

Invoice Processing Automation for Purchasing Department

March 2024

The Need - Our Understanding

Current Business Context

Restoration Management Company (RMC) wants to improve operational excellence by automating manual repeatable processes. They are looking to automate *Invoice Processing* for Purchasing Department. Process details:

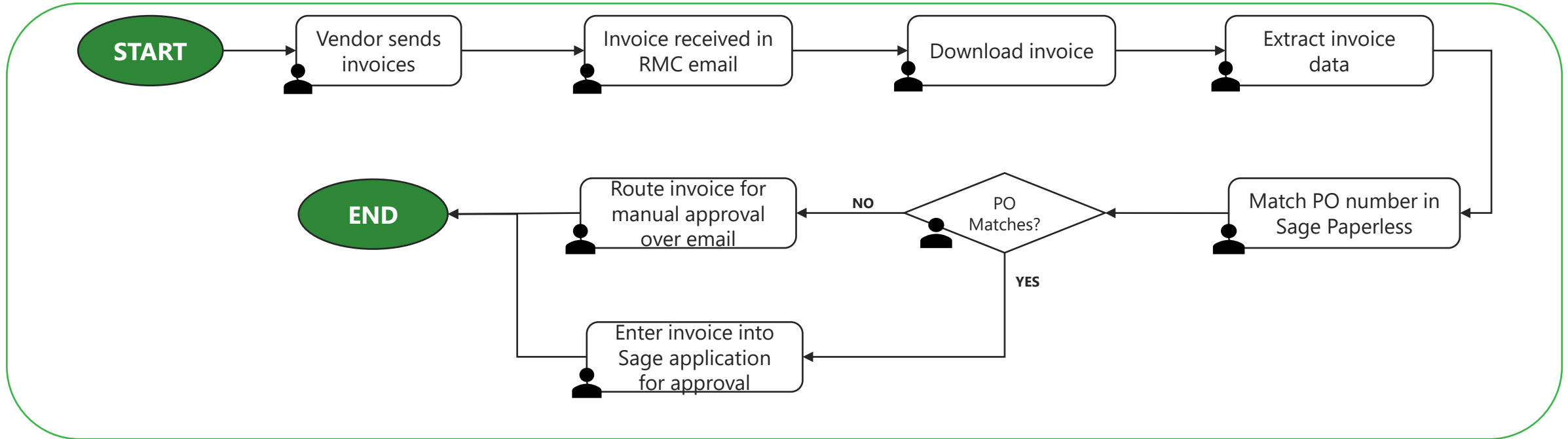
- Purchasing team receives PO invoices from 12 vendors on their mailbox.
- They extract field information from these invoices like PO#, Invoice#, Date, Line Items, Address, Total, Tax etc.
- They enter this information into Sage PaperLess application for approval.
- While entering invoice data, they match PO# in Sage application, and if PO is not available then it is an exception where email needs to be sent to SME to process that invoice manually.
- Volume: Around 130-150 invoice in a month.
- FTE: 1 SME is working on this.

Ask from the Technology Partner

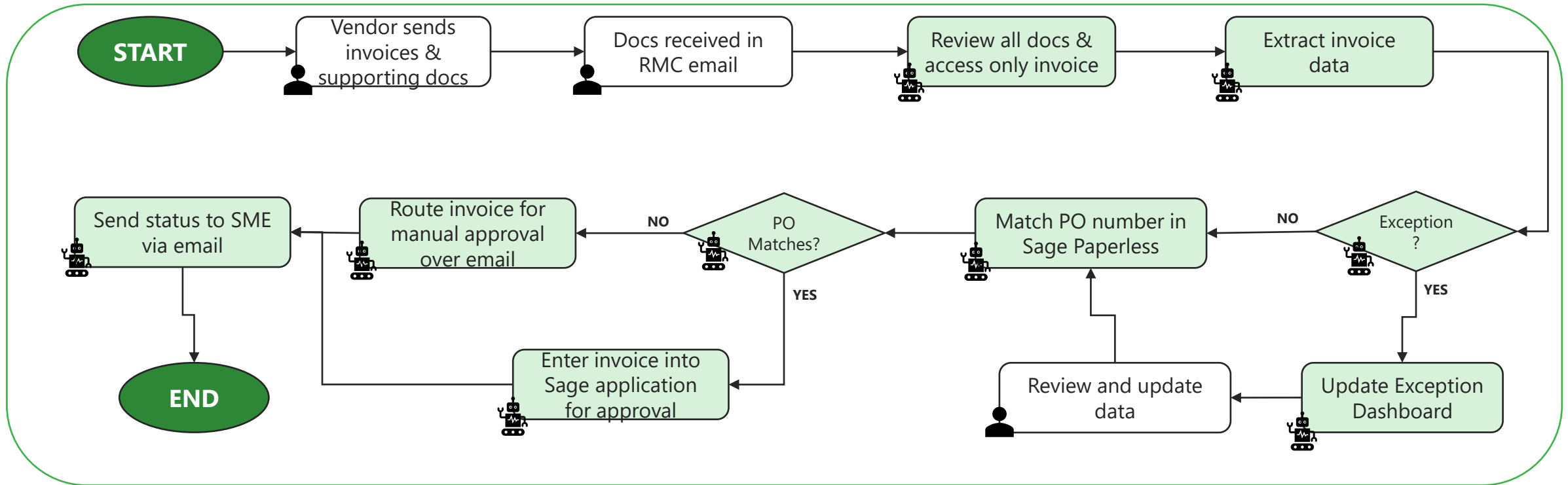
RMC team has reached out to Happiest Minds Technologies to provide process automation solution for Invoice Processing. Below are the high-level scope items:

- Automate mailbox to download invoices into pre-defined folders.
- Extract relevant data from around 12 different invoice templates.
- Match PO number in Sage application and raise exception for manual processing, if no PO match.
- If PO matches, enter invoice details in Sage application.
- Send status email to SME for each invoice processed.

Central Billing – High level AS-IS flow



Central Billing – High level TO-BE flow

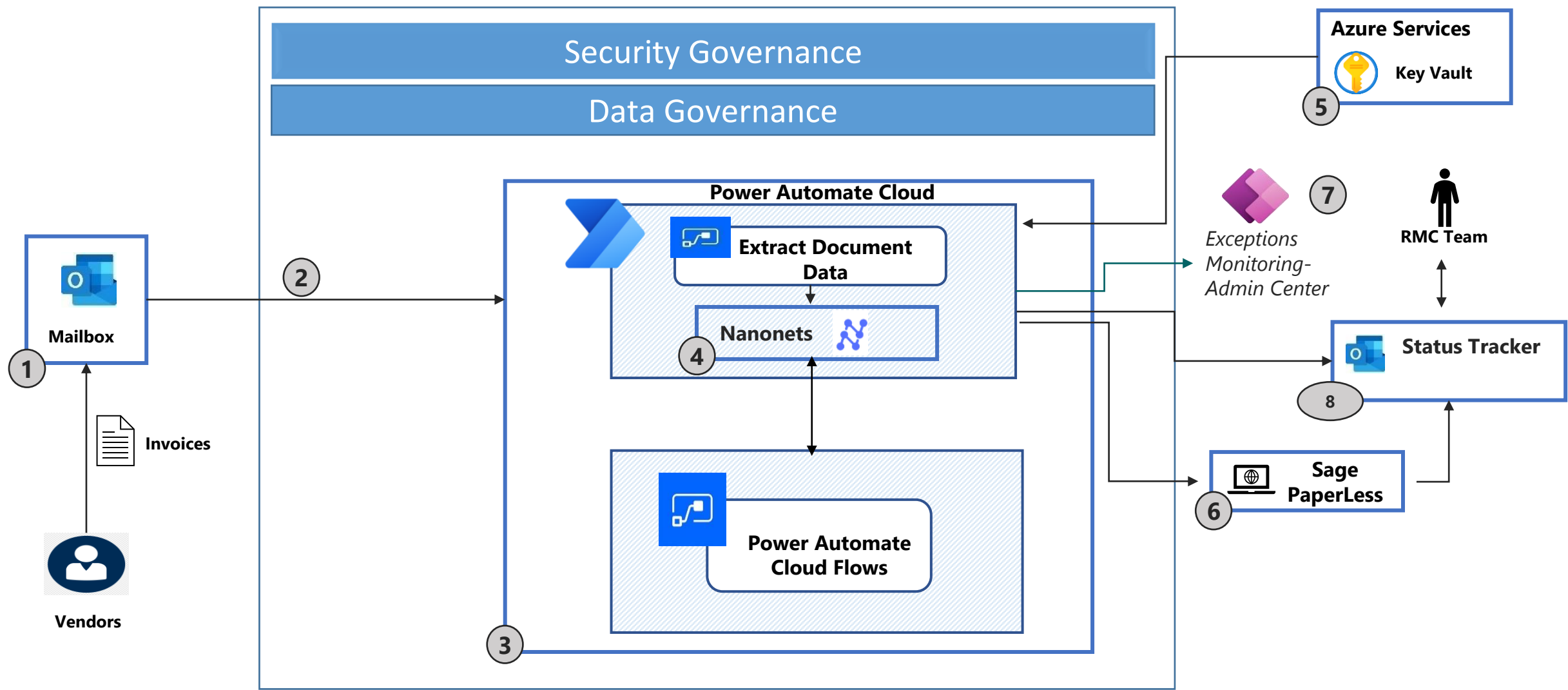


Solution Description

Happiest Minds Technologies recommend the use of Microsoft Power Automate & Nanonets OCR solution to seamlessly automate Invoice Processing process. Below steps provides the solution highlights.

1. Vendor send invoices & supporting docs to RMC team as email attachments.
2. The power automate cloud flow will get triggered when a new mail is received with a specific subject or as per scheduled time.
3. The Power automate cloud flow will review all documents & download invoice attachments into pre-defined folder.
4. Nanonets will be used to extract relevant data from Invoices like PO#, Invoice#, Date, Line Items, Address, Tax, Total etc.
5. Any credentials for drives, applications will be stored in Azure key vault.
6. Extracted invoice data will be entered into Sage PaperLess application.
7. Any exception in data extraction, PO matching into Sage application will be updated into Exception Monitoring console, where business SMEs can review & update the data if required.
8. An Excel Tracker will be maintained which will contain the processing status of each Invoice received in mailbox. This tracker will be shared with Business SMEs at the end of the day.

Proposed High Level Solution Architecture



Solution Components

The proposed solution will be leveraging Power Automate platform to build the Central Billing automation process.



Microsoft Power
Automate

Power Automate is the RPA tool for development of Bot. It has capabilities for API integrations, email/outlook automation, file/folder automation, UI Automation, invoking AI\ML models etc.



Nanonets

Extract meaningful information from unstructured data sources like documents, emails, tickets etc. Transform unstructured data across multiple sources into actionable insights.



Azure Key vault

Azure Key Vault is a cloud-based service provided by Microsoft Azure that enables users to securely store and manage cryptographic keys, passwords, certificates, and other sensitive information in a centralized storage that is protected by industry-standard algorithms and hardware security modules.



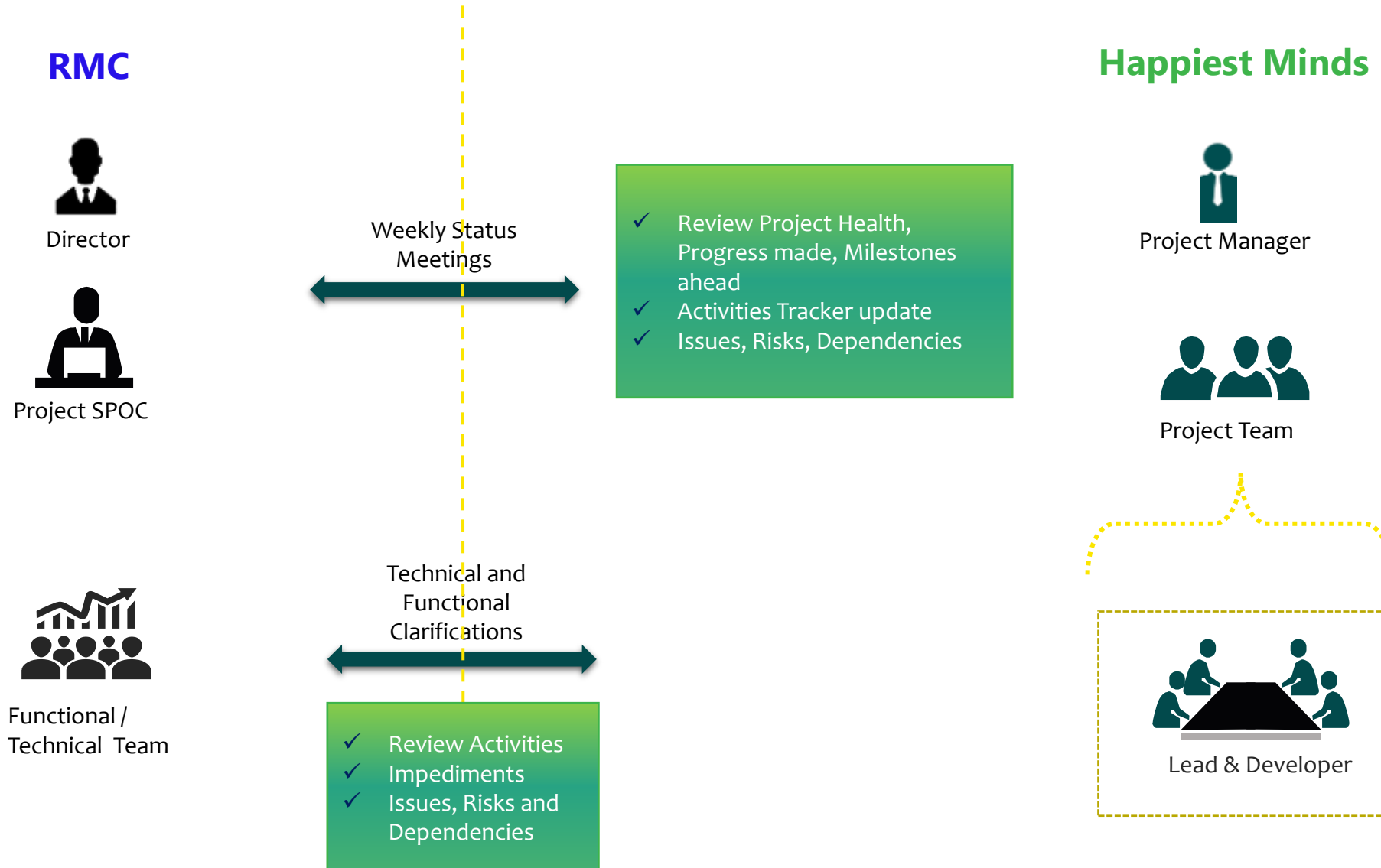
Exception Monitoring component is developed by Happiest Minds Technologies. This can be configured and used to display the exceptions occurring in the process. Using this, RMC team can review the exceptions and take next corrective action.

Project Plan

Activities	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12
Process Assessment & Documentation												
Solution Design and Architecture												
Development & Testing												
Validation (UAT) and Acceptance/Sign off												
Production deployment, Go-Live & Hypercare												

- *Validation / UAT will be performed by RMC Team.*
- *These are indicative timelines and may be refined/updated after detailed process study if updated scenarios are encountered.*

Governance Process



Assumptions

- Nanonets and Microsoft Power Automate licenses will be procured by RMC team and will be made available before the start of development.
- RMC team will provide access to developer/project team for virtual machines and access to any other software/application required to create this automation.
- RMC team will maintain one mailbox for monitoring incoming invoices.
- Each vendor has their own format for emails (subject lines, sender, email body etc.) and also send multiple supporting documents (excel, images, word, email, pdfs, email body screenshots etc) along with the invoices. Solution should be robust to segregate only the invoice document from all the supporting document.
- The effort is estimated for extracting data from 12 different invoice templates (vendors).
- Sandbox instance of Sage PaperLess application should be available during bot development phase and this environment should be exactly similar to production environment.
- Known and unknown exceptions in Sage paperless application like document already existed, invoice is in process by OCR, PO not found, document not found, Invoice amount mismatch, Invoice data mismatch or empty etc.
- Bot will follow FIFO method for processing job packages from mailbox.
- All the PDF documents are assumed to be in English language.
- Invoice samples of all formats are available through-out the life cycle of the project.
- UAT results will be reviewed and signed off within two weeks of UAT phase.
- Any technical limitations in implementing the required functionalities will be discussed and mutually agreeable action will be taken.
- Document that are extracted with low confidence level (below threshold that is agreed with customer) must be manually processed by SME's/ Users until the Nanonets model is retrained.
- Security aspects like service account creation, any firewall settings, access control for applications will be taken care by customer.

Dependencies

- Availability of Virtual Machines and installation of Nanonets & Power Automate on Virtual Machines.
- Availability of virtual machines during development/UAT and one virtual machine in production.
- Availability of invoice samples of each template/vendor type to train the OCR model for data extraction.
- Availability of sample documents during integration testing & UAT phase.
- Access to developer/project team for virtual machines, and other software/applications.
- Availability of common mailbox for accessing invoice documents.
- Availability of one service account for Bot with bot mail id.
- Access to Sage Paperless sandbox. The sandbox environment must be like production environment

Out Of Scope items

- Handwritten data is not part of the extraction requirement.
- Processing of documents other than English language.
- Any type of archiving of documents.
- Processing of any other document template other than invoice documents.
- Any change request will be taken up only after completing the in-scope process steps. If the change is required, then the additional effort will be mutually agreed with customer.

Happiest Minds will execute this engagement in Fixed Price & Fixed Scope model with below details

Services	Fee(\$)
Automation of 12 Vendor Invoices (Purchasing Department) process	32,800
5 Nanonets Instant Learning Licenses - upto 500,000 pages per year <ul style="list-style-type: none">• Can be used across for 5 different types of documents	40,000
Power Automate Cloud Flow <ul style="list-style-type: none">• Already purchased by customer	0
Total	72,800

Payment Terms:

- The cost is exclusive of all levies and taxes that might be applicable including service taxes, sales taxes etc.
- The cost is exclusive of all the hardware, software licences costs.
- Happiest Minds team will be based out of Happiest Minds office **in India**. No travel cost has been considered. Any travel requirement to RMC locations will be billed separately (including travel, per diem, lodging, boarding).
- Any change in scope or deviation to the requirements/assumptions will affect our ability to deliver this project in the agreed timelines specified in this document. In such an event a Change Request (CR) will be raised substantiating changes in scope, effort.
- If there is any extension beyond the proposed schedule due to the delay in closing the dependencies, the same will be discussed and agreed mutually through change management process.
- All payments are due Next 30 days from the date of invoice.



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Thank You