

Turn potential into performance

How AI can transform
your supply chain network

Introduction

AI is set to revolutionize supply chain networks. But while generative AI grabs most of the headlines, it should be viewed in the broader context as part of a continuum of intelligent technologies and automation capabilities that include traditional process automation, classical machine learning (ML) models, Internet of Things (IoT), and digital twins as well as large language models (LLMs).

Led by AI, these technologies have the potential to impact the entire supply chain and the possibilities appear endless. But to turn this potential into tangible business value, AI requires firm foundations: a modern and flexible technology infrastructure and effective management of the data that fuels it.

In this paper, Coupa and Accenture provide a succinct overview of the opportunities for AI across supply chain functions like sourcing and supply chain planning, and cross-functional outcomes such as supply chain sustainability, resilience, and supply assurance.

We also offer recommendations on how to get started with this truly transformative technology – including implementing AI responsibly, safely, and ethically – to help you reap the maximum benefits for your business.



According to Accenture's Technology Vision 2024, **95% of executives agree that generative AI will compel their organization to modernize its technology architecture.**

Power your supply chain with AI

The potential business value of AI is enormous. Accenture analysis suggests that 43% of all working hours across the entire supply chain function will be positively impacted – with generative AI either automating activities (29%) or significantly augmenting the work of human employees (14%). Multiply that by the huge global supply chain workforce and you get some idea of the cumulative value that could be achieved in terms of time and cost savings, and employee and customer satisfaction.

Generative AI excels in language-related activities, and on its own will not be suited to every supply chain task. However, while activities involving numerical processing or requiring greater levels of complex reasoning will remain the domain of traditional process automation and machine learning, generative AI can still add significant value across different aspects of the supply chain.

58%

of the 122 supply chain processes analyzed – from design and engineering, planning, sourcing, and manufacturing to fulfillment and service – can be reimaged to deliver greater speed, accuracy, and efficiency using generative AI.¹

Understand supplier performance

Machine learning can accelerate supplier vetting and assessment, and predictive analytics using historical data can predict future performance. If a particular supplier was always 10 days late with delivery, for instance, machine learning can help to identify the contributing factors behind the delays and predict the potential lateness of other suppliers based on similar characteristics such as size, location, weather, and so on.

Generative AI can play an important role here by taking the machine learning results and translating the data (which is often highly technical and complex) into plain and easily understandable language that delivers usable information and insights on assessing supplier performance to guide decisions on any remedial actions required.

Accelerate purchase order and invoice processing

While these key financial processes are already highly automated, the related communications may still be largely manual. By rapidly converting large volumes of unstructured data from e-mails and other sources, Generative AI can provide important contextual understanding to improve processing and execution speed, efficiency, and accuracy. In turn, this can help maximize payables outstanding while avoiding penalties to optimize working capital and cash flow.

Transform supply chain planning

The combination of comprehensive data models and powerful AI is transforming supply chain planning. When demand rises, do you need a new warehouse or additional manufacturing capacity? Will you need new suppliers in different locations to cut delivery lead-times or reduce costs?

To help you answer these and other questions, the latest [integrated scenario planning solutions](#) like Coupa leverage digital twin functionality so you can visualize your current supply chain model and use advanced algorithms to model various future scenarios. Generative AI can make complex machine learning outputs more explainable and understandable to enable faster and smarter decision-making. Together the technologies can help build more proactive and resilient supply chains that save time and money while delivering better customer service.



Leverage the cross-functional value of AI

Improve supply chain sustainability

Supply chain modeling is also a powerful tool for enhancing sustainability measurement, performance, and compliance: a key challenge facing many organizations.

Accurately mapping company spend to emissions, for example, is time-consuming and laborious work. Accenture has developed a generative AI solution that can sift through millions of lines of spend data across multiple languages, and automatically map each line item to relevant emissions factors. Once mapped, the information can be fed into a supply chain modeling tool like Coupa.

63% of CEOs say a key reporting and compliance challenge is the lack of ESG data measurement across the value chain²

Build supply chain resilience by design

It's estimated that supply chain disruption has cost businesses \$1.6 trillion in missed revenue opportunities over the last two years³. As a result, one of the key supply chain management challenges is having the ability to better understand supplier networks and their co-dependencies to asset risk and vulnerabilities.

Coupa has a global community of over 10 million suppliers with authorized customer spend data anonymized to deliver visibility and better decision-making at scale. Generative AI can augment existing AI-powered solutions that analyze this and other structured data with analysis of much larger volumes of unstructured data to produce deeper insights. Chatbot interfaces can also be used to make these insights more accessible and improve supplier collaboration.

Resilience can also be built into supply chains themselves through the design and planning solutions referred to above that can model potential disruptions, assess their effects, and inform mitigation strategies to reduce risk.

Increase supply assurance and improve revenue

Manufacturers need total confidence in their supply chain to deliver the right materials and parts in the right place, at the right time, at the right quality, and in the right quantity. Although direct spend can be highly complex with large networks of suppliers, many suppliers' systems and processes are still manual – and therefore slow, inefficient, and inaccurate. Telephone orders can go unrecorded, and e-mailed purchase orders missed or unacknowledged – potentially resulting in manufacturing delays and late deliveries.

Generative AI can streamline and accelerate processes by turning unstructured data into structured data: parsing e-mails, for example, and communicating back to the buyer for action. These improvements result in reduced plant shutdowns, increased customer service and, ultimately, improved margins.

Optimize working capital

For companies dealing with large numbers of suppliers and high volumes of invoices, paying at exactly the right time to maximize incentives and minimize penalties has become a business essential. Generative AI can simplify and speed up this process by analyzing all outstanding invoices to ensure consistently prompt payment that builds supplier loyalty while optimizing working capital.

How to get started with AI

Get your data AI-ready

AI relies on huge volumes of data, so an effective enterprise data strategy is an essential prerequisite. However, many organizations are still struggling with managing data across their supply chain networks and will need to extend this with large volumes of mixed-modality unstructured data. The good news is that generative AI itself can be applied to this task by automatically analyzing and extracting knowledge from supply chain data to feed other AI use cases.

A note of caution here. Companies are understandably cautious about providing confidential business-critical information to external generative AI solutions and strict data security and privacy policies are critical to ensure the ethical and responsible use of AI.

Collaborate with your suppliers

AI can benefit buyers and suppliers. Collaborating with key suppliers on generative AI pilots will help build confidence and trust while demonstrating the mutual benefits of the technology.

This collaboration can be extended across the ecosystem by leveraging community intelligence for scalable insights. Coupa, for example, has a vast trove of \$6 trillion of customer contributed spend data across its total spend management platform to fuel AI models. Companies can use AI-powered insights to benchmark their businesses, identify trends, and predict spend patterns to reduce risk, increase efficiencies and be more profitable.

Learn more

This unique combination of Coupa's community-generated AI network and market-leading source-to-pay platform delivers margin-multiplier capabilities to help companies enhance growth, productivity, efficiency, resiliency, and sustainability.

To find out more about how Coupa is using AI to improve Total Spend Management, [please visit our website.](#)

For the latest Accenture viewpoint on generative AI, read their 2024 report: [Supply chain networks in the age of generative AI.](#)