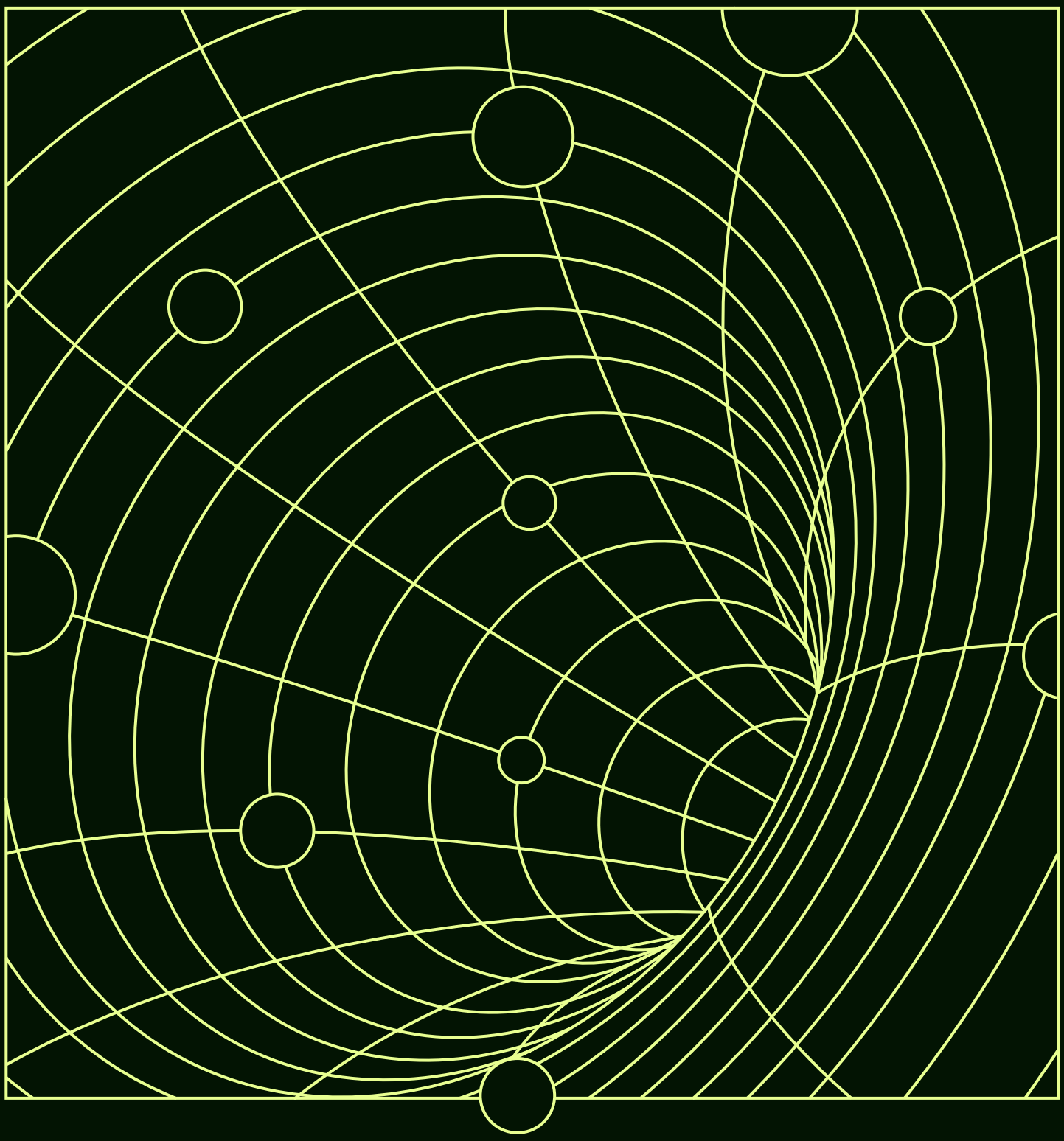
THE JOURNEY TO TRANSFORMATIONAL OBSERVABILITY



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WHITE PAPER

THE NEED FOR BETTER OBSERVABILITY

Observability is the ability to see and understand the internal state of a system from its external outputs. Logs, Metrics, and Traces are the three pillars of observability. Machine-generated data is a critical source of truth to secure and assure the delivery of digitized customer experiences. In recent years, we have seen an increase in demand for digitized services, accelerating the adoption of new technologies like microservices and the cloud. This tech adoption and the explosion of digital services are accelerating data growth and expanding the digital surface area requiring better security, reliability, and performance. This dynamic, in turn, creates more dependency on machine-generated data to improve services and mitigate risks. However, while the data is growing at an ever-increasing rate, IT budgets are not keeping pace.

Moreover, as data management costs keep increasing, companies are not seeing a corresponding increase in the value they generate from their observability data initiatives. Although there is an increase in the users who want to leverage data to make decisions, access and usability of data remain a challenge. As data sources multiply, the need for data interoperability and correlation increases so that users can access, unify, and utilize data from different systems and functional groups. Without proper processes and technology, organizations cannot fully leverage observability data and may compromise on risk management and the service quality they can offer their customers.

Enterprises are looking for ways to increase the value they get from their data investments while managing spiraling costs. They are looking for ways to make data available to a broader set of users with better access and control. While control, for instance, routing data to observability tools and lower-cost storage helps manage costs, is insufficient. Beyond the management and control of data, enterprises seek more value and real-time actionability. With better control plus data augmentation by enrichment and correlation, enterprises respond to issues faster and uncover opportunities to improve customer experience and launch new products.

The path to true observability is a journey, and understanding your stage helps identify people, processes, and technology gaps to get more business value from your data investments. Here are four stages enterprises can use to evaluate their practices and tools and deliver better products and services to their customers.

THE FOUR STAGES TO TRANSFORMATIONAL OBSERVABILITY

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STAGE 1: AD HOC

In this stage, organizations acknowledge the need for observability, but their focus is limited to logging and monitoring individual systems and applications. The data sources may include one-off servers or applications, and the destination is generally a log management tool or affordable storage like an AWS S3. Logs are collected and aggregated by individual users for a specific use. Different groups may search for tools for individual use or adopt open source technology to build their log management solutions. The primary use case is log aggregation and manual analysis to identify issues. Basic parsing and exclusion capabilities help identify problems and manage data costs. Observability tools are likely owned by the operations team, who must dedicate cycles to help other groups access the data they need.

FOCUS

- Monitoring

GOAL

- Log Management

APPROACH

- Log Aggregation

CRITICAL CAPABILITIES

- Data ingestion and egress
- Data parsing

THE FOUR STAGES TO TRANSFORMATIONAL OBSERVABILITY

STAGE 2: PLANNED CONTROL

Organizations with enhanced data control have better processes and tools to enable more comprehensive data access and greater control. There is a company-wide recognition of observability needs, and enterprise solutions replace one-off log management tools. Data ingestion comes from various cloud infrastructures, Kubernetes, or streaming platforms like Kafka. Destinations include a variety of messaging queues, observability, and security platforms. Many users, including developers, ITOps, DevSecOps, and SREs, leverage the solution for log management and analysis. Capabilities such as remapping, aggregation, filtering, and data sampling help users with superior data control. Sophisticated access control and routing meet the data needs of a wide range of users in the organization.

FOCUS

- Data Control

GOAL

- Access & Control
- Log Analysis

APPROACH

- Routing & Analysis

CRITICAL CAPABILITIES

- Aggregation, Filtering, Exclusion, Sampling

THE FOUR STAGES TO TRANSFORMATIONAL OBSERVABILITY

STAGE 3: OPTIMIZED FOR ACTIONABILITY

In this stage, enterprises have better control of their data and extract higher value from their observability investments. Observability processes and infrastructure are optimized to get actionable insights, improving MTTD/R and speed of product launches. Organizations are sophisticated in enriching data for better context and correlating cross-domain data for uncovering deeper insights. They leverage OpenTelemetry for additional context. In addition, enrichment and correlation happen while the data is still in motion instead of waiting for analysis when it has reached its destination, like a data lake. As a result, these organizations can proactively identify patterns before they become security issues or customer complaints.

FOCUS

- Data Value

GOAL

- Data analysis in motion
- Actionability

APPROACH

- Enrichment & Correlation

CRITICAL CAPABILITIES

- Advanced remapping
- Transformations
- Bi-directional correlations

THE FOUR STAGES TO TRANSFORMATIONAL OBSERVABILITY

STAGE 4: TRANSFORMATIONAL OBSERVABILITY

Organizations at the transformational observability stage have evolved beyond working in data silos and have advanced DevOps, DevSecOps, and DataOps approaches. They leverage observability principles and technology to transform their business. They treat data like an enterprise asset captured from multiple sources, including business applications such as CRM and Customer Data Platforms (CDP), and use insights to activate workflows in security or customer-facing applications. Achieving transformational observability requires real-time cross-domain correlation and intelligent data processing. DataOps and DevOps join to leverage enterprise data to its fullest. Insights become actionable and are used to gain a competitive advantage by delivering a superior customer experience and products.

FOCUS

- DataOps Transformation

GOAL

- Cross-domain insights
- Organizational transformation

APPROACH

- Real-time cross-domain correlation
- Intelligent workflows

CRITICAL CAPABILITIES

- Intelligent and real-time conditional logic
- Triggered workflows

CONCLUSION

The shift to digital is accelerating, and data is a critical competitive advantage. As businesses manage complex supply chains and deliver sophisticated customer experiences that span dozens of applications and systems, the need for data access, control, actionability, and security increases. Customer expectations force companies to be more responsive, and increasing security threats and regulations require organizations to be more vigilant and proactive. In this market dynamic, organizations must put necessary processes and technologies in place that help them use their observability data to be efficient, compliant, and competitive. Understanding where the organization stands on its observability journey will allow them to evaluate its gaps and formulate a path that aligns with the company's business goals.

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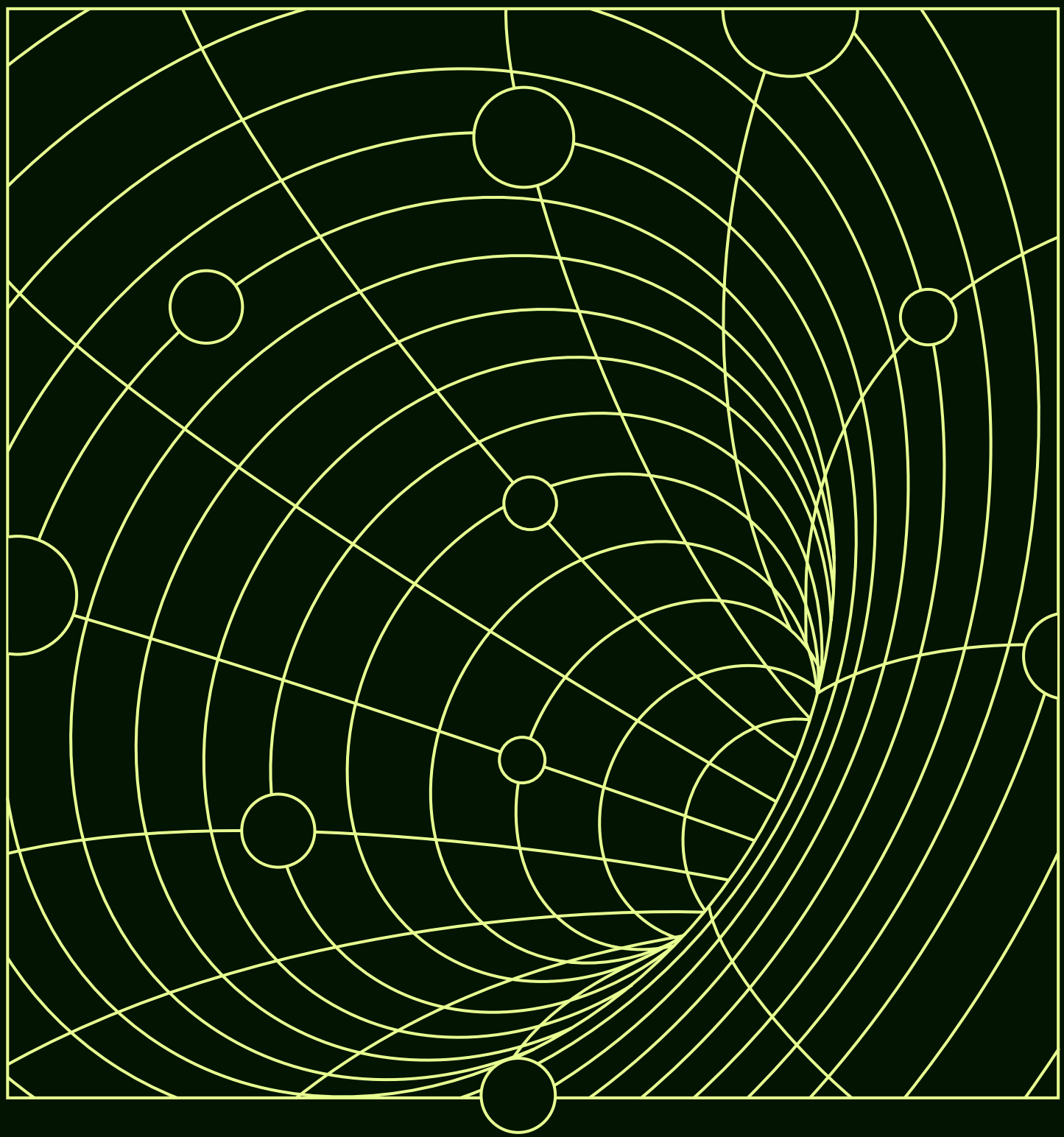

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