

White Paper - October 2025

Business observability: A strategic imperative for wealth management

How value stream monitoring is transforming client
experience, compliance and operational agility



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Observability – overview and context

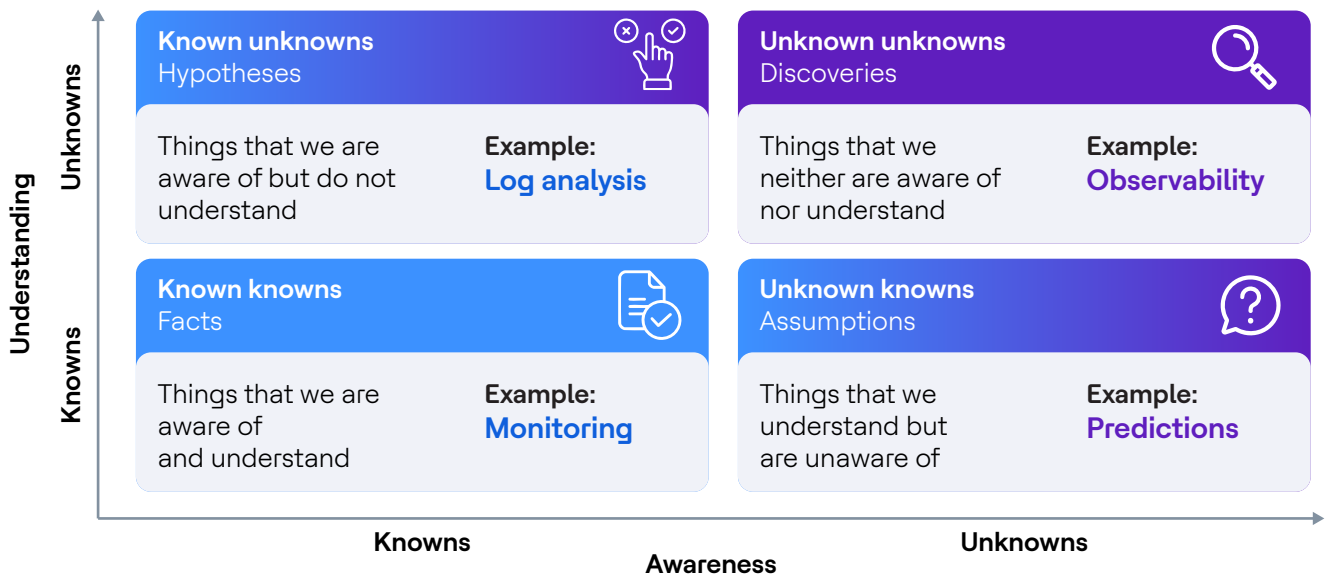
This white paper aims to introduce the concept of business observability and its relevance to Wealth Management institutions. It explores how implementing business observability can enhance operational efficiencies, decision-making processes and profitability.

Wealth management institutions are navigating a rapidly evolving landscape shaped by digital transformation, rising client expectations and increasing regulatory scrutiny. Customers expect seamless digital experiences and according to industry benchmarks, over **70% of wealth clients** expect **instant access to portfolio updates** and digital engagement failures can lead to **client churn rates exceeding 25%**. However, the increasing complexity due to the combination of legacy systems, on-premises infrastructure and cloud architectures is making it increasingly challenging to maintain or enhance service quality. This led to a focus on full-stack observability (FSO) to deliver insights, foster understanding and drive optimization across the entire technology stack.

However, to fuel growth, wealth management organizations need to enable business observability to create high-performing IT systems and enable business profitability.

Traditional monitoring involves capturing and tracking known parameters using metrics/events/logs/traces (MELT) and is restricted to generating alerts and reports using captured data. Observability, on the other hand, focuses on analyzing the telemetry data and is intended to manage “unknowns” that impact the underlying systems and ecosystem.

A Gartner definition contrasting monitoring vs observability highlights the focus on “awareness” and “understanding,” covering knowns and unknowns.¹



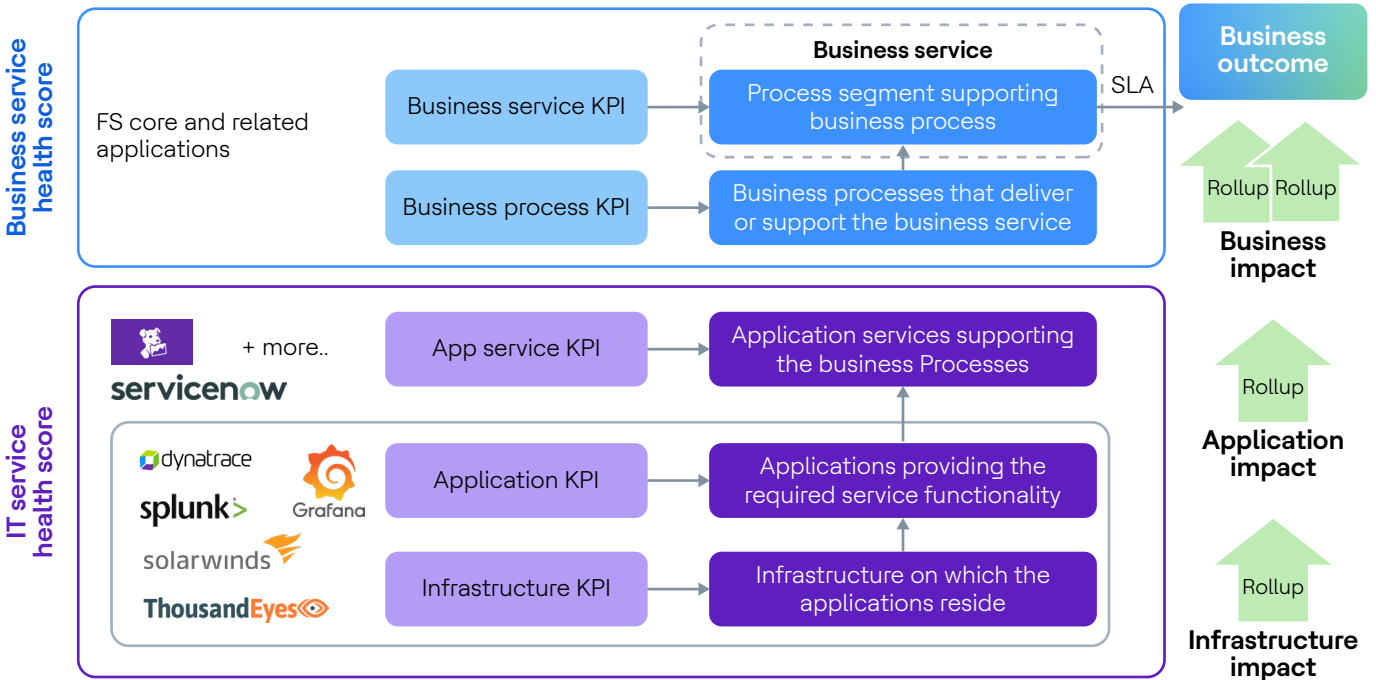
For understanding and managing the “unknowns”, the focus should be on correlating signals coming from all platforms and all technical stacks within each of these platforms – infrastructure and applications metrics, events, logs and traces. While FSO offers some business context, the true goal of “business observability” is to fuel growth by transforming high-performing IT systems into measurable business profitability.

“Business observability” provides a continuous view into the business function performance (against the current baseline) and offers insights for potential interventions to stakeholders from infrastructure, applications and business operations. The objective of business observability is to correlate and provide a consolidated view of the business performance across the entire ecosystem and address three groups of stakeholders: infrastructure and application support, development teams and business operations.

1. Cool vendors in monitoring and observability, Gartner, 2023.

Extending monitoring into observability

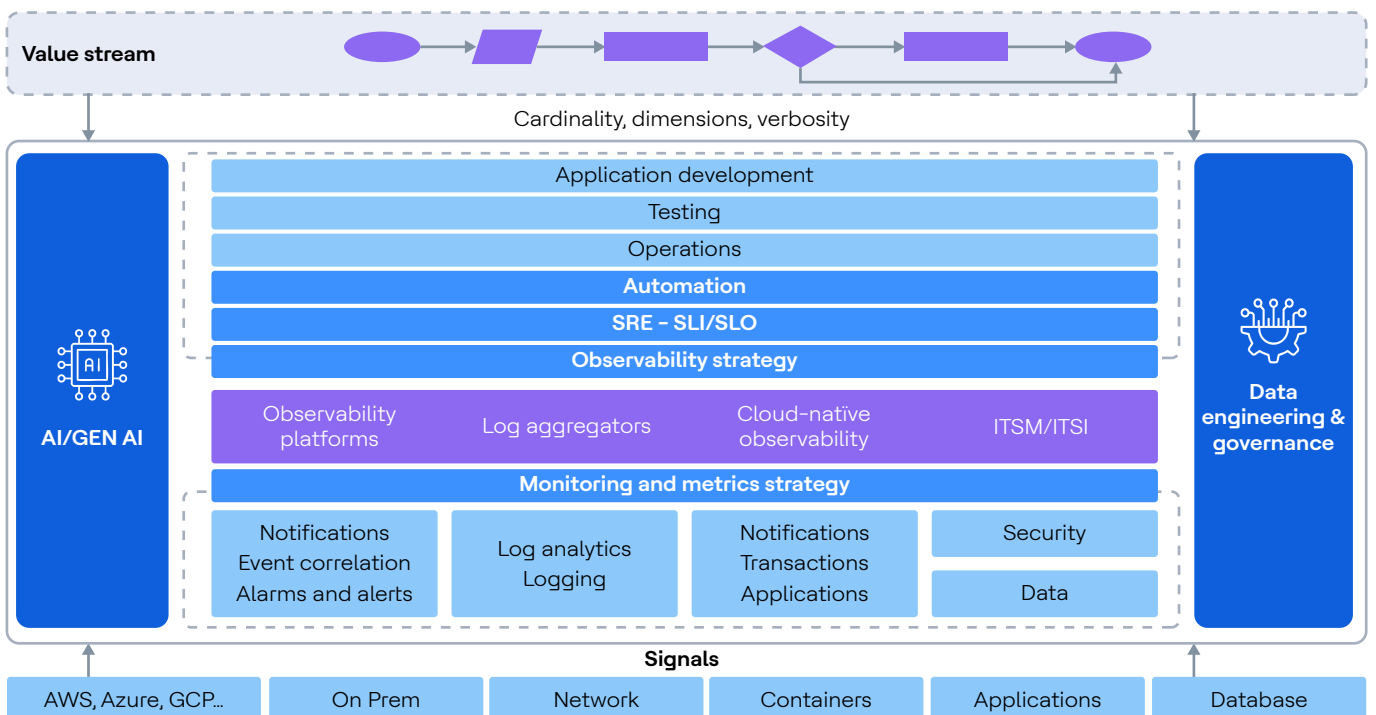
business outcome impact



Business observability – approach and architecture

Most wealth management Institutions already have an ecosystem of tools and instrumentation in place to collect data from infrastructure, cloud and application components. These inputs are often correlated to provide a bottom-up view of system performance. However, to truly drive value, there is a growing need to connect these technical signals with top-down value stream metrics. The illustration below depicts this integrated ecosystem, showing how bottom-up instrumentation and top-down “value stream” related metrics correlate at the business process level.

Business observability framework



Relevance of business observability in wealth management

Wealth management Institutions operate in a high-stakes environment where precision, agility and trust are paramount. As digital transformation accelerates, Institutions must orchestrate complex workflows across portfolio management, trade execution, client servicing and regulatory compliance—often in real time. The margin for error is slim: delays in portfolio rebalancing or inaccuracies in client reporting can erode trust and trigger regulatory scrutiny.

Business observability empowers Institutions to navigate this complexity with confidence. By collecting and correlating data from infrastructure, applications and client-facing systems; observability enables proactive issue detection, performance optimization and compliance assurance. It transforms fragmented operational signals into actionable insights—allowing teams to anticipate disruptions, streamline client experiences and uphold service-level commitments.

In an industry where speed and experience matter and trust is earned through transparency; observability is not just a technical capability—it's a strategic imperative.

Business observability use cases in wealth management



Client experience optimization

Delivering a frictionless digital experience is central to client retention and satisfaction.

Examples:

- **Digital experience monitoring:** Observability platforms track investor interactions across web and mobile wealth platforms, identifying latency spikes or transaction failures that may impact client trust.
- **Automated issue resolution:** Frequent app crashes or login failures are detected and resolved proactively, minimizing client dissatisfaction and reducing support costs.
- **Pattern recognition:** Observability platforms identify recurring issues such as failed transactions or delayed portfolio updates, enabling faster remediation and improved SLAs.



Risk management and compliance

Wealth management institutions must comply with regulations such as SEC, MiFID II and fiduciary standards, while managing operational and reputational risk.

Examples:

- **Anomaly detection:** AI-based tools can flag suspicious portfolio movements or unusual trading behavior, helping detect potential fraud or insider activity.
- **Behavioral analytics:** Can Track advisor and client activities to detect policy violations or unauthorized access.
- **Automated reporting:** Real-time dashboards support compliance reporting and audit readiness, reducing manual effort and error rates.
- **Securities lending oversight:** Observability tools monitor lending volumes, collateral movements and settlement timelines to ensure accuracy and reduce counterparty risk. Alerts are triggered for mismatches in loan terms, delayed returns, or collateral shortfalls—critical for maintaining compliance and operational integrity.



Capacity planning and cost optimization

Optimizing IT infrastructure and operational costs is essential for scalable growth.

Examples:

- **Application Performance Monitoring (APM):** Detects bottlenecks in systems such as portfolio rebalancing engines or trade execution platforms, ensuring timely service delivery.
- **Predictive analytics:** Forecasts system load during market events (e.g., earnings season, rate changes), preventing downtime and optimizing resource allocation.
- **Securities lending efficiency:** Dashboards provide visibility into lending utilization rates, income generation and operational efficiency across custodians and platforms—helping Institutions maximize returns while minimizing risk.

Given the high-speed transactions, stringent regulatory scrutiny and evolving customer expectations in FIs, business observability is critical to ensuring seamless operations, mitigating risks and enhancing decision-making. The shift to shorter settlement cycles (T+2 to T+1, T0), real-time payments and growing cybersecurity threats leave no room for operational error. Leveraging investments in real-time monitoring, AI-driven analytics and predictive insights to drive business observability helps wealth management institutions to optimize operations, reduce risks and enhance customer experience.

Challenges and their mitigation in implementing observability within the wealth management ecosystem

Wealth Management institutions face distinct challenges as they modernize their IT environments. Their IT and observability strategies must account for these complexities while ensuring the high levels of reliability their customers expect. In this section, we'll explore some of these challenges and highlight how leading Financial Services institutions have built observability stacks tailored to their unique application and infrastructure landscapes—enabling them to deliver world-class customer experiences.



Legacy system integration

Wealth management institutions often rely on legacy systems because the critical business functions and services are complex and depend on systems built decades ago.

The observability stack must provide visibility into their legacy systems and support cloud-native and data-intensive AI workloads. Ideally, choosing a single observability system that supports both legacy and modern workloads, while providing an end-to-end view of a value stream, is better for full stack observability.



Data and security concerns

The sensitive nature of financial and personal data demands stringent protection measures to meet regulatory requirements such as GDPR and CCPA. As Wealth management institutions integrate AI and cloud technologies, their cyber risk exposure increases, particularly with LLM-based Agentic AI workflows, which process massive volumes of data. The ROI of such AI-driven applications is directly tied to the quality, reliability and availability of data. With data volumes growing exponentially, Wealth Management institutions are increasingly adopting unified data architectures—such as LakeDB, Lakehouses and multi-model NoSQL databases—to address challenges around data integrity and scalability. **Data observability platforms** are becoming essential tools, enabling teams to proactively detect, prevent, or recover from data outages. These outages typically occur when critical data is either unavailable or compromised in quality, potentially disrupting operations and decision-making.



COTS product challenges

The growing adoption of modern, cloud-based core system products introduces additional complexity beyond standard cloud infrastructure. These systems often function as “black boxes,” making it difficult to access internal logs or introduce new telemetry without close collaboration with the product vendors. While some observability needs can be addressed by capturing data inputs and outputs around these black-box components, certain critical metrics require deeper, native instrumentation. Without this foundational visibility, it becomes challenging to monitor system behavior and performance in real time.

Methodology to implementing observability

Business outcomes should serve as the foundation for any business observability initiative. Start by defining key performance indicators (KPIs) that align with your strategic goals—such as transaction success rates, order execution times, trading platform uptime, regulatory compliance and customer experience. Then, select **service level indicators (SLIs)** that directly correlate with these KPIs. Synthetic monitoring of customer journeys or distributed tracing that mirrors real user behavior—are ideal candidates for meaningful SLIs. In addition, as workloads evolve, it is essential to revisit and refine your observability strategy to ensure it remains relevant, effective and aligned with changing business priorities.

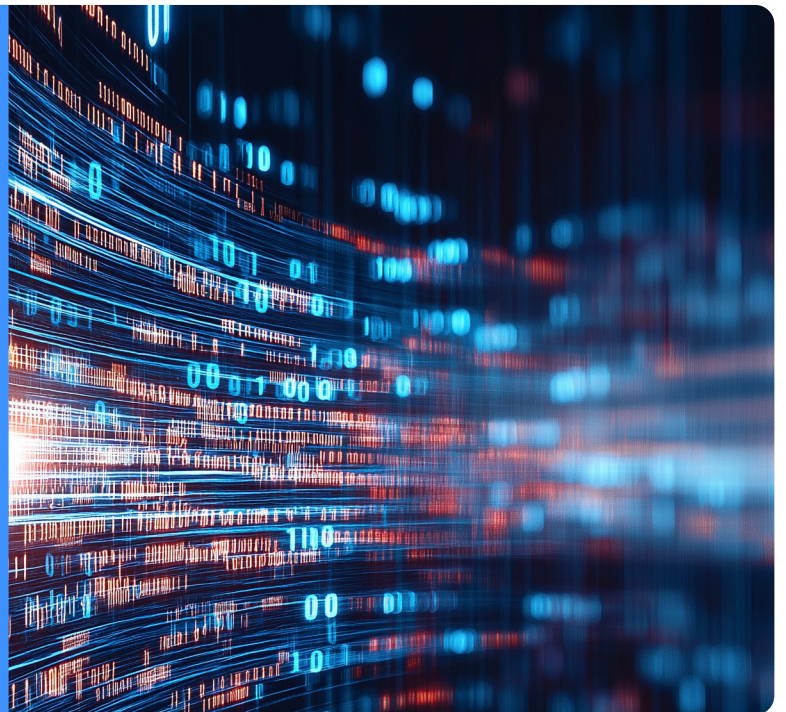
As outlined in the **Amazon AWS Operational Excellence Pillar**, identifying and aligning KPIs with monitoring activities ensures teams are focused on metrics that truly matter. This alignment enables **data-driven decision-making** that optimizes both system performance and business outcomes.

Outlined below are essential concepts to consider when developing an effective business observability solution.



Value stream focus

A value stream in the context of business observability is the sequence of core business activities an organization undertakes to deliver a service directly to its customers - generating actual customer value and revenue.



Value stream definition and mapping

Value stream definition for a process involves the following components and approach

1. A mapping of the sub-process indicating impact to key business outcomes – typically CSAT, top line measure, bottom line measure and specific expectations around turnaround time or other performance measures
2. A high-level architecture indicating the major application/ infrastructure components along with integrations to provide the context for business observability
3. A base SLO/SLI definition for the process at a sub-process level indicating the following
 - a. Service level objective
 - b. One or more service-level indicator
 - c. Specific measure that will need to be logged for the sub-process
 - d. Business outcome impact (relevant for mapping the inputs to the dashboard)

Service Level Objectives (SLO)/Service Level Indicators (SLI)

A service level objective (SLO) context is critical to implementing business observability. The following are some key definitions for the SLO context.

Concept	Definition
Service level objective (SLO)	<p>Set a reliable target for the SLI.</p> <p>For example, consider a scenario where a business transaction is expected to complete within 10 seconds, 99% of the time. Assuming we have instrumentation reporting this data every minute, the SLO evaluates each minute by comparing the reported value to the 10-second threshold.</p> <p>On average, if the transaction completes in under 10 seconds for a given minute, that minute is marked as a good minute; otherwise, it's marked as a bad minute. To meet the SLO, at least 99% of the total minutes within the evaluation window must be good. If this threshold is not met, the SLO is considered breached.</p>
Service level indicator (SLI)	<p>A quantifiable measure of service reliability.</p> <p>A good example of an SLI is 90th percentile response time for a specific API endpoint. Ideally an SLI should correlate as closely as possible to a business transaction.</p>
Error budget	<p>An SLO implies an acceptable level of unreliability. This is the budget we can allocate to manage the service economically.</p> <p>When we choose an SLO, we say SLI needs to meet the target 99% of the time. That means we give ourselves a 1% error budget.</p>
Time window	<p>SLO must be defined for a specific number of days. The recommendation is 28 days rolling window.</p> <p>28 days rolling window covers two sprints worth of time and gives a right balance for teams to understand whether the changes they are introducing are affecting their SLOs or not.</p>

Value stream illustration - Portfolio rebalance, a key sub process in wealth management

Portfolio rebalancing is a core investment management process that ensures portfolios remain aligned with their target asset allocations and risk profiles. It involves analyzing current holdings, determining necessary trades and executing adjustments across multiple asset classes. Effective rebalancing helps manage risk, respond to market changes and maintain investment objectives, requiring coordination between portfolio managers, trading desks, compliance teams and technology systems for timely and accurate execution. Any process failures can lead to delayed or failed processes, resulting in operational and financial risks.

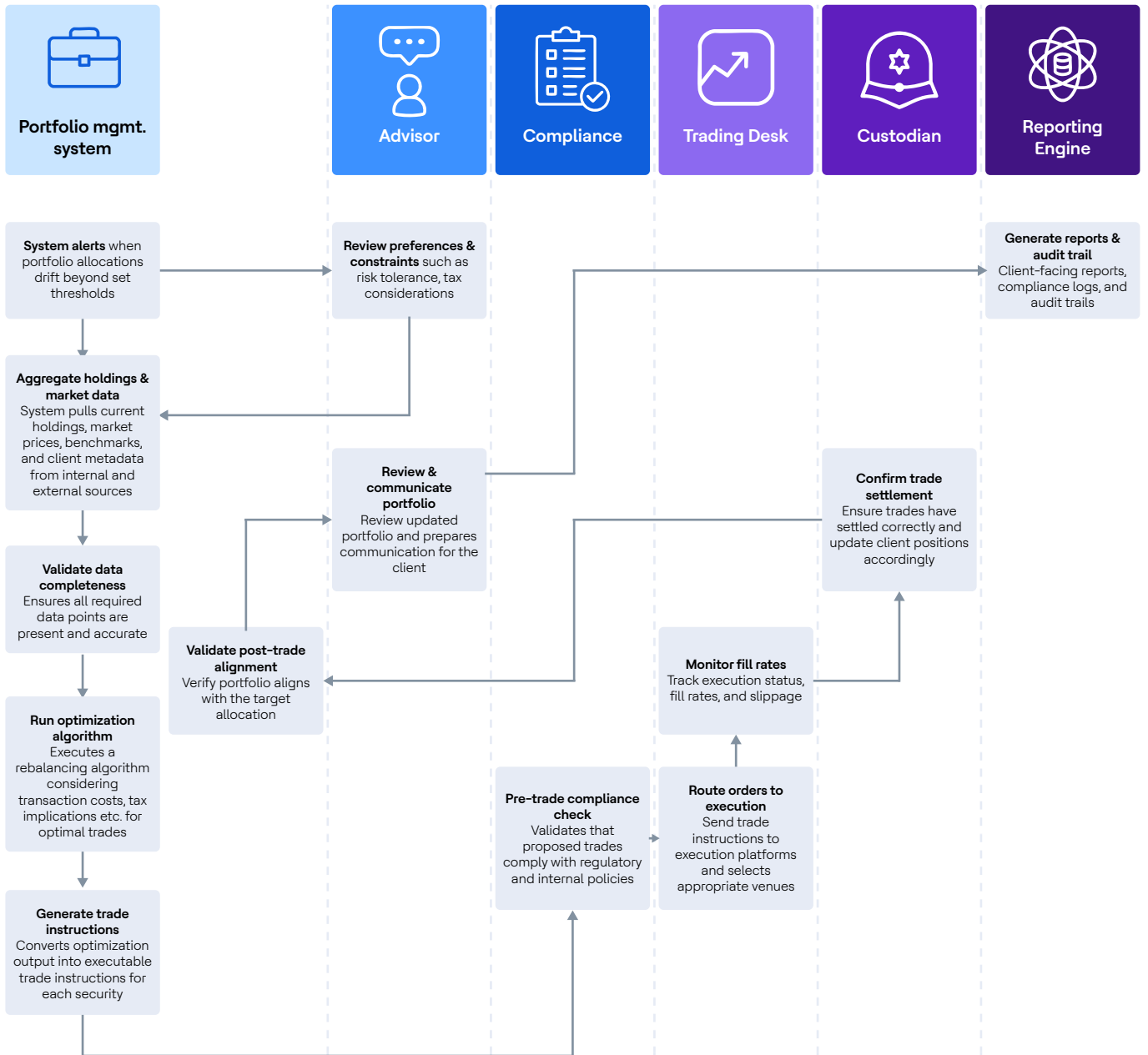
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Below is the high-level depiction of the business process:

Business process flow for portfolio rebalancing

The below illustration depicts the multistep portfolio rebalance business process. This provides a basis for specifying relevant business outcomes—including triggers, quality and customer SLIs/SLOs—and for identifying the metrics that should be recorded throughout the related transactions.

Business process flow for portfolio rebalancing



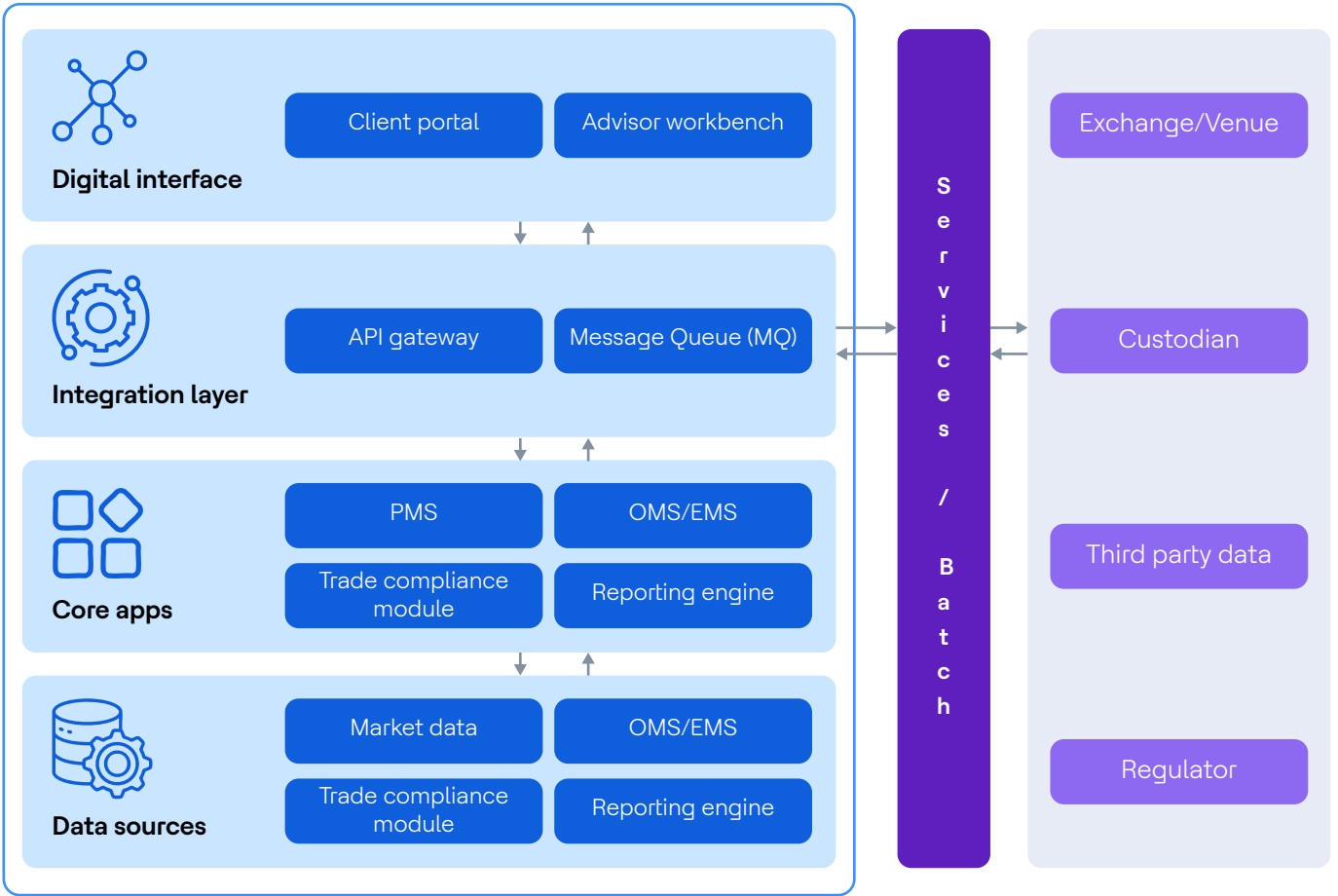
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High level IT system Architecture of "Portfolio Rebalance" value stream

Portfolio rebalancing system architecture integrates several core components: a data aggregation layer that collects real-time asset values, an analytics engine that monitors allocation drift and triggers rebalancing based on predefined rules and an execution module that generates and routes orders. An effective business observability solution provides deep-level visibility into availability and performance of each of these components.

Portfolio rebalancing system architecture

Context for observability



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SLI/SLOs Illustration for portfolio rebalancing

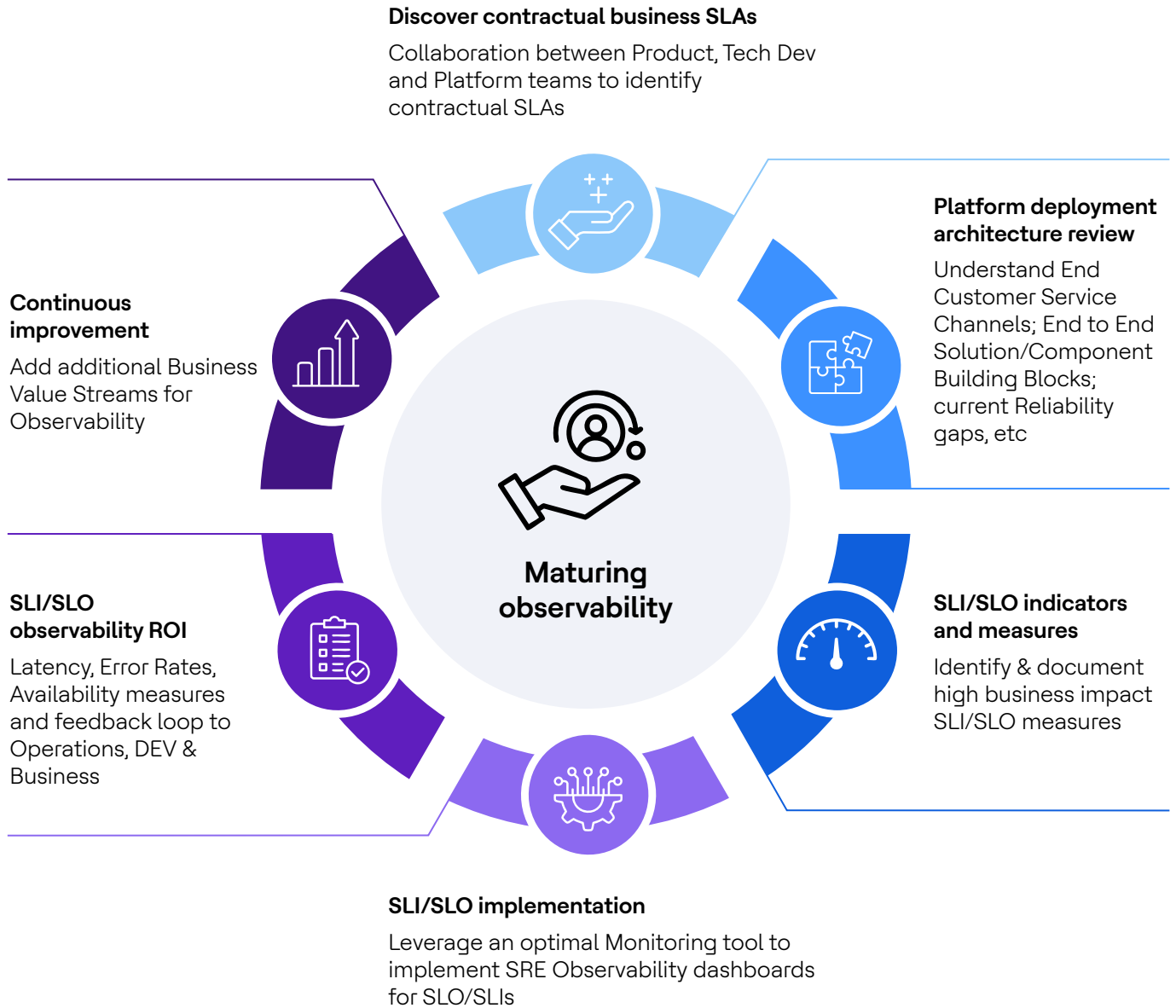
Below are few sample SLI/SLOs for portfolio rebalancing value stream.

Process Step	Service Level Indicator (SLI)	Service Level Objective (SLOs) - Illustration
Rebalance trigger detection	Detection time	≤ 5 seconds
Review preferences and constraints	Review latency	≤ 2 minutes
Validate data completeness	Data accuracy	≥ 99%

Introducing observability in the portfolio rebalancing sub process ensures greater speed, transparency, risk mitigation and operational efficiency. By monitoring applications, data integrity and infrastructure health, wealth management institutions can enhance system performance, improve regulatory compliance and proactively manage trade and operational risks.

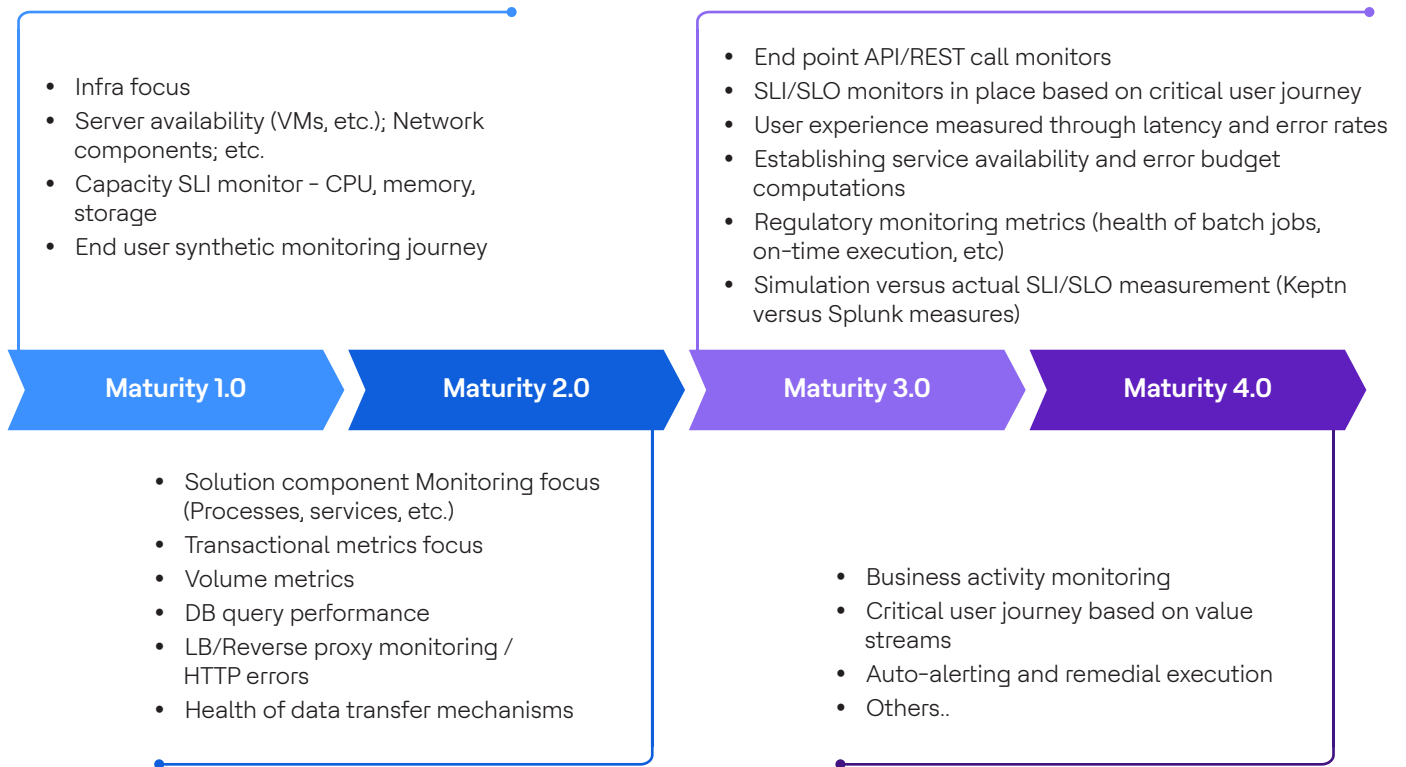
SLI/SLO operationalization process:

The process includes discovering business SLAs, reviewing the architecture of platforms and applications, identifying high-impact SLI/SLO for each application and services provided to end-users, implementing SLO-based alerts and end-to-end observability dashboards that provide a single-pane-of-glass view of the state of systems. Collaboration between product, technology and platform teams is crucial for success.



As teams advance in their observability practices, they develop additional capabilities and more refined processes, as illustrated in the figure below. In the early phases, teams concentrate on monitoring basic infrastructure and server availability, providing binary visibility into systems—indicating whether a server or application is operational or not. Subsequently, teams broaden their scope to include monitoring of solution components, transactions and initial performance metrics. At Maturity 3.0, user experience monitoring is introduced with API endpoint checks, service level indicators/objectives (SLIs/SLOs) for key user journeys and the integration of observability data in pre-production activities. Maturity 4.0 enables comprehensive 'Business Observability' through value stream-based monitoring and advanced implementations such as auto-remediation and self-healing systems.

SLI/SLO Observability maturity curve



Key outcomes for observability implementation

Observability is increasingly being recognized as a strategic business asset. In a recent survey of senior executives from leading organizations, the following were cited as the top drivers for adopting comprehensive observability:

- Drive better business outcomes
- Reduce risk
- Accelerate innovation

To fully realize the benefits of observability, its implementation must be comprehensive and scalable across the entire organization. As outlined in the earlier section, comprehensive observability involves collecting and correlating data across infrastructure, application and business instrumentation layers to generate meaningful insights. Isolated implementations in select areas are not sufficient. A successful observability strategy must include a clear roadmap to extend coverage enterprise-wide, ensuring consistent visibility, performance and alignment with business goals.



Drive better business outcomes

Observability projects can drive better business outcomes by providing comprehensive insights into system performance, enabling data-driven decision-making and optimizing operations. Implementing service level objectives (SLOs) as part of an observability strategy will align business goals, such as high customer satisfaction, availability and quality of critical services and optimized operations to IT metrics in the form of service level indicators (SLIs). Teams can now leverage observability platforms to track the performance of these SLIs and associated SLOs to drive better business outcomes.



Reduce risk

A well-implemented observability platform provides a benchmark of current service performance and scalability. This measure of quality of service is crucial while embarking on a large project, such as migrating on-prem services to the cloud, or re-architecting the tech stack to control technical debt or costs. Observability tooling provides insights into degradation of quality, compliance violations, or cost overruns during the migration process.



Accelerate innovation

One of the crucial indicators of a project's success is the rate at which the team is innovating in the field. Innovation rate has a direct correlation to the rate of development cycles or the rate of production deployments. Observability helps with deployment rates by offering end-to-end visibility into the entire business process – from user interactions to backend systems. DevOps and development teams can see how changes impact the entire journey and consequently, business outcomes, thereby enabling them to identify and address issues early in the development cycle. As discussed earlier, SLOs provide insights into how changes may affect the overall business process. Teams can make more informed decisions about when and how to release features, tackle technical debt, and ensure that releases align with business objectives and user expectations.

Surveys found that adopting observability tools, SRE best practices and a culture of shared ownership (facilitated by SLOs) translates to efficiencies across the software engineering cycle, better end-user experiences and ultimately production excellence and accelerated innovation.

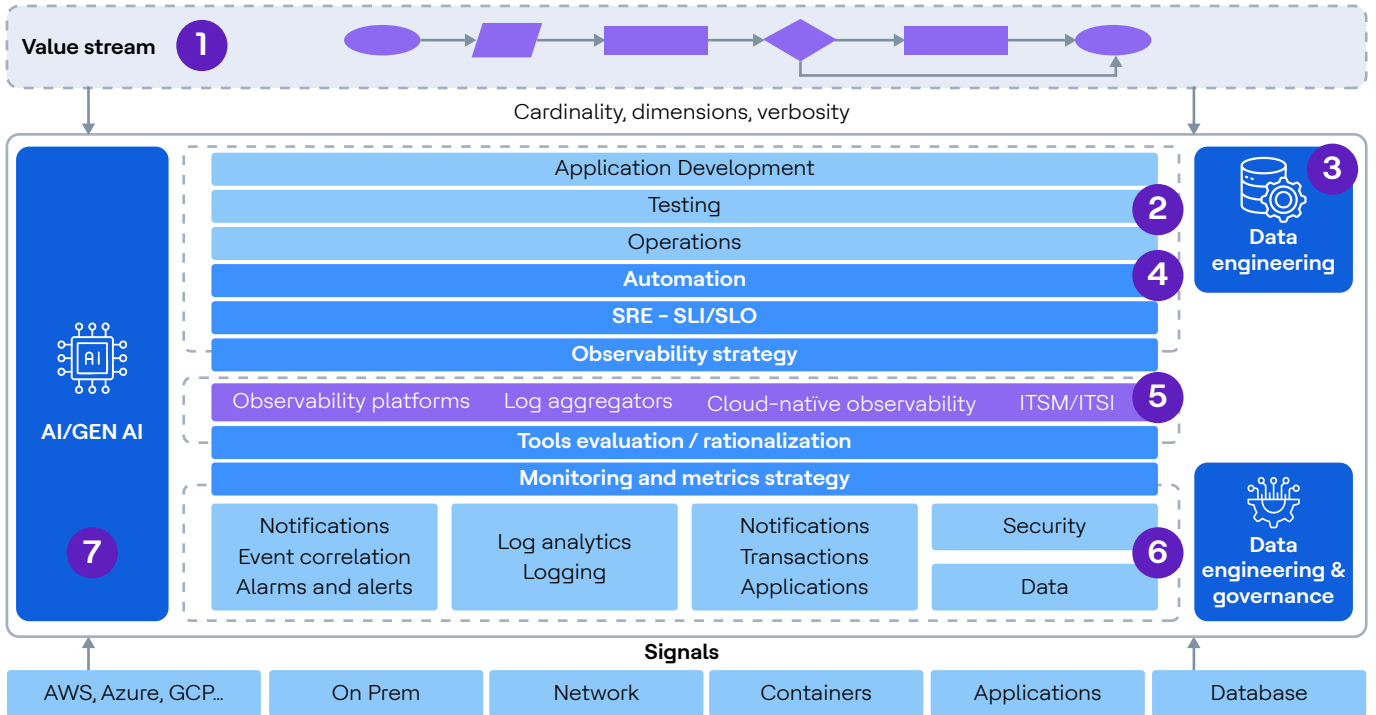


HCLTech for observability – How we can help drive better business outcomes

HCLTech delivers a domain-centric observability framework designed to improve business performance through actionable insights. Leveraging reusable playbooks, we help establish baseline business metrics that distinguish normal from anomalous behavior—empowering IT operations, development, SRE and business teams alike.

HCLTech's observability proposition

Driven by HCLTech's engineering DNA and our knowledge of IT operations



Faster time to value

- 1 **Value stream-based playbooks** with best practice logging, SLOs and SLI
- 2 **Business context based best practices** for dimensions (what to measure), cardinality (how often) and verbosity (how detailed)
- 3 **Data engineering** to ingest, stream and analyze in the most cost-efficient manner
- 4 Industry and **value stream-based automation, prioritization**
- 5 **Rationalize tools** (Enterprises use as many as 14-30 monitoring tools). new capabilities, open-source innovations and accelerators
- 6 Proactively **integrate application and infrastructure monitoring** strategies
- 7 **Identify use cases and implement AI/Gen AI** models to predict business and IT behavior

Our solution includes:

- End-to-end landscape assessments (including current tooling)
- Operational playbooks tailored to business needs
- Targeted automation to boost responsiveness and system efficiency


Going beyond traditional monitoring, our observability model defines customer-centric quality by:

- Identifying critical data points
- Mapping IT performance to real-time business context across key value streams like client onboarding and transaction settlements


This unified view—spanning business metrics, logs, traces and individual transactions—enables organizations to:

- Prioritize actions based on business impact
- Resolve issues with greater accuracy
- Optimize resource utilization
- Align innovation with evolving business, customer and IT stakeholder needs


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