SUSCHAINABLE

OPTIMIZING SUPPLY CHAIN EMISSIONS IN CRISIS

BUSINESS PROBLEM

$1 billion

estimated total loss in 2020 alone in the United States after a record 22 climate shocks.

$14.5 trillion

hypothetical geopolitical conflicts losses primarily due to supply chain disruptions over next 5 years.

$210 billion

losses due to operational shocks in financial institutions alone, between 2011-2016.

McKinsey (2022, 2024)
FTI Consulting (2022)

MAIN CRISES CATEGORIES:

- Environmental
- Geopolitical
- Operational
- Regulatory

ARE BUSINESSES READY?

- Only 25% of companies have formal processes to discuss supply chain issues.
- Nearly 40% of companies lack a contingency plan in the face of a shock to their supply chains
- 45% have no visibility into their supply chains.

RELATION TO FASHION

- In 2022, 85% senior fashion executives identified the existing supply chain vulnerabilities to operational disruptions.
- Geopolitical conflicts were expected to significantly impact with 55% of fashion executives expressing concern

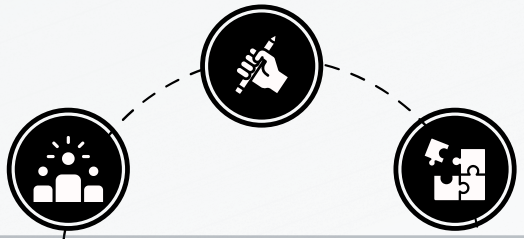
SHOCK HITS

EVERGREEN SHOCK

- March 2021, Evergreen incident disrupts global supply chains
- **$9.6 billion** estimated **daily loss** due to shock to global trade
- Fashion companies with time-sensitive products **lost sales** opportunities and faced **stock imbalances**

FASHION EMISSIONS

- Detours resulted in **additional 1000 metric tons of CO_2** emissions per vessel for this industry
- Switch to **Air Freight** produced **50x more emissions per ton-kilometer** compared to shipping

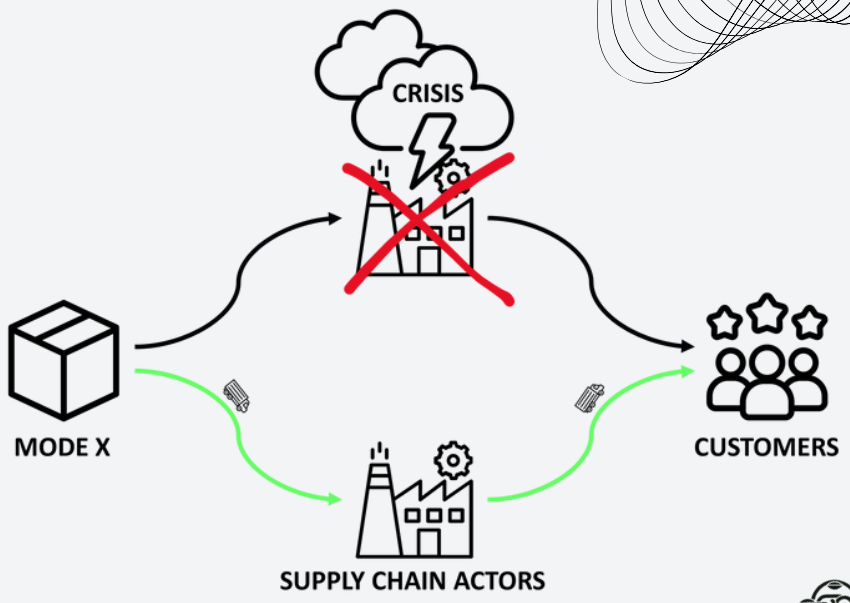


SOLUTIONS AT THE TIME

- Waiting/Delays
- Shift to **Air Freight** - emitting significantly more CO_2
- **Extended Shipping Routes** around Cape of Good Hope
- Exploring **Alternative shipping routes** but this was not an immediate fix

OUR SOLUTION

- Supply chains responding to crisis in the most emissions effective way
- With fast alert to get full control on the situation
- And powered by AI to help the responsible in the decision making process



METHODOLOGY

OPTIMAL MACHINE LEARNING (OML) INTEGRATION TO ERP SYSTEMS

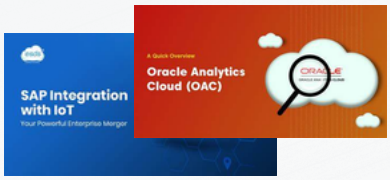
ORACLE TRANSPORT MANAGEMENT (OTM)

DECISION-SUPPORT ENGINE

Integrate data on supply-demand drivers and optimizes decisions for KPIs like product availability and inventory levels

DIGITAL TWIN

Provide a virtual model of the supply chain, enabling detailed simulations and testing of alternative scenarios.



ORACLE AUTONOMOUS DATABASE

SAP S/4HANA

END-TO-END DATA ARCHITECTURE

Facilitate data sharing across systems, supporting real-time decision-making

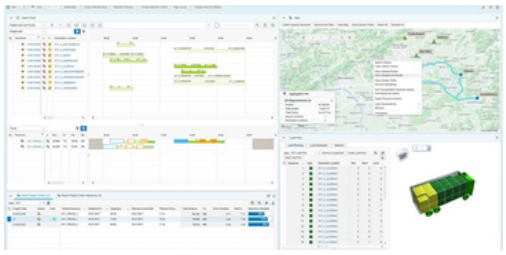
METHODOLOGY

ADDED VALUE

Automatic alerts when important crisis is detected based on sentiment analysis

Decision makers being able to add constraints to the optimization algorithm by typing them using natural language

Decision makers run and analyze different scenarios being able to interact with weights for variables like carbon emissions, cost, operational efficiency, customer and market impact.



DATASETS


CO_2
• CDP Full GHG Emissions Dataset
• S&P Global Trucost
• Bloomberg ESG Terminal
• Thomas Reuters Eikon
GHG EMISSIONS
• Humanitarian Data Exchange
• United Nations Social Pulse
• Live Time News Sources
• Global Disaster Alert and Coordination System
CRISIS DATA
• UN Comtrade Datasets
• Panjiva (S&P Global)
• Resilinc
ACTORS IN CHAIN
• Information from your own historical ERP
• IOT at every point of your supply chain
SUPPLY/DEMAND

IMPACTS

Traditional system

- **Enhanced Visibility & Real Time Integration :** traditional system often rely on delayed or fragmented data sources. Now, more **informed**, **timely decision-making**.
- **Sustainability Emphasis :** traditional system, in a way, ignores environmental impact. Now, **aligned with global sustainability goals** and **regulatory pressures**.
- **End-to-end architectures :** traditional system, lack a holistic view. Now, **comprehensive view**, allows to **optimize** across different KPIs.

Impact on Stakeholders

- **Companies :** Suschainable allows companies to proactively **manage risks** and **reduce costs** linked to supply chain disruptions. It also **enhances their sustainability image**, which can **attract environmentally conscious customers**.
- **Consumers :** Ensures **product availability** by minimizing disruptions, while **supporting eco-friendly brands**, which appeals to consumers increasingly concerned with sustainability.
- **Regulators :** Facilitates compliance by providing **transparency on emissions** and **crisis impacts**, helping **align with regulatory standards** and **fostering accountability**.

Additional impacts

- **Environmental :** Helps companies **lower their carbon footprint** by **optimizing logistics** and **reducing emissions**.
- **Economic : Strengthens resilience** by **minimizing financial impacts** from crises, thus **supporting economic stability** across sectors.
- **Innovation :** Promotes the **use of digital twin technology** and **machine learning** in supply chains, encouraging broader adoption of **sustainable** and **data-driven solutions**.

OUR TEAM

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