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Implementing robotic automation into business process

Digital Transformation

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ABSTRACT

Implementing Robotic automation into business process - Enterprise Learnings

I was running project management for implementing Robotic automation in Volvo for over 1.5 years. It has been a challenging as well interesting journey.

The objective of this paper is to provide you insights into different phases involved in implementing RPA journey to enterprises as well share best practices in implementing automation.

Establish

- ◆ Strategy
- ◆ Consulting for RPA, GAP analysis
- ◆ Business case development
- ◆ Project organization and Controls

Build

- ◆ Infrastructure
- ◆ Analysis, Development and Test

Operate

- ◆ Runtime setup
- ◆ Scheduling and monitoring
- ◆ Challenges

Optimization

- ◆ Automation Optimization
- ◆ Resource optimization
- ◆ Best practices

INTRODUCTION

What is RPA?

Robotic process automation is a simple way to automate business processes without building new IT Systems and without major re-engineering the processes. It is becoming popular because of the ease of automation without major changes to the current process.

Why RPA?

Organization always looks for quick solutions to business problems and traditional software development has its limitations to bring speed in execution.

Below highlights the advantage for business to go for RPA implementation compared with traditional software development.

- ◆ RPA strength lies in providing quick and effective solution to improve turnaround time, quality and cost in a business process.
- ◆ Business analysis and requirement study can be quick as RPA can follow the activities in business process without much change required
- ◆ Easy to integrate with wide range of applications developed in different solution including legacy ones.
- ◆ Development using built in components can reduce development effort and time.
- ◆ Maintenance effort will be low compared with traditional approach

Business benefits by doing RPA

- ◆ Quick ROI and Low cost
- ◆ "Returns hours to business"
- ◆ Increased flexibility, scalability
- ◆ Increase internal efficiency through reuse of code
- ◆ Better utilization of employee skills by focusing on more interesting tasks
- ◆ Can run around the clock "24hours, 365days"
- ◆ Improved auditability of transactions, better control over end to end process

- ◆ Manage seasonable changes and peaks in business demand
- ◆ Increased consistency and double-digit reduction in error rates

What is difference between RPA and Normal Automation?

Normal automations are with limited scope and mostly run on desktop or laptop.

Some key areas where RPA demonstrates advantage compared with normal automation

- ◆ RPA scope can cover the complete process scope
- ◆ Deployed to servers and centrally orchestrated and managed
- ◆ RPA tools provide solutions to manage automation versions and Robots
- ◆ Automation tracking and data analysis can be centrally done
- ◆ Concepts like queue's used for managing work between automation robots
- ◆ Authorized and secure access using id's similar to employee id
- ◆ Improved Tracking and Auditing of transactions automated

The objective of this paper is to bring in more information on how to effectively implement enterprise automation and learnings.

DETAILS OF THE PAPER

1. Establishing Robotic automation setup

Following steps are involved in establishing an automation setup for an organization

1.1 Automation Strategy

Automation strategy needs to be developed at business Unit/Area level in an organization.

Focus will be on following areas

Business need to prioritize the objective for doing automation, key objectives for doing RPA is below.

- ◆ Expedite process
- ◆ Increase quality
- ◆ Increase productivity
- ◆ Cost reduction

based on the selected objective automation team can prioritize areas and process to develop a back log for automation, base data like quality, process speed, effort etc. can be captured as information on the process.

1.2 RPA Consulting

RPA Consulting is to investigate process readiness and arrive on a scoring based on the following. This will also give an understanding of gaps in process to go for automation

- ◆ **RPA suitability scoring**
Repeatable, objective decision making, input characteristics, complexity which gives an average RPA suitability ranking.
- ◆ **RPA readiness scoring**
Digital input, process stability which gives an average RPA readiness ranking.
- ◆ **RPA Complexity**
Development will have low, medium or high complexity based on the estimated effort required.

Intelligent approach to automation



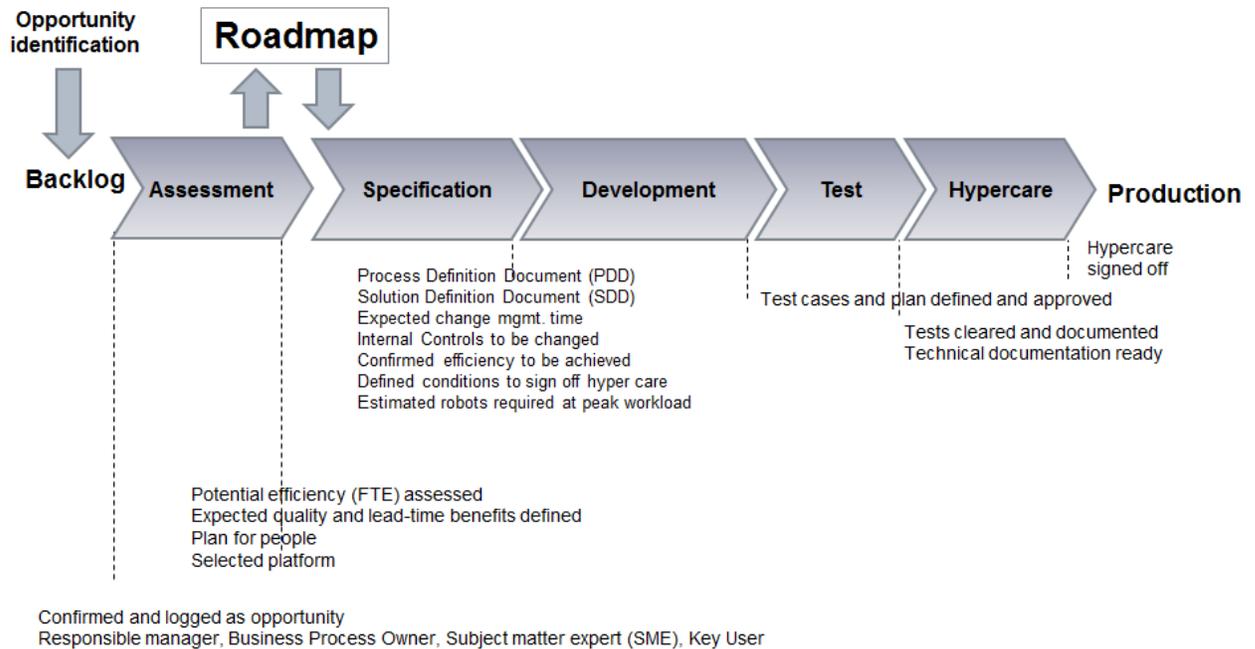
1.3 Business case development

Following are the key for business case development

- ◆ Software license cost
- ◆ Infrastructure cost
- ◆ Project one time cost
- ◆ Maintenance cost
- ◆ Cost saving from quality improvement
- ◆ Cost saving from effort
- ◆ Improved business satisfaction score

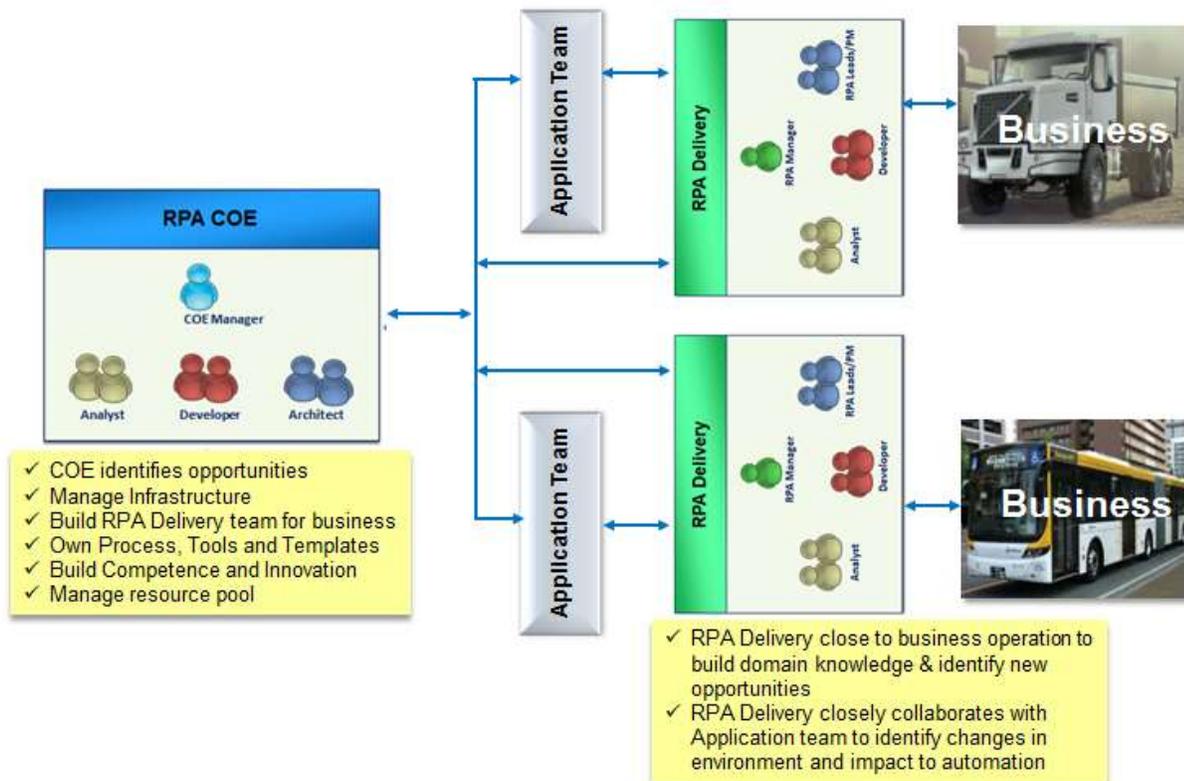
1.4 Project organization and Controls

Organization can develop templates tools and project control model for doing RPA project, typical lifecycle of a RPA project is below



RPA Centre of Excellence (COE)

Organization need to establish and RPA COE and RPA delivery teams for different business units to develop and maintain RPA, typical structure of RPA COE and delivery teams as below



2. Build

2.1 Infrastructure

Following needs to be taken care for RPA infrastructure

Robotic ID

- Robotic Id and its management to be agreed with Organization IT security
- Robot report to process manager and password management only with manager
- Access rights to follow existing roles and privileges in application

Server Environment

- Servers to have controlled changes because automation is susceptible to changes
- Access to robotic environment needs to be made secure
- Dedicated Test, QA and Production setup needs to be created

2.2 Analysis, Development and Test

RPA Analysis

RPA analysis and requirement study is the most important part to do a successful automation implementation, few key areas to be addressed in RPA analysis

- ◆ Process understanding and system dependency
- ◆ Agreement with process stakeholders and system stakeholder
- ◆ Business impacts due to automation and change management
- ◆ SLA on existing process
- ◆ Automation scheduling frequency and time
- ◆ Requirement of any cognitive solution
- ◆ Total volume and automation volume based on benefit analysis
- ◆ Total effort spend and savings
- ◆ Review existing documentation and develop if any gaps
- ◆ Capture of exception scenarios
- ◆ Audit requirement
- ◆ Logging and reporting's

RPA Development and Test

Agile approach is the way to follow for RPA development. Close collaboration with business is required to important exception scenarios and handling them.

Test has challenges with respect to data, if all scenarios cannot be handled in test environment, a controlled run in production can be an option based on agreement with different stakeholders

3. Operate

3.1 Runtime setup

RPA maintenance team setup with business and IT resources, Close collaboration required between different Application stakeholders and maintenance team.

3.2 Scheduling and monitoring

Automation tools provide functionality to schedule and monitor automations.

While implementing and maintaining automation additional reporting and alerts can be established to secure monitoring of activities done by automation robot

Automation logs needs to be secured for audit purpose.

4. Optimization

4.1 Automation Optimization

Automation scope can be enhanced to cover the complete process scope. This would require the following

- ◆ Periodic review of automation scope and volume
- ◆ Identify new exception scenario to be handled
- ◆ Integration of intelligent automation with RPA

4.2 Resource optimization

Automation resources involves the following

- ◆ Robot License
- ◆ Infrastructure
- ◆ Development tool license

To have optimal utilization of them the automation resources proper designing and scheduling of automation is required. Real-time automation will require robot to be

completely allocated to a process design need to be done based on what the optimal service level required for business

4.3 Automation Challenges and Best Practices

- ◆ Analysis phase is very important for a successful automation implementation. Establishing automatable volume from total transaction volume is the key.
- ◆ Few processes can be automated exactly AS-IS – process changes are often required to gain expected efficiency. Process re-engineering if required needs to be driven with stakeholders before automation.
- ◆ Communication methodology between different stakeholders (Application and business) need to be established, IT application and business process changes can impact automation
- ◆ Dedicated support from Infrastructure required: Virtual Desktop Infrastructure setup, issues due to environment changes, security policy changes etc.
- ◆ Limited documentation on process : Work instructions are not detailed or updated, step by step review with SMEs is time consuming but always required
- ◆ Conformance to Audit requirements and Internal Controls need to be maintained in To-Be automation flow.
- ◆ Cognitive solution investigation and training robot would require additional investment in time and effort.
- ◆ Test environment and data availability can impact automation delivery plan.

CONCLUSION

To conclude, the advantage offered by RPA is very important for business success and cannot be ignored; its application must be considered in many different industries.

While many people fear that Robotic Process Automation will lead to the redundancy of workforce, but an alternative view is to see it as a valuable tool that liberates humans from performing repetitive tasks, and frees them up to do more creative and fulfilling work. It also brings quality and process speed for business sustain in competitive environment.

REFERENCES