





# INTRODUCTION

The supply chain industry is experiencing a data-driven revolution, with companies leveraging extensive supply chain analytics to transform their vast amounts of generated data into valuable insights. This transformation has been fueled by the rapid growth of the industry, which is currently worth over 5.7 trillion euros, and the e-commerce boom, projected to increase the logistics market by \$71.96 billion during 2022-2026.

The global next-gen supply chain market, which focuses on digital revolution utilization for enhancing economic and environmental sustainability in supply chain services, is expected to more than double by 2030 from its 2019 value of 32 billion U.S. dollars. With these promising growth prospects, the challenge lies in how companies can effectively harness the power of their supply chain data to drive profitability.

Research indicates that cognitive and artificial intelligence technologies are poised to revolutionize supply chain analytics. According to IDC, by 2020, half of all enterprise software will incorporate some form of cognitive computing functionality.

# WHAT'S RESTRICTING THE MANAGEMENT AND PROFITABILITY?

Numerous factors can impede the effective management and profitability of a supply chain, but one often overlooked aspect is the sheer complexity and interconnectedness of modern supply chains.

As companies expand their operations globally, they face the daunting task of managing multiple suppliers, manufacturers, distributors, and customers across diverse geographies and time zones. This intricate web of relationships amplifies the impact of disruptions, whether they stem from natural disasters, geopolitical tensions, or global health crises.

The butterfly effect, where seemingly minor events can trigger significant consequences throughout the supply chain, becomes a reality in such complex systems. To thrive in this environment, organizations must adopt a more holistic and proactive approach, embracing advanced technologies and data-driven insights to anticipate, mitigate, and adapt to the inevitable challenges that arise in today's ever-evolving global landscape.

To better understand how seemingly small challenges can restrict growth in supply chains, consider these two illustrative examples by Mckinsey.

McKinsey highlights two primary challenges that limit the full impact of big data in supply chains:

- Skill Shortage: Many supply chain managers lack experience in advanced data analysis techniques employed by data scientists, hindering their understanding of the potential offered by big data analytics.
- Absence of a structured approach: Organizations often lack a systematic process for exploring, evaluating, and capitalizing on big data opportunities in their supply chains. While some data is tracked, organizations need to adopt a more comprehensive approach to data management that encompasses all aspects, including Sales, Operations, Sourcing, Manufacturing, Warehousing, Transportation, Point of Sale, and Customer interactions.

# PAIN POINTS AND SOLUTIONS FOR THE LOGISTICS INDUSTRY IN RELATION TO DATA PRACTICES

The logistics industry generates vast amounts of data from various sources, such as transportation, warehousing, and supply chain management systems. However, managing and analyzing this data comes with its own set of challenges. In this document, we will discuss some of the major pain points for the logistics industry in relation to data practices and their solutions.

### Data Fragmentation

The logistics industry generates data from various sources such as transportation, warehousing, and supply chain management systems. These systems often operate in silos, resulting in data fragmentation, making it difficult to extract valuable insights and develop predictive models.

#### Solution:

One way to overcome this challenge is to implement an integrated logistics platform that brings together all logistics systems and data sources. This platform should have standard interfaces that allow for easy integration and exchange of data between systems. The use of application programming interfaces (APIs) can also help to streamline data exchange between systems.

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decision-making. Inaccurate or incomplete data can lead to wrong conclusions and negatively impact operational efficiency and customer satisfaction.

#### Solution:

Standardization of data formats and protocols is critical for efficient data exchange and interoperability. The use of industry standards, such as Electronic Data Interchange (EDI), can help to ensure data compatibility across different logistics systems. This can also help to reduce errors and improve data quality.

Lack of Standardization

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Different logistics

data formats and

standards, making it

from multiple sources.

difficult to integrate data

providers use different

## **Data Quality**

The quality of data is

critical for data-driven

#### Solution:

The logistics industry can implement data quality checks and validation processes to ensure data accuracy and completeness. The use of automated data cleaning and enrichment tools can also help to improve data quality. Additionally, regular data audits can help to identify areas of improvement and ensure that data is aligned with business aoals.



**Data Security** 

The logistics industry generates and handles sensitive data, such as customer information. financial data, and shipment details. Ensuring data security and protecting against cyber threats is critical to maintain trust and compliance with regulations.

#### Solution:

The logistics industry can implement robust data security measures such as encryption, access controls, and monitoring tools to protect data from cyber threats. The use of data masking techniques can also help to ensure that sensitive data is not exposed to unauthorized

### **Data Analytics**



The logistics industry generates vast amounts of data, but extracting actionable insights and developing predictive models requires advanced analytics capabilities

#### Solution:

The logistics industry can invest in advanced analytics tools and technologies, such as artificial intelligence (AI) and machine learning (ML), to analyze data and gain insights. The use of predictive analytics can help logistics providers to anticipate customer demand, optimize routes, and reduce costs. Additionally, investing in data science talent can help to build and maintain advanced analytics capabilities.

# Data Privacy and Compliance



The logistics industry must comply with data privacy regulations such as the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA). Non-compliance can result in significant fines and damage to reputation.

#### Solution:

The logistics industry can establish clear data governance policies and procedures that define how data is collected, stored, processed, and shared. This can help to ensure that data is used ethically, securely, and in compliance with regulations.

#### Data Visualization



Data Silos/

**Data Integration** 

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The logistics industry

often relies on multiple

systems and platforms

data silos. This can make

that may not be integrated, leading to

it difficult to obtain a

operations, and to use

The logistics industry

data and facilitate

establishing clear

agreements with

data-sharing

regulations

integration with other

systems. Additionally,

third-party providers

can help to ensure that

data is shared securely and in compliance with

can use data integration

platforms and tools that

can help to standardize

holistic view of

data effectively.

Solution:

Analyzing and interpreting large amounts of data can be challenging, especially when dealing with complex supply chain operations.

#### Solution:

The logistics industry can use data visualization tools and techniques, such as dashboards and heat maps, to provide a clear and concise view of data. This can help to identify patterns, trends, and anomalies and make data-driven decisions.

# Data Collaboration



Collaborating and sharing data across different departments, teams, and partners can be challenging, especially when dealing with data security and privacy issues.

#### Solution:

The logistics industry can establish clear data collaboration policies and procedures that define how data is shared and who has access to it. Additionally, implementing secure data-sharing platforms and tools can help to facilitate data collaboration while maintaining data security and privacy.

#### Data Monetization



The logistics industry generates valuable data that can be monetized, but realizing the full potential of data monetization requires advanced analytics capabilities and a clear data monetization strategy.

#### Solution:

The logistics industry can invest in advanced analytics capabilities and develop a clear data monetization strategy that defines how data can be monetized and who can benefit from it. Additionally, using data marketplaces and exchanges can help to monetize data while maintaining data security and privacy.

# **HOW TO BEGIN?**

The initial step towards transforming into a data-driven supply chain organization involves establishing a dedicated data team. This team will be accountable for collecting and generating ideas from within the broader organization and beyond. Additionally, they will be responsible for testing and validating these ideas by swiftly developing prototypes.

The personnel of this new organization must possess a unique skill set, combining deep analytical capabilities, the ability to work with unstructured data, and comprehensive knowledge of the supply chain business.

Supply chain analytics can enable organizations to make smarter, faster, and more efficient decisions, offering benefits such as:

- Ocst reduction and margin improvement
- Enhanced risk understanding
- Increased planning accuracy
- Leaner supply chain operations
- Future-readiness

# SCIKIQ'S SUPPLY CHAIN CONTROL TOWER



SCIKIQ's supply chain control tower is a connected, personalized dashboard that displays data, key business KPIs, and essential events throughout the organization. The control tower facilitates breaking down data silos, minimizing or eliminating manual processes, and providing real-time actionable insights, empowering business executives to make swift decisions.

A supply chain control tower allows organizations to gain a deeper understanding of critical issues, prioritize them, and resolve them in real time. An intelligent control tower should offer end-to-end visibility across the supply chain, particularly for unforeseen external events. By leveraging advanced technologies, such as AI and machine learning, it can help break down data silos, minimize or eliminate manual processes, and deliver real-time actionable insights.

An intelligent control tower fosters collaboration across teams and trading partners while preserving organizational knowledge, ultimately enhancing decision-making and outcomes. This enables organizations to better predict disruptions, improve resilience, manage exceptions, and respond to unexpected events.

SCIKIQ's control tower promotes collaboration across teams to enhance and accelerate decision-making while improving key organizational and departmental metrics.

# IMPROVING SUPPLY CHAIN PROFITABILITY & OTHER KPIS

There is an urgent need for workable solutions given the expanding list of difficulties the logistics sector faces. Fortunately, there are remedies accessible. The majority of current problems can be resolved by digitization and collaborative logistics, which also makes it easier for businesses to plan, manage, and keep an eye on the flow of goods. The business KPI gets better and SCIKIQ can implement a ready logistics control tower for managing these metrics.

# **Profitability**

- Trade lane
- Customer level
- Organization wise (Entity, office etc)

# **Business performance**

- Yield (E2E)
- Booking
- Conversions

# **Customer analytics**

- Profitability
- Retention
- New Accounts
- Receivables
- Pre-sales

# **Finance**

- Operational Pnl
- Financial Pnl
- AR/AP Analysis

# **Sales Analytics**

- Conversions/bookings
- Revenue Trends
- Sales Quota management

# **Operations**

- Lost, New, Active
- Utilizations
- Detailed view
- Gross profit

Data is critical for the supply chain and logistics industry as they need to track the shipments at all levels. Data is required to optimize inventory, predict accurate estimated times of delivery (ETD), forecast customer preferences, manage demand, and improve speed. In a nutshell, data is all you need at your service at all

times. without comprehensive use of data, you can't improve the organisation's KPI or metrics and this is true for a supply chain industry.

# **ABOUT SCIKIQ**

SCIKIQ is First-of-its-kind AI driven data fabric platform that delivers a trusted and real-time view of data across an enterprise in days or weeks instead of months and years.

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