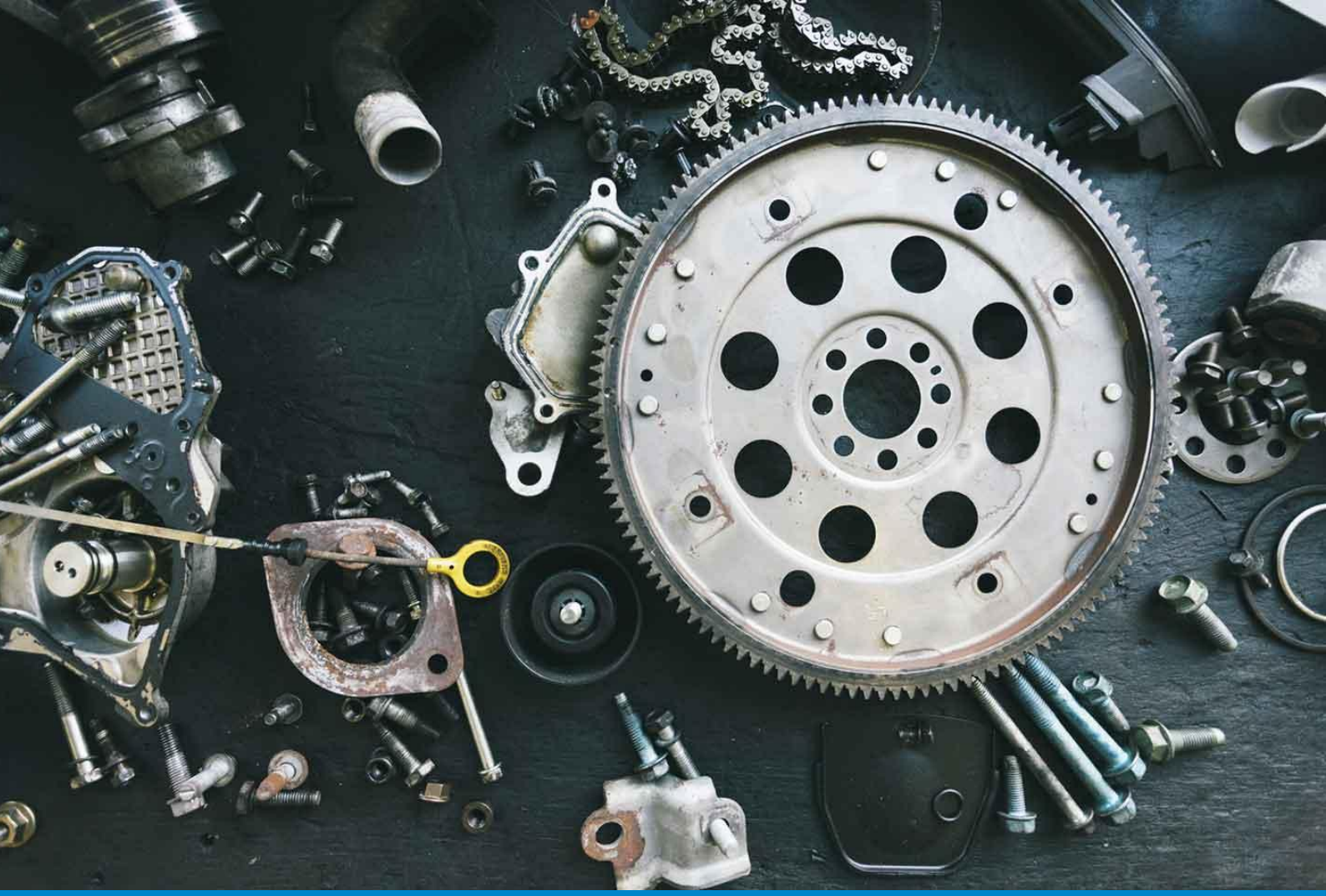


Process Definition Document

UiPath

TravelQuote Bot

Trip more, trip smarter

TABLE OF CONTENTS

I. INTRODUCTION

1.1 Purpose

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 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
	Râpa Denis - Andrei		

1.4 Minimum Pre-requisites for the Automation

a) Filled in Process Definition Document
b) Test Data to support development
c) User access and user accounts creations (licenses, permissions, restrictions to create accounts for robots)
d) Credentials (user ID and password) required to logon to machines and applications

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	TripSmart Bot – Automated Travel Cost Reply
Process Area	Travel & Tourism – Customer Requests Automation
Department	Customer Service / Sales Department of a Tourist Company

Short Description (operation, activity, outcome)	The process collects customer requests submitted via a web form (number of persons, destination, duration, etc.), retrieves predefined average costs from an Excel database, calculates an estimated total price, and automatically replies to the customer by email with the personalized trip cost summary.
Role(s) required in applications to perform the process	Access to Excel (read-only for cost data) Access to email client/server (send permissions) Web form integration access (read input data)
Process schedule and frequency	On demand triggered automatically whenever a new travel request is submitted through the web page.
Number of times the process is ran by selected frequency	Approx. 20–50 times per day (depending on customer demand).
Process execution time	20 – 30 seconds
Process Restrictions	The process requires stable internet connectivity to access the Excel cost database and email services. It is available 24/7 but dependent on server uptime.
Peak Period (s)	• *Summer holiday season (June – August)* • *Winter holidays (December – January)* • *Easter holidays (variable dates)*
Peak Volume Approximate increase	*During peak months, requests can increase by ~200–300% compared to normal activity.*
Number of persons performing the process	Currently, this process is handled automatically by the bot (0 human agents required once implemented)
Expected Volume increase during next periods	*10–20% annually, depending on company growth and marketing campaigns.*
Percentage Un-handled exceptions	<5% (mostly due to incorrect or incomplete user input on the web form).
Input data description	*Web form submissions containing:* • *Customer name & email* • *Country of origin* • *Destination* • *Number of persons*
Output Data description	Automated email sent back to the customer with: • Destination details • Estimated flight cost (per person) • Estimated daily budget per person • Accommodation, food, and activities breakdown • Total estimated trip cost • Recommendations / notes

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
Microsoft Excel	2016 or later	English	Thick Client	Local desktop / Robot machine	Used to store average trip prices (read-only access).
UiPath Orchestrator	Cloud / 2025	English	Thin Client	Browser access (URL + login)	Used to manage queues, dispatcher, and performer scheduling.
UiPath Studio	2025.x	English	Thick Client	Installed on developer/robot machine	Used to build and execute the automation workflow.
Email Client (SMTP)	Latest available	English	Thin Client	Accessed via configured mail activity (SMTP/IMAP/Outlook).	Used to send automated replies with trip cost estimates.
Web Form (Custom Website)	Prototype	English	Thick Client	Web browser	Interface where customers input their trip requests.

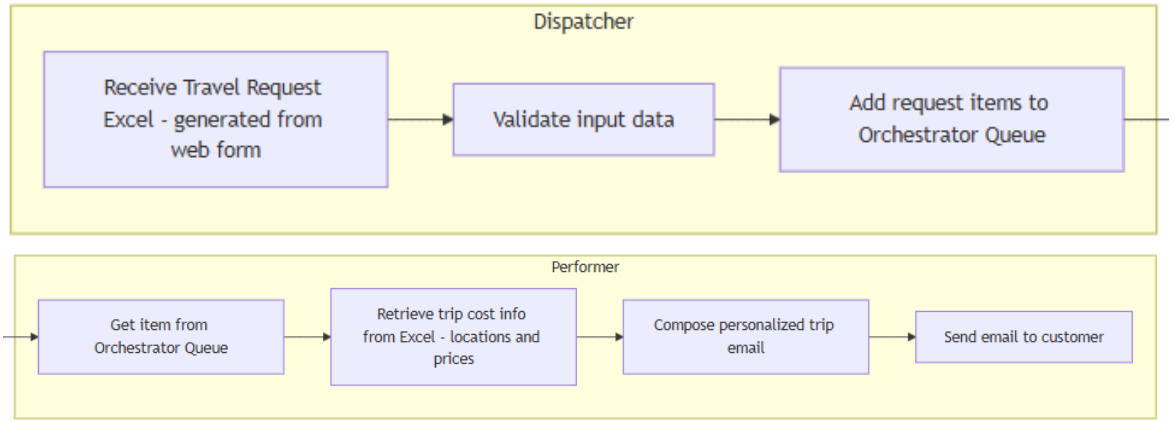
Add more rows to the table to include the complete list of applications.

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 in scope for automation.



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 ID	Action Description	Application	Input/Output	Expected Result	Exception Handling / Notes
1.1	Open Travel Request Excel (generated by web form)	Excel / UiPath Studio	N/A	Excel file opens successfully	If file not found → Send alert & retry
1.2	Read new customer requests	Excel / UiPath Studio	Excel rows → Local variables	Requests extracted correctly	If invalid format → Log error and skip
1.3	Add requests to Orchestrator Queue	UiPath Studio	Queue item data → Queue	Items added to queue	If queue unavailable → Retry and alert

Step ID	Action Description	Application	Input/Output	Expected Result	Exception Handling / Notes
2.1	Get queue item for processing	UiPath Studio	Queue item → Local variables	Queue item retrieved	If queue empty → Wait and retry
2.2	Retrieve trip cost info from Excel	Excel / UiPath Studio	Destination, num persons, days → Trip cost details	Correct trip costs retrieved	If destination missing → Log as Business Exception
2.3	Compose personalized email	UiPath Studio / Email activity	Customer info + trip costs → Email draft	Draft ready for sending	If missing fields → Skip item and log
2.4	Send email to customer	UiPath Studio / Email activity	Email draft → Customer inbox	Email delivered successfully	If send fails → Retry once; mark as Business Exception if still fails
2.5	Update queue item status	UiPath Studio	Queue item → Status = Successful/Failed	Status updated	If status update fails → Retry once
2.6	Continue with next queue item	UiPath Studio	N/A	Process loops back to 2.1	If no more items → End process

2.4 Process Statistics

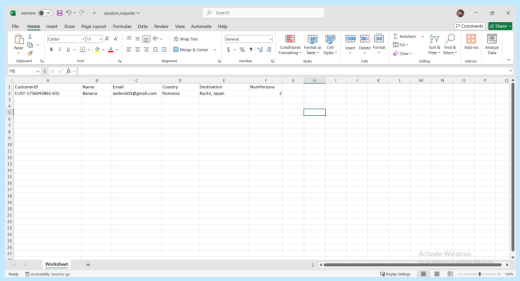
High Level statistics

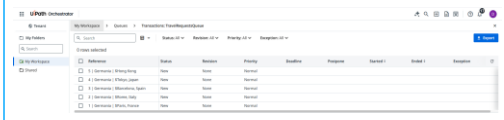
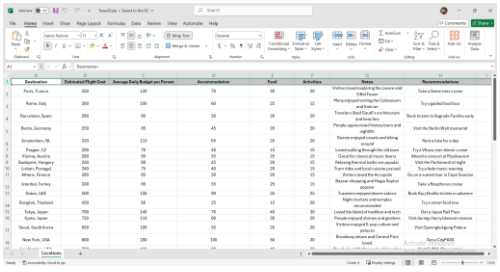
Processes	Windows	Actions	Mouse clicks	Keys pressed	Text entries	Hotkeys used	Time
Dispatcher	2 (Excel + Studio)	~8–10	~4	~10	~2	~1	~1 minute per run
Performer	2 (Excel + Studio)	~10–12	~5	~15	~3	~2	~2 minute per run

Detailed statistics

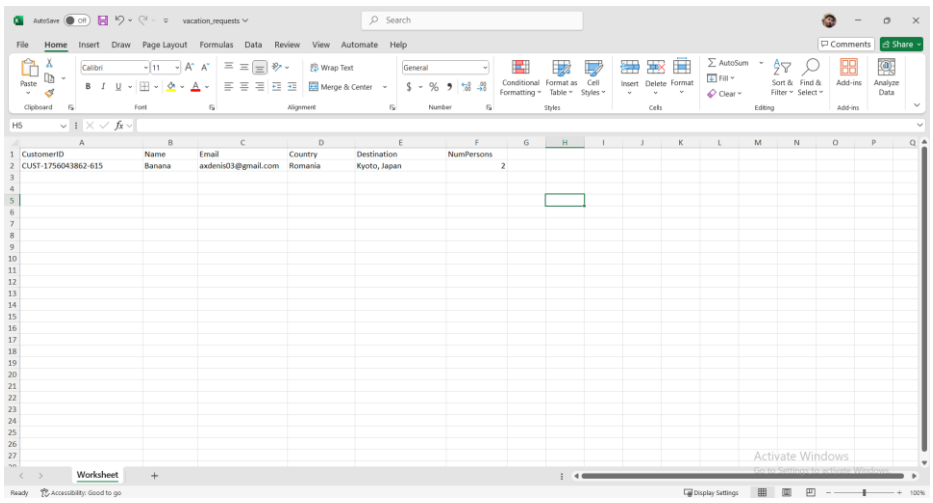
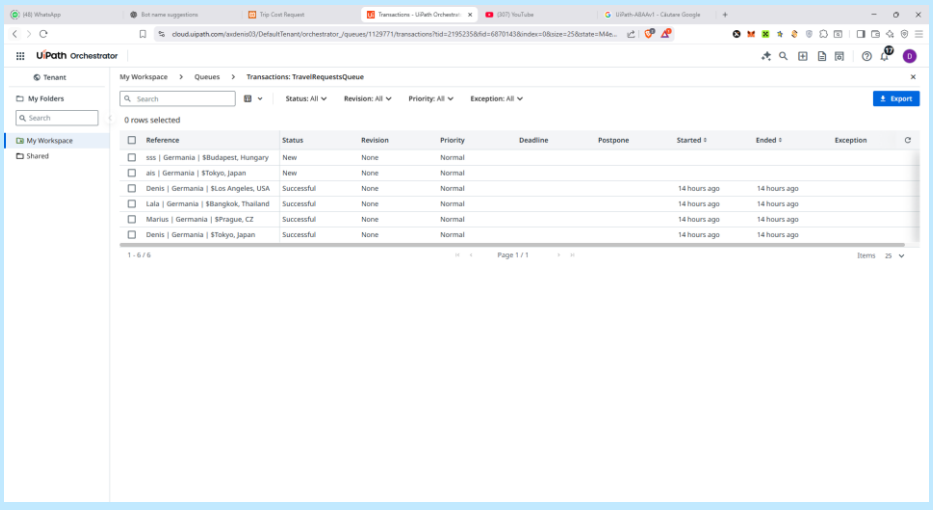
Window name	Mouse clicks	Text entries	Key pressed
Travel Request Excel (Dispatcher)	3	2	10
UiPath Studio – Dispatcher Workflow	4	0	5
Queue Item Preparation	6	1	5
Add to Orchestrator Queue	2	1	3
UiPath Studio – Performer Workflow	4	0	5
Get Queue Item	3	0	5
Retrieve Trip Cost Excel	5	0	8
Compose Email Draft	6	3	10
Send Email	3	1	5
Update Queue Item Status	2	1	5
Close All Applications	0	0	0

2.5 Detailed As Is Process Actions

#Action	Input	Description	Details (Screen/Video Recording Index)	Exceptions Handling	Possible Actions
1.1	Travel Request Excel	Open Excel file with new customer trip requests		File missing → Send alert & retry	Retry, skip if not found
1.2	Excel rows	Read new customer requests		Invalid format → Log error	Skip row, notify admin
1.3	Extracted request data	Validate data (destination,		Missing or incorrect	Skip item, mark for review

		num persons, days)		values → Log error	
1.4	Validated request	Add item to Orchestrator queue		Queue unavailable → Retry	Retry, log error
2.1	Queue item	Get queue item in Performer workflow		Queue empty → Wait & retry	Wait, retry after delay
2.2	Queue item + Excel trip info	Retrieve trip cost info from Excel		Missing destination or data → Business Exception	Log, skip item
2.3	Customer info + trip cost	Compose personalized email		Missing email or invalid fields → Skip	Log error, mark as exception
2.4	Email draft	Send email to customer		Email server down → Retry	Retry once, mark Business Exception if fails
2.5	Queue item	Update queue status (Successful / Failed)		Status update fails → Retry	Retry once, log error
2.6	N/A	Continue with next queue item		No more items → End process	End process

1 Read & Queue Trip Requests	
The robot opens the Excel file with trip requests, reads customer data, and uploads each request to the Orchestrator queue.	**Est. time: 1 min**

1.1 Open Trip Request Excel	
The bot launches Excel and opens the file containing trip requests.	Est. time: 10 sec
	Action: Open Application (Excel)
1.2 Read Data from Excel	
The bot reads all rows from the Trip Request sheet.	Est. time: 30 sec
	Action: Read Range (Excel Application Scope)
1.3 Validate Data	
The bot checks for missing values (e.g., destination, budget, days).	**Est. time:** 45 sec
	Action: If / Assign / Log Message
1.4 Add Requests to Queue	
Each valid row is added to the Orchestrator Queue (“TripQueue”).	**Est. time:** 1 min
	**Action:** Add Queue Item
1.5 Close Excel File	
After uploading data, the bot closes the Excel file.	**Est. time:** 10 sec

	Action: Close Application (Excel)

2.6 Exceptions Handling

1 Input Excel File Not Found	
The robot cannot locate the Excel file containing trip requests.	Est. time: 00:45

1.1 Notify support team	
Send email to exceptions@trip-bot.com with subject "Input file missing" and include timestamp.	Est. time: 00:30 Action: Notification

1.2 Stop process	
Terminate process gracefully after sending notification.	Est. time: 00:15 Action: Termination

2 Invalid or Missing Data in Excel	
Trip request row contains incomplete or invalid fields (e.g., missing destination or days = 0).	Est. time: 01:00

2.1 Skip row and continue	
Log error and proceed to next valid row.	Est. time: 00:30 Action: Business Rule Exception

2.2 Notify support team	
Send email with details of invalid row (row number, error type).	Est. time: 00:30 Action: Notification

3 Email Sending Failed	
Trip summary email cannot be sent due to SMTP service issue.	Est. time: 01:00

2.7 Input Data Description

The following table should contain details regarding the inputs that every action of the process takes.

#Action	Sample	Input Type	Location	Are inputs Natively Digital*?	Are the Inputs Structured*?
1.1	Trip Request Excel	Excel row	Local folder / Web download	Yes	Yes
1.2	Customer Name, Email	Text	Excel row	Yes	Yes
1.3	Destination, Number of Days, Number of Persons	Text / Number	Excel row	Yes	Yes
1.4	Budget	Number	Excel row	Yes	Yes
1.5	Queue Item	Object	Orchestrator Queue	Yes	Partially (structured by fields)
2.1	Queue Item Data	Object	Performer robot	Yes	Partially (structured fields)
2.2	Destination Info	Excel row	Local Destination Info Excel	Yes	Yes
2.3	Estimated Flight, Accommodation, Activities	Number / Text	Excel row	Yes	Yes
2.4	Customer Email	Text	Queue Item	Yes	Yes
2.5	Generated Email Body	Text / HTML	Robot memory	Yes	Partially (structured template)
2.6	Email Attachment (optional)	PDF/Image	Local folder (generated by robot)	No	No

---

** **Native Digital**: This is data that was originally created digitally e.g. excel, database or application reports etc. The non-native digital inputs are usually scanned images.*

** **Structured Data**: has a predictable format and exists in fixed fields (e.g. an excel cell or a field in a form) and is easily detectable via search algorithms.*

III. TO BE PROCESS DESCRIPTION

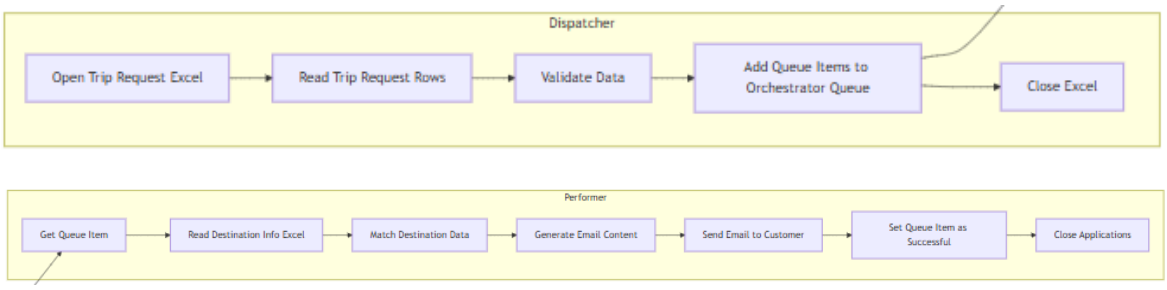
In this section the proposed improvements to the process, actions to the process will be outlined as well as the actions proposed for automation and the type of robot required. **This will be cross-checked by the Solution Architect.**

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.

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
1	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).



3.2. Parallel Initiatives

The table below will capture the proposed Business, Process or Application changes to be made in the near future that would impact the process at hand (if any).

Initiative Name	Process Action(s) where it is identified	Impact on current Automation Request	Expected Completion Date	Contact Person
Trip Request Excel Format Update	1.1, 1.2, 1.3	Changes in column names or structure may require updating read range and validation logic	Q4 2025	Rapa Denis Andrei
Orchestrator Queue Field Standardization	1.5, 2.1	Field names in the queue may change; bot config and mappings need update	Q1 2026	Rapa Denis Andrei
Destination API Integration	2.2, 2.3, 2.4	Could replace Excel lookup with API calls, reducing runtime and increasing accuracy	TBD	Rapa Denis Andrei
Email Template Standardization	2.4, 2.5	Changes to email format may require updating the email body generation	Q2 2026	Rapa Denis Andrei
Multi-Currency Support	2.3	Adding support for multiple currencies may require updating calculation logic	Q3 2026	Rapa Denis Andrei

3.3. In Scope For RPA

The actions in scope for RPA should be listed below:

3.4. Out Of Scope for RPA

The actions **out of scope** for RPA should be listed in the table below together with the reasoning.

TO-BE process is fully automated end-to-end. All process actions from reading trip requests, validating data, queue management, calculating costs, generating emails, and sending them are included in automation.

Activity/Action*	Reason for out of scope	Impact on the TO BE	Possible measures to be taken into consideration for future automation
None	*N/A*	*N/A*	*N/A*

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

3.5. Exceptions Handling

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.

3.5.1. Known Business Exceptions

Details regarding how the robot should handle the exceptions.

Exception Name	Action	Parameters	Action to be taken
No Trip Requests Available	Read Trip Request Excel (Action 1.1–1.3)	Empty Excel or no valid rows	Log "No pending trip requests found", stop execution
Destination Not Found	Match Destination Data (Action 2.3)	No match found in Destination Info Excel	Mark queue item as Business Exception, log details
Queue Connection Failure	Add / Get Queue Item (Actions 1.5 / 2.1)	Queue unavailable or API error	Retry 3 times, if still failing → notify support and stop execution
Email Sending Failure	Send Email to Customer (Action 2.5)	SMTP / Outlook error	Retry 3 times, if still failing → mark queue item as System Exception and notify support
Input Excel File Missing	Open Trip Request Excel (Action 1.1)	File not found	Log error, send notification to support, stop execution

Invalid Customer Data	Validate Data (Action 1.3–1.4)	Missing or incorrect fields	Skip row, log warning, continue with next row
Unexpected System Error	Any Action	Null reference, timeout, or other unhandled error	Retry once; if still failing → mark queue item as Failed, log details, notify support

3.5.2 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.

3.6. 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.

3.6.1. Known Applications Errors and Exceptions

Details regarding how the robot should handle the exceptions.

Error/Exception Name	Action	Parameters	Action to be taken
Trip Request Excel Not Found	Open Trip Request Excel (Action 1.1)	File missing	Log exception, send notification to support, stop process
Invalid Customer Data	Validate Data (Actions 1.3–1.4)	Missing or invalid fields	Log warning, skip row, continue with next valid request
Queue Connection Failure	Add / Get Queue Item (Actions 1.5 / 2.1)	Queue API error / unavailable	Retry 3 times; if still failing, notify support and stop execution

Destination Info Missing	Read Destination Info Excel (Action 2.2)	Destination not found	Log error, mark queue item as Business Exception, continue with next item
Email Sending Failure	Send Email to Customer (Action 2.5)	SMTP / Outlook error	Retry 3 times; if still failing, mark queue item as System Exception, notify support
Unexpected System Error	Any Action	Null reference, timeout, or other unhandled error	Retry once; if still failing, mark queue item as Failed, log details, notify support
No Trip Requests	Read Trip Request Excel (Action 1.1–1.3)	Empty Excel or no valid rows	Log info message "No pending trip requests found" and end execution

3.6.2. 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.

Unexpected null reference errors in any sequence step.

Timeout or unresponsive application windows (Excel, Outlook, Queue, Destination Info).

Network or API failures when connecting to Orchestrator or email servers.

File access issues not previously identified (locked or deleted Excel files).

Unexpected data format changes in input Excel or Destination Info Excel.

Unhandled robot crashes due to memory or resource issues.

Any other application behavior not defined under Known Exceptions.

3.7. 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	Monitoring Tool to visualize the data
Process Logs	*Daily*	*Total number of bot runs per day, average execution duration*	*UiPath Orchestrator Dashboard*
Process Logs	*Monthly*	*Total number of bot runs per month, monthly average runtime*	*UiPath Orchestrator Dashboard / Export to Excel*
Transaction Logs	*Daily*	*Number of trip requests processed, split by "Successful", "Business Exception", and "System Exception"*	*UiPath Orchestrator Transaction Reports*
Error Logs	*Daily*	*List of all process errors with timestamp, action name, and screenshot*	*UiPath Orchestrator Logs*
Email Logs	*Daily*	*Summary of emails sent including recipient, success/failure, and timestamp*	*UiPath Orchestrator Logs / Outlook 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.

Additional Process Documentation		
Video Recording of the process (Optional)	N/A	*Not recorded; could be added for training or review purposes.*
Business Rules Library (Optional)	N/A	*Rules for validating trip request data, budget limits, and queue handling can be documented here.*

Other documentation (Optional)	N/A	*Any notes on exceptions, known limitations, or future improvements.*
Standard Operating Procedure(s) (Optional)	N/A	*Can be created to instruct operators on managing Excel input files and monitoring queue.*
High Level Process Map (Optional)	Included in section 2.3.1 of this PDD	*High-level process overview for management review.*
Detailed level process map (Optional)	Included in section 2.3.2 of this PDD	*Step-by-step process diagram showing Dispatcher and Performer actions.*
Work Instructions (Optional)	N/A	*Could include instructions on manually checking failed queue items or email notifications.*
Input Files (Optional)	Sample Trip Request Excel	*Used for testing data extraction and queue population.*
Output Files (Optional)	Generated Customer Email	*Contains estimated trip cost and itinerary sent to customer.*

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