**Rpa(Robotic Process Automation)-**

Robtic Automation is a type of autmation where a machine or computer mimics a human's action in completing rule based tasks.

Automate the process by mimic a human(robot),Automating the bussiness process by robot is known as RPA.

Rpa stand for Robotic Process Automation

Robotic-Mimic

Process-Sequence of Activity

Automation-Seuence of steps performed without human intractions

**RPA Developers Roles & Resposiblity**

The RPA developer will use input from the Business analyst and the process charts to develop the robot. He (or she) is the expert at programming (and might test) the robot.

As the robot has to mimic user behaviour in a process, performing tasks perfectly, it is important for the RPA developer to have a good understanding of the business and the process itself. He (or she) will have to spend time with the Business analyst during the workshops to gain an understanding of the tacit knowledge that surrounds the process.

* The Process Designer is responsible for **understanding the current process.**
* He/she makes sure that the **people working on the RPA project are in sync.**
* He/She also **monitors the changes** that happen after implementing the feedback during development or testing phase while keeping the project specifications intact.
* Work with Business Analyst, SME for process identification and feasibility
* Perform Proof of Concepts to help the business recognise the feasibility of an automated solution
* Creating and maintaining solution and other relevant documentations e.g PDD, ODI, SDD and etc
* Creating and documenting test procedures and scenarios for the pre-UAT phases

A RPA developer has to ensure automation of repetitive and logic based task using ROBOT or BOT. From an organizations perceptive, RPA developer might be involved in requirement gathering, design, POC, testing and launch as well.

RPA Developers are also engaged in Bot Production support and maintenance work - change management or resolving bugs/exceptions.

who are given end to end responsibility of opportunity identification, cost benefit analysis, BRD creation, Solution design, Development, testing and production deployment.

Verify the future state business flow

Actual Development work

Testing (Integration, Unit and UAT Testing)

Production Deployment

RPA Developers are also engaged in Bot Production support and maintenance work - change management or resolving bugs/exceptions.

Primary responsibility to develop the solution & design lay out by Architect .

So this person developed the technology.

**Bussiness Analyst**

The business analyst’s has three different roles in an RPA project.

During the Assign phase, the Business analyst works with the project manager in identifying the processes, evaluating the key criteria for RPA (which might be different from the CTO’s point of view and the business point of view). Having experience of business process mapping is of essence.

During the Approve phase, the role is centered on documenting the current process (gathering the tacit knowledge from the business users, their tasks and activities) and designing the new process (with the robot). It requires knowledge of drawing and documenting processes but also business acumen and a willingness to observe and ask questions.

During the Design phase, the Business analyst together with the RPA developer works with the business in detailing the process. This is done during a number of workshops. During this phase we tend to ask very specific questions about where, how and why one uses a system, what exceptions there might be in handling a specific task and which processes interact with the process we are automating.

**Challenges in Rpa development:-**

1.100% Automation is not possible ,manual intervention required for clicking on popup I am not Robot.

2.Not able to do accuracy match between hand written & text Image to text

3.In Agile development Methodology under 4 weeks Risk we have to

Cover Complete project.So we have do under deadline 100% Autumtion is not possible.

4.If application have 30-50 field with same name or same colour then we have problem to automate(Occurance)

5.Image based Pdf(Invoice) ,We have to use regex to match invoice number

6.Recording brake .

7. Count how many icons or images exists on the screen

8. Copy information in Excel & save as image.

9.Create pie chart from Excel file.

10.Retrieve items from a combobox.

Advantages of Uipath

1.Attended & Unattended

2.Recording (All types of Recording)

3.Uipath is robost because they have given all the facility like data scrapping,

Screen scrapping ,

4.Without Sql server we are able to open Uipath.

**PDD-**The main purpose of a Process Definition Document (PDD) is to describe the manual process that is to be automated. The PDD only needs to be created where existing process documentation does not exist or isn’t provided to the required detail.

Created by – Client SME and/or Blue Prism analyst

Read by – Client SME, Blue Prism analyst, Blue Prism developer

Approved by – Client operation, client SME.

**SDD-**The purpose of the Solution Design Document (SDD) is to describe how Blue Prism will automate the process described in the PDD.

Created by – Blue Prism developer

Read by – Client operations, IT

Approved by – Client operations, IT

The SDD includes a description of

 Overview of end-to-end solution

 Object model

 Operational control and alerting

 Data security and credentials

 Business and technical assumptions

Sdd is most important part in the RPA or any other software components.

So here SDD of rpa is more different & more detail process

In real time every design documents must be sign off from client.

Because this is agreement between client & service provider.

After discovery phase first ever created doc is SDD which means-

How the high level solution will look like, How previous system or manual system is working

How would be to be process or automated process will look like.

How disaster recovery will be handled?

How process high level looks like?

High level technical descriptions

High level functional descriptions

High level roles & their responses

So all the details would be in Sdd.

**RPA TESTER-**The Process Designer is responsible for understanding the current process. He/she makes sure that the people working on the **RPA** project are in sync. He/ She also monitors the changes that happen after implementing the feedback during development or **testing** phase while keeping the project specifications intact.

* Experience with Process Analysis, Design, and Implementation, Business and Technical requirements, Problem-Solving, and System(s) Testing, including UAT and Bug fixes

**Rpa Limitation—**

One thing is clear that UiPath Studio Community Edition is free for education and training purposes, developers and small professional teams.

1. Local hosting of UIPath Orchestrator server
2. The libraries from nugget package manager will get deleted every time the tool asks you to activate it
3. Auto-start feature of the UIRobot.exe
4. Number of Test robots are limited to 5 in Orchestrator Community Edition.

**Difference between Uipath/Blueprism:-**

<http://itasktechnologies.com/top-3-rpa-tools-comparison/>

**RPA Phases**

<https://www.linkedin.com/pulse/phases-roles-rpa-project-richard-ahl-phd/>

**Four critical stages of implementation**

https://www.cutter.com/article/4-critical-stages-rpa-implementation-496651

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In the **assess phase** we investigate the process (or processes) that could be automated.

Assign Phase

Approval Phase

Design

Implement

**The four phases of an RPA project and the activities within**

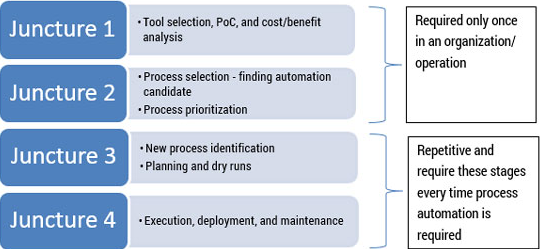
**The four critical stages of Implemention**

**1.Tool selection, Poc, and cost/ benefit analysis**

**2.Process selection & risk identification–finding automation candidate, Process prioritization**

**3. Detailed planning, Bot creation & dry run ,New process identification ,Planing & dry runs**

**4.Execution deployment & maintenance**



Risk in RPA tool:-

1.Tool Selection Risks:-Picking the wrong tool for strategy (Security)

2.100%Automation not possible under under dead line in Agile development

3.Wrong renaming convention(Variable & Argument) due to less time in Agile Environment.

4.Launch & Project Risks:-Not working fine in client environment, may be in installation process, may be robot fail, process became slow due to work on multiple application.

**Limitations:-**

**1. No** secure compare to BP

**2.** Always we have to click on Continue free in Community version.

3. No of test robot are limited to 5 (in Orchestrator community edition)

4. Local hosting of Uipath Orchestrator server is not provided.