|  |  |
| --- | --- |
|  | | Process Definition  Document |
|  |  |

**Social Media Manager**

An automation solution that logs into Instagram, makes a post, extracts posts data including links and like counts, exports the information into a structured Excel file, and logs out securely, streamlining social media management tasks.

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## 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** |
| --- | --- | --- | --- |
| **Project Mentor** | Pop Andreea |  |  |
| **Developer** | Oanea Gabriel Alexandru |  |  |
| **Developer** | Ognean Mihnea Ionut |  |  |

### 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** | ***Instagram Social Media Manager*** |
| **Process Area** | Social Media Management |
| **Department** | Marketing/Automation |
| **Short Description**  (operation, activity, outcome) | ***Automates login to Instagram, makes a post, retrieves all posts with links and like counts, exports data to Excel, and logs out.*** |
| **Role(s) required in applications to perform the process** | UiPath Robot, Instagram Account Access |
| **Process schedule and frequency** | Scheduled daily or on-demand |
| **Number of times the process is ran by selected frequency** | Once per execution |
| **Process execution time** | ***~5-7 minutes for accounts with up to 50 posts (depending on account size and network speed)*** |
| **Process Restrictions** | ***Requires stable internet connection, active Instagram credentials, and no CAPTCHA during login.*** |
| **Peak Period (s)** | ***End of each month when post analytics need to be reviewed for reporting.*** |
| **Peak Volume Approximate increase** | ***Up to 20% increase in workload during peak reporting times*** |
| **Number of persons performing the process** | ***0 (fully automated)*** |
| **Expected Volume increase during next periods** | ***~15%, considering potential addition of accounts or increased reporting frequency.*** |
| **Percentage Un-handled exceptions** | ***~10% (e.g., failed logins due to incorrect credentials or Instagram UI changes)*** |
| **Input data description** | ***Instagram username and password*** |
| **Output Data description** | ***Excel file with post links, like counts, and post details (e.g., captions, dates).*** |

*\*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 | English | Thick Client | Local Development Setup | Used for developing and debugging workflows. |
| Instagram (Web App) | N/A | English | Thin Client | Browser (Chrome) | Target platform for automation: login, data extraction, logout. |
| Microsoft Excel | Office 365 | English | Thick Client | Local Installation | Used for storing extracted data into an Excel file. |

*\*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

1. Login to Instagram: Authenticate using stored credentials.
2. Extract Posts Data: Retrieve links, captions, and like counts for all posts.
3. Export to Excel: Save the extracted data into a structured Excel file for further analysis.
4. Logout: Safely log out to end the session.

{%diagram}

#### 2.3.2 Detailed Level Process Map

* Open Google Chrome and navigate to the Instagram login page.
* Extract the user and password from excel.
* Wait for the page to load.
* Make a post
* Navigate to the user profile and scroll to load all posts.
* For each post:
* Click on the post.
* Extract the post link, caption, and like count.
* Save the data into a temporary DataTable.
* Close the post and repeat for the next one.
* Once all posts are processed, open Microsoft Excel and export the DataTable into a structured worksheet.
* Log out of Instagram to secure the account.
* Close all applications and finalize the process.

### 2.4 Process Statistics

**High Level statistics**

| **Processes** | **Windows** | | **Actions** | **Mouse clicks** | **Keys pressed** | **Text entries** | **Hotkeys used** | **Time** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Login/Logout | 2 | ~50 | | 20 | ~60 | 2 | 0 | ~2 mins |
| Post | 1 | ~50 | | 10 | ~2 | 1 | 0 | ~1 min |
| Extract Posts | 1 | ~300 | | 80 | ~50 | 0 | 0 | ~5 mins |
| Export to Excel | 1 | ~50 | | 20 | ~40 | 0 | 0 | ~2 mins |

**Detailed statistics**

| **Window name** | **Mouse clicks** | **Text entries** | **Key pressed** |
| --- | --- | --- | --- |
| Login | 10 | 2 | ~30 |
| Logout | 5 | 0 | ~10 |
| Profile View | 15 | 0 | ~20 |

### 2.5 Detailed AS IS Process Actions

| **#Action** | **Input** | **Description** | **Details (Screen/Video Recording Index** | **Exception Handling** | **Possible Actions** |
| --- | --- | --- | --- | --- | --- |
| 1 | Username, Password | Login process with valid credentials | Enter credentials, | Handle invalid credentials (show error message) | Success -> Dashboard, Fail -> Retry |
| 2 | - | Navigate to profile page | Click on profile icon | Handle loading issues | Success -> Profile loaded |
| 3 | - | Extract post data (links, likes) | Scroll through posts, extract data | Handle missing data (retry extraction for post) | Success -> Data saved |

{#sequenceLayout}

| 1. Login Sequence |
| --- |
| Logs into Instagram using stored credentials. | ~2 mins |

| 1. **Data Extraction Sequence** |
| --- |
| Navigates to the user profile, scrolls through posts, extracts post links and like counts, and stores data in a DataTable. | ~5 mins |
| 1. **Export to Excel Sequence** |
| Opens Microsoft Excel, writes the extracted data from the DataTable into a structured format, and saves | ~2 mins |
| 1. **Logout Sequence** |
| Logs out of Instagram to securely end the session. | ~1 mins |

{#actionLayout}

| **1.1 {actionTitle}** |
| --- |
| {actionDescription} | Est. time: {action\_execution\_time} |
| {%actionImage} | {#action\_metadata}  Action: {action\_type}  {/action\_metadata} |

{/actionLayout}

{/sequenceLayout}

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

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### 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\*?** |
| --- | --- | --- | --- | --- | --- |
| Login | Username  password | *String*  *String* | Instagram | - | Yes |
| **Post** | Photo path and description | String | My device | - | 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.**

### 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** |
| --- | --- |
|  | 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** |
| --- | --- | --- | --- | --- |
| Advanced Reporting Dashboard | Build a dashboard for visualizing extracted Instagram data. | Provides a real-time view of metrics, reducing reliance on Excel exports. | Q3 2025 | Gabriel Oanea (developer) |
|  |  |  |  |  |

### 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.

| **Activity/Action\*** | **Reason for out of scope** | **Impact on the TO BE** | **Possible measures to be taken into consideration for future automation** |
| --- | --- | --- | --- |
| Manually solving CAPTCHAs | CAPTCHAs cannot be automated due to compliance and legal restrictions. | Process might require human intervention when CAPTCHAs appear. | Implement API-based CAPTCHA-solving solutions (if compliant with policies). |

*\*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** |
| --- | --- | --- | --- |
| Invalid Instagram Login | Retry login process | Username, Password | Retry login up to 3 times; if still unsuccessful,please contact our developers and stop the process. |
| Post Data Missing | Skip to next post | Post URL | Log the missing post URL in a report file and proceed to the next post. |
| Excel File Save Error | Retry saving file | File Path | Retry saving the file twice; if it fails, send an alert and terminate the process. |
| Network Disconnection | Pause and retry connection | None | Pause the process for 5 minutes and retry; if unsuccessful, log the issue and stop the process. |

#### 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** | **Actions to be taken** |
| --- | --- | --- | --- |
| *e.g. Application Crash* | *e.g. Any action* | *e.g. Error message* | *e.g. recover and retry 3 times* |

#### 3.5.2 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.*

### 3.7 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** |
| --- | --- | --- | --- |
| *e.g. Process logs* | *e.g. Daily* | *e.g. How many times was this process run since the beginning of the month and what was the average run duration* | *e.g. Kibana* |
| *e.g Process logs* | *e.g. Monthly* | *e.g. How many robots worked on this process per each month?* | *e.g. Csv file posted daily on share drive* |
| *e.g Transaction logs* | *e.g. Daily* | *e.g. How many transactions were run by this process since the beginning of the month and what was the average transaction duration?* | *e.g. Kibana* |
| *e.g Error logs* | *e.g. Daily* | *e.g. Average number of errors by type per day* | *e.g. Kibana* |
| *e.g Error logs* | *e.g. Daily* | *e.g. All errors per month grouped by type* | *e.g. Csv file posted daily on share drive* |

*\* 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.*