



**Parshvanath Charitable Trust's**  
**A. P. SHAH INSTITUTE OF TECHNOLOGY, THANE**  
**(All Programs Accredited by NBA)**

**Department of Information Technology**



# **Robotic Process Automation of Supply Chain Management for Healthcare**

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# INTRODUCTION

- **Problem Identified:**

- In many companies SCM is a manual process which is a time consuming and prone to human errors.
- Finding a particular record takes more time.

- **Solution Proposed:**

- We wish to automate the SCM of Healthcare by using RPA tools.
- Aim to automate the manual process of vendor selection & onboarding, inventory management and order processing.

# OBJECTIVES

1. To Design an efficient vendor selection algorithm.
2. To automate Vendor Selection and Vendor On boarding Processes with the help of RPA.
3. To automate Order Processing and Inventory Management Processes using RPA tool .
4. Maintaining adequate stock of medications.
5. Minimizing the occurrence of unavailability of medications.
6. Reduction of cost of maintaining an inventory.
7. Limiting the use of resources for purchasing tasks.
8. To contribute to the overall profitability of the healthcare organization.

## **PROBLEM DEFINITION**

- Most of the existing supply chain management processes are manual.
- Scope of error are naturally high.
- The management has to do the tedious task of reading the quotations from multiple vendors and comparing these quotations based on multiple factors.
- Shortlisting and selecting the best quotation is a very difficult task.
- More time consuming.

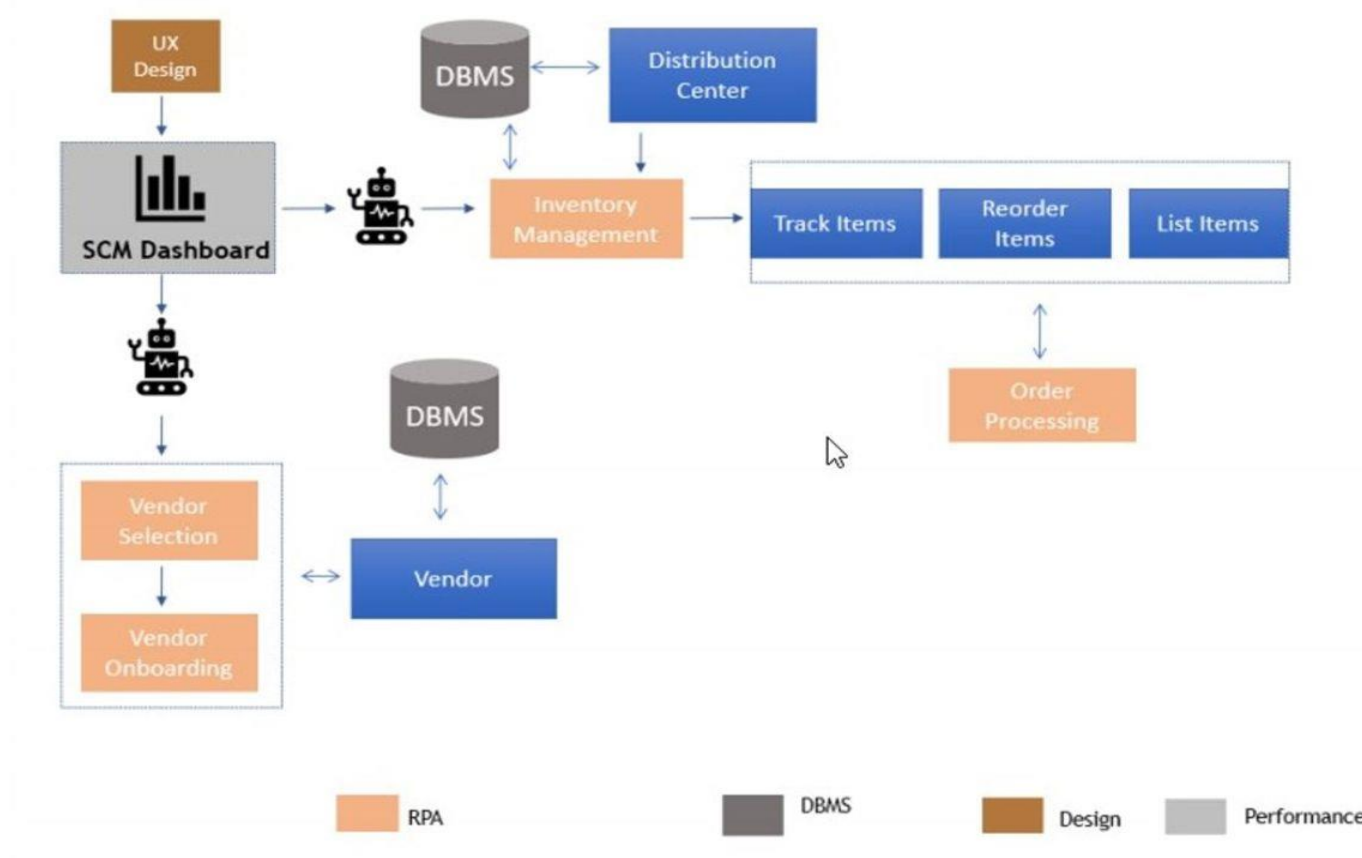
# TECHNOLOGICAL STACK

- RPA Tool (BluePrism)
- SQL Express (For storing the data)
- Python (For vendor selection algorithm)

## **REVIEW SUGGESTIONS**

- No Suggestions.

# PROPOSED SYSYTEM ARCHITECTURE/WORKING



[https://lucid.app/lucidchart/invitations/accept/inv\\_7d8e1ff2-74bd-4f0b-a543-a59a81842f9f?viewport\\_loc=-1341%2C79%2C4377%2C1696%2C0\\_0](https://lucid.app/lucidchart/invitations/accept/inv_7d8e1ff2-74bd-4f0b-a543-a59a81842f9f?viewport_loc=-1341%2C79%2C4377%2C1696%2C0_0)



## IMPLEMENTATION STATUS

- Successfully automated the task of scanning the database to find which products need to be restocked.
- Automated the process of sending an email to the appropriate vendor for ordering the required products.
- Successfully modified(increased) the quantity of the products upon restocking, after receiving the 'Order Delivered' email from the vendor.

# **STATUS OF PAPER DRAFT & TARGETED CONFERENCE**

**Paper completed , approved by guide and submitted in following conferences:-**

- 3RD International Conference on Deep Learning, Artificial Intelligence and Robotics, (ICDLAIR) 2021

Paper submission deadline: 6 September 2021

<https://icdlair2021.iaasse.org/index.html>

- ISDA 2021 : The 21st International Conference on Intelligent Systems Design and Applications

Paper submission deadline: 30 September 2021

Conference Date: Dec 13, 2021 - Dec 15, 2021

<http://www.mirlabs.org/isda21/welcome.php>

Thank You...!!