

**Tobor Inc.**

User request and content automation

Detailed Process Description

Version 1.0

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Date Issued | Version | Description | Author |
| 15/06/2020 | 1.0 | Draft | Melissa Potts |
| 17/06/2020 | 1.01 | Added in description of manual process along with manual process flow. | Melissa Potts |
| 18/06/2020 | 1.02 | Added in an overview of the automation and details on the target systems. | Melissa Potts |
| 19/06/2020 | 1.03 | Added in details about the workload and constraints following on from Roberto’s reply to my questions email. | Melissa Potts |
| 23/06/2020 | 1.04 | Added details to how the automation will run in the automation walkthrough section | Melissa Potts |
| 24/06/2020 | 1.1 | Sent to Roberto for initial review | Melissa Potts |

Contributors

The content of this document has been authored with the combined input of the following group of key individuals.

|  |  |  |
| --- | --- | --- |
| Name | Role | Area |
| Melissa Potts | RPA Consultant | QAC |

Business Sign-off

The following table contains the people required to sign-off and/or review this document and those that require the document for information only.

|  |  |  |
| --- | --- | --- |
| Name | Department | Responsibility |
| David Bradbury | Managing Director | Sign off |
| Roberto Fernandez | Backend Application Manager and Project PM | Review / Sign off |
| Chris Lucas | Consultant Project Liaison | Information |

Document Classification

|  |  |
| --- | --- |
| Classification | *Company Confidential* |
| Definition | Information is company confidential and needs to be protected |
| Context | Where loss of information confidentiality would result in significant harm to the interests of the Organization, financial loss, embarrassment or loss of information |

Contents

[1 Introduction 4](#_Toc26352448)

[2 Manual Process 4](#_Toc26352449)

[2.1 Overview 4](#_Toc26352450)

[2.2 Detailed Process Flow 4](#_Toc26352451)

[3 Automation Proposal 4](#_Toc26352452)

[3.1 Overview 4](#_Toc26352453)

[3.2 Automated Process Flow 4](#_Toc26352454)

[3.3 Target Systems & User Requirements 4](#_Toc26352455)

[3.4 Impacted Business Areas 5](#_Toc26352456)

[3.5 Workload 5](#_Toc26352457)

[3.6 Operational Constraints 5](#_Toc26352458)

[3.7 Delivery 5](#_Toc26352459)

[3.8 Contact List 5](#_Toc26352460)

[4 Automation Details 6](#_Toc26352461)

[4.1 Automation Walkthrough 6](#_Toc26352462)

[4.1.1 *First robot action* 6](#_Toc26352463)

[4.1.2 *second robot action* 6](#_Toc26352464)

[4.1.3 *third robot action etc.* 6](#_Toc26352465)

[4.2 Reporting 6](#_Toc26352466)

[4.2.1 Business Exceptions 6](#_Toc26352467)

[4.2.2 System Exceptions 6](#_Toc26352468)

[4.2.3 Performance 7](#_Toc26352469)

[4.2.4 Triggers 8](#_Toc26352470)

# 1 Introduction

Tobor Inc. recently launched a new content aggregation application, which proved to be extremely well received. This launch brought an unprecedented number of new registrations and has thus brought up some problems. The process of registering new users, fulfilling change requests and aggregating and sending out content has proved to be very time consuming, taking up to 50% of the backend application managers day. Therefore, this process has been identified as an ideal candidate for automation due to the potential time saved and its repetitive and structured nature.

# 2 Manual Process

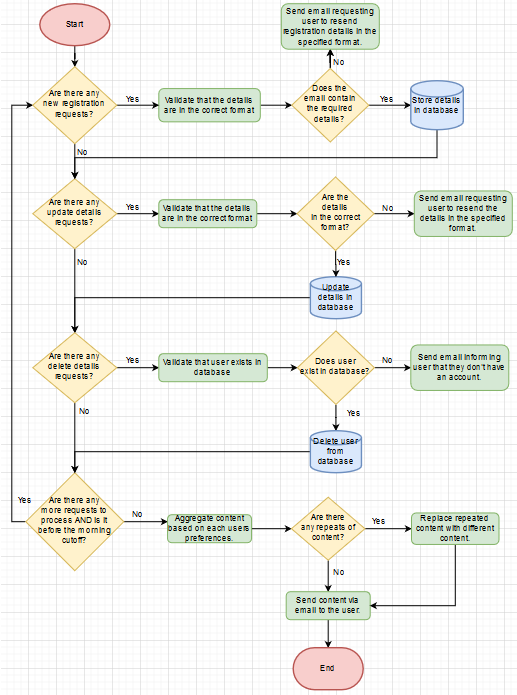
## 2.1 Overview

The process is triggered when the user downloads and registers with the app. The registration details are sent from the users’ email to the company email. The backend application manager will then carry out the following steps:

* Sort through the emails based on their subject (register, change and delete). Any registrations will be handled first.
* Validate that the details are in the correct format and all there (From the email template they will be presented in a table in the email).
* Store the details in a database.
* Confirmation of registration sent to user.
* Any update requests are processed, and the database is updated with these changes. Emails are presented in same format as with the registration emails.
* Delete requests are processed, and users who requested removal from the app are removed from the database.
* After the morning cut off, content is aggregated from a minimum of 3 websites, based on each of the registered users’ preferences.
* Check that there are no repeats in content and format the content to look clear and easily readable to the user.
* The content is sent out to the users.
* The users receive the content.
* A report of user data actions and content delivered is collated and sent as a PDF via email daily. This report contains all the change requests fulfilled that day, noting whether they were successful or not. It also details what content has been sent out and to who.

## 2.2 Detailed Process Flow

Manual process flow is shown on the next page:



# 3 Automation Proposal

## 3.1 Overview

Process to be automated:

* Registration of new users, updating user details and removal of users from the app.
* Content aggregation and formatting.
* Sending content out to the users.
* Daily reporting.

The process wil be automated in UIPath anl run on an attended robot. A member of the team will be able to interact with the process as it is running. The process will run every day, with certain parts of the process triggered at certain times in the day.

## 3.2 Automated Process Flow

The automated process flow will be identical to the manual process flow. Every section carried out by the team will be automated. The only minor difference will be that fake user data will be generated before the main automation runs, due to not having access to real user data.

## 3.3 Target Systems & User Requirements

| Name | Description | User Permissions/Access |
| --- | --- | --- |
| MS Outlook | Email Inbox – simulate company inbox and responses to user requests. | Robot will require access to the inbox to read user request emails. It will also require the ability to send emails to the users. For reporting purposes, the robot will require access to other folders in the mailbox that will be used for storing completed requests. |
| Gmail | Email Inbox – simulate user interactions such as registering a new user or updating a current users’ details. | Min two robot inboxes required, one for new registrations and the other for updating details. The robot will require the ability to send emails. |
| Bestrandoms.com | Website used for generating the fake user data | Robot will scrape first name, last name, address and phone number data from pages within the website to generate a fake user database. |
| Websites used for content aggregation | A minimum of three websites will be used per content preference to gather content from | Robot will scrape headlines and article abstracts from these websites and put them into an email. |

## 3.4 Impacted Business Areas

* Development department

## 3.5 Workload

|  |  |
| --- | --- |
| *Max. no. of user requests per week* | 35 |
| *Min. no. of user requests per week* | 8 |
| *Average no. of user requests per week* | 10 |
| *Are there any periods when a higher workload is anticipated?* | Potential spikes when there are big sporting events on or a huge news story. |
| *How many people do this process per day?* | 1 |

Automating the user registration and content aggregation process will realise an average time saving of 80 minutes (1 hr 20 mins) per day. This is based on an average time spent per user of 40 minutes and an average of 10 user requests processed per week.

## 3.6 Operational Constraints

* Morning cut-off for user requests (register, update details and delete) is 11:30am.
* Automation will run daily within work hours (9am until 5pm).
* Scheduled maintenance of email systems or the app.

## 3.7 Delivery

A minimum viable product will be expected by the 26/06/2020.

## 3.8 Contact List

Managing Director – David Bradbury

Backend Application Manager and Project PM – Roberto Fernandez

Consultant Project Liaison – Chris Lucas

Consultant – Melissa Potts

# 4 Automation Details

## 4.1 Automation Walkthrough

### 4.1.1 Create Fake user database

* Open browser with bestrandoms.com URL
* Navigate to the first names, last names and addresses pages of the website, scraping the corresponding data from each page. The total amount of user details data scraped from these pages should equal 50 users.
* Complete any necessary data manipulation to make the user details easy to read and in the same format as what would be received in the registration emails.
* Create a data table and input the user data into this.
* Write this to an Excel file so that it can be evaluated manually if needed.

### 4.1.2 simulate user registration email

* Using the same workflow created for generating the user data, generate 3 more users that will be used in the registration email process
* Read in email template for registering users and input each user’s data into emails.
* Send email via Gmail account to the outlook email account with subject “REGISTER”

### 4.1.3 Simulate updating user details email

* Randomly pick 3 users currently registered in database to update details of.
* Using same workflow created for generating the user data, generate new details for these randomly selected users
* Read in email template for updating a user and input the new values into the emails
* Send the emails via Gmail account to the outlook email account with subject “CHANGE”

### 4.1.4 Simulate Delete user email

* Randomly pick 3 currently registered users to delete from database
* Send email via Gmail account to the outlook email account with subject “DELETE”

### 4.1.5 Complete user requests

* Read in emails from the outlook email inbox.
* If email subject is “REGISTER”:
  + If details are in the correct format and there are no null values:
    - Extract user details from the email and add to the database
    - Send confirmation of registration email to user
    - Move email to “SUCCESS” folder within outlook email
  + Else, send email to user asking for them to resend their details I the correct format & EXCEPTION
    - Move email to “FAILED” folder
* If email subject is “CHANGE”:
  + If details are in the correct format and there are no null values:
    - Extract user details from email
    - Use their email to search for the user in the database
    - If user found:
      * Update details in database with those in the email
      * Send confirmation of update email to user
      * Move email to “SUCCESS” folder within outlook email
    - Else, send email to user saying they are not currently registered with the app & EXCEPTION
      * Move email to “FAILED” folder
  + Else, send email to user asking for them to resend their details I the correct format & EXCEPTION
    - Move email to “FAILED” folder
* If email subject is “DELETE”:
  + Extract the users email address from the mail and use that to search for them in the database
  + If, user found:
    - Remove from database
    - Send confirmation of removal email to user
    - Move email to “SUCCESS” folder
  + Else, send email to user saying they are not currently registered with the app & EXCEPTION
    - Move email to “FAILED” folder
* Else, move email to “FAILED” folder & EXCEPTION
* If there are any more requests to fulfil:
  + Repeat
* Else, wait for cut-off point trigger and then continue

### 4.1.6 Aggregate content

* Open browser and navigate to first website of a particular content preference category
* Scrape the first 5 article results. Headline and abstract information are what should be scraped
* Repeat this for the next 2 websites within the category
* Tidy up the data so that it is clear, concise and readable.
* If the scraped data contains any null values:
  + Remove articles with null values
  + Re-scrape data if needed
  + After a certain number of retries end process & EXCEPTION
* Check that there is no repeating data
* If there is repeating data:
  + Remove repeats and re-scrape for any extra data needed
* Repeat these steps for all other categories within the app

### 4.1.7 Content Delivery

* Read in email template for the content email
* Assign the scraped content of the same content preference to correct sections of the template.
* Send email to all users that have that content preference
* Save information on sent content and who it was sent to into a text file

## 4.2 Reporting

### 4.2.1 Business Exceptions

|  |  |
| --- | --- |
| Exception | Solution |
| User request email is not in expected format | Move to an errors folder and send reply requesting the user to resend information in correct format. |
| User request email contains null values | Move to an errors folder and send reply requesting the user to resend information in correct format with all fields filled in. |
|  |  |
|  |  |
|  |  |

### 4.2.2 System Exceptions

|  |  |
| --- | --- |
| Exception | Solution |
|  |  |

A performance report will be emailed to Tobor Inc. each time the process runs (showing worked cases, exceptions and a cumulative processing log)

### 4.2.3 Performance

Once the processes have successfully completed a performance report and processing log will be emailed to Roberto Fernandezas an excel file.

**Performance Report**

This will contain all exceptions (business and system) and successes for the automated Process, based on the last automation execution completion (i.e. based on the last time the process ran)

### 4.2.4 Triggers

The robot will be triggered at 11:30 am every day. This will then go through any user requests that have been emailed to the company before the cut-off time. Once the requests have been fulfilled, the robot will begin the content aggregation and delivery process, depending on whether the users asked for a daily interval or weekly interval.