



THE COLD CHAIN ECOSYSTEM

COLD CHAIN FEDERATION - OCTOBER 2020



AGENDA

- Introduction
- Cold Chain Ecosystem
- The Future is Technology



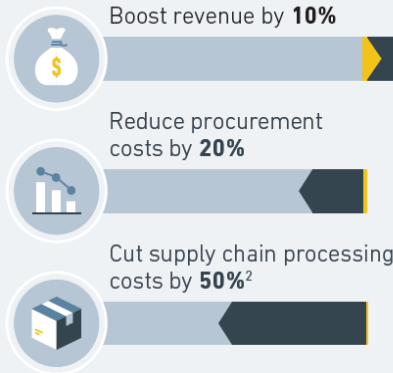
HOW THE INDUSTRY IS RESPONDING

ONGOING ADVANCEMENTS IN DIGITALISATION OF SUPPLY CHAIN

Sensors and IoT tools are transforming traditional asset tracking to intelligent supply chains that are capable of earning logistics companies a higher ROI.

Food
Logistics®

A 2017 study by the *Center for Global Enterprise* indicates that **supply chain digitization could:**



In fact, **supply chains were forecasted to be some of the biggest spenders on IoT solutions** in 2019, with \$197 billion spent by the manufacturing industry and \$71 billion spent by transportation companies.

FUTURISTIC IDEA TO A TACTICAL TOOL

As the digital economy continues to grow, the internet of things (IoT) technology has nearly any logistics company can implement in their supply chain.

Food shippers can reduce waste and loss while ensuring safer delivery with a digital supply chain strategy that offers:

- Full visibility
- Active condition monitoring
- Proactive risk management

Incisiv's 2018 Digital Supply Chain Executive Survey found that:



Over 50%

of respondents saw real-time product visibility as the most critical factor in digital supply chain investment



Over 50%

of retailers now want end-to-end visibility throughout the supply chain

COLD CHAIN CHALLENGES



QUALITY ISSUES
(Counterfeit or
falsified medicines)



DEVIATION EVENTS
(Temperature, Humidity,
Shock, Light deviations)



COST
(CAPA)



SECURITY THREATS
(Cargo theft)



SITUATIONAL EVENTS
(COVID-19, Weather,
Disruptions)



BRAND REPUTATION
(Customer satisfaction)

SECURITY RISK

- For the first 182 days of 2020, TAPA recorded 3,278 cargo theft incidents with a total loss of **€85,166,106** for the 2,154 or 65.7% of these crimes reporting a value.
- Over €52 million of this total was attributed to the 96 major incidents, those with individual losses of goods worth €100,000 or more. The average value of products stolen in these cases was €542,761.
- Five countries accounted for 87% of all cargo thefts recorded by TAPA's IIS in this six-month period.
- The United Kingdom recorded the highest number of major cargo losses in this reporting period with 56 or 63.6% of all crimes with a value of €100,000 or more. These produced a total loss of €27,658,653 or an average of €493,905. **Food & Drink accounted for €2,987,254.**

Overhaul is making supply chains fully visible, secure and connected in a digital world.



REAL TIME SUPPLY CHAIN OVERVIEW

Data visuals and customized interfaces provide different business groups (logistics, quality & security) a unified view of the information most important to their individual role and more importantly, the customer.



EXISTING AND NEW DATA INTEGRATION

Overhaul pulls data from your existing fragmented sources into our rules-engine. From the manufacturer to patient, we capture an audit trail of digital data (packaging, vials, reference numbers, consent forms, images) all in real-time on a secure IoT Cloud.



PROACTIVE INSIGHTS ALLOWING CORRECTIVE ACTIONS

Predictive analytics can inform our customers of emerging risks in real-time, protecting products and patients.

Critical insights can instantly trigger directive corrective actions and reduce cost associated with CAPA's investigations.

VISIBILITY, OPTIMISATION AND PROTECTION OF BRAND, SECURITY AND INTEGRITY

- **Visibility** upstream and downstream of supply chain flow
- **Optimisation** of logistics processes
- **Brand** protection with proactive risk management
- **Security** of food safety
- **Pro-active management** of temperature excursions & deviations to ensure product integrity



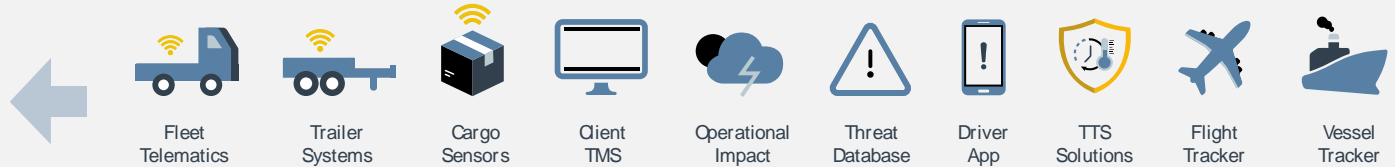
Overhaul's real-time visibility & intelligence-driven risk management platform

INDEPENDENT SINGLE UNIFIED VIEW

Proven data extraction methods

- API-EDI integration
- Cell network pull
- Cell Triangulation
- Mobile Application

Available & Connectable Vendor Data Sources



Screen data via user customized workflow



Detect non-compliance or Ops metrics



Issue Corrective actions/network alerts



Generate data on how to improve network compliance



User group dashboard and reports

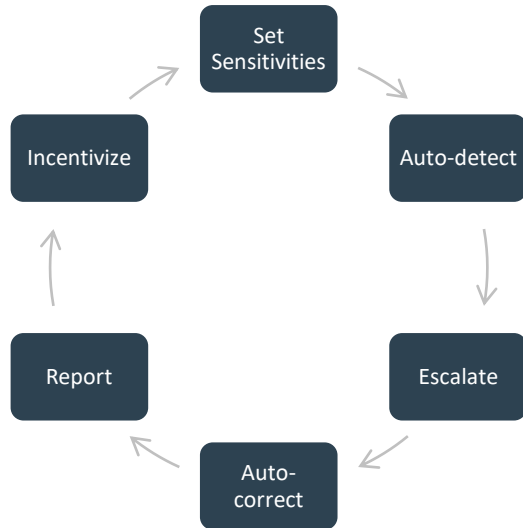


Cost savings
efficiencies disruption avoidance

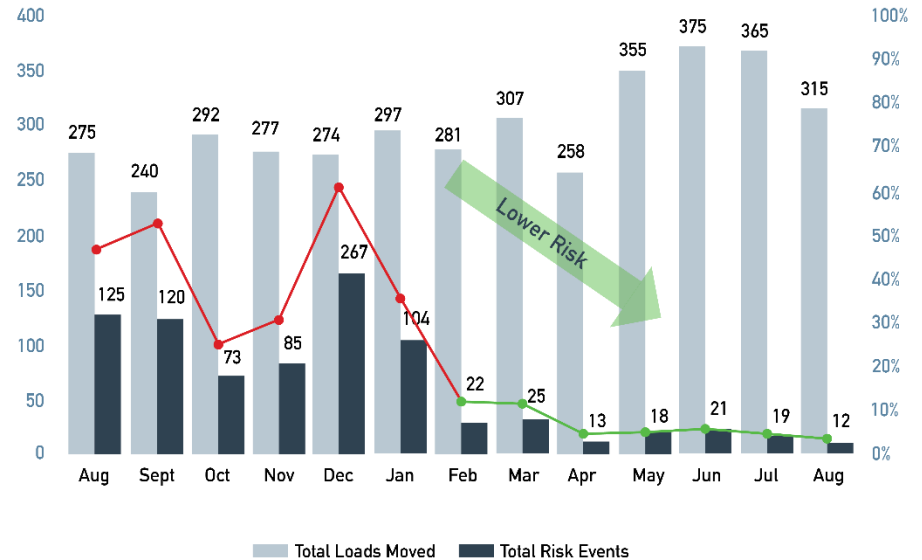
Overhaul's Robust Engineering Process

OVERHAUL'S RISK MANAGEMENT APPROACH

Software auto-detects/corrects and pushes events for resolution based on severity and urgency.

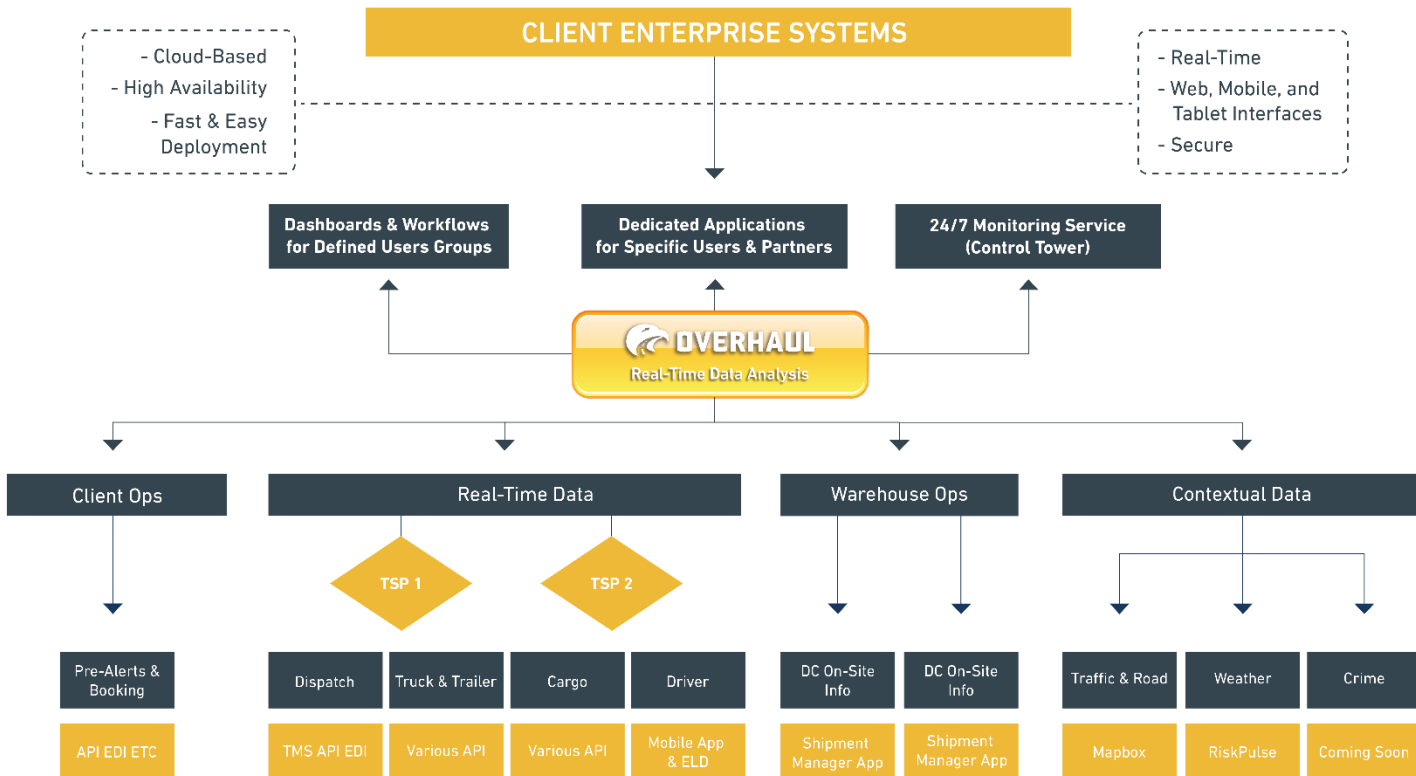


Non-compliance is reduced by communicating non-compliance to all stakeholders driving down risk.

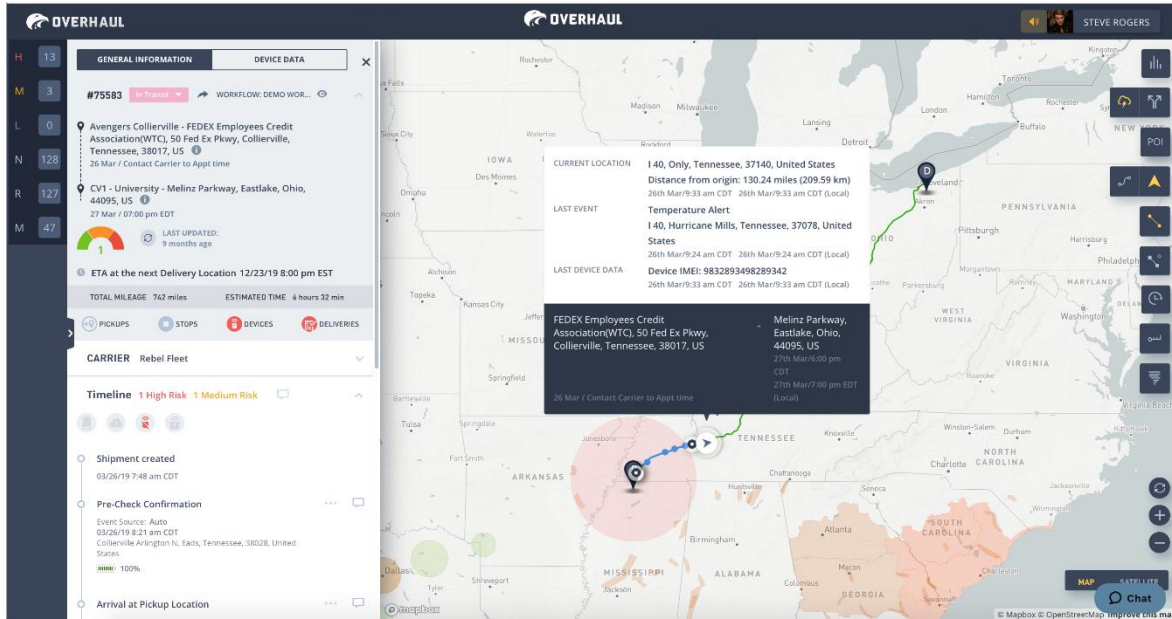


CONNECTING THE ECOSYSTEM

RELEASING THE VALUE OF END TO END SUPPLY CHAIN VISIBILITY



OVERHAUL TRACKS THE CUSTOMER REQUIRED ALERTS AND PROTOCOLS



- View and analyze all shipments simultaneously
- Be instantly alerted to high-priority events
- Identify problem areas
- Search and filter by carriers, drivers, locations, and more
- Log events and work with transportation parties to make corrections in real-time.

KEY TAKEAWAYS

- Security, Brand, IP Protection and Product Integrity are critical
- Data insights can have both tactical and more strategic benefits
- Look for multi-layered solutions that protect products, assets, brand and offer logistics optimization.

THANK YOU



OVERHAUL

[OVER-HAUL.COM](https://over-haul.com)

WHAT INDUSTRY ANALYST'S ARE SAYING

ONGOING ADVANCEMENTS IN DIGITALIZATION OF SUPPLY CHAIN

Gartner

Despite 2020 being a cash-sensitive year, **39% of manufacturing business indicated that they had increased their technology investment beyond pre-COVID budgeted levels.**

“CSCOs must make clear that today’s digital progress secures the options of tomorrow,” Mr. O’Connor said. “For example, supply chain organizations with the right digital capabilities can act as the central nervous system of the business that senses risks and opportunities and enables real-time action.”

Thomas O’Connor, Snr. Director Analyst; Oct, 2020

McKinsey Digital

“The COVID crisis has **increased and accelerated the pace of digital transformation by 5 years**”