



BUYER'S GUIDE TO OBSERVABILITY

RETAIL & ECOMMERCE



INTRODUCTION

Retail and eCommerce leadership faces a paradoxical mandate today: accelerate the adoption of disruptive technologies like generative AI for personalized shopping and dynamic pricing to drive top-line growth, while simultaneously protecting margins and enforcing strict site stability.

However, these goals are often at odds. As your architecture expands to accommodate headless commerce, microservices, and AI-driven recommendations, operational complexity spikes. Maintaining a coherent view of the customer journey becomes increasingly difficult. Service boundaries blur between payment gateways, inventory management, and third-party logistics, and failures propagate in ways that lead to abandoned carts and lost brand loyalty.

Siloed tools and outdated monitoring are dangerously inadequate for today's high-velocity retail environments. This fragmented approach leads to teams scrambling to identify why checkout rates are dropping long after the revenue loss has occurred. This model fosters alert fatigue, burns out the engineering talent needed for innovation, and creates blind spots that obscure the true ROI of cloud-based digital storefronts. Furthermore, as AI adoption for chatbots and search accelerates, so does the risk to the customer experience. Without a unified source of truth, decision-makers cannot effectively attribute technical latency to cart abandonment or ensure compliance with evolving data privacy standards.

The solution lies in intelligent observability. Instead of focusing on isolated server signals, it provides a complete view of the Digital Supply Chain, correlating data across frontend mobile apps, backend fulfillment services, and business context (like conversion rates) in real time. By consolidating your telemetry, customer context, and transaction data into a single platform, you gain the ability to predict bottlenecks before they impact the shopper, strictly manage cloud costs during traffic surges, and confidently deploy new features. This guide shows how the right platform empowers you to align eCommerce operations with business strategy and deliver undeniable value to the board.



HOW INTELLIGENT OBSERVABILITY HELPS DIFFERENT TEAMS

Beyond the core benefits of uptime and reduced spend, intelligent observability offers unique advantages for the specific teams keeping the retail engine running.

PLATFORM ENGINEERING TEAMS ↘

In retail, platform teams must manage the “Golden Path” for developers across various brands or regions. Intelligent observability gives them a unified view of technology adoption and site performance standards. It allows them to set organization-wide benchmarks for page load times and API reliability, ensuring every sub-brand or regional site meets the same high bar for customer experience.

ENGINEERING MANAGERS ↘

For those overseeing eCommerce features (Search, Cart, Checkout), intelligent observability provides visibility into how specific features impact the bottom line. It enables them to track historical trends—such as how optimizing image rendering dropped MTTR by 80%—and provides the data needed to prove to the board how technical health directly drives higher Average Order Value (AOV).

DEVOPS ENGINEERS ↘

For DevOps, the priority is “Zero-Downtime Deployments” during promotional windows. Intelligent observability supports confident releases of new promo code engines or recommendation carousels by identifying latency issues instantly. It integrates with workflows to ensure that “Code-to-Cart” velocity remains high without risking the stability of the storefront during peak traffic.

SECURITY/COMPLIANCE OFFICERS ↘

Retail is a prime target for credential stuffing and payment fraud. Security leaders gain the ability to detect anomalous checkout patterns and remediate vulnerabilities in near real time. Observability also provides a reliable audit trail for PCI-DSS compliance and data privacy reviews, ensuring that customer trust is never compromised.

RETAILER'S CHECKLIST: IS YOUR ORGANIZATION READY?

Before selecting a partner, ask your team these specific questions:

✓ **Revenue Impact:**

"Can we quantify the exact revenue lost per minute of downtime during our highest-traffic hour of the year?"

✓ **The Third-Party Gap:**

"Do we have visibility into the latency caused by our payment processors (Stripe/PayPal) or social login integrations?"

✓ **The AI Shopper:**

"Do we know if our AI-driven 'Frequently Bought Together' recommendations are actually loading fast enough to be seen by the customer?"

✓ **Omnichannel Journey:**

"Can we track a single customer journey from a mobile push notification to a web-based checkout to a backend shipping confirmation?"

This checklist surfaces the critical difference between simply monitoring "server health" and having the transactional insight required to run a global storefront with confidence. In the thin-margin world of retail and eCommerce, closing that gap requires more than another dashboard. You need to ensure your observability strategy actually maps to Customer Lifetime Value (CLV) and Digital Shelf Availability.

Not all platforms are built to handle the extreme volatility of Flash Sales, Black Friday surges, or complex omnichannel fulfillment logistics. When evaluating a partner, the ability to provide real-time clarity during a traffic spike matters far more than a long list of generic technical features. If a platform cannot correlate a database lag to a drop in "Add-to-Cart" actions, it isn't providing the level of accountability your business requires.

A STRATEGIC FRAMEWORK FOR EVALUATING OBSERVABILITY PLATFORMS

Choosing an observability platform is a critical strategic decision and an investment in operational resilience, innovation velocity, and business alignment. Therefore, evaluating potential solutions requires a framework focused not just on technical features, but on the core capabilities that drive tangible business value.

CORE CAPABILITY: UNIFIED FULL-STACK VISIBILITY ↴

The foundational requirement of any strategic observability platform is a single, unified source of truth. By ingesting all operational, cost, change, and dependency data into one platform, an organization eliminates the silos that create confusion and delay. This unified view aligns development, operations, security, and business stakeholders around a shared, real-time understanding of system health, performance, and cost.

Achieving this requires a platform capable of ingesting more than just basic telemetry such as metrics, events, logs, and traces (MELT). To deliver genuine intelligence, a modern observability platform must ingest and correlate a richer set of data points for a full contextual understanding of system behavior. This broader signal set is commonly referred to as MELTx.

In practice, the MELTx framework includes:

- ✓ **Security Signals:** To integrate security posture directly into operational health and provide a unified view of risk.
- ✓ **Cost Data:** To attribute cloud spend to specific services and features, enabling precise ROI analysis.
- ✓ **Configuration Changes:** To correlate deployments and environmental changes with performance degradation or improvements.
- ✓ **Dependencies:** To map the complex relationships between services, infrastructure, users, and third parties.
- ✓ **Runbooks:** To embed remediation knowledge directly within the platform, accelerating incident response.

Furthermore, this data must span every part of your stack, from front-end to back-end infrastructure, and include continuous contexts such as deployment markers, feature flags, and ownership metadata. This enables teams to move from knowing what happened to understanding why it happened and what it affects.

ARCHITECTURAL AND TECHNICAL CONSIDERATIONS

UNIFIED DATA PLATFORM ↘

A modern observability platform should be built on a single, real time data platform that connects and correlates telemetry in context while explicitly modeling relationships across services, infrastructure, and users. This shared data foundation is what enables consistent correlation, ownership, and system level understanding as environments evolve.

That foundation should also support a native service catalog, and compliance or scorecards that operate on the same underlying data rather than separate modules.

OPEN AND EXTENSIBLE FEATURES ↘

A strategic observability platform must include open and extensible features to avoid vendor lock-in and ensure future-readiness. An open approach allows organizations to standardize instrumentation and maintain data portability, providing the flexibility to adopt new technologies without being constrained by a proprietary ecosystem.

The non-negotiable standard for this is first-class support for OpenTelemetry (OTel). A platform must treat OTel data as a peer to its own native agents, with full support for native OpenTelemetry Protocol (OTLP) and flexible Collector deployment in both agent and gateway modes. This commitment ensures you can instrument your services once and send that telemetry to any compatible backend, giving you complete control over your data and technology choices.

This framework provides a clear lens for evaluating the core capabilities an observability platform should have. The following section examines how New Relic is architected to deliver on these strategic capabilities and translate them into measurable business outcomes.

APPLIED INTELLIGENCE ↘

In an environment of escalating complexity, traditional human driven, manual analysis alone is insufficient. This means moving beyond simple threshold-based alerts to AI-strengthened capabilities like automatic anomaly detection, intelligent alert correlation, and deep root-cause analysis that works across all telemetry signals.

This eliminates context switching and critically, enables business users to access production insights without needing console access, democratizing data across the enterprise.

EVALUATING THE MARKET: ECOMMERCE RED FLAGS

FEATURE ↘	WHAT TO LOOK FOR ↘	RETAIL-SPECIFIC RED FLAG ↘
DATA SILOS	A platform that connects frontend and backend.	You have to switch tools to see why a mobile app user is experiencing API errors.
SCALING	Automatic scaling for traffic bursts.	The vendor requires "manual provisioning" or "pre-warming" before a major sale event.
PRICING	Pay for what you use.	You are forced to "sample" or drop 90% of your data during Peak Season to stay within budget.
TOOL SPRAWL	One platform for logs, traces, and RUM.	Your SRE team and Marketing team are looking at two different sets of "truth" regarding site performance.

NEW RELIC: DELIVERING INTELLIGENT OBSERVABILITY AT SCALE

New Relic delivers intelligent observability through a single, unified platform designed to support modern, highly distributed systems at scale. It brings together telemetry, context, and applied intelligence to help organizations understand system behavior, reduce operational risk, and connect technical performance to real business outcomes. The following capabilities illustrate how New Relic translates intelligent observability principles into real, operational outcomes across complex environments.

FLEXIBLE, OPEN OBSERVABILITY TO MONITOR YOUR FULL STACK ↘

New Relic unifies all telemetry, service catalog, team ownership, and compliance in a single platform with [700+ integrations](#), first class OTel support, and open APIs. The platform fits cleanly into your existing environments and scales as systems grow. Every team has a shared, real-time, single source of truth across apps, infrastructure, and third-party services.

As you evaluate observability platforms, you'll see that all have a variety of features, but few capabilities that are true difference makers. These are the New Relic features that are force multipliers for your teams:

EXPERIENCE-CENTRIC OBSERVABILITY ↘

New Relic extends observability beyond system metrics to include real user experience. It helps teams understand how performance issues affect users, anticipate frustration or churn, and guide developers with code level insight based on real production behavior.

Force multiplier: [Code-to-Impact Traceability](#) links performance issues or business impact back to specific code commits or even lines of code.

PREDICTIVE AND PROACTIVE INTELLIGENCE ↘

New Relic uses applied intelligence to forecast potential incidents and their business impact before issues spread. This includes deployment risk scoring that highlights risky releases, surfaces contributing factors, and recommends preventive actions so teams can intervene early rather than react after impact.

Force multiplier: [Predictive Alerts](#) indicate the likelihood of a major incident in the next hour/day, with drill-down to contributing factors.

AI OBSERVABILITY ↘

New Relic provides purpose built visibility into AI systems and agent based workflows. It enables teams to monitor model performance and drift, understand how model behavior impacts business outcomes, and observe how agents interact, hand off tasks, and execute workflows across distributed environments.

Force multiplier: [Model Drift Alerting](#) with Business Context notifies teams on AI model performance degradation and explains the potential business consequences.

ACTIONABLE REMEDIATION ↘

Teams can move beyond alerting by using safe, AI-strengthened remediation with clear guardrails. This approach helps reduce MTTR by recommending or triggering corrective actions, freeing up SRE cycles while maintaining visibility into dependency risks so teams can resolve issues faster without increasing operational risk.

Force multiplier: [Autonomous Fix Suggestions](#) recommends specific remediation steps, including confidence levels and potential side effects.

INTEROPERABILITY AND STANDARDS ↘

New Relic extends observability beyond applications and infrastructure into the broader digital and AI supply chain. It unifies operational and security signals and supports emerging standards and protocols, enabling systems and tools to work together without tight coupling or vendor lock-in.

Force multiplier: [Standard Compliance Monitor](#) automatically checks and reports on adherence to emerging AI communication standards.

ACTIONABILITY TIED TO BUSINESS OUTCOMES ↘

Operational data becomes more valuable when it is directly connected to business results. Scorecards and analytics can turn best practices into automated checks, track progress over time, and roll results up by team, making operational excellence measurable, auditable, and continuously improving across reliability, customer experience, and unit economics.

Force multiplier: [Business Impact Dashboard](#) shows how the current system performance is directly impacting key business metrics.

AT A GLANCE: KEY CRITERIA

CRITERION	NEW RELIC	DETAILS ↴	OTHER PLATFORMS ↴
FULL-STACK OBSERVABILITY	✓	Unifies all telemetry for full-stack, end-to-end, real-time visibility.	Often provide observability capabilities but may rely on fragmented tools or integrations, leading to potential gaps in end-to-end visibility.
OPEN AND EXTENSIBLE	✓	OpenTelemetry, 700+ integrations, open APIs that are extensible, portable by design.	While many platforms claim extensibility, they may require proprietary agents, limiting flexibility and vendor neutrality.
UNITED DATA PLATFORM	✓	Single real-time data layer unifying entities, queries, correlations.	Other platforms may use separate data stores for different telemetry types, resulting in siloed data and more complex cross-domain analysis.
APPLIED INTELLIGENCE	✓	Built-in, context-aware AI tools like the SRE assistant and predictive capabilities allow for automated anomaly detection, proactive alerting, and accelerated, proactive remediation.	Often treat AIOps as fragmented, add-on modules that lack platform-wide context. These siloed or limited capabilities can result in fragmented or incomplete insights and make cross-domain analysis more complex.
EASE OF IMPLEMENTATION AND ADOPTION	✓	Quickstarts, broad integrations, minimal setup, day-one value from existing telemetry.	Other platforms may require extensive setup or additional tools given the siloed nature of their architecture.
BUILT FOR DEVOPS	✓	Self-service ownership, IDE surfacing, ChatOps workflows, team-aligned permissions.	Provide DevOps tools but often lack the seamless integration and team-aligned workflows that New Relic offers.
OPERATIONAL EXCELLENCE	✓	Custom scorecards automate standards, track compliance, and drive continuous improvement.	Often lack the customization and automation capabilities of New Relic's scorecards.
CONNECTIONS TO BUSINESS OUTCOMES	✓	Overlay KPIs and cost with reliability, quantify real-time business impact.	Typical monitoring solutions are often not as deeply integrated with operational data and are unable to provide real-time business impact analysis.

YOUR JOURNEY TO INTELLIGENT OBSERVABILITY STARTS HERE

The stakes are clear: unplanned downtime costs businesses millions, fragmented tools slow your teams, and AI is accelerating operational complexity faster than traditional monitoring can handle. You need a platform that unifies your data, automates compliance, and gives every team, from DevOps to the C-suite, the visibility and clarity they need to act.

New Relic delivers that unified platform. With 700+ integrations, customizable scorecards built on live production data, and AI-strengthened insights that surface issues before they become incidents, New Relic is built for the realities of modern software.

The best way to understand what intelligent observability can do for your organization is to experience it. Explore the platform, see how your data connects in real time, and discover how much faster your teams can move when they're working from a single source of truth

READY TO GET STARTED? ↘

Try New Relic free for 30 days

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Join us for a demo today

[See How it Works →](#)