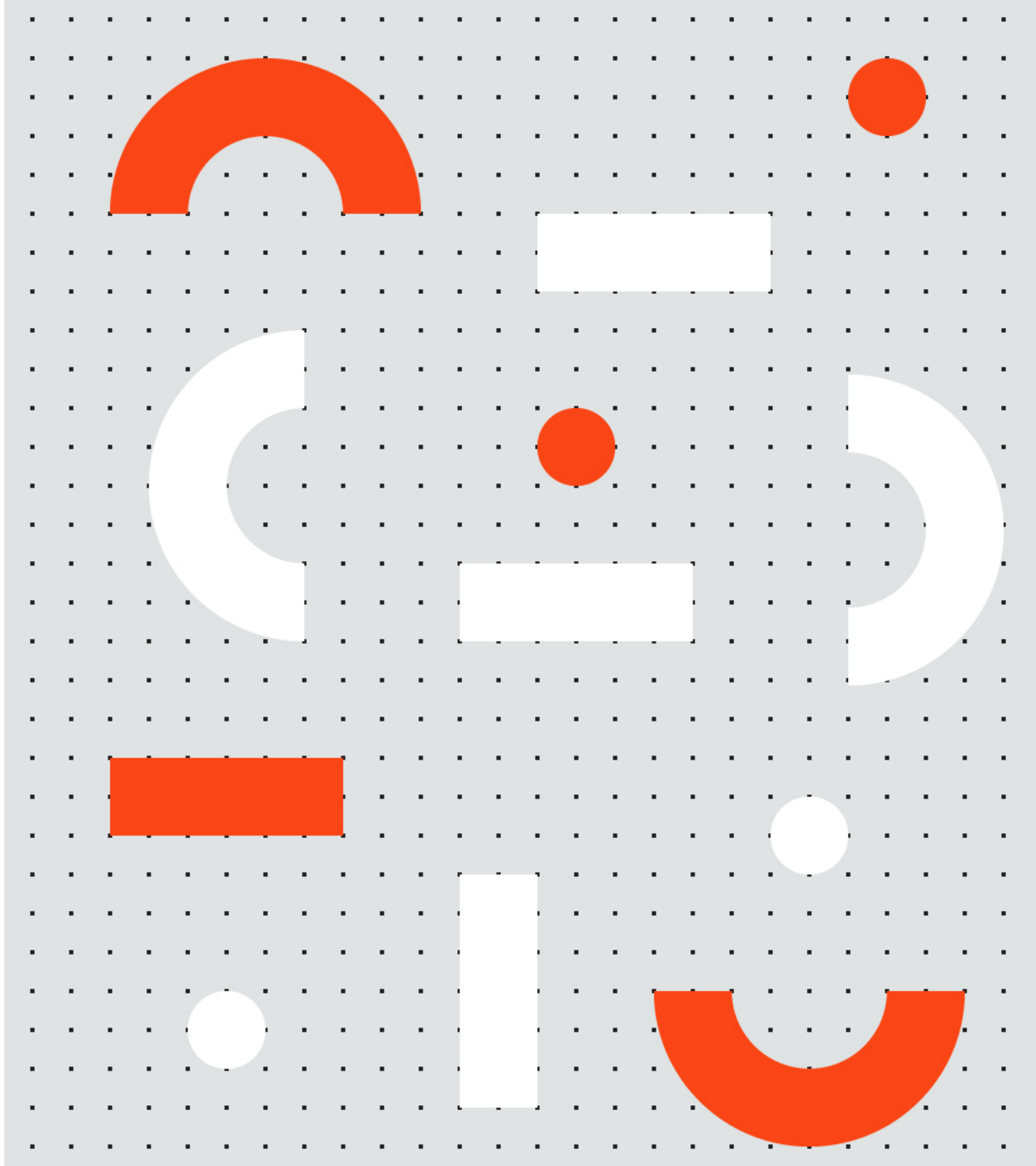
Business Analyst Training

Solution Design



Prerequisites and Objectives

Prerequisite

- Gather and understand process related documents – Standard Operating Procedures, process maps, Organizational Chart, user manuals etc.

Aim

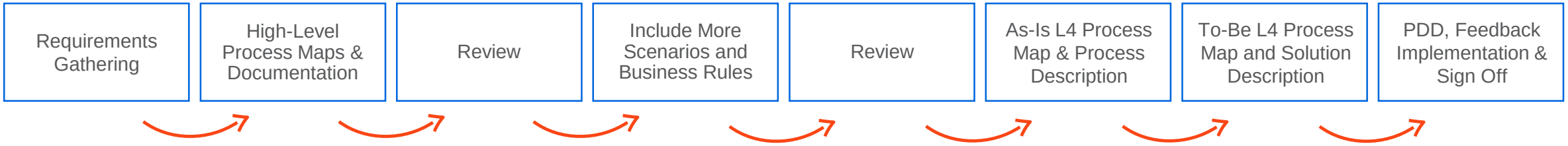
- Gain a deep understanding of the process
- Document and validate with the Process Owner the As-Is process flow and all relevant data for RPA
- Design the To-Be process flow
- Handover a good documentation to the Developer to build the RPA solution for that process

Recommended Approach

- Organize a discussion with the Process Owner & SMEs
- Obtain a high-level description of the process (walk through the process)
- Understand the complexity of the process & the challenges (from SME and RPA point of view)
- Capture process metrics (scope, applications involved, no of FTEs, volumes, AHTs, SLAs, time dependencies, challenges, complexity, stakeholders involved and their role)
- Prepare the Process Design Document with the help of Key Stroke Level documentation or process recordings
- Mark what is in scope and out of scope for RPA from the beginning and continuously validate this classification during the documentation process
- Log the reasons which determine whether an action can be automated or not

Stages of Process Documentation

- Gather all the process information and data
- Prepare a high-level process map with process description
- Validate the high-level process map with the Process Owner
- Update the document by including more scenarios and business rules and validate it with the Process Owner
- Prepare the detailed Level 4 process map (including all scenarios) for the As-Is process
- Define the To-Be Level 4 process map together with the solution description and validate these with the Process Owner
- Prepare the PDD and include any support material that would detail the business rules, roles matrix, the input & output etc.
- Validate the PDD with the Process Owner and update the PDD with all the received feedback; if needed, organize sessions for clarifications
- Obtain Sign-Off



Requirements Gathering

Process Metrics

- Volume
- AHTs
- Total FTE effort involved in the process

Process Information

- Open and close times, time dependencies & SLAs
- Expected increase in transaction volume
- Stakeholders involved and their role
- Inputs & Input type (Structured/ Unstructured & Standard/ Non-Standard)
- Output & Output type

Infrastructure Requirements

- Test environment availability
- UiPath hardware / software requirements

Applications Used

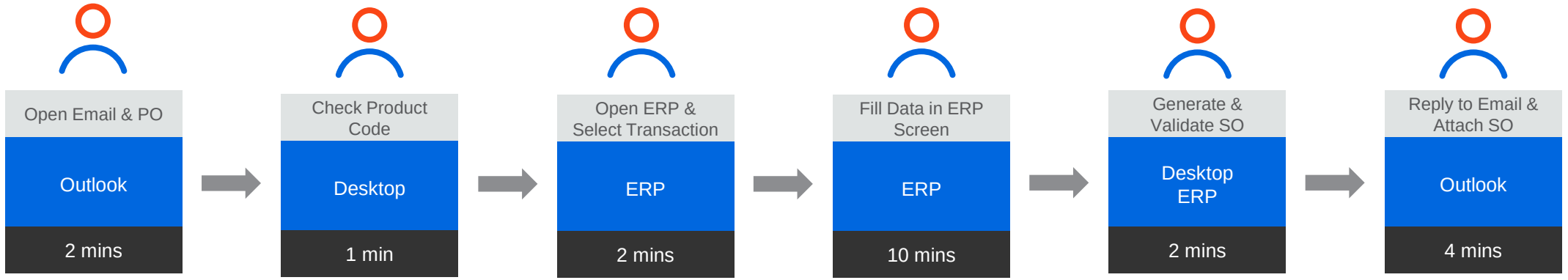
- Capture all applications used in the process
- Understand and capture the underlying technology of each application
- Different instances of one application – if applicable (e.g. Mainframe)

“Thin” or “Thick” Client ?

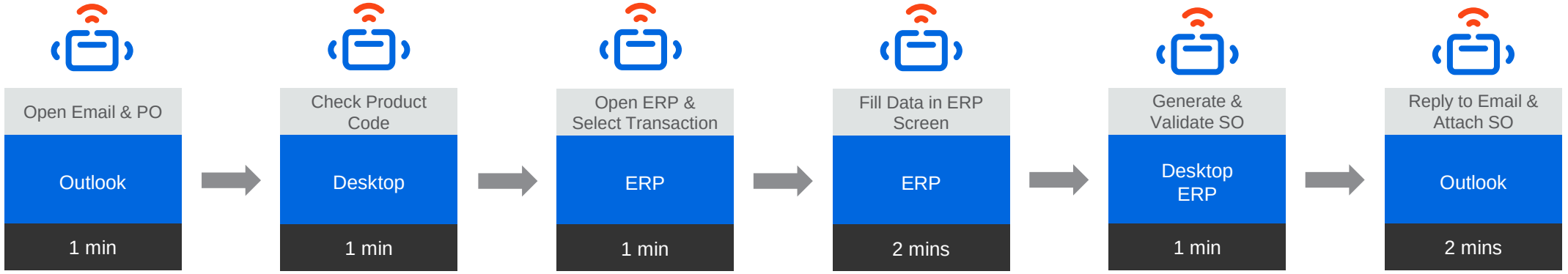
- VDI / Remote desktops – Thin Client
- Desktop applications – Thick Client

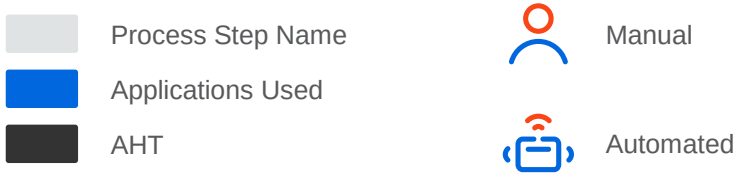
High Level Process Maps

As-Is

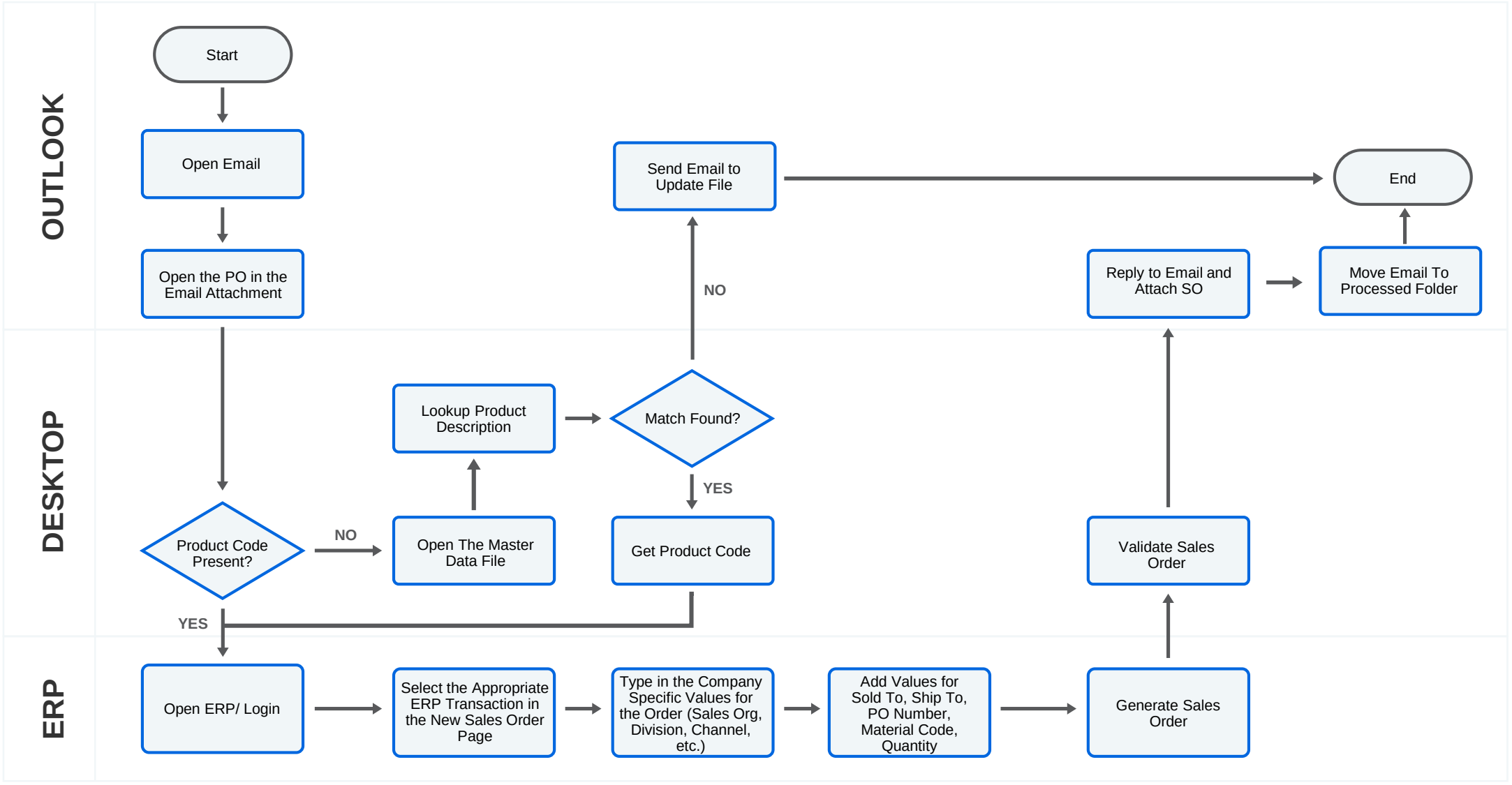


To-Be

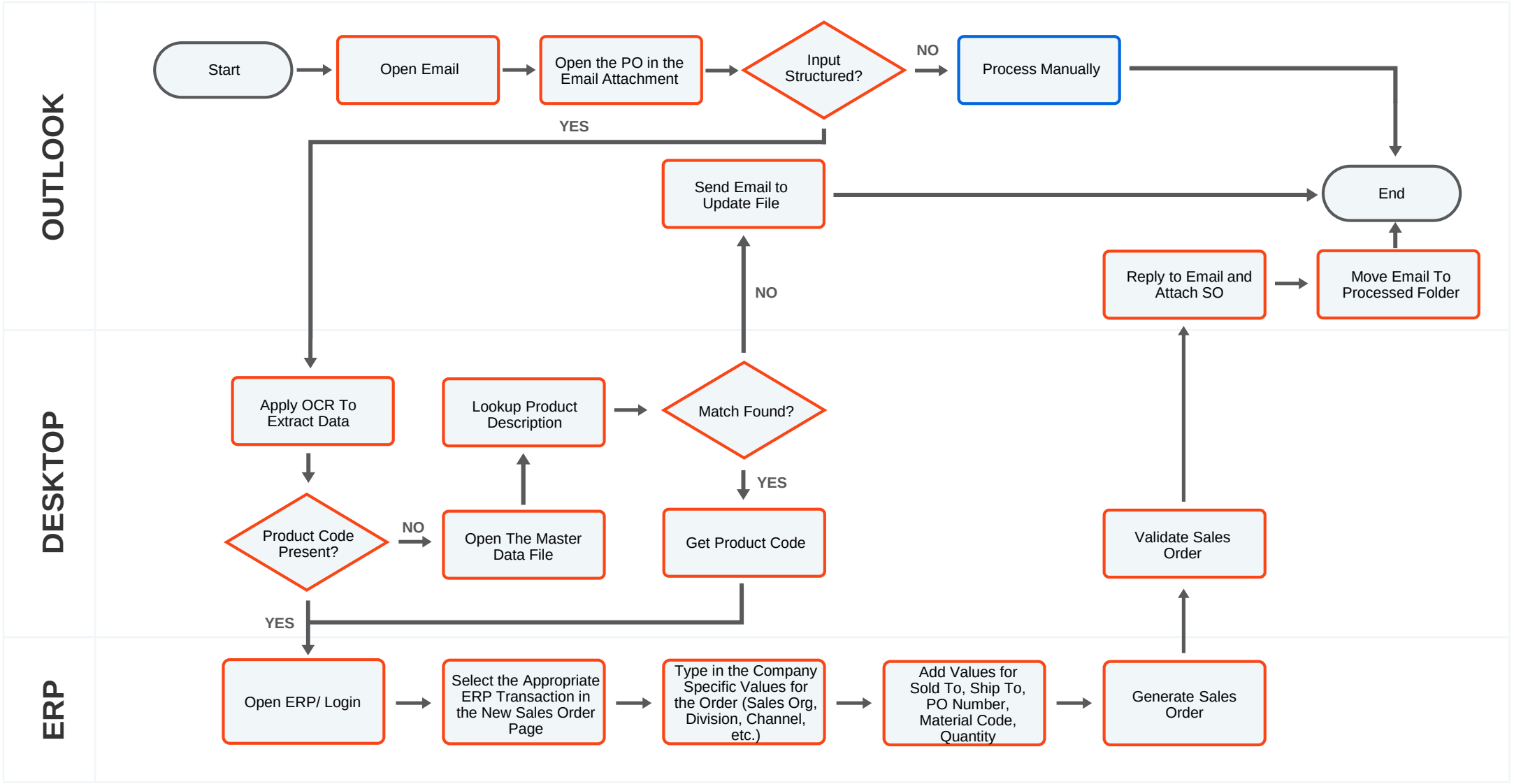




As-Is L4 Process Map



To-Be L4 Process Map



Inputs & Outputs

Inputs

Aim: Identify what are the inputs needed at process level and at granular level and the dependencies to other sub-processes

- Input Source – from which inputs are accessed (e.g. file, a screen, email, a scanned invoice etc.)
- Input Structure – templates from which identified inputs need to be captured
- Fields containing the input – unique identifiers to capture the required fields
- Input Location – location from which the input file / application can be accessed

Aim: For the To-Be process documentation, analyze in detail every input and how it can be obtained and standardized where possible

- Already existing at activity level (e.g. a report that triggers some actions)
- Specifically created for RPA (e.g. data to be used by the robot)

Outputs

Aim: Identify if the output already exists or if it needs to be generated by the robot

- Output type: a new record in an app, a report, a file etc.
- Destination
- Structure
- Content
- Trigger

Process Documentation Methods and Tools

Key Stroke Document

- Process activities detailed at key stroke level with respective screen shots captured
- Capture every action performed by the SME on the application layer
- Screenshot tools: Microsoft Screen recorder/ Epiplex

Process Video Recordings

- Video recordings of process activities
- Recommended for complex business rules within a process
- Short video recordings (activities as modules) with appropriate voiceovers are recommended
- Index the videos and use them as reference in the As-Is process description

Business Logic Translation Table

- Either use the existing business rules table or document the business rules in a separate file
- The robots can use business rules directly from the table
- In case of future rule changes, the table will be updated directly, with low / zero impact on the code
- Index the business rules and use them as reference in the As-Is process description

Out of Scope Activities

Out of Scope Activities

- Compliance requests - must remain under the human control of team members
- Activities / source apps liable to change in the next 3- 6 months (e.g. a source app release is announced)
- Templates / inputs not standardized or involving free text / poor quality scanned images
- Activities that need human input, due to the complexity and human expertise involved
- Effort to automate a specific activity exceeds the gains

Impact of Out of Scope Activities

The impact of the activities that cannot be automated has to be analyzed according to certain criteria:

- Will it change the order of the steps performed?
- Will the robot need to be restarted?
- Will the robot need to wait for that activity to be processed first?
- Does the robot need to use the output of that manual activity?

Exception Handling

Things to remember:

- Exceptions appear in a business process when something unexpected happens during the process execution
- A process documentation that describes only “the happy path” is considered incomplete, so it is important to keep track of both business exceptions and technical exceptions
- Make sure you cover all possible scenarios when something might not go as planned

Business Exceptions

- Mandatory details are missing or are incomplete / unidentifiable
- Email attachment is not available

Known Exceptions

- Previously encountered
- A scenario is defined with clear actions / workarounds for each case

App / System Exceptions

- Application stops responding
- System login failure

Unknown Exceptions

- New situation never encountered before
- Can be caused by external factors and cannot be predicted with precision
- It must be communicated to an authorized person for evaluation

PDD Creation, Sign-Off & Maintenance

01

Create PDD

Gather all the necessary information and put together a document describing the process

02

Sign-Off PDD

Validate the document with both with the Business Owner and the development team

03

Maintain PDD

Keep the document up to date during development. Unexpected things regarding the process might come to the surface

PDD – Document History and Approval Flow

Document History

- Version number of the document
- Date when the version of the document was created
- Name, role, function and organization of the person doing the updates
- Comments that summarize the changes for a specific version

Document Approval Flow

- Version number of the document submitted for approval
- Name, role, organization and signature of each person in the approval flow

PDD – Table of Contents

Test Scenarios and Test Cases

Test Scenario

Necessary for:

- ensuring better organization
- a thorough testing of the end-to-end functionality of the workflow

Not required when:

- applications are very complicated
- the project is on a tight schedule
- using Agile methodology
- performing regression testing

Guidelines:

- A solid understanding of the RPA workflow and of the possible user actions during the process is required
- Avoid writing scenarios that cover multiple components
- Update the Traceability Matrix to ensure there is a scenario for each component

Test Case

Required fields:

- Test case ID – unique value for each test case
  Best practice: use a naming convention to indicate what's being tested
- Test Author – name of the BA / Tester
- Test Executed By – name of the tester who executed the test
- Execution Date – date when the test execution was performed
- Test Title – test case title
- Test Steps – all the execution steps in the order they are to be executed
- Expected result – what the result of the test should be
- Actual result – the actual result of the test case
- Status – Pass or Fail
- Defect ID – if the status is Fail, then the defect ID needs to be added
- Comments

Test Scenario to Test Case relation: 1 : 1 or 1 : many

Thank you