

World Summit AI 2022

Quantiphi's Experience and Capabilities



Speaker



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Agenda



AI Supply Chain



Connected Dine-In



Zero-Waste Kitchen



Safe-Food Defrosting

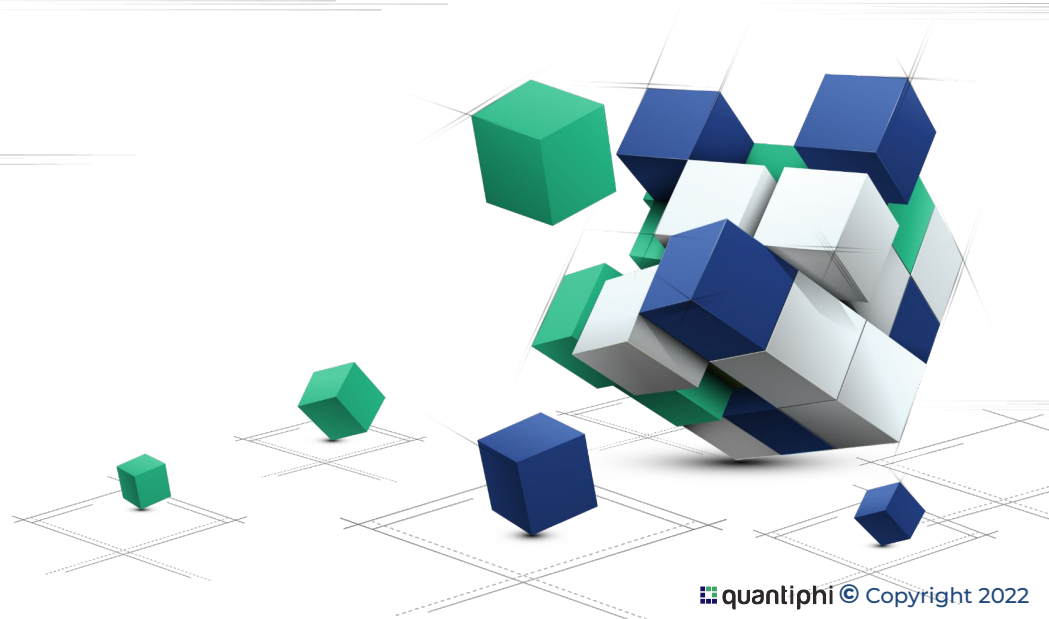


Omnichannel Labor Scheduling



Demand Forecasting Overview

Supply Chain at QSRs



AI Supply Chain

Delivery Schedule Optimization

Assortment Planning

Replenishment

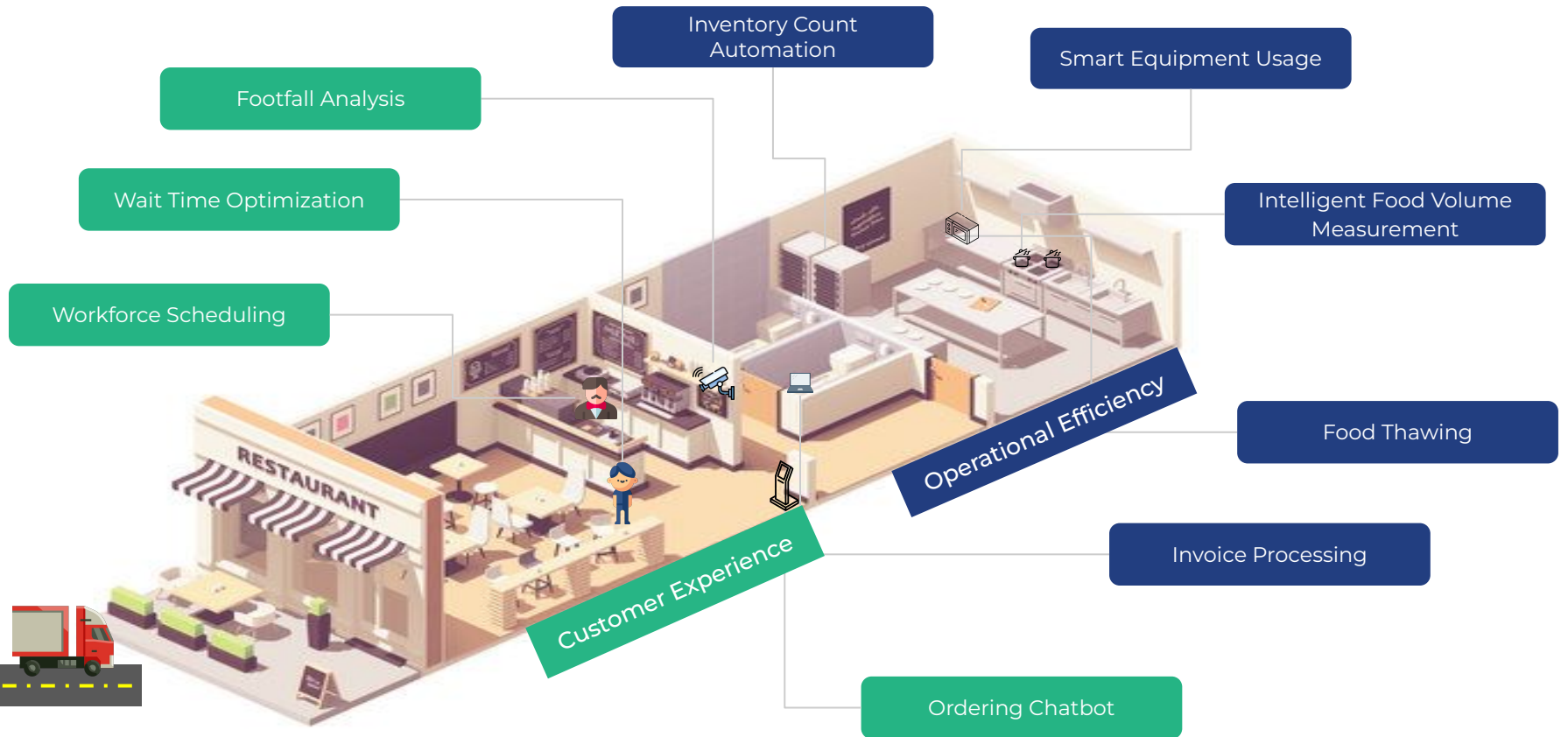
Inventory Count Automation

Storage Planning

Route Optimization



Connected Dine-In



Zero-Waste Kitchen

Standard Kitchen



Excessive Food Wastage



Long Customer Wait Times

AI-Augmented Kitchen



95%

Reduction in Food and Material Wastage

65%

Decrease in Customer Wait Time

25%

Optimum Use of Kitchen Equipment

DATA LANDSCAPE



Order Data



Menu Items

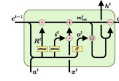


Ingredients



Appliances Required

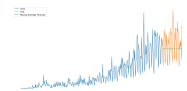
ML MODELS



LSTM



S-Naive



Moving Averages

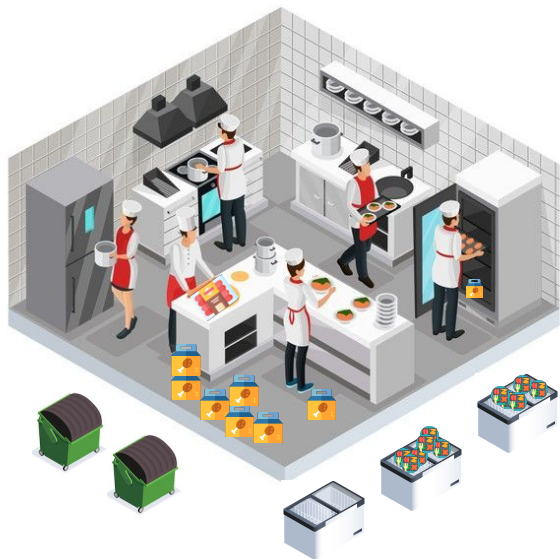
Safe-Food Defrosting

Standard Kitchen


Degradation in Food Quality


Freezer Space Constraints


Logistical Inefficiency



AI-Augmented Kitchen


Ensuring Food Safety Standards


Reduction in Operational Overhead


Enabling Storage in DC Freezers


Granular Demand Planning at Store and DC levels



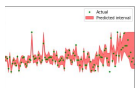
DATA LANDSCAPE

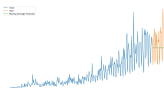

Consumer Patterns

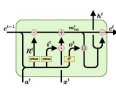

Food Types


Defrosting Requirements

ML MODELS


Quantile Random Forest


Moving Averages


LSTM

Omnichannel Labor Scheduling

Pre-COVID Scenario



In Person Meals

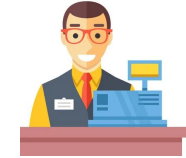


Primary Focus on in-store Customers

Post-COVID Scenario






Fewer In-Person Visits



Surge in Online Orders

Order Summary
1. Cheese Burger x2
2. French Fries - 5 x1
3. Loaded Nachos
4. Espresso Large
5. Chicken Wings
6. French Fries

Scheduled Workforce	
14:30 - 15:30	
15:30 - 16:30	
16:30 - 17:30	

AI-enabled Delivery Scheduling

DATA LANDSCAPE



Order Data



Store Constraints

ML MODELS

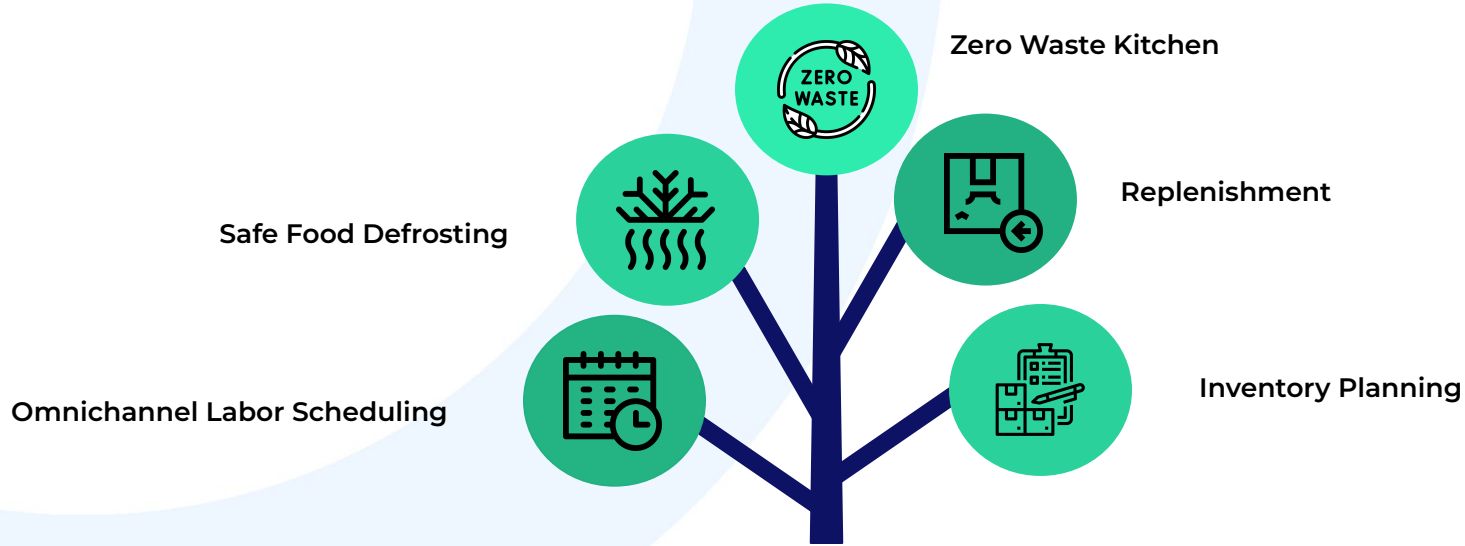


Quantile Forecasting



Optimization Research

...And it boils down to Forecasting



Scaling



Automated Pipelines to enable enterprise wide adoption across 2500+ stores



Augmentation with Product Catalogue and Seasonality Features



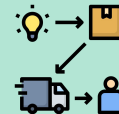
Optimizing Accuracy Metrics and adhering to Latency Requirements



Impact

85%

Reduction in Food and Material Wastage

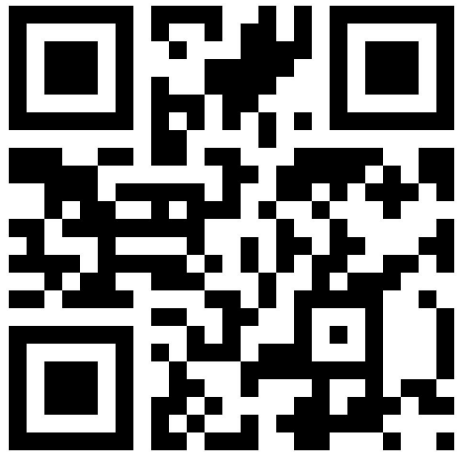


Streamlined and Standardized Supply Chain

6.5M

Cost Savings

Build Game Changing AI with Quantiphi



THANK YOU

 quantiphi

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