Achieving Ops-Led Development Through AI-Driven Observability

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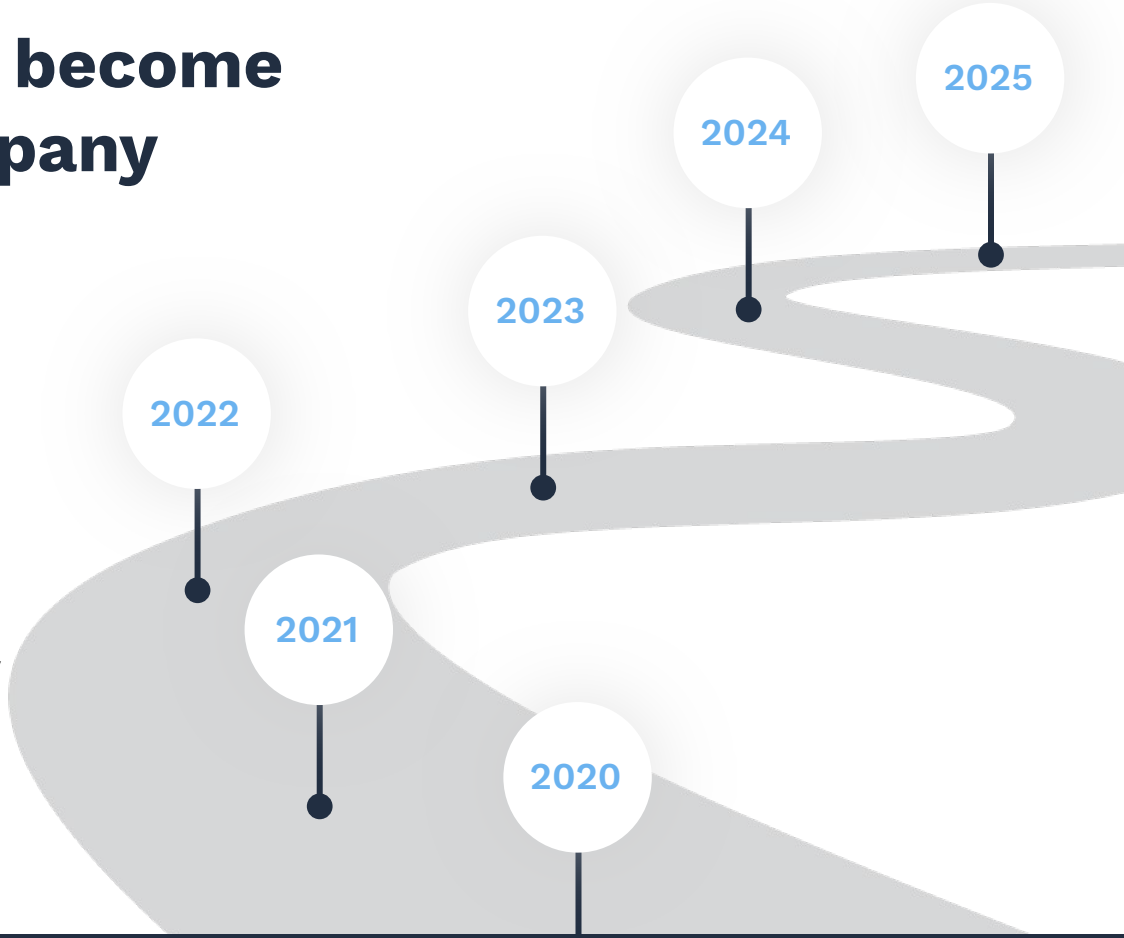
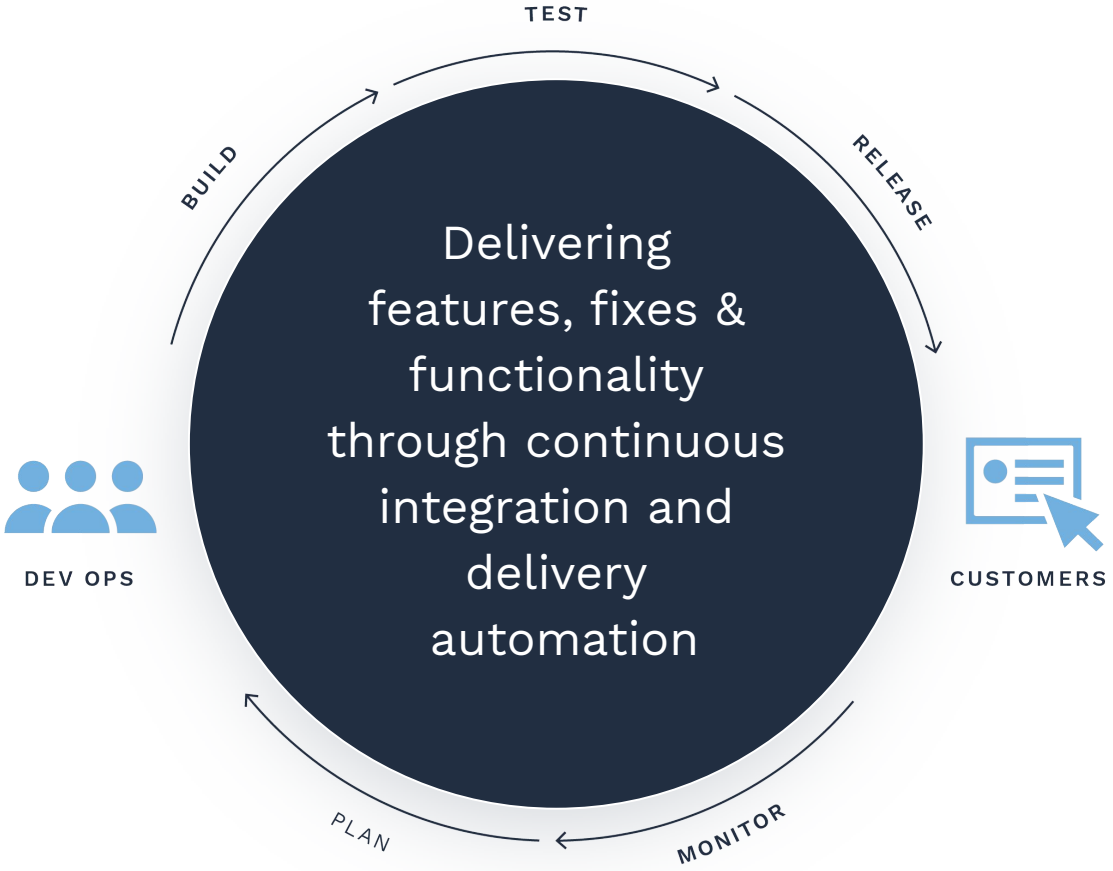
Speaker Intro

Adam Frank has been with Moogsoft for three years and currently leads the product and design teams. He has brought insights from a user perspective to focus on making better user experience, simple messaging, ease of use and self-service, each a focus of Moogsoft's latest platform advancements. He has also led the company's push to a cloud-native and SaaS-first model.

Every company has become a software company

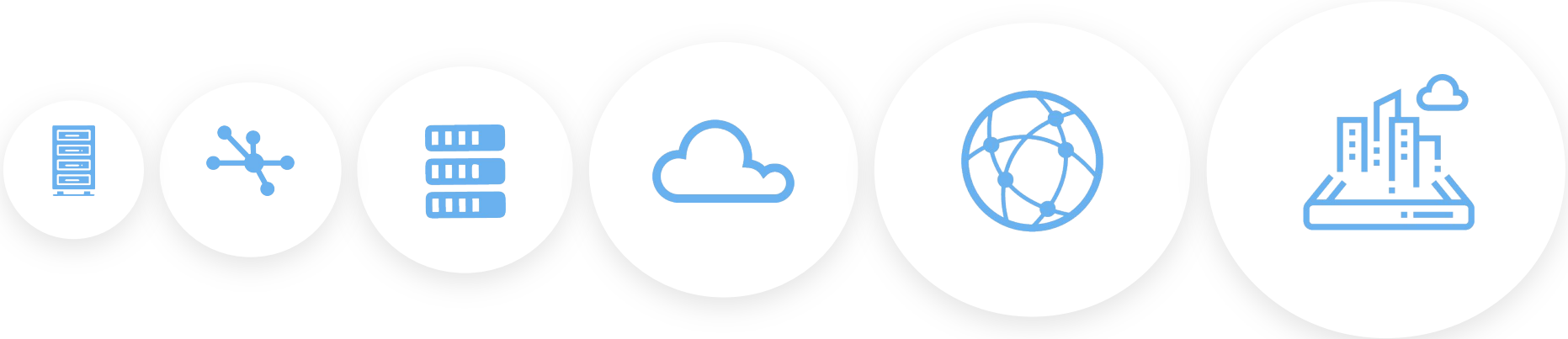
- All software requires continuous operation and innovation.
- Continuous customer value is **a Board level priority**.
- **Intelligent Observability** is uniquely positioned to provide self-learning, self-adapting and self-healing capabilities.





Complexity and Dependency is Increasing Exponentially...

Manual Monitoring → Automated Monitoring with Basic Rules → Attempts with Complex Rules → Only AI will Assure Service



MAINFRAME | NETWORKED | DISTRIBUTED COMPUTE | MOBILE & CLOUD | IOT & SAAS | SMART CITIES

DIGITAL TRANSFORMATION OF EVERYTHING →

1950 → 1960 → 1970 → 1980 → 1990 → 2000 → 2010 → 2020 → 2030 →

The Tail of Toil, and Reducing It

How introducing visibility and control over incidents earlier in the development cycle can reduce toil

… Causing Productivity & Agility to Diminish

Overwhelmed by **DATA** and lack of **INFORMATION**

Too many alerts

No context when an incident occurs

No early warning

Why is this happening in production???

Don’t we write test cases and automate QA???

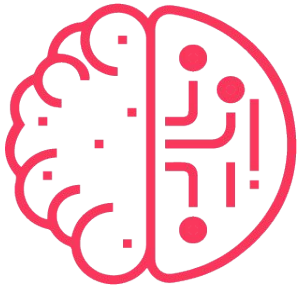
I thought we already fixed this???

IT Development & Operations Evolution

IT Ops → DevOps & SRE →

Monitoring → Observability →

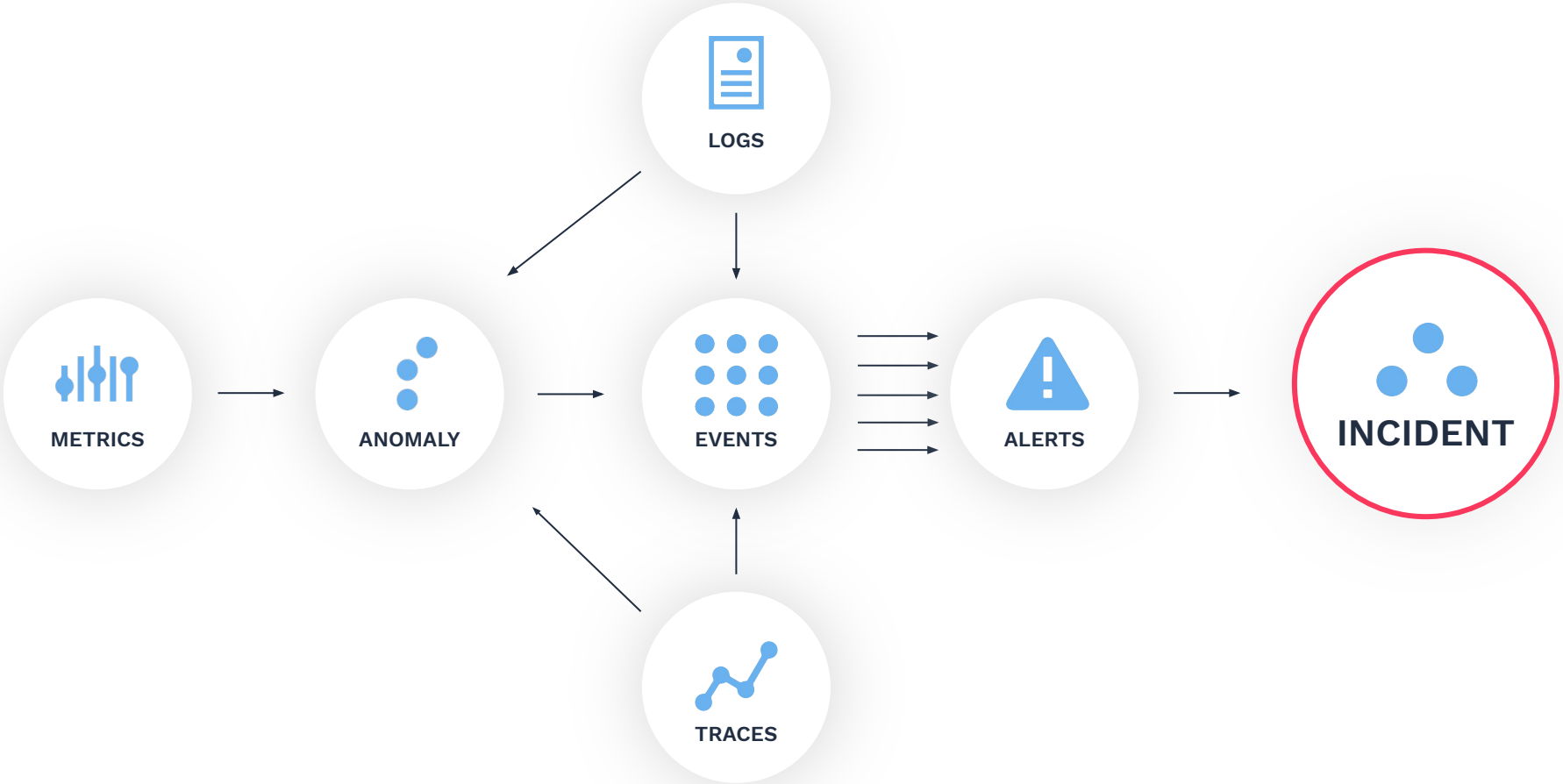
SecOps → DevSecOps →



A.I.

{AIDev, AIOps & AICloud}

Telemetry Everywhere



LOGS

Purpose written messages (error 123 occured)

TRACES

Connecting source to destination (point A to point B)

METRICS

Time-series data (timestamp + numerical value)

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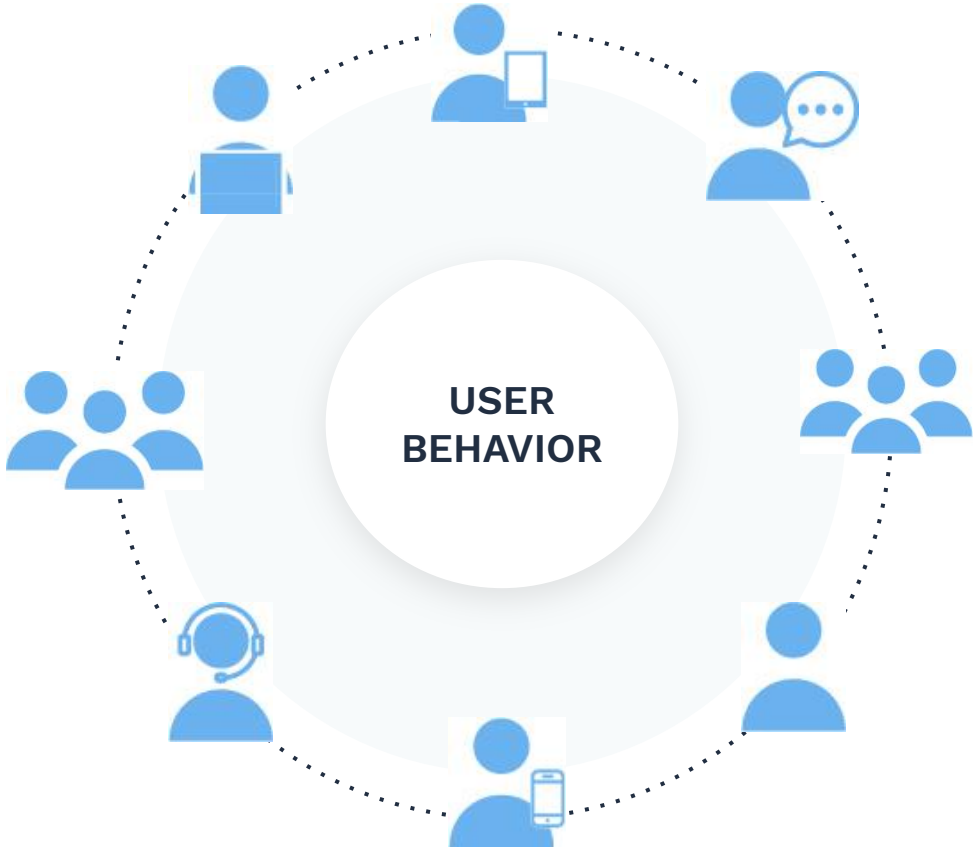
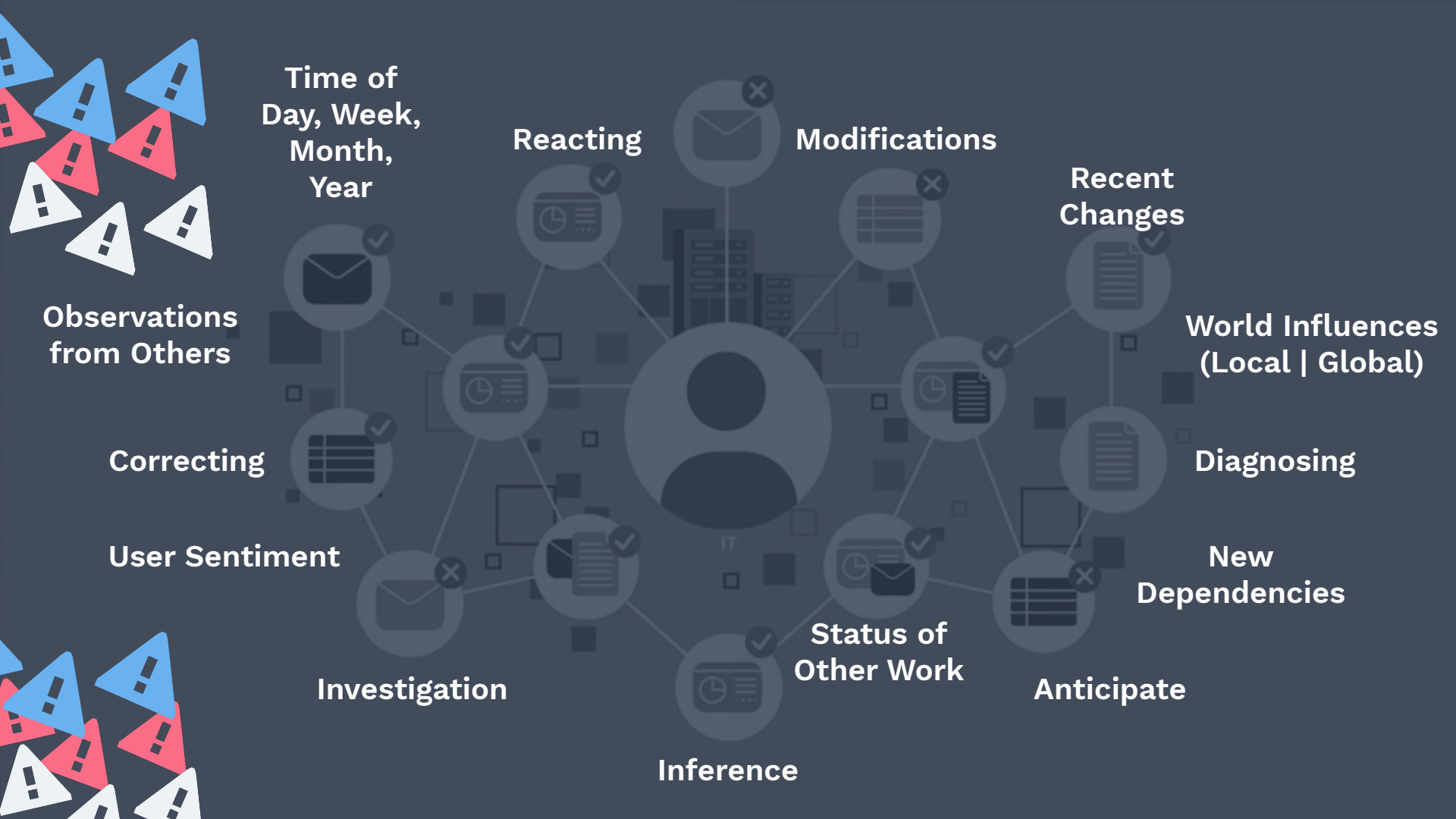



Time of Day, Week, Month, Year
Reacting
Modifications
Recent Changes
Observations from Others
World Influences (Local | Global)
Correcting
Diagnosing
User Sentiment
New Dependencies
Investigation
Status of Other Work
Anticipate
Inference

Observability Puts Developers in the Driver Seat

- Code features, functionality, and telemetry as a practice
- Emit metrics, logs and trace data
- Automatically discover and collect telemetry data with code pushes
- No updates needed to your observability solution
- Becomes part of your test cases and automated ~~quality~~ value assurance
- …

Putting Better Ops in DevOps

Leverage A.I. and the ‘wisdom of production’ to improve the Ops part of DevOps.

A.I. Driven Observability

OBSERVABILITY

\- A.I.

NOISE!

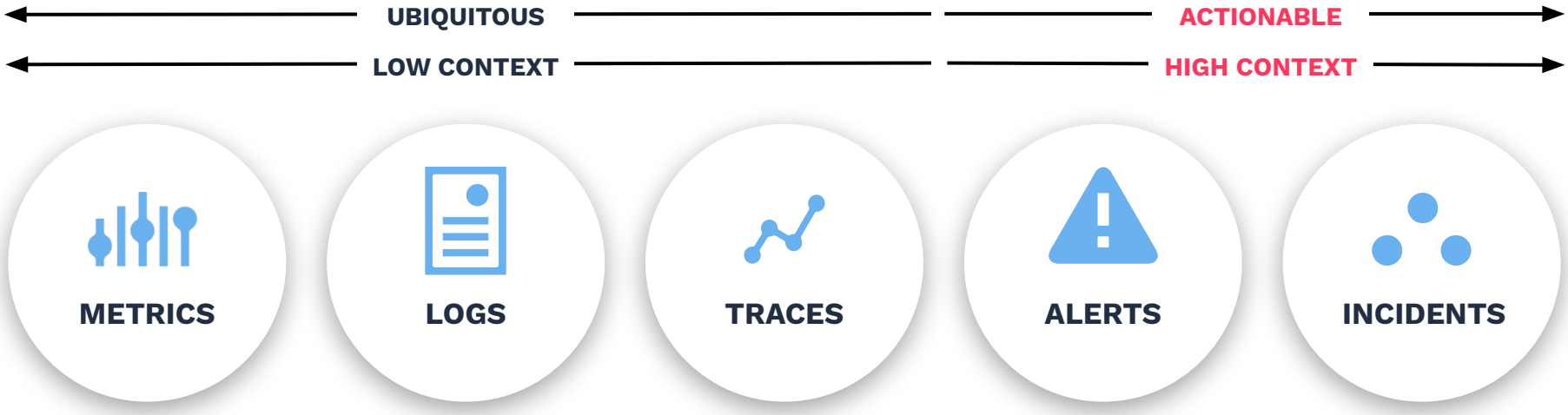
EXPENSIVE DATA LAKES
MANUAL DIAGNOSTICS
NO CONTEXT

OBSERVABILITY

\+ A.I.

CLOSED LOOP
AUTONOMOUS
ACTIONABLE
HIGH CONTEXT
INSIGHTFUL

Observe & Monitor Digital Complexity



Valuable & Consumable A.I.

Reduce Noise → **Correlation** → **Causality**

Anomalies	Significance	Time	Text	Topology	Impact	Feedback	Probable Root Cause	Similarity
Anomalous Deviations	Alert Significance	Timestamp Patterns	Text Value Similarities	Network Proximity Patterns	Critical Node Identification	Learnings from User Behavior	Root Cause Identification	Similar Past and Current Situations

Improve Reliability

Increase Visibility & Improve Uptime

Discover and ingest raw time-series metric data at the source

Establish normal operating behaviors to generate anomaly events for abnormal behaviors

Ingest events and alarms from all your monitoring tools

Discover patterns and relationships in the anomalies and events to correlate them together

Automate monitoring observability data using AI

Enable Agility & Innovation

Actionable insights from analysing multiple streams of data in real time

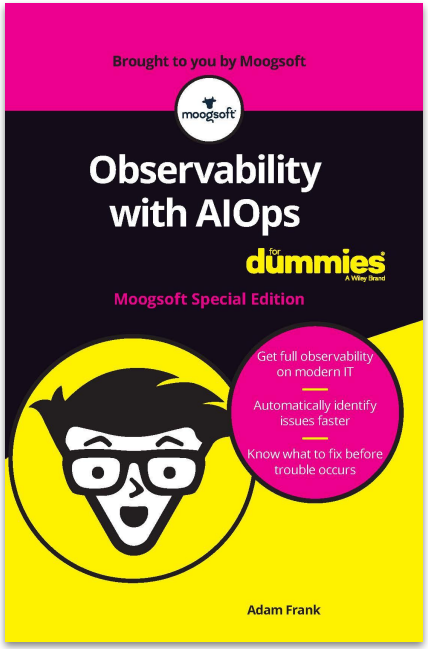
Remove handoffs between teams and embrace “*We build it, we own it*”

Accelerate root cause analysis

Forecast normal operating behavior for pre-emptive warning

Focus on your customers’ experience

Want to know More? Read my Book!



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THANK YOU!

Meet me in the Network
Chat Lounge for questions

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