aPriori

A New Way of Sourcing & Supply Chain Management

DATA IS THE NEW CURRENCY

Overview

A Boston Consulting Group survey of 600 C-Suite executives found that 65% of respondents were focusing their cost initiatives on manufacturing and the supply chain. Despite overcoming many supply chain issues during the height of Covid 19, they, along with high costs, remain a top priority for many organizations. However, companies are recognizing the importance of investing in more efficient supply chains.

What's more, a Forbes article notes supply chains are a huge part of the problem when it comes to emissions (estimated to be about 70% for most companies), circularity, and inequality, and are, therefore, a great area to focus on when looking for solutions. The article also noted that digitalization is key to enabling risk-resilient, sustainable supply chains. The more digitalized the supply chain, the more capable organizations will be to handle disruptions better, faster, and more cost-effectively.

In fact, **60% of executives say the pandemic accelerated the prioritization of their supply chain strategies,** according to Ernst & Young. Organizations require an agile, more transparent supply in order to innovate faster and better, optimize aging product lines, and improve profitability and design for manufacturability (DFM).

The latter plays a crucial role in determining downstream manufacturing costs. What's more, product design is a driving factor in sourcing and how quickly a manufacturer can pivot their supply chain operations as necessary. Comparable, readily available bill of materials (BOM), as well as optimized manufacturing and assembly, will enable manufacturers to react quickly to supply disruptions when designing new products.

This report outlines the full scope of sourcing and supply chain management. Organizations will learn how to mitigate supply chain risks effectively, streamline supply chain management, maximize sourcing opportunities, and, most importantly, lower costs.

In the first two sections of this report, we will cover the nuances and correlations between sourcing, procurement, and supply chain management. However, for expediency, feel free to jump to our section, "How The Supply Chain Landscape Has Changed".

Today, in addition to recovering profitability and finding ways to preserve cash, **companies face the added challenges** of shifting supply-market dynamics, changing ways of working, increasingly volatile demand, and de-risking their supply chain to make it less vulnerable to disruption.

Source: Reimagining procurement for the next normal | McKinsey

Table of Contents

What Are Sourcing and Procurement?

Sourcing, which falls under the umbrella of procurement, is the process of identifying, evaluating, and selecting suppliers to provide goods and services. The difference between sourcing and procurement is that the former is one step in procurement or supply chain management, while the latter manages the goods and/or services supply chain process from end to end, both internally and externally.

For example, sourcing professionals work within a network of suppliers and their internal teams (design, cost, production). In greater detail, they:

- **Identify potential suppliers** who can meet their goods (e.g., parts, components) and services (assemblies) needs within their cost, reliability, and quality requirements.

- **Stay attuned to market fluctuations and industry trends** to respond in a proactive manner, pivot when necessary, and reduce supply chain risks. The result is a more agile supply chain to maintain time to market, quality, and cost-effectiveness.

- **Facilitate supplier relationships**, which are essential to ensuring efficient, agile supply chain management (SCM). Good communication and collaboration and the ability to create win-win fact-based negotiations can be critical factors in avoiding costly delays and navigating disruptions with finesse.

Within sourcing, there are various distinctions. They include:

Outsourcing
Using third-party suppliers (domestic or foreign) for activities or services typically done in-house.

Insourcing
Using internal resources for supply chain activities, often as a cost-reduction strategy.

Nearshoring/Friendshoring
Moving sourcing activities closer to where goods or services are sold, reducing transportation costs and delivery lead times.

Single Sourcing
Relying on just one supplier for all materials, goods, and services, creating product exclusivity.

Global Sourcing
Expanding sourcing efforts worldwide.

Joint Ventures
Partnerships that share resources and strengths, increase bargaining power, and reduce supply chain risk.

Procurement experts handle all aspects of SCM, including purchase orders, contract negotiations, inventory, and performance management. Moreover, they:

Streamline sourcing procedures via a centralized database

enhancing communication and collaboration between all aspects of product development to ensure cost-effective sourcing and mitigate supply chain issues that could impact production schedules.
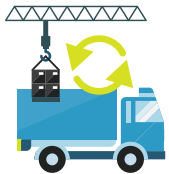
Implement strategies to further boost supply chain management

such as addressing risk management and building supply chain resiliency (e.g., weighing offshoring vs. onshoring vs. nearshoring, working with sourcing to build a network of suppliers). Managing the supply chain workflow is also an integral procurement responsibility (e.g., quality assurance of supplier materials, parts, and services). aPriori's Regional Data Libraries (RDLs) provide digital libraries with real-world variable material and supplier production costs across 87 global regions and over 440+ manufacturing process models. Manufacturing alternatives can be effectively assessed, regional tariff impacts considered, and overreliance on specific regions with potential risks avoided, often leading to significant cost savings and reduced lead times.

Optimize supplier pricing to ensure that cost targets and revenue goals are met

Procurement typically is responsible for the cost target analysis solutions used by sourcing. The solution should be able to identify cost and manufacturing outliers and provide a detailed analysis of should cost vs actual cost. Sourcing teams will then be better positioned to conduct fact-based negotiations with suppliers to secure the best price possible.

Sourcing and procurement must communicate and collaborate effectively to meet supply chain goals. When successful, they contribute to an organization's overall competitiveness, profitability, and efficiency.

A Decade of Global Events and Their Impact on the Supply Chain

2010-2011
An earthquake and tsunami in Japan, floods in Thailand, and a volcanic eruption in Iceland impacted production, logistics, and supply chains globally.

2014-2015
A labor dispute at U.S. West Coast ports created significant delays in cargo handling, with many companies facing goods shortages and production slowdowns as a result.

2018-Early 2019
With looming tariffs, businesses accelerate shipments to avoid this cost, resulting in major congestion at many U.S. ports, shipment delays, and increased handling fees.

2019
Aluminum producer Norsk Hydro is victim of a ransomware attack, highlighting supply chains' cybersecurity vulnerabilities.

2020
The Covid-19 pandemic begins, first in China and then spreading rapidly and globally, essentially shutting down the world. The extended shutdown leads to supply shortages of everything from household essentials and food to raw materials, appliances, and cars. The pandemic shone a spotlight on the critical need for a resilient supply chain. Additional fallout from the pandemic included inflation, geopolitical challenges, and tighter sustainability regulations that bottlenecked offshoring and drove up costs.

March 2021
The 400-meter Ever Given cargo ship loaded with approximately 17,600 containers holding approximately $1 billion worth of goods ran aground in the Suez Canal, ending up at a 45-degree angle that blocked passage for six days. It was estimated that $10 billion worth of marine traffic per day was piling up.

2021-2023
Geopolitical tensions and conflicts further hamstring supply chains globally, including the Ukraine War, U.S.-China tensions, and U.S.-Mexico border issues. Inflation also rises significantly between June 2021 and June 2022. It leads to reevaluate of the supply chains.

August 2023
Drought-induced low water levels in the Panama Canal left more than 200 ships stuck in a traffic jam. The majority were cargo ships and gas carriers. They paid multiple times the toll to pass through…in some cases as high as $900,000 from the more typical $400,000 passing toll. It illustrates how vital shipping channels are to the global supply chain.

October 2023
The Israel-Gaza War extends to other regions, including Yemen. Houthi rebels threaten shipping channels in the Red Sea and Suez Canal, forcing several freight companies to temporarily halt transport or utilize different routes. It has created a supply chain disruption ripple effect worldwide and added hundreds of additional miles to cargo shipping routes. These two shipping channels facilitate the movement of 12% of global trade.

March 2024
Baltimore Bridge Collapse-Francis Scott Key Bridge-March 26, 2024-Baltimore's port has been closed to most maritime traffic since the accident and nearly a dozen container ships were stuck in the port in the aftermath of the accident, which resulted in the deaths of six road crew who were on the bridge at the time.

What Is Supply Chain Management?

Today's supply chain is global and far more complex than it was even 50 years ago. Now, it is fraught with geopolitical conflicts, climate-induced disruptions, tighter regulations and sustainability requirements, labor and material shortages, and market fluctuations.

Sourcing and procurement professionals must operate with the utmost efficiency. A product development cog that slows to a stop can have costly consequences for the entire operation.

Supply chain management (SCM) is the process of turning raw materials into finished products and delivering them to customers. It encompasses sourcing materials and managing production, as well as handling transportation and logistics. Additionally, cost control, time management, and mitigation of supply chain disruptions are integral to SCM.

Let's take a look at the SCM flow:

STAGE 1
Planning

This step involves analyzing market data, forecasting customer demand, and planning production schedules with strategic precision. Collaboration with key suppliers is essential to forecast material requirements accurately.

STAGE 2
Sourcing

This phase identifies and establishes a robust supply network, including selecting reliable suppliers, negotiating contracts, and maintaining strong relationships to secure cost-effective and high-quality materials.

STAGE 3
Manufacturing/Production

Here, manufacturers and suppliers work together, ensuring their production processes meet quality, cost, and sustainability standards and goals.

STAGE 4
Logistics Management

The final step is delivering finished products to customers. Logistics management service providers handle order fulfillment/distribution, warehousing, seamless delivery, and expeditious returns.

Think of these four stages as a set of dominoes laid out. When one falls, they all start falling, and when this occurs, time to market is slowed, money is lost, and a competitive advantage is missed. It cannot be emphasized enough that each stage must operate with a high degree of efficiency.

How the Supply Chain Landscape Has Changed

PwC's Global Crisis and Resilience Survey reveals that 91% of companies have experienced supply chain disruptions in the past few years. The survey also shows that 76% of companies believe that these disruptions, such as inflation, had a medium to high impact on their business. The most prominent include:

- **The Covid 19 Pandemic:** The pandemic underscored the vulnerabilities of both individual and global supply chains. Staff shortages, factory closures, and reduced transportation indicated how reliant we are on them to keep the supply chain moving. It also confirmed how vital digital supply chain technologies (e.g., AI, analytics, robotic process automation) are to communication, collaboration, and agility. A KPMG supply chain trends report notes that 50% of surveyed supply chain organizations will continue to invest in applications that support artificial intelligence (AI) and advanced analytics capabilities through 2024.

- **Geopolitical Tensions and Domestic Self-Sufficiency:** The pandemic, wars, trade embargoes and tariffs, and more isolationism have propelled manufacturers to consider onshoring, nearshoring/friendshoring, and other self-sufficient supply chain and manufacturing methods. The KPMG report indicates that more than six out of 10 global organizations anticipate geopolitical instability possibly having a detrimental impact on their supply chains in the next three years.

- **Inflation and Recession Concerns:** Inflation caused prices to rise significantly between June 2021 and June 2022. The KPMG report notes that 71% of global companies surveyed highlighted raw material costs as their number one supply chain threat for 2023.

- **A Shift In Global Manufacturing Capacity:** Peter Zeihan mentioned it at our most recent Manufacturing Insights Conference. His perspective was further validated in Kearney's annual Reshoring Index report. The global consulting firm notes the following movement in U.S. reshoring initiatives:
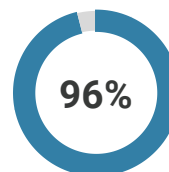
96% of manufacturing executives are considering reshoring their operations
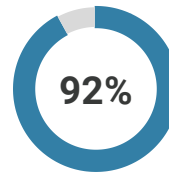
92% of executives have a positive outlook on reshoring initiatives

An uptick in the number of executives focusing on geopolitical risks due to U.S. regulations and measures.

- **Other disruptions:** Even more isolated incidents can disrupt the supply chain. Some include labor strikes, natural disasters such as volcano eruptions, earthquakes, and flooding, and changes in ownership.

While not every disruption can be anticipated, there are solutions that can cut down the number of surprise disruptions with better forecasting. In fact, a Deloitte survey found that only 25% of firms believed they could identify and predict supply disruptions "to a large extent" in a timely manner. These events emphasize the importance of supply chain resilience and necessitate companies' ability to adapt to changing geopolitical and technological landscapes.

Find out how your manufacturing procurement challenges and initiatives stack up to your competitors and suppliers.

A New Way of Sourcing and Supply Chain Management

If the past few years have taught us anything, it's that the supply chain is a vital commerce link that cannot be taken for granted. As a result, it requires a comprehensive, exacting strategy, and the right solutions and processes to execute it.

Here are several strategies that can foster more agile and efficient sourcing and supply chain management:

Be more selective and foster more collaborative supplier partnerships

Better collaboration, advanced planning, and end-to-end visibility between sourcing/procurement teams and suppliers at the beginning of new product development can facilitate more efficient SCM. What's more, choosing suppliers who agree to provide the necessary materials, components, and production capabilities at the right price not only saves money but also time to market—a critical factor in SCM. McKinsey notes that more aligned manufacturer-supplier strategic relationships can double a manufacturer's performance versus its competitors. Vetting reliable vendors, negotiating favorable terms, and ensuring consistent quality are paramount for maintaining a smooth flow of materials. Additionally, diversifying supplier networks also mitigates risk and increases resilience against disruptions.

Implement the right sourcing and procurement technology

Without consistent, shareable data via digital solutions, even the smallest supply chain disruption can put operations in a tailspin. Many manufacturers and suppliers lack secure, collaborative, real-time automated sourcing and procurement solutions. Companies are using manufacturing insights to assess their material and process alternatives to effectively reduce risks. For example, manufacturers can evaluate the benefits of reshoring or nearshoring. The Kearney Reshoring Index found American, Canadian, and Mexican nearshored and reshored industrial production efforts continue to take market share from manufacturers including mainland China.

Leverage regional supply data for faster, more informed decision-making

Efficient SCM requires extensive knowledge of material, component, and production availability, regional costs, any import or export tariffs, and more. Furthermore, a critical component of strategic sourcing and SCM lies in being able to comparatively analyze your potential suppliers. Map the countries where your materials are sourced. Then balance that inventory against all the countries where those resources are available. Develop a detailed understanding of how your company needs global capacity for both supply and demand.

Watch how a detailed breakdown of total manufacturing costs (including regional labor rates, material costs, and manufacturing overhead) benchmarks production cost estimates, identifies the best suppliers, and mitigates supply chain risks.

AI: Data Is The New Currency

Although cost is still a critical aspect of sourcing and procurement, the past several years have highlighted the importance of shoring up sourcing and supply chain processes, improving risk management, and boosting supply chain resilience. One of the most essential steps in this process is ensuring data accessibility, accuracy, and consistency. As a result, more manufacturers and chief procurement officers (CPOs) are prioritizing digital transformation and data analytics capabilities to gain more value for their supply chains, accelerate time to market, improve costs, and meet stakeholder demands.

75%

The Hackett Group's 2024 Procurement Key Issues Research finds that data and analytics reporting was a top 2024 improvement initiative for 75% of surveyed procurement executives, an increase of 10% from 2023.

28%

Artificial intelligence (AI) is quickly becoming a game changer in this scenario, leveraging it to accelerate the product development lifecycle and optimize spend analysis. However, Hackett's research indicates that only 28% of procurement professionals have adopted generative AI, and just over 50% said they were evaluating it.

Procurement professionals reveal that data is one of the most challenging obstacles to implementing AI in their processes. Vast amounts of data—purchase orders, supplier information, risk assessments, contract repositories, and more—are often stored on numerous, disparate systems, making it difficult to work from one central, consistent source.

AI tools can facilitate more seamless, standardized access to this critical information, making it a new and essential currency in order for manufacturers to remain competitive. However, many databases are under the control of third parties or other organizational functions, making the barrier to entry an uphill climb for procurement.

aPriori's AI-Powered Design and Sourcing Insights

aPriori's Insights Platform applies AI to 3D CAD models, automatically recommending changes to improve profitability, manufacturability, and sustainability. aPriori's intelligence enables users to simulate multiple variables simultaneously to make data-driven decisions amid increasing design, supply chain, and manufacturing complexities. Measuring, reporting, and reducing product costs now occurs in seconds rather than weeks or months using aPriori's AI technology.

aPriori provides a range of AI-powered manufacturability, profitability, and sustainability insights on components and assemblies from a single digital representation of the real-world component(s). Using its proprietary AI rule-based analysis, aPriori enables manufacturers to make decisions and solve complex optimization problems for 440+ manufacturing processes via these insights.

How Sourcing and Procurement Benefit from aPriori's AI-Powered Insights

Although aPriori's AI-powered design and sourcing insights encompass manufacturability, profitability, and sustainability across product development, let's examine those specific to sourcing and procurement:
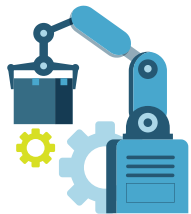
Automated supplier data eliminates manual processes and spreadsheets

aPriori's process models use a combination of rule-based and data-driven approaches to predict manufacturability, cost, and carbon emissions from manufacturing. Input parameters include raw material properties, regional labor rates, and production volumes to simulate and assess process feasibility, material utilization, and machine selection—all without needing an expert. Bonus benefits: More accurate material and process pricing, cohesive collaboration between suppliers and all product development teams.
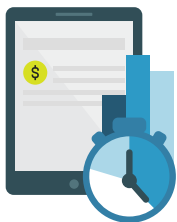
Faster quoting and more cost-effective sourcing

aPriori helps identify potential manufacturing issues and routing recommendations. It can analyze several scenarios at once. Moreover, it can facilitate trade-off decisions based on regional production, process optimization, material selection, and other factors, using the sourcing professional's knowledge of their supply base and aPriori's AI-powered insights. Data is more accurate, reducing the time required to update it or request more precise volumes or pricing. It also eliminates the need to send an RFQ and shortens quoting times. Bonus benefits: Reduced quoting iterations, more cost-effective production and sourcing.

aPriori: A Powerful Data Ally for AI

Leading manufacturers are leveraging aPriori in conjunction with their generative AI tools. The result is an intensive amount of data, which is then used to innovate faster, improve sourcing and procurement, make more informed decisions, and achieve manufacturability, profitability, and sustainability.

aPriori insights help provide the critical data foundation required to fully leverage AI. Sourcing and procurement can then maximize their efficiencies through collaborative data insights via analytics.

Data analytics and centralized data management will continue to drive innovation and competition. Proactive manufacturers recognize the risk mitigation properties and opportunity potential that AI tools, in combination with an AI-powered design and sourcing insights solution like aPriori, offer.

Watch how Signify uses aPriori to get creative with its procurement

Why Sourcing and Suppliers Need aPriori

aPriori enables sourcing and procurement teams to identify the best opportunities for cost savings and the appropriate suppliers who can cost-effectively make their parts. aPriori helps you engage suppliers early in product development to leverage their manufacturing expertise in a cost-collaborative manner for realized savings and relationship growth.

For example, sourcing and procurement teams are using manufacturing insights solutions to expedite the costing process during global supply chain issues. The automated, simulation-driven software provides comprehensive cost insights associated with raw materials, global factories, manufacturing processes, labor rates, and more. It also applies real-world supply chain conditions and other critical variables to generate accurate cost estimates.

Procurement teams can also use insights to collaborate with product development and manufacturing teams during the early design stages. aPriori provides real-time data on what materials are being used, where, and by how much. It also identifies the cost and carbon associated with it across the supply chain ecosystem that can delay launch dates and create cost overruns.

Discover how you can build a better supply chain with a digital factory.

aPriori Helps TE Connectivity Improve Supplier Relationships and Save

Highlights

Enable proactive supplier relationship management (SRM)

Unlock significant cost savings with data-driven expense analysis

Wins

Machine rate increase reduced from 10% to 4% in supplier negotiations

Through fact-based negotiations, supplier raw material costs reduced by 15%

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aPriori

HOT TAKE INTERVIEW

SUSTAINABLE SUPPLY CHAIN MANAGEMENT EXCELLENCE AT TE CONNECTIVITY

SYLWIA LAMBERT

Hear **TE Connectivity** explain why they chose aPriori

5 Fast Supply Chain Facts

The **Silk Road** was the first global supply chain, connecting China to the West. It was 4,000 miles long, and few people traveled the entire route. Middlemen handled goods in a staggered progression

UPS was founded in 1907 in Seattle, Washington, by two teenagers with a $100 loan. Its original business name was American Messenger Company.

In 1982, **Keith Oliver coined the term "supply chain management."** He defined it as "the process of planning, implementing, and controlling the operations of the supply chain with the purpose to satisfy customer requirements as efficiently as possible. It spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point-of-origin to point-of-consumption."

An **Ernst & Young survey** of 200 senior-level supply chain executives between late 2020 and September 2022 revealed that all automotive and nearly all (97%) industrial products companies said the pandemic has had a negative effect on them. In addition, 47% of all companies reported the pandemic disrupted their workforce.

The global supply chain market is expected to **reach $49 billion by 2028**.

Supplier Relationship Management:
A Critical Supply Chain Management Conduit

Strong supplier relationship management (SRM) reduces supply chain risks and disruptions. Shoring up your SRM includes evaluating each supplier's impact on your organization and identifying methods that can improve collaboration and increase supply chain efficiency.

Start by ensuring that your Tier 1 suppliers (direct suppliers to the original equipment manufacturer (OEM)) and Tier 2 ones (those who provide components or services to Tier 1 suppliers) have the capabilities to meet your supply chain priorities. Next, audit your supply base to confirm if it is agile enough to mitigate disruptions. Focus on:

- Identifying any regional overreliance on suppliers. If so, reallocate accordingly
- Analyze potential logistical and transportation obstacles (e.g., shipping lanes such as the Suez and Panama Canals that could be impacted by blockages and other problems.)
- Explore ancillary sourcing and production locations and facilities (e.g., in lieu of reliance on China, perhaps consider nearshoring/friendshoring in Mexico if you are a U.S.-based manufacturer)
- Consider new suppliers and alternative manufacturing processes to broaden options should a disruption occur with current suppliers and production methods

To further enhance your SRM efforts, implement the following actions:

- **Create win-win opportunities with Tier 1 suppliers** to gain a competitive OEM advantage (e.g., supplier equipment investments, long-term supplier contracts).

- **Leverage supplier collaboration opportunities prior to awarding bids.** It provides an opportunity to refine designs and processes, unlocking the hidden value in the new product development (NPD) process through early-stage involvement from key suppliers.

- **Cultivate SRM transparency.** Like any good relationship, trust is key, and transparency is vital. Ensure that you are transparent with your objectives and encourage your suppliers regarding their true material and production capabilities. Digital factories can play an important role in cultivating transparency, simulating processes, evaluating design, identifying cost and manufacturing outliers, and assessing the best production options to meet manufacturability, profitability, and sustainability goals. Product data from all systems (e.g., PLM, ERP) is connected by the digital thread.

- **Upgrade cost models.** Your current cost model methods may not be the most accurate or efficient. Inconsistent, incomplete, or inaccurate data is also known as "dirty data." The output of dirty data within sourcing can include inaccurate pricing, duplicate volume information, and even incomplete supplier capability data. However, even if data isn't the cleanest, it should not deter you from using AI to optimize cost. By utilizing a tech stack that enables refinement of your cost models, aiding your existing sourcing and procurement tools that can build out your generative AI or language models can accelerate valuable insights for faster decision-making.

- **Gauge supply chain sustainability.** Your product is not truly green unless you know that your supply chain is sustainable. Increasing numbers of manufacturers are measuring their carbon dioxide equivalent (CO_2e) emissions across their supply chain (Scope 3) to implement sustainability solutions more effectively.

Check out our comprehensive definition of SRM to learn more.

Early insights provide opportunities to find the right suppliers to meet material and process alternatives as **it did in this aPriori customer's case.**

aPriori

Case Study

TE CONNECTIVITY SUPPLIER STRATEGIES FOR MANAGING COST RISKS

Achieving Zero RFQ Capabilities with Manufacturing Insights

Another potential supply chain bottleneck is the quoting process. Too often, there are limited resources available to tackle a large number of RFQs. Moreover, many are working with antiquated quoting methods, leaving them open to oversights and inaccuracies and further slowing time to market. Frequently, these efforts result in a low percentage of RFQ wins as well.

A survey conducted by IndustryWeek in collaboration with aPriori found that 70% of respondents want to accelerate the quoting process, and 79% prefer a 24-hour to two-week completion window. Here are two tips to accelerate the quoting process:

Automate the quoting process to benefit both the manufacturer and the supplier

This will enhance collaboration, streamline quoting processes, and reduce costs and time to market. These strategies and a manufacturing insights platform can support these goals and help achieve Zero RFQ capabilities. Rather than submitting an RFQ to suppliers, manufacturers can improve supplier relationships and automatically send purchase orders directly to preferred, qualified suppliers, achieving Zero RFQ capabilities. Here are a few more tips: Utilize a manufacturing insights platform that works in tandem with your 3D computer-aided design (CAD) software. The right platform will enable manufacturers and suppliers to get automated, detailed product and manufacturing information (PMI) for faster, more accurate quoting.
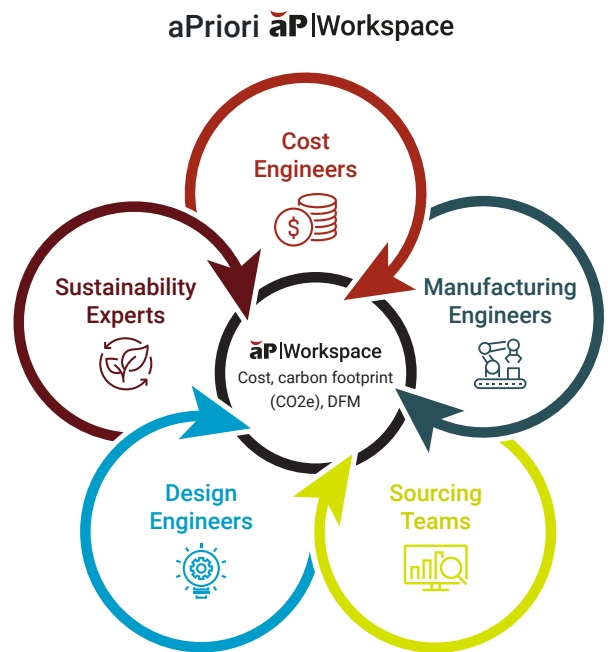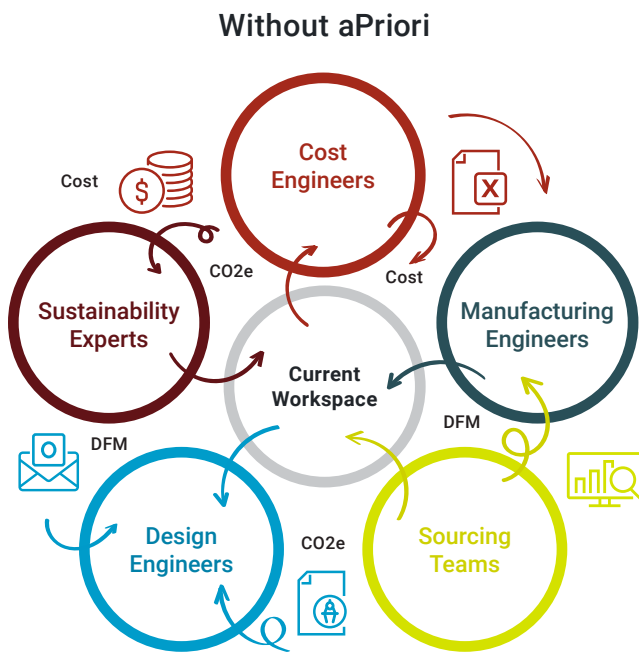
Ensure all product development team members work from the same database to enhance alignment and collaboration

aP Workspace is a solution for internal product manufacturers to optimize product designs. Once achieved, they can share and openly discuss it with suppliers more transparently. Both manufacturer and supplier can agree or modify key cost and manufacturing assumptions to reach a spec and pricing consensus. The latter provides the framework for the RFQ process.

Read how **aPriori customer, Flex, reduced BOM generation from 3 days to 30 seconds** illustrating the power of the right quoting solution.

See the Power of aP Workspace Before & After

Without aPriori

Cost Engineers
Cost
CO_2e
Cost
Sustainability Experts
Manufacturing Engineers
Current Workspace
DFM
DFM
Design Engineers
CO_2e
Sourcing Teams

aPriori aP|Workspace

Cost Engineers
Sustainability Experts
Manufacturing Engineers
aP|Workspace
Cost, carbon footprint (CO_2e), DFM
Design Engineers
Sourcing Teams

Solutions like aPriori provide a centralized, real-time supplier collaboration and information exchange. These automated platforms eliminate the need for traditional, more time-consuming RFQs, saving money and time to market. Cost specialists calculate costs for new designs without waiting for supplier quotes or reviews. An added bonus is that they facilitate long-term relationships with suppliers by aligning key assumptions and creating win-win scenarios.

Read how one transportation manufacturer models manufacturing costs for 20,000+ parts per year using aPriori.

Final Supply Chain Thoughts and Tips

SCM should take a holistic approach. By considering every aspect of sourcing and procurement, manufacturers can build a resilient and cost-efficient SCM. These additional tips can further strengthen your SCM strategy and processes:

Mitigate recessionary woes

Procurement should conduct a spend analysis to bolster profit margins. Experienced sourcing managers who use one typically achieve savings of 3 to 5% of the spend analyzed in their product cost reduction goals. A spend analysis should not be a one-off. It should be conducted on a regular basis to identify any material or manufacturing process outliers. Those can be analyzed, and a cost-reduction plan implemented to ensure profitability.

Avoid putting your supplier eggs in one basket

A KPMG supply chain article said 71% of global companies highlighted raw material costs as their main supply chain threat. aPriori provides end-to-end visibility. Design engineers can create products that work around supply chain issues and related costs while collaborating with cost engineers, procurement, and production. aP Pro allows your product design, engineering, cost engineering, sourcing, and production partners to identify and eliminate manufacturing cost drivers at the point of origin. Consequently, they can reduce quoting from several weeks to a few days, meet schedules and target pricing, and improve cash flow. Procurement can also quickly identify, select, and onboard suppliers, facilitating predictive sourcing and ensuring more negotiation transparency and supplier visibility.

Experienced sourcing managers who conduct a spend analysis typically achieve savings of **3 to 5% of the spend analyzed** in their product cost reduction goals

A KPMG supply chain article said **71% of global companies** highlighted raw material costs as their main supply chain threat

Expand and improve the supplier network

Challenges like organizational silos or no process standardization were cited by more than 25% of CPOs among their top three issues in the Deloitte survey. The right tools can maximize and multiply your supplier network, including aPriori's RDLs. They can identify the best supplier type aligned with your desired parts in your preferred geographic areas using the most optimized manufacturing process. For example, we have a customer who is looking to utilize AI along with aPriori to supplier match based on part classification and supplier quotes/capabilities. Manufacturers can digitally recreate their suppliers' factories to better understand costs associated with cycle time, materials, etc. This visibility is essential to sourcing competitively, particularly for those expanding their supplier geographical reach. NPD will need this visibility to identify if and where suppliers exist to provide parts. Finally, supply chain operational efficiency improves (with 74% of Deloitte CPOs making it the priority), boosting agility and responsiveness when managing supply chain issues without negatively impacting operations or the bottom line.

Learn how aPriori RDLs provide a detailed breakdown of total manufacturing costs including material costs, regional labor rates, and manufacturing overhead.

Mitigate risk with what-if scenarios

Understanding potential risks ahead of time can allow you to act pre-emptively. aPriori's AI functionality can help simulate potential impact on risk factors, enabling you to quantify risk and weigh potential solutions. For example, if you know a supplier's contract is coming up for renewal and there has been a trend of material prices rising, aPriori can tell you how much to anticipate if material rates, energy, or labor rates go up. It can then run a comparison to see what other cost drivers might be affected. The same could be said for other risks.

Learn how Signify's procurement team went from analyzing 1000 to 10,000+ parts annually.

SCM: Grounded in Meaningful Partnerships

Prioritizing effective supply chain collaboration allows manufacturing brands to navigate today's complexities. It also increases project visibility, traceability, and coordination. Strong and meaningful partnerships with suppliers help improve negotiations, minimize disruptions, and improve customer satisfaction.

Digital transformation streamlines workflows, enabling manufacturers to quickly capitalize on new cost and carbon savings opportunities. Taking a more proactive approach to your supply chain can pay off in spades, provided you have a strategy in place and the right manufacturing insights solution.

A 2024 **KPMG** supply chain trends piece reveals that less than half **(43%) of organizations** have limited to no visibility of Tier 1 supplier performance

Why aPriori?

aPriori provides unique AI-Powered Design & Sourcing Insights that unlock and identify new opportunities rapidly for reducing product cost & carbon footprint, optimizing manufacturing & supply chain risk, and improving design engineering & sourcing teams' productivity. According to Forrester, aPriori customers achieve a ~600% ROI within three years and payback within six months of adopting our Enterprise AI software.

Leading manufacturers use our automated Insights Platform to reduce time to market, meet sustainability targets, accelerate revenue growth, and increase profitability, all contributing to creating cash faster. To learn more about aPriori's cloud and on-premise solutions, visit www.apriori.com.

aPriori

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Corporate Headquarters USA
Concord, MA | hello@apriori.com

APAC
Tokyo, Japan | apac@apriori.com

EMEA
Belfast, Northern Ireland | emea@apriori.com

DACH
Munich, Germany | dach@apriori.com