

How Decision Intelligence Unlocks the Future of the Enterprise

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ADAPTING TO THE TIDE OF CHANGE

The transformative power of digital technology is redefining the enterprise. It is a tide of change that will overwhelm those who cannot adapt fast enough. For established businesses, it's not just a matter of catching up to where the leaders are today. Survival depends on leaping ahead to where they'll be tomorrow. But there are many obstacles to finding the right path.

Global brands today are grappling with the convergence of four separate trends in this fast-changing world:

- **Buyers want more personalized, responsive choices.** While the global consistency and trust associated with established brands remain powerful, we are entering the era of the microbrand. An agile 'long tail' serves the last mile with diverse offerings that adapt more rapidly to changing tastes and preferences in each segment of the market. Global players must find a way to operate at scale, with agility, in this new world of personalized microbrands.
- **Supply chains have been built up in an era of globalization, free trade, and lean manufacturing.** Disruptions over the past decade, from the 2010 Eyjafjallajökull eruption to the COVID-19 pandemic and semiconductor shortages, have exposed the fragility of these systems. Companies are now confronted with the possibility of having to rethink foundational assumptions about how they plan, forecast, and operate their supply chains.
- **Data is the lifeblood of a modern business, providing the raw material to analyze behavior and respond accordingly.** But in established global organizations, this valuable resource is locked away in antiquated computer systems and business processes, which combine to make it impossible to access in a timely manner. The digital natives entering markets to challenge the incumbents don't have to wrestle with this legacy restraint.
- **While the speed and volume of data are growing fast, the organization's institutional knowledge is in decline.** Longstanding employees who used to know the business inside-out are retiring, replaced by a younger cadre who rarely stay in the same role for more than a few years at a time. A new mechanism is needed to retain and apply that organizational knowledge.

These trends aren't resolved simply by streamlining the existing systems in the hope that they will somehow deliver the right answers for this new world. Those systems were built to handle homogeneous products designed for decades-long lifecycles, not today's diverse and fast-changing offers. The organization still needs its systems of record, but they are not fast or flexible enough to sustain the real-time data analysis and responsiveness today's economy demands.

The processes of planning and execution must be rebuilt using modern digital technology to support a networked organization – one that operates in real time, responds proactively to changing conditions, and is able to adapt its structures within weeks.

DECISION INTELLIGENCE MAKES THE DIFFERENCE

In today's connected world, information never stands still. Every day brings new data, and business success is defined by an organization's ability to understand and instantly respond to those signals. This is a far cry from the pre-digital era when your only choice was to plan and forecast your needs weeks or months in advance – and then wait just as long to review your performance. Traditional ERP systems, with their fixed structures and separate data silos, are rooted in that past. They cannot keep pace with the new benchmark of real-time business operations set by digital upstarts like Amazon, Uber, and many more.

To remain competitive, a modern enterprise must create a new layer of Decision Intelligence – connected digital intelligence that supports responsive decision making and helps to orchestrate business operations in real time.

Decision Intelligence frees information from the old data and process silos of traditional enterprise applications. It enables more responsive operations focused on delivering business outcomes at the moment – locating

underused assets, anticipating interruptions to supply or spikes in demand, coordinating necessary actions, and learning as it goes. There are three distinct elements to making this happen:

- Access real-time data for analysis. A modern enterprise requires an always-on view of key information. Several steps are needed to enable this:
 - Establish access to information across all the organization's data sources – not easy when it is typically locked away in ERP silos that conform to historic demarcations of function, geography, or business division.
 - Add access to external data sources, whether from a partner ecosystem or supply chain, or third-party data such as weather feeds, regulatory information, Google Trends, commodity prices, and so on.
 - Build a framework to collate the data and apply real-time, intelligent data analytics to rapidly yield new insights, predictions, and recommendations.
- Present the results in a business context. The data is only useful if it can be acted upon. Decision Intelligence applies domain expertise to understand the business context. It engages in dialog with relevant users to refine decisions and then orchestrates enterprise processes to drive execution. This empowers and augments your organization with the agility to keep up with today's fast-moving digital business environment.
- Enhance performance with continuous learning. Decision Intelligence goes beyond the rote learning of lesser technologies such as robotic process automation. The system continuously learns from the decisions your people make – and is always looking to suggest new ways to optimize performance. This creates a symbiotic relationship in which human and machine intelligence work together to advance the results they can achieve.

All of these must be done at Internet speed and scale to ensure that the intelligence is up-to-date. It's no use extracting the data into a separate infrastructure, where it will always be out-of-date by the time it is ready for analysis. The cognitive data must stay in tune with events as they unfold across the business.

Decision Intelligence is like an enterprise-wide nervous system, responding instantly to new stimuli, sometimes as a reflex, at other times calling on conscious decision-making, and constantly adjusting its behavior as conditions change.

A BLUEPRINT FOR DECISION INTELLIGENCE

At Aera, we help our customers fast-forward to the intelligent, networked enterprise of the future. We achieve this promise with the Aera Decision Cloud™, a platform that digitizes, augments, and automates decision making. Machine learning algorithms take care of routine analysis, alerts, and actions, releasing the power of intelligent data to augment your business operations and your people's effectiveness.

Getting started on this fast track to the future is challenging for most established enterprises. Aera has created a platform to accelerate and optimize implementation of this powerful new layer of digital abstraction.



Understand.

Continuously crawls enterprise systems and provides end-to-end visibility



Recommend.

Suggests ways to improve financial and operational performance



Predict.

Leverages real-time data and AI to accurately predict business outcomes, risks, and opportunities



Act.

Proactively engages relevant users and drives the execution of their decisions

The Aera Decision Cloud is very different than a traditional enterprise analytics platform. Aera has drawn on the best of cloud-scale technology and engineering to build a platform that's ready for the digital future. The foundation is akin to a search engine for business data, tuned by domain specialists to the specifics of your operations, and then enriched with AI to not only anticipate the results you'll want but also put your selections into effect. Here is how Aera delivers the three elements of next-generation Decision Intelligence.

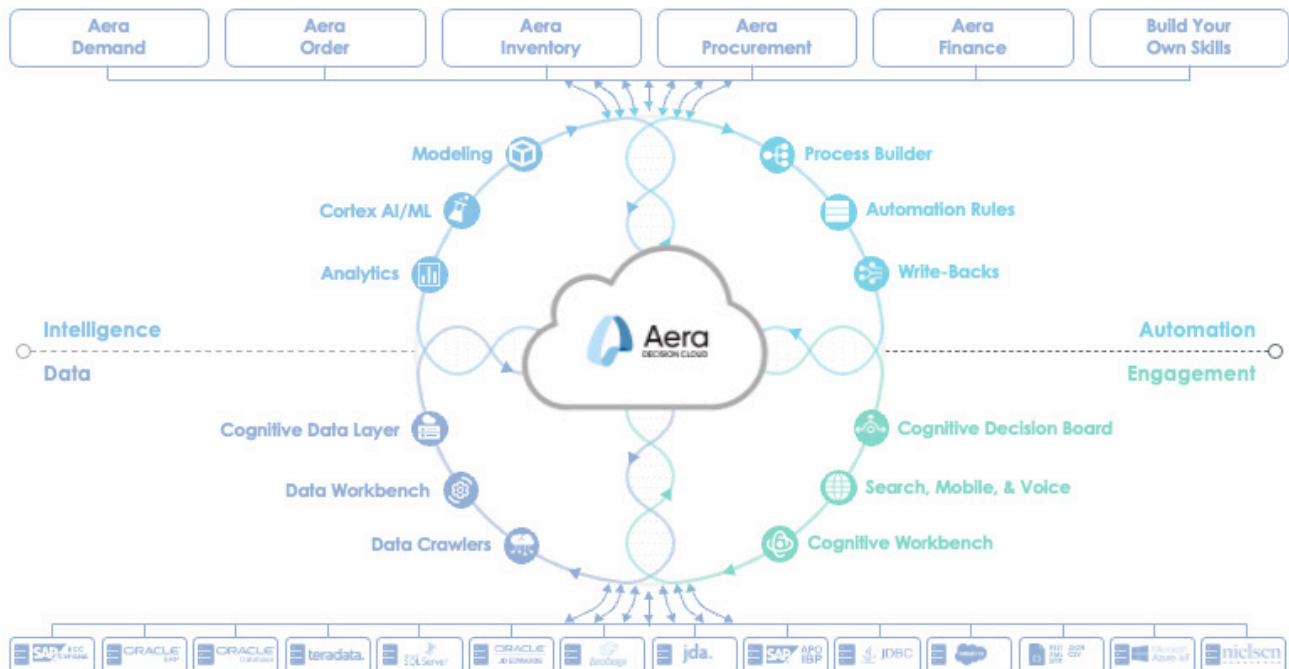
MAP THE DATA

The foundation step is to collate and aggregate information across all the organization's data sources for analysis. Aera stays connected to maintain a constantly refreshed image of the data, which it automatically transforms and restructures to provide real-time, contextualized visibility into business operations.

- Aera gathers data in much the same way as a search engine. Its proprietary crawlers are optimized to extract business-critical information on an ongoing basis, with minimal impact on performance. They continuously discover and extract data stored in SAP, Oracle, and other enterprise systems, such as CRM and planning, both on-premise and cloud.
- A cloud-scale data processing engine running on high-performance Amazon Web Services or Microsoft Azure infrastructure automatically transforms this transactional data, in combination with unstructured data from external sources, to normalize it for analysis.
- Applying business domain expertise coupled with machine learning, the Aera Decision Cloud enriches the raw data with functional business models and a unique algorithmic library of key metrics, trends, and metadata. It takes snapshots of the dataset to enable time series analysis, as well as continuously recording a working memory of decisions and actions.
- Knowledge graphs add interpretive structure to identify vendors, products, and customers, mapping relationships between them to use in predictive analysis, search, and other functions.

DELIVER THE ANALYSIS IN CONTEXT

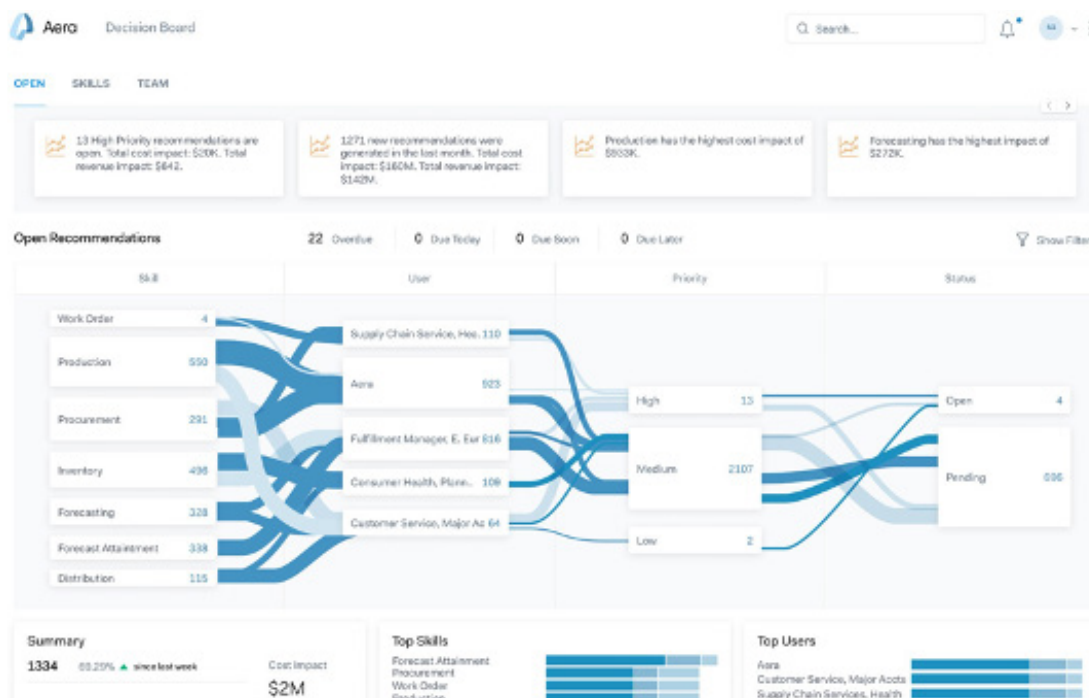
Aera brings Decision Intelligence to life in the form of preconfigured, customizable packages called “skills”. These are end-to-end solutions that combine the underlying data and embedded AI to present analysis, forecasts, and recommendations as part of a decision-making workflow. Skills present information and “what-if” options in the context of business operations for decision, and then connect back to the source systems to complete the required actions. This is far more than a traditional business reporting tool or dashboard. Aera supports and augments decision-making by enterprise managers, suggesting ways to improve financial and operational performance, predicting business opportunities, risks, and outcomes, and then prompting users for decisions and automatically completing actions.



Aera doesn't require any special know-how from the business user beyond their existing domain expertise. It understands and responds using natural language interaction, on mobile, web, or voice. It displays its analysis and recommendations through interactive visual analytics that allow the user to drill all the way down to the underlying data. Developers can modify or build their own custom skills using a self-service, drag-and-drop interface.

CONTINUOUS LEARNING

Aera Skills include the ability to learn from experience. The cognitive architecture constantly reviews past decisions and actions, looking for repeatable patterns that it can recommend for automation. For example, it may notice that users always accept its recommendations under a certain value threshold, and so suggest routinely automating that action. Aera provides detailed reporting and evaluation of decision making over time through its Cognitive Decision Board.



By learning how humans make decisions across the organization and feeding this back into the system, Aera extends its decision-making capabilities, freeing users from repetitive tasks to spend more time on more complex issues. This is where the true potential of Decision Intelligence is realized, continuously learning from an organization's people while augmenting their potential.

UNLOCK THE FUTURE

A growing number of top-tier global businesses are working with Aera's cloud-scale, AI-enabled platform to stay in control of today's faster, increasingly complex planning cycles. They are applying Decision Intelligence to resolve key pain points in demand planning, supply chain forecasting, and management. Here are two real-world examples:

AUGMENTING THE WORK OF SUPPLY CHAIN PLANNERS

One CPG company uses Aera to automate routine supply chain planning across a range of products to predict spikes and bottlenecks in demand and mitigate supply shortages. Decision Intelligence reduces often tedious and repetitive work and augments the work of the company's supply chain planners. Machine learning algorithms analyze the data brought together from ERP systems and other data stores, including external sources such as weather reports, consumer trends, and retail networks. The system automatically suggests appropriate actions such as increasing inventory, starting a new production run, or identifying a replacement product. It provides daily alerts for time-critical decisions, based on real-time demand data.

SHARING AUTOMATED LEAD-TIME FORECASTS WITH CUSTOMERS

One pharma company is using the Aera Decision Cloud to improve forecasting accuracy in its demand chain and automate the provision of available-to-promise data to its customers. The AI-powered system examines data from dozens of different sources to estimate delivery dates for a given order. It has proven significantly more accurate at forecasting than human demand planners had previously achieved while freeing them to take on more valuable work. The company has now made the forecasts available on its customer portal and is rolling out the capability across multiple countries.

BUILD ON QUICK WINS, THEN EXPAND HORIZONS

A customer's transformation journey typically begins by bringing end-to-end visibility to former data silos and building a cognitive data model. An initial deployment can start showing metrics within days of beginning to crawl data and have production-ready code within two to three months. Over time, this iteratively evolves to add predictive, prescriptive, and finally autonomous capabilities. The phased approach enables quick wins from the outset as an organization begins its journey to unlock the future enterprise.

Every business today faces the challenge of how to access meaningful information about its operations in a timely manner. Whether it's a demand planner getting advance warning of a storm that could affect deliveries, a distribution manager seeing a suddenly popular new product about to go out of stock, or a VP of sales spotting a sudden downtrend in sales in the final month of what was expected to be a blow-out quarter, people need to see the right information when they can still have time to take action and achieve a better result.

In the past, enhancements were planned and implemented at scale over months and years, but in today's world, there's no time to wait. Whatever problem you're trying to resolve, it shouldn't take more than two to three months to make an impact. Layering a framework for Decision Intelligence across the existing infrastructure makes it possible to move one project at a time, resolving each issue in turn as you build out a new digital framework capable of real-time analysis and responsive adaptation.

Business leaders see how rapidly technology is advancing all around them, and they know how their organizations are held back by the structures and systems of the past. Powered by huge advances in machine learning and artificial intelligence, the digital future is on its way. Decision Intelligence is the key to unlocking that future.

About the Company

Aera Technology is the Decision Intelligence company that makes business agility happen. We deliver a cloud platform that integrates with your existing systems to make and execute business decisions in real time. In the era of digital acceleration, Aera helps enterprises around the world transform how they respond to the ever-changing environment. For more information, visit aeratechnology.com.

Understand.

Continuously crawls enterprise systems and provides end-to-end visibility

Secure, low impact, and programmable Crawlers

Internet-scale data management and processing

Data indexed for search

Recommend.

Suggests ways to improve financial and operational performance

Opportunity and risk analytics

Analysis at any granularity

Predict.

Leverages real-time data and AI to accurately predict business outcomes, risks, and opportunities

Embedded AI and machine learning

Act.

Proactively engages relevant users and drives the execution of their decisions

Autonomously takes action

Pre-defined process library

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