SUCCESS STORY

# Cold-Chain Network Optimization

For a Leading Indian Ice Cream Brand

| Document Type | Date | Version |
|---|---|---|
| **Case Study Report** | **22/07/2025** | **1.0** |

## Top Indian Ice Cream Manufacturer

| DOCUMENT TYPE | SCALE | LOCATION |
|---|---|---|
| Food & Beverage | 72k+ Retail Outlets \| 200+ Stores | India |

**Sector Focus:** Temperature-sensitive logistics requiring cost efficiency, faster routing, and minimized spoilage.

## Executive Summary

A leading ice cream manufacturer operated a large cold-chain network that lacked optimized supply point mapping. Translytics used its Network Optimization Engine to simulate multiple scenarios, reduce transport distances, and improve cold-chain efficiency while ensuring cost savings and higher product freshness.

| ₹35L+ | 60% | 15–20% | +25% |
|---|---|---|---|
| Monthly Saved | Distance Reduction | Spoilage Losses | Mapping Accuracy |

## Challenge

The company struggled with:

### High Transport Costs

- Misaligned consumption-to-supply mapping
- Long secondary distribution routes
- Rising fuel and freight expenses

### Cold-Chain Inefficiencies

- Increased risk of product spoilage
- Delayed deliveries in peak seasons
- Low network responsiveness

### Business Impact

- High logistics costs reduced profitability
- Limited scalability for seasonal demand
- Spoilage affected brand reliability

**Solution provided by: Translytics**

AI-Powered Cold-Chain Network Optimization

**Contact Information**

+91 84849 87425
info@translytics.io

Translytics

## Solution

### Translytics Network Optimization Engine

AI-driven modeling to optimize cold-chain logistics and reduce operational costs.

### Center-of-Gravity Simulation

- Modeled optimal supply point locations
- Reduced average route distance and costs

### Transport Cost & Distance Analysis

- Identified high-cost routes
- Simulated greenfield and optimized scenarios

### Supply Point Realignment

- Better plant-to-CFA-customer mapping
- Improved service levels and delivery speed

## Impact & Results

### Qualitative Improvements

- Higher cold-chain reliability
- Lower spoilage and product losses
- Faster replenishment to retail outlets
- More scalable network for seasonal peaks

### Annual Impact Projection

| ₹4 Cr+ | 60% | 15–20% | +18% |
|---|---|---|---|
| Saved Annually | Route Distance Reduction | Product Spoilage | Service Level Improvement |

## Technology & AI Implementation

### AI & Machine Learning Components

- Cost-to-distance scenario modeling
- Route clustering algorithms
- CoG-based supply alignment
- Seasonal demand variation simulations

### Integration & Platform Features

- ERP & route planning linkage
- Real-time distribution monitoring
- Dashboard for distance-cost metrics
- Automated network optimization reports

## Future Enhancement Roadmap

### Phase 2: Dynamic Seasonal Routing

Adjust network paths proactively to match peak seasonal demand variations.

### Phase 3: Automated Load Consolidation

Maximize truck fill efficiency while maintaining precise temperature control.

### Phase 4: $CO_2$ Impact Tracking

Optimize cold-chain operations for cost savings and reduced emissions.

**Solution provided by: Translytics**

AI-Powered Cold-Chain Network Optimization

**Contact Information**

+91 84849 87425
info@translytics.io