

CISCO Engage | Tech Day

AI-Driven Unified Observability

*Building Resilient Operations
with Splunk & Cisco*

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Denver, CO



Reaching 50 Million Users

Reaching 50 Million Users

Telephone   **75 years**

Radio   **38 years**

TV   **13 years**

Internet   **4 years**

Facebook   **3.5 years**

Angry Birds   **35 days** \$5B+ valuation

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splunk>

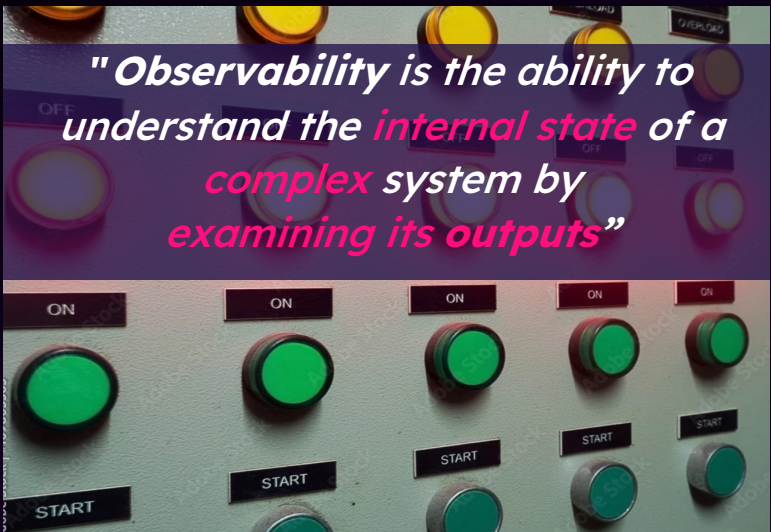
AI-Driven Unified Observability

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

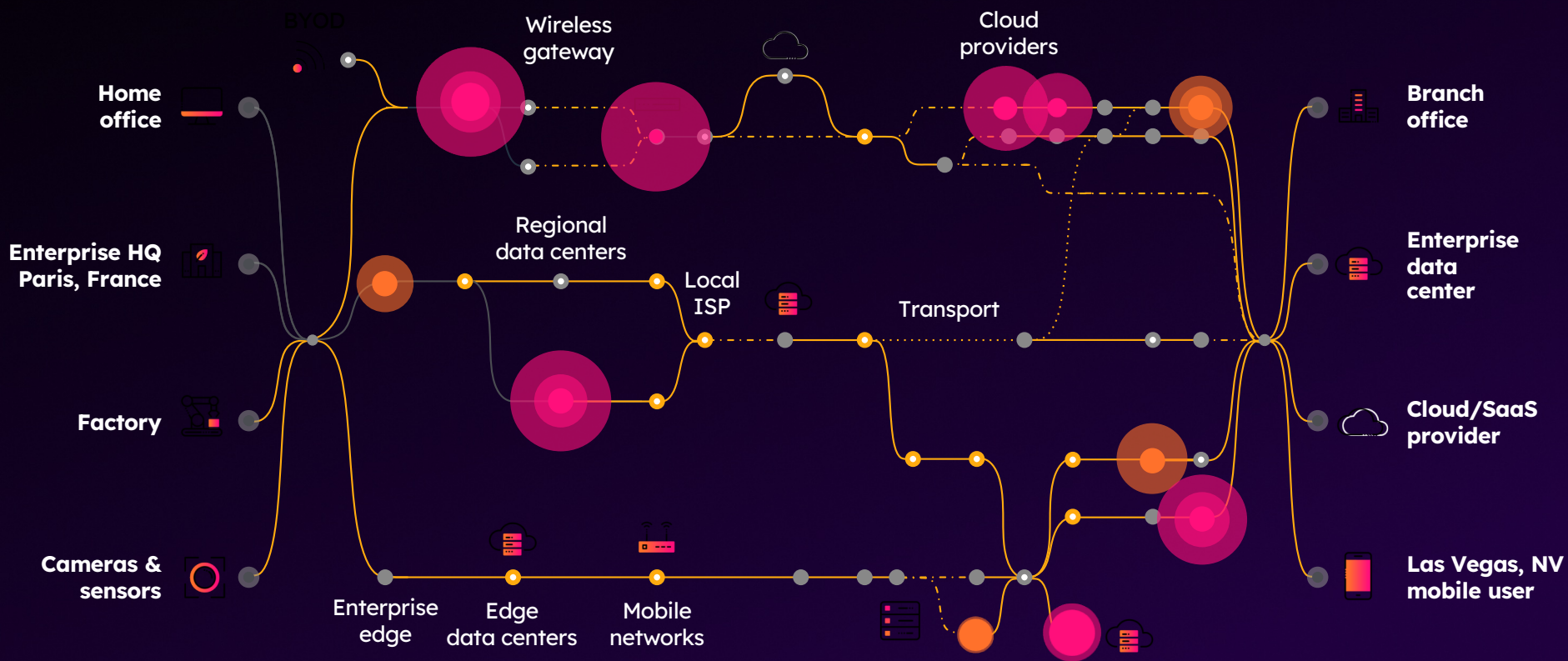
Full-fidelity logs, metrics and
traces

Proactive alerts to prevent
issues

Unified correlated solution

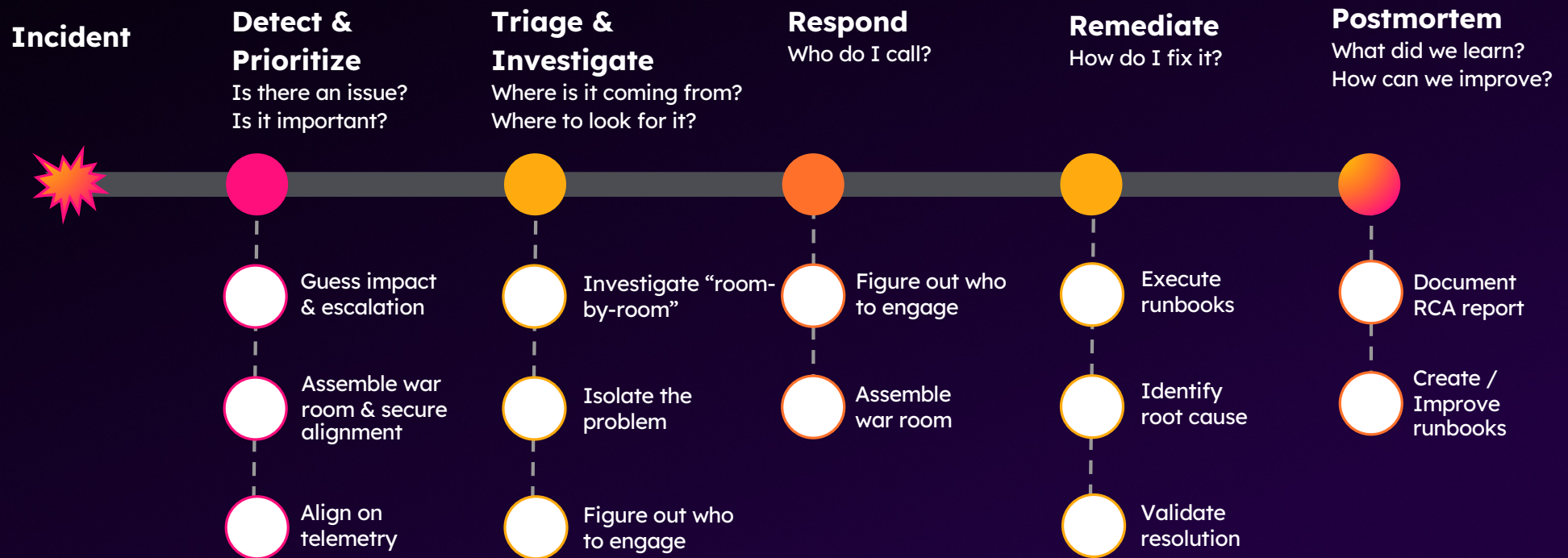
Real-time automated
correlation to speed RCA

Digital footprints are **complex**



Incident Management Workflow

The Workflow that AI is about to Transform



The Evolution of Monitoring & Observability

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

Reactive
(Basic)



Issue detection
after failure

Proactive
(Smarter)



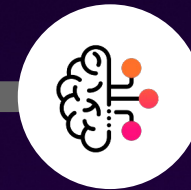
Addressing issues
before major impact

Predictive
(AI-Driven)



Anticipating
failures

Autonomous
(Self-Healing)



Automated detection
and remediation

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It has to be the **“Network!”**

Splunk Observability

Build a leading observability practice in the AI era

Unified Observability Experience



Traditional Environments

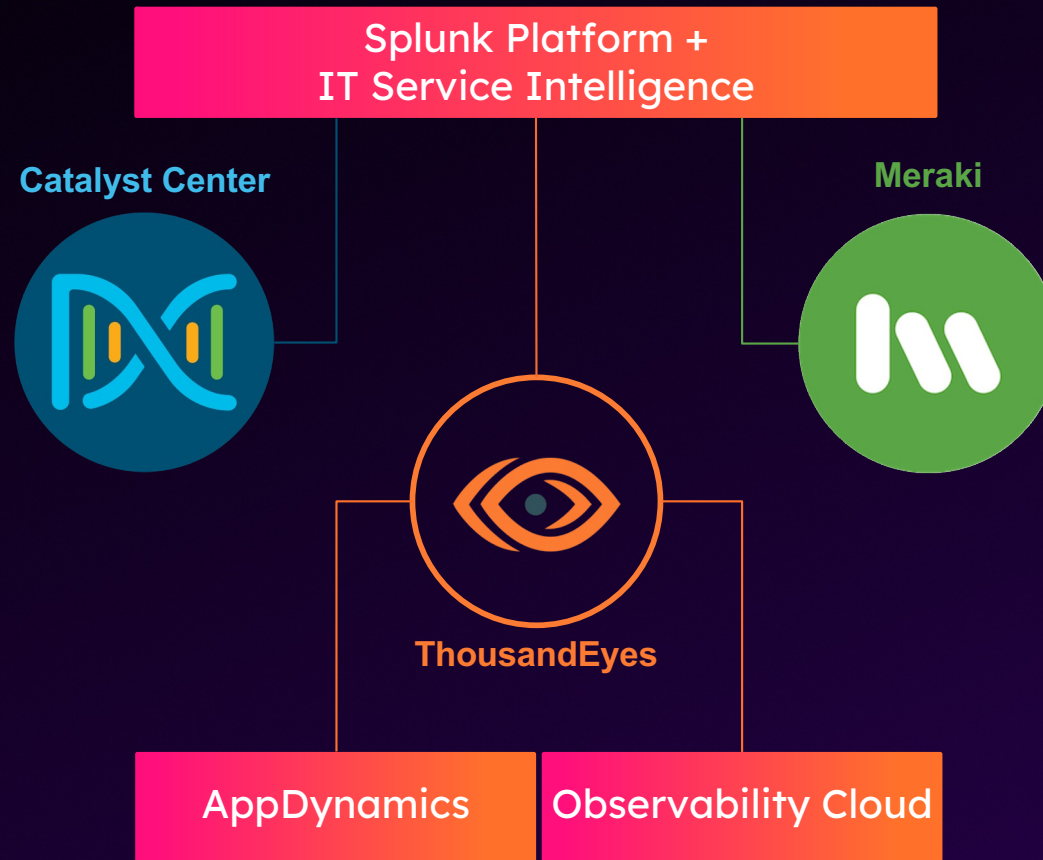
Splunk Platform

Cloud native environments



OTEL Compliant

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

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Our approach toward ML and AI



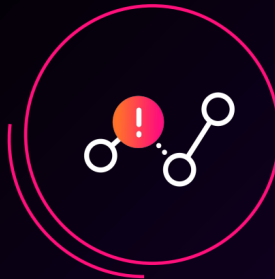
Generative AI

Make everyone an expert

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

Detect and predict

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



Machine and Deep Learning



Correlate and diagnose

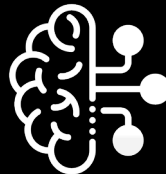
Aggregate and analyze all data to investigate and identify root cause

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.

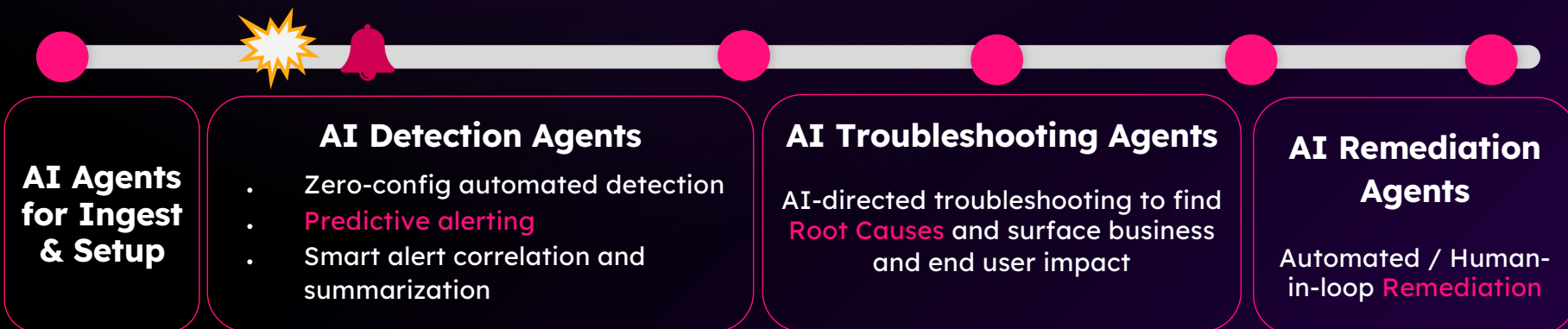
3. Monitor the health,

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-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

The image shows a laptop displaying the Splunk APM interface. The main screen shows a service dependency map with nodes for 'frontend', 'adservice', 'checkoutservice', and 'recommendationservice'. A chat window is overlaid on the right side of the screen, featuring an AI Assistant (AZ) that responds to a user query about critical alerts for 'paymentservice'. The chat window includes a text input field with a placeholder 'Ask me anything about your environment' and several buttons: 'View service dependency map in apm', 'Suggesting some metric names', and a set of social sharing icons (thumbs up, thumbs down, share, and print).

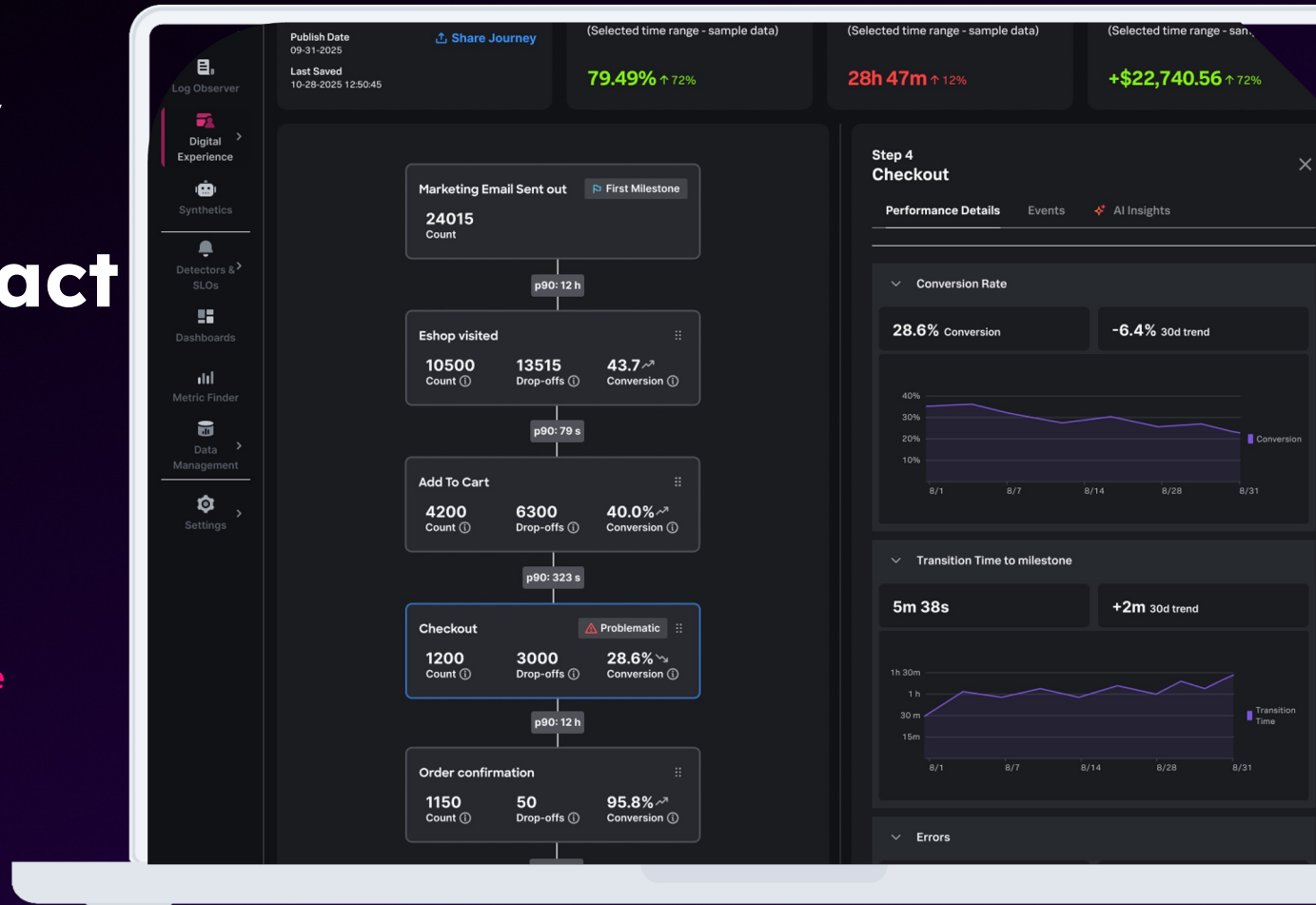
APM Explore
PST: 08:00 -4h Environments: All Workflow: A
View Services (10), Databases (2), Inferred services (1)
Overview
frontend 93.1ms checkoutservice 1.37s
adservice 923µs 84ms
recommendationservice 975µs
Service Metrics Fewer requests More requests
Intraservice Metrics Fewer requests 11ms More requests P90 Latency
Show Legend

AZ I see 3 critical alerts triggered for paymentservice, can you explain more?
I can certainly help with that!
The upstream service from paymentservice is called checkoutservice, which had critical alerts triggered 30 minutes before alerts were triggered for paymentservice. Two deployments were made to checkoutservice today. This could be related. You can explore these services visually from the service dependency map in APM, or I can assist you with some metric names to further explore. Which of these next steps would you prefer?
View service dependency map in apm
Suggesting some metric names
Ask me anything about your environment

358 days left in trial
Observability Assistant
AZ I see 3 critical alerts triggered for paymentservice, can you explain more?
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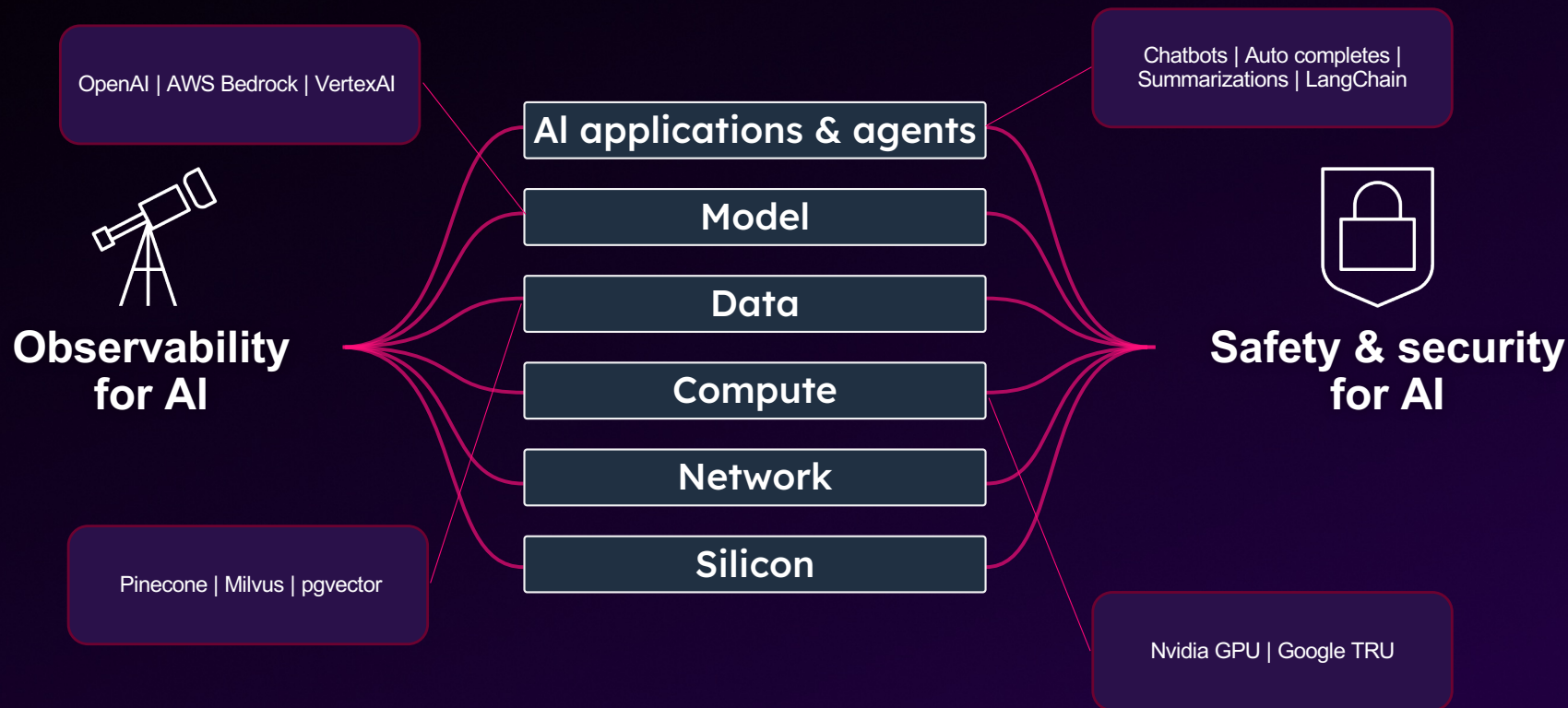
Unified observability that surfaces business impact

- 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**



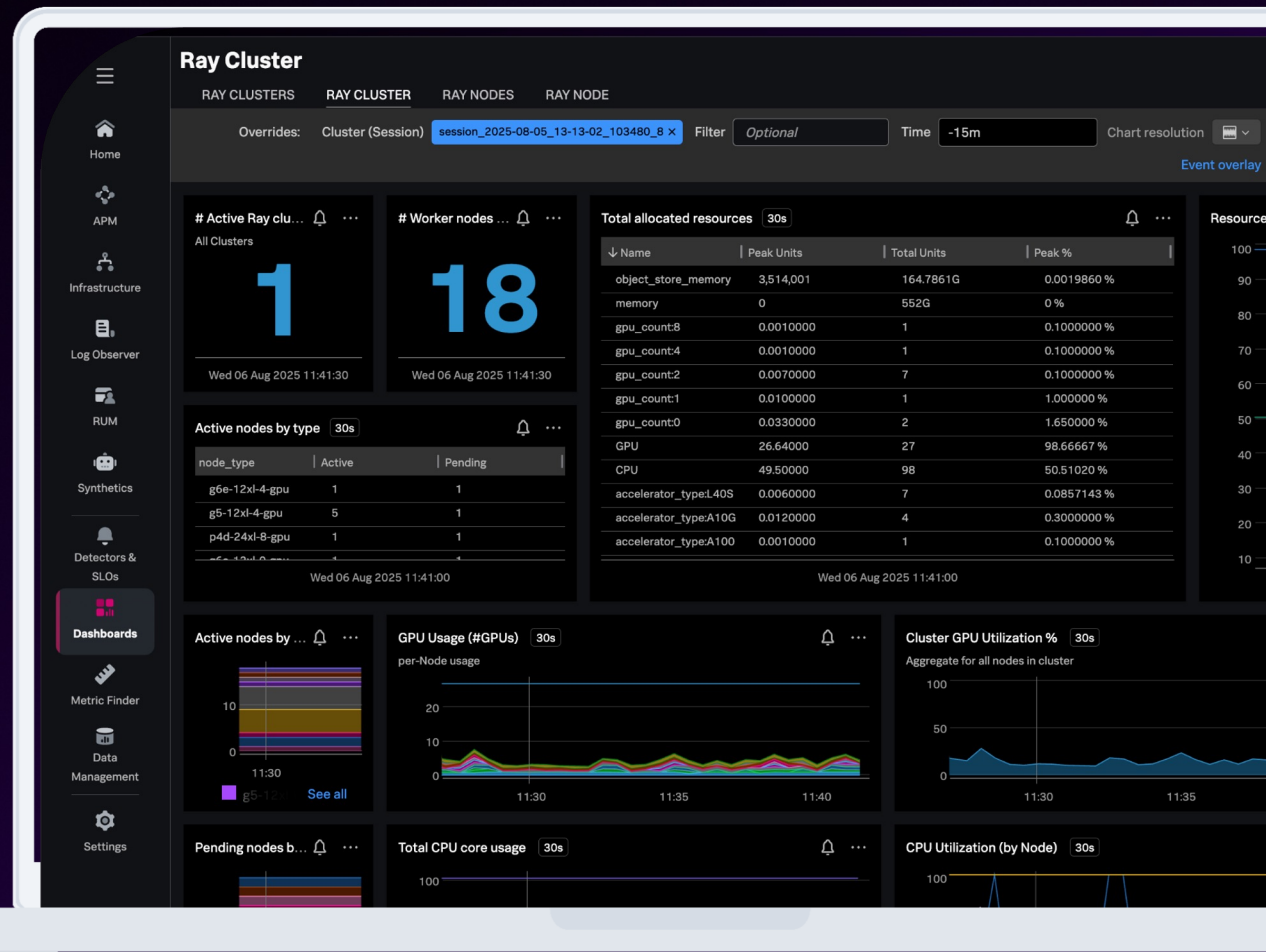
Pictured: Business Insights

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



Pictured: AI Infrastructure Monitoring

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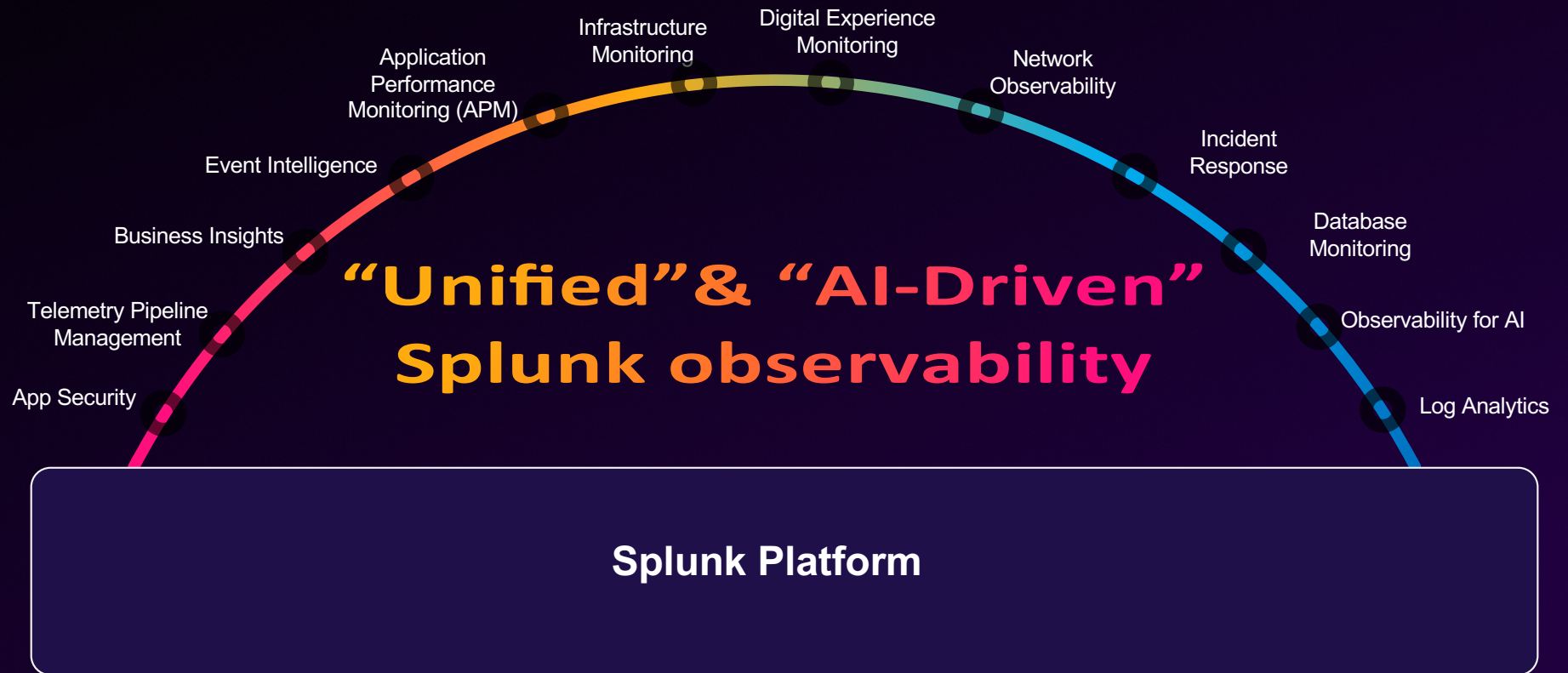
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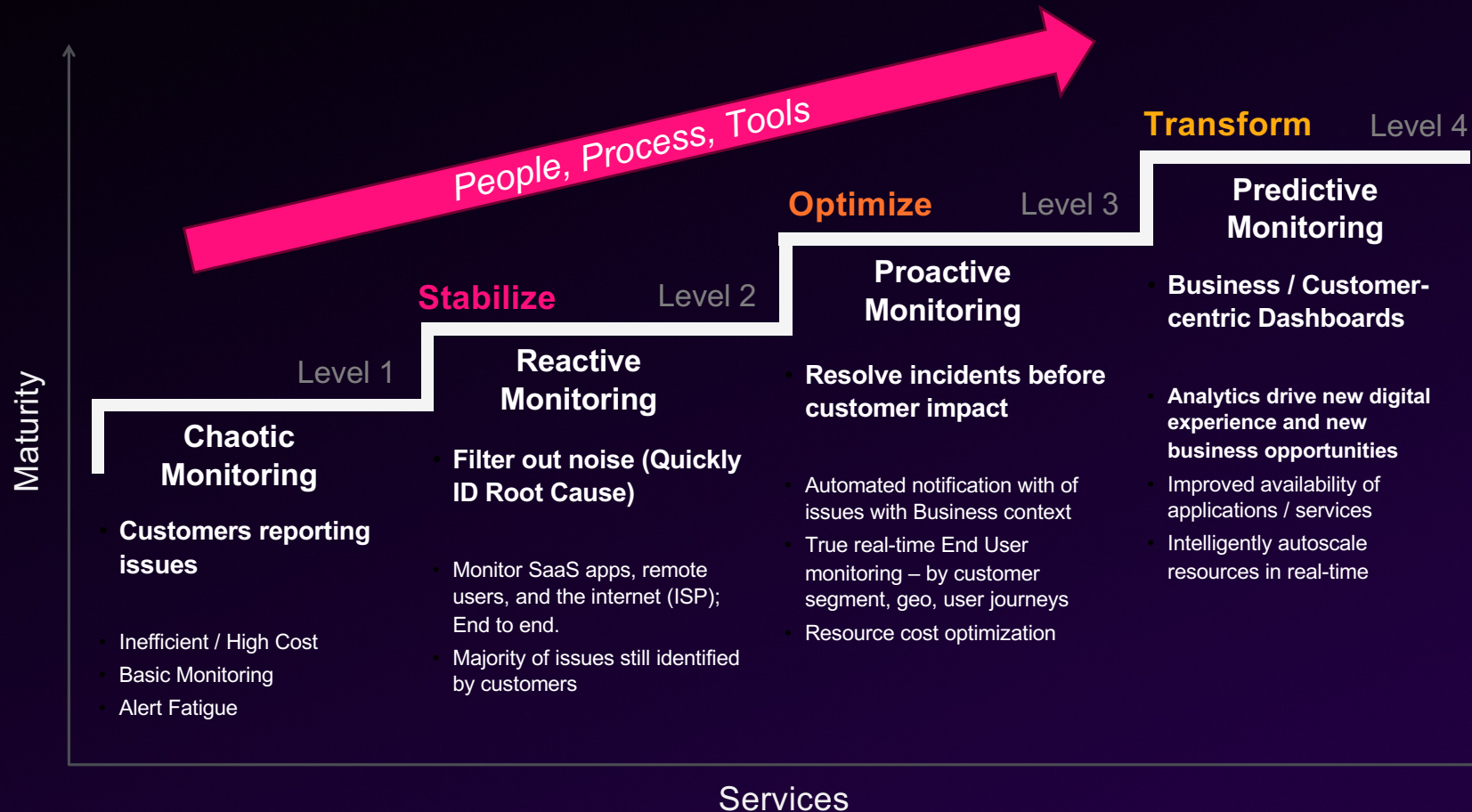
How these innovations impact your business

Key Takeaway

Build and future-proof resilient operations with...



Observability - Operational Maturity Model



AI & Data Resiliency: Secure Practices and Observability Insights

Thank you!

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We'd love to hear from you!

Tell us about your experience so far
and what you thought of this session

