

Project Overview

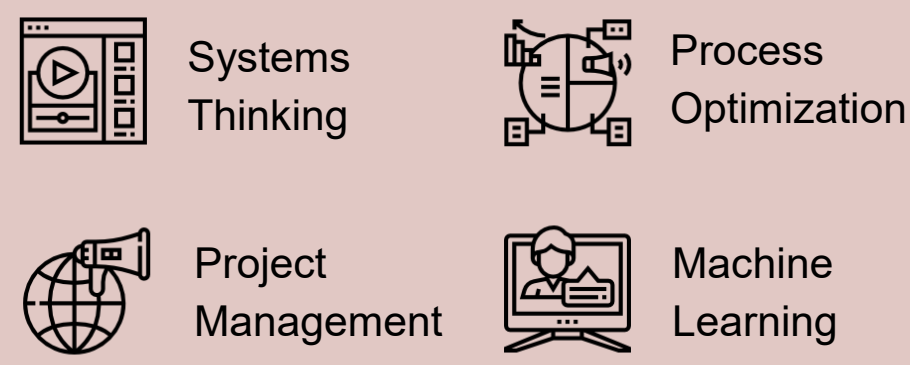
SDP Group 17 aims to identify opportunities to establish digital solutions in the F&B industry. The digitalization roadmap of the F&B industry involves 4 phases. The team started with introducing digitalization into JR Group, an F&B organization in Singapore, through process documentation, problem identification, solution ideation and implementation in **Phase 1 and 2**. The team then identified the potential of scaling JR Group specific solutions to an industry-wide level in **Phase 3** and established a data cloud framework to encompass stakeholders, interactions and information flows in the F&B industry to provide intelligent information for stakeholders to perform their key activities more optimally in **Phase 4**.



Key Objectives

- Gain insight into the F&B industry by understanding the processes in F&B organizations and identify possible areas of improvement.
- Utilize digital technologies to help F&B organizations tackle problems identified, to improve operational efficiency and productivity.
- Explore potential of big data solutions in the F&B industry.

Key Skillsets

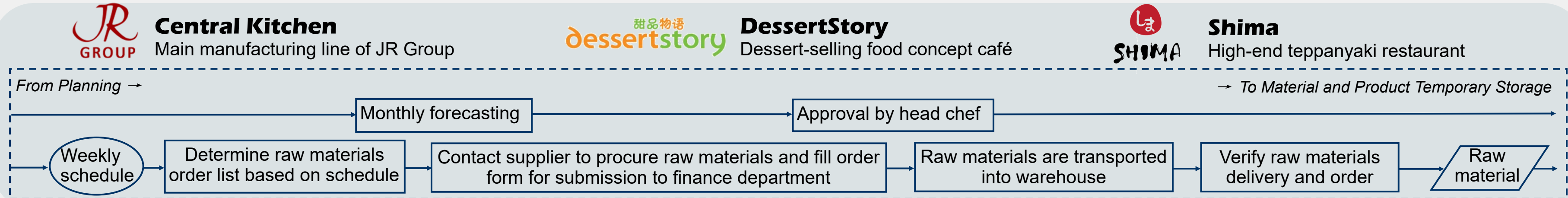


Digitalization Roadmap

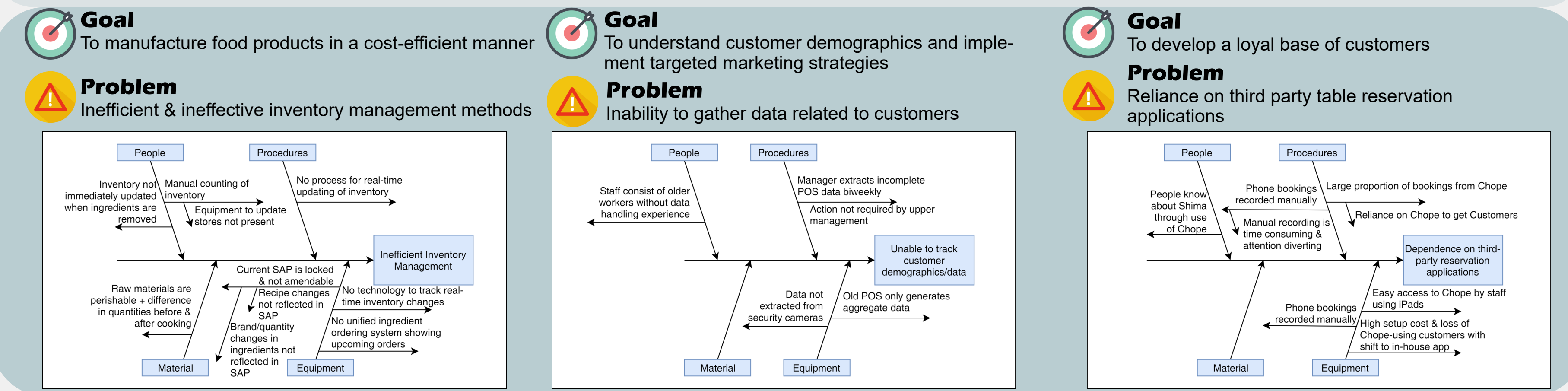


Phase 1 Solution Generation

Step 1 Process Documentation
 Visualize backend process
 Document process details



Step 2 Problem Identification
 Identify goals
 Identify roadblocks
 Root cause analysis



Step 3 Solution Ideation
 Identified problems + Organizational requirements
 Feasibility study
 Proposed implementation

Inventory Management System

Functions	Features
Inventory Optimization Efficient inventory control through forecasts and systematic product catalogues	<ul style="list-style-type: none"> Demand Forecasting Reorder Point Product Cataloging
Inventory Tracking Track stock keeping units (SKU) across food manufacturing supply chain	<ul style="list-style-type: none"> SKU Identification SKU Quality Management SKU Tracking
Report Generation Summary of key information of storage and inventory	<ul style="list-style-type: none"> Warehouse Reports Product Reports Work Schedule

Benefits

- Cost Savings**
Save costs through prevention of spoilages and dead-stock; Reduce transportation and admin costs through improved material replenishment planning
- Labor Hour Savings**
Reduce labor hours spent on audit and admin work during ordering, planning and storage processes
- Possible Expansion of Scale**
Able to expand production capacity in the future

Video Analytics

Person Detection
Provide better information on crowd level

Facial Analysis
Age and gender estimation to provide data on customer demographics

Benefits

- Manpower Savings**
Support planning of staff work schedule according to crowd level and optimize service time
- More Targeted Marketing**
Allow for better understanding of customer demographics to design targeted marketing campaigns

Reservation App

Functions	Features
Diner Management Efficiently managing diners by attracting potential customers, improving customer experience, and encouraging repeat visits	<ul style="list-style-type: none"> Customer UI / UX Reservation Management Loyalty Program
Data Management Function as data collection point; Generate reports on restaurant performance and customer stats	<ul style="list-style-type: none"> Customer Data Collection Customer Data Analytics Report Generation

Benefits

- Cost Savings**
Eliminate fees paid to third party applications for reservation services
- Independent Data Collection and Analytics**
Facilitate collection and storage of customer data to create a database; Identify regular customers and encourage repeat visits by developing upselling strategies

Phase 3 Expansion into F&B Industry

Purpose: Assess the potential of the identified problems and solutions generated to be scaled up to the F&B Industry

Inventory Management System

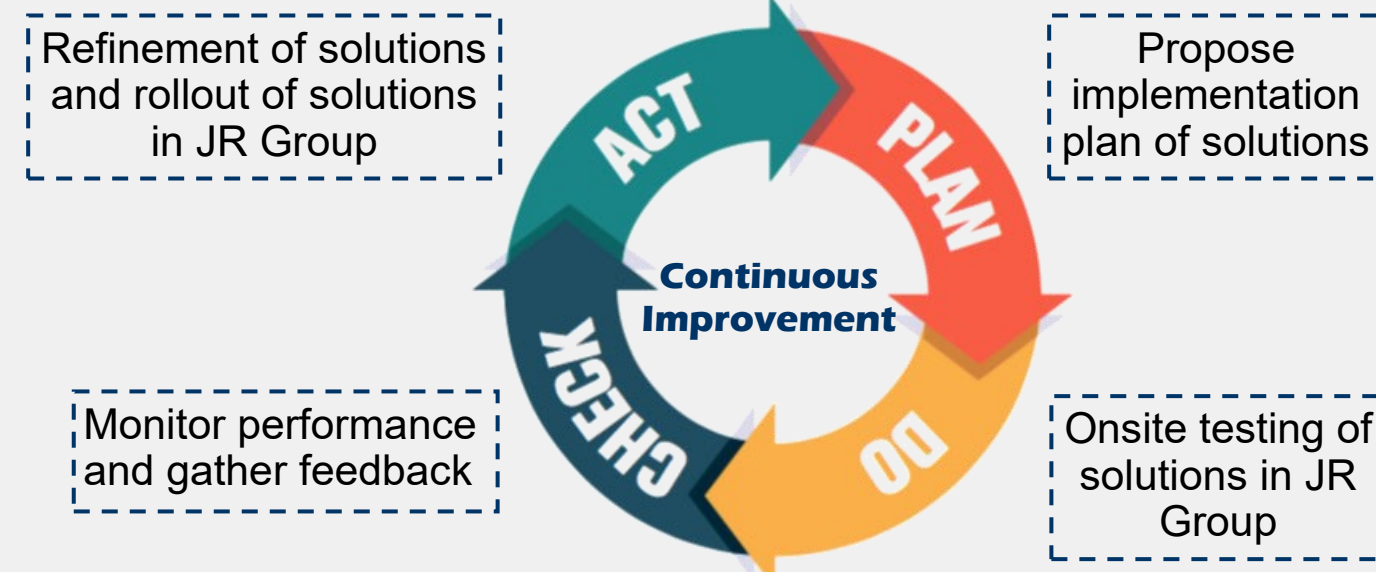
Inventory control and management systems in local food manufacturing organizations are underdeveloped
 → Great potential for more effective inventory management applications

Video Analytics

Potential benefits of video analytics applicable in the F&B industry
 → Allow scalable video analytics applications to be catered to F&B organizations

Reservation App

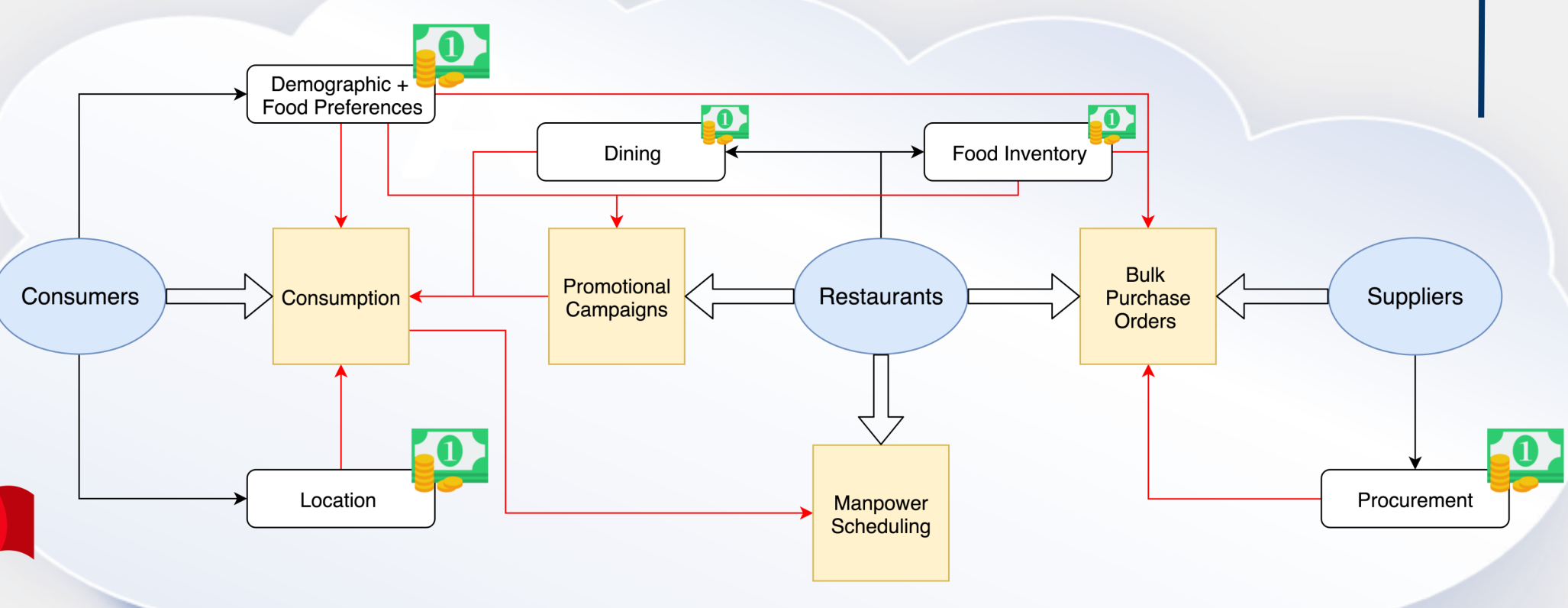
Existing reservation applications have high subscription costs and prevents key customer information extraction
 → Presents the opportunity for the proposed reservation application with a revamped cost structure and increased customer data transparency and sharing



Phase 4 Future Work – Data Cloud

Data Cloud

Framework: Encompass the interactions and information flows of the 3 key stakeholders
Objective: Provide complete intelligent information to help stakeholders perform key activities optimally.

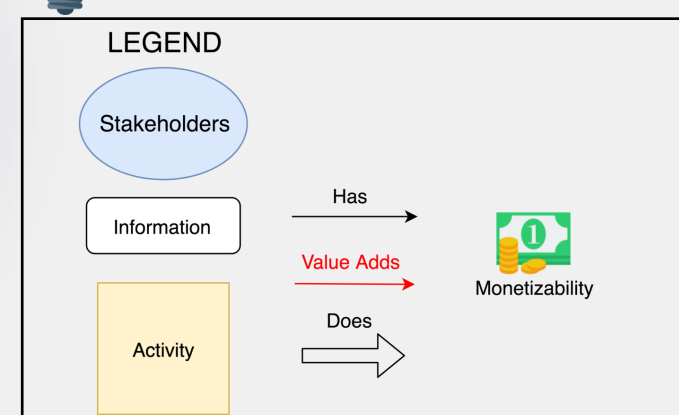


Feasibility for Monetization

Rationale: Financial viability of the data cloud.
Profit model: Monetize data through providing critical information and insights

Monetizability of each information segment is scored across 3 key factors:

- Level of Market Saturation
- Accessibility of information
- Insightfulness



Application into F&B Industry

Stakeholders	Applications	Benefits	Enhances
Consumers	Food Concierge	Personalized food content and recommendations	Consumption
Restaurants	Bulk Order Collaboration Platform	Reduces cost by optimizing scheduling and combining orders with other restaurants to capitalize on bulk purchasing	Bulk Purchase Orders
Suppliers	Data Analytics	1. Increases revenue from better targeting of consumers; 2. Reduces wastage of expiring food ingredients	Promotional Campaigns
Restaurants	Bulk Order Collaboration Platform	1. Increases revenue from greater customer reach; 2. Reduces wastage of expiring raw materials; 3. Reduces logistics cost	Greater Customer Base