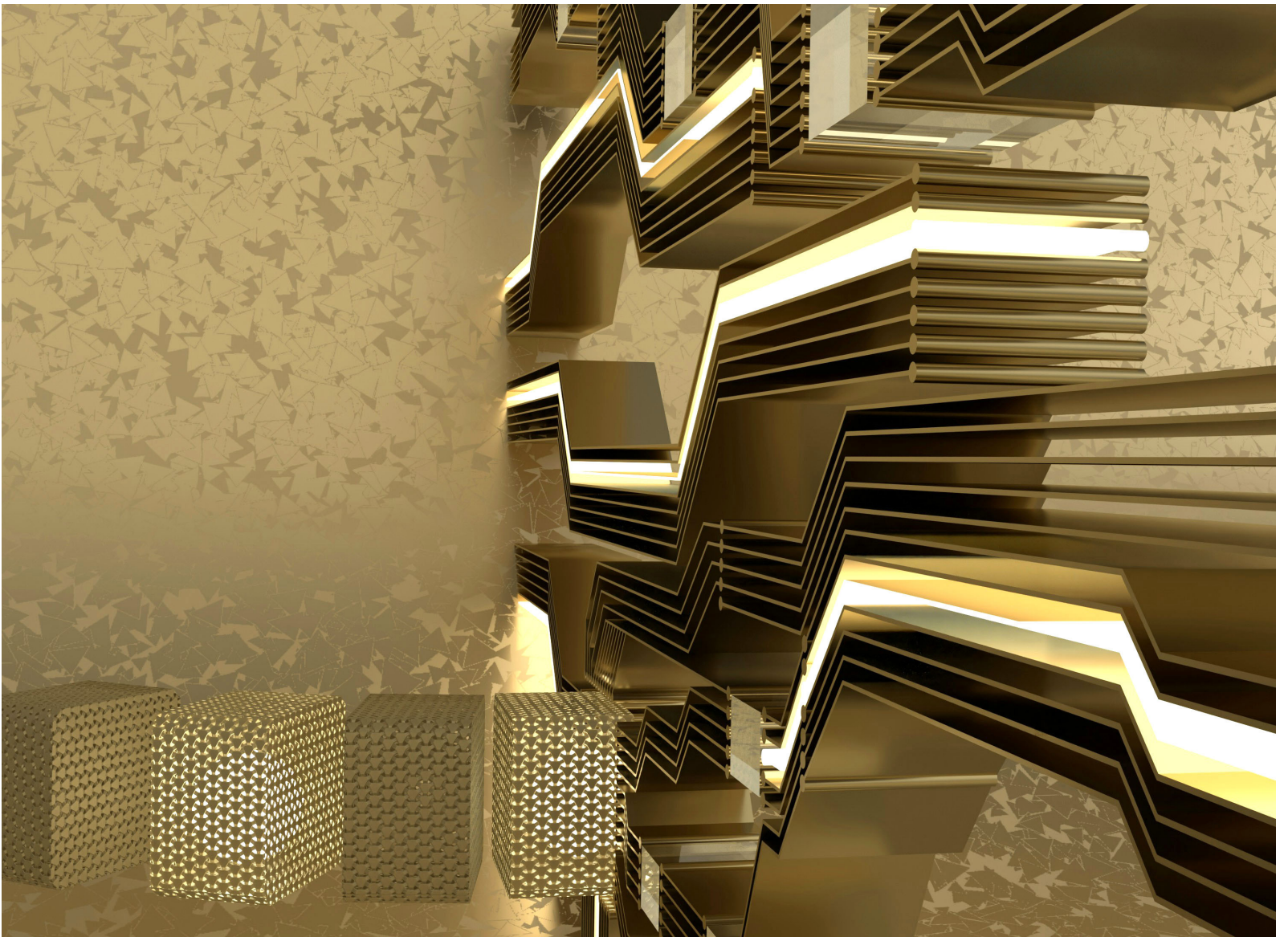


# Risk

Markets Technology  
Awards

2026 **WINNER**



Best use of machine learning/AI

ActiveViam

# Best use of machine learning/AI

## ActiveViam



“Winning this award is a testament to the incredible innovation and dedication of our teams at ActiveViam. Atoti Intelligence represents our commitment to delivering game-changing technology that empowers institutions to operate with speed, precision and confidence. And this recognition reinforces our position as a leader in bringing practical, transparent AI into mission-critical financial workflows”

Shelley Magee, CEO, ActiveViam

Artificial intelligence continues to reshape financial services, but nowhere is its impact more complex or more consequential than in the risk and profit-and-loss (P&L) architecture of major capital markets institutions. These environments demand precision, transparency, repeatability and absolute control over data lineage – characteristics not always associated with fast-moving AI innovation. This year’s winner of *Best use of machine learning/AI*, ActiveViam stood out for delivering a practical, production-ready implementation of AI that enhances, rather than disrupts, the rigour of high-performance analytics.

Atoti Intelligence represents a significant extension of the firm’s established real-time analytics platform, integrating machine learning and generative AI capabilities directly into the Atoti semantic, computational and user-facing layers. The result is an AI framework that amplifies the power of Atoti for analysts, risk managers, front-office teams and control functions while preserving transparency, intellectual property protection and institutional governance.

At a time when market participants must balance AI experimentation with regulatory responsibility, ActiveViam’s approach resonated strongly with the judging panel. The submission described a unified AI architecture equipped with natural-language interaction, a modular large language model (LLM) engine, a multi-agent discovery layer and AI-powered

tooling designed specifically for risk and P&L workflows. This combination demonstrated sophistication, technical clarity and practical relevance in equal measure.

### **A unified AI intelligence layer for institutional needs**

The Atoti Intelligence architecture is built around the principle that institutions need control. Rather than positioning AI as an external layer or a bolted-on assistant, ActiveViam has embedded AI deeply and natively into the Atoti platform. This ensures users interact with AI in the context of governed data, defined hierarchies, real-time computation and established enterprise security.

At the user level, Atoti Intelligence introduces a conversational interface that allows analysts and risk professionals to explore data using natural language queries. This interface is supported by the Atoti AI agent, which can operate with an institution’s preferred LLM but is easily swappable for alternatives, including proprietary or locally hosted LLMs.

The platform’s machine-to-machine communication server extends discoverability, allowing any enterprise AI agent to understand and interact with Atoti objects, metadata, capabilities and resources. This ensures institutions can adopt AI while keeping full control over intellectual property, data provenance and lineage, all of which are critical to operating complex models under regulatory scrutiny.

**“Atoti Intelligence puts AI to work where it matters most, helping clients make decisions at speed of thought. By embedding AI into real-time risk workflows, we’ve turned complexity into clarity, giving institutions the confidence to act when under pressure”**

Antoine Chambille, CTO, ActiveViam

The real differentiator is the fusion of Atoti’s high-performance query engine with AI capabilities. Atoti’s semantic layer defines hierarchies, measuring and pathing in a way that is machine-readable and business-meaningful. This allows AI agents to resolve queries with accuracy and context, translating natural-language instructions into structured, analytical operations without compromising integrity.

### Accelerating performance with machine learning

A core component of Atoti Intelligence is the Query Engine Optimizer, a machine learning-powered module that solves one of the most persistent operational challenges in large-scale analytics: determining which aggregates to cache to maximise query performance without overwhelming memory.

Atoti’s query engine can compute metrics from either its in-memory data store or external cloud data warehouses such as Snowflake or Databricks. Deciding which hierarchical aggregates to materialise is critical: too few lead to slow queries, while too many create unsustainable cost and memory overheads. Historically, institutions relied on intuition, heuristics or manual tuning by expert developers.

ActiveViam’s optimiser replaces guesswork with machine learning. It uses a hierarchical agglomerative clustering algorithm to analyse actual production queries, identify frequently accessed paths, determine meaningful correlation points between hierarchies and recommend the most efficient cache configuration. The optimiser considers execution times, frequency of use and the complexity of hierarchical combinations, allowing it to propose a configuration that improves performance without unnecessary memory consumption.

Initial production deployments have shown that the Query Engine Optimizer can reduce the most used query times by half. In one use case, a large European commodity trading firm using Atoti for real-time portfolio management

saw a doubling of query performance after implementing the optimiser.

Atoti Intelligence has been released and adopted, and it is already generating tangible improvements in production environments.

### Automating root-cause analysis with Auto-Explain

The second major innovation, Auto-Explain, addresses a task that risk, P&L and trading teams undertake daily: identifying the causes behind unexpected metric movements.

Explaining shifts in P&L, value-at-risk, derivatives valuation adjustments or liquidity is one of the most time-consuming and multilayered investigative processes in capital markets, typically requiring multiple drill-downs, repeated queries and trial-and-error exploration across hierarchies.

Atoti has long been used to accelerate these workflows thanks to its capacity to recompute complex metrics at high speed. Atoti Intelligence takes this one step further by automating the investigative process. Auto-Explain performs a structured, machine-driven analysis using a proprietary machine learning algorithm based on Shannon entropy. It identifies the hierarchies and levels most likely to influence a given metric, navigates those hierarchies intelligently and constructs a ranked narrative of the trades, positions or risk factors driving the deviation.

The AI agent then applies natural language summarisation to communicate the findings clearly, enabling users to move directly from problem identification to scenario-testing, remediation or what-if analysis using Atoti’s adjustment capabilities.

This approach transforms a process that could take hours and would often lead to analytical dead ends into a streamlined workflow that produces explanations within minutes. For complex organisations where risk teams, P&L teams and front-office management must collaborate under tight intraday deadlines, the efficiency gains are significant.



### Strengthening the product and expanding its mission

Atoti Intelligence not only enhances analytic speed and clarity, but it expands the profile of users who can work effectively with Atoti. By lowering the barrier to interaction through natural language interfaces, Atoti makes its real-time capabilities available to a broader audience. At the same time, its open architecture allows developers and quants to integrate Atoti into firm-wide AI ecosystems without ceding control of sensitive models or violating compliance obligations.

The Query Engine Optimizer modernises operational performance tuning, reducing reliance on specialist insight and ensuring that system behaviour evolves automatically in line with production usage patterns. Auto-Explain provides direct returns by eliminating manual investigative steps and allowing users to focus on decision-making rather than diagnostic effort.

Taken together, Atoti Intelligence extends the platform’s core proposition: delivering fast, precise analytics at enterprise scale. More importantly, it brings AI into mission-critical financial processes in a way that preserves the integrity, auditability and transparency required in regulated markets.

For institutions facing rising volumes of data, increasing intraday complexity and heightened expectations from regulators and trading teams, these enhancements provide a path to operating with less capital, more confidence and stronger risk discipline. ■