

# **Driving Productivity & Efficiency in the Assurance Industry with RPA**

**Dr. K. Paul Jayakar**

M.com., FCA, Ph.D, DIRM, CRISC

**SIRC Chennai**

**29.1.2020**

# Agenda

1. What is Robotic Process Automation?
2. Why Robotic Process Automation?
3. Example of RPA
4. Differences between Test Automation and RPA
5. RPA Implementation Methodology
6. Best Practices of RPA Implementation
7. General Use of RPA
8. Application of RPA
9. Robotic Process Automation tools
10. Benefits of RPA
11. Myths of RPA

# **1. WHAT IS ROBOTIC PROCESS AUTOMATION (RPA)?**

- **RPA** allows organizations to automate tasks the way a human being was doing them across application and systems by interacting with the existing IT architecture with no complex system integration.
- RPA can be used to **automate workflow**, infrastructure, back office process which are labour intensive. These software bots can interact with an in-house application, website, user portal, etc.
- The RPA is a software program which **runs on an end user's** pc, laptop or mobile device. It is a sequence of commands which are executed by Bots under some defined set of business rules.
- The main goal of RPA process to replace repetitive and boring clerical task performed by humans, with a virtual workforce. RPA does not require the development of code, nor does it require direct access to the code or database of the applications.

## **2. WHY ROBOTIC PROCESS AUTOMATION?**

1

### Rapidly Changing Business Processes to Compete

Products

Customers

Process

Sales

Marketing



Organizational Debt

3

People

Humans are used to fill the gap between systems and process



Technical Debt

2

Custom

Mainframe

Technology

ERP

SaaS

Multiple, disparate IT Systems can't evolve at the speed of business

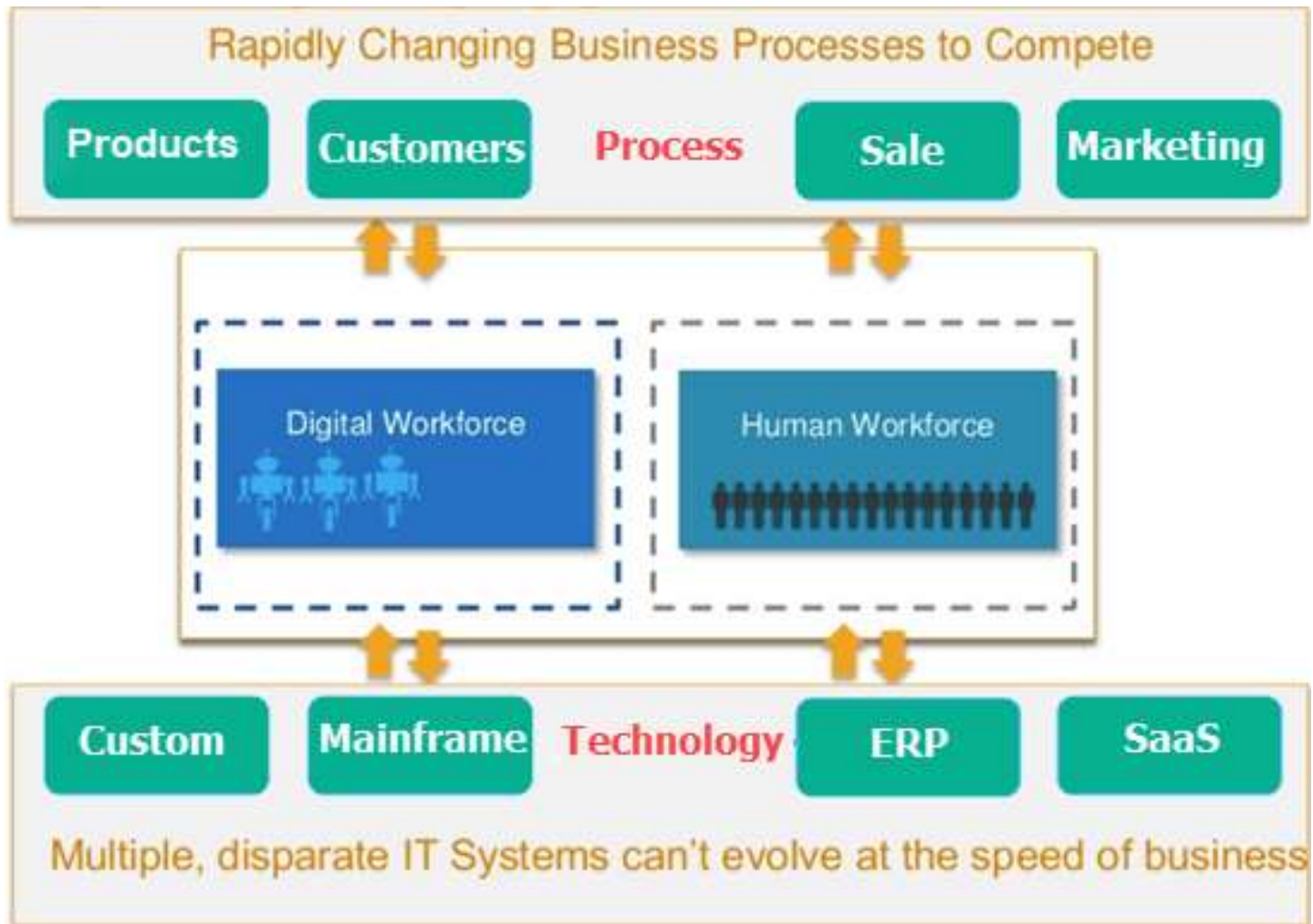
- The business climate is ever changing. An enterprise needs to continuously evolve its product, sales, marketing, etc. process to grow and stay relevant
- A typical enterprise uses multiple and disconnected IT systems to run its operations. With change in Business process, these IT systems are not changed frequently due to budget, timing, and implementation complexity issues. Hence, the business process does not map the technical process mapped in the IT system.
- To overcome this technical and organization debt human workforce is hired to fill the gap between systems and processes.
- **Example:** A company made changes in Sales process such that a mandatory 50% advance is required to confirm the booking of its product. But this is not coded in the IT system yet. A human worker will have to manual check the Invoice and payment details and process the sales order only if 50% advance is made.

# The problem? --- Humans

- A change in the business process, would need the hiring new employees or training of existing employees to map the IT system and business process.
- Time and money consuming.
- Succeeding business process change will also need hiring or re-training.



# Enter RPA

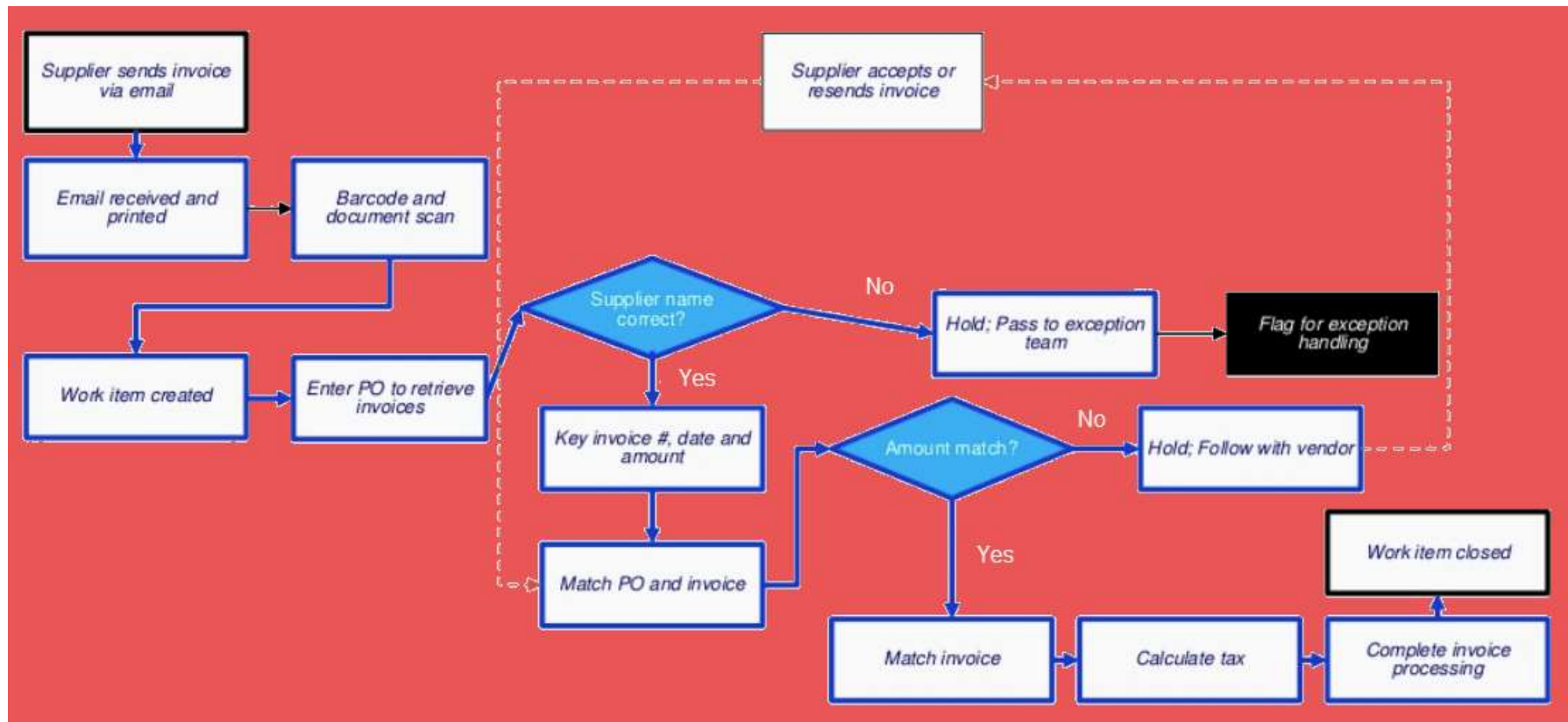


- With RPA, the company can deploy virtual workers who mimic human workers.
- In case of a change in process, a change in few lines of software code is cheaper than retraining employees.

Here, are some reasons why Robotics Process Automation is advantageous

- A human can work average 8 hours a day whereas robots can work all 24 hours.
- The average productivity of human is 60% with few errors as compared to the RPA which is 100% without any errors.
- Robots handle multiple tasks very well compared to a human being

### **3. EXAMPLE OF RPA**



**Description****Can be Automated via RPA?**

Open invoice email from the supplier and print it for records

Yes

Manual

Barcode Scanning

Create work item in a legacy software system

Yes

Yes

Enter PO to retrieve Invoices

Check supplier name is correct or not?

Yes

---

Key Invoice, Data and Amount	Yes
------------------------------	-----

Match PO and Invoice	Yes
----------------------	-----

Check if Amount is matches or not?	Yes
------------------------------------	-----

If amount match Matches Invoice, Calculate Tax	Yes
---------------------------------------------------	-----

Complete Invoice Processing	Yes
-----------------------------	-----

Work Item Closed	Yes
If Amount does not match Hold, follow with vendor	Yes
Supplier accepts or resends Invoice	Yes
If Supplier name is incorrect to hold a pass to exception team	Yes
Flag for exception handling	Yes

## **4. DIFFERENCES BETWEEN TEST AUTOMATION AND RPA**



Parameter	Test Automation	RPA
Goal	Reduce Test execution time through automation	Reduce headcount through automation
Task	Automate repetitive Test Cases	Automate repetitive Business processes
Coding	Coding knowledge required to create Test Scripts	Wizard-driven, and coding knowledge not required
Tech Approach	Supports limited software environment. Example: Selenium can support only web applications.	Supports a wide array of software environments
Example	Test cases are automated	Data entry, forms, loan processing, is automated

Application	Test Automation can be run on QA, Production, Performance, UAT environments	RPA is usually run only on production environments
Implementation	It can automate a product.	It can automate a product as well as a service.
Users	Limited to technical users.	Can be used across the board by all stakeholders.
Role	Acts as a virtual assistant.	Acts as a virtual workforce.
AI	Can execute only what is coded.	Many RPA tools come with an AI engine can process information like a human

- RPA tools like UIPath, Blueprism can be used for test automation.
- Vice versa, advanced automation tools like UFT can be used for RPA if you have good coding skills.

## **5. RPA IMPLEMENTATION METHODOLOGY**



# Planning

- **Identify processes which you want to automate.**

Following checklist will help you identify the correct process

1. Is the process manual & repetitive?
2. Is the process Rule-based?
3. Is the input data in electronic format and readable?
4. Can existing System be used as it is with no change?

- **Next, steps in planning phase are**

1. Setup project team, finalize implementation timelines and approach.
2. Agree on solution design for performing RPA processes.
3. Identify logging mechanism that should be implemented to find issues with running bots.
4. Clear roadmap should be defined to scale up RPA implementation

# Development

- In this phase, you start developing the automation workflows as per agreed plan. Being wizard driven, the implementation is quick

# Testing

- In this phase, you run Testing cycles for in-scope automation to identify and correct defects



# Support & Maintenance

- Provide continuous support after going live and helps in immediate defect resolution. Follow general maintenance guidelines with roles and responsibilities with business and IT support teams.

## **6. BEST PRACTICES OF RPA IMPLEMENTATION**

# Best Practices of RPA Implementation

- One should consider business impact before opting for RPA process
- Define and focus on the desired ROI
- Focus on targeting larger groups and automating large, impactful processes
- Combine attended and unattended RPA
- Poor design, change management can wreak havoc
- Don't forget the impact on people
- Governance of the project is foremost thing in RPA process. Policy, Corporate, Government compliance should be ensured.

## **7. GENERAL USE OF RPA**

## **1. Emulates Human Action:**

Emulates human execution of the repetitive process using various application and systems.

## **2. Conduct high-volume repeated tasks:**

Robotic process automation can easily simulate rekeying of data from one system to another. It performs tasks like data entry, copying, and pasting.

## **3. Perform Multiple Tasks:**

Operates multiple and complex tasks across multiple systems. This helps to process transactions, manipulate data and send reports.

#### **4. 'Virtual' system integration:**

This automation system can transfer data between disparate and legacy systems by connecting them at the user interface level instead of developing new data infrastructure.

#### **5. Automated report generation:**

Automates the extraction of data to come up with accurate, effective and timely reports.

#### **6. Information validation and auditing:**

Resolve and cross-verify data between different systems to validate and check information to provide compliance and auditing outputs.

## **7. Technical debt management:**

Helps to reduce technical debt by reducing the gap between systems, preventing the introduction of custom implementations.

## **8. Product management:**

It helps to bridge the gap between IT systems and related product management platforms by automated updating of both systems.

## **9. Quality Assurance:**

It can be beneficial to QA processes which cover regression testing and automating customer use case scenarios.

## **10. Data migration:**

Allows automated data migration through systems which is not possible using traditional mediums, like document, spread sheets or other source data files.

## **11. Gap solutions:**

Robotic automatic fills the gaps with process deficiencies. It includes may simple tasks as password resets, the system resets, etc.

## **12. Revenue forecasting:**

Automatically updating financial statements to predict revenue forecasting.



## **8. APPLICATION OF RPA**

## Industry

## Usage

Healthcare

- Patient registration
- Billing

HR

- New employee joining formalities
- Payroll process
- Hiring shortlisted candidates

Insurance

- Claims Processing & Clearance
- Premium Information

---

Manufacturing & Retail

- Bills of material
- Calculation of Sales

Telecom

- Service Order Management
- Quality Reporting

Travel & Logistic

- Ticket booking
- Passenger Details
- Accounting

Banking and Financial Services

- Cards activation
- Frauds claims
- Discovery

Government

- Change of Address
- License Renewal

Infrastructure

- Issues Processing
- Account setup and communication

## **9. ROBOTIC PROCESS AUTOMATION TOOLS**

# Selection of RPA Tool should be based on the following 4 parameters:

- **Data:** Ease of reading and writing business data into multiple systems
- **Type of Tasks mainly performed:** Ease of configuring rule-based or knowledge-based processes.
- **Interoperability:** Tools should work across multiple applications
- **AI:** Built-in AI support to mimic human users

# Popular Robotic Automation Tools:

- **1) Blue prism**
- Blue Prism is a Robotic Process Automation software. It provides businesses and organizations with an agile digital workforce.
- **Download link:** <https://www.blueprism.com/>

- **2) Automation AnyWhere**
- Automation Anywhere is a developer of robotic process automation (RPA) software.
- **Download**  
**link:** <https://www.automationanywhere.com/>



- **3) UiPath**
- UiPath is Robotic Process Automation software. It helps organizations efficiently automate business processes.
- **Download link:** <https://www.uipath.com/>

## **10. BENEFITS OF RPA**

# Benefits of RPA:

1. Large number of processes can easily be automated.
2. Cost is reduced significantly as the RPA takes care of repetitive tasks and saves precious time and resources.
3. Programming skills are not needed to configure a software robot.
4. Robotic process automation supports and allows all regular compliance process, with error-free auditing.
5. The robotic software can rapidly model and deploy the automation process.
6. Effective, seamless Build & Release Management
7. Real time visibility into bug/defect discovery
8. There is no human involvement so there is no need of training.
9. Software robots do not get tired and help in scalability.

# Disadvantages of RPA:

- The bot is limited to the speed of the application
- Even small changes made in the automation application will need the robots to be reconfigured.

## **11. MYTHS OF RPA**

- **Coding is required to use RPA software**-That's not true. To use Robotics Process Automation tools, one needs to understand how the software works on the front-end and can how they can use for automation.
- **RPA software does not require human supervision**-This is an illusion because humans are needed to program the RPA bot, feed them tasks for automation and manage them.
- **Only large big companies can afford to deploy RPA**-Small to medium-sized organizations can deploy RPA to automate their business. However, initial costing will be high but can be recovered in 4-5 years.
- **RPA is useful only in industries that rely heavily on software**- RPA can be used to generate automated bills, invoice, telephone service, etc. which are used across industries irrespective of their software exposure.

# Summary:

- Robotic Process Automation allows organizations to automate task just like a human being was doing them across application and systems.
- The main goal of Robotics process automation process to replace repetitive and boring clerical task performed by humans, with a virtual workforce.
- The average productivity of human is 60% with few errors as compared to Robot's productivity which is 100% without any errors.
- One should consider business impact before opting for RPA process
- There is multiple overlaps between a Test Automation Tool and RPA tool. Though they are still different
- RPA implementation has 4 phases 1) Planning 2) Development 3) Testing 4) Support & Maintenance
- RPA is used in wide range of industries like Healthcare, Insurance, Banking, IT etc.

Thank You

Questions???