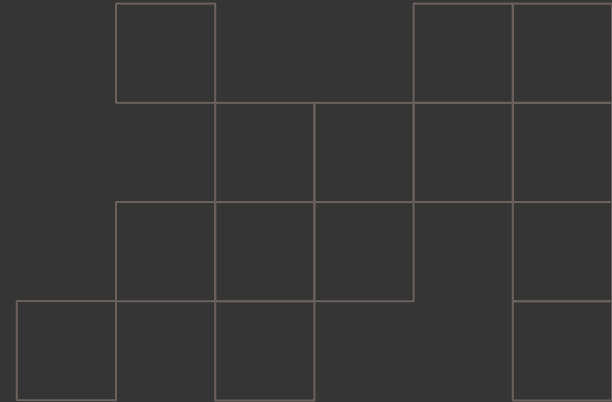


Ship-athon
11/ June//2025

Smart Supply Chain Management



Using ML for Delivery Delays Prediction & Supplier Categorization

A new ML-powered system that gives us an edge by helping:

Mitigate risks before delivery delays happens, preventing customer dissatisfaction.

Make smarter partnerships with suppliers who set us up for success, and advising those lagging behind

Project roadmap

Step 1

Establish clear success metrics and KPIs for our logistic teams

Step 2

Establish timeline for actualization of the project and expectations

Step 3

Implement and improve infrastructure plus automated alerts

Step 4

Continuous monitoring of KPIs and important metrics

Step 5

Create actionable response protocols within the chain

Goal

Have a smart supply chain that helps us improve customer and supplier relations

The Current Supply Chain Problem

Two Problems Costing Us Revenue & Customer Trust

Poor Partnerships

No systematic way to evaluate supplier reliability

Customer Dissatisfaction

55% of orders at risk of late delivery

Impact

Reactive problem-solving instead of prevention

The solution

This is where the project comes in: Early warning system + Supplier Scorecards.

For our customers' orders: We will receive early alerts when an order is at risk of late delivery and hasten it before it happens.

For our suppliers: We will now have scorecards for who are our most reliable suppliers, action on that, and uplift the rest

The Process

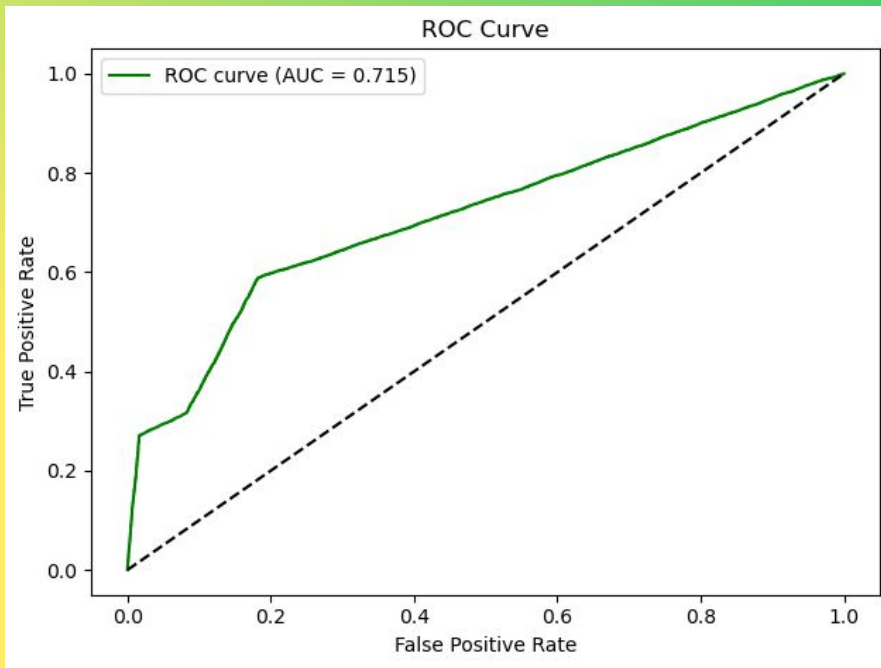
How accurate the machine learning (ML) model is in predicting delivery delays and supporting metrics

Predict with ML & Prevent Delivery Problems

- 80%+ accuracy in predicting which orders will be late as shown by diagram
- Early Warning: Flag at-risk orders before shipping

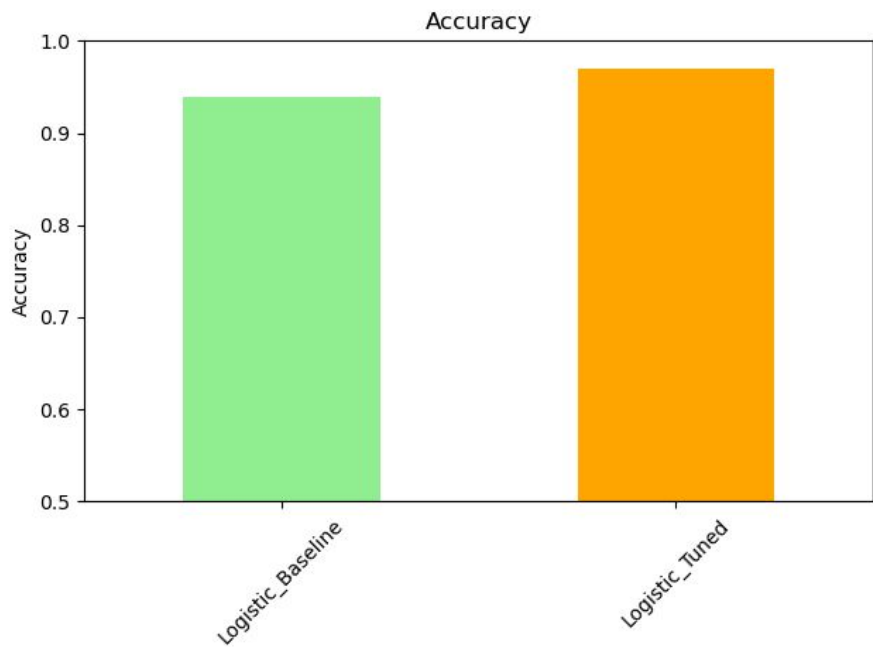
Results:

- Priority routing for high-risk orders
- Proactive customer communication



The Process

How the supplier score cards are calculated and accompanying proof metrics



Data Driven Supplier Scorecards

3-Tier Classification: High, Medium, Low reliability suppliers

Key Metrics: Late shipment rate, lead time consistency, order volume

Results:

- Prioritize reliable suppliers
- Uplift lagging suppliers

Business Impact

Expected business impact after approval and execution of this project

1

Cost Savings

Reduce expedited shipping and customer service costs from our predictive modeling of delays

2

Revenue Protection

Prevent customer churn and negative reviews from late deliveries from our delay alert system

3

Risk Mitigation

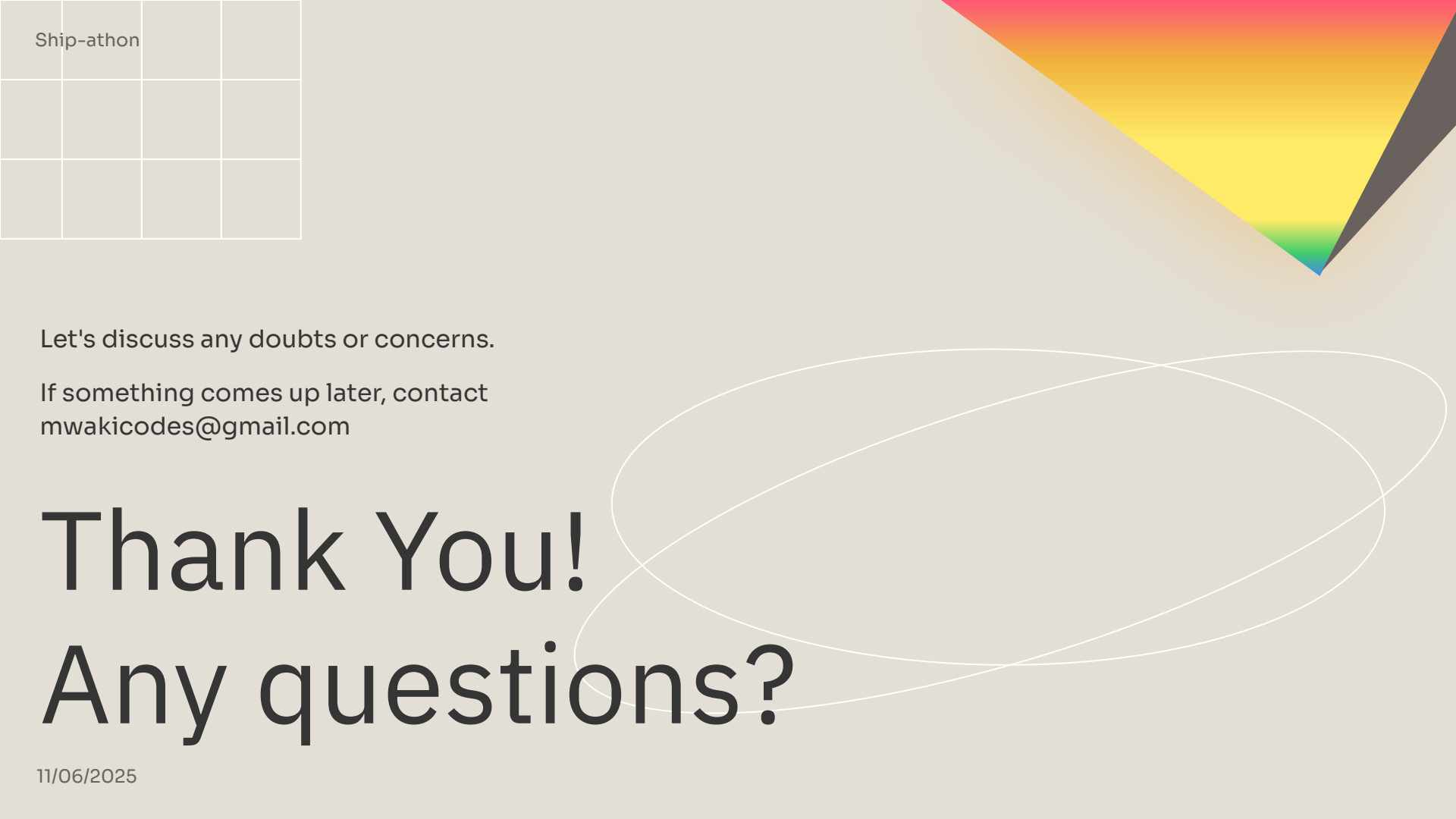
Identify backup suppliers for low-reliability partners brought about by our supplier segmentation

4

Supplier Optimization

Focus development on medium-tier suppliers and as well prioritize highly reliable suppliers

Ship-athon

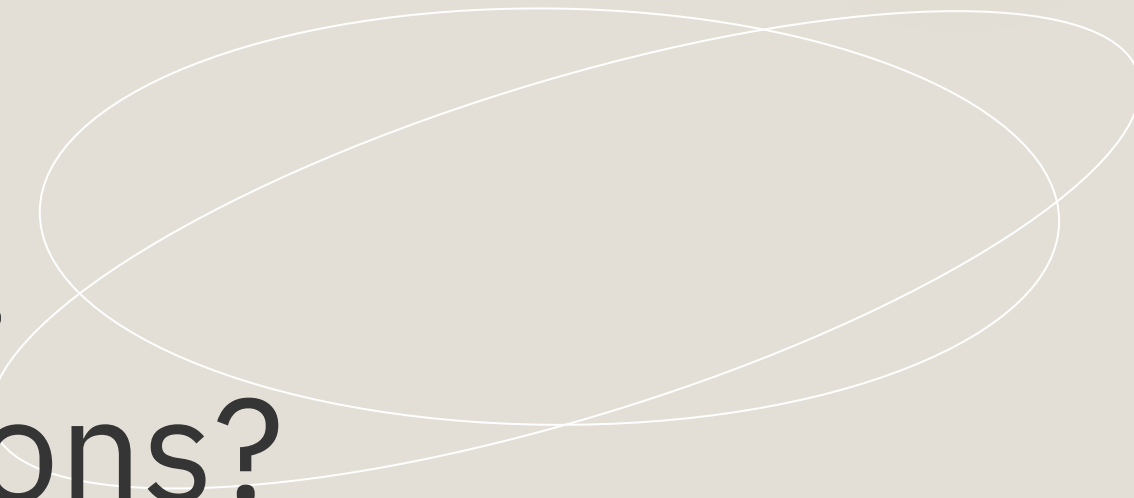
A decorative grid of 12 squares (3 rows by 4 columns) is located in the top-left corner. The top-left square contains the text 'Ship-athon'. In the top-right corner, there is a large abstract shape composed of several overlapping triangles. One triangle is red, another is yellow, and a third is dark grey. A small, multi-colored triangle (green, blue, yellow) is also visible within the yellow triangle.

Let's discuss any doubts or concerns.

If something comes up later, contact
mwakicodes@gmail.com

Thank You!

Any questions?

Two large, thin, white, overlapping ellipses are positioned on the right side of the slide, partially overlapping the 'Thank You!' and 'Any questions?' text.