SMU-X
Project Brief

19 Jan 2017

Jason Tai
Steven Luck

Reinvent Tomorrow

Introducing Y3

Y3 Technologies is a forward thinking organisation reinventing the way businesses respond to tomorrow's needs for a positive future.

Solutions that supports **700,000sqm** & half a million pallet space and growing

50,000 orders weekly

50,000 transactions per day from **11,000** connected POS

Over **200** Global Talents

Management of **120,000** different SKU at any point in time

1.8M members

USD50 billion worth of annual flow through managed

Our Offices:

Chennai   Jakarta   Shanghai   Singapore   Tianjin

*Re*invent Tomorrow

Who we are

Y3 is a forward thinking organisation reinventing the way businesses respond to tomorrow's needs for a positive future.
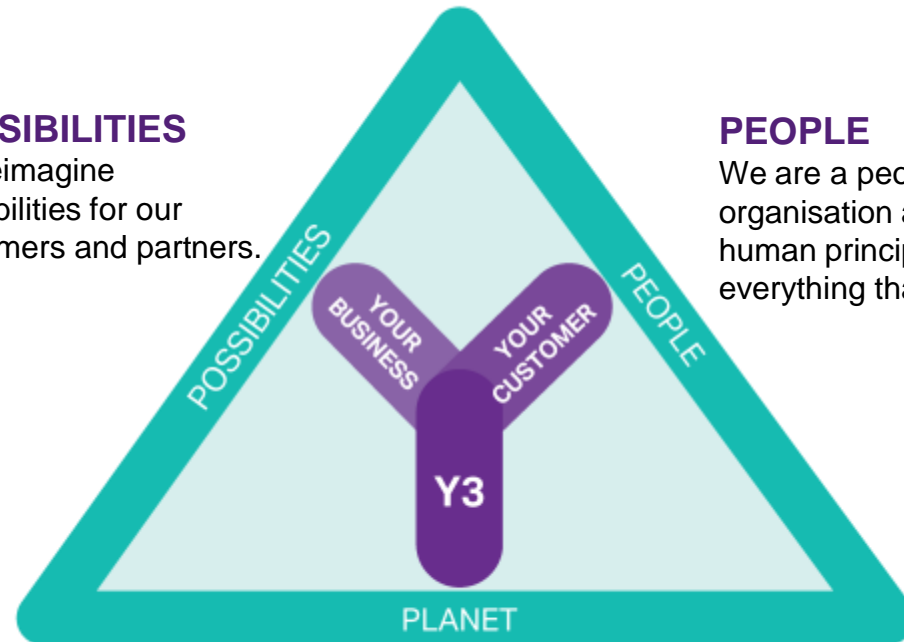
The Power of 3

We exist to serve our customers in remarkable ways. 3 stands for Y3, our dedication to our customers and to their end customers.

POSSIBILITIES
We reimagine possibilities for our customers and partners.

PEOPLE
We are a people centric organisation and embrace human principles in everything that we do.

PLANET
We believe in our social responsibility to build a better future.

SMU SIS & Y3

BOARD OF ADVISORS (CURRENT TERM, 2017)
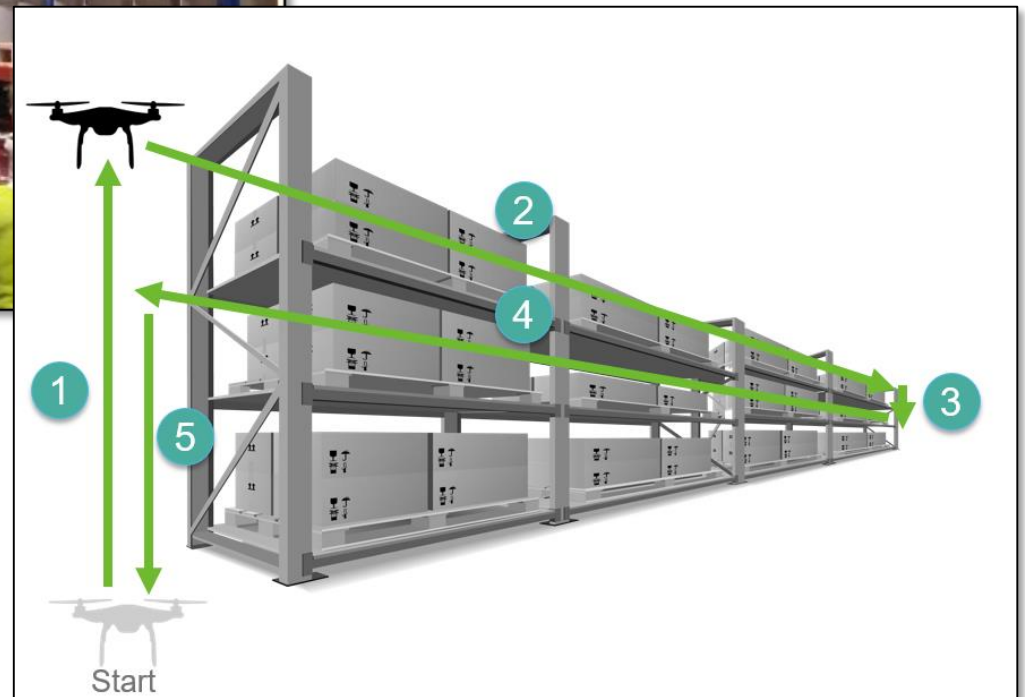
CHAIRMAN, SMU SIS BOARD OF ADVISORS

Mr Robert YAP Min Choy
Deputy Chairman & Executive Director, Y3 Technologies

VIEW BIODATA   **ORGANISATION WEBSITE**

Analytics & Robotics Innovation

Ascentis: Introduction

2003
Incorporation of
Ascentis Pte Ltd - a CRM
and Loyalty Agency

2013
Marketing Interactive
Loyalty Marketing Agency

2015
Marketing Interactive
Loyalty Marketing Agency
Local Hero of the Year

2009
Provision of Marketing /
Outsource Services

2014
Incorporation of
Meet Isaac Pte Ltd -
a Digital Marketing and
Creative Agency

Marketing Interactive
Loyalty Marketing Agency

2016
Joined the
YCH Group
Family

ThaiExpress

SUSHI TEI
A Good Deal of Sushi

*Re*invent Tomorrow

Ascentis: Awards

Loyalty Agency of the Year in 2016

1. Best CRM Strategy(GOLD)
2. Best Loyalty Programme – Retailer (GOLD)
3. Best Innovative Loyalty Programme (GOLD)
4. Best Use of Rewards & Incentives (GOLD)
5. Best Card-Based Loyalty Programme (SILVER)
6. Best Use of Technology (SILVER)
7. Best Customer Experience (BRONZE)
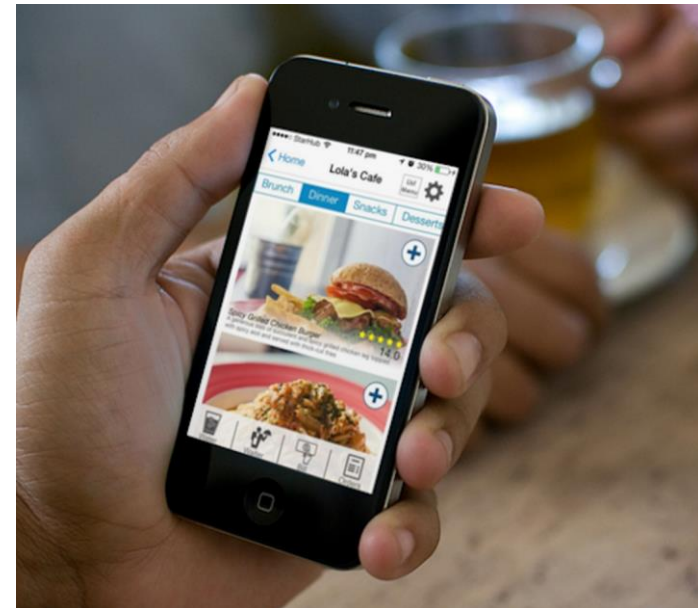8. Loyalty Programme of the Year (BRONZE)

Today's F&B Technology Landscape

Merchant's Menu

Menu in Personal Mobile Phone

- *Static, non-personalized content*
- *Not linked to existing CRM/Loyalty system*

- *Sub-optimal UX*
- *Not linked to existing CRM/Loyalty system*
- *Lack historical data*

Objective

Help **F&B merchants** *who are open to digital menu to deepen their customer engagement profitably by using a* **recommendation engine** *that optimizes* **customer satisfaction** *and* **merchant revenue**

Possible Approach

- Collaborative Filtering + Content-based Filtering

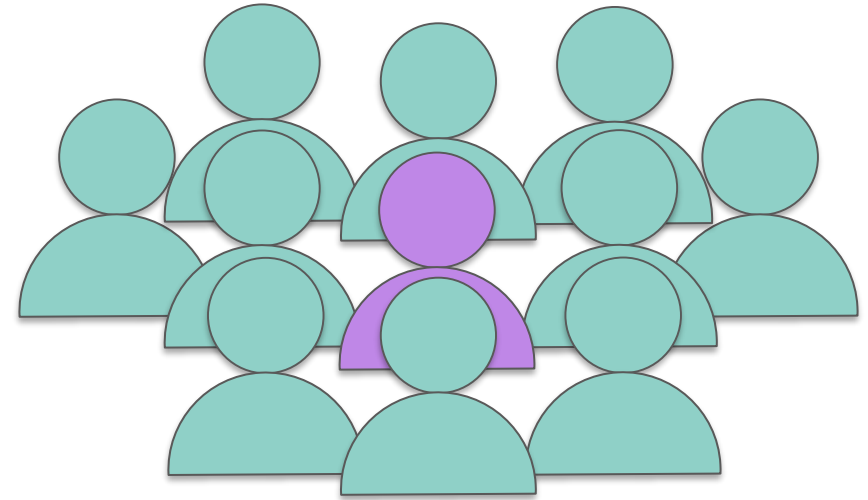- Multi-Objective Optimization

Recommendation(s)

Modeling Constraints

- **Maximum Cash Outlay**
  (e.g. total bill hardly crosses $200)

- **Maximum Quantity of Food**
  (e.g. a single person hardly orders more than one main course)

Segmentation to Consider

- **Member vs Non-Member**

- **Individual vs Group**

- **Breakfast vs Lunch vs Dinner**

- **Young vs Middle-Age vs Elderly**

- **Heartland vs CBD**

Deliverables

- **Robust Model**

  ❑ Increase in customer satisfaction
  ❑ Increase revenue

- **Scalable Model**

  ❑ Written in Python or Java
  ❑ Clear documentation/commenting
  ❑ Able to incorporate new parameters

*Re*invent Tomorrow

X-Factors

- Consider the impact of weather (temperature/rainfall) on the product choices

- Promote the model's recommendation by tagging it with endorsement from social media

- Recommend untried products to make the meal more experimental and delightful than norm

- Promote slow-moving products

Data Available

- **Type: Anonymized CRM**

- **Time Period: 1 Year**

- **Number of Outlet: ~20**

- **Number of Customer: ~20,000**

- **Characteristics:**

  - Member ID
  - Age
  - Gender
  - Transaction ID
  - Transaction Date
  - Transaction Time
  - Outlet
  - SKU Description
  - Quantity
  - Price
  - Spending

Re invent Tomorrow

Questions?

Jason Tai (Jason.Tai@y3technologies.com)
Steven Luck (Steven@ascentis.com.sg)