

Process Definition Document



Procure-to-Pay (P2P) Process Automation

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INTRODUCTION

1.1 Purpose

The Process Definition Document outlines the automation of the Procure-to-Pay process. It describes the manual (AS-IS) and automated (TO-BE) workflows, including details about exceptions, complexities, and optimization benefits.

The Process Definition Document outlines the business process chosen for automation. The document describes the sequence of actions performed as part of the business process, the conditions and rules of the process prior to automation (AS IS) as well as the new sequence of actions that the process will follow as a result of preparation for automation (TO BE).

The PDD is a communication document between:

- The RPA Business Analyst and the SME/Process Owner. The goal is to ensure that the RPA Business Analyst has the correct understanding of the process and has represented it accurately.
- The RPA Business Analyst and the Development team (represented by the Solution Architect and RPA Development Lead). The goal is to ensure that the process is documented appropriately and to a sufficient level of detail so that the Solution Architect can then create the solution based on the PDD content.

1.2 Objectives

The objectives of automating the P2P process include:

Reducing Average Handling Time (AHT) by 80%.

Decreasing Average Handling Costs by 60%.

- Eliminating clerical errors in data entry.
- Enhancing process transparency and reporting capabilities.

The business objectives and benefits expected by the Business Process Owner after automation of the selected business process are:

- Reduce processing time per item by 80%.
- Better Monitoring of the overall activity by using the logs provided by the robots.

1.3 Key Contacts

Add here any stakeholders that need to be informed or to approve changes to the process:

Role	Name	Contact Details (email, phone number)	Notes
RPA Developer	Ankith M Deekshith U Dhanush A M Sanath Kumar S Yathish G P	ankithankith022@gmail.com deekshithu30@gmail.com alokdhanush25@gmail.com sanath71564@gmail.com yathishgp1@gmail.com	
Process Owner	Saibal Chakraborty	-	

1.4 Minimum Pre-requisites for the Automation

Hardware Requirements

- Processor: Intel i5/i7 or equivalent AMD processor (minimum 4 cores)
- RAM: 8 GB (16 GB recommended for large-scale automation)
- Storage: Minimum 256 GB SSD (512 GB recommended)
- Display: Full HD monitor for better UI/UX during automation development.
- Peripherals: Keyboard, mouse, and additional external monitor (optional for improved productivity).

Software Requirements

- Operating System: Windows 10 (64-bit) or higher
- UiPath Studio Version: Latest Stable Release (Enterprise or Community Edition as per license availability)
- Microsoft .NET Framework: Version 4.8 or higher
- Browser: Google Chrome, Mozilla Firefox, or Microsoft Edge (for web automation; ensure extension installation)
- Office Suite: Microsoft Office (for Excel/Word automation scenarios)

Network Requirements

- Internet Connection: Stable broadband connection with at least 10 Mbps speed (required for UiPath updates, Orchestrator connectivity, and cloud interactions)
- Firewall and Proxy: Ensure that UiPath Studio and Orchestrator URLs are whitelisted.

Environment Requirements

- Development Environment:
 - Dedicated machine for automation development.
 - UiPath Studio installed and licensed. ○ Access to source systems, applications, or platforms for integration.
- Testing Environment:
 - Separate testing machine or virtual machine.
 - Mirrors the production environment.

- Test accounts and dummy data for validation.
- Production Environment:
 - Secure and dedicated machine or server for running bots.
 - UiPath Robot installed and configured.
 - Scheduled execution via UiPath Orchestrator.

II. AS IS PROCESS DESCRIPTION

In this section the Business Analyst will document the process. This section will serve as the starting point for the re-engineering and automation effort.

2.1 Process Overview

Section contains general information about the process before automation.

Item	Description/Answer
Process Full Name	Procure-to-Pay (P2P) Process Automation
Process Area	Procurement and Accounts Payable
Department	Purchase Department
Short Description (operation, activity, outcome)	The process involves raising purchase requests, checking inventory, engaging suppliers, receiving goods, and processing payments.
Process schedule and frequency	Continuous process, occurring daily with approximately 6000 invoices processed monthly.
Input data description	Purchase requisitions, inventory details, supplier quotations, goods receipt notes (GRNs), invoices.
Output Data description	Purchase orders (POs), invoice records, payment confirmations, quality inspection reports.

**Add more rows to the table to include relevant data for the automation process. No fields should be left empty. Use "n/a" for the items that don't apply to the selected business process.*

2.2 Applications Used

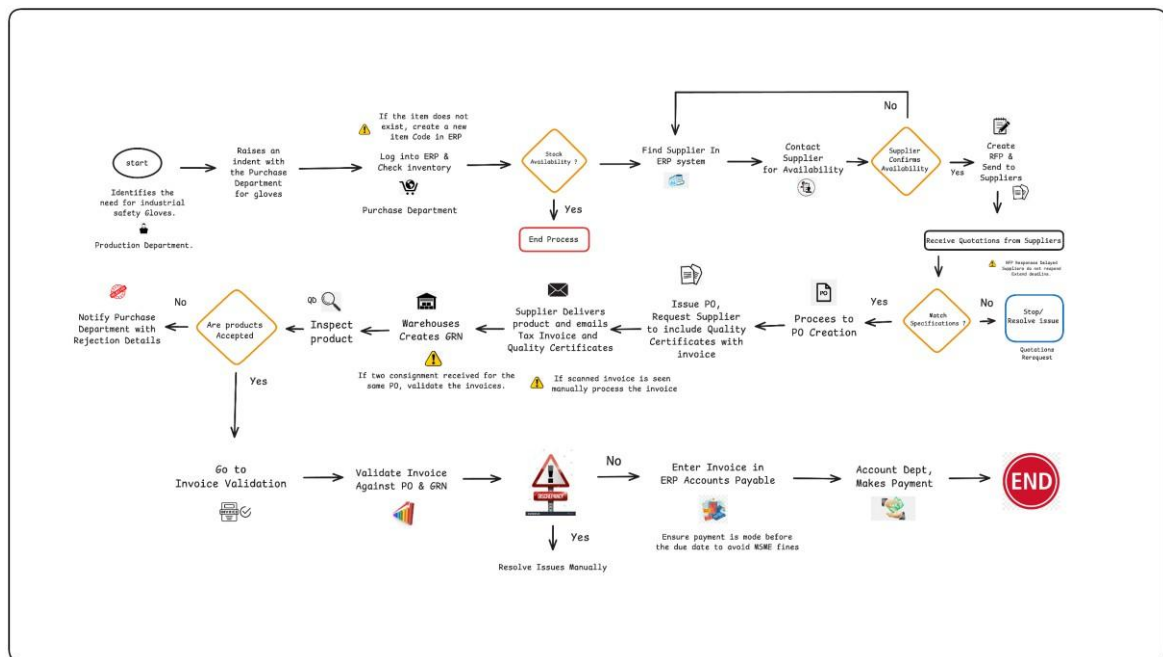
The table includes a comprehensive list of all the applications that are used as part of the process to be automated to perform the given actions in the flow.

Application Name	Version	Application Language	Thin/Thick Client	Environment/ Access method	Comments
PDF Reader	Adobe Acrobat Reader DC (Latest)	English	Thick Client	Desktop application	Used for reading and extracting data from PDF files.
Microsoft Excel	Microsoft Office 365	English	Thick Client	Desktop application	Used for data entry, validation, and report generation.
Email System	Microsoft Outlook (or Web-Based Email System)	English	Thin/Thick Client	Desktop/Web Application	Used for sending notifications or retrieving emails for processing.
OCR Tool (e.g., UiPath OCR Engine)	Latest	N/A	Thin Client	Cloud/Local Integration	Used for invoice scanning and data Extraction
Automation Platform (e.g., UiPath)	Latest	.NET/C#	Thin Client	Cloud/On Premise Orchestrator	Used for Process Automation, bot Orchestration, reporting
Quality Inspection App	2023	Java/.NET	Thin Client	Web Based Access	Used to Log quality inspection details and rejections

*Add more rows to the table to include the complete list of applications.

2.3 AS IS Process Map

This section contains various process maps contributing to a better understanding of how the process is performed pre-automation.



2.3.1 High Level Process Map

This section is useful for the Business Analyst in presentations and discussions with management to underline areas of weakness, inefficiency or to demonstrate which actions could be automat

- A tabular representation of all AS-IS process steps, listing:

- Step Description: Brief details of each step in the process.
- Possible Exceptions:
 - Specific exceptions that can occur at each step.
- Action Taken: How the exceptions are handled.

2.3.2 Detailed Level Process Map

This section describes the process at key-stroke level and is an essential part for the communication with the developers.

Step-by-Step Process (Keystroke-Level Details):

1. Indent Creation:

1. Login and Navigation:

- SME logs into the ERP system using credentials and navigates to the “Material Request” module.

2. Submit Indent:

- Fills in item details (e.g., safety gloves) and submits the indent.

2. Inventory Check:

1. Access Inventory Management:

- Opens the “Inventory Management” module and searches for the item by entering its item code.

2. Verify Stock Availability:

- Verifies stock availability and notes inventory levels.

3. Supplier Identification (If Stock Unavailable):

1. Search for Suppliers:

- Opens the “Supplier Directory” in the ERP and searches for suppliers using item-related keywords.

2. Contact Suppliers:

- Contacts potential suppliers via email or phone.

4. Request for Proposal (RFP):

Create RFP:

Navigates to the "Procurement" module and selects the "Create RFP" option.

Send RFP:

Enters supplier details and item specifications, then sends RFP to shortlisted suppliers via email function. ERP

5. Quotation Evaluation:

- 6. Review Supplier Responses: ○ Opens supplier responses in the "Quotation Management" section.

7. Compare and Select Quotes:

- Compares quotations based on specifications and price, then selects the best quote and flags it for approval.

8. Purchase Order Creation:

1. Create Purchase Order:

- Switches to the "Purchase Order" module, fills in the supplier details, item details, and quantity.

2. Send PO:

- Includes quality certificate requirement in the notes, sends PO to the supplier, and logs the action.

9. Goods Receipt Note (GRN):

1. Access GRN Module:

- Upon consignment arrival, accesses the "GRN" module and enters item codes and quantities received.

- 2. Save and Forward GRN: ○ Saves GRN and forwards it to the Purchase Department.

10. Quality Inspection:

1. Inspect Items:

- Logs into the "Quality Control" module and enters item details from GRN for inspection.

2. Mark and Notify:

- Marks rejected items with rejection codes and sends email to the Purchase Department with inspection results.

11. Invoice Processing:

1. Download Invoice:

- Downloads the vendor invoice received via email and compares the invoice details with the PO and GRN in the ERP.

2. Create Invoice Entry:

- If matched, creates an invoice entry in the “Accounts Payable” section and sends email notification to the Accounts Department.

12. Payment Initiation:

1. Verify and Initiate Payment:

- Accesses the “Accounts Payable” module, verifies invoice details, and matches payment terms.

2. Execute Payment:

- Initiates payment to the vendor via the ERP payment gateway.

13. Exception Handling (Keystroke-Level Steps):

1. New Item Code Creation:

- Opens the “Item Master” module in ERP, fills in item specifications, and assigns a new item code.

2. Quantity Discrepancy:

- Compares invoice quantity with GRN and PO in the ERP, and raises a query ticket to the supplier in the ERP.

3. Multiple Consignments:

- Consolidates GRN data by linking multiple entries under the same PO, and updates invoice records accordingly.

4. Rejected Items:

- Removes rejected items from invoice records and notifies the vendor via email with rejection details.

5. Scanned Invoice Submission:

- Sends an email to the vendor requesting a soft copy and uploads scanned invoice to ERP for temporary reference.

2.4 Process Statistics and Detailed As Is Process Actions

- Average Volume of Invoice per month – 6000
- Average Number of pages per Invoice – 2
- Total Number of vendors on date – 2500
- Average Number of vendors to be onboarded per month - 50

#Action	Input	Description	Details (Screen/Video	Exceptions	Possible Actions
			Recording Index)	Handling	
1	Purchase Indent	Production department raises an indent for industrial safety gloves in ERP.	Screen Recording 01	Missing details in the indent request.	Notify the Production department to revise and resubmit the indent.
2	Inventory Check	Purchase department checks inventory in ERP to determine if the gloves are available.	Screen Recording 02	Item not found in inventory.	Move to supplier identification or initiate a request for new item code creation.

III. TO BE PROCESS DESCRIPTION

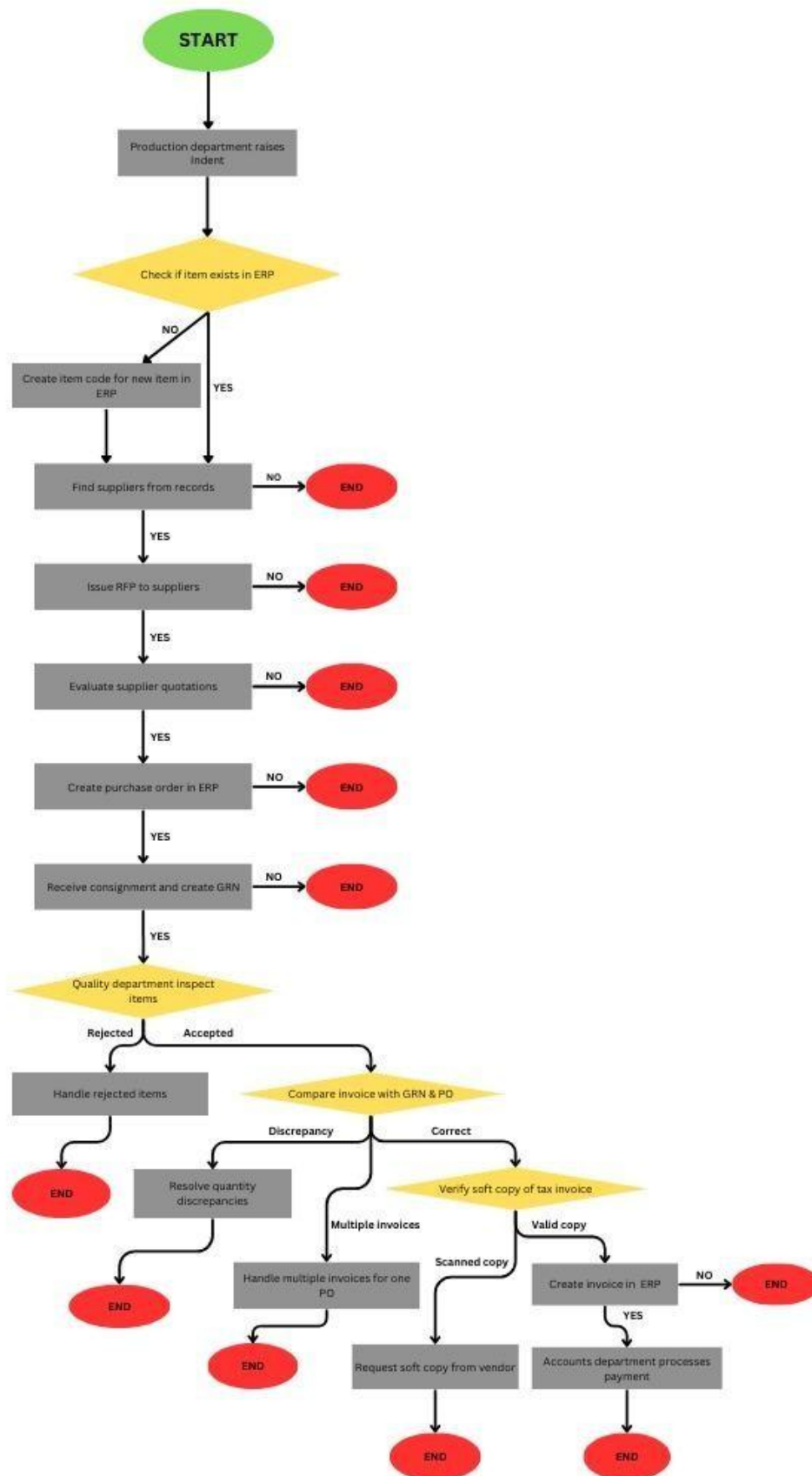
In this section the proposed improvements to the process, actions to the process will be outlined as well as the actions proposed for automation and the type of robot required. **This will be cross-checked by the Solution Architect.**

3.1. Detailed TO BE Process Map

A detailed process map of the process as it will look like post-automation will be outlined here.

The TO BE process map highlights:

- Automated steps with bot icons.
- Manual interventions with human icons.



3.2 In Scope/Out Scope and Exceptions Handling of RPA

In Scope:

- Invoice validation: Ensuring that all invoice details are accurate and match with purchase orders.
- Automated data entry: Using software to automatically input data into the ERP system.

Out Scope:

- Vendor negotiations: Engaging in discussions and bargaining with suppliers.
- Quality checks: Conducting inspections to ensure products meet required standards.

The Business Process Owner and Business Analysts are expected to document below all the business exceptions identified in the automation process. Exceptions are of 2 types and both need to be addressed:

Known exceptions = previously encountered. A scenario is defined with clear actions and workarounds for each case.

Unknown = New situation that was not encountered before. It cannot be predicted and in case it happens it needs to be flagged and communicated to an authorized person for evaluation.

3.2.1 Known Business Exceptions

Details regarding how the robot should handle the exceptions.

Exception Name	Action	Parameters	Action to be taken
New Item Code Required	Trigger approval workflow for item creation.	Item details, approval status	Notify Purchase Manager for manual approval; update ERP with the new item code.
Quantity Discrepancy	Flag mismatch in quantity across PO, GRN, and Invoice.	PO quantity, GRN quantity, Invoice quantity	Escalate to Warehouse or Quality Department for validation and correction.

Scanned Invoice Received	Use OCR to extract data from scanned invoices.	Invoice image	Flag incomplete or unreadable data for manual review; notify Accounts Department.
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3.2.2 Unknown Business Exceptions

An umbrella rule that includes a notification needs to be designed for all other exceptions that could happen and cannot be anticipated.

e.g.: for all other cases which do not follow the rules defined an e-mail should be sent to:

exceptions@company.com with a screen shot and robot should proceed to next transaction.

3.3 Applications Errors & Exceptions Handling

A comprehensive list of all errors, warnings or notifications should be consolidated here together with the action to be taken for each by the Robot. There are 2 types of exceptions/errors:

Known = Previously encountered and action plan or workaround available for it (e.g. SAP unresponsive during peak times)

Unknown = these are exceptions and errors that cannot be anticipated but for which the robot needs to have a rule so that the RPA solution is sustainable.

3.3.1 Known Applications Errors and Exceptions

Details regarding how the robot should handle the exceptions.

Error/Exception Name Action		Parameters	Action to be taken
ERP System Unresponsive	Retry accessing the ERP system.	Retry count, timeout duration	Robot retries 3 times; if unsuccessful, notify the IT support team and log the error.
Email Server Connection Failure	Reattempt connecting to the email server.	Server status, retry interval	Robot retries every 10 minutes up to 3 times; escalate to IT support if issue persists.

3.3.2 Unknown Applications Errors and Exceptions

An umbrella rule that includes a notification needs to be designed for all other exceptions that could happen and cannot be anticipated.

e.g. robot should attempt to access the application 3 times then it should terminate thread.




3.4 Reporting

In this section all the reporting requirements of the business should be detailed so that when the RPA solution is moved to production the administrators can track the performance of the solution.

Report Type	Update Frequency	Details
Exception Report	Daily	Tracks exceptions and resolution status.
Performance Log	Weekly	Automation success rates.

Highlight Bot interventions/ To-Be automated actions with different legend/ icon (purple).

Mention below if process improvements were performed on the To-Be design and provide details.

Legend	Description
	Action number in the process. Referred to in details or Exceptions and Errors table.
	This process action is proposed for automation.
	This process action remains manual (to be performed by a human agent).

Report Type	Update frequency	Details	Monitoring Tool to visualize the data
Exception and Performance Report	Daily	Tracks transaction volumes, exceptions encountered, resolution status, and automation success rate.	UiPath Orchestrator Dashboard and Logs

* For complex reporting requirements, include them into a separate document and attach it to the present documentation

IV. OTHER

4.1. Additional sources of process documentation

If there is additional material created to support the process automation please mention it here, along with the supported documentation provided.

KPI Details

KPI Metric	Target Value
Processing Time	Reduce by 80%
Error Rate	Zero clerical errors

UAT Test Cases

Test Case ID	Description	Expected Outcome
TC001	Validate invoice entry	Accurate and error-free entry
TC002	Handle missing PO exception	Notify and log exception successfully
TC003	Test OCR accuracy for scanned invoices	Data extracted with 95%+ accuracy

Additional Process Documentation		
Video Recording of the process (Optional)	Acme-System1-Process-WI5-Manual-Walkthrough	Contains step-by-step manual walkthrough for the process.

Business Rules Library (Optional)	Insert link to Business rules library	Comprehensive list of rules governing the process, exceptions, and approvals.
Other documentation (Optional)	Insert link to any other relevant process documentation (L4, L5 process description, fields mapping files etc.)	Includes detailed process descriptions, data mappings, and validations for automation.
Standard Operating Procedure(s) (Optional)	SOP-PURCHASEDEPT-GLOVESPROCUREMENT.PDF	Detailed standard operating procedures for purchase and vendor payment processes.
High Level Process Map (Optional)	HighLevelProcessMap-P2P.pdf	Visual representation of the overall Procure-to-Pay workflow.
Detailed level process map (Optional)	DetailedLevelProcessMap-P2P.pdf	Process flow diagram showing each step and decision points in detail.
Work Instructions (Optional)	WorkInstructions-P2P-Processing.pdf	Specific instructions for handling Purchase Orders, GRNs, and Invoices.
Input Files (Optional)	Indent_Template.xlsx	Template used by the Production Department to raise purchase requests.
Output Files (Optional)	Invoice_Output_Sample.pdf	Example output generated postinvoice reconciliation and approval.

**Add more rows to the table to reflect the complete documentation provided to support the RPA process.*