Business Case: Expansion and Optimisation of Logistics Services

General Information

Ebenezer Logistics Pte Ltd would like teams to take on the challenge to research and conceptualise solutions to facilitate the optimisation of existing services and expansion of their logistics services. This includes helping to create better visibility and organisation of the operations via optimize routes of their 80 trucks, refining processes and expansion of services to include warehousing while ensuring that customer's service level agreements are met.

In the fleet, we have 41 Freezer Trucks, 1 12ft truck, 18 14 ft truck, 20 24 ft trucks, 5 prime movers, and 7 vans and the product that we typically handle are fragile; hence, our colleagues are constantly challenged with issues like "what are the food that cannot be packed with others, and etc."

Our key logistics home is in Pandan Loop to facilitate island wide delivery.

In sum, it is about growing the company organically – by improving efficiency, reducing waste, and expanding current range of services without increasing the carbon footprint.

Issues Encountered

- 1. Unorganized way of accepting jobs. Currently we communicate with our customers via WhatsApp, and jobs offered are being posted in group chats. The issue with jobs postings on WhatsApp poses the issues and difficulties of:
 - a. Overlooking jobs tendered by customers.
 - b. Taking on additional jobs without an overview of next day schedule, manpower, vehicles, and other resources.
- 2. Finding and referring to past proof (photo) of delivery is time consuming.
- 3. Drivers' not following delivery timing.
- 4. Questionable returns on assets namely vehicles deployed in last mile delivery.

Requirements

- 1. Recommend or design an algorithm logic for dynamic route optimization taking into account inventory size, number of trucks, truck capacity, expected time of delivery, Delivery locations and erp during peak period.
- 2. Recommend or design a solution to maximise the co loading of goods in a truck to facilitate easy loading and unloading of trucks (FIFO), articulating how you will also verify the goods delivered with the client. Include step by step process.
- 3. Recommend or design a warehouse management system and solutions to make it intuitive for users (to locate and verify the goods), arrange goods in a FIFO manner in a cost efficient and smart way. Include step by step process.

Open House

The Open House will be on:

2 nd May 2023, Tuesday	: 10am - 5pm
3 rd May 2023, Wednesday	: 10am - 2pm
5 th May 2023, Friday	: 10am - 5pm

Contact person / Email: <u>lawrence@ebenezer.com.sg</u> <u>tengteng@ebenezer.com.sg</u> <u>samson@ebenezer.com.sg</u>

Team leader to send email to the contact person in advance regarding the number of persons going to the open house.