

Case Study for HCCB Disrupt Season 1

Introduction

HCBL is India's largest player in the NARTD (Non-Alcoholic Ready to Drink) market. The non-alcoholic beverages market in India is approximately valued at INR 28,000 Cr and growing at a CAGR of 5-7%. HCBL manufactures these beverages at its own and contracted plants and then distributes them to around 5000 distributors across 20 states in India. Beverages being voluminous products, the transportation cost of the product becomes a significant cost, compared to the overall costs of production. The beverage industry's cost of logistics is significantly higher compared to the other FMCG products due to the bulkiness and lower cost/Volume.

Logistic Operations

HCBL has 15 manufacturing locations spread across the East, West, and South of the country. The company does not have operations in the northern region of the country (UP, Haryana, Punjab etc). Operations of the company are divided into three Clusters- East, South, and west. The South cluster is the biggest in the scale of operations, followed by the West and East cluster. There are three types of transportation movements that happen in HCBL. The company uses trucks with payloads ranging from 750 kg to 34 tons. The loading bay length of these trucks' ranges from 4 feet to 45 feet.

Intra Unit: This movement is typically short-haul, with distances ranging from 5 km to 40 Kms/trip. We use dedicated trucks for this movement. These trucks are contracted throughout the year and run only with HCBL. The trucks used in these movements have a payload capacity >24 tons and a loading bay length of >40 feet.

Inter Unit: These are long-haul movements, where they prefer to use market trucks. These trucks transport HCBL goods on one way chartered by the company. Once it reaches the destination and the delivery of goods is done, the contract for the truck is over. The distances in these movements range from 150 Km to 2400 Km. The average distance of these moves is around 490 KMs/trip. The trucks used in these movements have payload capacity >24 tons & a loading bay length of >40 feet.

Customer: These movements are done from HCBL locations to our customers. They service more than 5000 distributors from our 15 plants and 20 depots. The distances in these movements range from 15 km to 500 Km. The average distance of these movements is 248 Kms. The trucks used in these movements have a payload capacity of 12 tons, and a loading bay length of 24 feet.

HCBL moves around 2000 trucks/day on average out of which 435 trucks are inter-unit movements, 220 trucks/day are intra-unit while remaining 1,345 truck movements are customer movements. Graph in Fig 1 shows the percentage split between different move types based on the total distance travelled in a year.

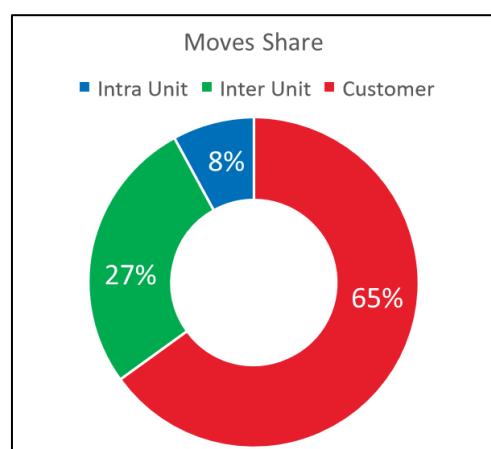


Figure 1: Split of move type based on total distance travelled annually

Trucks Used for HCBL's Transport Requirements (Examples)



Figure 2: Long Haul Transportation



Figure 3: Short Haul Transportation

Problem Statement

HCBL's current transportation is dominated by Diesel as a primary fuel. The largest number of fleet available in the market is also diesel compliant Trucks for goods and material transport. In this ecosystem, Diesel contributes around 35% of the freight cost in short-haul movements. The cost of diesel increases to 45% of total Freight on long-haul moves.

There is a huge risk of inflation in this fuel, and this creates risks on the total transportation costs. Like HCBL, most of the organizations are contracted to reimburse the cost of the fuel along with its inflation to the trucker/transporter. This implies that there is a cascading impact of fuel inflation on the user of the service and not the transport industry. A rough calculation indicates that if the Diesel price increases by 20% in the next 3 years - the freight impact is expected to be around 8% which needs to be passed on to the customer, thereby pressurizing our sales, and challenging the price points of every pack and flavour.

The carbon emission of this fuel is amongst the highest at 2.71 Kg CO₂ / Litre. Considering that our long-haul / Higher capacity trucks (payload >24 tons) give a mileage of 2.5 KMPL, and our short-haul trucks (Payload of 12 tons) have a mileage of 4.5 KMPL. This gives us an emission of 1.08 KG CO₂ for every KM travelled in long haul/higher capacity trucks and emission of 0.6 KG CO₂ for every KM travelled in the short haul.

HCBL is looking for reducing its risk of fuel inflation and reduction in carbon emissions in line with its sustainability targets.

Task at hand

You are a part of the Logistics Team of this company, and you need to propose alternatives to mitigate this risk. Below are the points to consider:

1. Alternative Fuels to be blended with/replace diesel which can reduce Cost / emissions. Consider and plan for consistency of supply and quality.
2. Carbon emission impact to be proposed from a current emission of 100,000 MT of CO₂ emission with 100% diesel usage (An annual usage of approx. 3.68 Crore litres).
3. Newer technologies, and their application, to be explored with timelines along with risks involved.

Points to consider:

- The company's sales are growing at a CAGR of 15 %, and there will be a commensurate increase in truck movements and thereby emissions.
- HCBL is open to changing truck sizes in case of newer mobility options with different specifications.

Deliverables

What should HCBL do in this dynamic Post-Covid environment to de-risk and reign in the cost of fuel and reduce the emissions of transportation?

1. Qualitative inputs on the kind of technology/innovation HCBL can take up in the strategy
2. Base case scenario of company's emissions for next 5 years (considering growth) and emissions post implementation of recommendations Timeline of implementation of the recommendations.
3. Cost impact of implementing of the suggestions along with potential risks involved.

As a first step, you are required to submit a 2-slider pitch, excluding cover page (as per the details mentioned at <https://www.gradpartners.in/e/HCCB-Disrupt-Season-1-38>) to the evaluating team showcasing your understanding of the problem and direction of your strategies.

Top 20 teams qualifying Round 2 would be further assigned with the task of formulating detailed plan.

All the Best!