

### **Project Title**

SingHealth Robotic Process Automation (RPA) for Billing and Claims Processing

### **Project Lead and Members**

- Wong Kwok Kian
- Renuka Segaran

### **Organisation(s) Involved**

Singapore General Hospital, KK Women's and Children's Hospital

### **Healthcare Family Group(s) Involved in this Project**

Healthcare Administration

### **Applicable Specialty or Discipline**

Finance, Business Office

### **Project Period**

Start date: Apr 2021

Completed date: Apr 2022

### **Aim(s)**

To use Robotic Process Automation to increase productivity and to eliminate errors and repetitive manual process that are time-consuming and tedious

### **Background**

See poster appended/ below

### **Methods**

See poster appended/ below

## **Results**

See poster appended/ below

## **Lessons Learnt**

See poster appended/ below

## **Conclusion**

See poster appended/ below

## **Additional Information**

Singapore Healthcare Management Congress 2022 – 2nd Prize (Finance category)

## **Project Category**

Technology, Digital Health , Data Analytics

Care & Process Redesign, Value Based Care, Productivity

## **Keywords**

Robotic Process Automation, Blue Prism

## **Name and Email of Project Contact Person(s)**

Name: Wong Kwok Kian

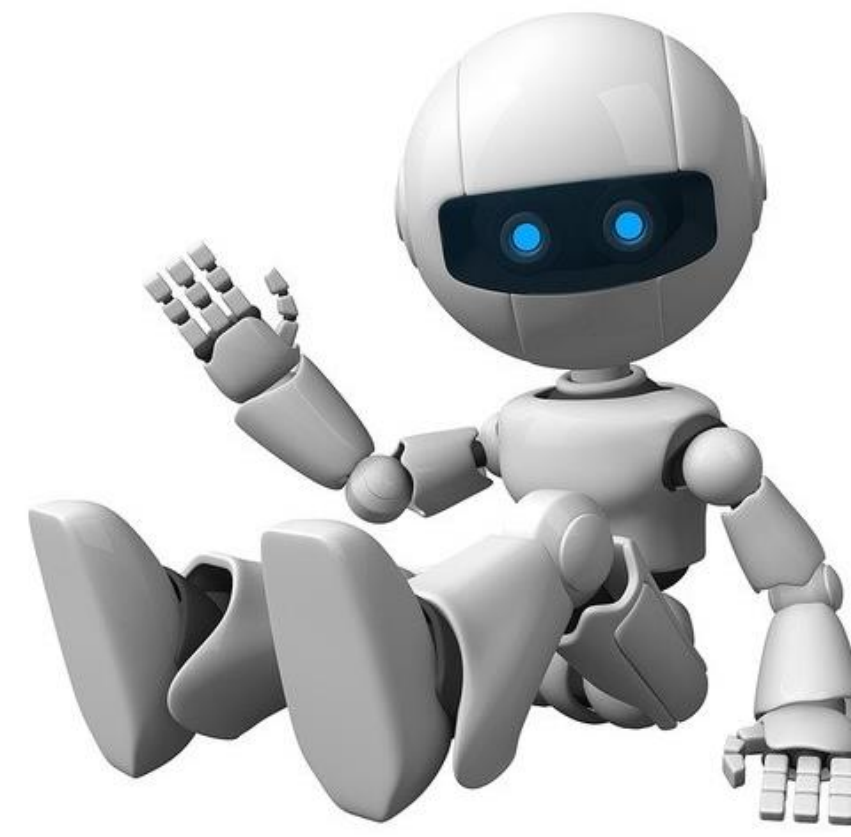
Email: [singaporehealthcaremanagement@singhealth.com.sg](mailto:singaporehealthcaremanagement@singhealth.com.sg)



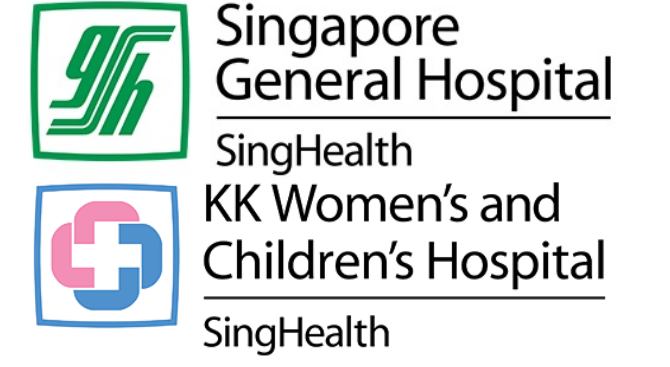
# SingHealth Robotic Process Automation (RPA) for Billing and Claims Processing



Singapore Healthcare Management 2022



Wong Kwok Kian



Renuka Segaran

Supported by: SGH : Siong Guan-Cheng, Wong Wai Ling & Sean Teow KKH : Lee Hui Quan, Siti Haida Ghani & Sheila Tan SKH : Ng Mui Lim, Ong Yin Woon, Renny Noviaty, Edmond Lai & Adibah Aljaru CGH : Cheng Mei Chen, Gina Ler, Garret Chua, Rosaline Ker, Rosmalawati Bte Othman, Margaret Tan, Winnie Lau SCH : Amran bin Abdul, Amy Wong, Chin Chin Sow NHC: Josephine Koh

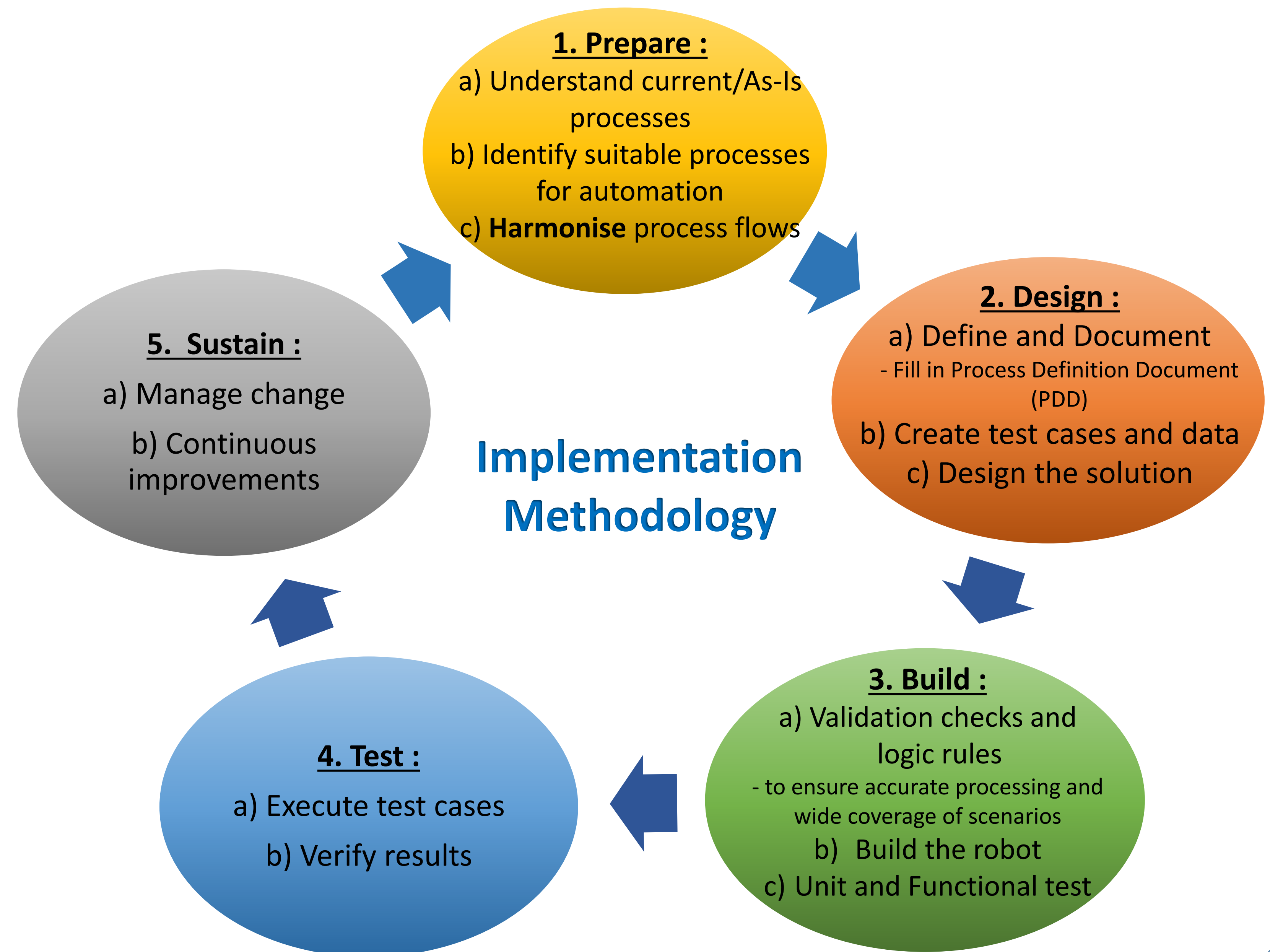
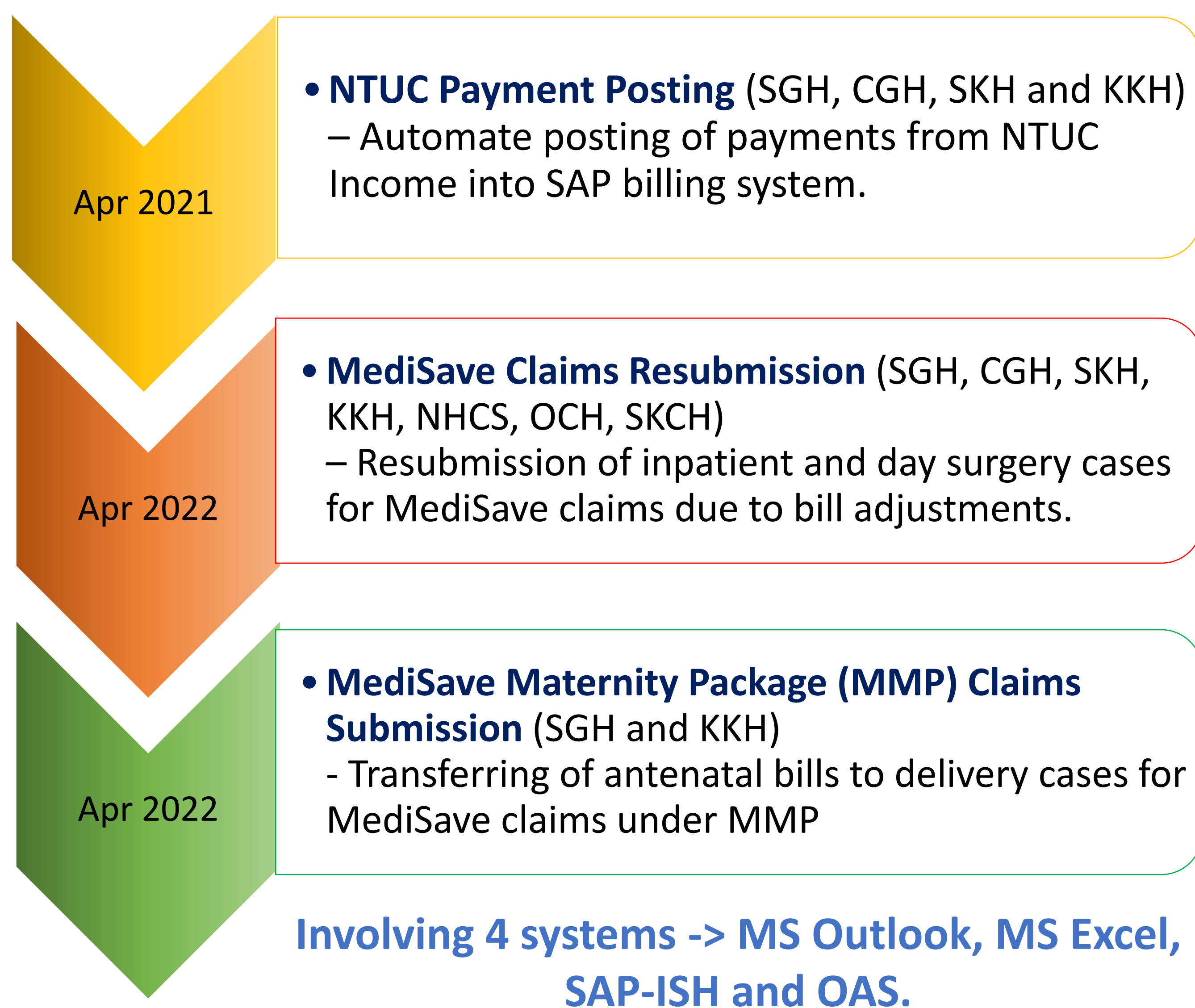
## Background

Like other industries, the healthcare industry is also moving towards digitization to mimic the back-office tasks of human workers. Currently, Business Office users perform various repetitive and manual activities for billing and claims processing. To use Robotic Process Automation (RPA) to increase productivity and to eliminate errors and repetitive manual process that are time-consuming and tedious.

## Methodology

This is a cluster initiative led by SingHealth Institutions Business Office, leveraging on enterprise RPA solution (Blue Prism) for billing and claims processing to increase productivity and to eliminate errors and repetitive manual process that are time-consuming and tedious. Pre-set validations and logics are built into the RPA solutions to ensure accurate processing as it covers a wide spectrum of billings and claims scenarios. Users are alerted through email and/or reports of failed transactions not processed by the bot, for manual interventions.

3 processes identified for RPA:



## Result 4,300 man-hours saved per year with breakeven years in less than 2 years

Optimizing headcount vis-a-vis workload expansion by diverting critical resources towards value-adding activities

- Increase speed of completing cumbersome and tedious tasks
- Increase productivity and operational efficiency
- Increase staff satisfaction and promoting Joy@Work.

- Reduce risk of data entry errors
- Decrease overhead cost

## Key Learnings 4 ways to successful RPA

### 1. Proper process identification

- Start small, gain momentum
- Identify Simple-Medium repetitive high-volume processes

### 3. Harmonized Processes

- Variations increase complexity and affect BOT performance

### 2. Digitized format

- Information must be converted into structured electronic data format as BOT cannot sight hardcopies

### 4. BOT is like human

- Learns and acquires knowledge base to handle exceptions (eg. data format “99” means 1999 or 2099 ?)
- “Trains” with exposure to extensive test data and scenarios

## Conclusion

- Due to its non-invasive integration into the existing system landscape, Robotic Process Automation (RPA) can be easily introduced for processes to be automated quickly.
- It has the ability to minimize/eliminate errors thus increasing productivity and improving efficiency.
- RPA is one highly adaptable technology for process automation. Its scalability and reliability can be further leveraged on to enable a seamless, highly agile and cost efficient operating environment.