

18 & 19 JAN 2024

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# OUR LEARNING FUTURES

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# Applied Learning Pedagogy in goRPA and goBWA CET short courses

Republic Polytechnic  
School of Engineering

Eugene Tham

# My Profile

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## Education

- Bachelor's degree in Computer Engineering (First Class Honors) from Nanyang Technological University
- Masters in Computer Science from Nanyang Technological University
- Masters in Engineering and Management from Massachusetts Institute of Technology
- ACTA Certified

## Work Experience

- Embedded Systems Software Engineer in DSO National Lab from 2000-2006.
- Lecturer in Republic Polytechnic since 2006.
- For most of his career, Eugene focused on software coding, embedded systems, and micro-controllers. His alternate interest lies in electronics and product design.
- As a proponent of RPA Eugene has 5 years of experience as a trainer as well as an end-user in UiPath.

## Expertise

- Robotic Process Automation
- Workflow Automation
- Embedded Systems and Microcontrollers
- Programming Languages
- Electronic and Product Design
- 3D Printing

# Problem Statement

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Lack of time to attend long courses

Lack of confidence to deploy new skill at the workplace

Lack of skills to implement projects at workplace using new skill learned from the course

High trainer-to-student ratio



# Proposed Solution

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Short course

Application  
based use  
cases

Learn what you  
need to apply

Course to come  
with guided  
project  
implementation

Low trainer-to-  
participant ratio

# What Is Robotic Process Automation (RPA)?

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## Robotic

- A virtual entity which have the capability to **mimic human actions**

## Process

- A sequence of steps that lead to meaningful activity or task

## Automation

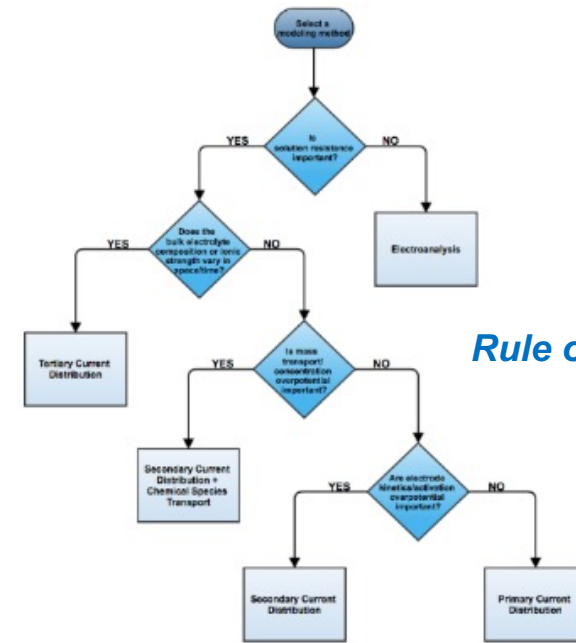
- Tasks happens automatically without human intervention



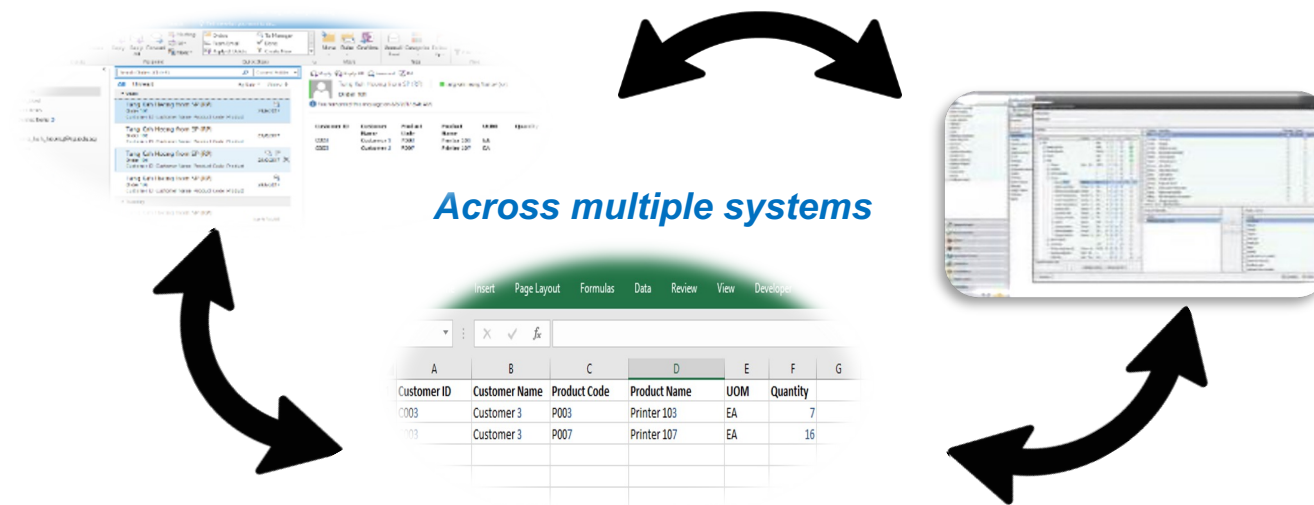
# Where to Implement RPA?



*Manual, repetitive and data intensive*

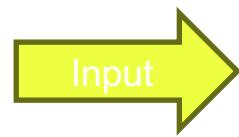
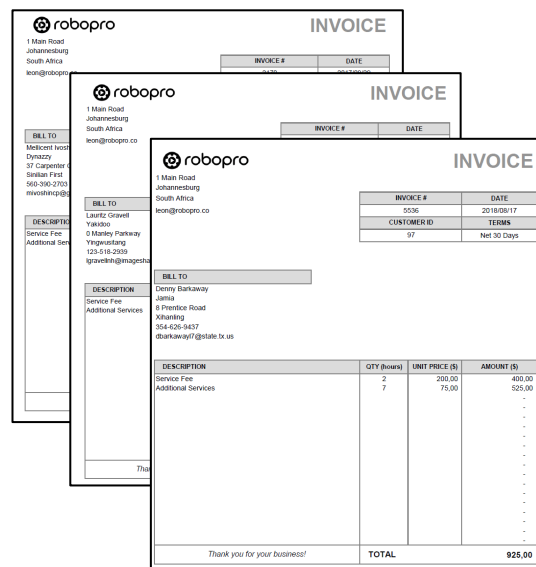


*Rule or criteria based*

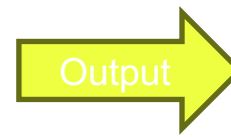


# Example (UiPath)

- Invoice Data Collation Automation



Automation Process



The screenshot shows an Excel spreadsheet window titled 'InvoiceSummar...'. The spreadsheet has columns A through F. The data is as follows:

	A	B	C	D	E	F
1	Invoice Number	Date	Customer ID	Total		
2	2170	2017-09-29	279	1725		
3	3031	2016-10-27	609	650		
4	5536	2018-08-17	97	925		
5						
6						
7						
8						



# RPA Software

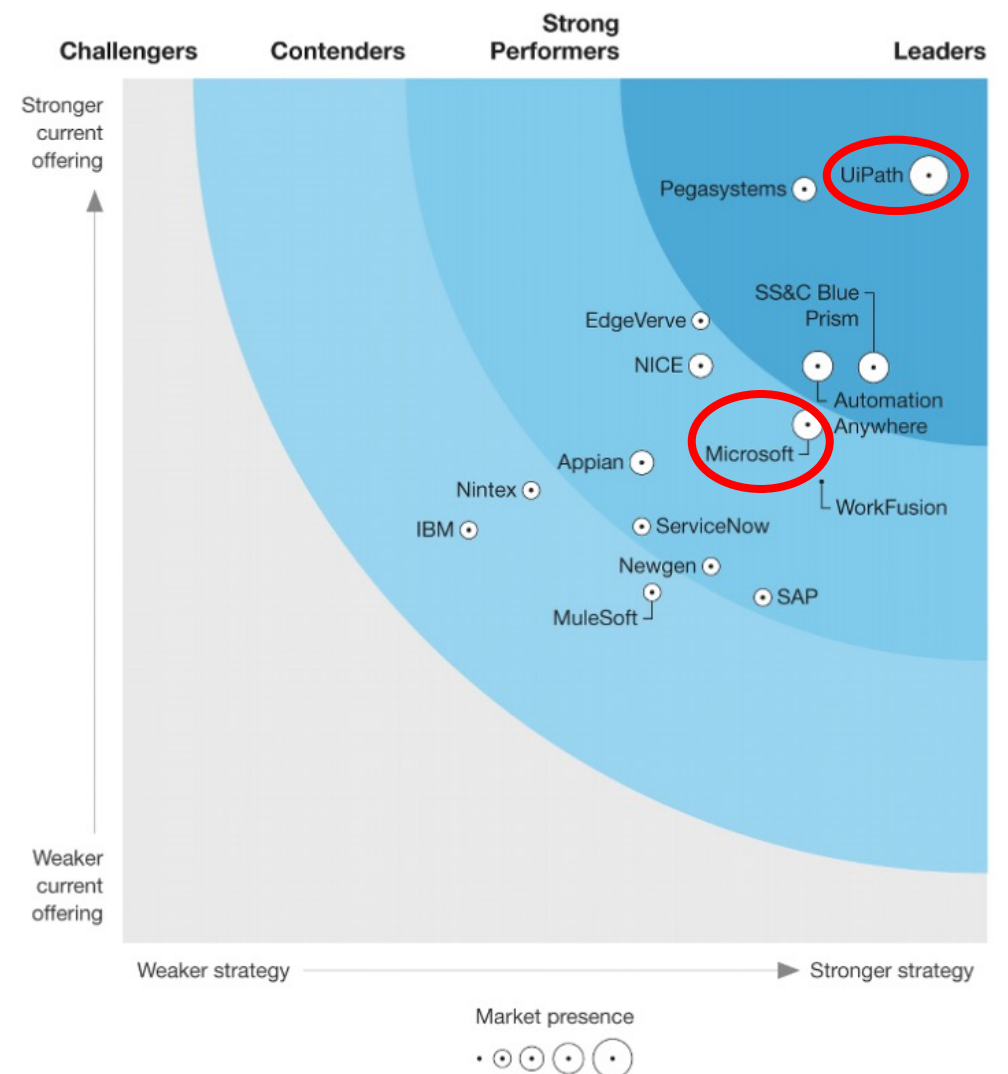
## UiPath

- 1-Day RPA
- **goRPA**
- goRPA Advanced
- goRPA Expert

## Microsoft Power Automate

- Experience Power Automate in a Day
- **goBWA**

THE FORRESTER WAVE™  
Robotic Process Automation  
Q1 2023



<https://www.uipath.com/resources/automation-analyst-reports/forrester-wave-rpa>

# What is BWA and why is it not RPA?

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## Power Automate Desktop

- Power Automate Desktop is RPA
- Power Automate Desktop can perform web and desktop automation tasks

## Power Automate Cloud

- Power Automate Cloud replaced MS Flow, and is better known as **Workflow Automation** in the industry
- BWA -> Business Workflow Automation (not an industry known term)
- Power Automate Cloud does not need software installation
- Power Automate Cloud can also perform cloud related RPA, as well as approval flow automation
- RP's goBWA program uses Power Automate Cloud

# goRPA and goBWA Applied Learning Pedagogy

Republic Polytechnic  
School of Engineering

Eugene Tham

# First Institution in Singapore to Introduce RPA programmes

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2002 – Republic Polytechnic setup

2012 – Centre of Innovation for Supply Chain Management setup

2017 – RPA Use Cases for Companies

2018 (early) – First project-based RPA programme

2018 (mid) – SkillsFuture goRPA

2019 – UiPath RPA for Government Agencies and Ministries

2020 (mid) – UiPath StudioX programme launched

Republic Polytechnic has more than 50 goRPA trainers

# goRPA's Applied Learning Pedagogy

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In-House developed curriculum based on industry needs

Practitioner's approach (time factor)

Use Case based curriculum (as opposed to topic based)

Facilitated project consultation sessions

1:4 Trainers-to-participants ratio

Train participants to be citizen developers



# goRPA's Applied Learning Pedagogy

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2 days Lesson

1.5 days  
Facilitated  
Project  
Consultation



<https://www.rp.edu.sg/ace/short-course/Detail/gorpa>

# Typical Scenario



Prior to Course

- Learner have an idea for RPA automation at the workplace



2 days Lesson

- Learner goes through the standard 2-days goRPA use-case based curriculum
- Every session have 1 trainer teaching, with other support trainers roving around to assist learners that needs help
- Training laptops with UiPath software installed are provided



1.5 days  
Facilitated Project  
Consultation

- Each Trainer is assigned to 4 learners
- Learners can do solo or team projects
- Projects are ideas from learners to implement at their workplace to ease their workload
- Learners are encouraged to use their work laptop with UiPath software and license



Post Course

- Learner can email his/her trainer for technical enquiries

# Most Common RPA Use Cases

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Extraction of  
Information from  
PDF/Word Documents  
into Excel

Extraction of  
Information from  
Internet/Intranet/Internal  
System into Excel

Uploading Information  
from Excel to  
Internet/Intranet or  
Internal System

Email Automation

Data Scrapping from  
Websites for Further  
Processing

Collating and  
Processing Information  
from Online Forms

Generation of  
Certificates or Letters  
from Template Files

Excel Automation

Word Automation



# Companies Trained



# goRPA Testimonials

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“The RP trainers are passionate and take a genuine interest in ensuring participants grasp the RPA concepts. The goRPA workshop also has a very healthy trainer-to-participants ratio. This way, the trainers are able to walk participants through their use cases and guide them in applying their newly acquired skill sets to script their first bots!”

– Mr Norman Tan, Former Director, Finance Shared Services Centre, MHA

“It was a fruitful course. The learning materials provided had good content and were useful in explaining the concepts taught during lesson. I am now able to support my company’s RPA initiatives with confidence.

- Ms Kelly Lim, HR Senior Executive, Mandai Wildlife Group

“Interesting course even for beginners as trainers are very helpful and always on the move to guide.” – Participant from a Government Ministry



# goRPA Progression Pathway

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# goBWA Programme

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## Differences from goRPA

- Rolled out in 2022
- 1:3 Trainers-to-participants ratio
- Uses Power Automate Cloud

# goBWA Progression Pathway

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# Q&A

Eugene Tham  
eugene\_tham@rp.edu.sg

Thank You