

# Reinventing Sourcing and Procurement with Decision Intelligence

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## Executive Summary

Procurement organizations are becoming more technology-driven and dynamic as they adopt recent advancements in artificial intelligence (AI) and machine learning (ML). Yet the complexity and pace required to make better spending decisions faster cannot be tackled with traditional technology landscapes. It's no longer reasonable for users to interact with multiple systems to process purchase orders, negotiate contracts, analyze data, and attempt to find patterns and insights by themselves.

With Decision Intelligence platforms, procurement organizations can make more decisions with greater accuracy, and unlock new opportunities for risk reduction or cost savings while extending their value across the business. They can not only act with agility in a world of constant change, but also serve as the catalyst their business needs to drive innovation and become more intelligent, efficient, and sustainable as an enterprise.

# Navigating the Age of Complex Decision Making

Massive volumes of articles have been written about the future of procurement in the last few years. As technology rapidly displaces repeatable processes and tasks, procurement organizations are under considerable pressure to demonstrate their value to the entire business.

Procurement functions were traditionally focused on delivering cost savings and governing spend and process compliance. But that was during a time when procurement systems were designed to handle simple processes and were disconnected from business operations, processes, and data.

Today, procurement must move beyond a focus on savings delivery and compliance, and become a strategic business function. According to Kearney, procurement technology can help achieve this goal when redefined around an AI hub to cope with new challenges.<sup>1</sup>

Connecting procurement technology around an AI hub helps organizations resolve challenges by:

- Linking isolated systems of record and multiple procurement applications across the ecosystem and throughout the supply chain to support more efficient and effective purchasing decisions
- Connecting strategic sourcing to operational procurement quickly enough to take advantage of market opportunities and detect supply risks in a volatile environment
- Meeting the expectations of internal buyers who desire the same speed and ease that they find in buying goods and services from digital-native companies like Amazon in their day-to-day lives

Decision Intelligence platforms enable procurement organizations to orchestrate the end-to-end decision-making process, connecting to business operations and external data and insights (see Figure 1). Decisions can be digitized, augmented, and even automated, greatly increasing the organization’s overall agility and accuracy. This allows procurement professionals to focus on the human side of purchasing activities (for instance, supplier relationships and internal stakeholder management). Plus, their internal buyers can enjoy a seamless experience similar to the ones they have as consumers.



- Digitization, augmentation and automation of decision making
- Aera orchestrates procurement decision-making processes through automation & machine learning
- Connects strategic and operational activities; so that procurement can be self-driven
- Decisions around cost saving opportunities, resilience, sustainability, and so forth

## Decision Intelligence for Procurement



- Execution systems
- Traditional Sourcing (direct), E-Sourcing, Contract Lifecycle Management, Supplier Relationship Management, Spend Analytics, Marketplaces and Networks
- Procure-to-Pay, Catalog Management, Request & Order, Invoice-to-Pay, Accounts Payables, Cashflow Management

## Procurement Solutions



- Legacy transactional systems (ERP, WMS, CRM, etc.) remain as the central repository for financial data and the single source of truth for master data governance

## Data Governance and Backbone

Figure 1: Decision Intelligence in the Procurement Application Landscape

# What Is Decision Intelligence?

Decision Intelligence is the digitization, augmentation, and automation of decision making. A Decision Intelligence platform can sense, analyze, predict, and act at machine speed and precision – giving companies the ability to address a host of decision-making challenges at scale, while revealing new opportunities that were unattainable before.

Decision Intelligence was recognized as one of the Top Strategic Technology Trends for 2022 by Gartner® for the first time.

**“Decision Intelligence is a practical domain framing a wide range of decision-making techniques bringing multiple traditional and advanced disciplines together to design, model, align, execute, monitor and tune decision models and processes.”<sup>3</sup>**

As per Gartner, “by 2023, more than 33% of large organizations will have analysts practicing decision intelligence, including decision modeling”.<sup>4</sup> Market intelligence firm IDC also pointed out the importance of Decision Intelligence in the years to come, predicting businesses that do not implement it will face the same fate as competitors that were the last to move to online commerce in the early 2000s.<sup>5</sup>

Since the start of the COVID-19 pandemic, many procurement organizations have and continue to step up and enable their companies to stay afloat, mitigate risks, and drive financial sustainability.<sup>6</sup> This commitment will continue to pay off, especially as energy and other commodity prices remain volatile, inflation rates reach peaks not seen since the 1970s, and supply disruptions persist. To achieve the necessary agility to respond to these external factors and fulfill internal business needs, procurement professionals must embrace Decision Intelligence.

## How Decision Intelligence Helps Address CPO Priorities

Top consulting firms, such as Deloitte and the Hackett Group, have identified the top priorities of chief procurement officers (CPOs). At Aera Technology, we have classified these agenda items into three main categories:<sup>7, 8</sup>

- **Internal priorities** that help the business succeed in the current environment
- **External priorities** focus on factors that need to be controlled to achieve business objectives
- **Digital transformation priorities** that enable the function to deliver on internal and external priorities

### Internal Priorities

- Drive operational efficiencies
- Reduce spend
- Deliver value beyond savings
- Become a strategic advisor to the business

### External Priorities

- Reduce supply risk
- Enable corporate sustainability
- Attract and retain talent

### Digital Transformation Priorities

- Modernize procurement application landscape to improve analytical, modeling, and reporting capabilities
- Improve procurement agility
- Connect with the supplier ecosystem

Figure 2: Top CPO Priorities Adapted from Research from the Hackett Group and Deloitte

# Redefine Internal Priorities to Deliver Value Beyond Savings

## Driving Operational Efficiencies

For many years, companies have tried tirelessly to find efficiencies in complex procurement processes, particularly source-to-contract and procure-to-pay processes.

Procurement outsourcing was first introduced to push operational, repetitive, and tactical tasks over to third-party, specialized providers to reduce transactional costs. More recently, the advent of robotic process automation (RPA) and business process management (BPM) software automated repetitive tasks, such as approvals, based on a set of predefined business rules.

Without question, efficiency gains have been achieved. However, in most cases, the implementation of these technologies fell short of business expectations. Procurement professionals still spend excessive time on non-value-added activities, such as data gathering and analysis. These activities take time away from more strategic areas where a machine cannot replace human interaction.<sup>9</sup> Building trust and good relationships with suppliers and internal stakeholders is at the heart of the procurement function, but it requires focus and time.

Decision Intelligence can break this cycle by going beyond simple automation of tasks and approvals based on rules or the execution of purchasing workflows. And, more importantly, it augments procurement outcomes with capabilities – for example:

- **Analysis and insight automation:** Gone are the days of copying business intelligence reports and pasting them into a spreadsheet to understand procurement data. Decision Intelligence platforms ingest data in real time and transform it into the critical insights required to make data-driven decisions.
- **Connected procurement processes and workflows with the rest of the business:** The insights provided by Decision Intelligence are not just isolated dashboards. The analysis is linked to a specific action in the process that could be triggered by a user or a process in another area, including logistics, supply chain planning, and order management.
- **Machine learning algorithms that capture how decisions are made:** Decision Intelligence platforms log every decision made by users. This knowledge base is the foundation for machine-learning techniques that identify patterns to enrich insights and analysis or automate decision execution. In return, procurement professionals can focus on exceptions and strategic decisions.

## Reducing Spend

In the last decade, procurement organizations have implemented strategic sourcing to manage spend more effectively to identify and deliver more savings. However, they have also struggled with certain aspects of strategic sourcing, such as:

- Viewing the total spend in a category
- Defining baselines and should-cost analysis
- Gathering relevant market intelligence
- Keeping category strategies relevant when market conditions change

The concept of Decision Intelligence introduces a new paradigm in how strategic sourcing is conducted. It transforms how traditional challenges are tackled with an event-based process of recommendations

that brings together internal data and external market insights. In many ways, this experience is similar to having 24/7 access to a procurement analyst who identifies spend opportunities and shares the best time to go to market for a given contract.

One use case for Decision Intelligence is using market information to optimize sourcing strategies. Most organizations have yet to systematically leverage data in their source-to-contract (S2C) platforms. However, with Decision Intelligence, they can gain the total value of information available in their procurement systems, including ERP, e-sourcing portal, invoicing system, and contract management systems. They can correlate this intelligence with external market data – for example, commodity pricing, labor rates, inflation rates, and logistics costs. In addition, commercial information submitted by suppliers during sourcing events can be used to create benchmarks, baselines, and cost forecasts.

Consider the three fundamental decisions that procurement professionals make during the sourcing process:

- **Decision 1:** Where should the material be sourced from?
- **Decision 2:** When should I go to market to procure the material?
- **Decision 3:** What is the cost baseline for the material?

In Figure 3, a Decision Intelligence platform can crawl data from three different e-sourcing platforms in each country and provide a comprehensive analysis so users can make the most optimal decisions.

Based on the commercial information available, Decision Intelligence platforms could recommend:

- **Decision 1:** The best location to source from is Country A, as it offers the most competitive pricing overall.
- **Decision 2:** A contract should be secured immediately, since prices for the material are going up across all countries compared to data from RFIs in 2020 and RFPs in 2021.
- **Decision 3:** The average price for the material in country A is \$4.76/kg, which is 31% lower than average price in country B and 48% lower than the average price in country C.



Figure 3: Illustrative Example of a Decision Intelligence Flow

# Becoming a Strategic Advisor to the Business

In many large organizations, procurement leaders have been striving for a seat in the C-suite boardroom. However, most executives still view procurement as a function that reports to the finance, operations, or supply chain leader.

According to Accenture CPO Kai Nowosel, procurement organizations should not be considered a back-office function because they are expected to deliver impact and value.<sup>10</sup> And while “impact and value” may hold different meanings for different businesses, the concept goes beyond cost savings achieved through negotiation.<sup>11</sup>

Decision Intelligence can help procurement organizations to deliver impact and value beyond cost savings across three dimensions:

## 1. Balance risk, cost, and quality

Procurement can support the organization’s resilience by introducing more variables into purchasing and supply chain decisions. For example, optimal decisions require visibility of operational data and information, such as customer orders, safety stock, on-time-in-full (OTIF), inventory levels, and total cost of ownership.

Augmenting procurement decisions with Decision Intelligence can help strike the right balance between risk, cost, and quality, taking the supplier selection process to the next level and beyond unit price savings. By accessing all relevant internal and external information for each supplier, Decision Intelligence platforms provide recommendations for selecting the best potential supplier for a given sourcing event.

## 2. Identify innovations and opportunities

To become a strategic and dynamic function that serves as an innovation catalyst, procurement organizations must have the capacity to:

- Propose alternative materials and products to avoid supply risks
- Recommend innovative technologies and solutions to resolve engineering problems
- Identify alternative suppliers
- Pinpoint synergies between spend categories
- Offer new options to optimize the total cost of ownership, not just unit price

Procurement systems cannot work in isolation anymore. Instead, they must be connected to each other and across the supply chain by a single Decision Intelligence platform.

## 3. Ensure continuous compliance

Procurement compliance often uses complex approval processes and delegations of authority. But Decision Intelligence can help companies step up their compliance efforts with capabilities including:

- **Process compliance:** Guide business buyers with recommendations of products and services contracted with suppliers to prevent maverick spending and reduce off-contract purchases. Decision Intelligence can also list suppliers under contract to assess comparable products or services.



- **Data compliance:** Ensure integrity and accuracy of commercial and pricing information. For instance, a self-healing master data skill could run in the background 24/7 to ensure standard prices reflect real-market costs, or to align payment terms in the purchase orders with contract terms or vendor payment agreements.
- **Regulatory compliance:** Get alerts when regulatory changes occur with Decision Intelligence platforms that ingest external data and information sources, such as news feeds and market reports.

**Combining a supply chain finance platform with a Decision Intelligence platform helps identify regulatory issues resulting from misalignment between existing contract payment terms and the maximum payment terms allowed by the latest regulations and directives.**

## Free Up Information to Tackle Top External Priorities

### Reducing Supply Risk

One of the challenges that procurement organizations have faced over the last few years is creating a 360-degree view of the supplier. This information is scattered across multiple systems and requires integration with external data sources, such as financial reports, third-party counterparty due-diligence reports, and news feeds.

Aera Decision Cloud™ integrates internal data sources (for example, ERP systems, e-sourcing solutions, supplier performance reports, and invoice data) with external data sources (through APIs and flat files) to create a real-time, well-rounded view of the supplier. Based on a predefined scorecard, supply risk levels can be calculated and linked to the supplier’s contractual situation.

This approach allows procurement organizations to confidently cover critical questions, such as:

- Based on the latest OTIF data and trends, should a supplier undergo a performance improvement program?
- Based on the latest level of rejections, should a factory audit be conducted to ensure quality processes are compliant with contractual terms?
- Based on the latest news about an environmental issue in a country, should the business transition to an alternative supplier?

With Decision Intelligence, supply risks can be identified much earlier, enabling an earlier implementation of mitigation strategies.

### What Are Skills™?

Aera Skills™ give Aera Decision Cloud™ the ability to understand, recommend, act, and learn for a set of business problems. They aggregate and harmonize data in real time, and apply artificial intelligence and decision logic to make recommendations.

Skills also orchestrate changes in your existing systems to execute decisions autonomously, while continuously learning to improve future recommendations.

Built on a comprehensive, composable, trusted, and scalable cloud platform, Skills can be quickly configured for unique decision-making requirements. As the business environment changes, Skills can be adapted so that your business is ready for the new status quo.

## Enabling Corporate Sustainability

Many global companies are adopting sustainability as a key pillar for procurement.<sup>12,13</sup>

Decision Intelligence can bring this dimension into all procurement decisions, especially these strategic and operational concerns:

- **Striking the right balance among all sustainability factors:** At a strategic level, a business buyer can consider selecting a particular supplier based on the right balance between environmental, social, and economic factors by using a sustainability scorecard. Decision Intelligence can recommend which suppliers do not meet the necessary sustainability criteria to be included in the bidding process.
- **Supporting strategic suppliers financially:** Operationally, Decision Intelligence platforms can recommend a negotiation with a key supplier to reduce payment terms if a cash flow issue is detected or the supplier shows signs of financial struggle.
- **Tracking CO2 emissions:** Decision Intelligence can also suggest the reallocation of work from one supplier to another to meet CO2 emissions targets. This recommendation can be based on scope-3 emissions reported by the supplier and information about delivery origins and destinations.

## Attracting and Retaining Talent

As mentioned earlier in this document, procurement professionals still work on many non-value-added tasks and activities driven by process complexity. As a result, procurement organizations will need to do more with less time to focus on critical decision making and the human aspects of their activities and processes.

To attract new talent, companies must allow procurement roles to avoid non-value-added tasks and focus more on the strategic thinking, creativity, and empathy essential to the procurement function's success. Decision Intelligence automates lower-value tasks and allows procurement teams to focus on work that helps build trust with suppliers and internal stakeholders.

Another area in which Decision Intelligence can improve is the retention of procurement knowledge and expertise to ensure continuity and high performance. Procurement functions are also vulnerable to shifts in the labor market, particularly those that result in staff-retention challenges and a loss of experienced workers. Decision Intelligence platforms can capture how decisions are executed, enabling the organization to maintain an understanding and keep tracing outcomes if a buyer leaves the company.

## Modernize Procurement by Prioritizing Digital Transformation

### Reimagining the Procurement Applications Landscape

As we discussed earlier in this paper, traditional approaches to procurement decision making are no longer sufficient to remain competitive. Procurement systems must be connected with the rest of the enterprise, with a full view of data and impact on business outcomes, to cope with the pace of decision making, and to provide the granularity and accuracy required to succeed in today's market environment.

A Decision Intelligence platform, like Aera Decision Cloud™, will soon be a critical part of the enterprise technology stack. This hub of intelligence integrates source-to-contract and procure-to-pay suites with planning systems, track and trace software, and other auxiliary applications covering functions such as risk management.

Consider a simple example of an organization that uses two different procurement solutions for indirect and direct procurement each one optimized for the spend categories in scope.

Decision Intelligence platforms can bridge and augment the two solutions to give the procurement function complete visibility and control over its decision making and spending in a single place. As a result, the ability to make sourcing decisions based on total cost of ownership can become a reality as we see how direct and indirect categories are interconnected with each other.

### Improving Procurement Agility

By creating a network of interconnected skills, Decision Intelligence platforms accelerate and increase the effectiveness of procurement decision making. Each skill is a different procurement decision, leveraging different inputs and outputs and augmenting and complementing the recommendations generated by other skills in the network (see Figure 5).

A skill, such as automated costing, can deliver an expected cost for every product and service based on available commercial data from e-sourcing platforms, ERP systems, and commodity pricing. The output of this skill can then be used by another one, like a digital category analyst, to generate alerts and recommendations as market conditions require. This approach makes processes, including category management, more dynamic and event-based.

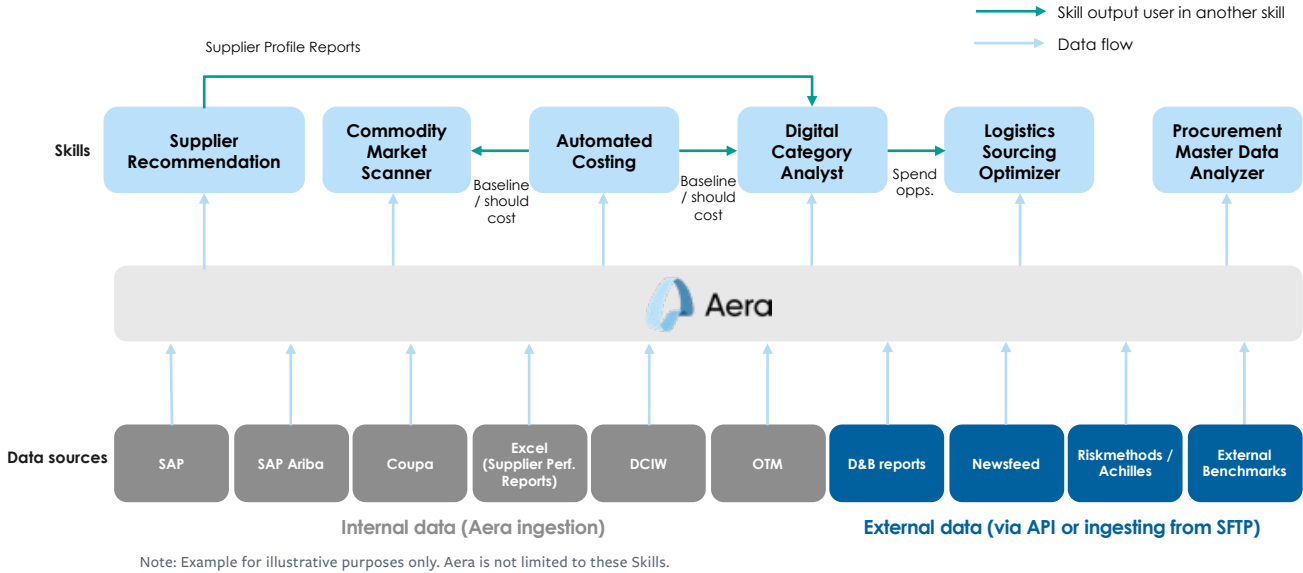


Figure 5: Sample Skills architecture for Aera Decision Cloud in procurement

### Connecting the Supplier Ecosystem

Supply chain and procurement decisions are dependent not only on the customer-facing organization, but also on the large ecosystem of suppliers and partners that play a role in delivering goods and services to the customer. Every step must be synchronized to meet customer expectations, from raw materials providers to third-party logistics companies.

Decision Intelligence platforms also play a key role in connecting the supplier ecosystem, for example:

- **Optimization of scope-3 emissions:** Third-party logistics data on vehicle emissions, routes, and utilization can help generate recommendations for optimizing scope-3 emissions in the supply chain. This analysis can be used to source and select the best carrier operating the route with the lowest scope-3 emissions.
- **Optimization of manufacturing capacity:** Supplier data on raw materials supplies and forecasts can optimize internal manufacturing operations. A Decision Intelligence platform can, in turn, generate recommendations for changing purchase order dates so goods can arrive on time, or alternative suppliers can be quickly found and onboarded to mitigate downtime risks due to issues with raw material availability.

## Decision Intelligence as a Force for Change

Decision Intelligence platforms will likely become the cornerstone of the procurement technology landscape within the next few years. Procurement organizations that implement Decision Intelligence are well-positioned to increase their value to the business, becoming a strategic advisor and gaining a seat at the C-suite table. However, those that don't may struggle to cope with the agility and pace that procurement decisions require in a world of constant change and disruption.

At Aera Technology, we believe Decision Intelligence can transform the procurement function today. Its value can be further extended by a platform, reaching multiple dimensions such as cost savings, cost avoidance, and risk mitigation and reduction. Best of all, procurement roles become much more rewarding.

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# About the Company

Aera Technology is the Decision Intelligence company that transforms how enterprises make and execute decisions. Our innovative platform, Aera Decision Cloud™, integrates with existing systems and data sources to enable business decision making in real time, at scale. Trusted by many of the world's best-known companies and brands, Aera is helping enterprises operate sustainably, intelligently, and efficiently. For more information, visit [aeratechnology.com](http://aeratechnology.com).

## Understand.

Continuously crawls enterprise systems  
Refines, indexes, and augments data in real time  
Enables end-to-end visibility into operations

## Recommend.

Leverages real-time data and AI  
Predicts business risks and opportunities  
Engages users with data-driven recommendations

## Act.

Proactively alerts users  
Executes decisions autonomously by writing back to source systems

## Learn.

Records decisions made and their outcomes  
Captures institutional and domain knowledge  
Enables continuous learning and improvement

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