We’re all for good

Good comes in more ways than one. We’re a collective made up of many social enterprises, serving many different purposes, for one good reason. You.

Data-driven Transformation in NTUC Social Enterprise

Dr Jingyuan Zhao, SVP, Head of Advanced Analytics Center, NTUC Enterprise

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Agenda

- About NTUC Social Enterprise
- NTUC Analytics Journey
- Data Science Solutions
About NTUC Social Enterprise
In order to consistently **Do Good and Do More Good**, social enterprises need to **Do Well** (to be scalable and sustainable) but not profit maximizing.
NTUC SE Digital Transformation Journey

An organization that focuses on doing good

Leverage on technology to drive transformation

NTUC SEs are doing data-driven business transformation to deliver an integrated suite of services to meet the needs of people in Singapore throughout their life cycle.
Analytic Journey in NTUC
Data-driven organization: build data strategy and unlock data value

Group Data Integration
- Group Signal
- Customer 360-degree view
- Customer communication & engagement
- Customer experience

Optimization
- Performance monitoring and optimization
- Heatmap for Resource Management
- Delivery optimization
- Assortment optimization
- Marketing spending optimization
- Demand forecasting & Optimization

Personalisation
- Recommendation
- Personalized Search
- Customer Segmentation
- Dynamic communication
- Store Localization

GMV, Customer base, Customer Engagement & Experience, Operation efficiency

Analytics Algorithm
- Supervised learning
- Segmentation
- Forecasting
- Collaborative Filtering
- Optimisation
- Graph mining
- Deep Learning
- A/B Testing

Foundations

Infrastructure

Data
Customer 360 view Data/Store Data/Sales/Logistic from different SE

AWS Cloud /Google Cloud

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Data-driven organization: build data strategy and unlock data value

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Assess data & analytics maturity, analytics strategy

• Evaluates levels of data maturity and identify data gaps
• Designs analytics strategy to articulate strategic focus

Data warehouse, governance, acquisition & integration

• Organises data lakes to create usable data sets, enables central provisioning of data analytics services
• Implement effective data governance frameworks
• Acquire and integrate new data sources

Business intelligence, business analytics, data science solutions

• Develops machine learning and AI solutions to enable business growth, strengthen business operations and create new business lines
• A/B testing to validate and select optimal solutions.

Automation, tracking, optimization

• Scales pilots and rollouts for full implementation and automation
• Tracks performance KPIs and usage
• Iterates and optimises processes

How we deliver

NTUC Advance Analytics Center building up NTUC analytics best practice
Data Science Solutions
fostering better customer relations and driving operational excellence
“We Know You” Customer Insights

Analytics will help us act on precise knowledge of what our customers need

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3 Branches
1:1 Personalization
Real-time personalized recommendation delivers content that matches specific customer needs and interests.

2 Trunk
Customer segmentation
multi-dimensional segmentation enables us to better understand customer needs and deliver the segment-level personalization.

1 Roots
Customer metrics
Automated reports delivers unified and valuable customer insights across organization, which is critical to every day decision making.
More than 2,800 data signals across our members and NTUC ecosystem

It is helping us act on precise knowledge of what our customers need

Demography & Life Stage
- 26 Signals eg. Millennials, Affluent, Pioneer

Behavioral
- 108 Signals eg. Practical Shoppers, Promotional Shoppers, Brand Conscious, Household with kids

Location
- 312 Signals e.g. frequented Mall, residential, Next shopping location in 7 days, Mobile App geo-location

Communication
- Deterministic & probabilistic Signals
- 612 Signals eg. category to channel preference, promotion to channel preference

Customer Life Cycle
- 528 Signals eg. Weekend or Weekday shopper, High value shopper, New to Plus/Category/Merchant, Lapse from Plus/Category/Merchant

Transport
- 132 Signals eg. Mode of transport, RFM of transport

Shopping
- 804 Signals eg. Fashionista, Skin care lovers, potential shoppers in a category in next 30 days, shopping for kids

F&B
- 343 Signals eg. fast food lovers, Chinese food lovers, Number of time eating out