IIT KHARAGPUR

# INTER IIT TECH MEET 10.0

25-27TH MARCH 2022

## BLUE YONDER'S SUSTAINABLE SUPPLY-CHAIN

Across the globe, supply chain models face a vast shift to become increasingly efficient and adaptive to consumer demand. With the onset of the Covid 19 pandemic, the models have changed to adapt themselves to achieve greater customer satisfaction. But unfortunately, it has also led to an increased amount of carbon footprint, which will have a detrimental impact on the environment. Thus efficient and sustainable supply chain models have become the need of the hour.

BlueYonder | HIGH PREP

# INTRODUCTION

The impact of new supply chain models was discussed at the National Association of Well-known Companies of India (NAWCI). The member corporations of NAWCI are large/mid-size corporations of India, e-market players, distributors, and retailers. They sell typical consumer products ranging from food and beverages, personal care, health supplements, paper and stationery, household supplies, and well-being products. There is rapid growth in terms of overall footprint and YoY growth.

Over the years, there has been a gradual shift towards e-commerce channels, and it has exploded due to multiple COVID-induced lockdowns in the last couple of years. All companies have enhanced their direct-to-consumer sales. An internal task force found that while customer satisfaction has increased, the carbon footprint has increased significantly due to added packaging, last-mile logistics, and increased returns, directly impacting distributors and retailers.

NAWCI members are concerned about the sustainability of these supply chain models. It wants to improve its impact on the environment and sustainability significantly – a strategic goal they have set for itself, putting them on a path to become one of the 'greenest' companies in the world.

To achieve this ambitious goal, NAWCI has set up an empowered task force led by exceptionally talented Gen Z members to get innovative solutions to this problem. Your objective is to arrive at a strategic plan broken down at the tactical level to reduce the overall carbon footprint significantly while focusing on customer satisfaction.

# PROBLEM STATEMENT

NAWCI wants to lay out a comprehensive time-phased, 5-year roadmap proposal with specific initiatives to achieve its end goal of significant carbon reduction.


The proposal must be supported by relevant data and operate within contemporary real-life constraints, e.g., technological limitations. Highlight how the solution recommendation will help the government achieve the target of the COP26 summit and benefits for NAWCI (e.g., tax benefits).

The initiatives should follow the **MAQ** framework:

- **M**easurable profitability and revenue impact
- **A**ctionable Initiatives
- **Q**uantifiable and predictable benefits

For example, a proposed initiative to combine deliveries and pick-up should be supported by expected returns, assessment of last-mile reductions, and, if applicable, the potential impact on revenue in case of compromise on customer service.

# NETWORK SCOPE

NAWCI's members can influence the following spans of control:

## WAREHOUSING

Each member may have one or several warehouses across the country. They receive products from manufacturing plants and distribute them to customers. The mode of delivery can be via own truck or third-party logistics(3 PL) services.

## TRANSPORTATION

The overall carbon footprint inherits the carbon impact of the entire supply chain: transportation and logistics (own assets and 3 PL) from Plant to Distribution Centre (DC), DC to Customer, Plant to Customer for forwarding distribution, and Customer to DC, Customer to Vendor and returns.

## PACKAGING

Manufactured products come with their packaging. Additional packaging may get added due to the delivery mode (direct to consumer, ship to distributors, etc.):

- Product's retail packaging
- Larger boxes for transportation
- Return boxes for returns of damaged/ rejected/ expired goods.

The production processes in plants are out of scope for this exercise, and the carbon footprint to manufacture is fixed/ given for each product.

# EVALUATION AND SUBMISSION

The Evaluation process will be done in two parts :

1. Mid-Evaluation Submission: 100 pts
2. Final Presentation: 300 pts

Points will be distributed on the basis of the following broad categories:

1. Actionability of the 5-year vision (mid and long-term opportunities) - 35%
2. Net Negative Carbon Impact - 25%
3. Cost Impact -20%
4. Market Share and SLAs Impact -15%
5. Model sustainability -5%

## MID EVALUATION

The Mid- Evaluation report needs to be submitted in PDF format by 19th March. It should not exceed seven pages (excluding the cover page).
The report should consist of the following details:

### IDENTIFYING AND ANALYZING THE PROBLEM

The participants are expected to provide an overview of the currently existing supply chain models, i.e., conduct extensive research on the various stages of the models and analyze the current carbon footprint in each step.

### DEVISING AN IMPLEMENTATION STRATEGY

After identifying and analyzing the current issues, provide a brief explanation of the initiatives that you plan to undertake under the 5-year roadmap proposal. The initiatives should be analyzed based on the impact and resources required. They should be data-centric as well as integrable in the current models efficiently.

### IMPACT OF THE PROPOSAL

An assessment of the proposal should be provided in terms of the carbon footprint it is reducing by customizing or improving the various stages, the cost and revenue impact it induces in the current model, and how well it is catering to the customers.

### STRATEGIC FIT

Analysis of the on-ground implications of implementing the model, i.e., the feasibility analysis of the model in real markets and assessing the adaptability and flexibility of the model.

## FINAL PRESENTATION

All participating teams would be required to give their final presentations of their proposed solution on 26th March.
The final presentation has to be submitted by 24th March 11:59 p.m.
Please note that the Final presentation should wrap up within 15 minutes followed by Q&A (5 min).

Important notes:

- All the critical assumptions must be documented in the appendix of the proposal.
- Any estimated carbon impact and cost impact must be supported by quantitative analysis (refer to MAQ framework in Problem Statement section above)
- Before proposing a solution, ask whether something similar has been attempted in real life, analyzing the reasons for its success or failure.

Send your submissions at this email: submissions@interiit-tech.org

Team size for this event is maximum 10 participants.
Participation awards shall be awarded to all participants.