|  |  |
| --- | --- |
| Graphic 9 | | Process Definition  Document |
|  |  |

Automated Car Searching

This app automates data extraction from three online marketplace websites based on user-defined filters and compiles the first offers into a report, which is then emailed to the user.

Contents

[1. Introduction](#bookmark) 3

[1.1 Purpose](#bookmark1) 3

[1.2 Objectives](#bookmark2) 3

[1.3 Key Contacts](#bookmark3) 3

[1.4 Minimum Pre-requisites for the Automation](#bookmark4) 3

[2. AS IS Process Description](#bookmark5) 4

[2.1 Process Overview](#bookmark6) 4

[2.2 Applications Used](#bookmark7) 5

[2.3 AS IS Process Map](#bookmark8) 5

[2.3.1 High Level Process Map](#bookmark9) 5

[2.3.2 Detailed Level Process Map](#bookmark10) 5

[2.4 Process Statistics](#bookmark11) 5

[2.5 Detailed AS IS Process Actions](#bookmark12) 6

[2.6 Input Data Description](#bookmark13) 6

[3 TO BE Process Description](#bookmark14) 7

[3.1 Detailed TO BE Process Map](#bookmark15) 7

[3.2 Parallel Initiatives](#bookmark16) 7

[3.3 In Scope for RPA](#bookmark17) 7

[3.4 Out of Scope for RPA](#bookmark18) 8

[3.5 Exception Handling](#bookmark19) 8

[3.5.1 Known Business Exceptions](#bookmark20) 8

[3.5.2 Unknown Business Exceptions](#bookmark21) 8

[3.6 Applications Errors & Exceptions Handling](#bookmark22) 9

[3.6.1 Known Applications Errors and Exceptions](#bookmark23) 9

[3.5.2 Unknown Applications Errors and Exceptions](#bookmark24) 9

[3.7 Reporting](#bookmark25) 9

[4 Other](#bookmark26) 10

[4.1 Additional sources of process documentation](#bookmark27) 10

## 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** |
| --- | --- | --- | --- |
| **1** | Ostapciuc Diana Miruna | diana.ostapciuc@gmail.com |  |
| **2** | Micu Alexia Claudia | alexiamicu@gmail.com |  |
| **3** | Persa Boc Oana Maria | [mariapersaboc@gmail.com](mailto:mariapersaboc@gmail.com) |  |

### 1.4 Minimum Pre-requisites for the Automation

1. Filled in Process Definition Document
2. Test Data to support development
3. User access and user accounts creations (licenses, permissions, restrictions to create accounts for robots)
4. Credentials (user ID and password) required to logon to machines and applications

## 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** | ***Automated Car Searching*** |
| **Process Area** | Data Gathering |
| **Department** | IT Automation Support |
| **Short Description**  (operation, activity, outcome) | ***Operation: Automates the process of searching for cars based on user input criteria (Make, Model, Registration Year, Mileage, Price).***  ***Activity: The app gathers input from users, sends it to the backend for processing, retrieves data from car dealership websites, and compiles an Excel report.***  ***Outcome: an excel report which is emailed to the team.*** |
| **Role(s) required in applications to perform the process** | **User**: Provides input criteria via UiPath Apps (Make, Model, etc.).  **Robot**: Automates browser interactions to retrieve car data.  **Email Recipient**: Receives the final Excel report. |
| **Process schedule and frequency** | none |
| **Number of times the process is ran by selected frequency** | once |
| **Process execution time** | ***02 m 07 s*** |
| **Process Restrictions** | ***-Internet connectivity is required for accessing car dealership websites.***  ***-The email system must be properly configured to send reports.***  ***-The process might fail if website layouts are updated unexpectedly (e.g., changes in car search form or data tables).*** |
| **Peak Period (s)** | ***e.g.*** *It is important to understand peaks in order to design a robust and scalable solution.*  ***Example:*** *Beginning of month, usually from 28th to 30th day of each month* |
| **Peak Volume Approximate increase** | ***1*** |
| **Number of persons performing the process** | ***1*** |
| **Expected Volume increase during next periods** | ***e.g.*** *It is important to understand peaks in order to design a robust and scalable solution.*  ***Example:*** *10-20%* |
| **Percentage Un-handled exceptions** | ***40%*** |
| **Input data description** | ***Filter values for: car make, model, price, registration year and mileage*** |
| **Output Data description** | ***A report with separate excel sheets for each searched website containing the top offers and their: car mileage, price, registration year and fuel type*** |

*\*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/Think Client** | **Environment/ Access method** | **Comments** |
| --- | --- | --- | --- | --- | --- |
| **UiPath Studio** | 2025.0.157 | VB.NET | *Thick Client* | Installed on local machine | Used for developing the automation workflow |
| **UiPath Apps** | Latest | Cloud-based (low-code) | Thin Client | Accessible via web browser (Cloud) | Used for creating the front-end interface |
| **UiPath Assistant** | Latest | - | Thick Client | Installed locally, integrated with Orchestrator | Used for running and monitoring attended automations |
| **UiPath Orchestrator** | Latest (Cloud version) | Thick Client | Thin Client | Accessed via web browser | Used for managing and scheduling processes |
| **UiPath Cloud** | Latest | Cloud-based platform | Thin Client | Centralized UiPath cloud platform | Used for hosting Orchestrator and Apps |
| **Excel Application** | Office 365 | VBA (internally) | Thick Client | Accessed via automation activities | Used for generating and handling reports |

*\*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

The high-level process consists of the following steps:

1. User provides search filters such as car make, model, price range, registration year, and mileage via UiPath Apps.
2. The robot accesses three car dealership websites (Mobile.de, Autoscout24.ro, 12gebrauchtwagen.de) and applies the filters to search for offers.
3. The data from the websites is compiled into an Excel report containing the top offers from each site.
4. The robot emails the report to the specified recipients.

**Input Filters** → **Access Websites** → **Scrape Data** → **Generate Report** → **Email Report**

#### 2.3.2 Detailed Level Process Map

This process involves the following detailed steps:

1. User enters search filters via a web-based UiPath App form.
2. Robot navigates to the first website, inputs search criteria, retrieves results, and stores data.
3. Robot repeats step 2 for all configured websites.
4. Robot formats extracted data into an Excel report with a separate sheet for each website.
5. Robot sends the Excel report via email to the intended recipients.

**Action: "Input filters"** → **Action: "Navigate to website"** → **Action: "Fill in filters with data"** → **Action: "Search Offers"** → **Action: "Scrape Offers Data"** → **Action: "Create Report"** →**Action: "Save to Excel"** → **Action: "Email report."**

### 2.4 Process Statistics

**High Level statistics**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Processes** | **Windows** | | **Actions** | **Mouse clicks** | **Keys pressed** | **Text entries** | **Hotkeys used** | **Time** |
| {total\_applications\_count} | {total\_windows\_count} | {total\_actions\_count} | | {total\_clicks} | {total\_keys\_pressed} | {total\_text\_entries} | {total\_hotkeys} | {process\_execution\_time} |
| **1** | 2 | 127 | | 3 | 3 | 14 | 0 | 02m07s |

**Detailed statistics**

| **Window name** | **Mouse clicks** | **Text entries** | **Key pressed** |
| --- | --- | --- | --- |
| {#windows}{name} | {total\_clicks} | {total\_text\_entries} | {total\_keys\_pressed} {/windows} |
| **Mobile.de** | 1 | 5 | 0 |
| **Autoscout24.ro** | 1 | 4 | 3 |
| **12gebrauchtwagen.de** | 1 | 5 | 0 |

### 2.5 Detailed AS IS Process Actions

| **#Action** | **Input** | **Description** | **Details (Screen/Video Recording Index** | **Exception Handling** | **Possible Actions** |
| --- | --- | --- | --- | --- | --- |
| Get input filters | - | *User inputs values for car make, model, year, price and mileage. These get bound to the values from the backend process.* |  | No need for it |  |
| Search for cars on a website | Input filters | The process opens the browser, inputs the filters, searches for offers and uses a form of data scraping to retrieve the information from the offers. |  | Empty filters will be set as default and any other error is displayed on the screen |  |
| Create report of offerts for website | Details of the found offerts | An excel report sheet is created for each website with information about offers: car make, model, year, mileage, price, |  | error is displayed on the screen |  |
| Send email | Offerts report | The excel report is sent to the team. |  | error is displayed on the screen |  |

{#sequenceLayout}

| 1. **Main** |  |
| --- | --- |
| This sequence automates the process of gathering car offers from various websites based on user-provided criteria. | ***02 m 03 s*** |
| 1. **CreateReport** |  |
| This sequence automates the process of gathering car offers from various websites based on user-provided criteria. | ***01 m 58s*** |
| 1. **MobileDe** |  |
| This sequence automates the process of gathering car offers from various websites based on user-provided criteria. | ***00 m 14s*** |
| 1. **AutoScout24** |  |
| This sequence automates the process of gathering car offers from various websites based on user-provided criteria. | ***00 m 19s*** |

| 1. **Wagen** |  |
| --- | --- |
| This sequence automates the process of gathering car offers from various websites based on user-provided criteria. | ***00 m 21 s*** |
| 1. **ExportToExcel** |  |
| This sequence automates the process of gathering car offers from various websites based on user-provided criteria. | ***01 m 01 s*** |
| 1. **SendReportOnEmail** |  |
| This sequence automates the process of gathering car offers from various websites based on user-provided criteria. | ***00 m 05 s*** |

{#actionLayout}

| **1.1 Invoke Workflow** |  |
| --- | --- |
| Invokes workflows | ~ 00m 01s |
| **2.1 Export to Excel** |  |
| For each website, creates a new excel sheet. | ~ 01m 58s |
| **3.1 Use Browser** |  |
| Opens a Chrome browser to mobile.de. | ~ 00m 02s |
| **3.2 Select Item** |  |
| Selects the item in dropdown lists. | ~ 00m 01s |
| **3.3 Type Into** |  |
| Types into TextBox filter fields | ~ 00m 01s |

| **3.4 Click** |  |
| --- | --- |
| Clicks the “Search Offers” button | ~ 00m 02s |
| **3.5 Get Text** |  |
| Scrapes the resulting offers for data | ~ 00m 12s |
| **4.1 Use Browser** |  |
| Opens a Chrome browser to autoscout24.ro | ~ 00m 02s |
| **4.2 Select Item** |  |
| Selects the item in dropdown lists. | ~ 00m 01s |
| **4.3 Type Into** |  |
| Types into TextBox filter fields | ~ 00m 01s |
| **4.4 Click** |  |
| Clicks the “Search Offers” button | ~ 00m 02s |
| **4.5 Get Text** |  |
| Scrapes the resulting offers for data | ~ 00m 14s |
| **5.1 Use Browser** |  |
| Opens a Chrome browser to 12gebrauchtwagen.de | ~ 00m 02s |
| **5.2 Select Item** |  |
| Selects the item in dropdown lists. | ~ 00m 01s |

| **5.3 Type Into** |  |
| --- | --- |
| Types into TextBox filter fields | ~ 00m 01s |
| **5.4 Click** |  |
| Clicks the “Search Offers” button | ~ 00m 02s |
| **5.5 Get Text** |  |
| Scrapes the resulting offers for data | ~ 00m 12s |
| **6.1 Add Data Column** |  |
| Adds column to the report (colums: fuelType, price, mileage, year) | ~ 00m 12s |
| **6.2 Use Excel File** |  |
| Uses an excel file | ~ 00m 01s |
| **6.3 Insert Sheet** |  |
| Inserts a sheet into the excel file | ~ 00m 01s |
| **6.4 Write DataTable to Excel** |  |
| The data gets saved to the excel fule | ~ 00m 10s |
| **7.1 Send SMTP Mail Message** |  |
| Sends an email with the created report. | ~ 00m 05s |

### 2.6 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\*?** |
| --- | --- | --- | --- | --- | --- |
| Collect Filters | Make: "Toyota" | *Text Field* | UiPath Apps | Yes | Yes |
| **Collect Filters** | Model: "Corolla" | *Text Field* | UiPath Apps | Yes | Yes |
| **Collect Filters** | ***Registration Year:”2007”*** | Drop-down | UiPath Apps | Yes | Yes |
| **Collect Filters** | ***Mileage:”100000”*** | Drop-down | UiPath Apps | Yes | Yes |
| **Collect Filters** | ***Price:***  ***”20000”*** | Drop-down | UiPath Apps | Yes | Yes |

*\* 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.*

## 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.**

**The TO BE process follows these steps:**

1. **User enters filters via UiPath Apps.**
2. **The process accesses the specified car dealership websites, applies filters, and retrieves the data.**
3. **The process processes the data into an Excel report.**
4. **The process sends the report via email to recipients.**

### 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** |
| --- | --- |
| Picture 3 | Action number in the process. Referred to in details or Exceptions and Errors table. |
| Graphic 10 | This process action is proposed for automation. |
| Graphic 11 | 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** |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |

### 3.3 In Scope for RPA

The actions in scope for RPA should be listed below:

1. Retrieving user input filters from UiPath Apps.
2. Navigating to car dealership websites.
3. Extracting car offer data based on user-defined filters.
4. Compiling the data into an Excel report with separate sheets for each website.
5. Sending the report via email to designated recipients.

### 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.

| **Activity/Action\*** | **Reason for out of scope** | **Impact on the TO BE** | **Possible measures to be taken into consideration for future automation** |
| --- | --- | --- | --- |
|  |  |  |  |

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

### 3.5 Exception 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** | **Actions to be taken** |
| --- | --- | --- | --- |
| *Car make doesn’t exist* | *Action 3,4,5* | *Car Make* | *Show message box on screen with the error.* |
| *Car model doesn’t exist* | *Action 3,4,5* | *Car Model* | *Show message box on screen with the error.* |
| *Cannot find car offers* | *Action 3,4,5* | *n/a* | *Show message box on screen with the error.* |

#### 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.

*For all unanticipated exceptions:*

* *Take a screenshot of the error.*
* *Notify the responsible team via email with the error log.*
* *Proceed to the next transaction if applicable, or halt execution for critical errors.*

### 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** | **Actions to be taken** |
| --- | --- | --- | --- |
| *Website Unresponsive* | *Action 3,4,5* | *Timeout settings* | *Show message box on screen with the error.* |
| *Cannot write to Excel because it is open* | *Action 6* | *N/A* | *Show message box on screen with the error.*  *Close the Program* |
| *Cannot send email due to network* | *Action 7* | *Timeout settings* | *Show message box on screen with the error.* |

#### 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.

*If an unknown error occurs:*

1. *Retry the action twice.*
2. *If unresolved, terminate the thread and notify the team with an error log.*

### 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** |
| --- | --- | --- | --- |
| *N/A* | *N/A* | N/A | ***N/A*** |

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

## Other

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.**

### 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)** | Acme-System1-Process-WI5-Manual-Walkthrough | Insert any relevant comments |
| **Business Rules Library (Optional)** | Insert link to Business rules library | Insert any relevant comments |
| **Other documentation (Optional)** | Insert link to any other relevant process documentation (L4, L5 process description, fields mapping files etc.) | Insert any relevant comments |
| **Standard Operating Procedure(s) (Optional)** |  | Insert any relevant comments |
| **High Level Process Map (Optional)** |  | Insert any relevant comments |
| **Detailed level process map (Optional)** |  | Insert any relevant comments |
| **Work Instructions (Optional)** |  | Insert any relevant comments |
| **Input Files (Optional)** |  | Insert any relevant comments |
| **Output Files (Optional)** |  | Insert any relevant comments |

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