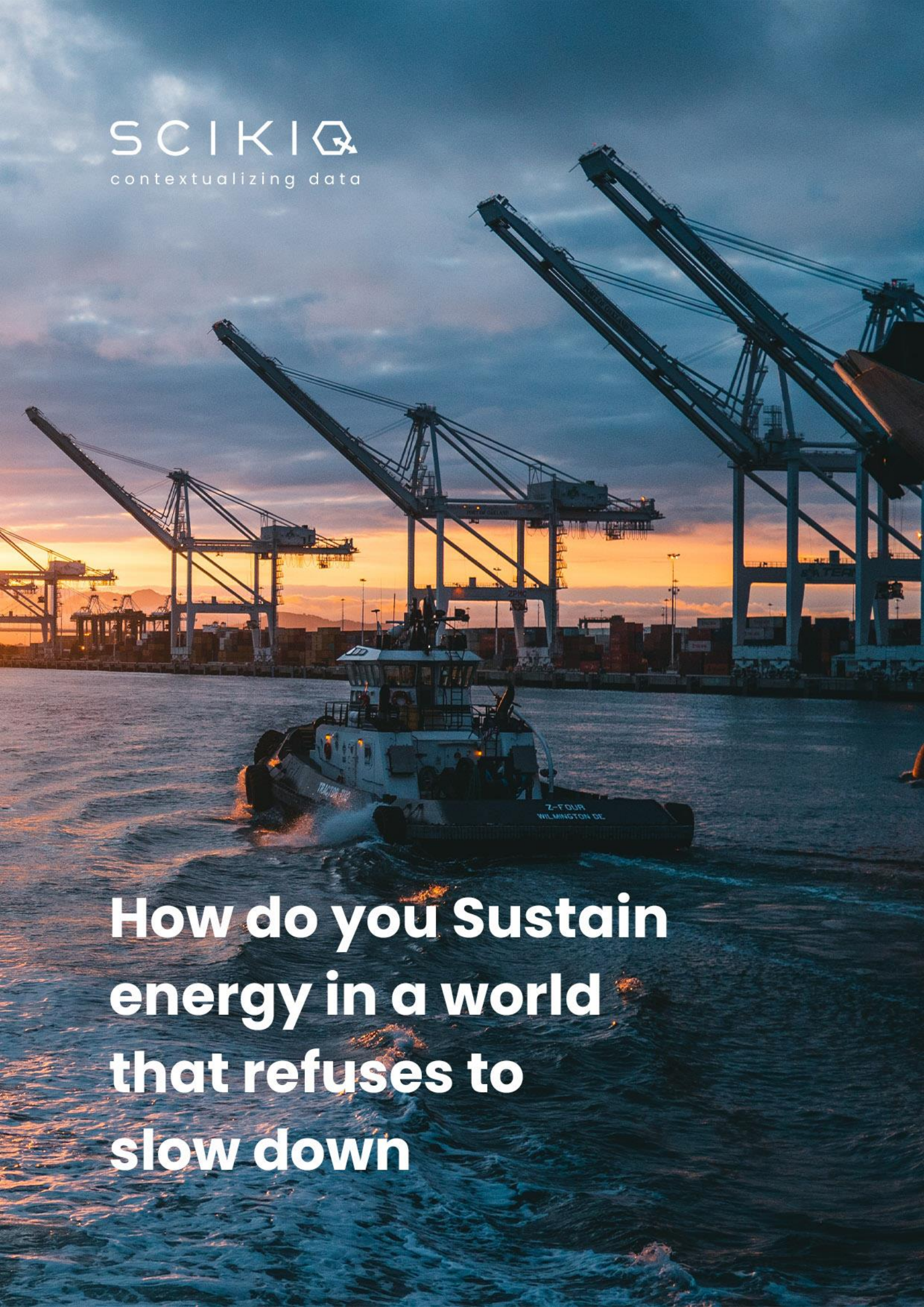
SCIKIQ

contextualizing data



How do you Sustain energy in a world that refuses to slow down

Introduction

In the complex and ever-evolving world of the oil and gas industry, effective supply chain management plays a crucial role in ensuring smooth operations and maximizing profitability. From sourcing raw materials to delivering finished products, every step in the supply chain is vital for meeting customer demands and maintaining a competitive edge.

Gazpromneft Lubricants Ltd. **With its extensive network of refineries, distribution centers, and retail outlets, this company has successfully optimized its supply chain to streamline processes, reduce costs, and enhance customer satisfaction.** As the company grows and expands its operations, it faces challenges such as volatile raw material prices, high transportation costs, and customs clearance complexities.

We will explore how efficient supply chain practices can help companies overcome challenges such as fluctuating prices, geopolitical uncertainties, and stringent regulatory requirements. By understanding these key aspects, we can gain valuable insights into how organizations can effectively manage their supply chains to thrive in this dynamic industry.

Supply chain solutions to run the world.

In the current competitive market landscape, logistics or SCM has evolved into a strategic tool to enhance enterprise efficiency. It not only uncovers new sources for efficiency gains

but also expands areas to discover reserves outside production, optimizing the synergy between different enterprise resource elements.

This strategic approach is especially relevant to the oil and gas industry, where supply, transportation, storage, and distribution processes involve materials in gaseous, liquid, and solid phases. Implementing a logistics-oriented approach can reduce production cycle times, order timing, material and finished product stockpiles, while enhancing innovative processes and adherence to contractual obligations. This strengthens the integration of all material flows throughout the production process.

Renowned analytical firms such as AMR Research and Forrester Research indicate that effective Supply Chain Management (SCM) provides businesses with significant competitive advantages including:

- Profit increase ranging from 5% to 15%.
- Reduction of order processing costs and time by 20% to 40%.
- Decrease in time to market from 15% to 30%.
- Decrease in procurement costs from 5% to 15%.
- Reduction of warehouse stocks from 20% to 40%.
- Decrease in production costs from 5% to 15%

One powerful example of SCM benefits is Toyota. Their improved supply chain strategy has led to a decrease of 53% in inventory levels at parts distribution centers since the 1980s. Moreover, since 1994, the inventory turnover of parts at dealerships has risen from 3.7 to 5.7. Between 1997 to 2000 alone, supplier on-time delivery improved from 76% to 93%

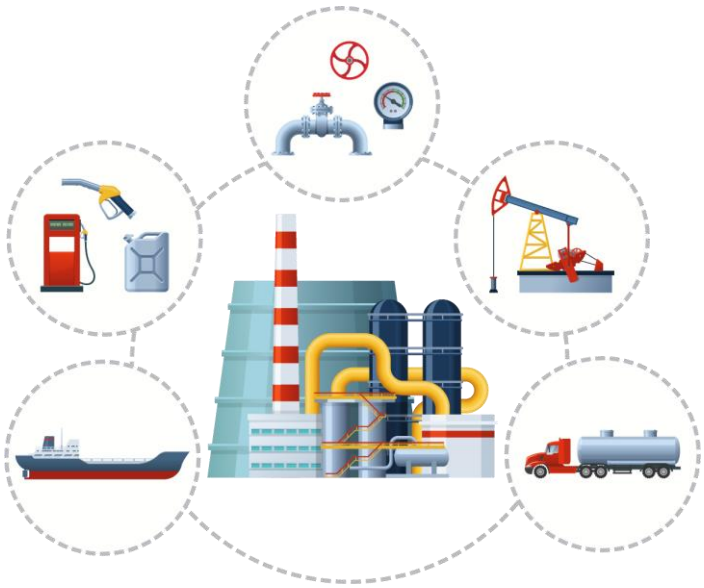
To provide comprehensive visibility across all levels of logistic or SCM management, an effective communication system is crucial. This system should accurately track the movement of material flows from contract initiation with a supplier to the final product's consumption.

Logistics activities often rely on warehouses or trans-shipment facilities to form logistic networks. These networks allow for regional consolidation of transports serving diverse customers and various suppliers. Through freight consolidation, transport utilization can be enhanced, reducing overall transport distance and consequently, CO2 emissions

This underscores the need to develop a sophisticated supply chain capable of creating a smooth flow of information, goods, and services from inbound to outbound logistics. Such a system aims to deliver high customer service levels, leading to superior performance results.

The main objective of SCM is to stimulate sales, minimize costs, and fully leverage business assets by enhancing collaboration and communication among all stakeholders in the supply chain. This promotes a clear understanding of mutual business gains, characterizing increased trade in transitional goods, services, and technical know-how within production networks. SCM is more than just a decision-making process. It effectively integrates all its participants, facilitating the coordination of essential flows: products/services, information, and funds

Unravelling the Oil Supply Chain



According to Christopher M. Chima "Supply chain management in the Petroleum industry involves the strategic configuration, coordination, and continuous enhancement of sequentially organized operations throughout the upstream, midstream, and downstream sectors".

The closer a function or firm is to the end user, the more "downstream" it is considered. Upstream entities focus on the discovery of oil and natural gas deposits and the extraction of these resources from beneath the earth's surface, often referred to as exploration and production companies. The downstream sector, on the other hand, operates on margins,

defined as the difference between the price realized for the products derived from crude oil and the cost of delivering the crude to the refinery.

Downstream operations encompass refining and marketing activities that convert crude oil into consumer-friendly products like gasoline, fuel oils, and other petroleum-based products. Marketing services facilitate the movement of these finished products from energy companies to retailers or end consumers. Downstream activities include:

- Refining and processing of crude oil and gas
- Supply and trading
- Marketing and distribution

Given the oil industry's structure, it's evident that it's a complex system that demands stringent control and strategic planning. This entails:

1. Providing accurate information to various stakeholders in a timely manner.
2. Integrating supply chains with vendors and suppliers for each organization involved in the process.
3. Employing Enterprise Business Solutions to manage multi-modal transportation, resource tracking, logistics, and cost tracking.
4. Implementing new, customized IT solutions and readily available solutions from vendors.
5. Studying market demand and offering products that best meet customer needs.
6. Planning deliveries to ensure there's no excess inventory or, conversely, an unfulfilled demand for goods.

In today's world, information technology is crucial to maintain a seamless flow of information, considering the complexity of supply management in the oil industry. To optimize the petroleum product supply system, it's essential to account for all components of the logistics chain, from oil refineries to commercial distribution.

Collaborative supply chains.

Establishing a network of effective communication among organizations — including producers of petroleum products, trading firms, intermediaries, and financial entities — occurs within the context of collaborative supply chains. In this framework, logistics companies serve as a unifying, complex link. These principles are executed within the paradigm of supply chain coordination, or Supply Chain Management (SCM).

SCM involves shaping a distribution network that ensures the right goods are delivered to the right place at the right time, minimizing costs. The concept of SCM focuses on creating optimal communication channels with distributors and end users, particularly to:

- Analyze the market demand and provide products that best cater to customers' needs;
- Process orders and requests swiftly;
- Plan deliveries to prevent stockpiling or unmet demands;
- Cultivate long-term relationships with distributors and consistently expand the sales network.

Supply chain management can be characterized as the configuration, coordination, and continuous refinement of a sequentially organized set of operations, with the objective of offering maximum customer service at the lowest feasible cost. It's important to consider that a customer is anyone who utilizes the output of a process. Therefore, considering the needs of the customer's customer is crucial for any organization focused on customer service.

Today, advancements in information systems and communication technologies provide more opportunities for coordinating activities across a supply chain, even in complex operations such as oil. Integrating operations management with other functional areas allows all components to contribute to supply chain management decisions.

Effective SCM strives to provide an essential level of customer service to specific segments, enhance customer service through increased product availability, and reduce order cycle time. It entails exchanging information (forecasting techniques, inventory management, delivery), structural collaboration (Just-in-time system, outsourcing, vendor-managed inventory, and co-locating plants), and cultivating relationships with downstream supply chain partners to create end-customer value and optimize benefits and costs along the supply chain. As such, the nature of SCM becomes evident to participating companies through successful implementation in the ever-evolving global business environment. However, risks are inherent and significantly impact the decision-making processes of business management.

Key issues with Oil and Gas Industry

The global oil and gas industry, a vital part of the world's economic infrastructure, stands at a critical juncture. As a crucial driver of economic development, it fuels countless sectors from transportation to electricity and plays a role in the production of various everyday products. However, it is also an industry under siege, grappling with an array of significant challenges that are reshaping its future.

The downstream oil and gas industry is facing a number of challenges today, including:

- Volatile prices: Oil prices have been volatile in recent years, making it difficult for companies to plan their operations and finances.
- Predicting demand: Global demand for oil and gas is expected to continue to grow in the coming years, putting pressure on supply.
- Environmental regulations: Governments are increasingly regulating the oil and gas industry, which is driving up costs and making it more difficult to operate.
- Technological disruption: New technologies, such as electric vehicles and renewable energy, are threatening to disrupt the oil and gas industry.
- Security risks: The oil and gas industry is a target for terrorist attacks and other security risks.
- Higher Operational Efficiency: Through advanced algorithms and predictive modelling techniques, companies can optimize warehouse layouts, improve demand forecasting accuracy, and enhance production planning processes.
- Aging Infrastructure: Much of the infrastructure used in the downstream oil and gas industry, such as refineries and pipelines, is aging. Maintaining and upgrading this

infrastructure can be costly, but it is necessary to prevent breakdowns and ensure safety.
- Cost reduction: By analysing historical purchasing patterns, demand forecasts, and supplier performance metrics, businesses can identify areas where costs can be minimized without compromising quality or service levels.

These challenges are making it difficult for the downstream oil and gas industry to remain profitable. Companies are facing increasing pressure to reduce costs, improve efficiency, and find new sources of revenue. Some of the specific issues that the downstream oil and gas industry is facing today include:

- Inventory management: With volatile prices and increasing demand, it is difficult for companies to manage their inventory levels.
- Transportation: The cost of transporting oil and gas is rising, as is the risk of disruptions.
- Refining: Refineries are facing increasing pressure to reduce emissions and improve efficiency.
- Distribution: The distribution of oil and gas is becoming more complex, as new technologies and regulations emerge.

These are just some of the issues that the downstream oil and gas industry is facing today. As the industry continues to evolve, these challenges are likely to become even more complex. Companies that are able to adapt to these challenges will be well-positioned to succeed in the future.

Key SCM Data Analytics for addressing the key issues:

SCIKIQ. A Data Fabric platform, a unified data management system, can help manage and mitigate the effects of volatile prices, predicting demand, and increasing environmental regulations in the oil and gas industry. Here's how:

Volatile Prices: SCIKIQ can provide real-time insights into global market conditions, trends, and prices. This data-driven approach allows companies to make more informed decisions about their production, inventory, and sales strategies. For example, advanced analytics can predict market trends, which can help firms hedge against price volatility by making strategic decisions about when and where to buy or sell.

Moreover, real-time insights can also assist in uncovering inefficiencies within operations that can be streamlined to reduce costs, creating resilience against price fluctuations.

Predicting Demand: Demand forecasting is a critical aspect of the oil and gas industry. The platform can leverage historical data, real-time data, and predictive analytics to better anticipate global demand. This can include data on economic growth rates, industrial production, weather patterns, geopolitical events, and more.

These insights can help the company optimize production schedules, manage inventories more effectively, and make informed decisions about potential investments in new production facilities or technologies.

Environmental Regulations: Environmental regulations pose significant challenges to the oil and gas industry. We can help track and manage their environmental performance in real time, aiding in regulatory compliance.

For instance, the company can collect data from various sources across the organization to monitor emissions, waste management, water use, etc. Company can then use these insights to identify areas where they can improve their environmental performance, potentially leading to cost savings from improved efficiency and avoidance of regulatory fines.

Furthermore, predictive analytics can forecast potential changes in regulations based on trends in political, societal, and environmental factors. This can help companies prepare for changes and incorporate compliance considerations into their strategic planning.

Security Risks: Oil and gas infrastructure can be targets for terrorist attacks or cyber-attacks, posing significant security risks. ScikIQ can integrate data from various security systems, sensors, and even geopolitical intelligence sources. This enables the company to monitor and respond to security threats proactively. Predictive analytics can also aid in identifying potential future threats and vulnerabilities, leading to enhanced preventative measures and contingency planning.

Higher Operational Efficiency: Operational efficiency is key to competitiveness. A data fabric platform can help optimize various operations by analyzing data across the supply chain. For example, it can improve demand forecasting accuracy by using machine learning algorithms on historical demand data and market trends. This can lead to optimized production schedules and reduced inventory holding costs. Also, the platform can identify inefficiencies in warehouse operations or transportation routes, providing insights for cost-effective and efficient operations.

Aging Infrastructure: Much of the oil and gas infrastructure, such as pipelines, drilling rigs, and refineries, can be aging and prone to breakdowns. A data fabric platform can integrate data from different monitoring systems to provide a real-time view of asset health. Predictive maintenance models can then use this data to predict possible breakdowns and schedule preventive maintenance, thereby avoiding costly unscheduled downtimes and ensuring the safety of operations.

Cost Reduction: In an era of volatile oil prices, cost management is crucial for oil and gas companies. A data fabric platform can provide insights into cost-saving opportunities by analyzing data on purchasing patterns, supplier performance, and demand forecasts. Companies can use this data to negotiate better prices with suppliers, optimize procurement schedules, and reduce wastage, all while maintaining service levels and quality.

To sum up, SCIKIQ with its advanced data integration and analytics capabilities, can play a significant role in help to navigate complex challenges.

How SCIKIQ Intends to solve Specific issues in Data integration, Real time Data analytics and Data security

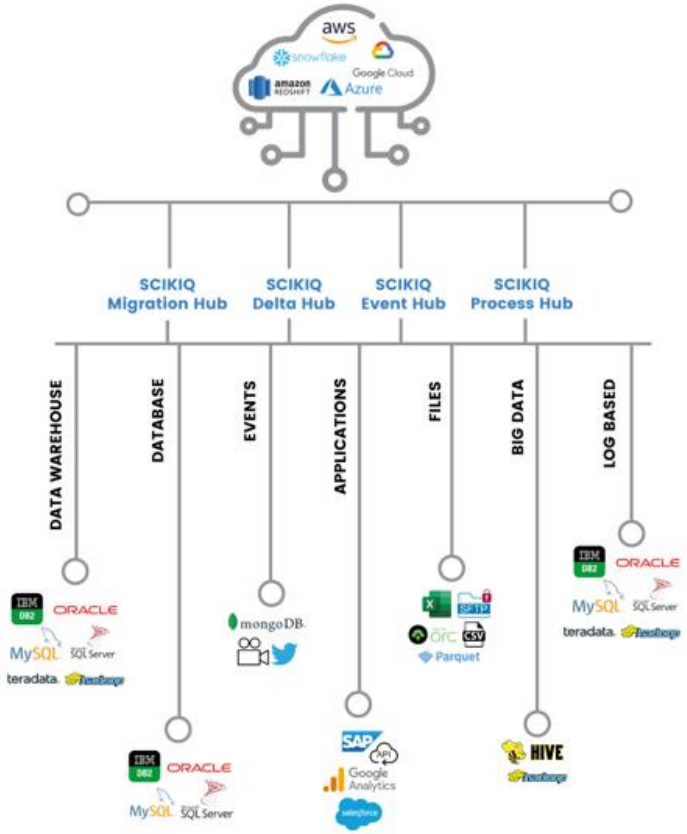
1. Data Integration:

A data management platform offers comprehensive data integration capabilities. It can pull data from various sources, such as enterprise resource planning (ERP) systems, warehouse management systems (WMS), transportation management systems (TMS), and even IoT devices, among others.

The platform can consolidate and standardize this data, breaking down silos and creating a unified data landscape. This process enables seamless sharing and accessibility of information across different departments and teams within the company, leading to improved collaboration and decision-making.

SCIKIQ connect builds ETL and data integration pipelines nearly automatically, requiring little or no input from developers using a simple, drag-and-drop visual interface. The platform offers out-of-box integration with connectors available for data warehousing products, databases, application stores, file systems, the Hadoop ecosystem, real-time sources, and log-based CDC using Debezium.

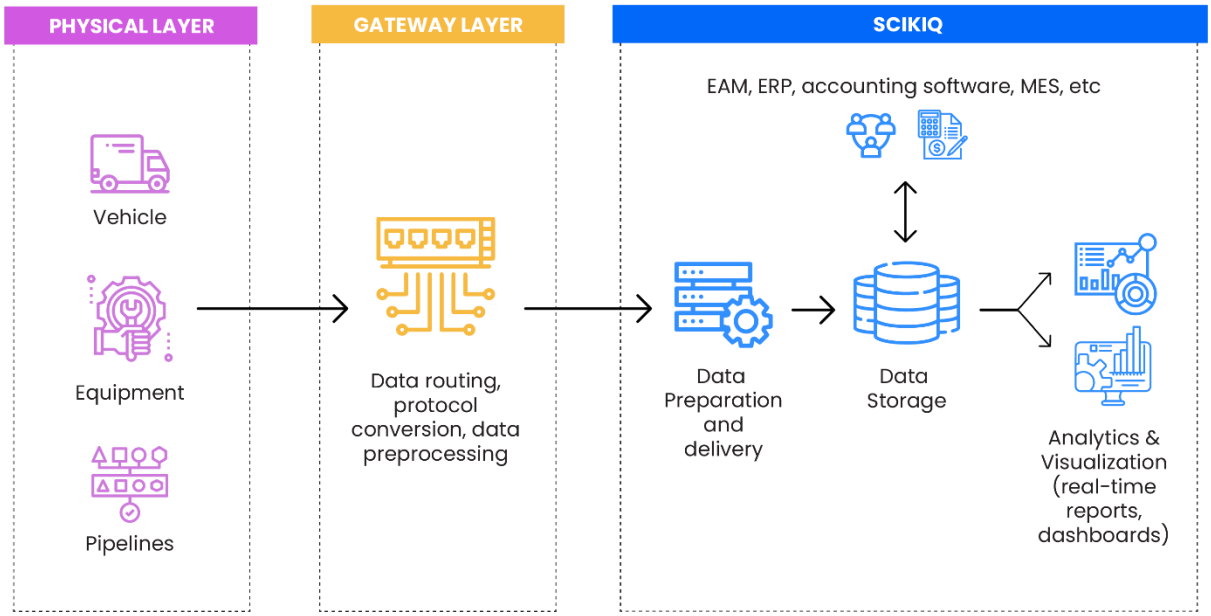
SCIKIQ data integration can integrate with SAP, SAP Hanna, SQL, Oracle, Teradata, DB2, snowflake and many other data sources using out of the box data integration.



2. Real-Time Visibility:

Through real-time data processing and advanced analytics, a data management platform can offer real-time visibility across the entire supply chain. It allows for the tracking of key parameters such as inventory levels, order status, shipment progress, and asset performance in real-time.

Furthermore, using advanced analytics, the platform can generate real-time insights and predictive analytics, such as demand forecasts or risk alerts. This capability enhances agility, enabling the company to respond promptly to changes in demand or potential disruptions.



SCIKIQ's use of Kafka allows businesses to collect, store, and process data in real-time. This can help businesses to improve their operations and make better decisions. Apache Kafka, the technology used by SCIKIQ, is a distributed streaming platform that allows for real-time data collection, storage, and processing.

3. Data Security:

Data security is a key feature of any modern data management platform. Such platforms are built with robust security measures, including data encryption, secure access controls, and regular security audits, to protect sensitive supply chain data from potential threats and breaches.

SCIKIQ offer features such as data anonymization and masking for added security during data analysis and sharing. They can also help companies adhere to data privacy and protection regulations, reducing the risk of compliance-related issues.

ScikIQ can integrate data from various security systems, sensors, and even geopolitical intelligence sources. This enables the company to monitor and respond to security threats proactively. Predictive analytics can also aid in identifying potential future threats and vulnerabilities, leading to enhanced preventative measures and contingency planning.

Automated Data Discovery:

Automated data discovery, sometimes referred to as automated data cataloging, is a process that involves using automation to identify, classify, and organize data across various sources within an organization. This process helps companies get a comprehensive view of their data landscape, making it easier for them to access, understand, and use their data effectively.

- **Operations Optimization:** By analyzing data across operations, patterns, trends, and inefficiencies can be detected to improve operational efficiency, such as informing predictive maintenance schedules.
- **Informed Decision Making:** Insights gleaned from automatically processed data can drive quicker, more accurate decision-making, improving business outcomes.
- Risk Reduction: Automated data discovery can identify operational risks and anomalies faster, aiding in mitigating potential equipment failures and supporting regulatory compliance.
- **Better Forecasting:** Utilizing historical and real-time data, automated data discovery can improve forecasting models for more accurate predictions of demand, price trends, and supply requirements.
- **Digital Transformation Support:** It helps integrate and make sense of data from various digital technologies like IoT devices, enhancing the outcomes of digital transformation efforts.

SCIKIQ Supply chain Control Tower

SCIKIQ supply chain control tower is a connected, customized dashboard of data of critical business KPIs, and significant events occurring throughout the organization. Logistics Control Tower allows you to gather real-time valuable intelligence, minimize or eliminate manual processes, and break down data silos so that business executives can make decisions quickly for the business.

Improve profitability, have a better view of daily operations, accelerate sales and be proficient in predicting disruptions in almost all significant business areas.

A supply chain control tower enables supply chain organizations to completely understand, prioritize and resolve critical issues in real time. SCIKIQ Supply chain control Tower enables organizations to monitor and improve key performance metrics and how business is getting impacted on a day-to-day basis.

SCIKIQ supply chain control tower is a connected, customized dashboard of data of critical business KPIs, and significant events occurring throughout the organisation.
Control Tower allows you to gather real-time valuable intelligence, minimize or eliminate manual processes, and break down data silos so that business executives can make decisions quickly for the business.
Improve profitability, have a better view of daily operations, accelerate sales and be proficient in predicting disruptions in almost all the significant business areas.

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

About SCIKIQ

Scikiq is ranked among the top 34 global augmented business intelligence Platforms and is recognised for various world class features like Data lineage, Automated Data Curation and Governance and Innovative Reporting and Visualization.

SCIKIQ is a groundbreaking, AI-powered Data Fabric platform that reshapes how data-rich organizations, including those in the oil and gas industry, manage and utilize their data. It bypasses traditional data silos, multi-vendor complexities, and multi-cloud environments to present a real-time, unified view of enterprise data in a significantly reduced timeframe.

The AI-driven capabilities of SCIKIQ bridge the gap between raw data and actionable insights, transforming vast data streams into real-time intelligence. This empowers teams to leverage centralised data sources and uncover valuable insights that drive operational efficiency and strategic decision-making.

SCIKIQ offers a user-friendly, no-code interface that allows business teams to seamlessly integrate data across organizational silos. The focus shifts from data wrangling to harnessing the power of data for informed decisions and meaningful outcomes.

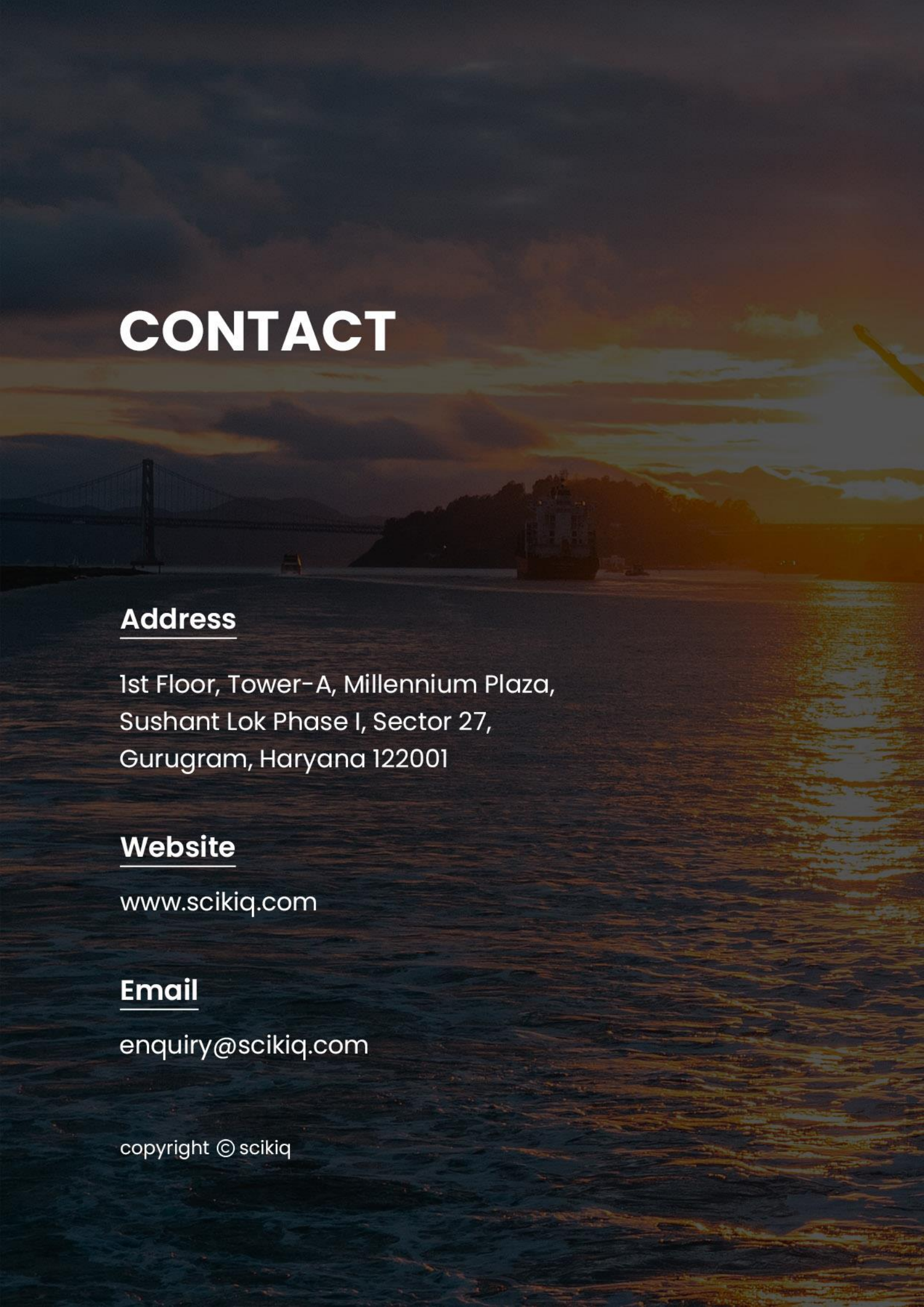
Key features of SCIKIQ that make it invaluable for oil and gas companies include:

- **Connection:** Pre-built connectors and recipes enable effortless integration with your application or data store.
- **Curation:** Through data integration, a single version of truth is curated across the enterprise, eliminating discrepancies and fostering trust in data.
- **Control:** The platform offers best-in-class governance modules to manage, discover, and trust the data lake.
- **Consumption:** Data and insights can be consumed through reports, dashboards, data-as-a-service, or embedded analytics.

SCIKIQ combines end-to-end data management processes, including ETL tools, data cataloguing, data preparation, data warehousing, data lakes, reporting, and analytics into a unified platform. This results in a seamless data architecture that supports everything from data extraction and modelling to generating standard and ad-hoc reports and integrating machine learning for key insights.

Ultimately, SCIKIQ accelerates business transformation by making data promptly available to business users in a trusted manner, thereby enabling oil and gas companies to thrive in a data-driven business landscape.

Connect with us at **SCIKIQ.com**
Attached is SCIKIQ Spotlight: Key recognitions of SCIKIQ



CONTACT

Address

1st Floor, Tower-A, Millennium Plaza,
Sushant Lok Phase I, Sector 27,
Gurugram, Haryana 122001

Website

www.scikiq.com

Email

enquiry@scikiq.com