

**CISCO** Engage

Tech Day

# AI-Driven Unified Observability

*Building Resilient Operations  
with Splunk & Cisco*

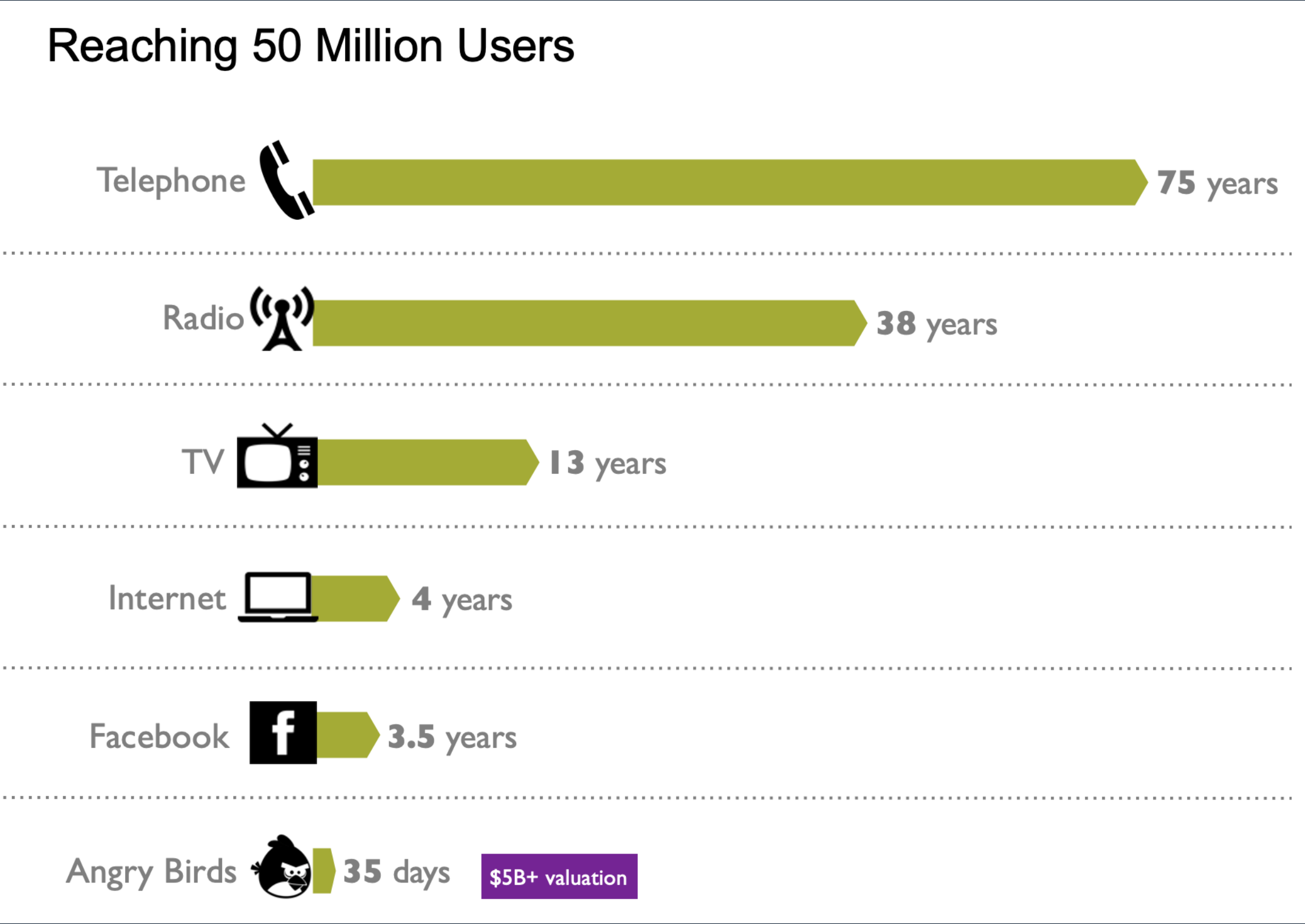
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Solutions Architect, Splunk Observability

17 December 2025  
Scottsdale, AZ



# Reaching 50 Million Users



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# AI-Driven Unified Observability

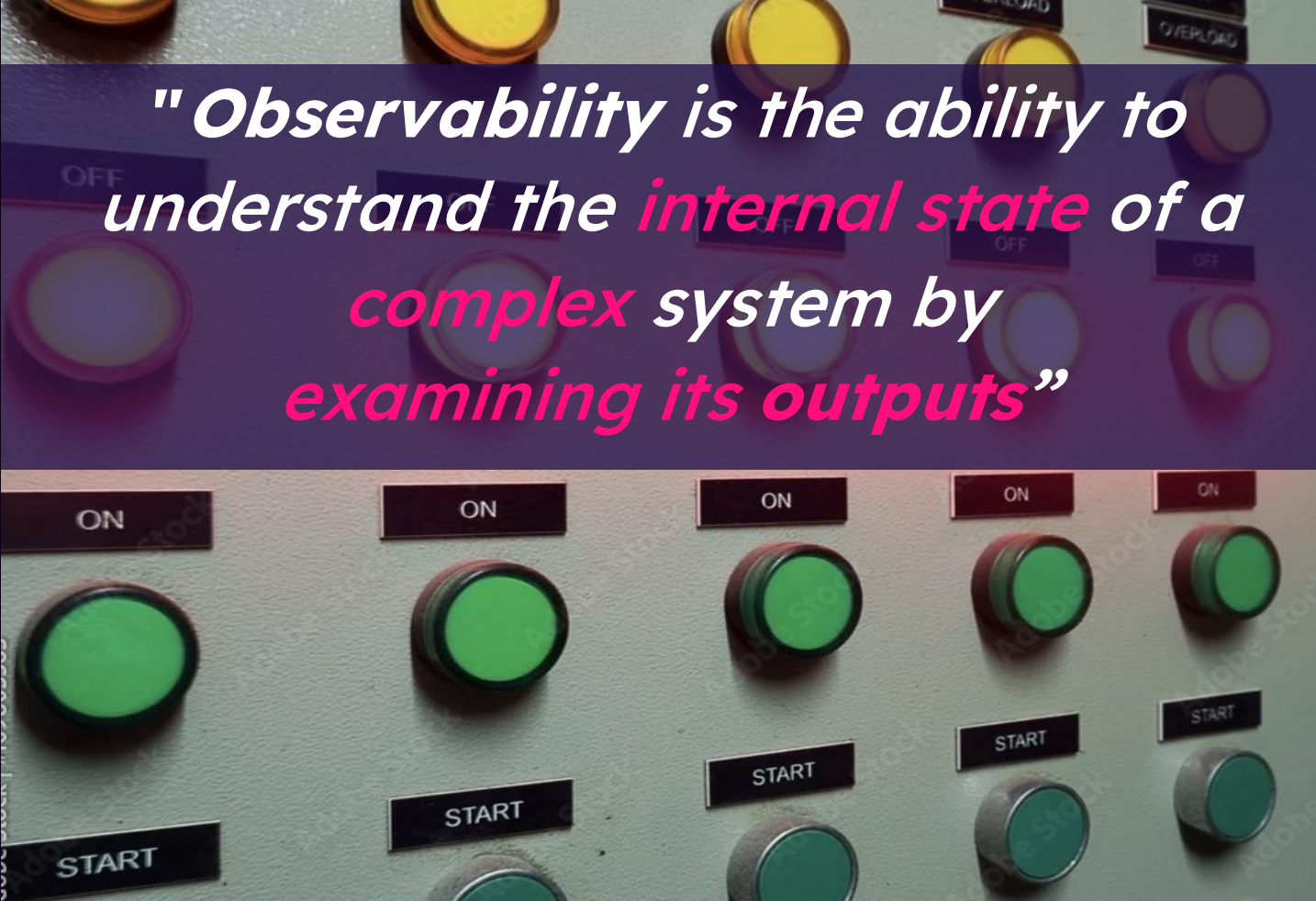
*Building Resilient Operations with Splunk & Cisco*

## Agenda

- 01 **Today's Observability Challenges**  
*Why traditional tools fall short ?*
- 02 **Unified Observability**  
*Troubleshoot and pinpoint root cause end to end visibility*
- 03 **AI as Force Multiplier**  
*AI in Observability & Observability for AI*
- 04 **Demo**  
*Walkthrough of Splunk Observability*
- 05 **Key Takeaways**  
*How these innovations impact your business*



# What is Observability?



*"Observability is the ability to understand the **internal state** of a **complex system** by **examining its outputs**"*

**Control Systems**



*"Ensures the **resilience** of digital systems and reduces the **human toil** of operating them by letting **software** do more of the **heavy lifting to identify problems, find root causes and take corrective action.**"*

Minimize or prevent **business impacting** problems

**Complex Digital Systems**

# Monitoring Vs Observability

**Tells You**

**Failures**

**Data Fidelity**

**Alerting**

**Cross System  
view**

**RCA**

## Monitoring

**IF** something is broken

Identifies **known** failures

**Aggregated / sampled** logs  
and metrics

**Reactive alerts** based on  
static thresholds

**Point tools** for each domain

**Manual correlation** of data  
slows down RCA

## Observability

**When, why, and how** something  
broke

Identifies and Investigates  
**unknown / novel** failures

**Full-fidelity** logs, metrics and  
traces

**Proactive alerts** to prevent  
issues

**Unified** correlated solution

**Real-time automated  
correlation** to speed RCA



# Observability improves digital resilience

Leaders are able to find and fix problems faster, ensure reliability, and build better digital experiences

**38%**

More time spent on innovation

**2.6X**

Higher annual return on observability solutions

**76%**

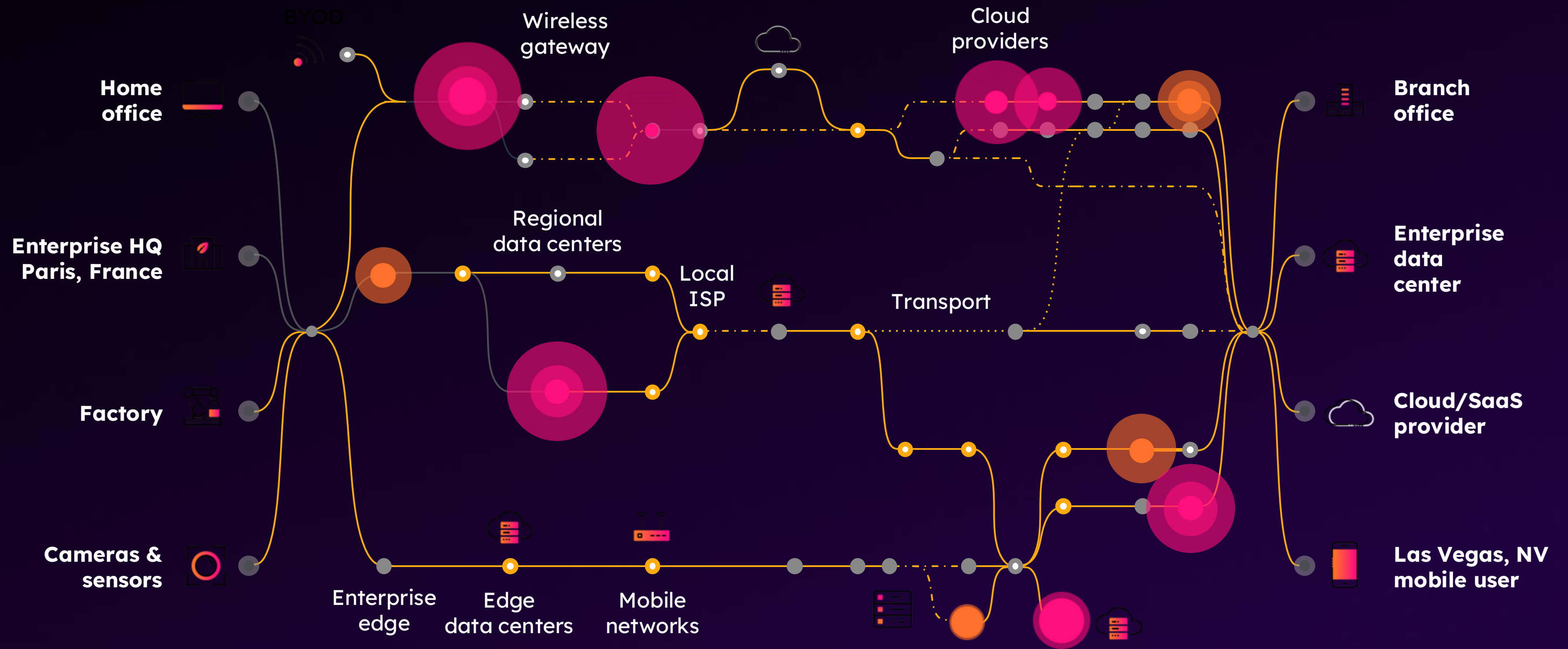
Higher change rate success for production code

**2.8X**

faster detection of application problems



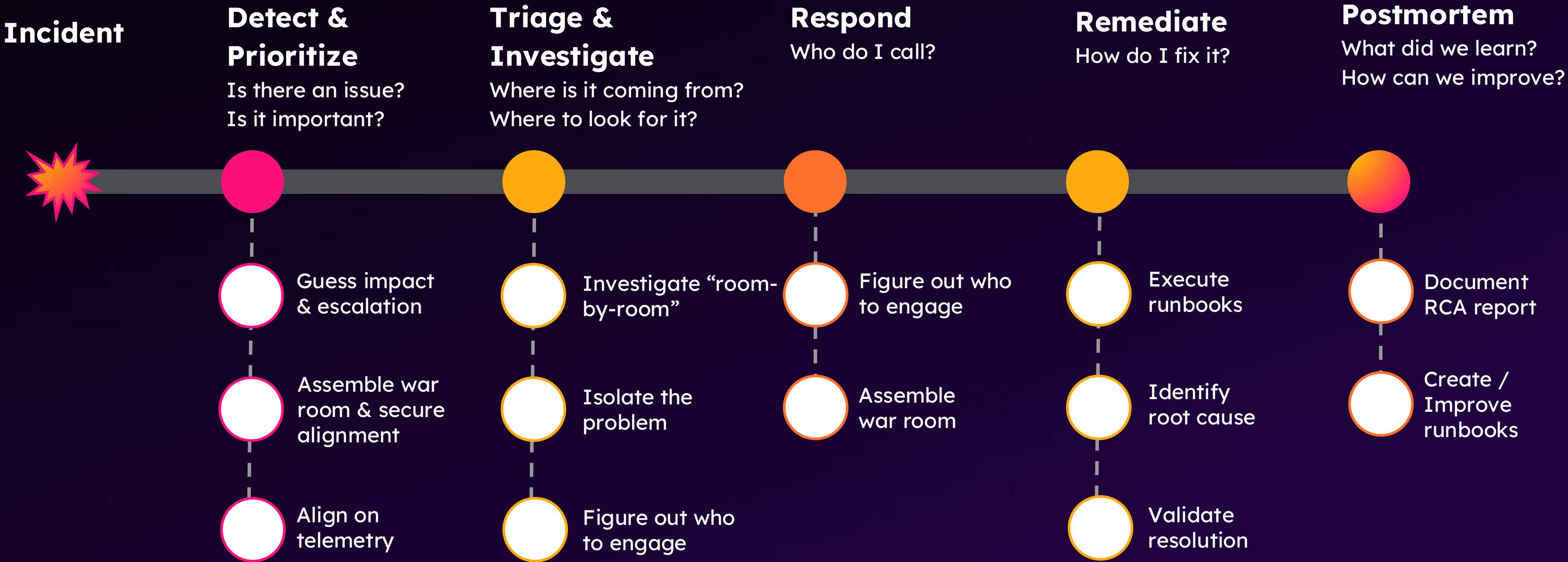
# Digital footprints are **complex**





# Incident Management Workflow

The Workflow that AI is about to Transform



# Today's Observability Challenges



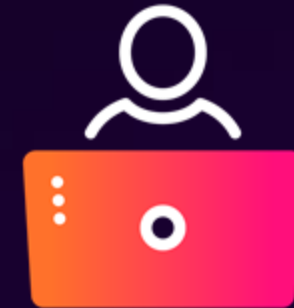
## Visibility Gaps

**More Stacks & Data  
results in Less Clarity**



## Lack of Unified Observability

**Too Many Tools,  
Too Little Insight**

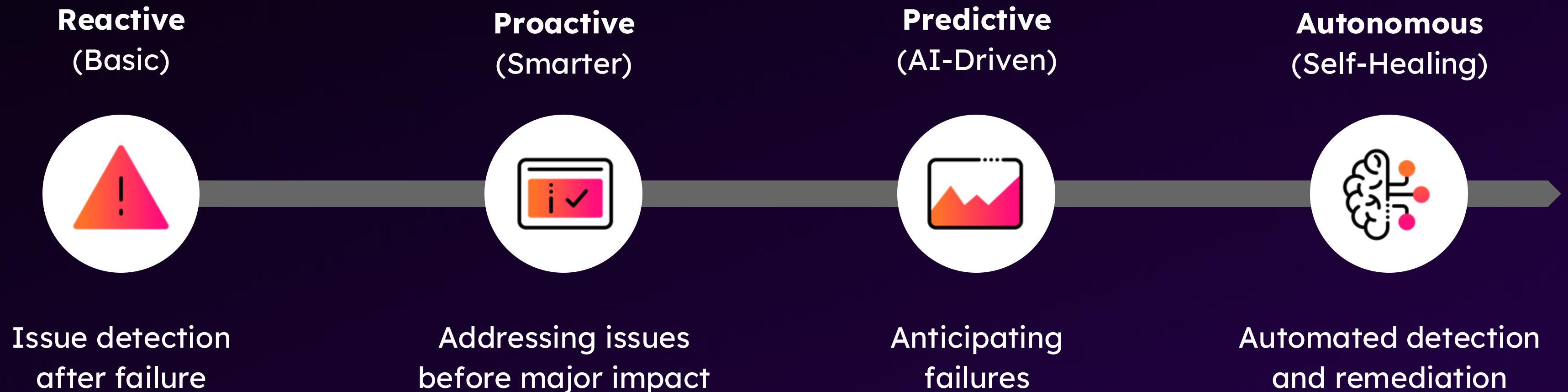


## Data Explosion & AI

**Data Outpaces  
Human Insight**

# The Evolution of Monitoring & Observability

From Reactive to Autonomous: Tracing the Journey to AI-Driven Observability





# AI-Driven Unified Observability

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A complex network graph is drawn on a chalkboard. The graph consists of numerous nodes, represented by small circles in various colors (white, yellow, red, blue, green, pink), interconnected by a dense web of thin lines (edges). The nodes are distributed across the entire surface of the chalkboard, with some clusters and many isolated connections. The background is a dark, textured green chalkboard surface.

It has to be the “Network!”



# Splunk Observability

Build a leading observability practice in the AI era

## Unified Observability Experience

APM

Infrastructure  
Monitoring

Digital  
Experience  
Monitoring

Business  
Insights

Application  
Security

Observability  
for AI

Network  
Observability

Traditional  
Environments

## Splunk Platform

Cloud native  
environments

Federation

Log Analytics

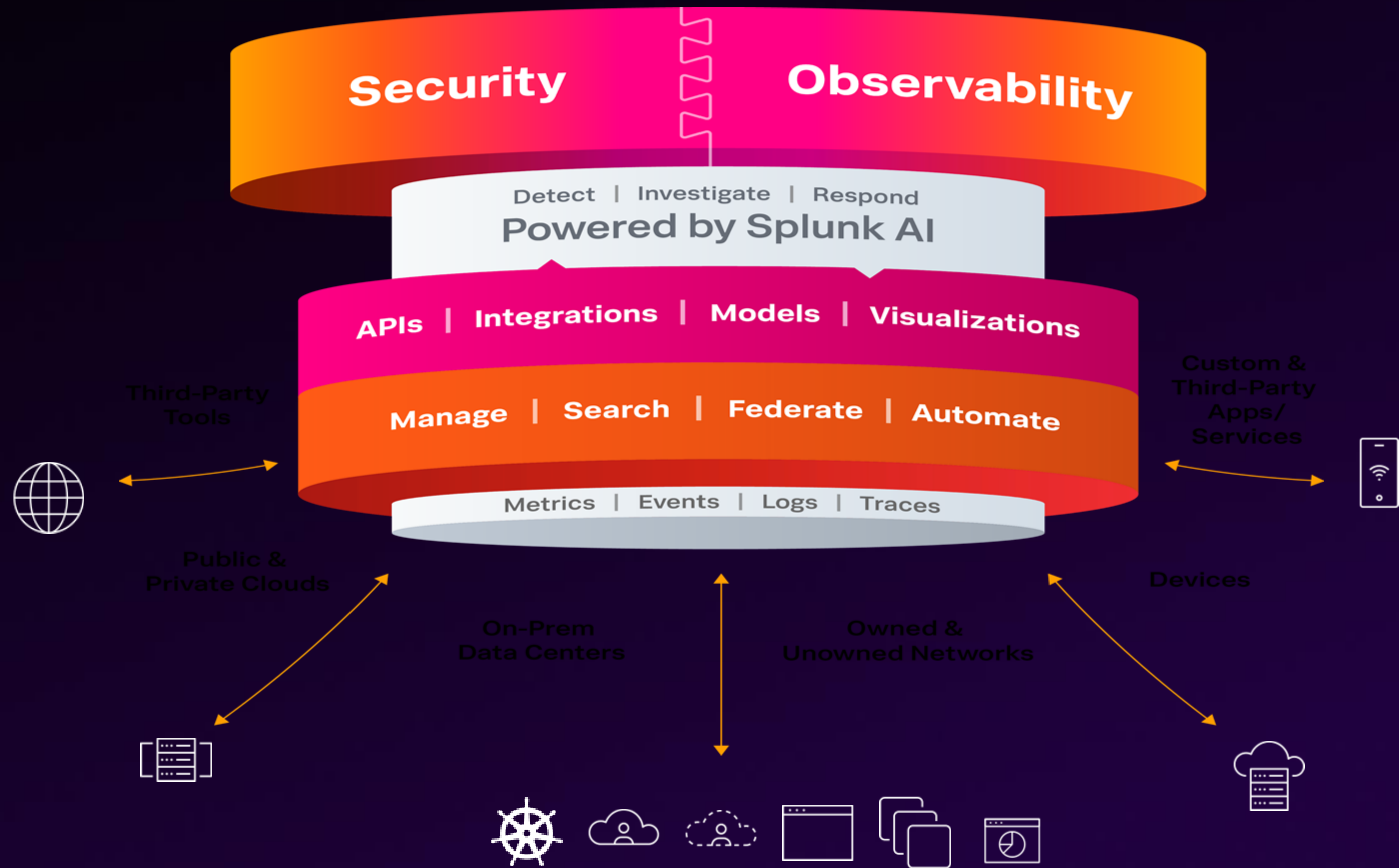
Event Intelligence



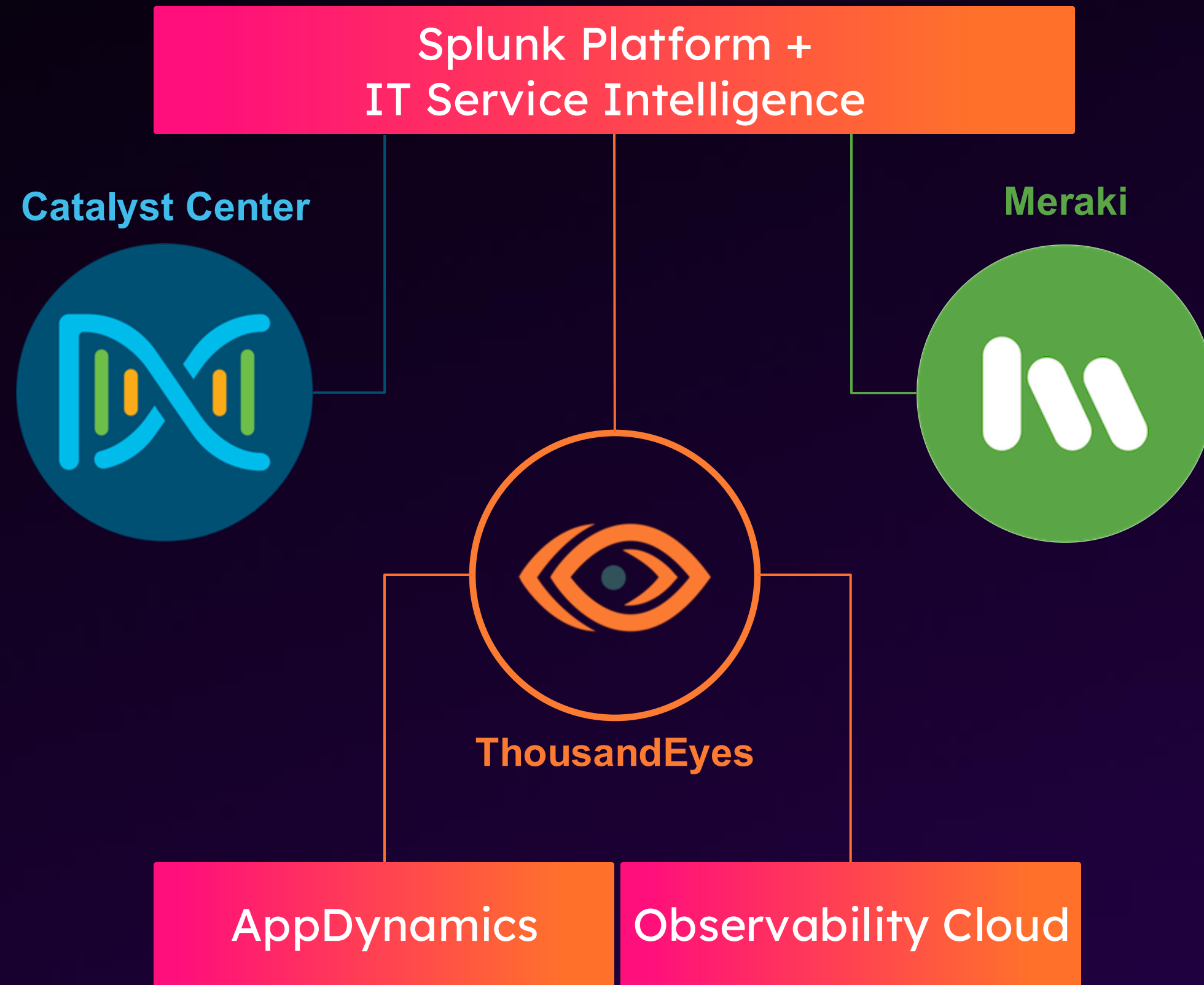
OTEL Compliant



# Splunk Platform Advantage



# Splunk Observability + Cisco Networking



# Use cases for integrated network observability

## Correlate Network Domains

**Assure network service health by unifying visibility and reducing alert noise across network domains (ThousandEyes, Catalyst Center, Meraki).**

- Splunk ITSI content packs for Cisco Enterprise Networking (Catalyst Center and Meraki)
- Splunk ITSI content pack for ThousandEyes

## Pinpoint Network Impact on App Performance

**Troubleshoot app performance problems with dependencies on owned and unowned networks.**

- ThousandEyes integration with Splunk Observability Cloud APM
- ThousandEyes integration with Splunk Observability Cloud RUM
- ThousandEyes integration with Splunk AppDynamics



# Splunk ITSI & Cisco Enterprise Networking

Enterprise Network Monitoring for branch & campus to quickly pinpoint site & device issues in Cisco networks

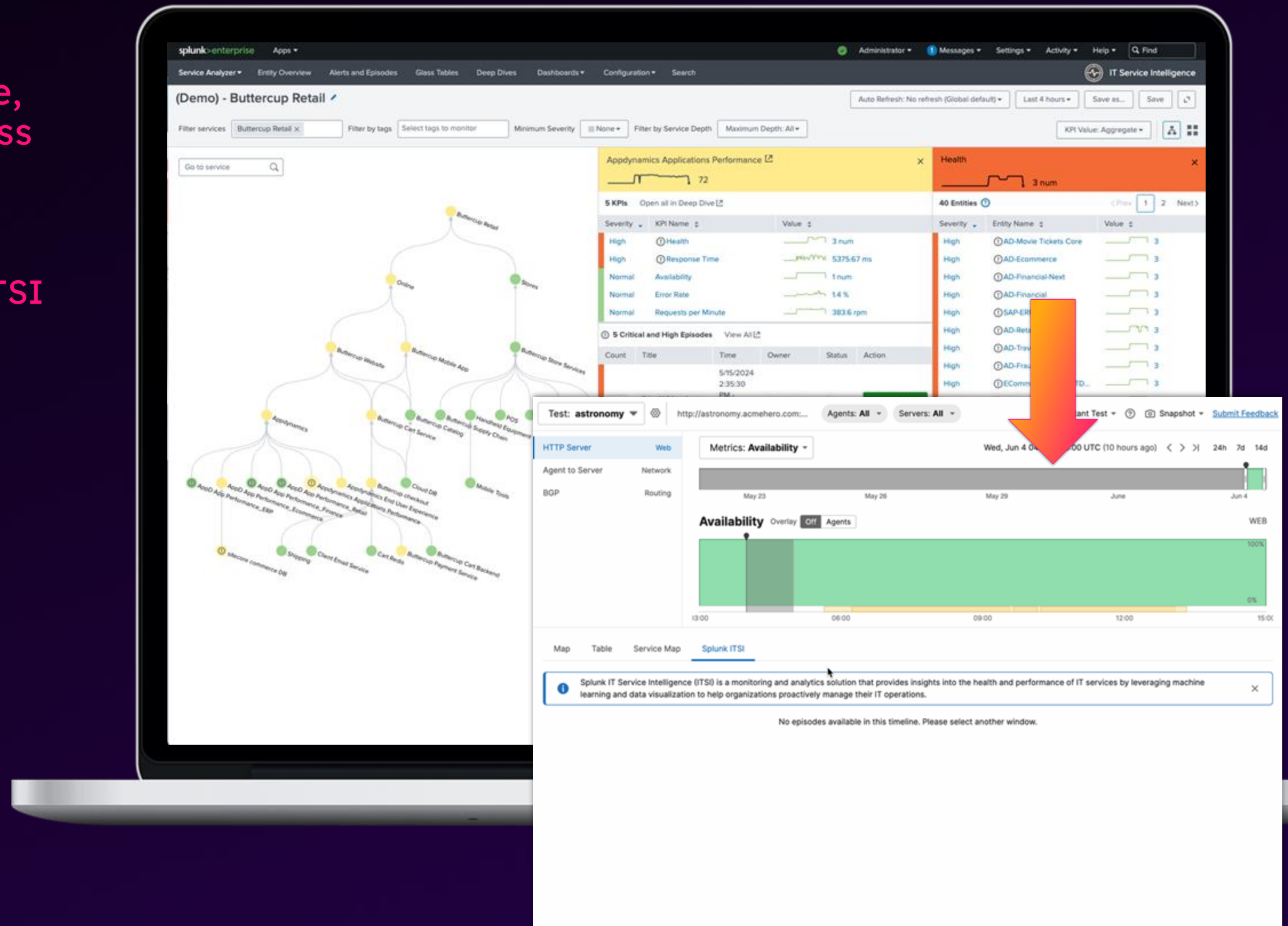
- ITSI content packs for **Catalyst Center** and **Meraki**
- Cross-domain correlation for reduced alert noise and domain isolation
- Out-of-the-box **topology** to measure the health of a location (e.g. retail store) and isolate problematic devices
- Device alert import, normalization, deduplication, and correlation logic
- Insights for problem troubleshooting (e.g. recent configuration changes)
- **In-context guidance** into Catalyst Center & Meraki to take action on devices



# Splunk ITSI & ThousandEyes

End-to-end visibility of apps, infrastructure, and network health correlated with business KPIs

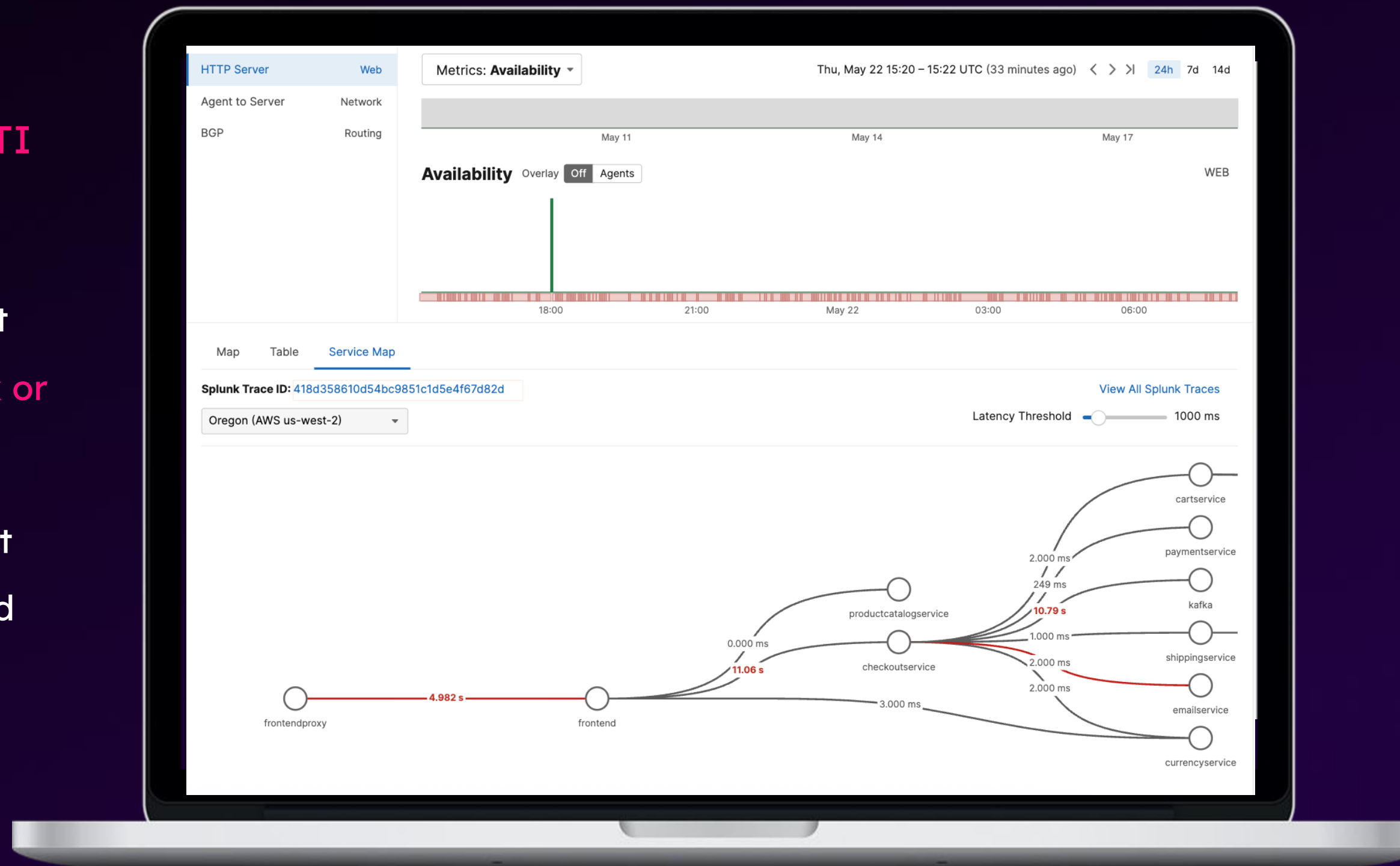
- Integrate alerts from ThousandEyes into ITSI to reduce alert noise and accelerate MTTR
- Bring network performance & business metrics from ThousandEyes into ITSI for faster troubleshooting based on impact
- Centralize network telemetry and incident response from ThousandEyes, and across other Cisco solutions
- In-context directed troubleshooting into ThousandEyes



# Splunk Observability Cloud APM & ThousandEyes

End-to-end visibility across ThousandEyes tests and Splunk APM traces for faster MTTI & MTTR

- Quickly diagnose failing ThousandEyes test
- Understand if slowness is from the network or application layer
- View trace topology and key intra-service metrics in context of the ThousandEyes test
- Easily set up tests for services instrumented in Splunk Observability Cloud from the ThousandEyes UI

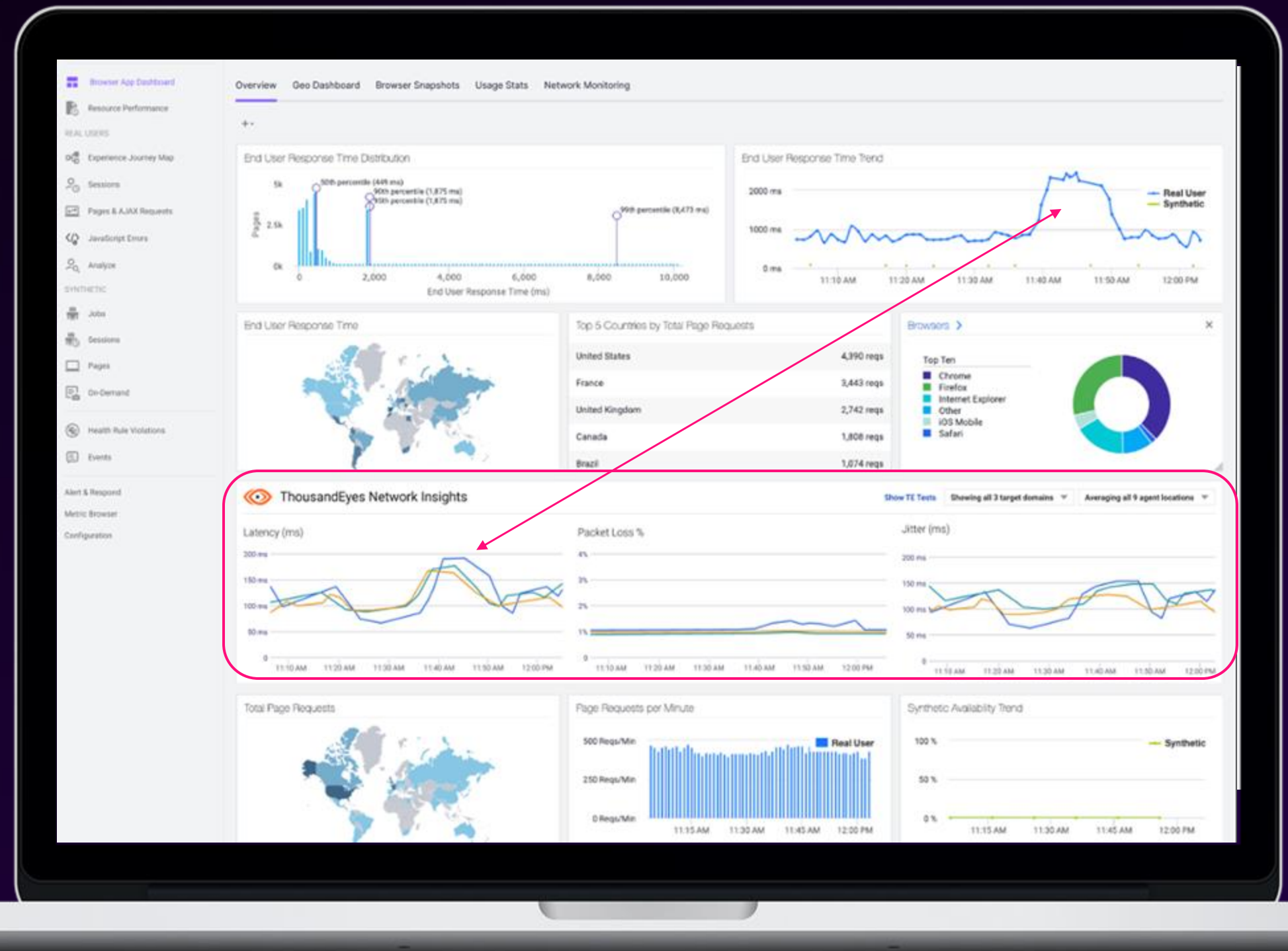




# Splunk AppDynamics & ThousandEyes

Gain detailed insights into how owned networks and the public internet impact user experience

- Gain **unified digital journey visibility** by integrating ThousandEyes & AppDynamics.
- **Accelerate issue resolution** by linking user experience insights with deep network intelligence.
- Sync network test creation with application mapping for comprehensive performance monitoring.
- Proactively **enhance user experiences** using integrated RUM and network data for data-driven optimizations.



# AI-Driven Unified Observability

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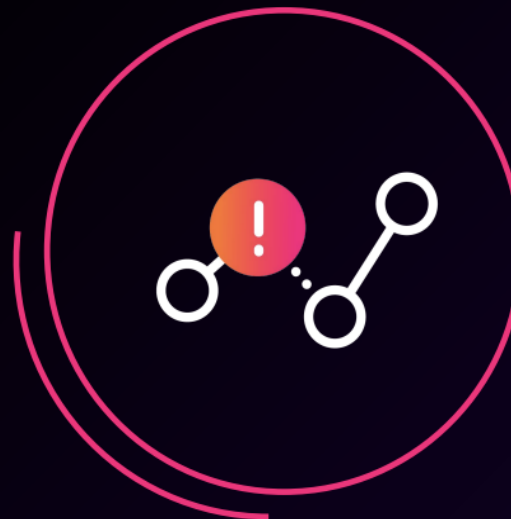
# Our approach toward ML and AI



**Generative AI**

## **Make everyone an expert**

Reduce need for environment  
and tool expertise by  
simplifying analysis and  
investigations



**Machine and Deep Learning**



## **Correlate and diagnose**

Aggregate and analyze  
all data to investigate  
and identify root cause

## **Detect and predict**

Real-time,  
streaming analysis  
to detect anomalies  
and forecast trends

# AI is rewriting the rules

...for what it takes to build a leading observability practice



**Apps can now be written with little human involvement**



**AI agents will perform troubleshooting & fixes**



**AI apps require new forms of telemetry**

## Three key innovation areas in Splunk Observability

### 1. Unified Observability

Instrument and monitor three-tier and microservices environments in one solution, with deeper **business context**.

2. **Agentic AI** to assist setup, and detect, identify root causes and fix problems before they turn into business-impacting incidents.

3. Monitor the health, performance, quality, and cost of the entire **AI application stack**, including agents, LLMs, and AI infrastructure.



# AI Embedded across Incident Response

Minimize & prevent incidents

Readiness

Incident Detection

Prioritization

RCA & Response

Remediation

Analysis

## AI Agents for Ingest & Setup

### AI Detection Agents

- Zero-config automated detection
- **Predictive alerting**
- Smart alert correlation and summarization

### AI Troubleshooting Agents

AI-directed troubleshooting to find **Root Causes** and surface business and end user impact

### AI Remediation Agents

Automated / Human-in-loop **Remediation**

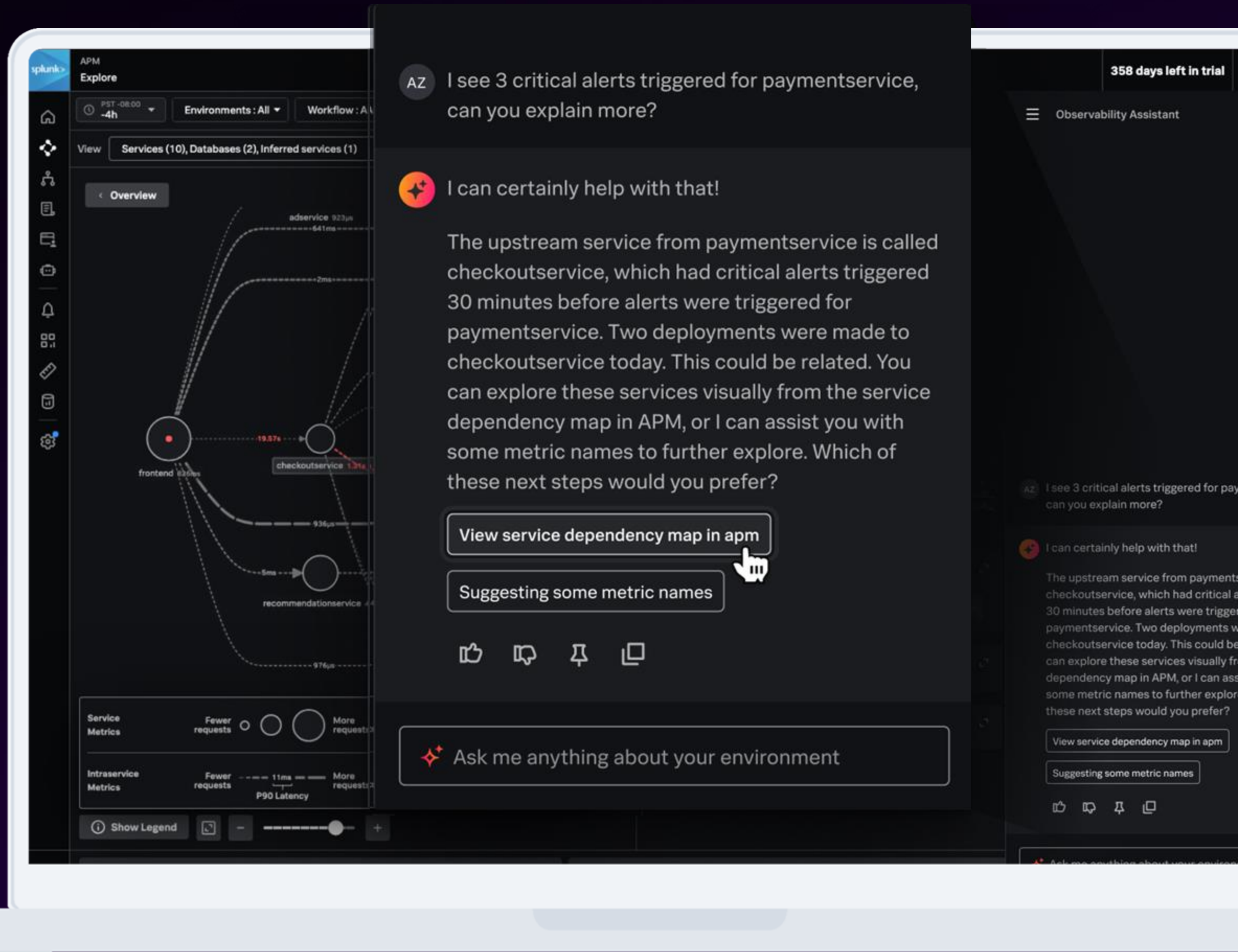
## AI-Native User Experience

- **Chat-based AI Assistant** for easy, interactive insights [Available Now]
- **Dynamic, collaborative** user interface with **AI Canvas**, and embedded in-product AI experiences
- **Observability MCP servers** and Slack / Teams AI agents to unlock observability in the developer / SRE workflows

# AI-Powered Observability

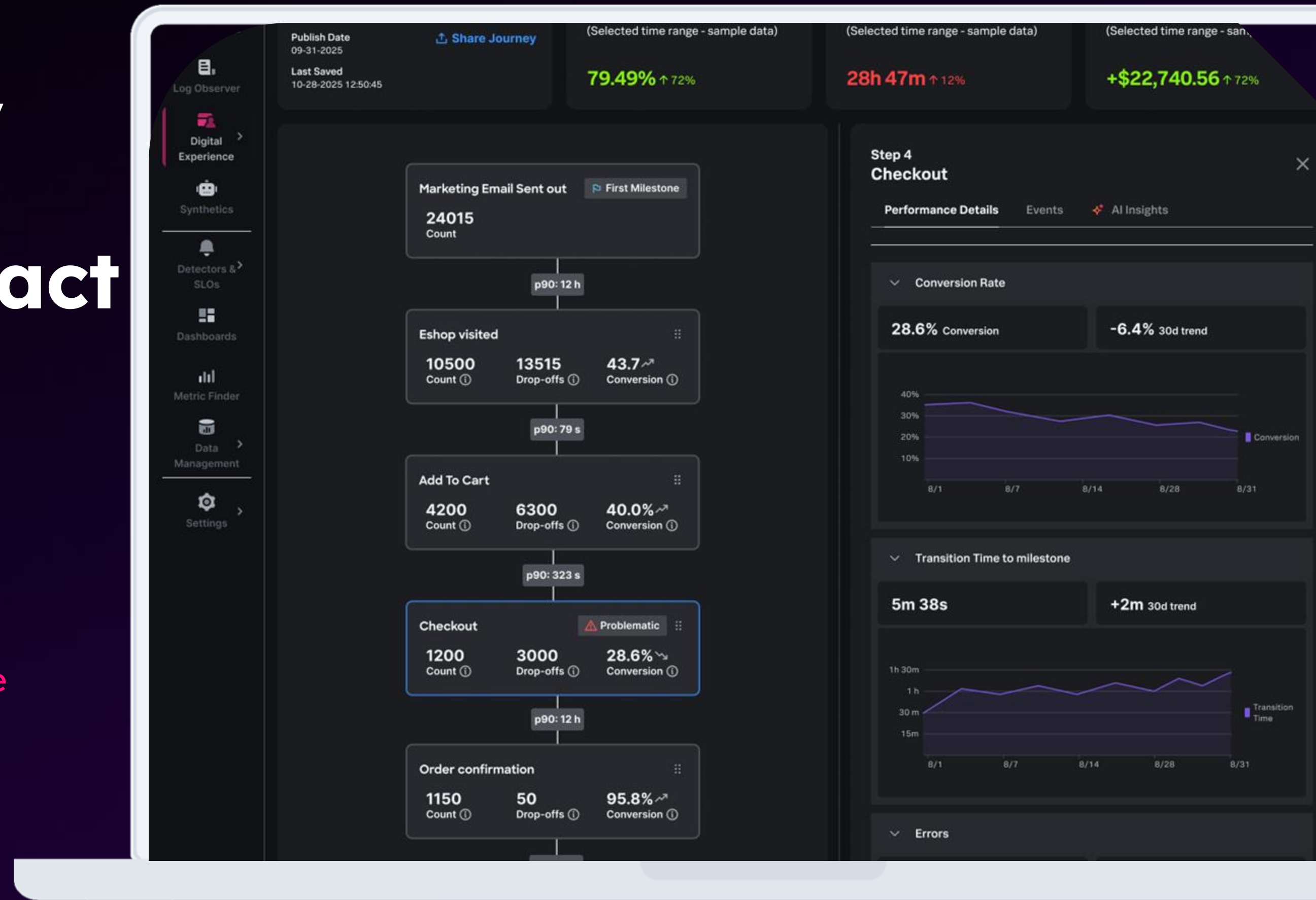
AI helping across your entire incident lifecycle

- **AI Assistant & Agents** help across the incident lifecycle
- **Faster, more accurate detection:** More accurate alerting, predictive analytics, and anomaly detection driven by AI
- **Intelligent investigation:** AI-directed troubleshooting and root cause analysis help speed remediation



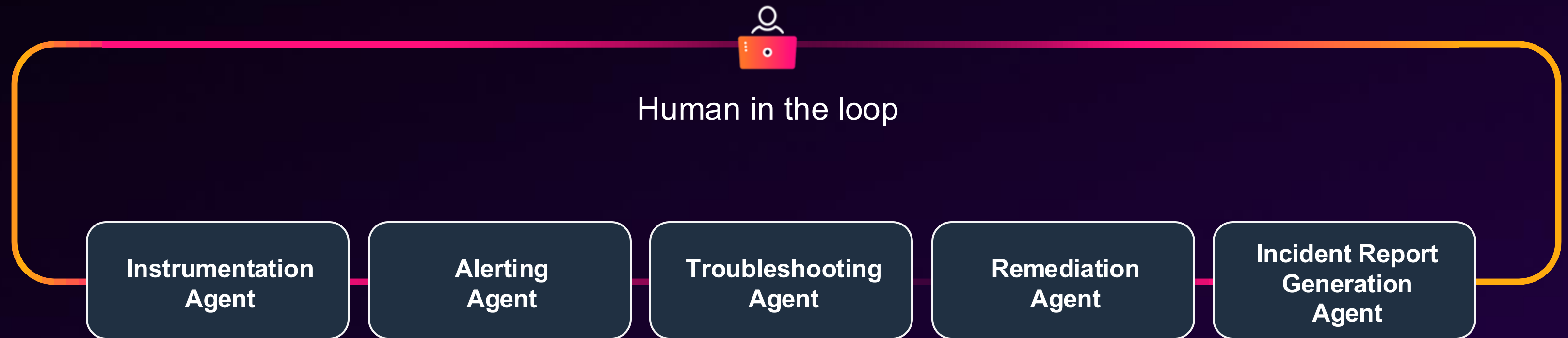
# Unified observability that surfaces business impact

- Monitor and secure **three-tier & microservices** apps in one solution
- Deeper **business context** to prioritize what matters
- Understand and optimize user journeys with **digital experience** analytics



Pictured: Business Insights

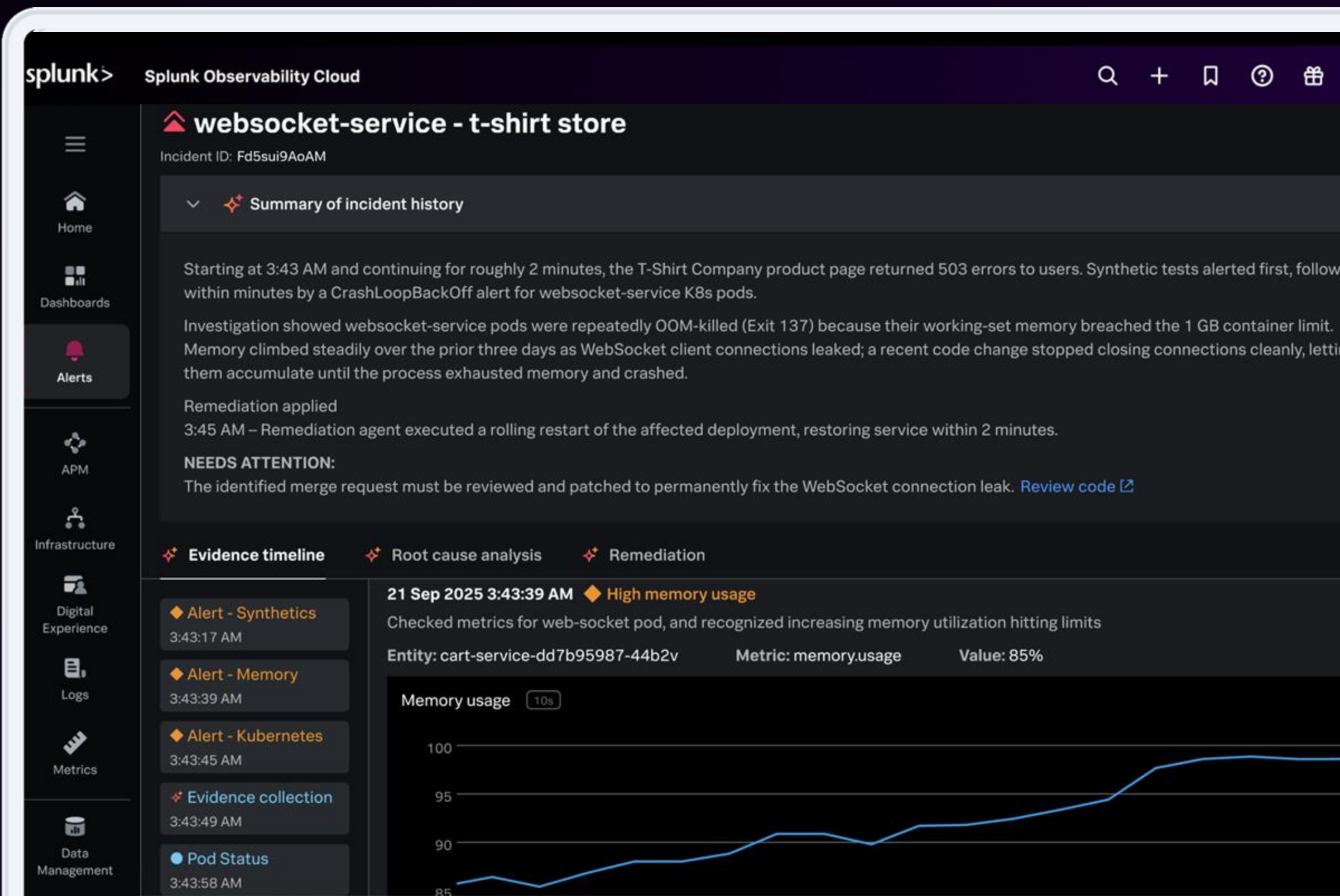
# Fix and prevent with AI agents (Coming soon)



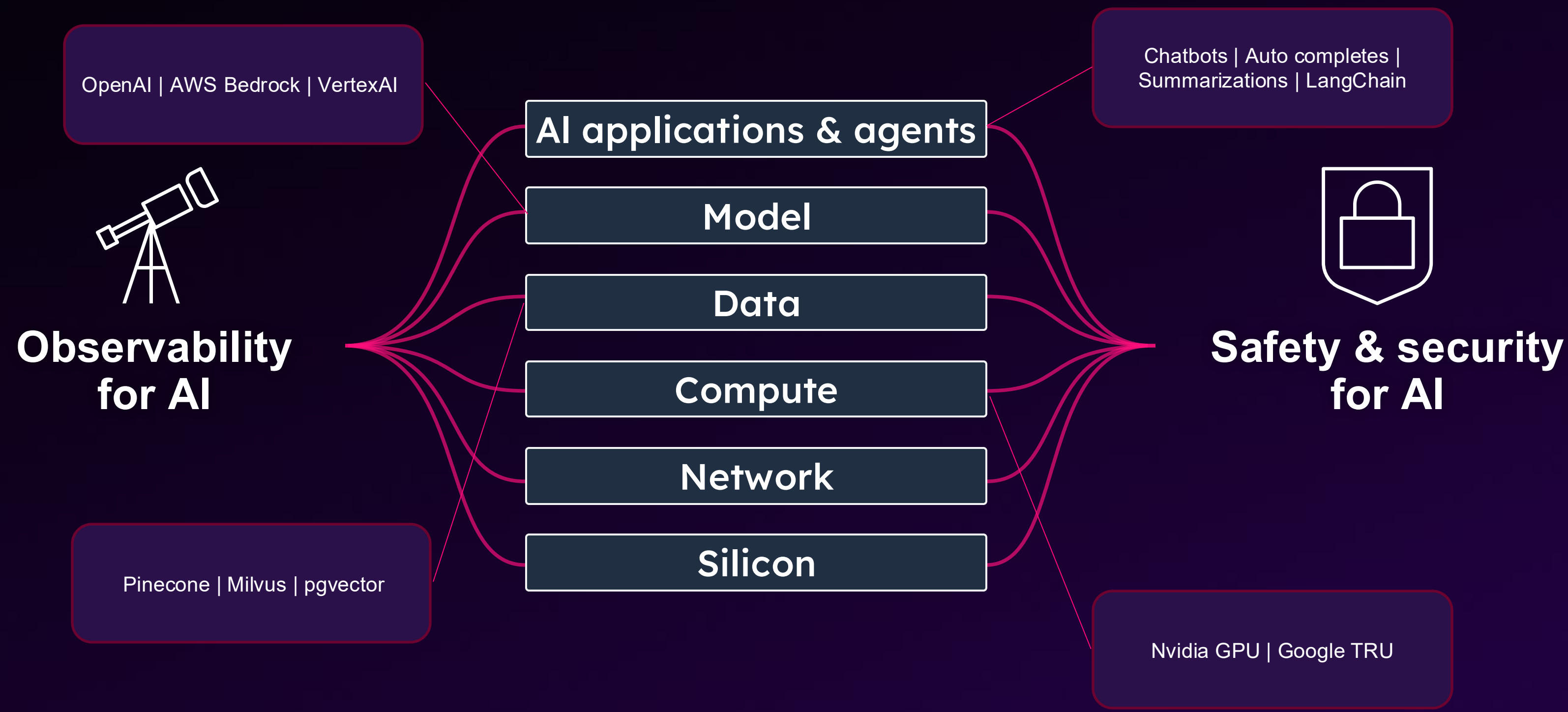


# Fix & prevent problems using AI agents

- **AI-generated RCA** in-context, to reduce MTTI
- AI-directed alert correlation and summarization to **reduce alert noise**
- **AI agents** to prevent problems by optimizing data collection and alert configuration
- AI agents to automate every stage of the incident response lifecycle

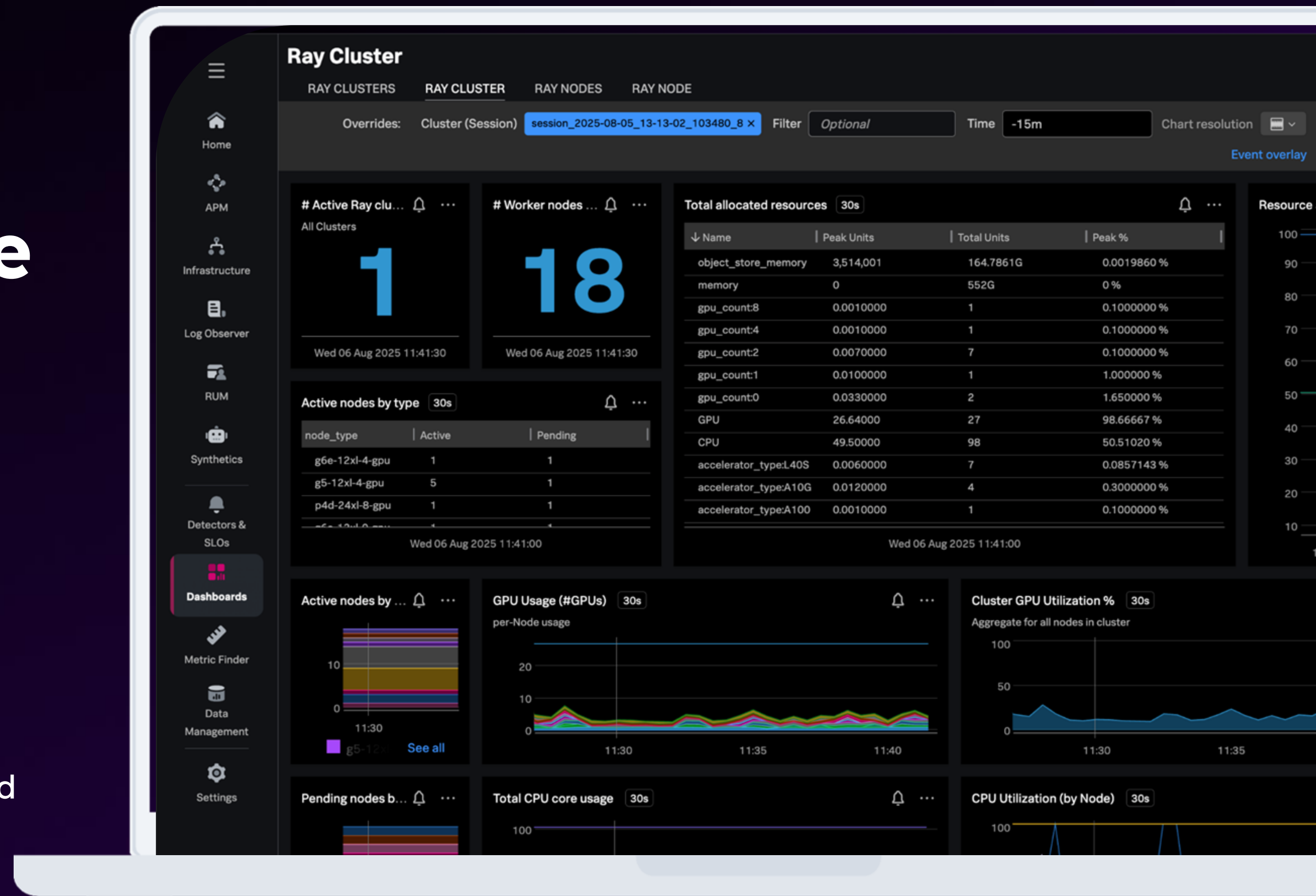


# Observe AI Stack (agents to Infrastructure)



# Observe AI agents & infrastructure

- Monitor the health and consumption of **GPUs, vector databases**, orchestration frameworks & agent platforms to **control costs** & ensure reliability
- Ensure the quality, accuracy, and security of **LLMs and agentic apps** to minimize **bias, inaccuracies, hallucinations**, and costs and performance risks





# Cisco AI Pods

NVIDIA AI Software



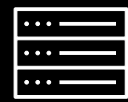
Kubernetes Platform



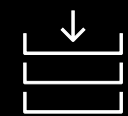
Cisco Networking & Optics



Cisco Compute with  
NVIDIA Accelerated Computing



Partner Storage



Cisco Security



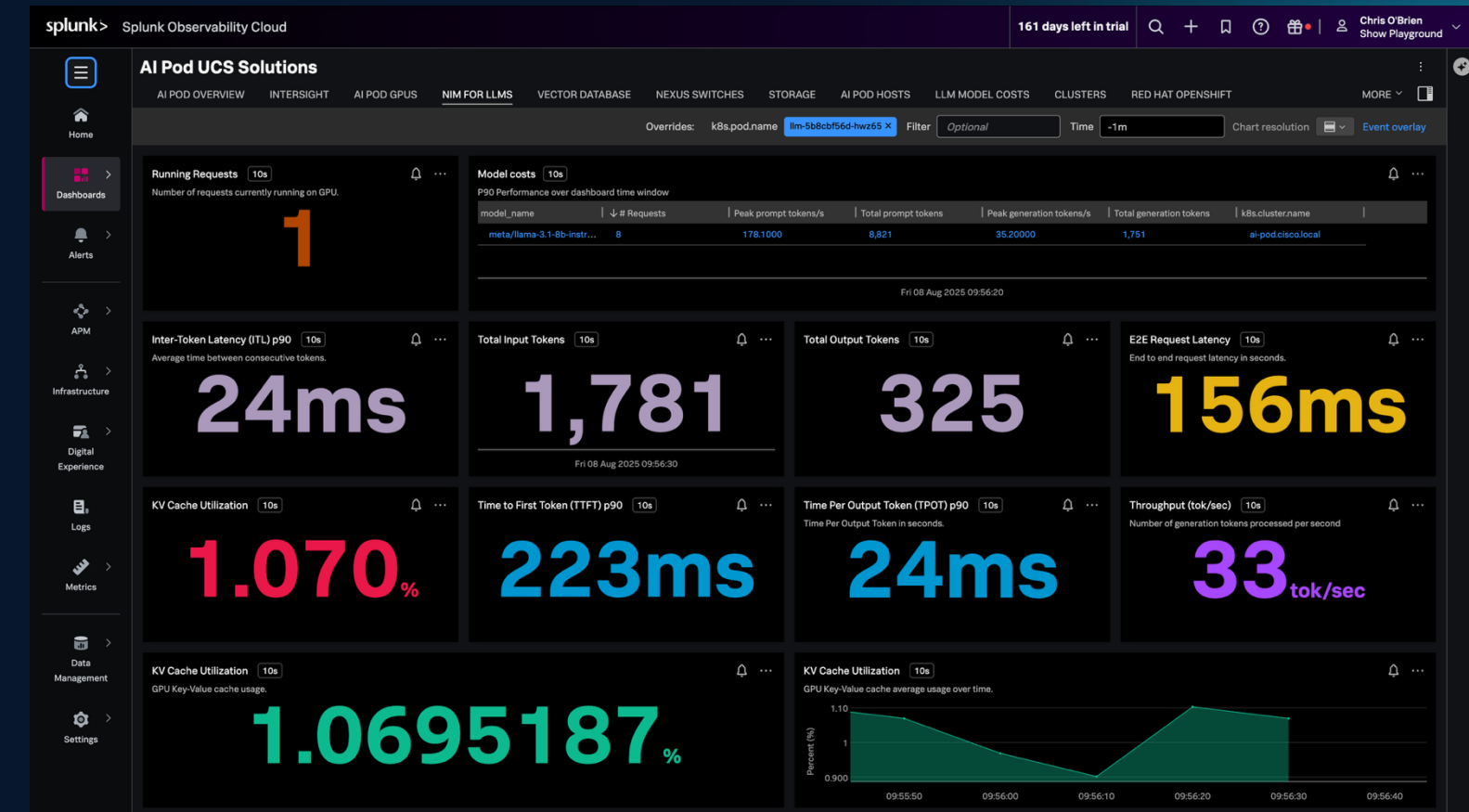
Cisco Observability

Reference architecture

Validated solutions and turnkey offerings

Differentiated with Security and Observability

## Splunk Observability for AI Pods



**OpenTelemetry-native** Own and control your data, avoid vendor lock-in

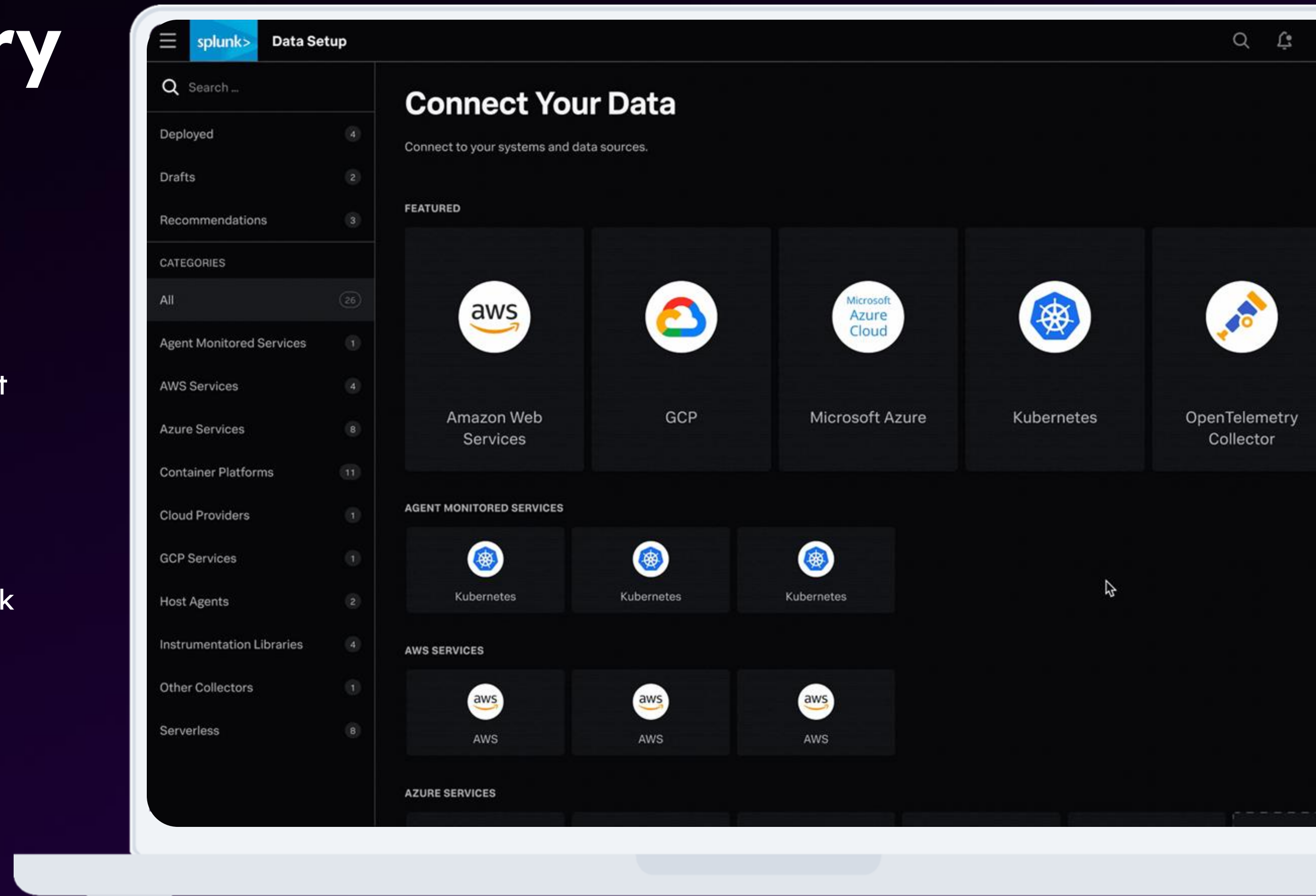
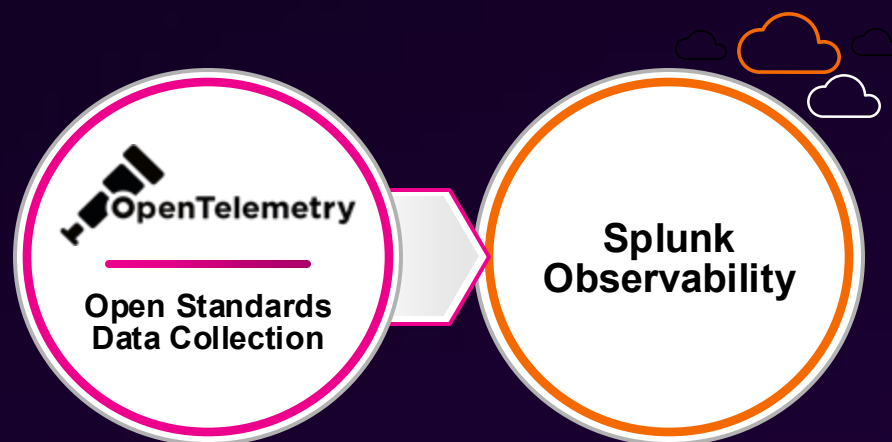
**AI powered analytics and guidance** AI/ML driven features like Service Maps and Trace Analytics provide help resolve issues faster.

**No data sampling** Eliminate blind spots by collecting and analyzing 100% of your data with Splunk's NoSample™ tracing.

# OpenTelemetry Collector

Full control over your data, **no vendor lock-in**

- Single **open standards-based** agent for metrics, traces, logs and more
- **Standardized** naming conventions powers correlation of logs, metrics and traces
- Complements other GDI, e.g. Splunk forwarders, cloud API integrations



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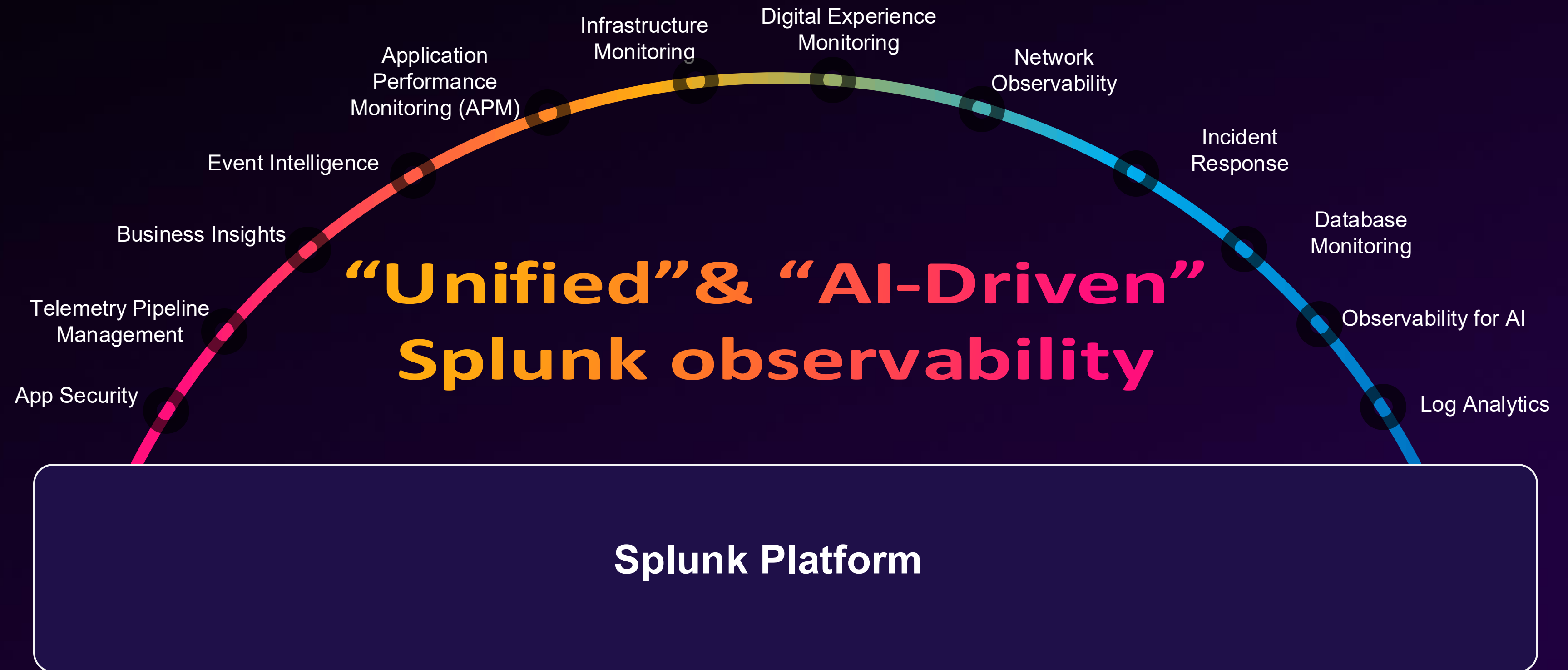
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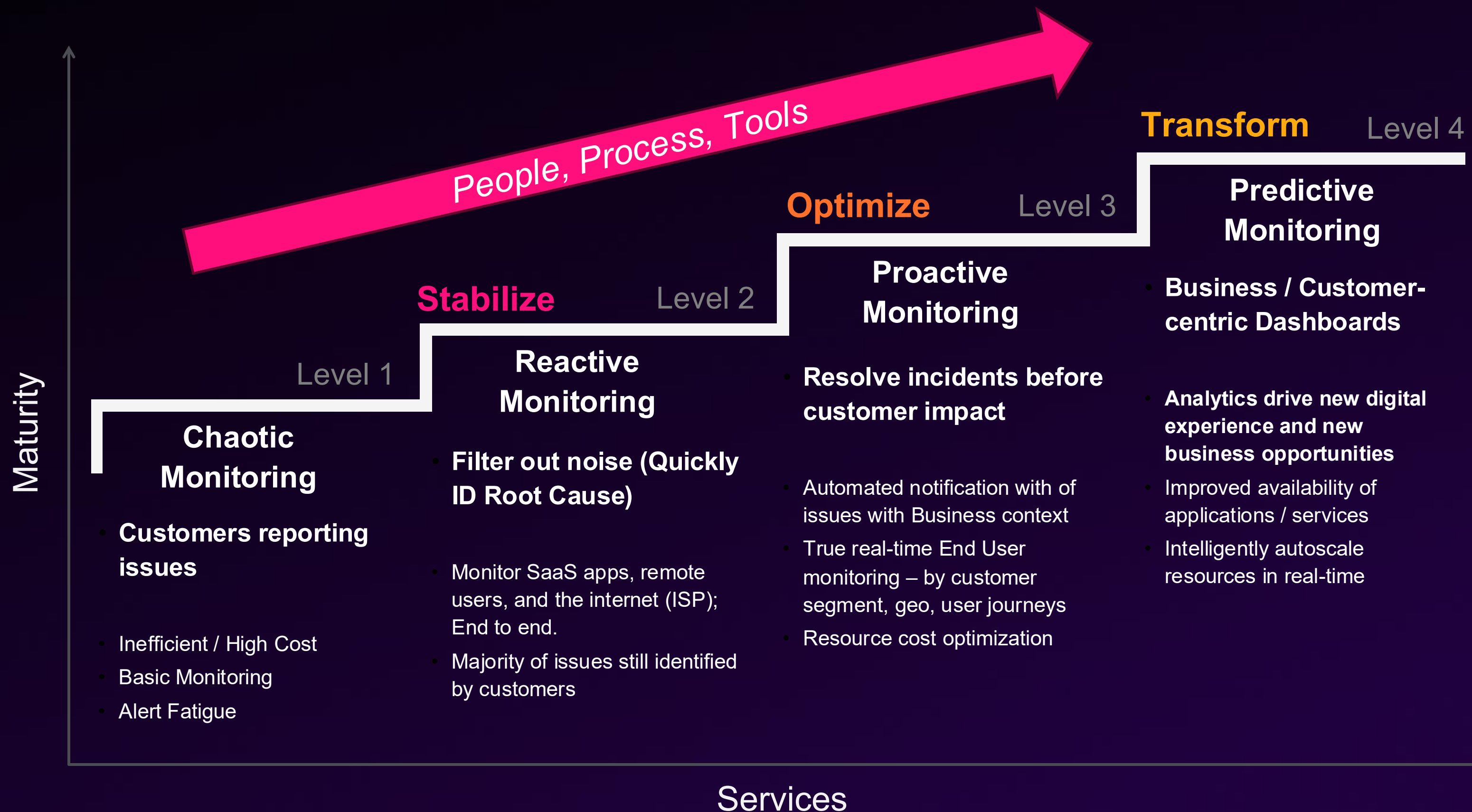


# Key Takeaway

## Build and future-proof resilient operations with...



# Observability - Operational Maturity Model



# Next Steps together

## Use Case Deep Dive

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- Review app architectures
- Prioritize use cases
- Initial Splunk solutioning

*SRE, Software Engineering ,  
ITOps*

## Solution Demonstration

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- Platform Overview
- Live Demo
- Use case walk-through

*SRE, Software Engineering,  
ITOps, Platform Engineering,  
Architecture, Tool Mgmt.*

## Day-in-the-Life Accelerated Workshop

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- RCA Process Overview
- Reverse Demo
- Best Practice & Guidance

*SRE, Software Engineering,  
ITOps, Tool Mgmt.*