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WHITE PAPER

Artificial Intelligence Buyer's Guide

Cutting Through Marketing Hype to Drive ROI

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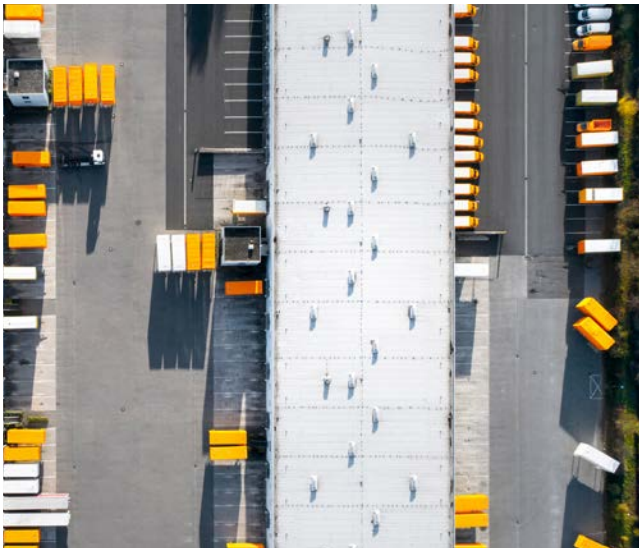
Executive Summary

Artificial intelligence (AI) has become a buzzword used liberally by all vendors — with good reason. The drive to create agile and resilient businesses is causing today's leaders to ask more and more of their supply chains and making them hundreds or thousands of times more complex. This complexity necessitates a new approach in which AI plays an important role. Yet the qualities that determine the success of AI technology are often hidden behind a blitz of marketing language.

This buyer's guide explores the truth beyond the hype. Topics include the three main categories of AI available, why not everything vendors market as AI actually is AI and the importance of embedded AI for supply chain applications. Use cases for supervised, unsupervised and reinforcement machine learning provide a practical foundation for understanding AI's versatility and value in supply chain.

Among the key takeaways are the little-discussed reality that AI without data is meaningless, how to get the internal- and external-system data required to make quality AI decisions and the importance of field-proven technology for mission-critical operations like supply chains. Valuable buyer's tips throughout the guide offer insights and best practices for business leaders considering AI investments at any stage of the supply chain journey — from augmenting functional activities to full decision automation and digital transformation.



The Little-Known Secret of AI

The truth beyond all the marketing hype around AI today is that AI is completely dependent upon data. Simply put, AI without data is useless. This is an essential takeaway for business leaders evaluating AI for their supply chains — and the one so many vendors try to obscure with flashy marketing. Now the secret is out.

For modern supply chains, the data required for AI to truly enable agile and resilient decision-making comes from every partner at every tier. This encompasses much more than merely the data within the four walls of the enterprise, which is typically siloed by function. Also, the scope must include real-time operational data as well as extensive historical information. Regardless of whether a vendor purchased an AI company, rolled out an impressive rebranding campaign or has the most advanced algorithms, if the vendor lacks access to this level of data to power AI, the value will be limited.

There is another hidden reality that business leaders considering investments in supply chain AI should beware of — and vendors often gloss over or even conceal this as well. All AI is not created equal and not everything labeled as AI actually is AI. What determines the true value of AI is not just the underlying algorithms themselves but the combination of the technology and the data to drive it. To cut through the hype and ensure any technology investments will yield a reliable return, it is crucial that business leaders challenge vendors on not just the type of AI they are offering, but how the AI will be receiving the broad and deep data required to provide real value. Given the strategic importance of the investment, business leaders should also insist that potential AI vendors provide use cases demonstrating field-proven robustness at scale.

A hidden truth is that quality AI decisions rely on data — and lots of it — from every part of the supply chain.

Essential Ingredient for Agile, Resilient Decision-Making

AI has come to the forefront today because supply chains themselves have changed and continue to do so. For years, outsourced global manufacturing with complex, cost-optimized networks was standard practice in many industries. Goods and materials flowed predictably through multiple tiers of supply, manufacturing and distribution with just-in-time delivery and marginal tolerance for variances. This worked well while the world was relatively stable.

However, pandemic-related disruptions, the rise in economic nationalism and escalating trade tensions have changed all that. After years of relative stability, recent extreme oscillations in the supply chain now pose an existential threat to companies that lack the resiliency to adjust to new conditions and the agility to seize new, unforeseen opportunities. Risk and resiliency have become a top priority for executives and shareholders as they look to rebalance their supply chains to work in today's less predictable conditions. In particular, the crisis precipitated by the novel coronavirus has raised a new awareness of how the long-enjoyed operational stability is really an illusion. It is as if the water levels have suddenly lowered, exposing rocks in what were previously considered safe channels.

As a result, end-to-end visibility, resiliency and agility have become a business imperative, and the demand for technology to enable them is at an all-time high. The urgency many companies feel is exemplified by media reports of Tier-3 suppliers going out of business and jeopardizing a once stable and cost-optimized global supply chain. As a recent McKinsey & Company report on risk and resiliency highlights, "The number of tiers in a supply chain determines how much visibility is possible—and the degree to which downstream companies can spot problems and respond to them before events snowball."[1]

Visibility into and data from all upstream and downstream tiers are essential to enable a new type of business decision-making that has these characteristics:

- Boundaryless and informed by the complete end-to-end supply chain
- Current and reflective of what is happening right now
- Agile and equipped to react quickly to capture unforeseen sales opportunities
- Resilient and able to withstand disruptions stemming from any part of the supply chain

Decision-making like this requires that systems not only encompass and process more, but also do it faster and in a cross-functional way that maximizes corporate goals instead of optimizing siloed departmental metrics.

The value of AI depends on far more than the quality of the algorithms. The scope, quality and timeliness of the data also play a key role in determining results and reliability. AI without data is useless.

New Approaches for New Complexity

To support agile and resilient supply chains, systems must process far more data with far more complexity from far more sources — and do it faster than ever before with significantly less human involvement. However, the new complexity extends beyond the sheer volume and urgency of data and encompasses new levels of mathematic and decision-making complexity. This adds to the challenge companies face.

Data Complexity

Agile and resilient decisions require end-to-end data that is boundaryless, encompassing the entire value chain rather than just part of it. This means going beyond the data housed in the enterprise resource planning (ERP) system or other enterprise systems to include upstream and downstream ecosystem partners. The exponential increase in data volume requires automated techniques to normalize the data and make it decision-grade. Impossible to do manually, this is routine for AI.

Data must also be processed much faster than before for timely decision-making, so manual analyses are not feasible and batch transfers are no longer sufficient. Data must be delivered and processed in real time, and this requires AI. Consumer demand, economic conditions, regulations and other factors can change moment by moment, so mitigating risk and capturing unexpected opportunities means leaders must understand the current situation across the end-to-end supply chain. Varying inputs combined with real-time feedback on execution compress planning cycles to the point where they start to become continuous instead of iterative.

Math Complexity

While there are many techniques for automating repetitive, unpleasant tasks, agile and resilient supply chains require a branch of extremely complicated pattern recognition and stochastic mathematics — calculations involving inherent randomness — that go well beyond human capabilities. This quickly crosses over into the domain of advanced algorithms and machine learning.

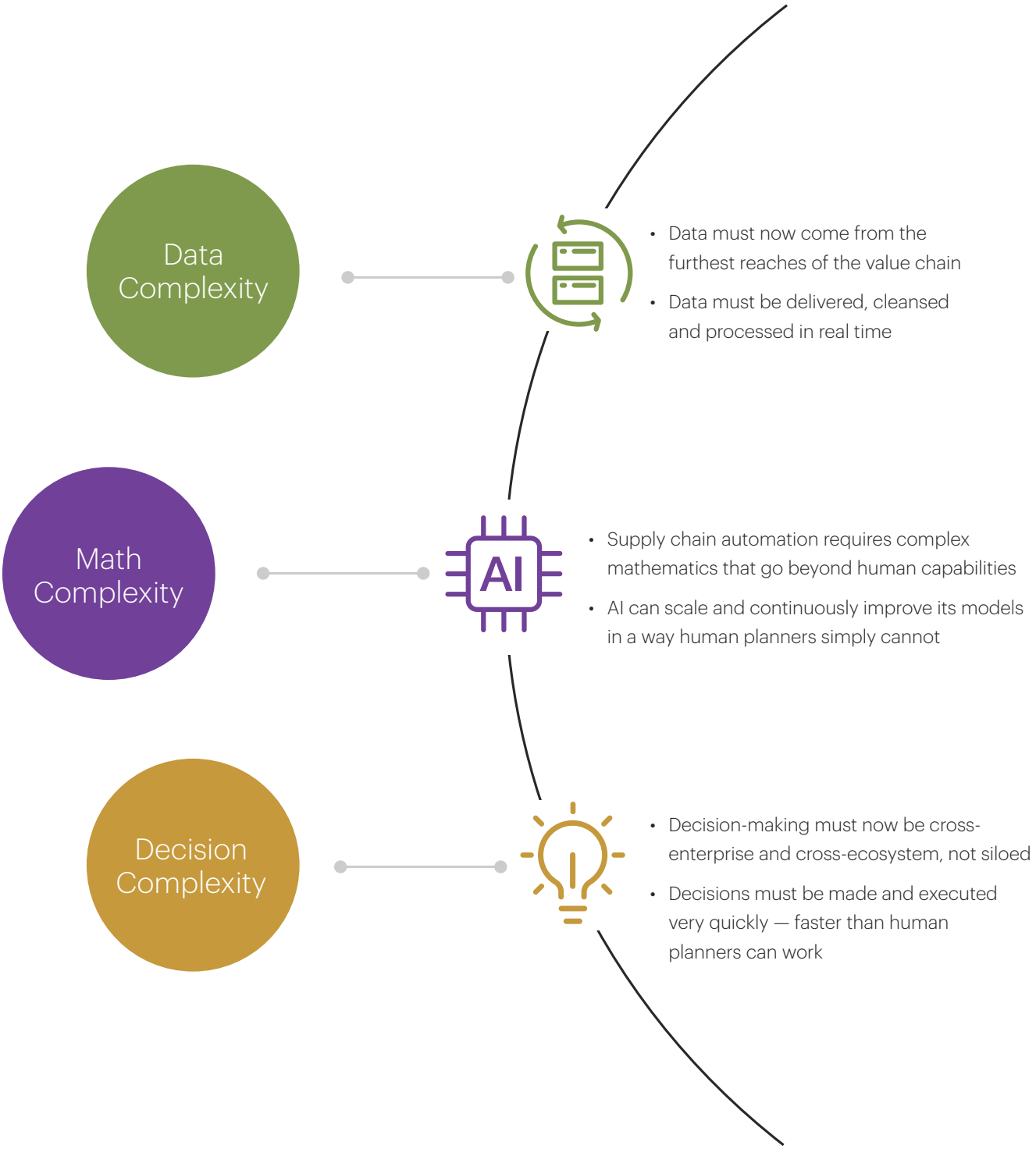
Stochastic models with uncertain system inputs — such as consumer demand, supply availability and logistics performance — have inherently uncertain outputs. Models like this benefit from running multiple iterations — as many as possible, in fact. Instead of running the models 10 times with different variants, AI can conduct thousands of iterations in the time it would take a traditional system to run one. AI also learns from each run, providing the kind of continuous improvement and scalability that traditional systems could never deliver but is critical for establishing an agile and resilient supply chain.

Decision Complexity

To achieve the best business outcome, decision-makers also need to consider cross-functional tradeoffs. This is something traditional approaches rarely addressed because decisions were mostly siloed and focused on improving functional metrics. In addition, decision-making must now be cross-enterprise and cross-ecosystem. This added complexity strains the competencies of typical organizations but presents no difficulty for the right AI.

In addition to being extremely complex, decisions must now be made and executed very quickly — sometimes in seconds. Near-instant timeframes mean that automation technology is the only feasible solution. Even the most competent planning team will not be able to manually deliver on this new requirement.

Every aspect of running a global business has grown exponentially more complex in recent years, and many key decisions must be made almost instantly. Making and executing data-driven decisions requires AI.

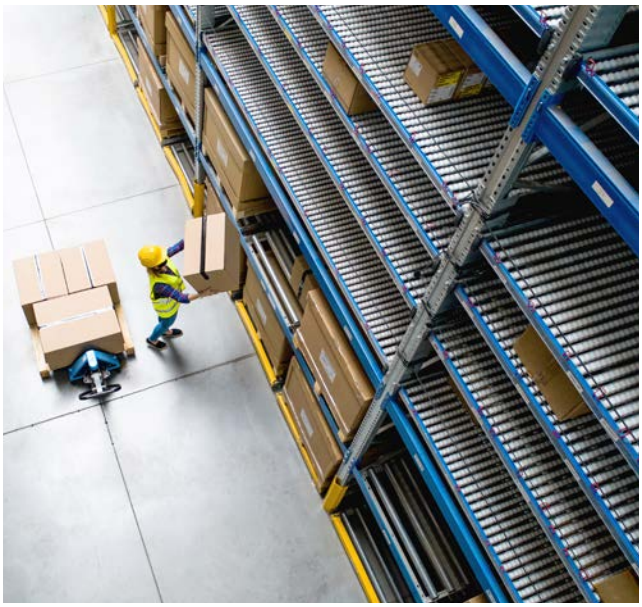


Embedded AI Does Not Require New Data Scientists

Most supply chain departments either lack extra data scientists or have none at all because they are allocated to the finance group. However, companies do not need to hire additional data scientists for core supply chain applications when using embedded AI that is part of their supply chain management software.

This is commonly misunderstood because generic AI tools — that is, those that are not purpose-built and not embedded — do require data scientists. Data scientists use these tools to sift through data lakes in search of nuggets of insight. For example, generic AI from Google and IBM was "trained" by data scientists to do things like beat the world champion at Go and win at Jeopardy, and also tasked with identifying cancer cells. While beneficial for certain tasks, generic AI is not the best type of AI for running the core operations of advanced supply chains.

Enhanced by years of historical data, embedded AI works on dynamic data streams in real time instead of pulling from static data lakes. No data scientists are required because AI for supply chain use-cases is already baked into the algorithms. Specialized for a specific supply chain function, this AI is high-performance, robust and efficient. While it cannot cure cancer, supply chain AI can cleanse data or forecast demand with tireless precision — without the need for new data scientists.



BUYER'S TIP

Embedded AI is required for a digital twin. AI embedded within the network platform is key to analyzing operational data in real time and enabling decision automation. Creating a digital twin of the physical supply chain requires extremely efficient and low-latency normalization, cleansing, enriching and contextualization of data at a scale that is impossible without embedded AI.

Deconstructing "AI" in Supply Chain

Used loosely in the industry, the term AI can mean different things to different people. Now that it is a common buzzword, many vendors have begun referring to their existing analytics as types of AI when they are not. This mislabeling, whether intentional or not, can make it very difficult for business leaders to know which questions to ask, much less to make the right investments.

In marketing literature, AI is often a blanket term encompassing a mix of three core process automation and analytical techniques that are important for advanced supply chains. Each is valuable for the business problem it was designed to solve, but only one of the three categories is truly AI. The following clarifies the differences between them.

Automation: Process-Driven
This technique makes manually intensive and error-prone tasks automatic. Some examples include spreadsheet exchange and reconciliation between multiple parties, exception-management alerts in supply planning for projected inventory shortages across multiple tiers of suppliers, and the four-way matching of orders, shipments, receipts and invoices in the procure-to-pay process.

Operations Research: Math-Driven

In operations research, algorithms are set before any data comes in. These algorithms process data, create results and remain fixed regardless of how much data is processed. Operations research methods include heuristics for fast, near-optimal decisions and optimization techniques for truly optimal, yet slower, results. This includes both deterministic and stochastic analysis methods, depending on whether the inputs are known or uncertain. For example, the task of allocating supply for new demand uses deterministic heuristics, enabling companies to commit with confidence within seconds. In contrast, setting inventory targets at plants and warehouses employs stochastic optimization to determine minimum levels to ensure service and maximum levels to avoid waste.

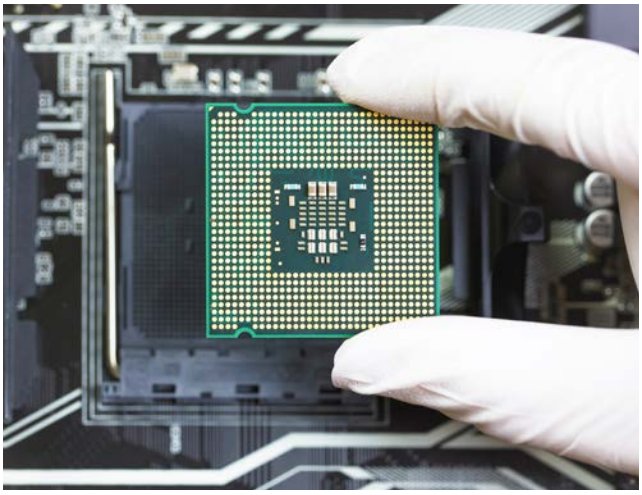
Artificial Intelligence: Data-Driven

Compared to the algorithms in simple automation and operations research, AI algorithms are fundamentally different in that they learn from data. The more data AI receives, the better it gets. AI uses real-time and historical data from all tiers of the end-to-end supply chain to understand patterns, identify similar clusters and test actions. Some practical examples follow:

- The cleansing, normalizing and enriching of data from ecosystem partners to create decision-grade data within the digital twin
- The use of point-of-sale (POS) or sentiment data to create more accurate demand forecasts based on current realities
- Similar-item clustering to improve safety stock settings for new items
- The use of real-time unstructured data from vessel records and historical route lead-times to improve the accuracy of predictive estimated times of arrival (ETAs)

While AI is the most modern of the three categories, all of them are required for agility, resiliency and the evolution to algorithmic supply chain management. It is not that one is better than another, but rather that they solve different business challenges. It is important for today's global supply chains to have them all to ensure that the right tool is available for each job.

Just because vendors claim to offer AI doesn't mean they can actually deliver it. Not everything that is called AI actually is, and not all true AI is created equal.



BUYER'S TIP

Understanding the three categories of what is commonly called "AI" is an important step toward cutting through the hype to discern fact from fiction. By becoming familiar with these different capabilities, business leaders can challenge the claims that vendors of generic AI make and better understand the actual AI technique and the data required to drive it.

Use Cases for Supply Chain AI

There is one more distinction that must be made to truly cut through the AI hype. True AI includes three types of machine learning: supervised, unsupervised and reinforcement. Each of these methods has extraordinary strengths in certain scenarios, and using them in combination when needed can provide maximum impact.

Supervised Learning

With supervised machine learning, the algorithm uses inputs and outputs to establish correlations with or without human guidance. One rudimentary example is training an algorithm to identify pictures of trucks by showing it thousands or millions of images of trucks — of all different sizes, angles and colors — and telling the AI what is in the images so that it can recognize pictures of trucks in the future on its own.

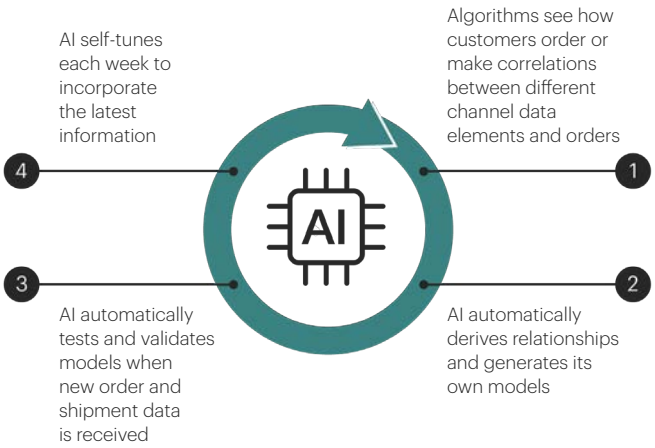
Use Case 1: Using Real-Time Demand Signals to Improve Forecasting Performance

How does AI combined with real-time data improve forecast accuracy? In e2open®'s Demand Sensing application, AI with supervised learning algorithms analyzes real-time demand signals to identify patterns and accurately forecast daily sales for up to 13 weeks into the future. Algorithms receive information from internal and external data sources such as orders and recent shipments from ERP; POS, store inventory and warehouse withdrawals from downstream channel partners; causal signals like weather or economic indexes; and unstructured data from social media. The algorithms create unique models for each item stored at each stocking location for every day over the next 91 days — each with unique weight factors for every demand signal. As shown in Figure 1, the complexity of self-tuning and the need for precision are significant.

For a company with 12,000 item-locations and seven demand signals, this means more than a million forecasts encompassing billions of influence factor combinations — every day of the year. Due to the sheer volume, this must be a fully automated process with daily forecasts published directly to resource planning systems for execution without human review. The algorithms are self-learning, continually tuning each item-location-day combination to always provide the most accurate forecast. By using AI and real-time data, e2open Demand Sensing can cut forecast error by roughly 40%.

Each machine learning technique that makes up AI — supervised, unsupervised and reinforcement learning — is powerful in certain business scenarios. Using them all is transformative.

Self-Tuning Supervised Machine Learning



Systematic Use of Multiple Demand Signals

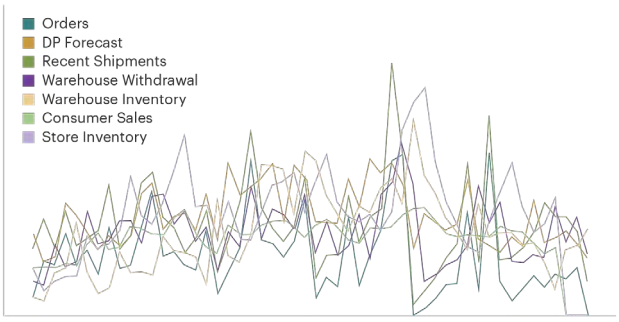


Figure 1: Supervised AI and real-time data create demand forecasts that reflect current market realities.

Use Case 2: Automated Cleansing of Data to Make it Decision-Grade

How is AI used to ensure the quality of ecosystem partner data? The quality of business decisions is limited by the quality of the underlying data. Normalizing and cleansing data can be challenging for information technology (IT) departments managing dozens of internal systems. The challenge grows exponentially for outside-in processes that rely on data from hundreds or thousands of external partner systems. In addition to the sheer scale of multi-enterprise master data management, these systems are outside IT's governance and therefore much of the data is inherently noisy.

AI with supervised learning helps automate data normalization by matching company names reported in different formats, such as normalizing IBM, I.B.M. or International Business Machines. AI also cleanses the data with multi-attribute matching to validate company name-location combinations (see Figure 2). As part of a fully automated process, data is enriched with missing information through multi-attribute validation, such as filling in zip codes based on city and state locations. The use of supervised AI significantly increases the rate of auto-classified matches, cutting manual effort by roughly 98%.

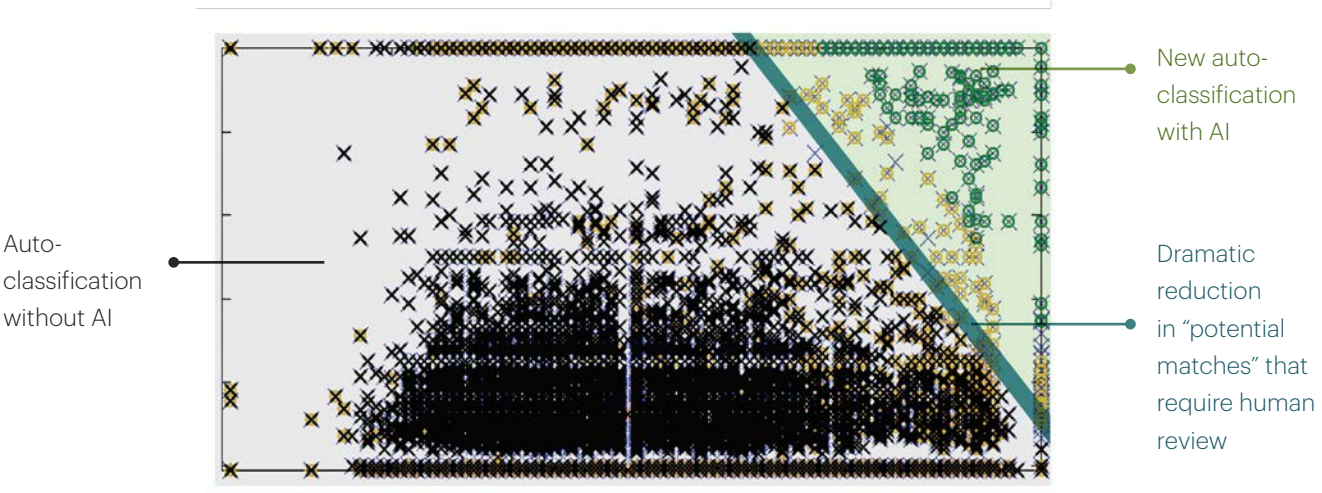


Figure 2: Supervised learning with multi-attribute matching increases data cleansing rate from 70% to 95%.

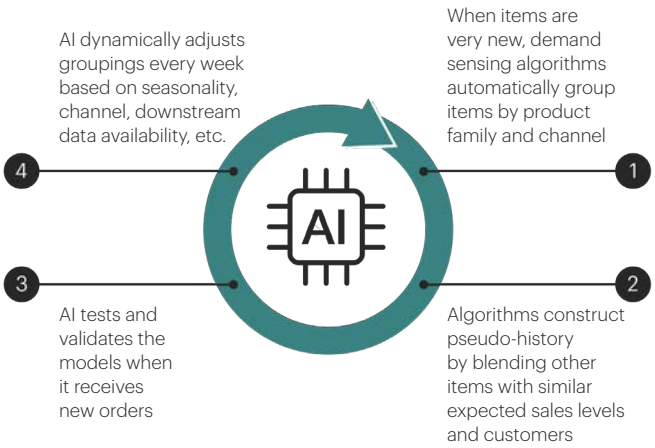
Unsupervised Learning

With unsupervised machine learning, AI uses inputs to establish correlations without outputs or human guidance, which is essentially an output. In short, when using unsupervised techniques, AI learns without the benefit of training. To return to the example of identifying trucks in pictures, the algorithm analyzes images of different kinds of trucks but receives no instruction on how to classify them. AI learns to cluster the various types into vans, box trucks, flatbeds, tankers and so on by identifying common attributes such as a cab size, trailer shape and number of wheels. One advantage of unsupervised learning is that the algorithm can detect patterns in similar items that may not be intuitively obvious to humans but have strong correlations.

Use Case 3: Intelligent Item Clustering for Managing Promotions

How does supply chain AI enable successful product launches without excessive or insufficient inventory? During the launch of a new product, there is no historical data available upon which to predict demand. Using unsupervised machine learning, e2open planning and inventory optimization algorithms cluster similar items to create a pseudohistory to better forecast the new product (see Figure 3). AI then tests, validates and refines the model as new orders come in, dynamically adjusting the groupings to include a different mix of products as the item ages or as demand is influenced by factors like seasonality.

Intelligent Item Clustering for New Product Introduction



Item Clusters in a Multi-Dimensional Hyperspace

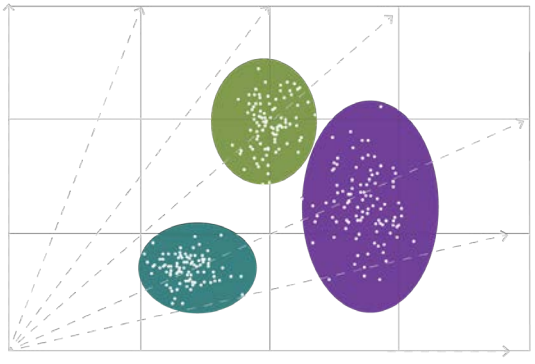
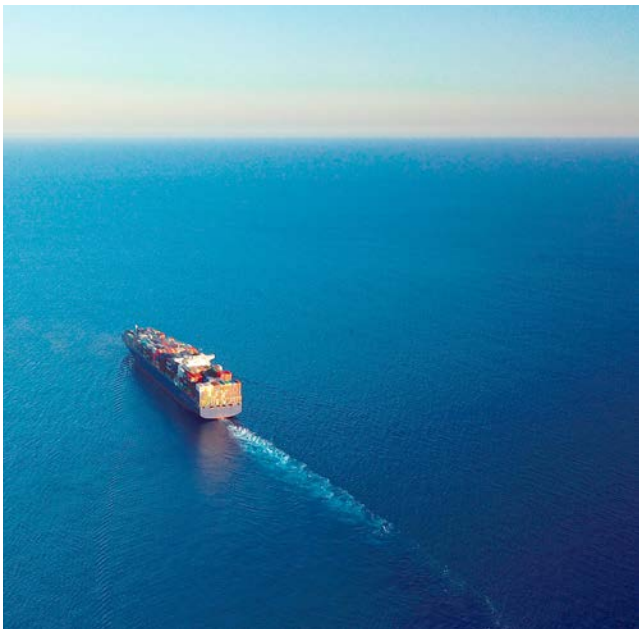


Figure 3: Unsupervised AI uses intelligent clustering to optimize inventory for new product launches.

Figure 4: Unsupervised AI clusters similar ports and route combinations to better predict ETAs.

Use Case 4: Route Clustering for Enhanced ETAs of Ocean Transportation

How is AI used to better predict estimated times of arrival (ETAs) at destination ports? The quality of an ETA on an ocean lane is a function of the quality and quantity of the real-time and historical data available to analyze. Data quantity is especially important for trade lanes that are travelled less frequently. E2open logistics applications use unsupervised machine learning to intelligently cluster similar origination and destination port combinations to increase the amount of data available for analysis. This is one of the many methods used to create the best quality ETA for any given lane.



Reinforcement Learning

The third AI method is reinforcement learning. Unlike supervised and unsupervised learning, reinforcement learning does not require historical data for training. Instead, the algorithm repeatedly simulates how future events could unfold under specific circumstances. Exploring all possible scenarios, AI identifies the optimal course of action for any given one. No matter which scenario actually occurs, AI has simulated them all already and knows the optimal course of action to take.
In the supply chain, reinforcement learning is used to significantly improve decision-making when scenarios are complex and there are multiple, interdependent, time-sensitive variables.

As with the other learning methods, reinforcement learning has many real-world use-cases, such as aligning dynamic forecasts with supplier orders, logistics and trade compliance variables when each of these has quantities and timelines that impact the others.

Use Case 5: Automating Cross-Functional Decision-Making

How is AI used to automate complex cross-functional decisions? Digital transformation includes breaking down functional silos that otherwise perpetuate suboptimal business decisions. When a disruptive event occurs — such as a delay in crucial component availability or a large new order — potential resolutions often involve a cross-functional response that spans multiple applications. Automating these complex decision trees is an essential step for algorithmic planning and execution, but determining the best path for an optimal outcome is challenging without AI.

To accomplish this, e2open is augmenting decision-tree automation with reinforcement machine learning to repeatedly simulate thousands of possible actions and measure the outcome of each combination, establishing the best course of action for each scenario. When unexpected events arise, the algorithm guides users (decision augmentation) or fully automates a response (decision automation).

BUYER'S TIP

AI should apply to all operations, not just one or two functional workflows in supply chain or channel management. Business leaders are best served by seeking a vendor that meets their immediate needs, has the AI breadth and depth to provide assistance across all parts of the business and creates a pathway for making cross-functional decisions. In short, the vendor of choice will be able to grow with the organization as its needs mature.

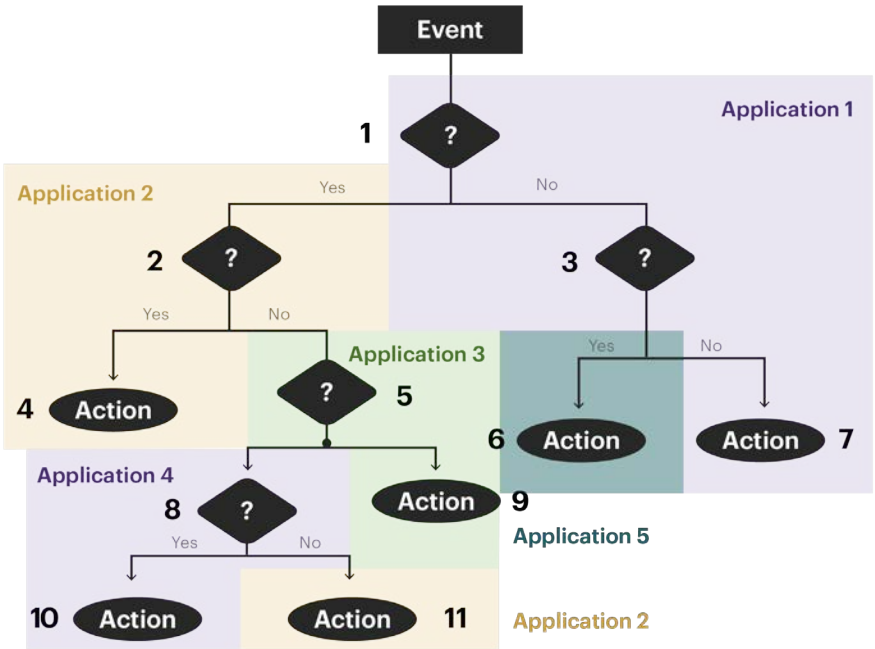


Figure 5: Reinforcement AI enables decision automation for complex, cross-functional process workflows.

Data's Critical Role in AI Decision Quality

Now that the different categories of AI have been defined, the next important thing is to understand the need for data and where it comes from because the quality of every AI decision comes down to the scale, scope and quality of the available data.

Data Dependency

It is crucial to remember that AI is fueled by data. Without data, AI is useless, regardless of how sophisticated it is.

A helpful analogy is to consider a car company that has developed a new class of engine with zero emissions and begins to promote it as the ultimate green vehicle. While that may sound great, if the car requires a new type of fuel that is not available at the nearby filling station, then it is virtually useless from a practical perspective. This is not a hypothetical example. Hydrogen fuel-cell cars have been around for decades but lack the refueling infrastructure required for widespread use. Aside from a handful of fueling stations in California, there is no way to fill a hydrogen-powered car, rendering all their promised benefits essentially moot. The same is true with AI. It needs data.

Data Scope

AI does not just require data — it is data-hungry. The more the company provides, the better the AI gets. For agile and resilient supply chains, this means not only data from the ERP and internal systems but also from all partners at all tiers and ecosystems. It is like shining a light on a problem. If it is a narrow beam on one part of the supply chain, the best that leaders can do is make business decisions on this segment of the supply chain. If they want to make decisions that reflect what is happening across the entire supply chain, they need to get data from all tiers and all ecosystems.

As another car analogy, autonomous cars have many sensors, not just one. This is because, to overcome the inherent risk of riding in an autonomous car, passengers need the vehicle to get the whole picture. Video cameras can be fooled by glare or splattered with mud, so video alone is insufficient. Radar provides the relative speed of objects. Ultrasonic senses nearby objects. Lidar provides three-dimensional images of people and signs. Mesh provides vehicle-to-vehicle communication. It takes all of these sensors and more to gather enough data to make autonomous cars safe. Just as no one would dream of placing their family in an "autonomous" vehicle with only a front facing dash camera, leaders should not dream of entrusting their business to a technology that cannot see or understand the furthest reaches of the supply chain.

BUYER'S TIP

Remember that data is critical. AI without data is useless, so decision makers must have a clear plan on how the supply chain will get the data when considering any investment.

Data Quality

In addition to volume, the quality of data also impacts the final value of AI results. As analyst firm IDC points out, "Supply chain planning and fulfillment performance is only as good as the data that informs decisions. In a world of AI-driven automation, bad data will simply mean faster bad decisions."[2]

This absolute need for quality applies to data from internal systems that are largely controlled by the IT department as well as data from multiple tiers of ecosystem partners that are outside of enterprise control. Ecosystem data is an essential input, but ensuring its quality is especially challenging because of this inherent lack of centralized governance. This is where a multi-enterprise supply chain business network with an integrated data model plays a critical role in cleansing, normalizing and enriching data for all parties, making it decision-grade.

To provide maximum value, AI requires access to data from the whole supply chain – otherwise it is running partially blind.

Value of Robust and Field-Proven AI

Since it is responsible for mission-critical planning and execution decisions that drive businesses, supply chain AI should be robust and field-proven, with years of production experience. A vendor that simply makes an AI acquisition or one that rebrands the company to emphasize artificial intelligence in its marketing cannot necessarily offer AI that is ready for prime time. Returning to the car analogy, most buyers would not entrust their loved ones to an autonomous car that was just commercialized, accompanied by a flashy marketing campaign. Instead, they would insist on an automaker that has millions of cars on the road and has built a safe track record over the span of years.

Due to the gravity of the AI buying decision and the consequences if the technology should fail, most buyers rightly insist on sustained, reliable, world-class performance in real-world situations spanning years or even decades. The same is true for enterprise technology investments. The stakes are enormous and the consequences can be extraordinarily high if the technology underperforms or fails.

Supply chains are mission-critical, so the AI that powers them must have a long track record of reliability at scale. Proven AI provides significant competitive advantage. Unproven or small-scale technology can be a liability, not an asset.

BUYER'S TIP

Nothing beats experience. Decision makers should ask vendors for proof points on AI deployment scope, scale and time in production. The following are some sample questions:

- How many clients does the vendor have and are they comparable when it comes to size and business needs?
- Is the deployment in one division, one region or the entire company?
- How many years has the deployment been in production for each client?

Role of a Multi-Enterprise Business Network

To get all the data to power their new AI, companies must go beyond their four walls and connect with everyone in their upstream and downstream ecosystem, including all tiers of suppliers, distribution, logistics and global trade partners. This requires a multi-enterprise supply chain business network. Gartner and IDC have both analyzed the market and evaluated vendors in the Gartner Magic Quadrant for Multienterprise Supply Chain Business Networks[3] and IDC MarketScape: Worldwide Multi-Enterprise Supply Chain Commerce Network 2018 Vendor Assessment[4], respectively.

Most traditional supply chain management vendors failed to even qualify for consideration in the analysts' reports because their solutions were designed to be enterprise-centric. These vendors typically offer application programming interfaces (APIs) to connect to external sources of data in what is essentially a build-it-yourself strategy: the client builds individual connections to partners instead of reusing an existing network connection.

As a result, the API approach is cost- and time-prohibitive for any deployment of scale. Given the outsized cost and inefficiency, building hundreds or thousands of API connections is challenging enough. However, it is even more difficult to take the essential step of normalizing, contextualizing, cleansing and enriching partner data to make it decision-grade after the connection is established, and then provide contextualization to create a digital twin of the physical supply chain. This requires an integrated data model, which is the heart of a multi-enterprise supply chain business network but a foreign concept for enterprise-centric systems. As such, the concept of a network is beyond the scope of traditional enterprise-centric supply chain technology vendors.

Multi-enterprise supply chain business networks not only collect the data to feed AI and make better decisions, but they also put AI-enabled decisions into action. This includes the closed-loop communication of decisions back to all ecosystem partners to ensure execution, monitor performance to detect deviations from the plan and proactively take corrective actions. End-to-end supply chain orchestration requires the combination of a network, a full suite of software applications and proven AI — all harmonized on a single operating platform.

A multi-enterprise network is the only feasible way to get the end-to-end supply chain data required for AI to deliver more than marginal value.

Key Takeaways Before Making an AI Investment

The pressing need for agile and resilient decision-making has made AI essential for supply chain management. As a result, most executives are no longer asking whether to invest, but where to invest. Despite misleading market hype, the truth about AI in supply chain is very simple. To realize — and hope to maximize — the return on investment (ROI) from next-generation supply chain management technology, leaders should choose a vendor that can provide these four things:

- Data from every part of the extended supply chain and a multi-enterprise business network to get it from all tiers of ecosystem partners
- Robust, field-proven AI with use cases at scale
- AI that is embedded within a full suite of planning and execution applications instead of merely a data-lake overlay
- A single operating platform that brings together the network, decision-grade data and AI-enabled applications to meet current and future needs

Contact e2open to learn more about how supply chain AI can help you make better business decisions and create a more agile and resilient supply chain.

About e2open

At e2open, we're creating a more connected, intelligent supply chain. It starts with sensing and responding to real-time demand, supply and delivery constraints. Bringing together data from customers, distribution channels, suppliers, contract manufacturers and logistics partners, our collaborative and agile supply chain platform enables companies to use data in real time, with artificial intelligence and machine learning to drive smarter decisions. All this complex information is delivered in a single view that encompasses your demand, supply and logistics ecosystems. E2open is changing everything. Visit www.e2open.com.

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