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*Business Requirement Document (BRD)*

**Property Condition Report (PCR) Automation**

*Document History:*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Date* | *Version* | *Prepared By* | *Role* | *Validated By* | *Comments* |
| *02-24-2022* | *1.0* | *Krithika Mahalingam* | *RPA Developer* |  | *Draft Version* |
| *03-07-2022* | *2.0* | *Krithika Mahalingam* | *RPA Developer* |  |  |
| *03-11-2022* | *3.0* | *Ninad Tambe* | *Project Owner* |  | *Formatting changes.* |

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## *Introduction*

### *Purpose of the document*

Business Requirement Document (BRD) outlines the existing and proposed business process automation for PCR activity, using UiPath Robotic Process Automation (RPA) technology.

The document describes the sequence of steps performed as part of the business process, the conditions, and rules of the process prior to automation and how they are envisioned to work post automation, partly or entirely. This specification document serves as a base for developers, providing them the details required for applying robotic automation to the selected business process.

### *Objectives*

The process that has been selected for automation is the PCR process.

The business objective and benefits expected by the Business Process Owner post automation of the selected business process are:

Objective:

* Automate the current manual PCR process

Benefits:

* Several stages of the process such as – Review, Preparation and Approvals are all automated resulting in time savings (roughly 2000 hours per year)
* Track the approvals and documents collected in a centralized location
* Save the data abstracted from PCR in a database to allow for easy reference, reporting and predictive capabilities
* Connect to the proposed Source2Book project to streamline the entire PCR activity (future phase)

### *Process key contacts*

The specifications document includes concise and complete requirements of the business process and is built based on the inputs provided by the **process** **Subject Matter Expert (SME)/ Process Owner.**

The **Process Owner** is expected **to review and provide signoff for accuracy** and completion of the steps, context, impact, and complete set of process exceptions.

|  |  |  |
| --- | --- | --- |
| *Role* | *Name* | *Contact details*  *(email, phone number)* |
| **Process SME / Business Champion** | * May Pham | mpham@realtyincome.com |
| **Process Reviewer / Business Sponsor** | * Andrew Thompson | athompson@realtyincome.com |
| **Process Owner** | * Andrew Thompson | athompson@realtyincome.com |

### 

### *Minimum Pre-requisites for automation*

1. Filled in Process Definition Document (PDD)
2. Bot Credentials (user ID and password) required to login to Site Lynx and Outlook application
3. Relevant test data to support development
4. Access to all the required applications of the process (SiteLynx, MS excel, Outlook, Sharepoint)
5. Access to UiPath

## *As Is process description*

### *Process Overview*

*General information about the process selected for RPA prior to automation.*

|  |  |  |
| --- | --- | --- |
| *#* | *Item* | *Description* |
| *1* | ***Process full name*** | *PCR Process Phase 1* |
| *2* | ***Process Area*** | *Property condition Reporting* |
| *3* | ***Department*** |  |
| *4* | ***Process short description***  *(operation, activity, outcome)* | *This process is utilized to verify the immediate and long-term costs of a property and the data is collected in an excel sheet which is maintained in the shared folder.* |
| *5* | ***Role(s) required for performing the process*** |  |
| *6* | ***Process schedule and frequency*** | *Five times a day* |
| *7* | ***# of items processes/ Monthly?*** | *Approx. 80 items* |
| *8* | ***Average handling time per item (approx.)*** | *1**minute* |
| *9* | ***Peak period (s)*** | *TBD* |
| *10* | ***Total # of FTEs supporting this activity*** | *TBD* |
| *11* | ***Level of exception rate*** | *TBD* |
| *12* | ***Input data*** | *Excel sheet downloaded from SiteLynx* |
| *13* | ***Output data*** | *Excel sheet with the costs data* |
| *14* | ***Dependencies***  *(Upstream, downstream)* | *Reports should be available on sitelynx* |

### *Applications used in the process*

*The table includes a comprehensive list all the applications that are required as part of the process automation, at various steps in the flow.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *#* | *Application name & version* | *System*  *Language* | *Login Module* | *Interface* | *Environment/*  *Access method* | *Comments (Include URLs)* |
| *1* | *SiteLynx* | *EN* | *Direct* | *Web Application* |  | [*www.sitelynx.net*](http://www.sitelynx.net) |
| *2* | *Outlook* | *EN* |  | *Desktop Application* |  |  |
| *3* | *MS Excel* | *EN* |  | *Desktop Application* |  |  |
| *4* | *Internet Browser* | *EN* |  | *Web*  *Application* |  |  |

### *As Is Process Map*

*This section of the document defines or explains how the process is currently being performed.*

*Below is the high-level process map of the As Is process.*

**

Diagram

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### *As-Is Process Step*

|  |  |  |  |
| --- | --- | --- | --- |
| *Step* | *Detail* | *Screen / Document* | *Exception Handling* |
|  | * *Launch* ***Outlook application*** * *Process triggered by email from Legal or an email from SiteLynx admin.* * *Legal mentions if the deal is part of portfolio. (For bulk deals)* | Graphical user interface, text, application, email  Description automatically generated  Graphical user interface, text, application, email  Description automatically generated |  |
|  | * *Access SiteLynx and Login using developer’s credentials* * *Look for the reports mentioned in Email* | Graphical user interface, text, application, email  Description automatically generated |  |
|  | * *Download the available reports in cost table format by clicking the cost link for PCA report* | Graphical user interface, text, application, email  Description automatically generated |  |
|  | * *Go to ‘Immediate and Short term’ tab for immediate expenses and tab ‘Capital Reserve’ for long term expenses* * *The tables can be exported in Excel format by clicking the download icon* |  |  |
|  | * *If reports not found on sitelynx, documents received by email from Partner contacts* | Graphical user interface, text, application  Description automatically generated |  |
|  | * *To make sure costs match, May’s team looks for PCR, ADA and roof reports.* * *Reports are ordered by legal and May’s team gets to know how many reports to expect only when they get the email from legal* * *If reports are uploaded later, or reports are revised, May’s team gets an email.* | Graphical user interface, text, application, email  Description automatically generated |  |
|  | * *May’s team goes through costs table, segregates immediate and long-term costs* * *Below rules are followed:*  1. *Any cost below $1000 is removed* 2. *Years 9 and above are removed* 3. *Year 6,7 and 8 – anything below $ 10k is removed.* 4. *Costs that recur for the entire 12 years are left out (example – Roof maintenance)* 5. *Landlord or Tenant responsibility – Legal must be giving this data, but sometimes it is not received and May is able to find the details from New deal email* | Graphical user interface, application, table, Excel  Description automatically generated |  |
|  | * *For single deals, summary of costs is prepared in a separate excel file. For bulk deals, the properties in the deal are appended in a singe excel sheet.* |  |  |
|  | * *Once the review is over, an email is sent to deal captain, paralegal, attorney and May’s team* * *Acquisition signs off in the second tab of summary of costs and replies in email* * *If there are no changes pointed out, then the process ends at this point* | Graphical user interface, table  Description automatically generated  Graphical user interface, text, application, email  Description automatically generated Table  Description automatically generated |  |

### 

### *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* | | |
| ***List of supporting documents*** | [*https://realtyincomeo365.sharepoint.com/:f:/r/sites/Research/Shared%20Documents/General/UiPath/Realty%20Income\_Use%20Cases/Use%20Case%20%232\_May%20Pham?csf=1&web=1&e=PBENSO*](https://realtyincomeo365.sharepoint.com/:f:/r/sites/Research/Shared%20Documents/General/UiPath/Realty%20Income_Use%20Cases/Use%20Case%20%232_May%20Pham?csf=1&web=1&e=PBENSO) |  |

## *To Be Process Description*

*This chapter highlights the expected design of the business process after automation.*

### *To Be Process Map*

*Below is the high-level process map of the To- Be process.*

**Diagram

Description automatically generated

### To-Be *Process* Details (Proposed)

1. Bot will launch Outlook application and Read emails from Site lynx.
2. Take note of project number available, along with Tenant name and City.
   1. If project number is empty, report it as Exception.
3. Open Site Lynx web application and login.
   1. If site is not opened, report it as Exception.
   2. If login error, report it as exception
4. Go to Portfolios tab, search with project number to see if the project number is part of a bulk deal.
   1. If yes, download cost tables from portfolio.
   2. If not, proceed with processing the single deals
5. Navigate back to Dashboard
6. Search for the appropriate reports by looking up project number from email
   1. If data not found, send an email, and report it as Exception.
7. Click on the cost link and download excel by navigating to appropriate tables
   1. If cost link not found, send an email and report it as exception
8. For Reports download, search for project number in dashboard and download all available attachments
9. Compute summary of costs by incorporating the set of rules used by May’s team.
10. Upload PDF Reports, Zip file Reports, Cost tables and Summary of Cost to SharePoint
11. Attach the project folder’s SharePoint link and send email to May and team

### *To-Be Process Steps*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Step* | *Detail* | *Screen / Document* | *Exception Handling* | | |
|  | * Launch Outlook application and look for emails from admin@siteLynx.net for reports available | Graphical user interface, text, application, email  Description automatically generated | |  |
|  | * Read Emails and get the project number from the email, stripping the decimal value for the number of reports * Eg – 21.348983 | Graphical user interface, text, application, email  Description automatically generated | |  |
|  | * Open SiteLynx Web application * If site is not opening, stop and report error * If login error, stop bot and report error |  | |  |
|  | * Go to portfolios tab and search for the project number in the search bar. * If project number is found, the project is marked to be a portfolio and the portfolio name and number of files is identified * If project number is not found in any of the portfolio, the project is not part of a portfolio |  | |  |
|  | * Search for appropriate reports by using project number without the extension from email.( Eg – 21.348983) * Project number lookup and look for the required reports * There is one PCA report found for single deals and multiple for portfolio | Graphical user interface, text, application, email  Description automatically generated | |  |
|  | * To download the reports in excel format for deals with one PCA report (single deal), click the cost link | Graphical user interface, text, application, email  Description automatically generated | |  |
|  | * Go to tab ‘Immediate and short-term repairs’ for immediate expenses and tab ‘Capital Reserve’ for long term expenses |  | |  |
|  | * The tables can be exported in Excel format by clicking the download icon * Once both reports are available, proceed to download PDF reports |  | |  |
|  | * For portfolio, go to portfolios tab and click on link with portfolio name to get cost tables * Go to ‘Repairs’ for immediate costs (short term expenses) and ‘Reserve’ for long term costs * The tables are downloaded to excel format with clicking the download icon * Move to dashboard to download PDF reports |  | |  |
|  | * On dashboard, search with the project number and click each of the PDF icons to download the reports in the available format (expected formats are .zip and .pdf) |  | |  |
|  | * Compute the summary of costs by incorporating the set of rules used by May Pham’s team * Columns in consideration are ‘Immediate costs’ from the immediate costs table and Year 1-8 in Capital Reserve * Columns ‘Immediate’ and ‘short-term’ are combined into immediate costs  1. Any cost below $1000 is removed 2. Years 9 and above are removed 3. Year 6,7 and 8 – anything below $ 10k is removed. 4. Costs that recur (number should be same) for 2-8 years are left out(example – Roof maintenance) 5. Costs year 1 and year 2 are combined for output to ‘Reserve (Years 1-2)’ column 6. Costs year 3, year 4 and year 5 are combined for ‘Reserve (Years 3-5)’ in output 7. Costs year 6, year 7 and year 8 are combined for ‘Subsequent Expenses [1]   (Years 6-8)’ column | Graphical user interface, application, table, Excel  Description automatically generated | |  |
|  | * Once report is complete, upload all PDF reports, report zip files, Summary of costs, short term cost table and long term costs table to a SharePoint location, attach link and email it to May Pham and team. * For SharePoint – a folder is created with project number and all the files are placed inside the same. * Link in email points to the folder with project number * Proceed to process next item. |  | |  |
|  | * (MANUAL IN PHASE 1) May Pham and team to fill out the “Tenant/Landlord Obligations” and send it for approval | Graphical user interface, text, application, email  Description automatically generated | |  |

### 

### *Change/Improvement details*

*Improvement Made from As-Is Process with respective to To-Be Process.*

### *Areas already automated*

*Currently none of the steps involved in the process are automated.*

### *In Scope for RPA*

The activities **in scope of RPA**, are listed here:

1. Processing incoming email from Legal / Partner
2. Logging in and downloading data from SiteLynx (for PCR cost tables)
3. Saving the files in Sharepoint – PCR cost tables and summary of costs
4. Putting together Summary of Costs (SOC) report based on business rules
5. Tracking the receipt of all reports and saving data in database
6. Sending the report to Research team for final review and L/T obligation check and approval

### *Out of Scope for RPA*

The activities which fall under ‘**OUT of scope of RPA’**, are listed below:

1. Cross-verification of the PDF reports (ADA and PCR) to check for costs (will be included in phase 2)
2. Landlord/Tenant responsibility column is currently out of scope for phase 1 as the data is interpreted from new deal email (will be automated as part of Source2Book)
3. Due to the L/T requirement, the approval process will need to be manual (will be automated as part of Source2Book)
4. Data populating in ETL (will be part of Source2Book project)

### *Automation Schedule*

*Bot schedule: 5 times a day*

*9AM, 11 AM, 1 PM, 3 PM and 5 PM*

### *Business Exceptions Handling –*

*The Business Exception Handling can be classified as follows:*

|  |  |
| --- | --- |
| *Known* | *Unknown* |
| *Previously encountered. A scenario is defined with clear actions and workarounds for each case.* | *New situation never encountered before. It can be caused by external factors. Cannot be predicted with precision, however if it occurs, it must be communicated to an authorized person for evaluation.* |

*Send an alert email to the team in case any business unexcepted exception/error is encountered.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***BE #*** | ***Error name*** | ***Step*** | ***Parameters*** | ***Action to be taken*** |
| ***1*** | ***Null Data in the file*** | ***2*** | ***Occur due to no data available in file.*** | ***Add exception to status report and move to next process in list*** |
| ***2*** | ***Report not found*** | ***6*** | ***Occur due to some cost report not available on SiteLynx / multiple PCA reports found for single deal*** | ***Mark exception and send report not found email with project number. Move to next item in list*** |
| ***3*** | ***Unexpected format of reports*** | ***7*** | ***Missing expected columns in cost table/ file naming*** | ***Mark exception and send email of failed summary generation. Move to next item in list*** |

### *Email distribution list:*

1. [*mpham@realtyincome.com*](mailto:mpham@realtyincome.com)
2. [*Vendor-kmahalingam@realtyincome.com*](mailto:Vendor-kmahalingam@realtyincome.com)
3. *ntambe@realtyincome.com*

### *Application Error and Exception Handling*

*Errors identified in the automation process can be classified as:*

|  |  |  |
| --- | --- | --- |
| *Area* | *Known* | *Unknown* |
| ***Technology/***  ***Applications*** | *In case of any Application issue, bot will retry once and send email notification on failure.* | *New situation never encountered before or may happened independent of the applications used in the process.* |

#### Known Errors or Exceptions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***AE #*** | ***Error name*** | ***Step*** | ***Parameters*** | ***Action to be taken*** |
| ***1*** | ***Sitelynx login failed*** | ***3*** | ***Credentials not valid, network issues*** | ***Stop bot and send email*** |
| ***2*** | ***Unable to download from SiteLynx*** | ***7*** | ***Site down, Network issues*** | ***Stop execution and send email*** |
| ***3*** | ***File corrupted / unable to read*** | ***7*** | ***Corrupted while downloading, network issues*** | ***Mark exception and continue*** |
| ***4*** | ***Unable to upload summary of costs file to email / Sharepoint*** | ***10*** | ***Application errors, not responding*** | ***Send email with exception:***  ***“Unable to upload output” stop execution***  ***The output file can be taken from the local drive.*** |

*The table below reflects all the errors identifiable in the process evaluation and documentation.*

*For each of these errors or exceptions, define a corresponding expected action that the robot should complete if it is encountered.*

#### Unknown Errors and Exceptions

*Currently all Unknown exceptions and errors are out of scope.*

## *Other Requirements and Observations*

#### Assumptions

* Bot gets input from a single source – SiteLynx (hosted by Partner)
* Property number and the list of reports to expect are obtained from the Initial Email from SiteLynx
* Email communication follows the given sample format and has project number, tenant name and city in subject
* SiteLynx user interface and navigation does not change
* The hyperlink to “Costs” (on SiteLynx portal) to download report in excel format is available for the PCA reports only. Roof and ADA don’t have them
* Downloaded costs table excel sheet has the data present and in given format, where the bot looks for the columns mentioned in step 9
* Single deals have one PCA report. Multiple PCA reports occur in the case of portfolios
* Portfolio has reports for different sites under the same project number
* Portfolio is available at the same time the reports are uploaded for the bulk deals
* Emails with keyword ‘Final Report’ in subject are ignored as these reports have been already processed. Only the reports with ‘Draft Report’ in subject are processed.
* Multiple emails received for same project number are ignored. Only the initial email per project number (without taking into account its extension) is considered
* Searching for the project number in the portfolio tabs to find if it is a portfolio - only if records exist.

#### Requirements

1. Email ‘send to’ list
2. Test data for development – Sample emails from admin@sitelynx.com along with reports that cover all corner cases, expected output sheets for the given samples
3. BOT Id for Email Box, Optional – service account for Bot access to SiteLynx
4. SharePoint location to upload the summary of costs for approval

## *Document Approval*

*This document requires serial approval (sign off) from the roles defined in the table below.*

*Changes to the requirements must be documented in an updated version and requires a new signature flow.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Version* | *Flow* | *Role* | *Name* | *Approval Date:* |
| ***3.0*** | ***Document Prepared by*** | ***RPA Developer*** | *Krithika Mahalingam* |  |
| ***3.0*** | ***Document Reviewed by:*** | ***Process Owner*** | *Ninad Tambe* |  |
| ***3.0*** | ***Document Approved by*** | ***Business Owner*** | *Andrew Thompson* |  |