2 Display the following fields in the header.

1. Submission Date	9. Invoice Number
2. Payment Request ID	10. Invoice Date
3. Invoice Submission ID	11. Invoice Total Amount
4. Sub-Con Address Number	12. Voucher Match Result (Full/ Partial)
5. Sub-Con Name	13. Voucher Match Date
6. Order Company	14. Total Voucher Matched Amount
7. Order Type	15. Voucher Matched Line Count
8. Order Number	16. Non Voucher Matched Line count

11.4.3 Display the following fields in the data grid

1. Order Company	8. Open Amount before Voucher Match
2. Order Type	9. Voucher Match Result (Full/ Partial)
3. Order Number	10. Voucher Creation Flag
4. Order Line Number	11. Voucher Doc Company
5. Voucher Match Category (Net Certified Amount, Retention…etc)	12. Voucher Doc Type
	13. Voucher Doc Number
6. Voucher Match Date	14. Voucher Pay Item
7. Voucher Matched Amount	15. User Reserved Fields (5 fields)
	16. Update By Fields (4 fields)

12. Voucher Match Processor (UBE)

12.1. Purpose

12.1.1 Based on the Payment Request and Sub-Con Invoice Submission record to perform 2-way voucher match to PO.

12.2. Data Selection

12.2.1 Invoice Submission Record Status is “Reviewed”.

12.3. Processing Option

12.3.1 Process Mode – 1 for Final, blank for Proof

12.3.2 Bank Account for Payment Voucher (for PV & PD)

12.3.3 GL Account for Contra Charge Voucher (for PD, object account and subsidiary)

12.3.4 GL Account for EC Voucher (for PD, object account and subsidiary)

12.4. Logic

12.4.1 When it is Proof Mode, all the below operation will only do the calculation and checking. When it is Final Mode, program will do the calculation and checking, and also update the data.

12.4.2 Process the Invoice Submission Record 1 by 1.

12.4.3 Based on the Invoice Submission Record, get the Payment Request information by Payment Request ID.

12.4.4 If all the below conditions are met, proceed for voucher match handling. Otherwise, show the corresponding error code for that condition in the report, and update the Invoice Submission Record Status to ”Processed” and Voucher Match Mode to “Manual”.

- Submission Status is “Accepted”. (error code 1)
- Voucher Match Mode is “Auto” (error code 2)
- Payment Request Number exists in the system. (error code 3)
- Payment Request is in status of “Sub-Con Notified” (error code 4)
- Scanned Invoice Order Number = Payment Request’s Order Number (error code 5)
- Scanned Invoice Total Amount <> Payment Request’s Total Payment Amount (error code 6)
- Scanned Invoice Date >= PO Order Date (error code 7)

12.4.5 For every Payment Request Line, proceed for below voucher match handling:-

- Check Payment Request Line's Certified Work Done Amount and Retention Amount Certified Amount <= PO line's Open Amount. If this condition is not met, skip the voucher creation and continue for the **Payment Request Line Update** and **Write Invoice Submission Voucher Match Record**
- Process voucher creation for every related PO Line (sort by PO Line Number in ascending order) by using below mechanism and logic:-

1. Certified Work Done Amount Without Retention 2. Retention Amount	A - PV Creation
3. Contra Charge Amount 4. EC Amount	B - PD Creation

A - PV Creation

- Generate 2 payment vouchers with PV type and match it to PO.
- Based on the Payment Request Line to determine the Voucher Match Amount of these 2 PVs as below:-
  - For Certified Work Done Without Retention : Certified Work Done Amount minus Retention Amount
  - For Retention: Retention Amount
- If Voucher Match Amount is > 0, proceed to the voucher creation process. Otherwise, skip the voucher creation and continue for the **Payment Request Line Update** and **Write Invoice Submission Voucher Match Record**
- **(s1)** *Create EDI transaction record* in F0411Z1 with
  - Doc Company = PO Order Company
  - Doc Type = PV
  - Gross Amount, Open Amount = Voucher Match Amount
  - Invoice Number
    - "G" + Scanned Invoice Number (Certified Work Done w/o Retention)
    - "RG" + Scanned Invoice Number (Retention)
  - Invoice Date = Scanned Invoice Date
  - GL Date = Today Date
  - Business Unit = PO Order Header MCU

- GL Bank Account = Processing Option Setup
- Pay Status = “B”
- Pay Item = “001”
- Sub-Con Address Number = PO Order Header Sub-Con Address Number

- Create EDI transaction record in F0911Z1 with
  - Doc Company, Doc Type, Invoice Date, Invoice Date, Invoice Number, Amount, Pay Item, Sub-Con Address Number = same as F0411Z1
  - Account Code (BU, Object, Sub) = PO Line’s Account Code
  - Subledger/ Subledger Type = PO Line’s Subledger/ Subledger Type
  - Explanation = ??
  - Explanation Remark = ??
- **(s2)** *Call Batch Standard Voucher Creation UBE (R04110ZA)* to process the generated transaction record in F0411Z1 and F0911Z1.
- **(s3)** Check the status in F0411Z1 and F0911Z1. If the records are processed, retrieve the PV number from F0411Z1 and then *generate the voucher match record in F43121*. Otherwise, skip the step (s4, s5, s6)
- **(s4)** Based on the generated PV number, *update the Payment Voucher Record* in F0411 and F0911 for the PO related fields and control fields.
- **(s5)** Based on the PV Gross Amount, *update the PO detail line’s open amount* in F4311.
- **(s6)** *Generate a PO commitment ledger* in F43199.
- Proceed for **B – PD Creation**

B – PD Creation

- Generate 2 standard payment vouchers with PD type.
- Based on the Payment Request Line to determine the voucher amount of these 2 PDs as below:-
  - For Contra Charge: Contra Charge Amount
  - For EC: EC Amount
- If Voucher Match Amount is > 0 , proceed to the voucher creation process. Otherwise, skip the voucher creation and continue for the **Payment**

Request Line Update and **Write Invoice Submission Voucher Match Record**

- **(s1)** *Create EDI transaction record* in F0411Z1 with
  - Doc Company = PO Order Company
  - Doc Type = PD
  - Gross Amount, Open Amount = Voucher Amount
  - Invoice Number
    - Reference DN in Payment Request Line Details.
    - "EC" + Scanned Invoice Number (EC)
  - Invoice Date = Scanned Invoice Date
  - GL Date = Today Date
  - Business Unit = PO Order Header MCU
  - GL Bank Account = Processing Option Setup
  - Pay Status = "B"
  - Pay Item = "001"
  - Sub-Con Address Number = PO Order Header Sub-Con Address Number
- Create EDI transaction record in F0911Z1 with
  - Doc Company, Doc Type, Invoice Date, Invoice Date, Invoice Number, Amount, Pay Item, Sub-Con Address Number = same as F0411Z1
  - BU = PO Line's Business Unit
  - Object / Subsidiary = Processing Option Setup
  - Subledger/ Subledger Type = blank
  - Explanation = ??
  - Explanation Remark = ??
- **(s2)** *Call Batch Standard Voucher Creation UBE (R04110ZA)* to process the generated transaction record in F0411Z1 and F0911Z1.
- Proceed for **Payment Request Line Update** and **Write Invoice Submission Voucher Match Record**

Payment Request Line Update

- Update "Payment Request Detail Line"
  - Voucher Match Date. (If voucher is created successfully (F0411Z1 EDSP is "Y"), set to the Create Date of the voucher; otherwise, set to blank).
  - Based on the result of **<u>A – PV Creation</u>** and **<u>B – PD Creation</u>** to update the below voucher amount fields. If voucher is created successfully (F0411Z1 EDSP is "Y"), set it to the Gross Amount of the voucher; otherwise, set to 0).
    - Voucher Matched Amount (A - PV Creation)
    - Retention Vouchered Amount (A - PV Creation)
    - Contra Charge Vouchered Amount (B - PD Creation)
    - EC Vouchered Amount (B - PD Creation)

<u>Write Invoice Submission Voucher Match Record</u>

- Based on the result of **<u>A – PV Creation</u>** and **<u>B – PD Creation</u>**, write the invoice submission voucher match record
- Determine the value for below field for Invoice Submission Voucher Match record
  - Voucher Match Result
    - If Voucher Creation is triggered, set to "Full". (i.e. record inserted to F0411Z1 and F0911Z1)
    - If Voucher Creation is not triggered, set to "Nil". (i.e. record not inserted to F0411Z1 and F0911Z1)
  - Voucher Creation Flag
    - If Voucher Match Result is Nil, set to "N". (Not create)
    - If voucher is created successfully (F0411Z1 EDSP is "Y"), set to "Y". (Created successfully)
    - If voucher is created successfully (F0411Z1 EDSP is not "Y"), set to "F". (Failed)
  - Voucher Sequence and Voucher Category
    - Sequence = 01, Category = Certified Work Done w/o Retention
    - Sequence = 02, Category = Retention
    - Sequence = 03, Category = Contra Charge
    - Sequence = 04, Category = EC

- Write a record to “Invoice Submission Voucher Match” table for the voucher match information.

12.4.6 After the voucher match handling for all Payment Request Lines are done.

- Update the Payment Request Status to “Auto Voucher Match”, Voucher Match Method to “Auto”. Then update the Invoice Submission ID, Voucher Match Date, Total Voucher Matched Amount(Total Gross Amount of the voucher being created),
- Voucher Match Result (update to “Full” if all Payment Request Lines are fully matched; update to “Nil” if none of the Payment Request Lines have voucher created; otherwise, update to “Partial”).
- Update the Invoice Submission Record
  - Status to “Processed” and Voucher Match Mode to “Auto”
  - Vouchered Payment Request Line Count (numbers of Payment Request line with Invoice Submission Voucher Match record that the Voucher Type= Certified Work Done w/o Retention and Voucher Creation Flag = “Y”)
  - Non Vouchered Payment Request Line Count (numbers of Payment Request line with Invoice Submission Voucher Match record that the Voucher Type= Certified Work Done w/o Retention and Voucher Creation Flag <> “Y”)
  - Voucher Creation Count (numbers of invoice Submission Voucher Match record that the Creation Flag = “Y”)
  - Failed Voucher Creation Count (numbers of invoice Submission Voucher Match record that the Creation Flag <> “Y”)

12.4.7 Proceed for next Invoice Submission.

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