nagarro

Supply chain analytics- from big data to better decisions

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Introduction

Global supply chains are getting a lot of attention today from customers, C-suite leaders and policymakers. Global disruptions have affected operations of enterprises and revealed a pressing need to rethink our priorities.

As a strategy, companies must prioritize supply chain safety over efficiency. The call to improve supply chain resilience is here, meaning that regionalization, in-sourcing and safety stocking are all back on the table. It is equally important for supply chain leaders to improve processes and tools to benefit from the latest advancements in technology and AI.

On the flip side, physical supply chains face mounting competition from e-commerce and digital native businesses. This is not only forcing supply chains to elevate cost competitiveness but also shaping consumer preferences towards hyper personalization and quick commerce, which traditional supply chains may struggle to execute.

In this scenario, analytics and digital solutions stand out as helpful tools that can extract insights about consumer behaviour, measure ROI from digital initiatives and lead to better decision making.

In this e-book, we will take a closer look at supply chains, their processes, challenges and opportunities. We will explore the possibilities that advanced analytics capabilities can unlock for your supply chain and study a framework which helps implement analytics well.

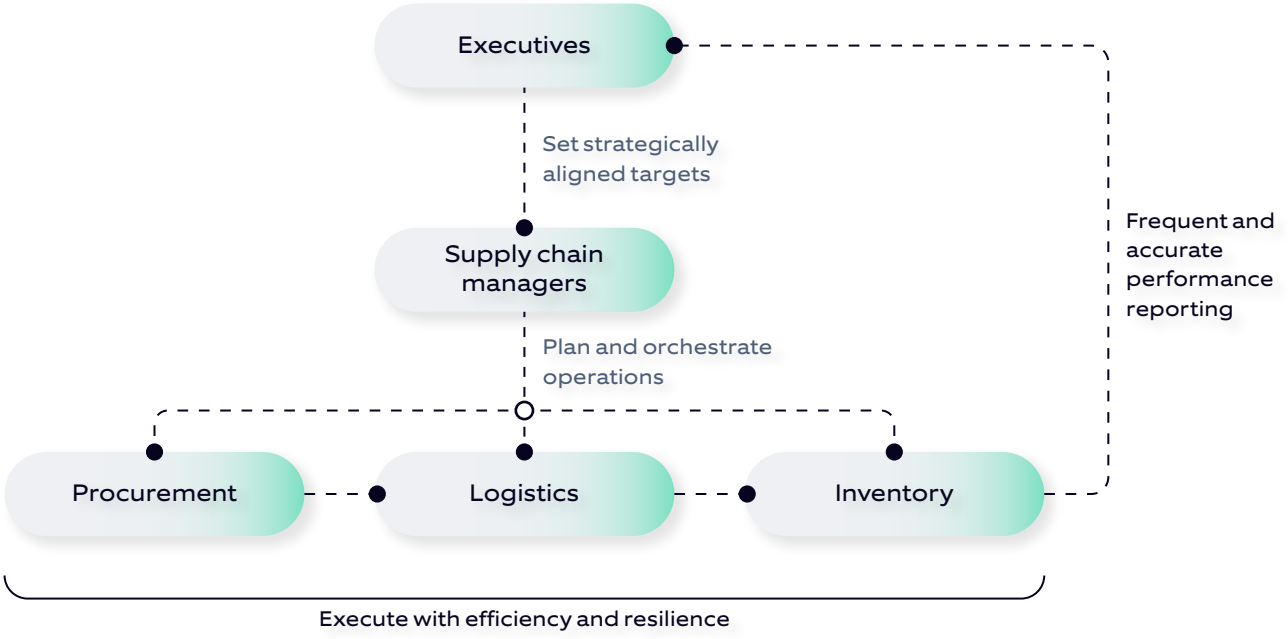
A closer look at supply chains

A supply chain is a group of interlinked entities that transforms raw materials into valuable goods and delivers them to customers.

Ever wondered how your favorite snack makes it all the way from the factory to your pantry? Multiple entities work together to ensure it reaches you, whether it is through the nearby mom & pop store and or an online store. The retailer purchases your snack from the distributors who in turn purchase from the manufacturers in bulk. The manufacturer sources raw materials from different suppliers, creating a supply chain that would look something like this:

Let's go a bit deeper into this ecosystem. Executives with the snack company plan their operations and set targets for the coming year. They set regional targets, and the supply chain managers then develop production, distribution and sales plans.

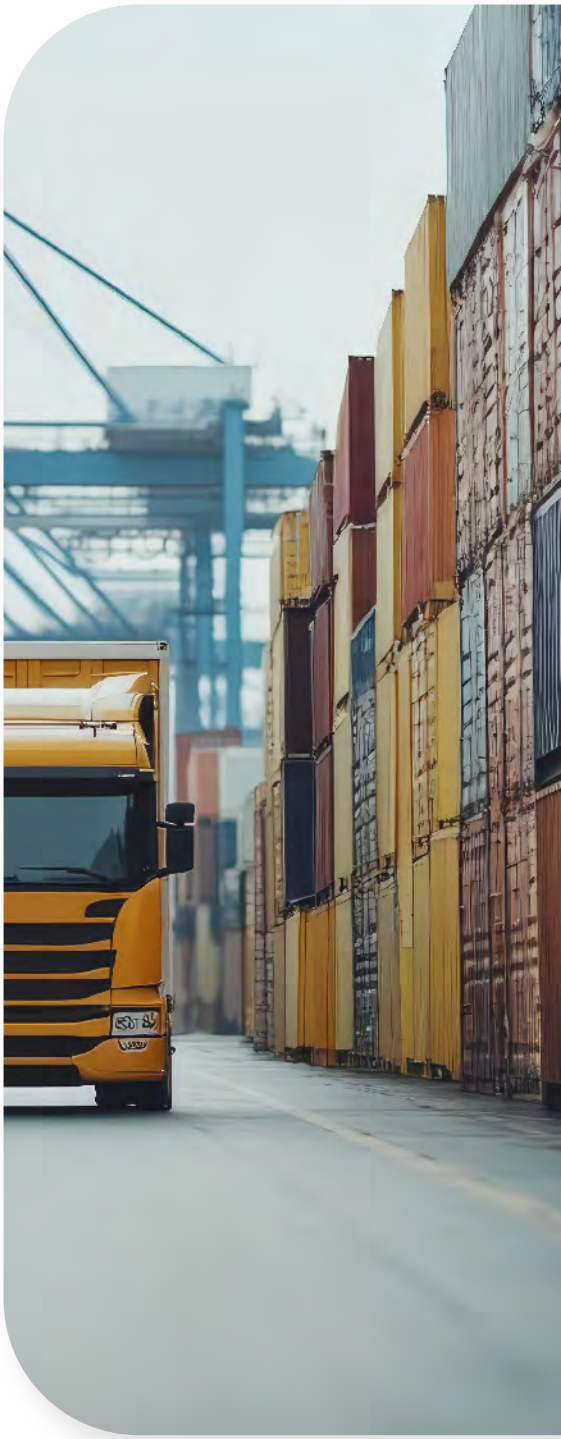
Meanwhile, the procurement teams evaluate different suppliers and order the supplies. Logistics managers ensure that supplies reach manufacturing facilities in time and that produced goods are shipped out. Inventory managers at distribution centres receive finished goods and help the company efficiently serve the demand in their respective regions.



The following table helps us understand the stakeholders, their goals and the decisions influencing their success.

Stakeholder	Goals	Decisions
C-Suite executives	Maximize profits	• What is our revenue target? • What is our annual budget? • What are some new markets we can target?
Chief supply chain officer / Supply chain managers	Improve service levels, minimize supply chain costs	• How much to produce? • How to distribute?
Procurement teams	Improve raw material availability for production, Minimize input costs	• Which suppliers to buy from? • How much to buy from each supplier and at what price?
Logistics managers	On-time arrival of raw materials and delivery of finished goods, minimize costs	• Which mode of transportation and 3PL provider to use for each shipment? • How much logistics capacity to reserve and at what schedule?
Inventory managers	Minimize stockouts of goods at retailers, minimize costs	• How much quantity to stock? • When to replenish stock?

Challenges for supply chains in 2025 and beyond



The past few years have seen global supply chain tackle multiple disruptions. McKinsey's Global Supply Chain Leaders' Survey states that 90% of the companies surveyed encountered supply chain troubles.

In 2022, Ford Motor Company reported a production shortfall of 100,000 vehicles, which would leave a revenue of around USD 4 billion on the table. Like many automakers, Ford couldn't procure enough chips to meet the demand for vehicles. A strong demand for consumer electronics during the pandemic consumed semiconductor supplies, leaving the auto industry high and dry.

In August 2024, Walmart, a global retail giant, reported that they carried an excess inventory of USD200 million, during their earnings call. Inflationary pressures after the pandemic had altered consumer purchase behaviour. While Walmart recorded a rise in grocery sales, categories such as apparel, electronics and sporting goods, took a hit and led to a pile up in inventory.

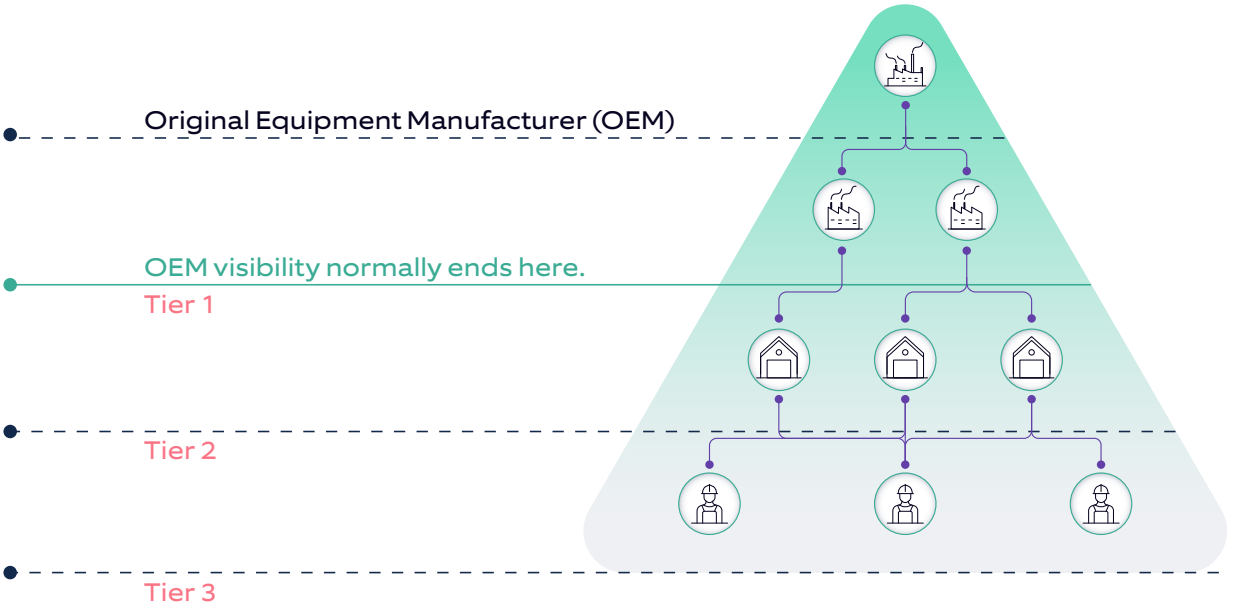
In May 2022, James Quincey, the CEO of Coca-Cola said in an interview with Wall Street Journal, that the company is facing a structural shortage of truck drivers due to a largely aging workforce. After the pandemic, companies in the United States are offering large incentives to remedy the acute shortage of truck drivers. Logistics companies are promising a bonus of at least USD15,000 to all new drivers.

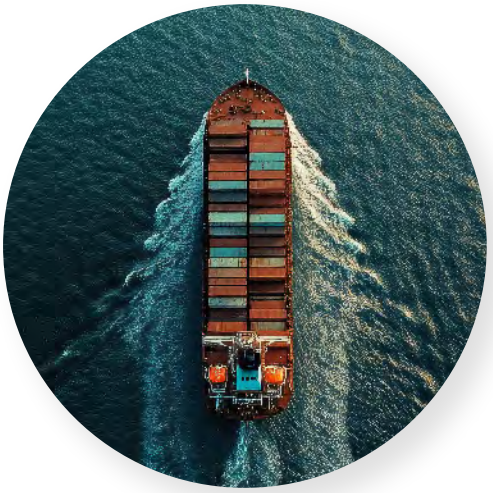
Addressed poorly, disruptions leave a lasting impact on the financial performance of a company. But why are supply chains so fragile? We identify **three dominant reasons.**

Growing complexity

Given the need to adopt multi-sourcing and regionalization for resilience, complexity of supply chains is bound to increase. In the aftermath of the pandemic, most US auto makers, such as Ford, struggled to fulfil their semiconductor needs because of a lack of multi-tier visibility. Since OEMs did not purchase directly from the semiconductor fabricators, they did not know that the consumer electronics industry was competing for a crucial ingredient in their vehicles. Due to a lack of insight, companies took months just to identify the bottlenecks in the supply chain. Such stories are common across the globe. In a 2024 survey of 350 executives by Deloitte, 98% conceded that they do not have "high visibility" beyond tier 1 suppliers in their supply chain. Supply chain complexity continues to be a challenge for enterprises and leaders must pursue investments to improve visibility and multi-tier transparency with a sense of urgency.

Multi-tier visibility is critical for supply chains to thrive amidst these challenges. Supply chain disruptions tend to proliferate from the deeper tiers, and having multi-tier visibility can help managers respond to disruptions proactively and minimize impact.





Frequent disruptions

Recent research by the McKinsey Global Institute found that, on average, companies experience a disruption of one to two months every 3.7 years. The year 2024 only saw a blockage at Suez Canal, conflicts in Eastern Europe and Middle East, attacks on cargo in the Red Sea. Businesses must build resilience to weather similar disruptions in the future. Supply chains are susceptible to larger losses if a coordinated response to disruptive events is delayed and difficult. A demand or supply shock of a few months in duration, can create a bullwhip effect lasting more than a year, leaving the supply chain unstable and inefficient.

For example, in a retail environment like Walmart's, quickly detecting a shift in consumption pattern and responding to it can reduce the burdens of excess inventory. Better collaboration with supply chain stakeholders and easy access to transactional data and analytics are crucial to improve reaction times against such demand shocks.

Workforce evolution

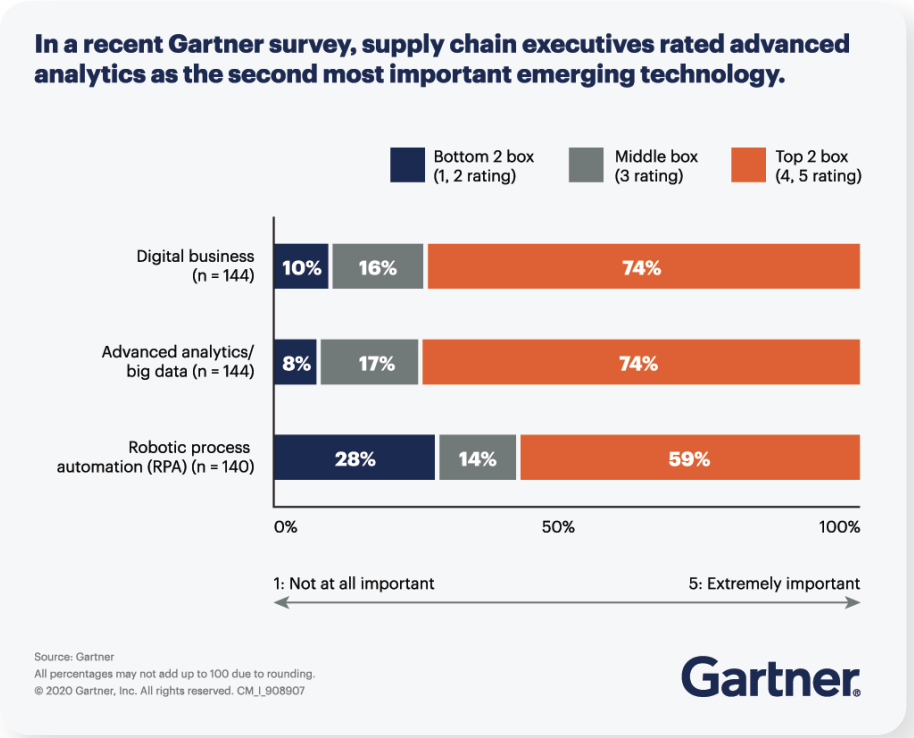
Internet platforms with innovative business models are challenging traditional supply chains to rethink operations and improve capabilities. In developed economies, the dominance of e-commerce and on demand platforms such as Amazon and Doordash have attracted a significant portion of the workforce towards a gig economy model. This, combined with an aging workforce, has created a human resource crisis for traditional supply chain businesses. Trucking companies, for example, are struggling to replace aging truck drivers, resulting in driver shortages and low asset utilization. Labor shortages reduce capacity and quality of service of the supply chain. Supply chain operations also suffer from high employee churn rates, leading to low reliability in processes and low levels of innovation.

Offering bigger incentives can motivate employees, but it's not a long-term solution unless companies help them work more efficiently. Businesses should invest in automation, AI, robotics, and optimization tools to boost productivity.

Why do companies need supply chain analytics?

As business leaders huddle in board rooms to design strategies to take on the challenges we explored in the previous section, they must consider the critical role played by digital tools in executing and sustaining strategy across the organization.

In a recent survey by Gartner, supply chain executives identified advanced analytics as a strong priority in their digital transformation journey.



Additionally, a McKinsey study revealed that on average, companies that aggressively digitize their supply chains can expect to boost earnings (EBIT) by 3.2 percent and revenue by 2.3 percent annually.

But why does supply chain analytics stand out as a preferred strategic enabler?

Supply chains generate vast amounts of critical data every day. Supply chain analytics helps understand this data by uncovering patterns and generating insights. It visualizes data in the form of graphs, charts or KPIs and enables data-driven decision making.

An enterprise that implements supply chain analytics well and practices data-driven decision making can achieve the following transformative outcomes:

Enhanced visibility

How convenient would it be if there was a one-stop platform to cut through the complexity and visualize the performance of your end-to-end supply chain? A supply chain analytics platform can be a digital twin of your operations and enhance visibility, keeping you and your teams informed, every step of the way. Such solutions greatly improve multi-tier transparency by helping leaders evaluate the performance of supply chain entities operating at deeper tiers.

It also empowers managers to slice and dice vast amounts of data and analyse the performance metrics that they care about. They can track KPIs at the supplier level, product level and regional levels to measure progress and foresee problems.

Reimagined resilience

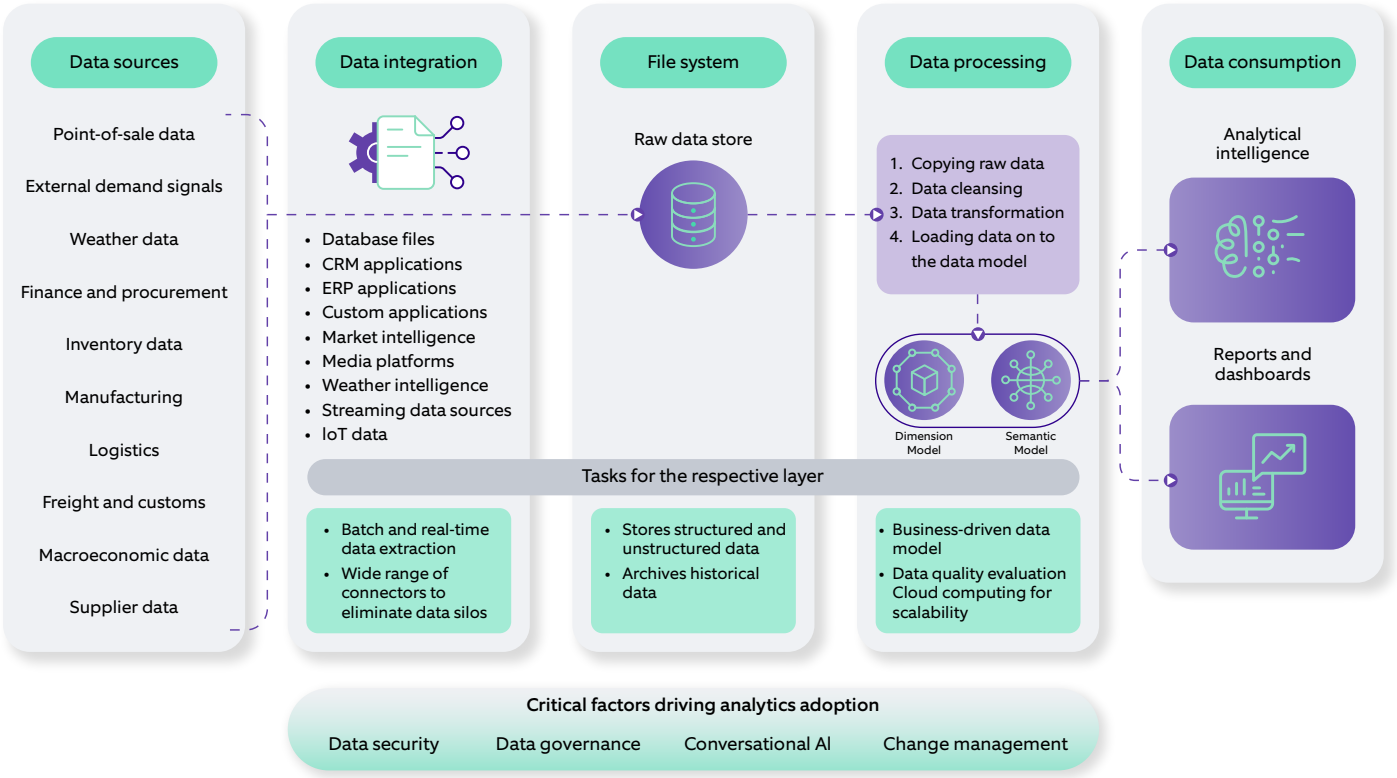
Resilience to withstand the numerous disruptions is a definitive trait of a high-performance supply chain. A supply chain analytics solution can offer insights, predictions and forecasts to managers and drive action to protect and improve operations. It also enables stakeholders to collaborate on a unified data platform, creating an environment where several stakeholders can leverage a single source of truth and make decisions aligned to the common enterprise goals.

Empowered innovation

Supply chain analytics streamline integrated business planning, goal setting and reporting. A unified analytics platform makes data-driven insights easily accessible fostering agility, ownership and on-ground innovation. This helps leaders energize their teams with achievable goals and deliver incremental improvements. Supply chain analytics can prepare your organization with the foundational data management infrastructure to support further advancements in data and AI, keeping you ahead of the competition.

What can supply chain analytics do?

Bridge data gaps: Supply chain functions such as planning, procurement, logistics and inventory generate data independently, and in heterogeneous formats, often resulting in unused data silos. A supply chain analytics platform improves data utilization by ingesting data from such silos and integrating it. An analytics implementation project also helps your teams identify data sources that can sharpen prediction or optimization models and further enhance decision support.



Foster trust among stakeholders: In supply chains, sales push for higher production to meet demand, while inventory teams scale back to avoid excess stock, creating a constant tug-of-war. This makes it difficult for managers to align stakeholders and drive optimal decisions.

A supply chain analytics platform bridges this gap by fostering collaboration and providing a unified view of enterprise data. It aligns teams with organizational goals set by leadership and serves as a single source of truth for decision-making. With governance features like data catalogs and lineage maps, the platform ensures transparency, builds trust, and clarifies how data is created and analyzed. Its adaptive design, robust access controls, and data quality features help maintain alignment as supply chains evolve.

Enable smarter decision making: A supply chain analytics platform goes beyond collecting and organizing enterprise data and makes data easier to understand. Powered by business intelligence tools, the platform makes it easy and intuitive to view and understand data. In-built tools can perform trend analysis, comparisons, drill downs and statistical analysis on aggregate data and help executives surface deep insights that transactional tools such as ERP software cannot deliver.

Potential use cases for supply chain analytics

The success of any digital enabler is measured not by the capabilities of the technology, but by its contribution to enterprise profits. Hence, it is important to evaluate the potential of supply chain analytics to drive tangible improvements to your supply chain processes and demonstrate ROI.

Let's take a simple profit framework to elucidate how supply chain analytics impacts processes and how data-driven initiatives can help grow revenues and reduce costs.

Growing revenues	Reducing costs
• Scenario planning powered by probabilistic demand forecasts can improve cycle service levels and grow revenue.	• Reduce input costs and improve hedging strategies through price forecasting for commodity procurement.
• Enhance customer experience with faster last-mile deliveries and ETA forecasts enabled by route optimization and AI.	• Eliminate penalties and late feed through automated shipment tracking and timely alerts.
• Improve promotions with deeper insights about target demographics.	• Reduce carbon emissions through route and capacity optimization in logistics.
• Analyze sales trends by region or SKU alongside market insights to make better decisions when entering new markets or launching new products.	• Reduce safety stocks and tied-up capital by optimizing inventory with demand forecasts, leveraging historical data and market information.

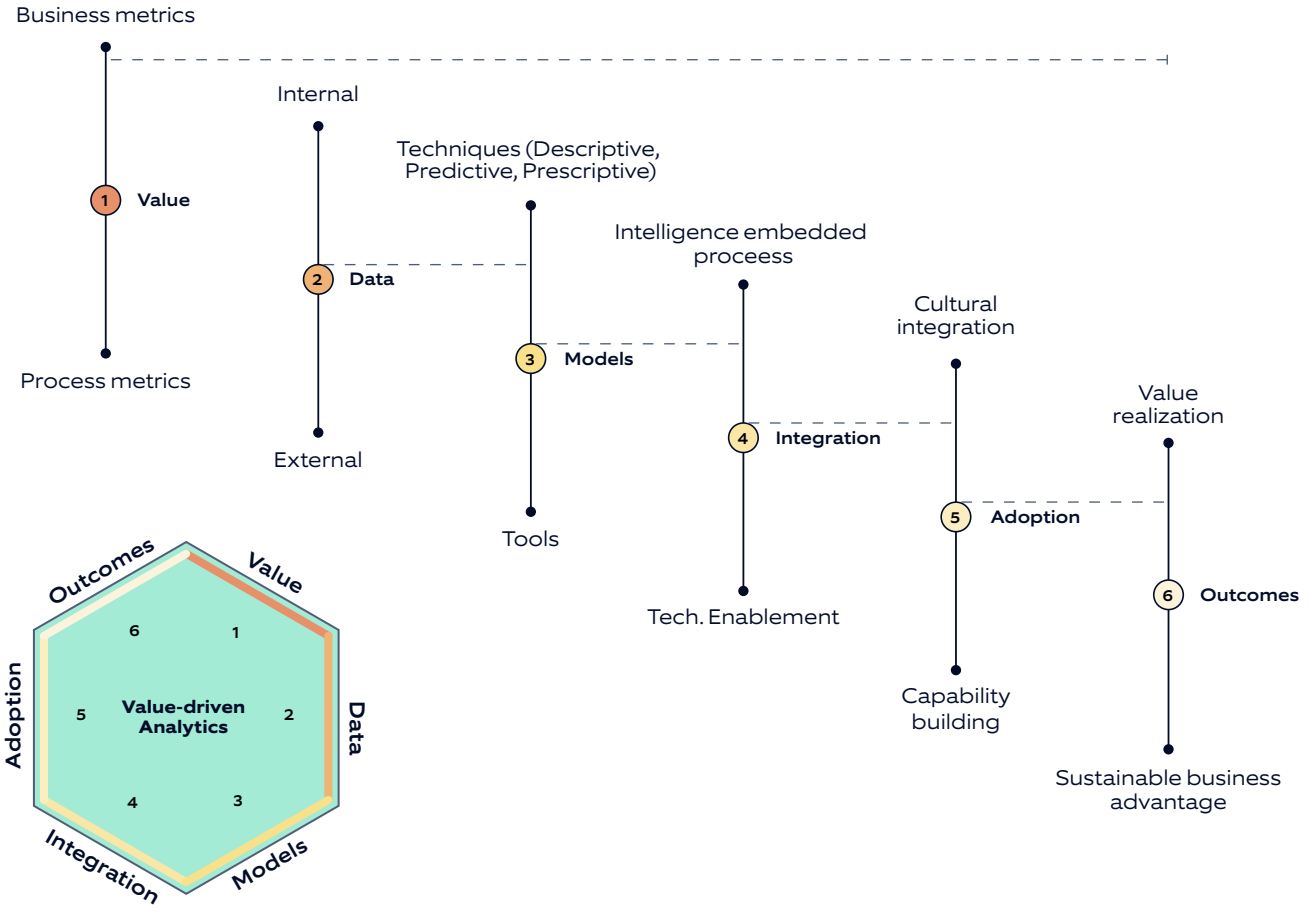
To learn more about our work in deploying optimization, scheduling and other supply chain analytics solutions *click here*.

How to implement supply chain analytics well?

Organizations often struggle to build the right analytics mindset, limiting ROI or even abandoning analytics adoption altogether.

To drive better results, leaders must focus on two key business performance measures—profit and resilience. Supply chain analytics should boost revenue, reduce costs, and minimize disruptions that threaten continuity. Metrics for evaluating its impact should align with these goals and guide use case selection.

Next, adopting a structured implementation framework helps integrate analytics into business processes and improve target metrics. Our Value-driven Analytics Framework defines six key components to accelerate transformation through supply chain analytics.



Nagarro's framework helps stakeholders ask the right questions and ensure value without getting lost in the complexities of deploying analytics solutions. Pairing our framework to the main business objectives will reveal the key metrics for evaluating the business value delivered by a supply chain analytics solution.

	Profits	Resilience
What value can I expect?	• Increased service levels • Lower operational costs	• Better scenario planning • Improved compliance
How to think about data?	• Market data and operational data • Efficient data collection, processing and storage	• Ensuring data quality and security • Building catalogues and tracking lineage to govern data usage
How do I decide which models to deploy?	• Accuracy of forecasts and optimizations • Cost to integrate with existing workflows	• AI models must be explainable and incorporate influencing variables, constraints and outliers
How do I evaluate integration success?	• Actionable intelligence at decision making points • Effectiveness of change management and training	• Security against cyber-attacks, data theft or loss • Parallel systems to ensure business continuity in case of failure
What are indicators of desirable outcomes?	• High utilization by supply chain planners and managers • Cost to scale across the org. and for different use cases	• Impact of analytics measured by regular review of business performance • Pursuance of data governance and ethical business practices

By defining metrics which shift the focus to business value, organizations can effectively build analytics solutions around their business priorities, instead of changing business priorities to accommodate analytics.

Overcoming challenges in building supply chain analytics capabilities

Talent and expertise

Building supply chain analytics requires a combination of data science, data engineering and supply chain expertise. The enterprise data model that stores cleaned and transformed data from the supply chain, must be scalable to accommodate an expanding supply chain and to a necessary degree, act as an approximate digital twin of the supply chain.

The analytics dashboards must display the right KPIs and enable the right analysis to effectively improve the decision-making process. The organization must also ensure that all parts of the supply chain utilize analytics in alignment with strategic goals of profitability and resilience. It is important not only to address these technical challenges but also to train managers to leverage analytics and optimize for better business outcomes.

Securing organizational support

Our experience with clients shows us that the biggest challenges are organizational, when it comes to successfully implementing supply chain analytics. Some managers may struggle to incorporate a data-driven culture where analytical insights improve day-to-day workflows. Others may not be able to identify measurable metrics that focus on ROI, and hence, are unaware of the incremental business value from analytics.

It is also challenging for leaders to secure investments for analytics because, either they have not identified metrics that impact profit and resilience or they have not set convincing targets for improvement, ultimately failing to convince the CFO or CEO. Without these efforts, the company may lag on technology adoption and laggards often don't survive. Our Value-driven analytics framework helps leaders design an effective implementation plan and measure business value from supply chain analytics.

Achieving scale

Scaling is not easy. Unlike single-use case solutions, developing an enterprise data analytics infrastructure is an expensive proposition and requires commitment from various departments within the organization.

However, network-level impacts of digital engineering significantly enhance ROI, making the endeavour worth it. To surmount this challenge, leaders must outline a clear strategy that complements their operating model and empower a Data & AI CoE or a transformation office (TO) to champion the execution of the strategy.

Technology-led deployment	Build and replicate	Capability-led deployment
• The CoE will deploy a single use case across all the sites, simultaneously • A standardized approach enabled by a strong central IT and similarity in operations	• The CoE will identify use cases, build solutions and replicate one-at-a-time • This approach greatly benefits from "assetization" and continuous learning by the CoE	• The CoE carries strong capability and assets to identify and deploy a wide range of solutions • Sites approach CoEs with requests to implement customized solutions for specific use cases

Low to high: difference in operations between sites or departments

Strategies to enhance ROI from supply chain analytics

Prioritize scale

Medium to large size companies can double the return on investment by enabling supply chain analytics across the organization. While scaling is not easy and requires a large capital investment, the benefits outweigh the costs. An enterprise-wide upgrade to talent, technology, data and operating model can ensure strong governance and adoption of data-driven practices leading to better returns. For data and analytics use cases, firms have achieved four to five times return on investment over a five-year horizon, with a payback period averaging around two and a half years. “Assetization” techniques can help companies package solutions for rapid deployment across sites, eliminating pilot costs and reducing implementation costs to further enhance returns.

Leverage speed

Companies that are faster to deploy supply chain analytics achieve better margins for a longer period before market forces and competitors tip the scale of balance. Incorporating solution accelerators or off-the-shelf solutions into their technology strategy can help organizations stay ahead of the curve and adopt new technologies faster.

Research by the World Economic Forum reveals that companies that have adopted applied AI are faster by 25%, to deploy new Generative AI use cases in their operations. Leaders should explore partnerships that can help them understand advancements in technology and drive their digital transformation office, so that they can focus on the core business.

Go beyond

Supply chains have become key drivers of business growth. Transformation should go beyond efficiency to fuel revenue growth. With the right analytics, supply chain data can guide product launches, promotions, and customer experience strategies, giving leaders greater impact.

Introducing SupplyView

SupplyView is a data analytics platform accelerator with a ready-to-use supply chain data model, cutting down the time and effort needed to implement advanced analytics for global supply chains. Built for sustained business value, SupplyView enhances visibility and trust by unifying data into a single source of truth for analytics and decision-making. It fosters collaboration by democratizing data while ensuring quality and security. With customizable analytics dashboards, SupplyView delivers high-quality, actionable insights tailored to your organization's needs, driving adoption and better decisions.

Empowering Smarter Supply Chains: SupplyView's intelligent analytics optimize sales & operations planning, procurement, logistics, and inventory management. It enables data-driven decision-making for greater agility and resilience, answering critical questions and providing both operational support and strategic direction. Our discovery workshops have helped supply chain leaders identify further opportunities to enhance resilience and efficiency of your supply chains.

Learn more about SupplyView *here*

Here's how SupplyView enhances the different functions of a supply chain:

- **Sales and operations**
  SupplyView reduces planning cycle time by consolidating the data from across the supply chain, analyzing it for insights and aiding in data-driven decision-making. Planners can review SupplyView's demand forecasts and the supply chain status reports to improve supply readiness and meet the demand efficiently.
- **Procurement**
  It helps procurement teams meet every payment deadline and comply with numerous supplier contracts across the chain. It further allows analyzing supplier performance, lead times, quality and availability for better reliability reliability of their supplier network.
- **Logistics**
  SupplyView's shipment tracking and automated alerting tool helps logistics teams avoid penalties and demurrage costs. It also fetches information from numerous shipping lines and serves as a one-stop solution for logistics teams to track shipments at a container level.
- **Inventory management**
  SupplyView gives you a clear picture of inventory movement, warehouse space, and product returns. By analyzing demand signals, it predicts how many days your stock will last. It also uncovers opportunities to improve working capital by optimizing stocking efficiency and demand patterns.

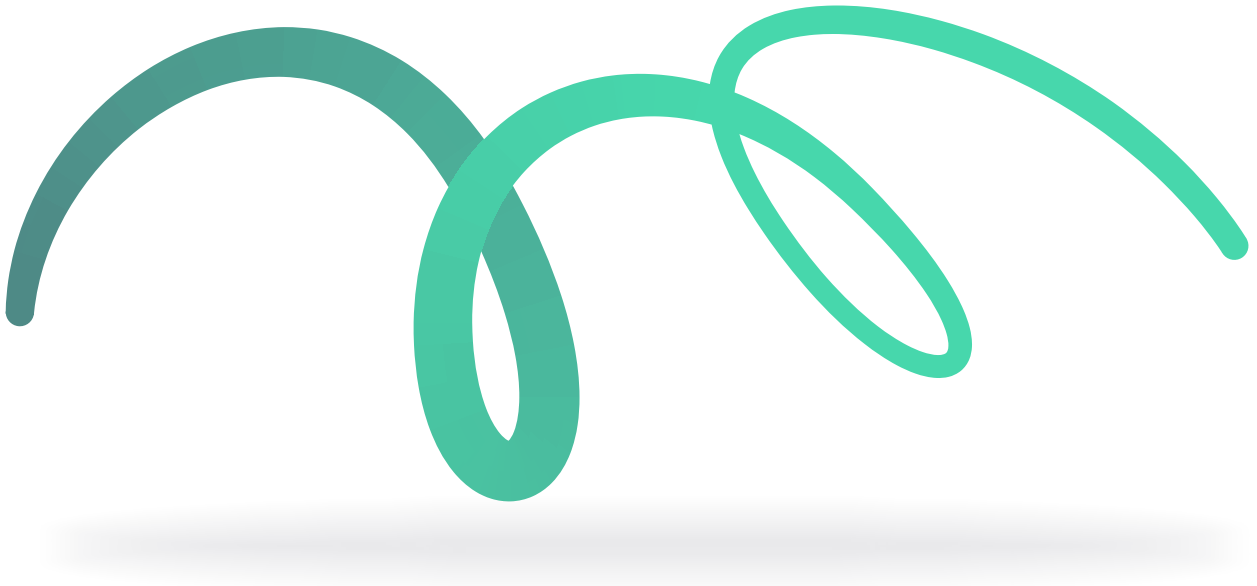
Conclusion

Global supply chains are facing unprecedented challenges, from disruptions, complexity and workforce evolution. Organizations must prioritize agility and resilience to thrive. Data analytics and AI offer strategic capabilities to protect the supply chain, improve collaboration and boost productivity.

By modelling the supply chain, organizations can gain deeper visibility and improve collaboration. Developing advanced analytics capabilities is key to improving productivity, forecast disruptions and optimize for better outcomes. Our expertise helps leaders identify the right metrics to measure ROI and develop a strategic roadmap for success.

SupplyView, built with our deep expertise in supply chain solutions and data engineering, can accelerate your supply chain towards agility and resilience. You can improve business outcomes with our cutting-edge analytics, powered by state-of-the-art supply chain data models to capture the right KPIs. Compatible with many hyperscalers and capable of ingesting from heterogeneous data sources, SupplyView offers seamless scalability and is easy to integrate with existing systems. It saves time and effort to implement analytics, enabling a faster rollout and giving you a competitive advantage

Contact us today. Let's work together to transform your supply chain.



Appendix: Performance indicators

Performance indicators help leaders and managers set realistic goals and evaluate the effectiveness of their business processes and operations. These metrics also help stakeholders diagnose issues and identify opportunities to improve outcomes.

Analytics helps us understand how changes in each indicator impact a variety of operational metrics over time. Comparison of sales regions or suppliers with one another can help identify good business practices for horizontal deployment.

Promptly diagnosing deviations from forecasted performance can help us detect disruptions at an early stage and respond faster than competitors.

KPI	Description
3-way quantity mismatch	It reports number or fraction of shipments where a mismatch exists between ordered qty., invoiced qty., and received qty.
Average order value	It reports the average amount spent by customers every time they place an order.
Backorder rate	It measures the percentage of orders that are waiting to be fulfilled due to insufficient inventory or stockout.
Booking rollover	It measures how frequently a planned shipment could not get loaded. This can occur due to reasons such as customs difficulties, overbooking etc.
Contract rate	A mutual agreement with a shipping line about the freight charges and minimum quantity of load.
Cost of goods sold as a percentage of revenue	It is the sum of all direct costs incurred in the production and sale of goods as a percentage of revenue earned from the sale of the same goods.
Cycle service level	It measures the supply chain's probability of not stocking out under uncertain demand conditions. This can be determined by simulation modeling or from historical data.
Days inventory outstanding	It measures the average time taken to convert inventory to sales Calculated as (Average inventory for the period/Cost of goods sold in the period) x Length of period.
Days of supply	It is an SKU level estimate of how long current inventory may last, based on prevailing selling speed. Calculated as (Current inventory value/Cost of goods sold in a period) x length of period in days.

Days payable outstanding	It measures the average time taken to pay suppliers Calculated as (Accounts payable/Cost of goods sold for the period) x Length of period.
Days sales outstanding	It measures the average time taken to convert receivables from credit sales to cash on hand. Lower is usually better. Calculated as (Accounts receivables/Total credit sales for the period) x Length of period.
Defect rate	It reports, at an SKU level, the fraction of items that were flagged as defective by the customer.
Demurrage	It captures the charges payable to the shipping line in case of failure to unload or discharge the ship within the time agreed.
Discharge rate	It measures the time (in hours or days) taken to unload or discharge a ship.
Forecast accuracy	It measures the accuracy of the forecast data as compared to actual demand or sales.
Gross expenditures	It is the sum of the different costs in an activity due to material, equipment, personnel and service.
Gross Margin	It measures the percentage of sales revenue that a company retains after incurring the direct costs of creating and selling their product. Calculated as (Sales revenue – Cost of goods sold) x 100/Sales revenue.
Inventory to sales ratio	It compares the value of the inventory against the cost of goods sold in the period. Calculated as (Average inventory value for the period/Cost of goods sold).
Inventory turnover	It measures the number of times the entire inventory is sold in a specified period.
Lead time or Turn around time (TAT)	It measures the time elapsed between when an order is placed with a supplier and when the order is shipped. This is measured per SKU per supplier. Averages are also useful at aggregated levels.
Lost sales	It measures the known revenue loss borne due to insufficient inventory.
Maverick spending	It measures the value of purchases made outside the regular procurement process, bypassing approved contracts and suppliers.
Minimum order quantity	It measures the minimum quantity that can be ordered for a specific SKU, from a specific supplier.
On-time In-full (OTIF)	It measures the number of shipments that are delivered according to the quantity and schedule specified when they were ordered.
Optimal service level	It reports the theoretically optimal service level for maximum profitability after evaluating the tradeoffs related to the cost of understocking and overstocking under uncertain demand.

Order Fill Rate	It measures the percentage of orders that were fulfilled with the available stock. Calculated as (Total Orders Shipped / Total Orders Received) x 100.
Pick rate	It measures the number of orders completely assembled for packing in an hour. A high pick rate indicates high efficiency at warehouses.
Production capacity	It reports the production capacity at an SKU level or supplier level.
Purchase order value	It reports the total value of orders placed to procure inputs from suppliers. Can be measured at a supplier level or SKU level.
Sales forecast	It is the output of forecasting models which calculate how much sales can happen in a period. Forecasts can be generated weekly or monthly for different SKUs.
Sales revenue	It reports the money earned from sales. This can either be actual sales or forecasted sales as required. Measured weekly, monthly, quarterly or annually.
Sales target	It measures the target value of the sales planned for each SKU. Sum totals are useful at aggregated levels.
Shipment status	It provides the status of the shipment as delivered, delayed, at port, at sea, or more.
Shrinkage rate	It reports the percentage of inventory lost due to factors like theft, damage, errors, or spoilage. Calculated as ((Opening inventory – Cost of goods sold + Purchases in the period)/(Opening inventory + Purchases in the period)) x 100.
Stockout rate	It reports the percentage of orders that cannot be fulfilled due to insufficient inventory
Supply chain cost as a percentage of sales	It tracks the total amount of money spent on supply chain costs as a percentage of the total sales for the same period. A low value is usually better.
Supply chain cycle time	It is the sum of the longest possible lead times for every stage of the supply chain.
Tied up capital	It reports the amount of company money that has been invested in assets that cannot be immediately liquidated, such as inventory or raw material.
Warehousing costs	It measures the various expenses related to warehouse including equipment, energy, labor, delivery, and shipping costs for handing goods at the warehouse.
Zero damage shipment	It measures the number of shipments received without damage

About the author

He is a technology consultant focusing on data analytics and AI-driven enterprise solutions. With experience spanning aerospace product development at Honeywell and business strategy expertise honed at the Indian School of Business—where he ranked among the top 10% of his class—Arunesh brings a unique blend of technical acumen and strategic insight. At Nagarro, he focuses on building solution accelerators for data analytics and AI deployment, while also exploring technology-driven interventions to enhance collaboration and change management in enterprises.

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References:

- Deloitte Global CPO Survey 2023 - 2023 Global Chief Procurement Officer Survey | Deloitte US
https://www2.deloitte.com/us/en/pages/operations/articles/procurement-strategy.html
- McKinsey Article: Future Proofing supply chains 2022 - Future supply chains: resilience, agility, sustainability | McKinsey
https://www.mckinsey.com/capabilities/operations/our-insights/future-proofing-the-supply-chain
- McKinsey's Global Supply Chain Leader Survey 2024 - McKinsey Global Supply Chain Leader Survey 2024 | McKinsey
https://www.mckinsey.com/capabilities/operations/our-insights/supply-chain-risk-survey
- Adopting AI at Speed and Scale Dec 2023 – WEF - Global Lighthouse Network: Adopting AI at Speed and Scale | World Economic Forum
https://www.weforum.org/publications/manufacturing-lighthouses-and-the-path-to-impact-adopting-ai-at-speed-and-scale/
- The state of AI in 2023: Generative AI's breakout year – McKinsey -
https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai-in-2023-generative-AIs-breakout-year
- Gartner – Building a supply chain analytics strategy -
https://www.gartner.com.au/en/supply-chain/insights/supply-chain-analytics
- Digital Transformation: Raising supply-chain performance to new levels -
https://www.mckinsey.com/capabilities/operations/our-insights/digital-transformation-raising-supply-chain-performance-to-new-levels
- The transformative power of integrated business planning | McKinsey
https://www.mckinsey.com/capabilities/operations/our-insights/a-better-way-to-drive-your-business
- SupplyView: Accelerate supply chain analytics & performance | Nagarro
https://www.nagarro.com/en/services/data-analytics-intelligence/enhance-supply-chain-performance