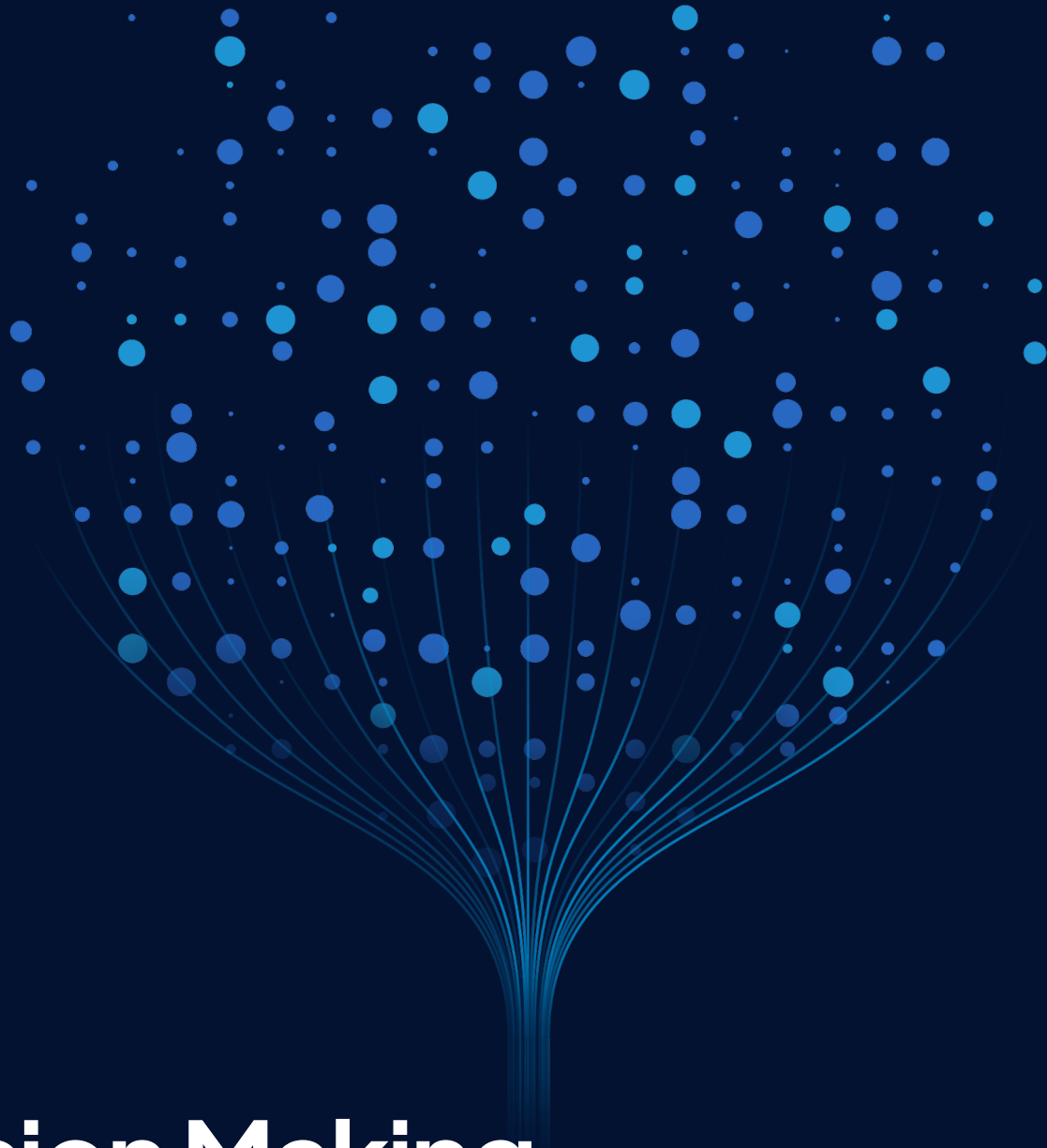




Decision Making at the Speed of AI

What separates organizations that shape
the future from those that react to it.

Introduction

AI is rapidly creating immense productivity gains and expanding the art of the possible. Doing more with less, streamlining processes, and advancing entirely new ways of working are now constant realities in an AI-driven world. But what about the business decisions that determine which new ways of working are worth pursuing in the first place within a rapidly changing business landscape?

This is not simply a matter of analyzing internal data for incremental improvement. We live in a world of rapid, unpredictable change: global events, competitive shifts, legislation, technology advancements, security risks, political upheaval, and energy disruption are all in constant motion.

Shape the Future vs. React Without Warning

Imagine business decisions informed in real time through external insights that

flow systematically into workflows with precision, reliability, and actionability, calibrated against existing business rules, protocols, and operating systems. Imagine shaping the future of your business through adaptive realignment of strategy, defensive actions, and proactive opportunity realization as the “new normal” for operating. This is what Decision Intelligence makes possible.

Seeing Around Corners and Predicting What’s Next

Business decisions made in minutes and hours rather than weeks and months are achievable now. Agile leaders who begin integrating business insights into daily workflows with precision and speed gain more than a competitive advantage. Organizations operating on the national and global stage can see and create entirely new growth opportunities while anticipating risks and responding faster. Business agility and resilience depend on adapting to this new reality of executive decision making at speed.

What Is Decision Intelligence and Why Does It Matter Now?

Traditional business intelligence focuses on internal historical data, intent tools track known buyer journeys, and news monitors surface information without connecting it to specific decisions.

Decision Intelligence answers a different question: what is happening in the world right now that should change what your organization does next? It converts pre-intent triggers and pre-risk indicators that emerge before buyer awareness or operational impact into prioritized, executable decisions embedded directly in executive workflows.

Pre-intent signals capture external world shifts before a buyer even recognizes a need. Pre-risk signals identify disruptions before operational impact is felt. These are not rebranded early-stage signals; they represent an earlier and more

Existing tools address adjacent problems. News monitoring surfaces information but does not connect it to decisions. Business intelligence platforms analyze internal historical data but do not process the external world. Intent data tracks buyer behavior inside a known funnel but cannot see what is happening before that funnel forms. Risk intelligence tools flag events after they are already public. Each of these categories does one thing well. None of them closes the loop from external signal to prioritized, executable decision embedded in a workflow. That is the gap Decision Intelligence fills and why it is a distinct category, not a recombination of existing ones.

Key Insight

Decision intelligence turns external signals into coordinated action before disruption becomes visible internally.

consequential layer of intelligence than existing tools provide. The distinction matters: intent data tells you what buyers are doing inside a known funnel. Pre-intent data tells you what's happening in the world before the funnel even forms.

Common Challenges to Enabling Decision Making at the Speed of AI

There is a range of challenges that must be overcome to make business decisions at the speed of AI a reality.

The following must all be addressed to harness AI's power with precision and confidence:

Unstructured data: Raw, messy data must be made usable by AI models; without it, every downstream capability breaks down.

Static information: Intelligence that does not reflect rapidly evolving conditions leads to decisions based on outdated reality.

Volume and noise: The sheer number of data sources creates a signal-to-noise problem that overwhelms manual processes and unfocused AI.

Fragmented workflows: Disconnected, do-it-yourself workflows cannot scale and create inconsistency in how intelligence reaches decision makers.

Strategic misalignment: Intelligence that does not connect to existing strategies and plans produces insight without direction.

Historical memory loss: Each decision made without connected context over time is made in isolation, unable to draw on what came before.

Lack of executability: Intelligence that cannot be directly tied to a decision or action has no business value, regardless of its accuracy.

Rapidly evolving events: Situations change faster than traditional workflows can track, leaving decision makers perpetually behind.

This paper explores the underlying requirements that overcome these challenges, and how Polaris I/O is a system of insight to empower executive decisions.

A journey to real-time decision making



01 ■ Making Global Event Signals Actionable is Essential

Every day, thousands of events occur around the world. The capabilities that are essential to converting this swirling tornado of daily events into actionable intelligence include: capturing source data, labeling and categorizing events, extracting associated objects, identifying key stakeholders, attaching contact data, and summarizing everything into actionable insight reports.



Pre-intent & pre-risk signals reflect early triggers of risks or growth opportunities that must be precise, contextually accurate, and actionable before others even know to look.

Proactive alerts coded by importance and fed into executive workflows are also essential, as is a historical memory of event data, including all source material, that is quickly accessible. These “pre-intent” and “pre-risk” signals are highly valuable when all the dots are connected to make them executable.

Consider a supply chain disruption beginning to develop in a key supplier region, not yet in the headlines, but visible in patterns across regulatory

filings, logistics reports, and local news. A pre-risk signal surfaces three weeks before pricing impact hits, giving leaders time to secure alternative suppliers and renegotiate terms. Or imagine an enterprise account about to enter a buying cycle, detectable in executive movements, strategic announcements, and industry shifts before intent data registers anything. Decision Intelligence is built to surface and prioritize these decisions in the early stages of an event.

The Problem: Unstructured Data Is Challenging to AI

The path from raw data to AI insight runs through data engineering: According to Andreessen Horowitz, turning messy, unstructured data into information that AI models can actually work with is a major “Big Idea” for 2026. Data translation is complex, requiring data engineering methods to clean source data, label objects, and build vectors for every source document for AI to search.

Poor data engineering is a root cause of AI hallucinations: Hallucinations are a well-documented risk when AI runs on non-engineered data. This is a relentless complaint with generalist tools: AI produces conclusions that are invented vs. grounded in verified sources. The risk of hallucination is meaningfully reduced when source data is curated, cleaned, and prepared through rigorous data engineering.

Key Insight

A document's value increases when its structure is encoded for AI, transforming static content into a reliable source for alerts, decisions, and workflow execution.

Unstructured data contains significant noise: AI models must also be engineered to include or exclude specific characteristics when processing unstructured data, which can contain many permutations of names and a wide range of associated objects. Models must therefore be carefully crafted to isolate the desired signals and exclude the noise.

The Solution: Codified and Engineered Unstructured Source Data Drives Accuracy & Precision

Curated data, data engineering to prepare it for AI models, and tailored models that exclude noise, combined with labeling, cataloging, and alert systems, deliver pre-intent and pre-risk signals that connect all the dots: producing intelligence that is precise, contextually accurate, and directly executable.

The Scenario

Data engineering creates a “DNA” wrapper. Every curated document carries a unique DNA that must be coded to support AI results that are precise and accurate. This enables AI models to summarize, match solutions and strategies, draft communications, generate alerts, catalog event types, and enumerate the objects contained within each document. Consider the wealth of information contained in an M&A news announcement that appears to be routine news but reveals a strategic need of great importance, one that signals the company's growth priorities and investment plans.

Takeaway

Organizations that fail to act on market signals early face greater financial exposure, slower response times, and competitive disadvantage compared with those that identify and act on opportunities sooner.

02 ■ Monitoring Evolving Event Situations Enables Adaptive Decision Making

Events are not one-time occurrences. They reflect evolving situations that unfold over time as conditions on the ground change. As conditions shift, so do the context, stakeholders, and frequency of change. Polaris I/O attaches event updates to every insight report like the next scene in a film, automatically updating, realigning, and re-notifying everyone involved.

The connection of event “scenes” over time, tied to the original event signal, is an essential characteristic of effective decision making, and of adapting those decisions in real time based on up-to-date signal intel.



Pre-intent & pre-risk signals reflect early triggers of risks or growth opportunities that must be precise, contextually accurate, and actionable before others even know to look.

The Problem: Unstructured Event Data Lacks Persistent Memory

Connected event history begins with how source documents are labeled and cataloged: Connecting signals across an evolving situation requires the “DNA wrapper” that labels and catalogs objects within each source document. Models are then trained to suggest updates to a pre-intent or pre-risk signal insight based on shared information about a particular event or continuum of events tied to the same situation.

Decisions made on fragmented or stale data carry real business consequences:

Without a connected record of events, business decisions can miss the mark, as the information underlying a decision can quickly become outdated. This leads to embarrassing situations: being blindsided by a new, unknown development at a key customer, or taking the wrong action at a critical moment because the full picture never came together.

Fragmented data produces fragmented understanding and unreliable guidance:

Aggregating all source documents for a given event into a single insight report is essential for models to perform “adaptive alignment” of recommended solutions or risk actions based on the collective, whole-picture view. Disconnected signal data produces incomplete contextual understanding and unreliable recommendations about evolving situations.

Key Insight

**Without persistent memory, signals arrive as fragments.
With connected intelligence, they become an actionable story.**

A signal's earliest days are typically its most active and most consequential:

Furthermore, the severity or urgency of a situation may remain unknown without persistent memory. The first 90 days of a signal's lifespan often generate the highest frequency of detection updates, making this a critical window for action.

The Solution: Adaptive Alignment Built on Connected Event History

Adaptive alignment of executive decisions, based on changing conditions, requires connected intelligence grounded in complete and continuously updated event history. Without it, organizations risk making poor, ill-informed, or outdated decisions, often without realizing it.

The Scenario

Consider a key account navigating a leadership transition. Executive changes, strategic announcements, earnings commentary, and industry signals accumulate over weeks. Without persistent memory connecting these scenes into a coherent story, each new article or report is processed in isolation, and the full picture of what is happening and what to do never emerges. With connected intelligence, the complete story arc is visible, and the response is calibrated to the actual situation, not a fragment of it.

Takeaway

Organizations that cannot see the constantly evolving situations unfolding around them, and understand their historical context, frequency, and urgency, will be unable to make well-informed decisions.

03 ■ Without Persistent Memory You Can't Forecast What's Next

Foresight is the missing ingredient and the logical next step in understanding an evolving situation: knowing and continuously updating the likelihood that something will happen next is core to informed business decisions.



Forecasts built on persistent memory give you the confidence to act before others see what's coming. The change in prediction over time is often the most important signal of all.

The more information available about the characteristics of a situation and its past history, the better the predictions will be. What becomes increasingly valuable is not just the prediction itself, but the change in the prediction: its magnitude, frequency, and direction. Is urgency or severity increasing? These dynamics create a critical input to executive decisions in terms of prioritization and action. Leaders must understand a prediction's accuracy and its historical trajectory.

The Problem: The forecasting gap...connected historical event data is needed for forecasting

Forecasting requires a continuous stream of historical data. The persistent memory created by connecting event “scenes” together enables AI models to evaluate past event data to predict likely future events or outcomes. Without historical event data, there is little predictive power. With a continuous stream of event source documents linked to the same evolving situation and feeding into models over time, predictive precision becomes achievable.

Not all source data carries equal weight, and models must reflect that distinction:

A further challenge is the weighting of model inputs and visibility into what the model is evaluating. Not all source information carries equal weight, and there must be a way to inspect what the model is weighting and to adjust those weights as additional source data flows in.

Likelihood matters. So does the speed and direction of change: Tracking not only the predictive values created, but also its magnitude, velocity, and direction of change is important. Imagine a situation where the likelihood of an event has increased dramatically and quickly in recent days. This would elevate it as a priority focus for business leaders monitoring dozens, if not hundreds, of situations, and determining if, when, and what actions to take.

Key Insight

A changing signal matters less for where it is today than for how quickly it is moving—and in what direction.

The Solution: Forecasts Built on Accumulated Event History

Forecasts require models built on a persistent memory of precise event data derived from engineered and connected source information, including the ability to inspect model source data, weighting, and associated prediction changes over time. Dashboard visualizations of forecast trajectories are paramount to executive decision quality: are the predictions accurate, reliable, and based on precise event history that can be viewed, inspected, and evaluated as decisions are made?

The Scenario

Imagine tracking a geopolitical situation that affects a supplier region. Early on, the likelihood of disruption is moderate and stable. Over six weeks, the prediction shifts...slowly at first, then rapidly. That change in trajectory, not the absolute value of the forecast, is what signals a leader to act. Organizations monitoring only the current state of a situation see the prediction, but not the momentum. Organizations tracking the direction and velocity of change can act with lead time rather than react to outcomes.

Takeaway

Organizations that forecast the likelihood of future events are in a powerful position to outpace challenges, proactively realize growth opportunities, manage risks, and gain competitive advantage, provided the source data feeding into predictions is reliable, accurate, consistent, and connected.

04 ■ Managing Decisions at Scale Requires Alerts, Dashboards, and Analysts

Monitoring global events, their cumulative history, and the degree of change in the forecasts they inform must all be presented in a way leaders can readily act on. The right information, reaching the right people at the right time, must be built into alerts and dashboard views designed around how companies actually do business.



Decisions at speed create a new kind of organizational pressure. Prioritization, action plans, and closed-loop reporting let organizations absorb and sustain faster velocity.

Every company manages information and makes decisions differently, shaped by a strong heritage of corporate roles, cultural norms, and established ways of working. New decision-making norms must be built into workflows, alert notifications, and the dashboards executives rely on to make effective decisions with confidence.

The Problem: Information Overload

Too much information, poorly organized, is as paralyzing as too little: The sheer

volume of information, particularly when fragmented, creates overwhelming challenges for executives. Too many inputs freeze decision making in its tracks. It is therefore essential to design the flow of information carefully, ensuring the right people receive the right information at the right time.

Executives need information brought to them, not more systems to monitor:

Alert systems that deliver notifications in a digestible, role-appropriate format are a critical success factor. Proactive alerts delivered where and when needed are proven to be effective precisely because executives are too busy to monitor everything they need to on their own.

Dashboards must surface what matters most, tailored to the role reviewing them:

Equally important is access to dashboards that surface event criticality, historical context, and prioritized decisions, always current and ready for review. These dashboard views and drill-downs must be tailored to fit the roles, departments, and decision-making levels within an organization.

The human-in-the-loop function is not optional; it is what makes AI output

operationally useful: Finally, analysts acting as “air traffic controllers” ensure that insights and foresights are properly flagged and routed to the right people, providing an essential human-in-the-loop function to oversee what AI produces every day. These analysts learn not only to monitor but to interpret changes, and to understand what truly matters and who needs to know.

Key Insight

The value of monitoring is not seeing more events, but surfacing the few that require action and routing them into the right decision workflow.

The Solution: Proactive, Role-Aware Intelligence Delivery

Proactive, agentic AI-driven alert notifications and tailored dashboards, designed for and embedded in the workflows of a business, are essential to enabling effective decision making at the speed of AI. Alert-driven systems that notify executives when and where they need to know, combined with well-designed decision dashboards that enable fast scans with drill-downs on the most critical situations and allow analysts to optimize the system, complete the picture.

The Scenario

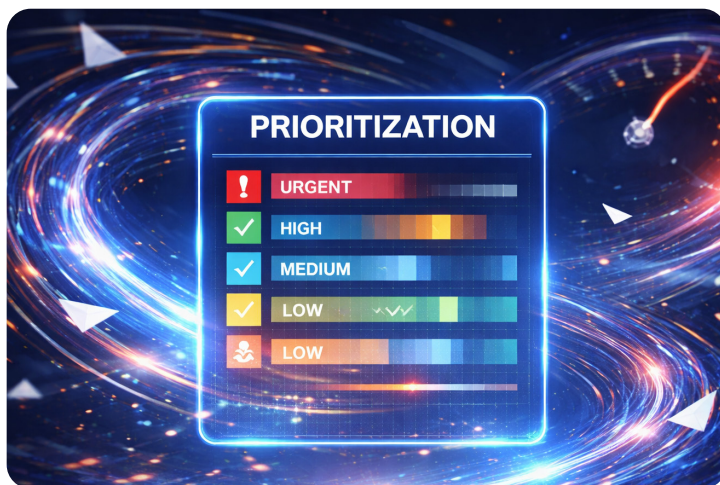
Businesses monitoring dozens of subsidiaries or suppliers cannot reactively respond to events across all situations or fast enough. Alert systems should be configured around specific risk thresholds, surface only what matters, route it to the right person, and trigger the right workflow. The analyst's role shifts from finding information to acting on it with precision. That is the difference between a monitoring system and a decision system.

Takeaway

Alert-driven systems that notify executives when and where they need to know, along with well-designed decision dashboards and human analysts acting as “air traffic controllers,” are essential to managing decision intelligence at scale.

05 ■ Increased Decision Velocity Requires Prioritization and a Closed Loop

AI enables decision velocity at a scale that fundamentally changes how a business operates. With precision data translating unstructured event signals into actionable insights, persistent memory, accurate predictions, proactive alert-driven notification systems, and dashboards all monitored by analysts, decisions can be made in minutes and hours rather than weeks and months.



Decisions at speed create a new kind of organizational pressure. Prioritization, action plans, and closed-loop reporting let organizations absorb and sustain faster velocity.

This is a profound shift for any organization to absorb. What do you do when you can make decisions fifty times faster than before, across a far greater expanse of global events? How many more risks can be prevented and opportunities realized? How do you realign people, processes, suppliers, and actions to fit this new reality?

The Problem: Increased Decision Velocity Changes the Pace of Business

AI accelerates decisions but speed without process creates its own risks: Harnessing AI's power creates a downstream challenge: the increased velocity of decision making and its cascading effects on the business. Just as the famous chocolate assembly-line scene in 'I Love Lucy' illustrated what happens when output outpaces the people, decisions at speed require that action plans account for their full downstream effects.

Speed requires prioritization to regulate the volume and focus of decisions:

Prioritization becomes an immediate requirement, given the importance of focusing on the highest-impact areas. What criteria determine which risks and opportunities deserve attention first? Criteria for viewing and prioritizing the most significant risks and opportunities, paired with playbooks that address all downstream activities, are essential.

Speed requires organizational alignment from decision through execution:

Organizations also need fast-response processes and personnel who understand priorities, know how those priorities are monitored, are informed about changes, and are aligned on how progress is tracked from decision to execution to results.

Performance feedback is not a post-mortem. It is an active input into the next decision: Performance updates and result reporting become another factor: feeding back into the decision-making process

Key Insight

Decision velocity creates advantage only when workflows, ownership, and execution models are built to keep pace.

to assess the effectiveness of outcomes, both in risk prevention and opportunity realization. This includes capturing the progress, disposition, and result data associated with informed decisions: how quickly results were achieved, what factors drove them, and at what speed. This is the foundation of an effective closed-loop system.

The Solution: Prioritization, Action Plans, and Closed-Loop Reporting

Prioritization of risks and opportunities, combined with comprehensive action plans and closed-loop reporting on results achieved, enables organizations to absorb faster decision velocity over time. The teams, processes, and playbooks that worked at yesterday's pace have to be rebuilt for today's velocity, and the closed loop is what ensures each cycle of decisions makes the organization smarter and faster.

The Scenario

Consider a global manufacturer that deploys an AI-enabled decision platform across its supplier risk function. In the first month, the system surfaces dozens of risk signals that would previously have taken weeks to identify. The organization can now respond in hours. But the bottleneck shifts: approval workflows, action plans, and teams built for a slower pace become the constraint. Speed reveals where the real constraints lie. Organizations that anticipate this shift and rebuild playbooks, realign roles, and install closed-loop reporting before they need it are the ones that turn decision velocity into competitive advantage.

Takeaway

Organizations that embrace faster decision-making velocity through relentless prioritization, comprehensive action planning, and result reporting create an organizational culture of innovation and speed that compounds over time.

06 ■ Maintaining a Decision System Requires a Modern Platform

Each capability described in this paper is essential on its own. The real power, however, comes from pulling all of them together into one coherent, continuously operating system. A comprehensive, scalable, and extensible data-and-AI-enabled service hub, built on current technology, is the architecture of choice today.



A full decision intelligence system, delivered as a service. Every capability connected. Every insight actionable. Every decision tracked.

As businesses adopt different AI tools, extend the scope of their decision systems, and introduce new workflows, processes, and personnel, the ability to upgrade the underlying data, AI models, outputs, and integrations becomes essential.

The Problem: Putting It All Together Is Complicated. Maintaining It Is Even Harder.

Competing at the speed of AI requires a modern, purpose-built platform, not a patchwork of tools: Decision making at the velocity of AI, where the new competitive advantage lies, requires a commitment to a modern, AI-enabled platform capable of delivering a consistent, reliable service. Upgradable capabilities, tailored data flows and AI models, configurable outputs, and integrated workflows are all foundational components of a modernized architecture.

Agentic AI designed around how people actually work is the difference between a tool and an operational advantage:

Because of the specialized nature of the capabilities required, including making real-time global event signals actionable and alert-driven, maintaining persistent memory of evolving situations, implementing continuously improving forecasts, deploying effective decision dashboards designed for speed, and enabling prioritization and closed-loop performance reporting, leveraging the latest in cloud computing, AI, and data engineering is both the safest and most efficient approach. Agentic AI-enabled workflows with tailored outputs, designed around how people actually work, are another critical success factor.

Key Insight

Risk rarely emerges within a single domain; it compounds across signals that disconnected systems cannot interpret together.

The Solution: A Full System, Delivered as a Service

A comprehensive data-and-AI-enabled service pulls together data sources, data engineering, AI models and refinement, persistent memory, alerts, dashboards, prioritization, and action plans as a continuous service, with constant adoption of the latest technology. Ensuring systems store history, enable continuous improvement, and remain adaptable, flexible, and scalable is entirely achievable with modern technology.

Leaders seeking to increase the quality and speed of executive decision making will invest in solving the data engineering challenge and ensuring that actionable insights are connected to end-to-end workflows that track results and drive continuous improvement.

The Scenario

Consider an energy company managing risk across a portfolio of upstream assets in multiple geopolitical regions. Regulatory signals, weather events, infrastructure developments, and commodity price movements all feed into the same set of operational decisions. The company has tools that monitor each of these domains, but they operate independently, maintained by different teams on different update cycles. When a regulatory change in one region begins compounding with a supply disruption in another, no single system sees the full picture. By the time the combined risk is understood, the response window has closed. A fully integrated platform, continuously maintained and built to connect every signal type into a unified view, is what turns that scenario from a recurring problem into a solved one.

Takeaway

Organizations that leverage a modernized platform, flexible, scalable, and extensible, will be positioned to adopt the latest data sources and AI capabilities, integrate new workflows, and pursue new applications and processes.

Early adopters build advantages that compound over time: richer signal history, greater model precision, and stronger decision workflows.

The future of executive decision-making is now

AI is redefining what is possible in every function of the enterprise. The organizations that will define the next decade are the ones that extend AI's transformative power to the decisions that determine strategy, protect profitability, and shape long-term competitive position and sustainability. The structural advantage of Decision Intelligence compounds over time. Organizations building this capability today accumulate richer signal history, more refined models, deeper workflow integration, and an organizational instinct for acting on intelligence at speed. These are capabilities that take time to develop

and are difficult to replicate once a competitor has established them. The return is concrete: risks identified weeks earlier, opportunities pursued before competitors see them, and decisions made in hours rather than months.

Polaris I/O has built the system that makes this possible. The methodology is proven. The technology is ready. The question is not whether Decision Intelligence belongs in your organization's future. The question is how quickly you build the foundation that makes it work. ■

About the authors



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Dave Irwin is a leading innovator and practitioner in the application of AI and data intelligence to executive decision making. With more than 30 years of experience converting market signals into strategy and measurable business outcomes, Dave brings both the operational perspective and the technical depth that inform this paper's framework. His career spans leadership roles across B2B and B2C organizations, with deep expertise in analytics, machine learning, and AI-enabled execution. He has built and led product, sales, marketing, and customer insight organizations across diverse industries, with a consistent focus on turning complex data into decisions that drive sustainable growth.



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Phil Cederstrom is a results-driven business leader, technologist, and entrepreneur who serves as the founding architect of Polaris I/O's decision intelligence platform, with three data-driven companies to his name. He brings rare depth across the full stack of capabilities this paper describes, spanning data engineering, AI model development, platform architecture, and real-world deployment. His career has been defined by a single throughline: extracting reliable, precise signals from complex data and building the systems that put them to work. That work includes the development of more than 100 customer marketing and analytics databases and the creation of multiple high performance platforms.

Ready to make decisions at the speed of AI?

Contact Polaris I/O to learn how decision intelligence
transforms your organization.

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