

The leader in AIOps for observability

# Challenges In Observability:

Applying the Right AI to AIOps

riverbed<sup>®</sup>

# Implementing AI in IT Operations is Harder Than it Looks

The surge in Artificial Intelligence (AI) enthusiasm has been undeniable, but as expectations evolve, many organizations are now at a pivotal juncture in their AI journey. The key question is no longer just about embracing AI but moving beyond the initial hype to implement practical and impactful AI solutions within their organizations.

**Enterprises aren't lacking AI tools. But many organizations fall into the same trap:** deploying siloed models that look good in demos but fall apart in production.

## Why?

**Organizational data silos lead to blind spots.**

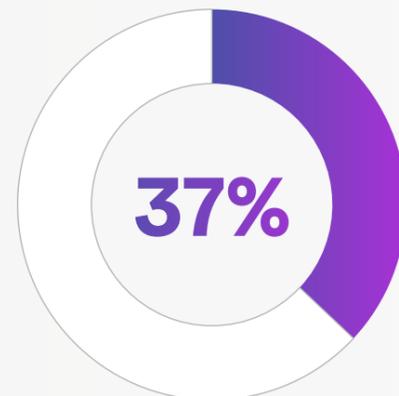
**Static AI models have trouble adjusting to dynamic environments.**

**One-size-fits-all logic fails in complex ecosystems with ever-shifting variables.**

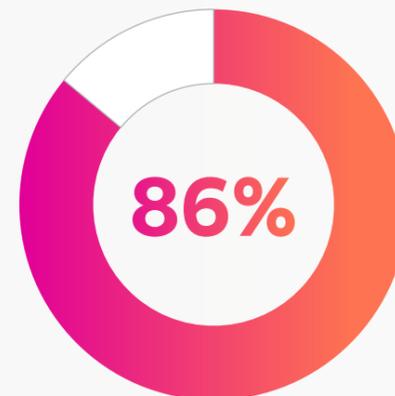
These challenges aren't just technical—they're strategic. Without a framework that evolves with IT infrastructure, AI can create more confusion than clarity. So, IT leaders need pragmatic strategies to execute their AI initiatives effectively. Organizations must align aspirations with action and turn AI potential into business results.



**Consider their organization fully prepared to implement its AI strategy**



**2024**



**2027**



# The Problem Isn't AI— it's the Kind of AI

AI in IT Operations once promised a revolution—but the reality is proving far more complex. As an IT leader, you've likely found that implementing AI at scale comes with more questions than answers.

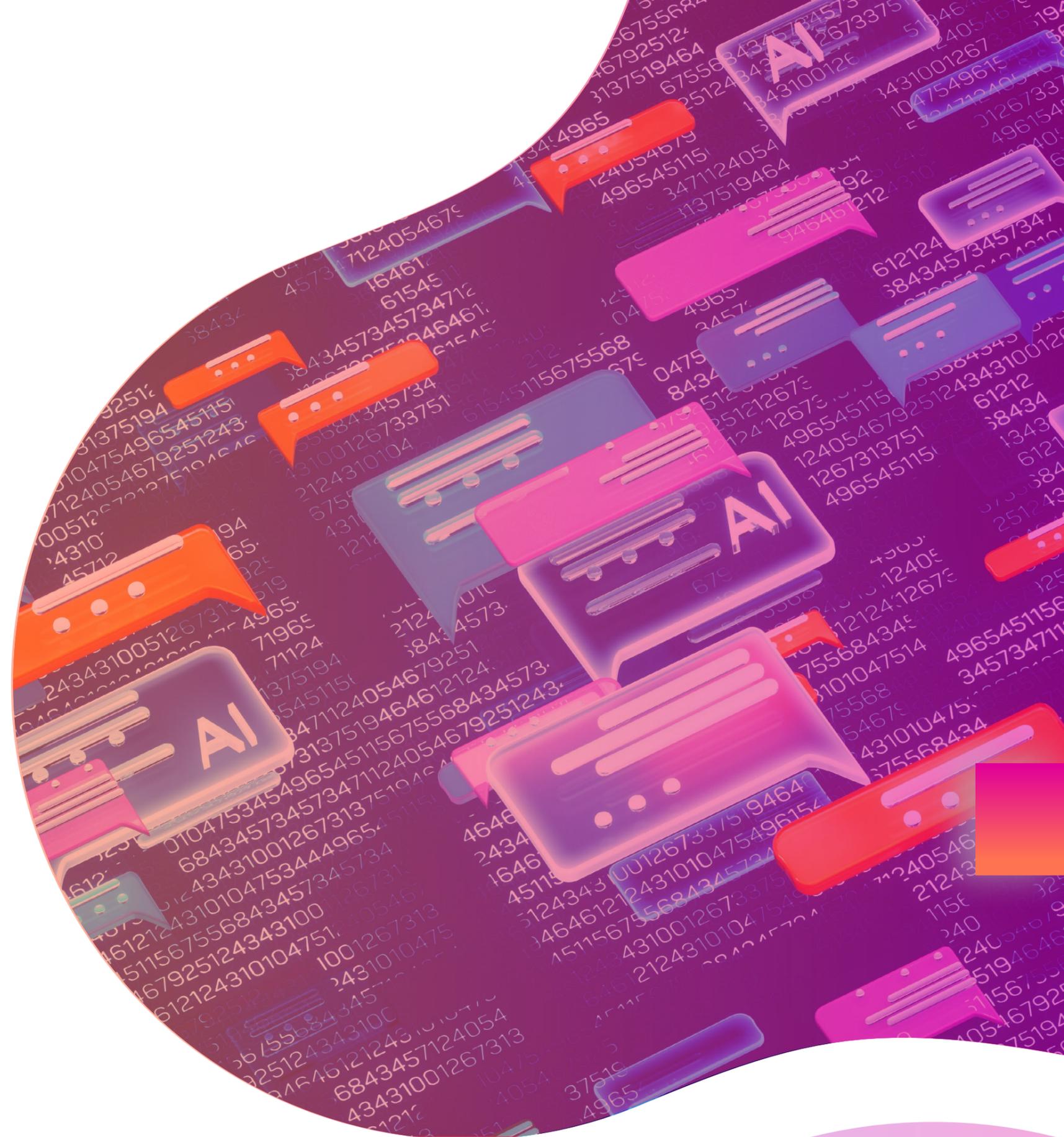
What really works? What delivers ROI? And what fits the unpredictable rhythm of modern IT?

AI is evolving rapidly—and with it, the challenges and opportunities facing IT teams. Much of the current excitement around AI is centered on Generative AI—and for good reason. It's flashy. It's fast. But on its own, it's also fundamentally limited.

Most environments don't have just one problem to solve or one type of AI that fits all. Each scenario requires a different kind of intelligence: understanding cause and effect, taking autonomous action, generating insights in natural language, or forecasting what comes next.

Focusing on any one kind of AI is like using only a hammer for all jobs instead of the best tool in the toolbox. Today's IT landscape requires orchestration across multiple AI types, each playing a unique role in a larger strategy.

**Real transformation begins when AI adapts to you—not the other way around.**



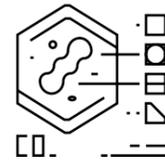
# The Case for Adaptive AI

Adaptive AI refers to a type of artificial intelligence system that can adjust its behavior, learning strategies, or decision-making processes in real time based on changes in data, environments, or objectives—without requiring retraining from scratch. Adaptive AI is built to learn and evolve—not just during training, but continuously, as conditions change.

## This is where real value lies:



It integrates multiple types of AI to solve specific, contextual problems.



It dynamically tunes itself based on full-fidelity, real-time data.



It enables proactive operations instead of reactive fire drills.

The key to successfully implementing Adaptive AI is not limiting it to just updating anomaly baselines and decision making processes based on continuous learning. It is just as important to leverage Causal AI, Predictive AI, Generative AI, and Agentic AI as critical components of a comprehensive adaptive AI solution which delivers the most current, real-time AI-driven insights, investigations and remediations.



# Riverbed Platform: A Foundation for Adaptive AI

## Riverbed's AI strategy is built on a simple but powerful principle:

AI is only as intelligent as the ecosystem that feeds it. That's why we approach Adaptive AI as a complete lifecycle—beginning with comprehensive instrumentation, followed by smart data collection and retention using our patented Data Store, and culminating in the orchestration of advanced AI models that transform raw telemetry into actionable insight.

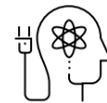
This process starts with a commitment to collect everything that matters, in real time, across your digital ecosystem—from endpoints and applications to networks and cloud infrastructure.

## The Power of Real-Time, Full-Fidelity Data



The Riverbed Platform is purpose-built to help IT leaders overcome the complexity of tool sprawl, siloed data, and fragmented operations that hinder successful AI implementations. At its core is the Riverbed Data Store, a high-performance, centralized data architecture that captures full-fidelity telemetry across networks, applications, infrastructure, cloud, and endpoints. This unified foundation ensures every tool and team operates from the same consistent, context-rich data—eliminating blind spots for true end-to-end visibility and making sure that AI always works with accurate, real-world data—not synthetic guesses—for AI that works at scale.

**Riverbed doesn't just talk about Adaptive AI—it delivers it. Riverbed's approach combines four powerful types of AI in a single, unified platform:**



**Causal AI uncovers the why behind incidents**



**Predictive AI sees what's coming next**



**Generative AI empowers teams with contextual, real-time insights**



**Agentic AI makes decisions and takes action to achieve specific goals**

**Riverbed's AI is adaptive, real, and it's available today. Deployed at scale, it's helping IT, security, and digital experience teams move from reactive to proactive, from fragmented to cohesive, and from complexity to simplicity. With Riverbed, AI delivers results—today.**

# From Insight to Action: Adaptive AI Delivers Real Outcomes

Once your organization is collecting comprehensive, high-fidelity, real time data—the question becomes:

What intelligence can you apply to that data to create impact? This is where Riverbed's Adaptive AI strategy truly makes a difference.

Rather than relying on a single model or one-size-fits-all approach, Adaptive AI is built on the principle that different types of AI are suited to different types of problems. By intelligently combining multiple AI disciplines—each optimized for specific outcomes—Riverbed empowers IT teams to move from data collection to insight to action seamlessly.

## Riverbed's AI is Adaptive

Different Problems.  
Different AI.  
A Unified Approach.

### Adaptive by Design



Riverbed AI dynamically adjusts to complex, real-world IT environments

### AI with Depth



Combines Causal, Agentic, Generative, and Predictive AI in a unified, outcome-driven platform

### Real-Time



Fueled by complete, high-quality data - not synthetic samples - delivering precise insights that drive real operational transformation

### Full-Fidelity Advantage



Powered by Unified Agent and Riverbed Data Store for unmatched visibility and precision

### Orchestrated



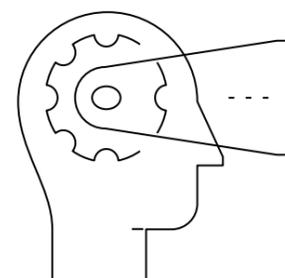
IQ Ops governs workflows, maintaining audit trails, and coordinating actions across agents and systems in real time

Now, let's explore how each AI technique plays a unique and complementary role within this strategy >

# Causal AI: Understanding the Root Cause, Not Just the Symptoms

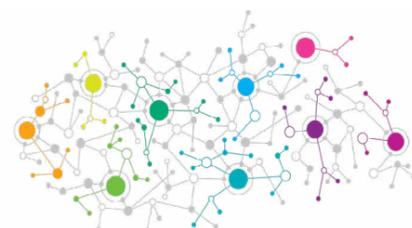
In complex IT environments, correlation isn't enough. It's no longer sufficient to know that something is wrong—you need to know why it's happening, what triggered it, and how to fix it. Riverbed's Causal AI delivers that clarity by uncovering the true root causes behind performance issues, outages, and user experience degradation.

Unlike conventional AI models that rely on statistical correlation or anomaly detection alone, Causal AI applies advanced inference techniques to reconstruct the chain of events that led to an issue. It doesn't just flag what's different—it explains what happened, in what order, and what factors contributed to the incident.



## Riverbed's Causal AI is powered by the industry's most comprehensive and accurate dataset:

Real-time, full-fidelity telemetry collected across your entire digital ecosystem. This means every inference is backed by complete, unsampled, real-world data—captured from networks, apps, endpoints, and users, all time-synchronized and context-rich.



Millions of metrics & thousands of alerts per day



Understand key metrics, correlate anomalies, and extract the incidents that matter

Correlated to hundreds of incidents



Automate remediation for business impacting incidents

Prioritized to tens for IT to oversee or to action on

# Predictive AI: Anticipating What's Next—Before It Happens

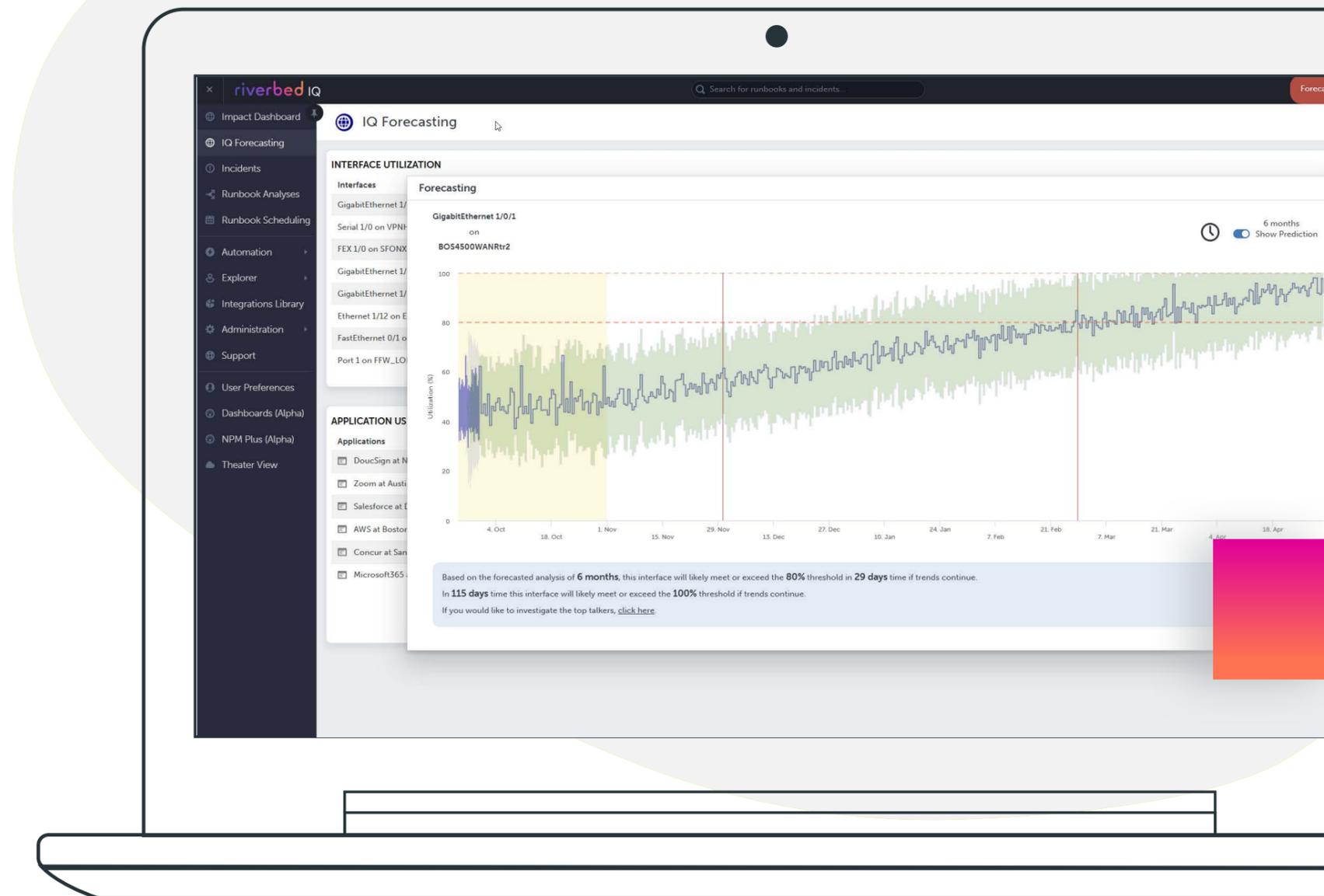
Today's IT environments demand more than reactive troubleshooting. They require foresight—early, accurate, and actionable. Riverbed's Predictive AI delivers just that, enabling IT teams to anticipate problems, mitigate risk, and optimize performance well before issues impact users or the business.

Built on the same real-time, full-fidelity data foundation as the rest of our Adaptive AI framework, Riverbed's Predictive AI continuously monitors telemetry across applications, networks, endpoints, and user experiences. It detects subtle deviations from baseline behavior and recognizes patterns that signal potential trouble.

But Riverbed doesn't just forecast anomalies. We turn predictions into readiness. Predictive insights are tightly integrated into our automation and orchestration workflows—meaning potential problems can trigger immediate alerts, proactive configuration changes, or the activation of intelligent agents that respond in real time.

Our models operate on real, unsampled, high-resolution data, ensuring that what we predict is grounded in truth—not probability.

Predictive AI also helps IT teams close the loop between observability and operational control. By understanding the drivers behind recurring issues, teams can take preventive action—restructuring policies, tuning configurations, or optimizing workflows to prevent recurring problems.

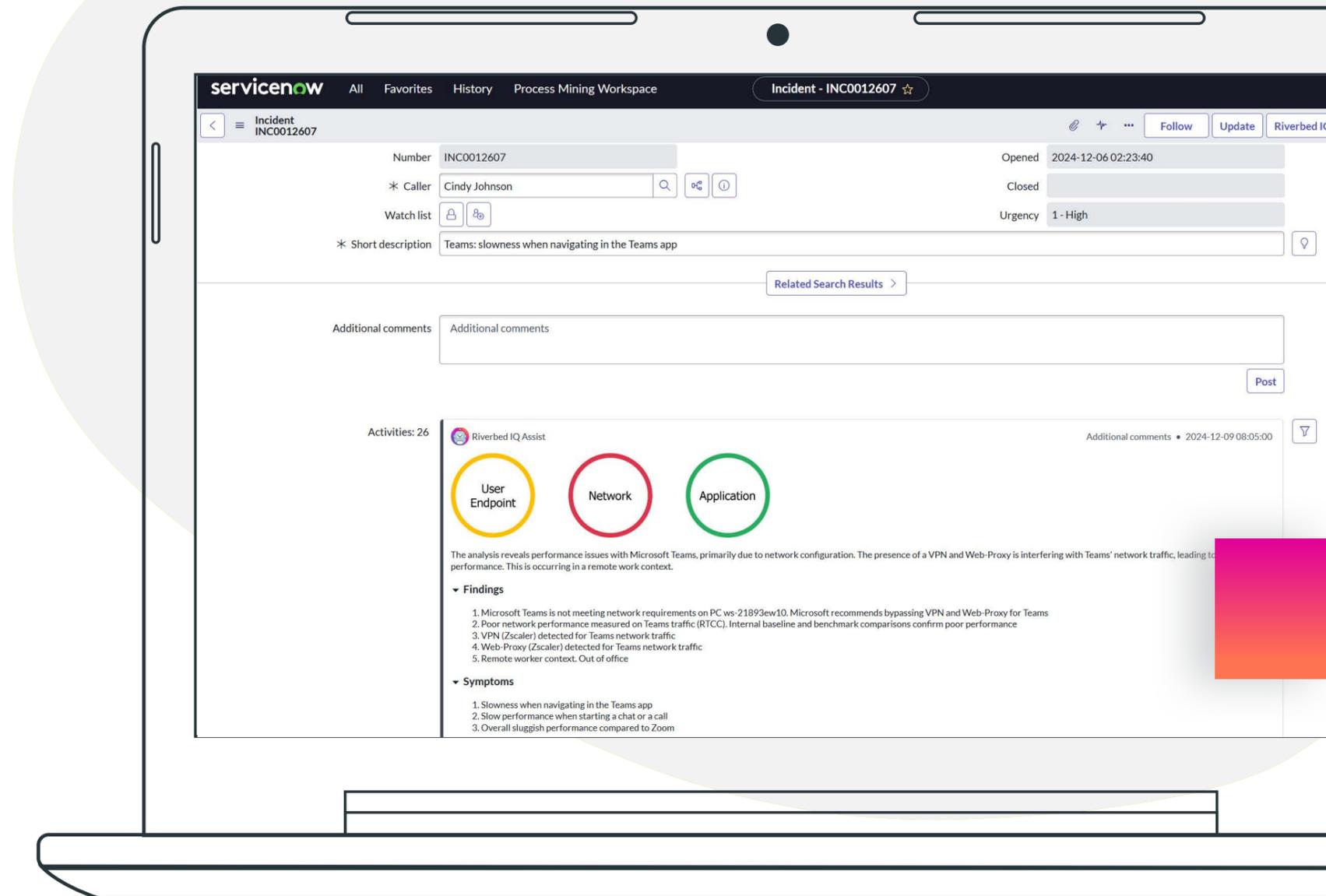


# Generative AI: Move Faster, Make Better Decisions

In most enterprise IT organizations time is limited, and specialized expertise is often stretched thin. Generative AI is seen as a tool that can help IT answer questions and address issues faster. But, IT teams need Generative AI solutions to quickly give them answers without the endless back-and-forth of traditional chatbots.

That's why Riverbed developed a Generative AI solution purpose-built to act as a real-time copilot for IT operations. Riverbed's solution is embedded in your workflows, offering guided intelligence exactly where and when your teams need it. It is designed to translate complexity into clarity. Whether you're troubleshooting a user experience issue, diagnosing a performance drop, or exploring telemetry trends, what sets Riverbed apart isn't just its interface—it's what it does behind the scenes. Powered by real-time, full-fidelity data from the Riverbed Data Store, the Riverbed Generative AI solution can automate root cause analysis, suggest corrective actions, and intelligently surface relevant data without repetitive prompting. That means less time searching and more time solving. From service desk to network engineering, it supports a wide range of roles by embedding expertise directly into the tools your teams already use.

Riverbed also offers a rapidly expanding library of pre-built GenAI use cases, with hundreds more in development. These use cases provide out-of-the-box functionality for common scenarios—and for more advanced needs, Riverbed enables extensive customization options to align with your environment, processes, and policies.



# Agentic AI: Intelligent Action, Not Just Insight

Most observability and AIOps solutions today provide analysis and alerts but stop short of action. Agentic AI fills that critical gap. It brings intelligence to life through autonomous agents that can act on behalf of IT—executing real-time decisions, remediating issues, and optimizing system performance based on trusted, full-fidelity data.

**Agentic AI** is not about replacing IT teams. It's about empowering them with intelligent, goal-oriented assistants that are always-on, context-aware, and continually improving. Each agent is narrowly focused on a specific operational task—such as isolating the root cause of latency, applying a configuration change, or enforcing compliance policies—and acts only within clearly defined parameters.



**What makes Riverbed's Agentic AI uniquely powerful** is its foundation in the Riverbed Data Store. With access to rich telemetry across every layer—network, application, endpoint, and user—our agents work with real, synchronized data. Not sampled. Not synthetic. Just pure, operational truth.

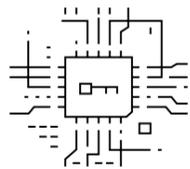


The Riverbed Platform serves as the central orchestration layer—governing workflows, maintaining audit trails, and coordinating actions across agents and systems in real time.

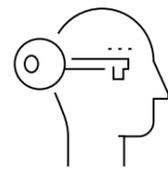
# Safe, Secure, and Accurate by Design

As organizations embrace AI-powered capabilities, it's critical that these technologies are implemented responsibly, transparently, and in alignment with enterprise data governance policies.

**Riverbed's AI strategy is built on three foundational principles: Safety, Security, and Accuracy.**



**Your data is safe.** With Riverbed, your data never leaves the boundaries of your organization. It is not sent to public cloud AI models or mingled with third-party data sources. We ensure that all processing happens within your trusted environment, respecting your operational and regulatory requirements.



**Our AI framework is designed to be secure.** Riverbed only uses the IT-specific telemetry data that you explicitly agree to share with the platform. We do not access private, personnel, or company-sensitive information. There is no ambiguity—your business and employee data remain untouched, and our agents operate exclusively within clearly defined scopes.



**Our AI is designed to be accurate.** We rely exclusively on full-fidelity, real-world data—never synthetic, fabricated, or heavily sampled inputs. This means our AI works with the same high-resolution telemetry used by human experts, resulting in more precise diagnostics, better automation outcomes, and a platform that avoids the risk of misleading or “hallucinated” results often seen in other AI systems.

This commitment to responsible AI is not an afterthought—it's a core tenet of how we build and deliver intelligent automation. With Riverbed, you get the power of AI, without compromising the safety, security, or integrity of your operations.



# AI That Adapts is AI That Delivers. Turn AI Potential into Real Results.

If your AI journey has felt like a series of missed expectations, you're not alone. The path to enterprise-grade AI is no longer about proving if AI works—it's about choosing the right partner to make it work at scale, in your environment, for your outcomes. The hype cycle is behind us. Today's IT leaders are demanding more: more clarity, more precision, and more return on their AI investments. They don't want generic tools—they want a strategy rooted in real data, trusted infrastructure, and AI that adapts to their environment.

At Riverbed, our approach to AI is rooted in real-world application and customer value, not hype. That's why our AI is adaptive, and not a series of point products—it's built into the core of every Riverbed product as a platform capability. Adaptive AI is how forward-thinking IT leaders are breaking through complexity and turning observability into opportunity. With Riverbed, it's not just possible—it's already happening.

**Now is the time to move beyond experimentation.  
Now is the time to operationalize intelligence at scale.**

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**Riverbed – Empower the Experience**

Riverbed is the only company with the collective richness of telemetry from network to app to end user that illuminates and then accelerates every interaction so that users get the flawless digital experience they expect across the entire digital ecosystem. Riverbed provides two industry-leading solutions: the Riverbed Unified Observability portfolio, which integrates data, insights, and actions across IT to enable customers to deliver seamless digital experiences; and Riverbed Acceleration, which offers fast, agile, and secure acceleration of any application over any network to users, whether they are mobile, remote, or on-premises. Together with our thousands of partners, and market-leading customers across the world, we empower every click, every digital experience. Learn more at [riverbed.com](https://riverbed.com).

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