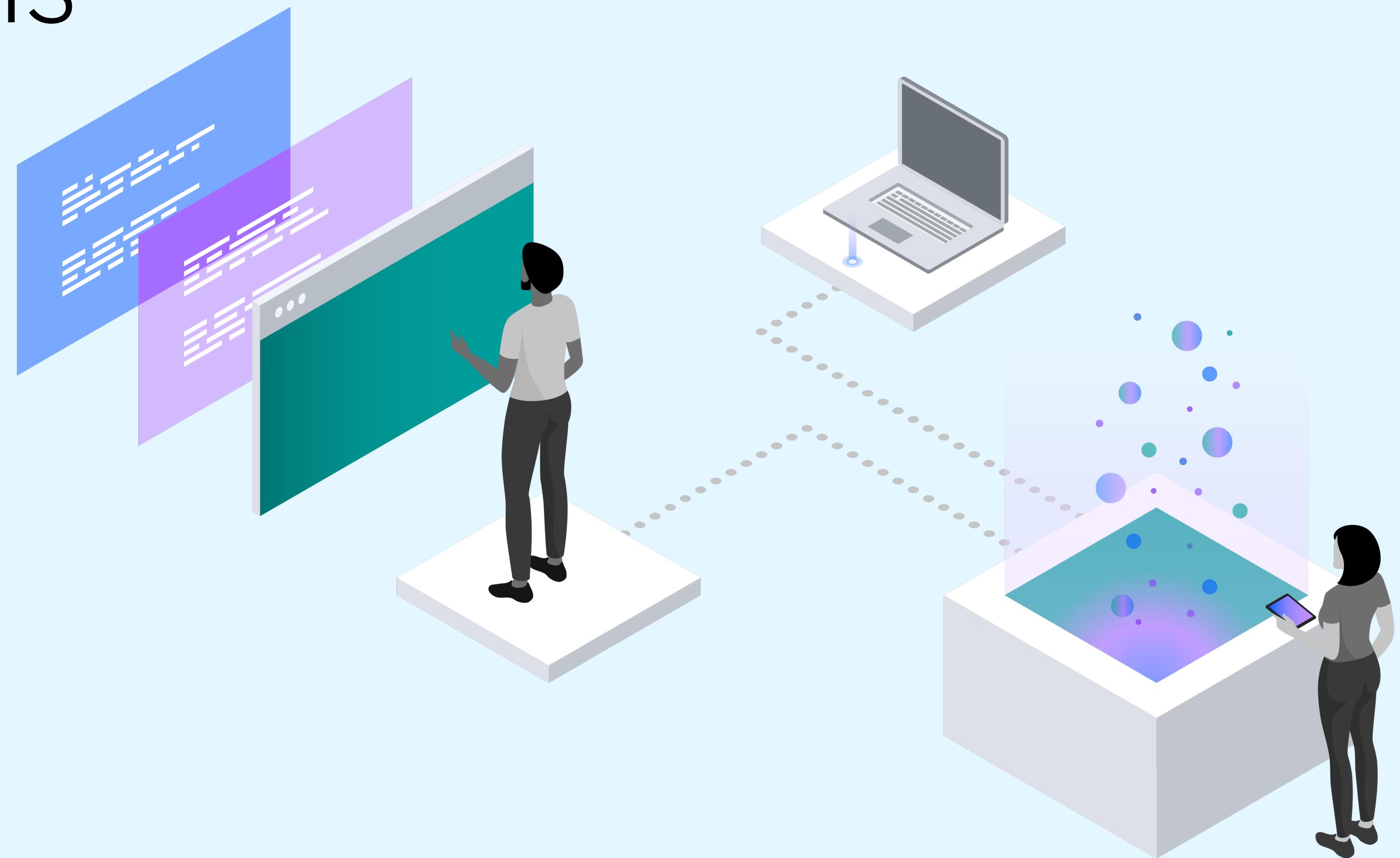


AIOps with IBM Z

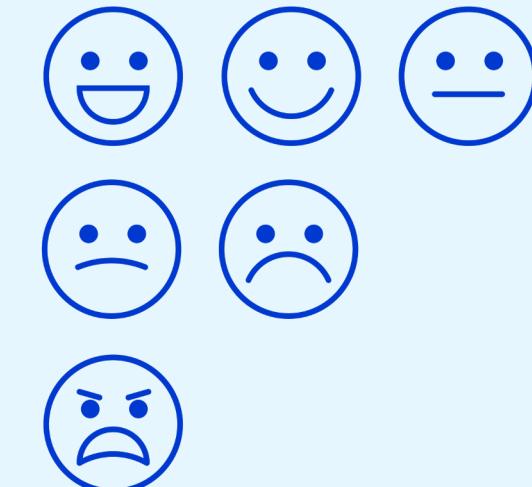
Overview & Solutions



IT under pressure: Meeting greater customer demands with fewer skilled employees

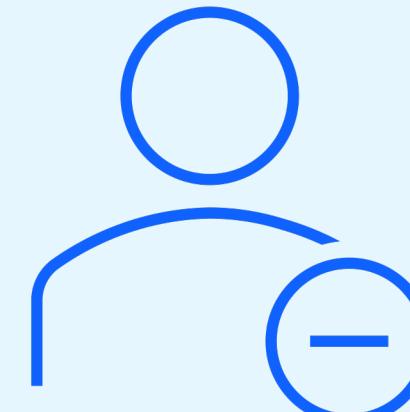
1 sec

of latency causes a 7% reduction in customer conversion and a **16% reduction in customer satisfaction**



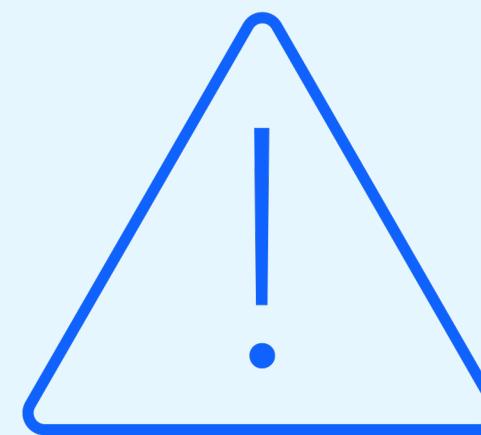
50%

of all employees need to upskill or **reskill by 2025** for responsibilities arising from automation and new technologies



\$250K

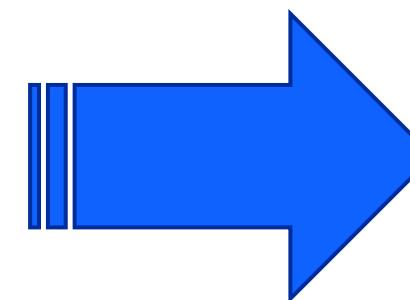
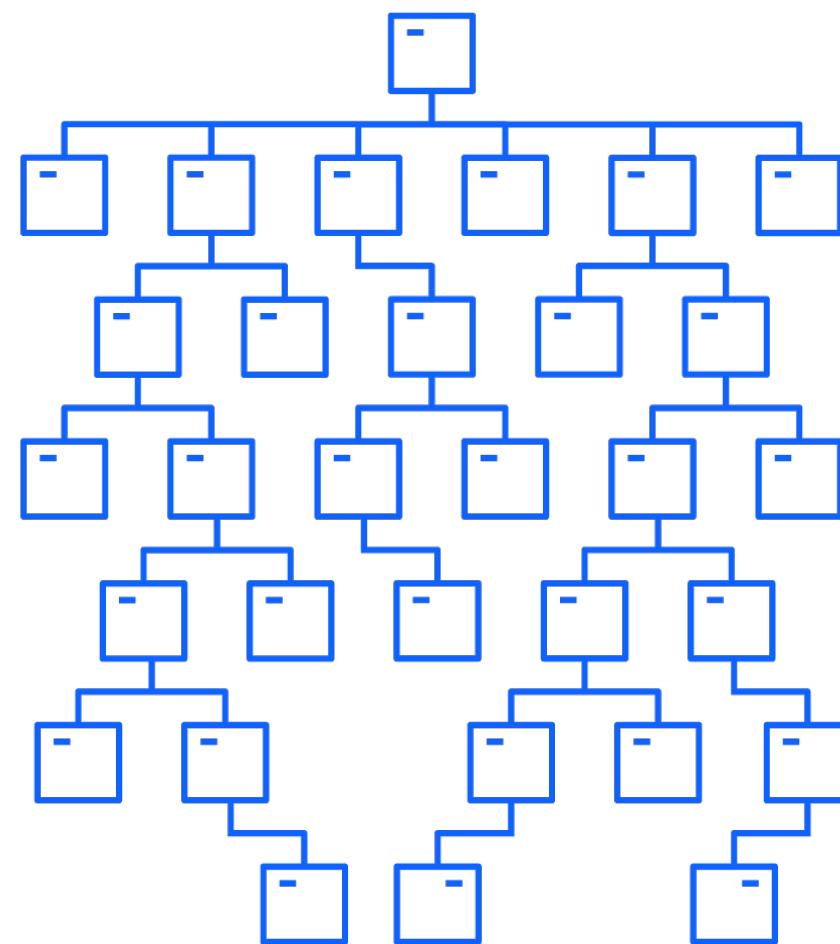
the average cost of an **hour of downtime** when a revenue generating production service is impacted



Current Landscape: Management Complexity

76% of companies use 2 or more public clouds

Organizations are using an average of over 1,000 applications across multiple clouds

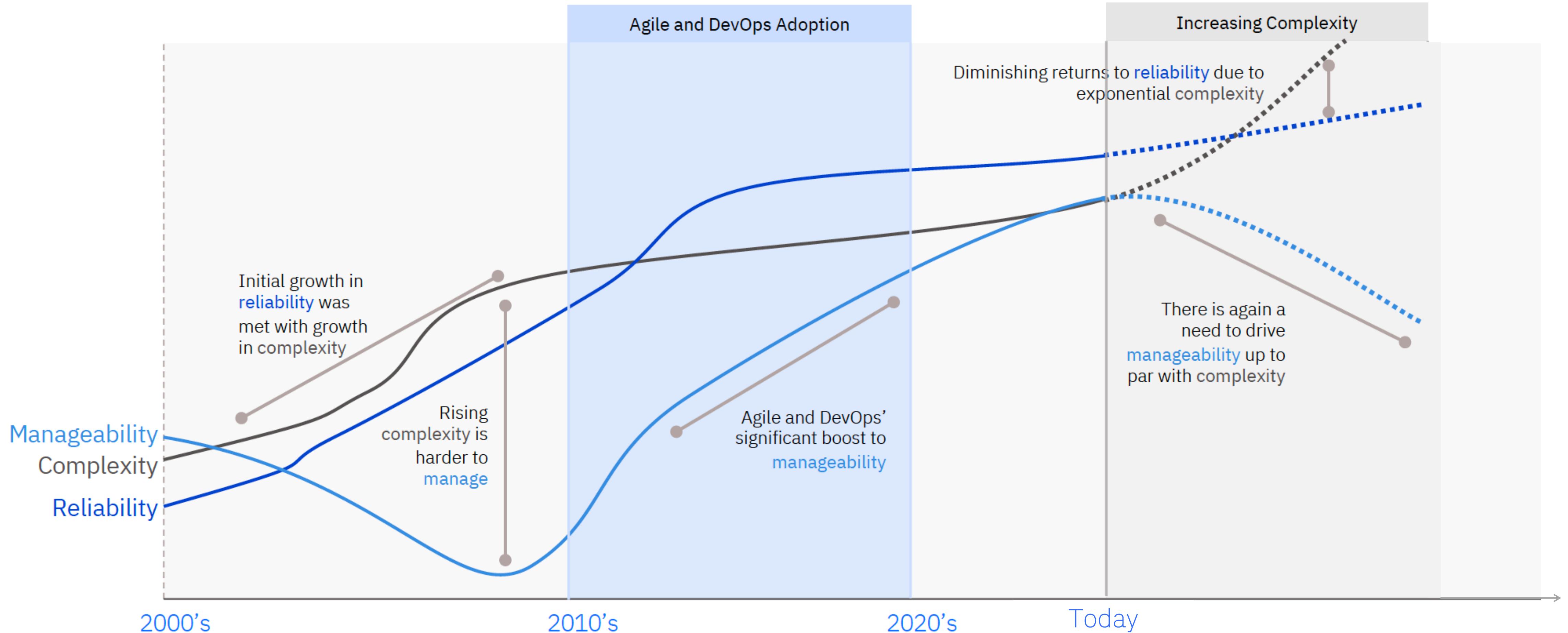


There's too much data for one person to handle

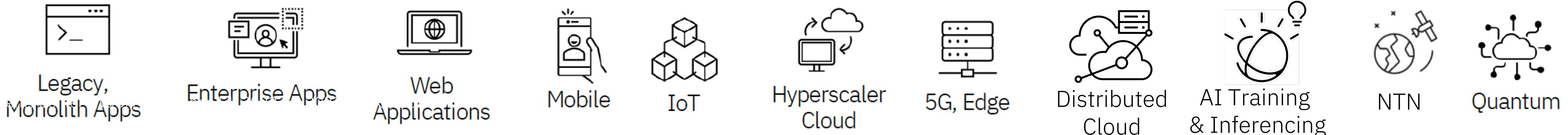
- Businesses need **real-time visibility** into their infrastructure and application estates to leverage actionable insights to **automate** and **enhance overall IT operations**
- Current **break-fix**, reactive approaches to IT management simply **cannot scale**
- Adopting **piecemeal** software solutions results in inconsistencies and inefficiencies, **undermining** integrated workflows and automations and **reducing visibility**

Why AIOps?

Modernization Accelerates Complexity



Example
Technology
Adoption



AIOps can help

Artificial Intelligence for IT Operations

The application of data, AI, and machine learning to improve and automate IT operations

Reduce the operational difficulty in adopting the hybrid cloud model.

AIOps helps to:

- **Collect and aggregate** the ever-increasing volumes of data generated by IT infrastructure components, applications, performance-monitoring tools, and service ticketing systems
- Intelligently shift ‘signals’ out of the ‘noise’ to identify **significant events and patterns** related to application performance and availability issues
- Diagnose root causes and report them to IT and DevOps for rapid response and remediation —or, in some cases, **automatically resolve** these issues without human intervention

AI on IBM z16 strategy: Designed for Business Insights and Intelligent Infrastructure



REAL TIME BUSINESS INSIGHTS

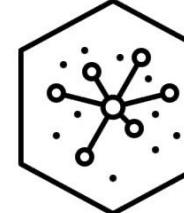
Infuse AI in Real-time into Every
Business Transaction



Db2 for z/OS® with
SQL Data Insights



Watson® Machine
Learning for z/OS

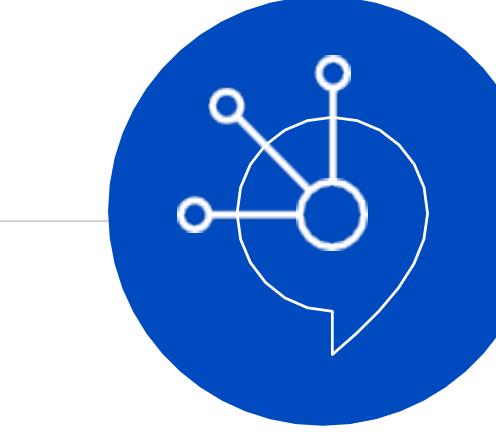


Cloud Pak for Data

Uncover hidden
insights in
Db2 for z/OS data

Unprecedented AI
inferencing performance
for every transaction while
meeting SLAs

Cloud native solution
to put your data to
work and generate
meaningful insights

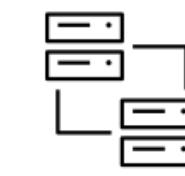


INTELLIGENT INFRASTRUCTURE

Improve Security, Data Privacy,
IT Operations with AI



Cloud Pak for Watson AIOps &
IBM Z Anomaly Analytics



Db2 AI
for z/OS



Data Privacy for
Diagnostics

Deploy advanced,
explainable AI across
the ITOps toolchain

Enhance database
performance with
machine learning

Leverage machine
learning to detect
and redact PII from
diagnostic dumps

Enable a leading
AI portfolio &
ecosystem



Db2 Analytics Accelerator
for z/OS



XGBoost

Watson Machine
Learning for z/OS



Keras

PYTORCH

scikit
learn

IBM Cloud Pak for Data

Observability and AIOps



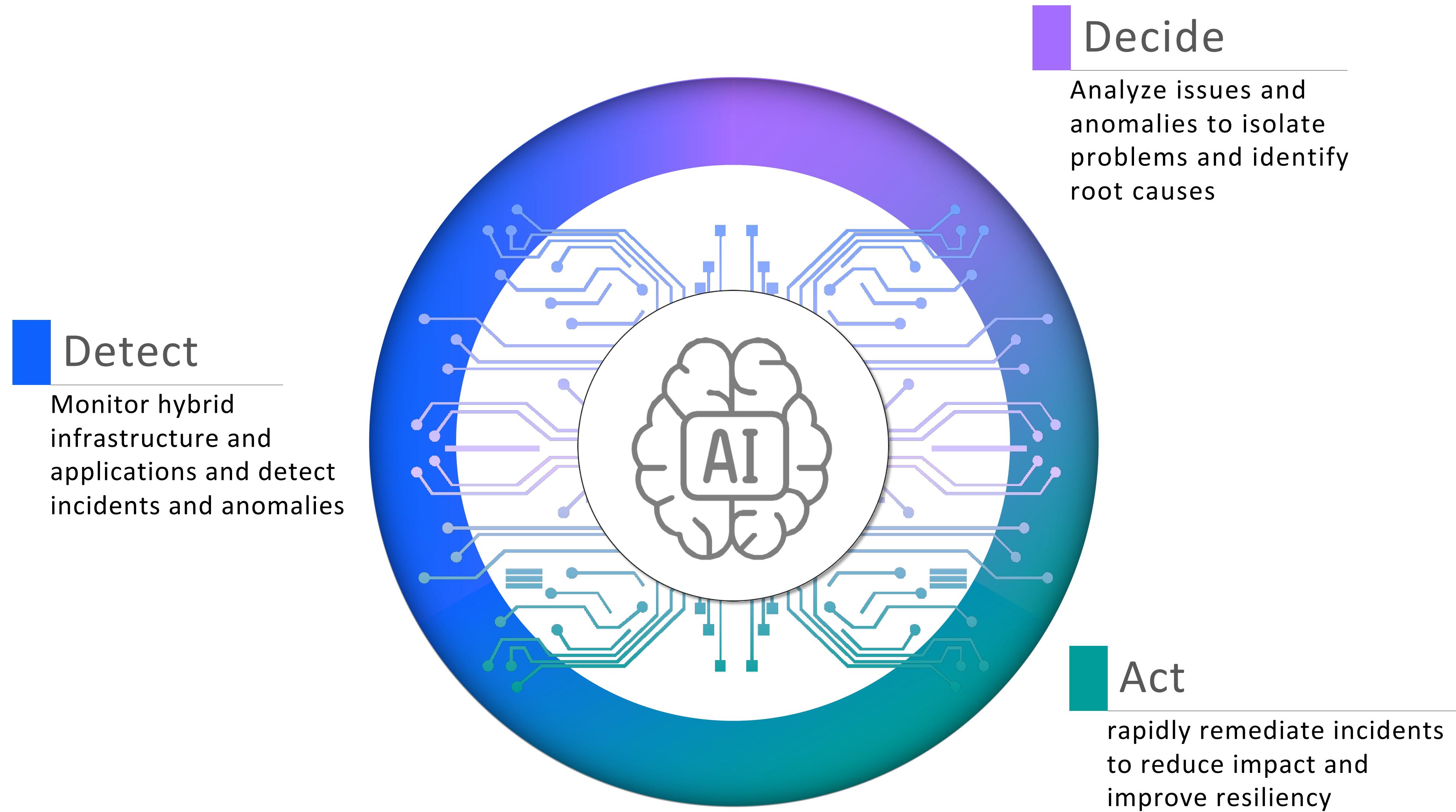
Observability is the ability to measure a system's current state based on data it generates, such as metrics, traces, and logs.



AIOps is the application of machine learning and data science to IT operations problems.

*Observability depends on AI to provide deep insights.
AIOps requires observability to get complete visibility into operations data*

IBM AIOps Framework



AIOps - Two IBM Z perspectives

“ZAIOps” – z/OS scope

- Encompasses z/OS monitoring & management solutions including the Omegamon suite, IBM Z Anomaly Analytics, IBM Z Operational Log and Data Analytics, IBM Z System Automation, and more.

“Hybrid Cloud” AIOps – Broader scope

- Encompasses solutions that support Linux on IBM Z, distributed platforms, containers, public clouds, and more.
- Solutions include Instana, Turbonomic, IBM Cloud Pak for AIOps, SevOne, Apptio, and more.

These are not mutually-exclusive perspectives.

They work hand-in-hand to break down silos and bring IBM Z and z/OS into broader AIOps environments.

IBM ZAIOps Solutions

Detect

Monitoring and observability

IBM Z Monitoring Suite and IBM Z Service Management Suite

Full-stack monitoring with best practices for early detection of Z incidents

Decide

Cross domain metrics and trace analysis

IBM Z Monitoring Suite and IBM Z Service Management Suite

Detect bottlenecks in code, server resources or with external dependencies

Act

Collaborative incident remediation

IBM Z ChatOps and IBM Service Management Unite

Improved collaboration and faster incident resolution through chat-based operations and user-friendly dashboards

Predictive workload automation

IBM Z Workload Scheduler

End to end workload automation with embedded predictive scheduling for SLA management

Application performance management

IBM Observability by Instana on z/OS and IBM Z APM Connect

End-to-end tracking visibility across hybrid cloud application

Log analytics

IBM Z Operational Log and Data Analytics

Accelerate hybrid incident identification with real-time operational analytics

Anomaly correlation

IBM z/OS Workload Interaction Navigator

Correlate anomalous activities across z/OS subsystems

Anomaly detection

Z Anomaly Analytics

Intelligent anomaly detection to avoid costly incidents

Performance and capacity planning

IBM Z Performance and Capacity Analytics

Performance analysis, capacity forecasting, and modelling

Intelligent automation

IBM Z System Automation

End to end, goal-driven and policy-based system automation for a consistent and reliable automation across the enterprise

Storage automation

IBM Advanced Storage Management Suite for z/OS

Machine aided storage resource management and automated storage tasks across the enterprise for improved SLAs



Detect

Monitoring

IBM OMEGAMON®
IBM Z® Monitoring Suite

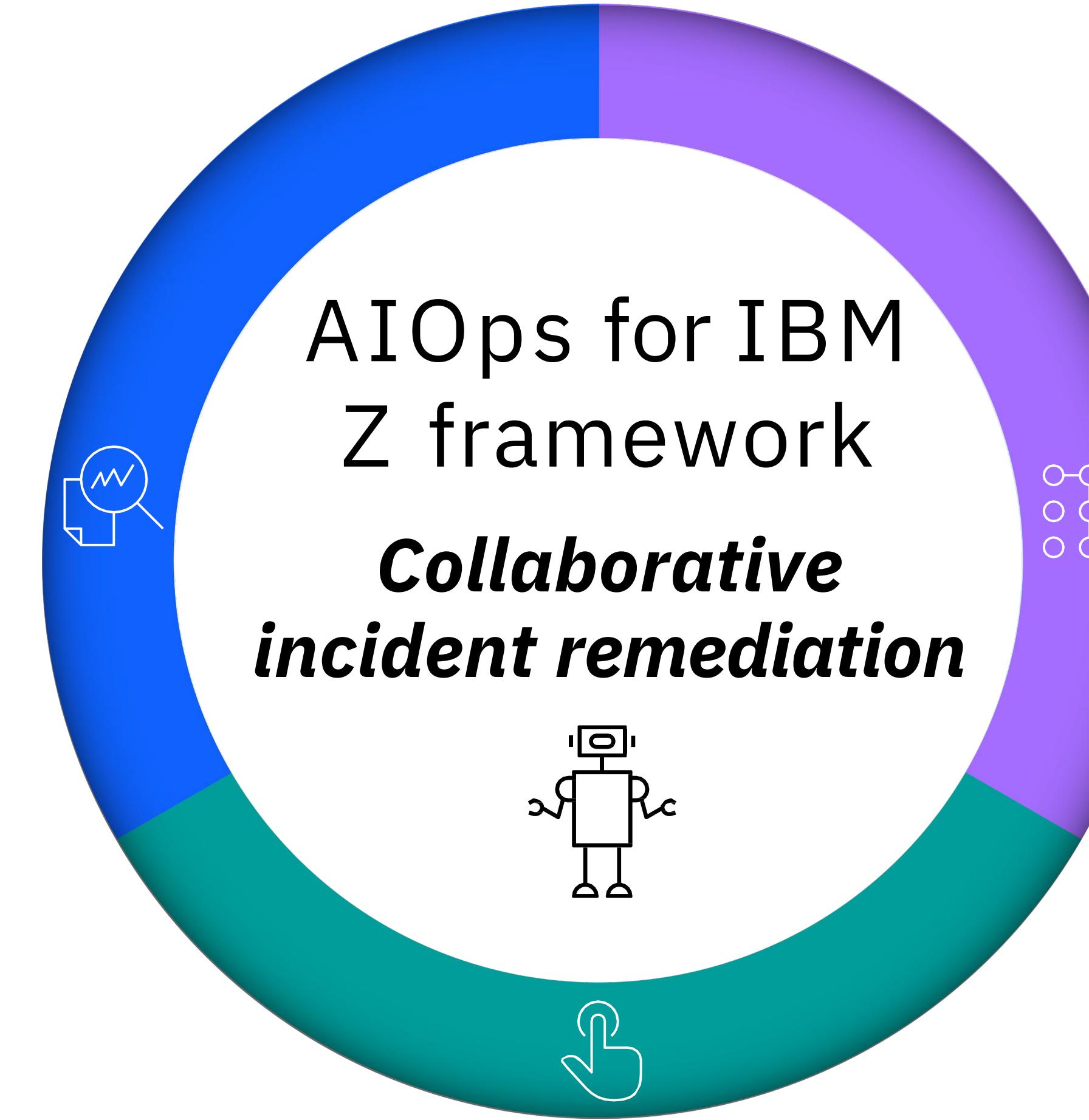


Hybrid cloud observability

IBM Z APM Connect
IBM Observability by Instana APM on z/OS®
IBM zSystems Integration for Observability

Anomaly detection

IBM Z Anomaly Analytics



Act

Decide

Deep-domain metrics & application trace analysis



IBM OMEGAMON
IBM Z Monitoring Suite

Log analytics

IBM Z Operational Log and Data Analytics

Anomaly correlation



IBM z/OS Workload Interaction Navigator

Performance & capacity management

IBM Z Performance and Capacity Analytics

Intelligent automation

IBM Z System Automation
IBM Z NetView®



Predictive workload automation

IBM Z Workload Scheduler



Storage automation

IBM Z Advanced Storage Management Suite



Resiliency

IBM Z Batch Resiliency

Our focus today – Hybrid Cloud AIOps

- Today we are focusing on Hybrid Cloud AIOps. Specifically with three solutions – Instana, Turbonomic, and IBM Cloud Pak for AIOps.
- If you are interested in a workshop for the ZAIOps portfolio, there is one available.
 - See the most recent iteration on the IBM Z Council website here:
 - <https://ibm-zcouncil.com/events/aiops-dec-6/>

Discover the value of AIOps in-action on IBM live Z systems.

This is a Bring Your Own Device event, however there will be a limited number of IBM provided laptops on the day
(on a first come basis)

Date: Wednesday 6th December 2023

Time: 09:30 am – 16:00 pm UKT

Hands-on Lab work-units at your choice

IBM Service Management Unite and zChatOps – Discover the value of SMU and zChatOps for a modern collaborative incident remediation experience.

IBM OMEGAMON Monitoring – Explore the latest OMEGAMON real-time performance monitoring for z/OS, JVM, Db2, CICS, IMS, MQ, Networks and Storage.

IBM Instana Observability for z/OS – Learn about Enterprise Observability with deep insights of application performance.

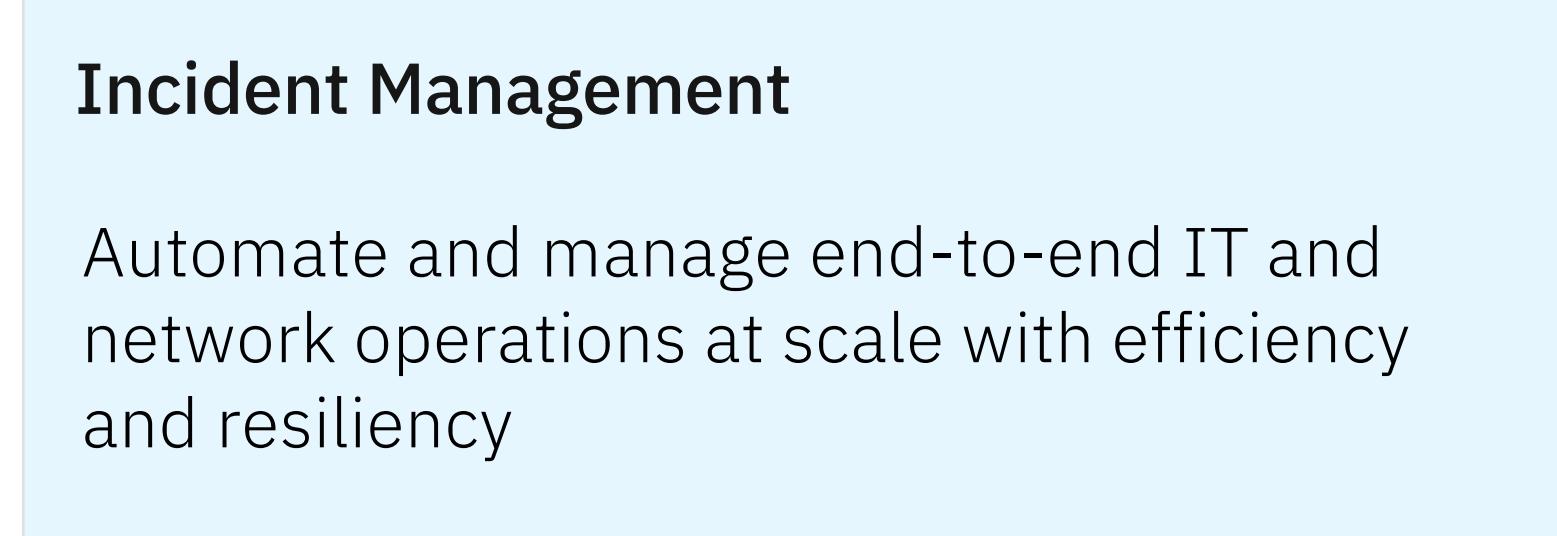
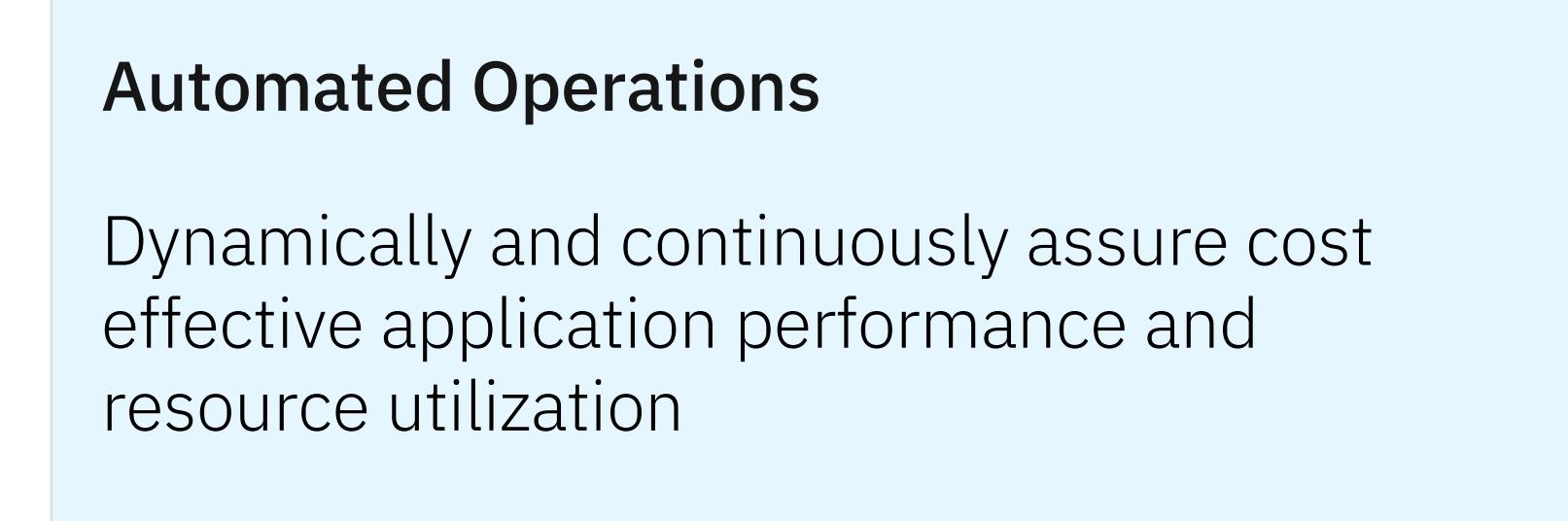
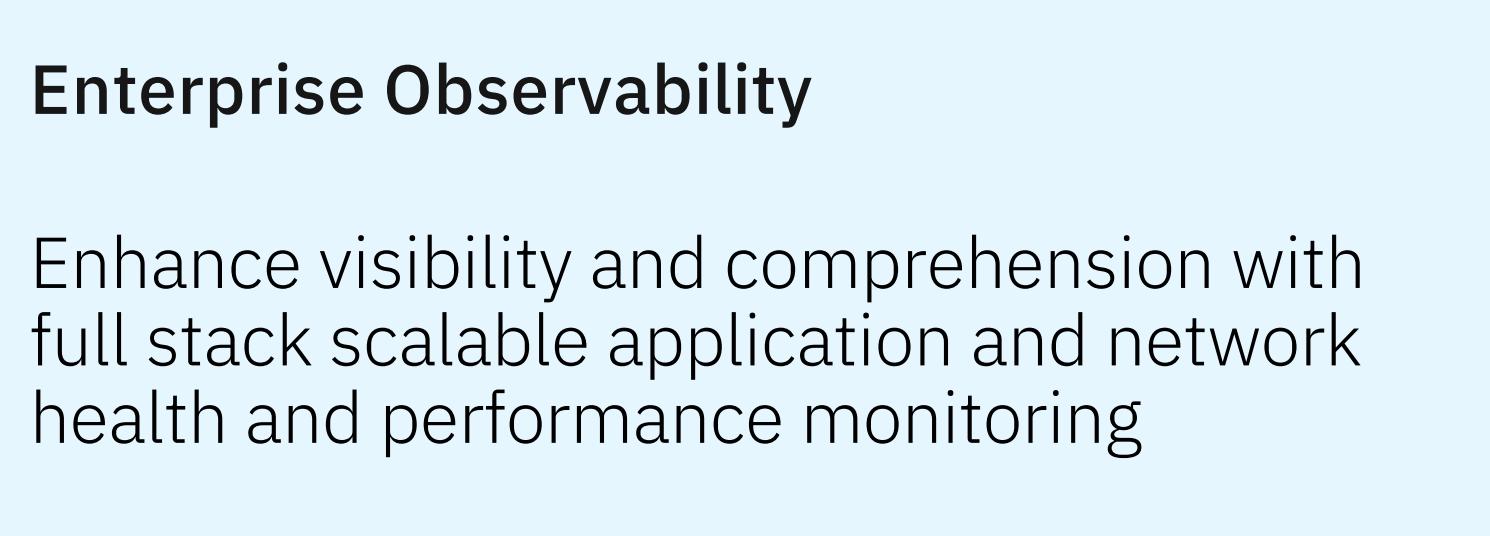
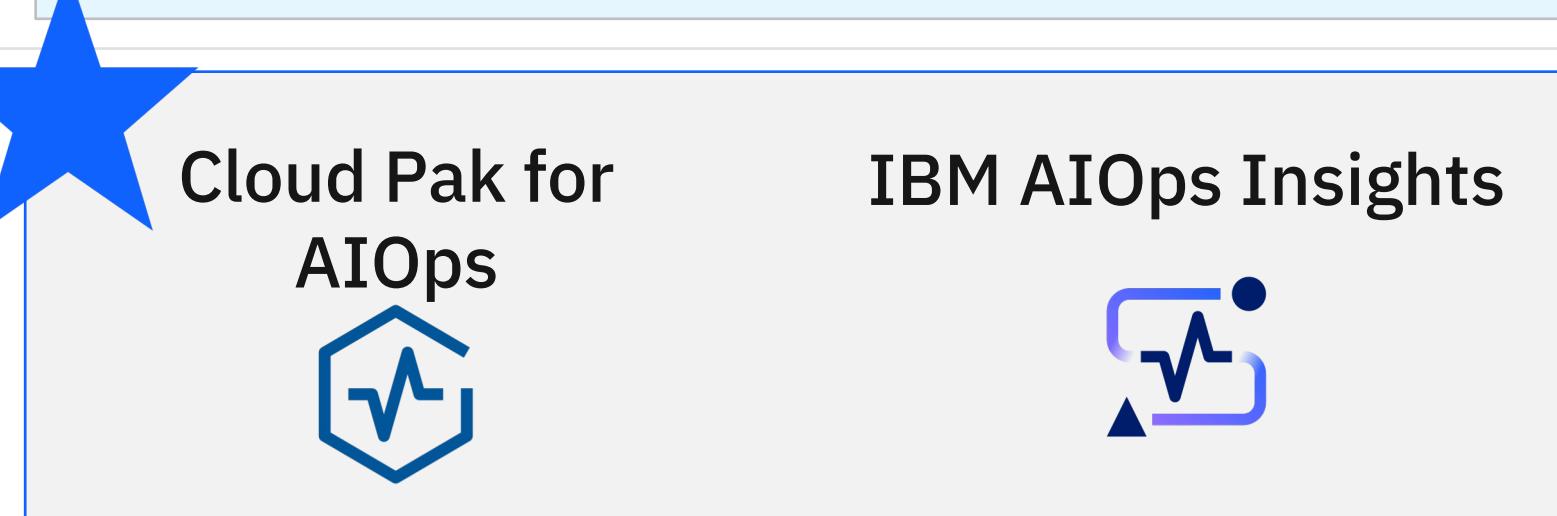
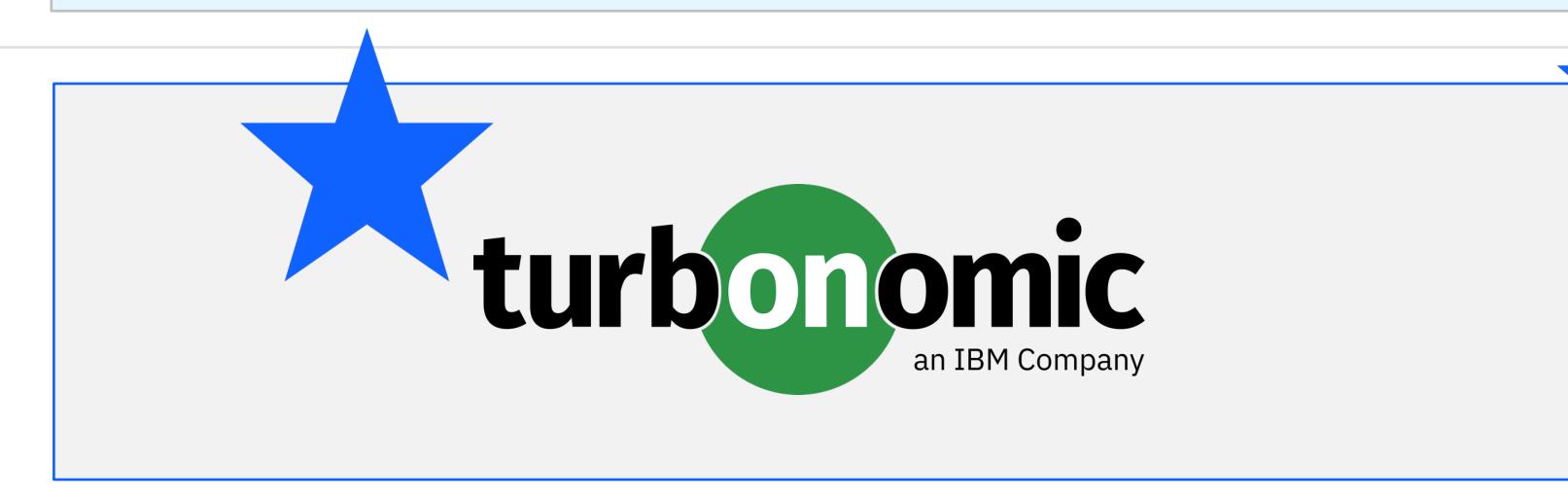
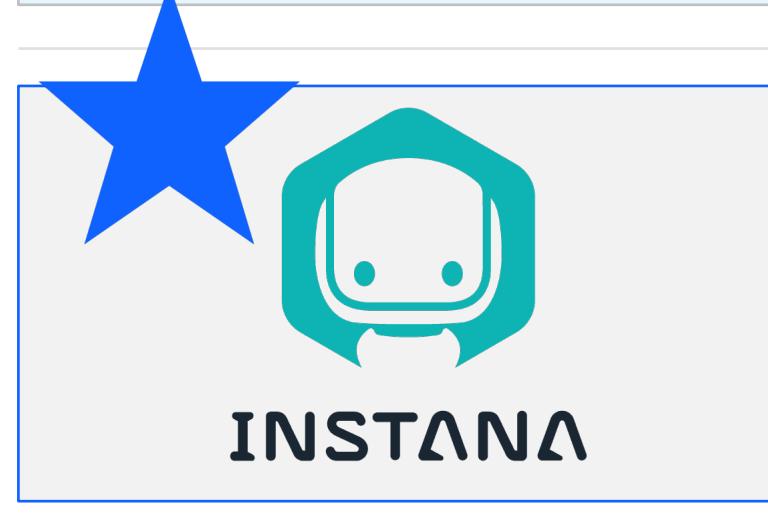
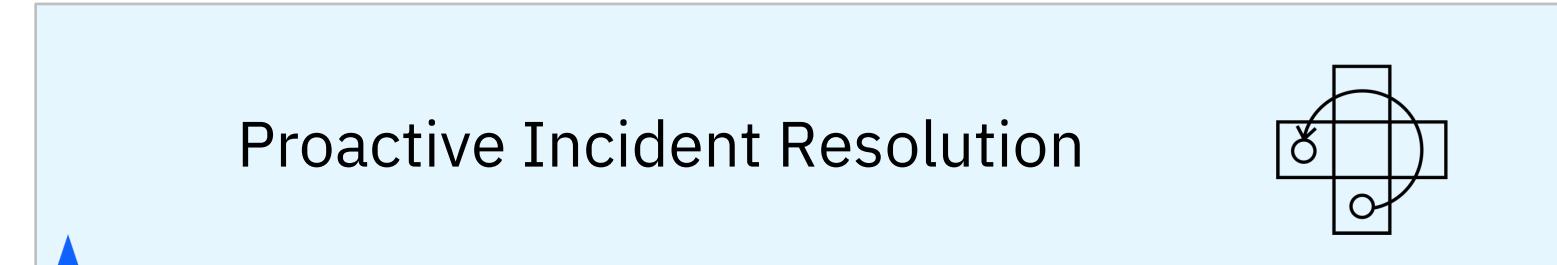
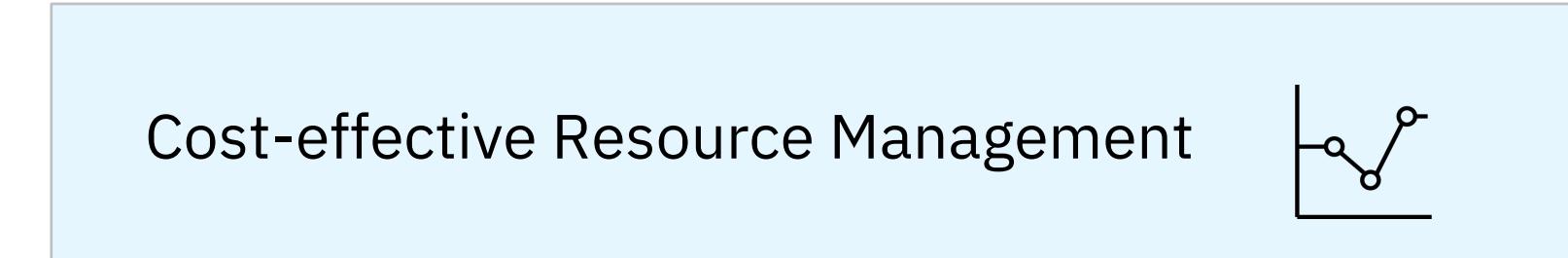
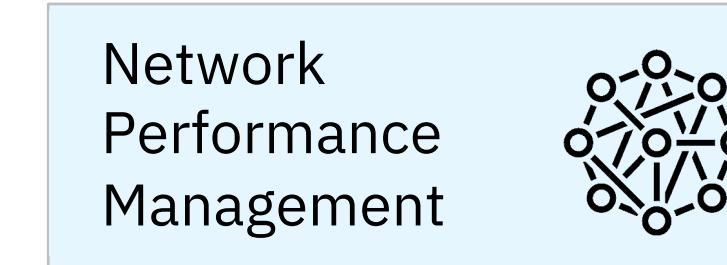
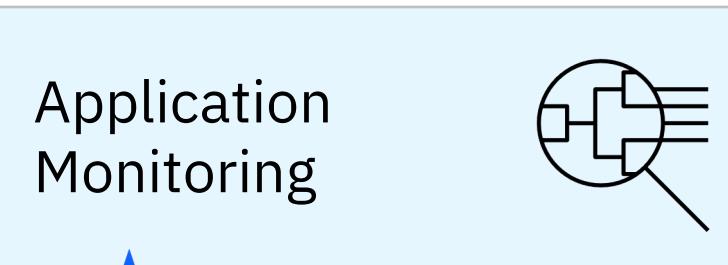
IBM Z Anomaly Analytics with Watson Machine Learning – Learn how AI-ML can detect anomalous system behavior with SMF and SYSLOG data.

IBM Z Performance and Capacity Analytics – Explore the new web reporting for capacity management and health check.

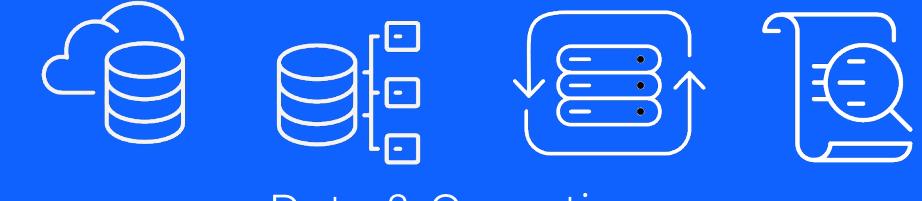
Audience: IT Operations, IT Administrator, Site Reliability Engineer, Sysprog, Automation Administrator, IT manager, Technical Support, Application Performance Analyst

IT Automation with IBM

The most complete and integrated set of modular automation technologies

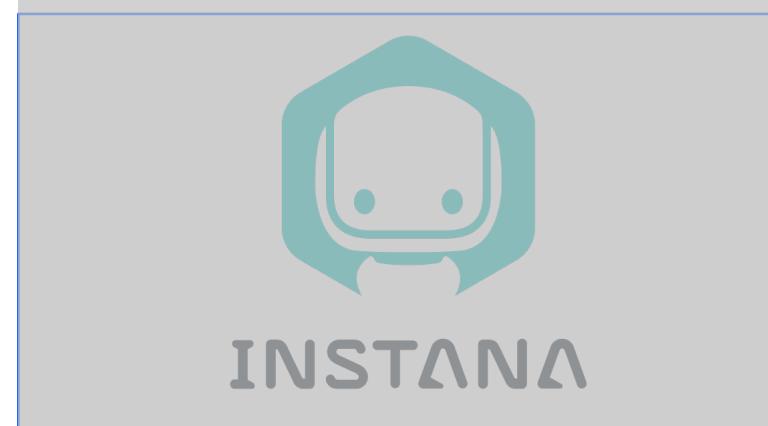
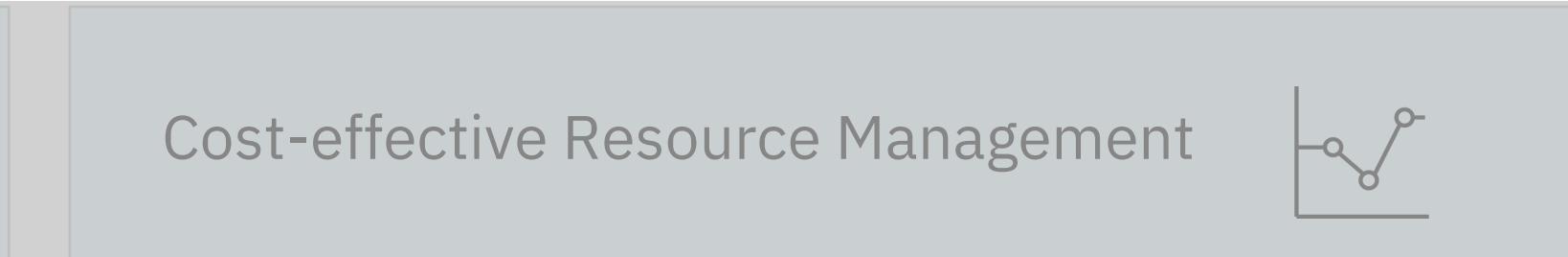
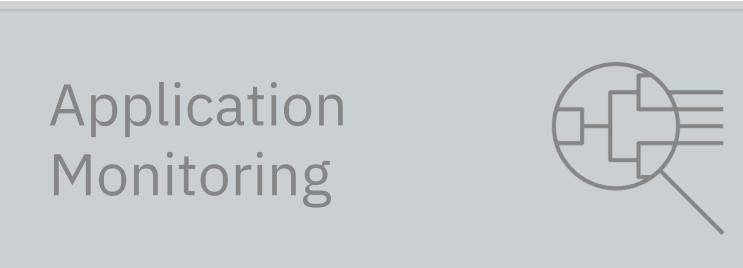


Integrated AI-powered IT Operations



IT Automation with IBM

The most complete and integrated set of modular automation technologies



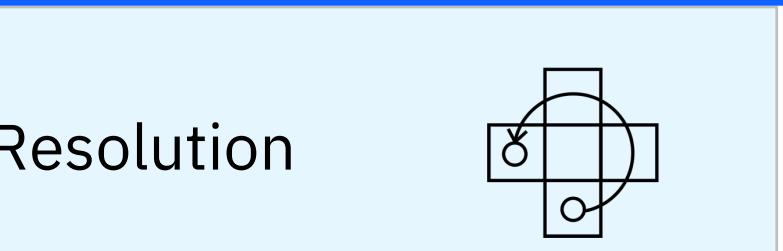
Enterprise Observability

Enhance visibility and comprehension with full stack scalable application and network health and performance monitoring

Automated Operations

Dynamically and continuously assure cost effective application performance and resource utilization

Proactive Incident Resolution



Incident Management

Automate and manage end-to-end IT and network operations at scale with efficiency and resiliency

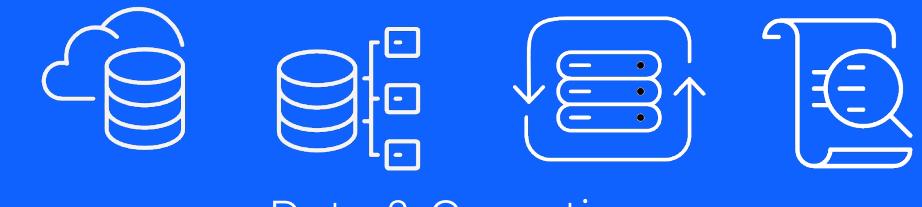
Integrated AI-powered IT Operations



Platforms

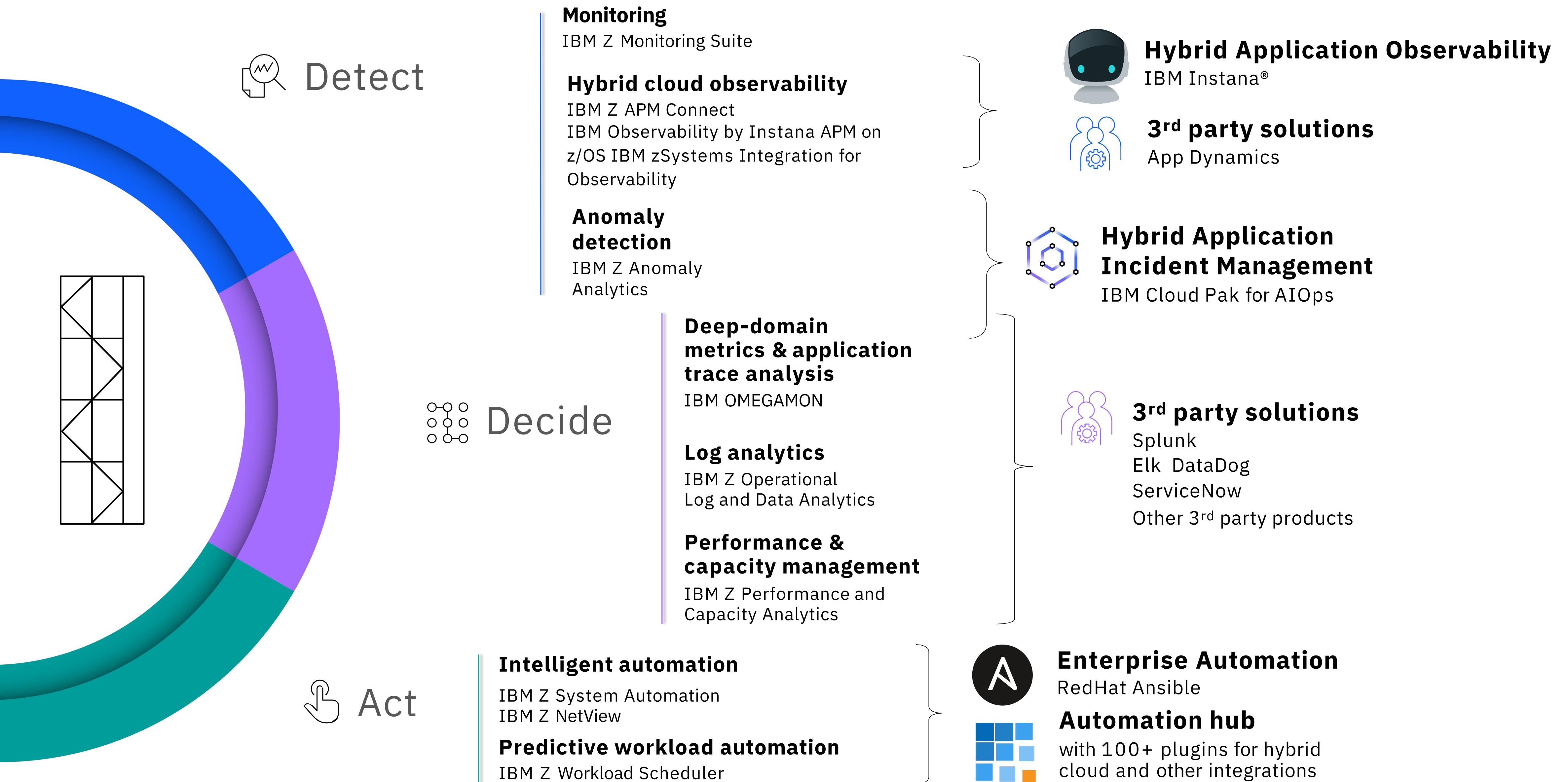


Hybrid Multicloud Networks



Data & Operations

Better together – Hybrid Cloud Integrations

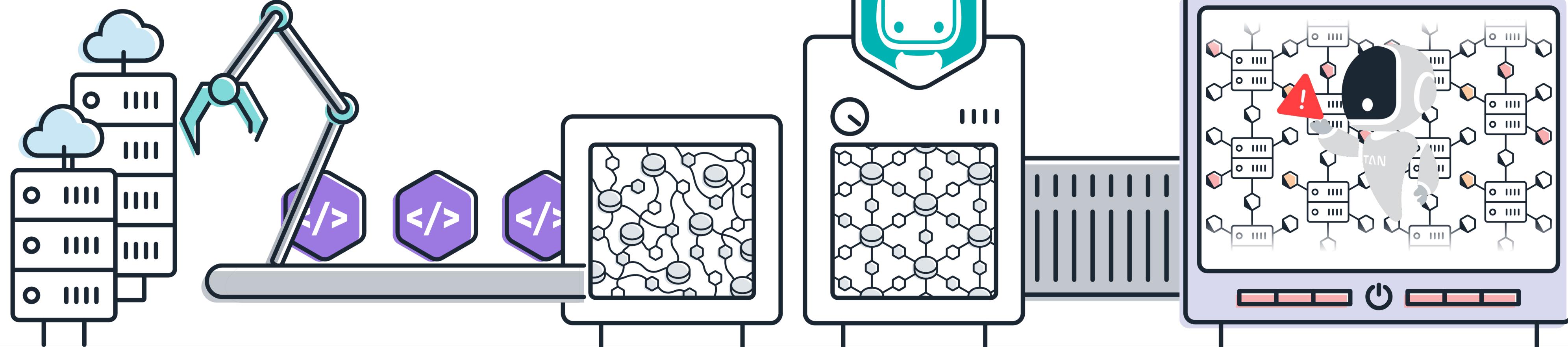


IBM Observability by Instana

IBM Observability by Instana®

Modern applications require modern solutions.

Track [every](#) interdependency
from code to end user.



[Automate](#) full-
stack visibility.

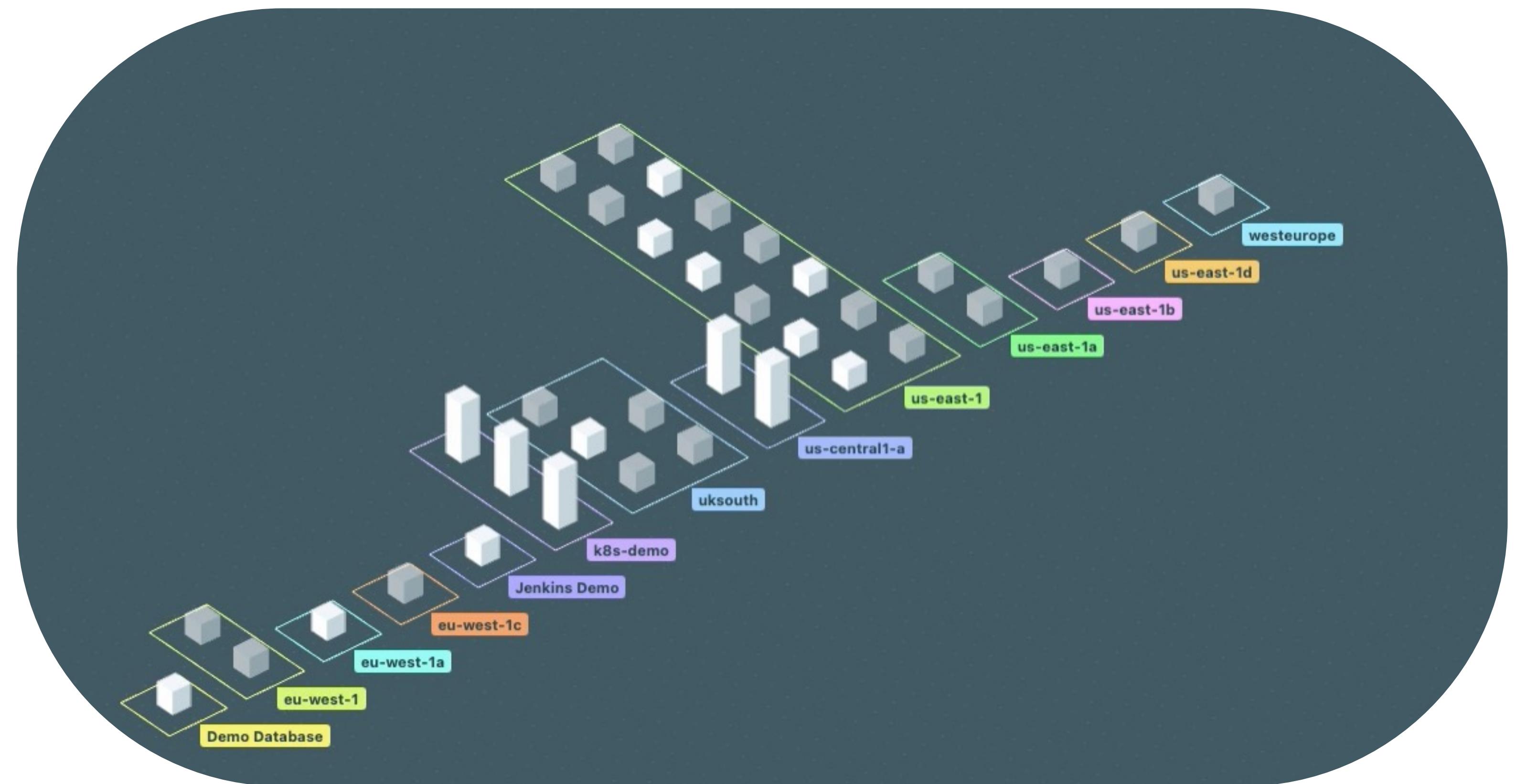
Collect accurate
data in [context](#).

Take [intelligent](#)
action.

Automate full-stack visibility

Automated, full-stack application visibility across the entire monitoring lifecycle - including real-time change detection, mapping, tracing and profiling.

- Self-monitoring, auto-updating single agent
- Automatic & continuous discovery, deployment, configuration and dependency mapping
- Zero-configuration dashboards, alerting, troubleshooting & remediation
- Always-on, automated health monitoring – tracing, logging and profiling



Collect accurate data in context

Real-time detection and mapping of all interdependencies reduces risk and decreases MTTR (Mean Time to Restore) by ensuring that you're always looking at accurate information.

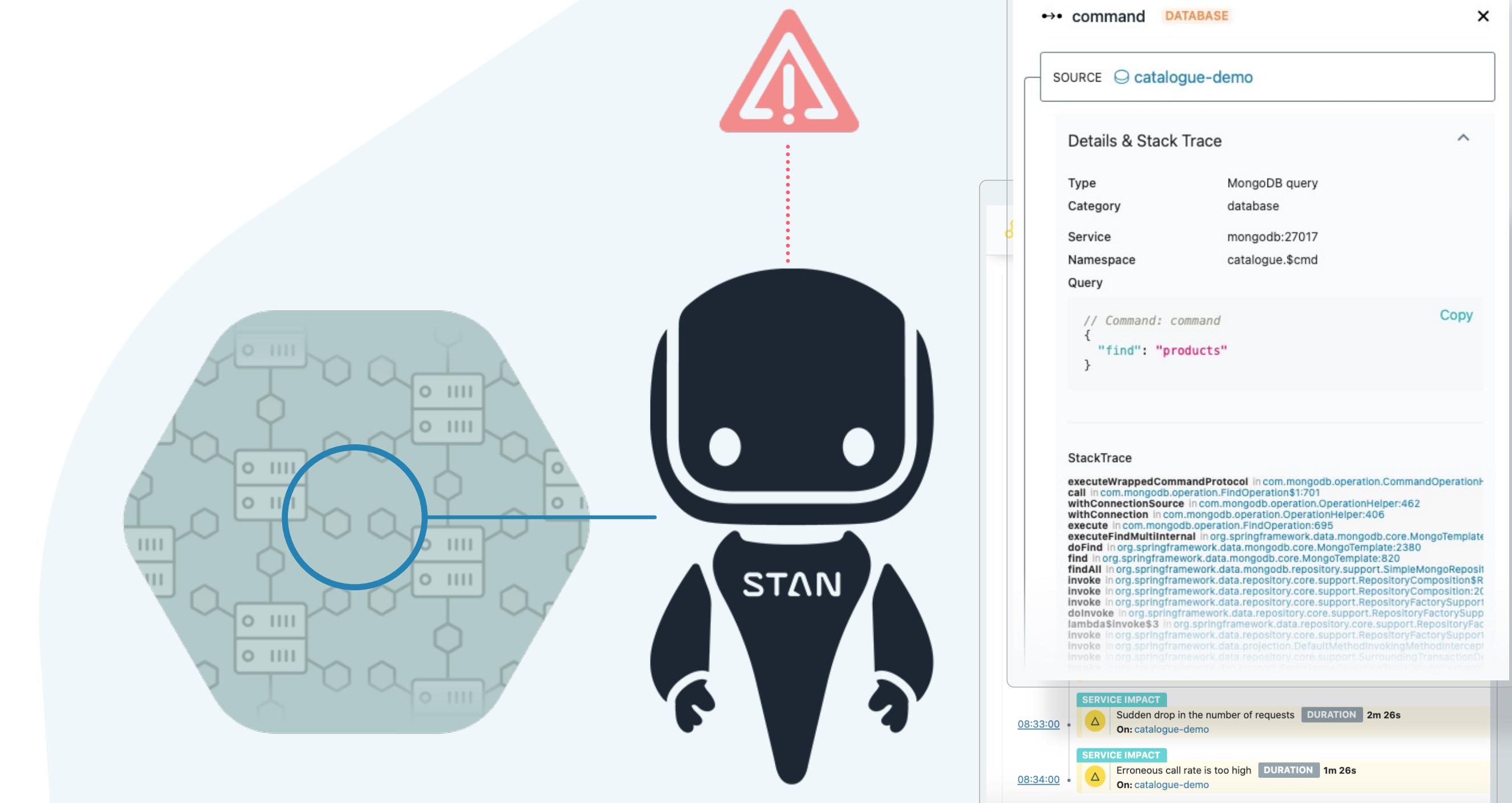
- Dynamic graph
- Automatic Anomaly Detection
- Application Perspectives
- Open Source & Logging Integrations



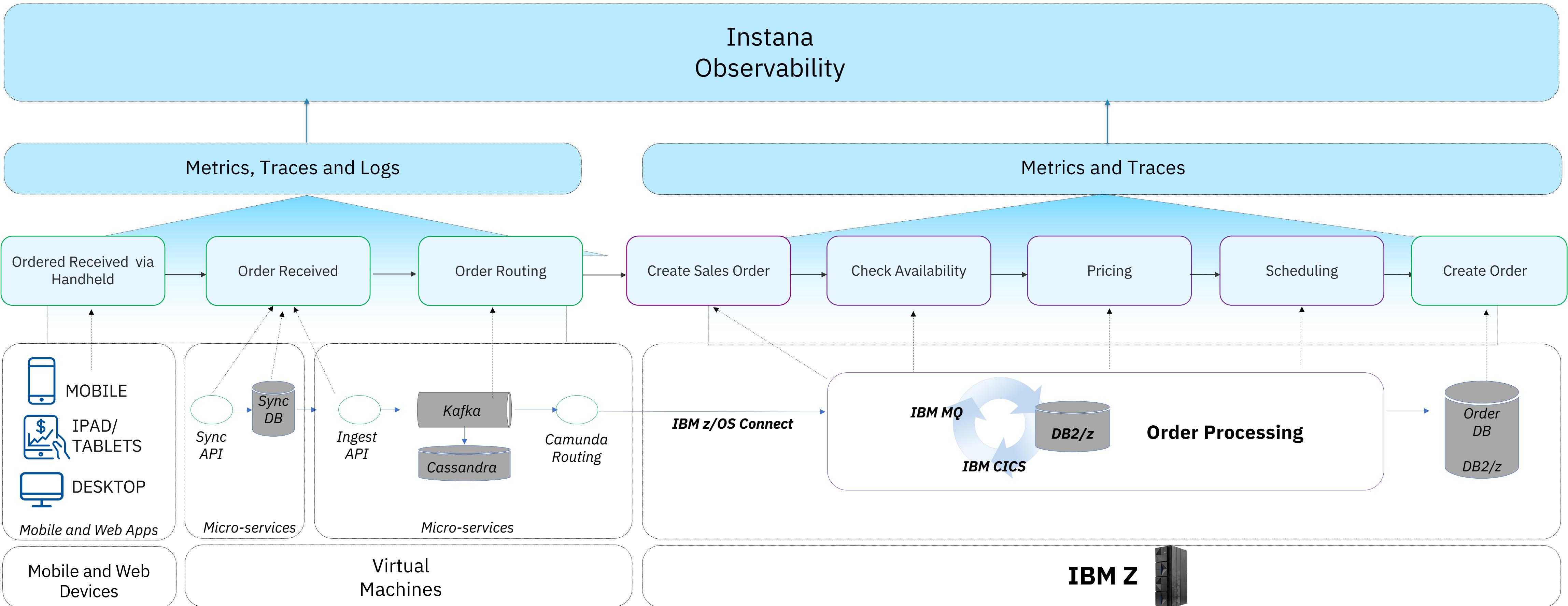
Intelligent action

Resolve issues faster with an understanding of contributing factors. Analyze every user request from any perspective to quickly resolve bottlenecks and optimize performance.

- Root Cause Analysis with Correlated Alerting & Incident Reporting
- Guided Troubleshooting
- Immediate Feedback of Pipeline & Canaries
- Unbounded Analytics



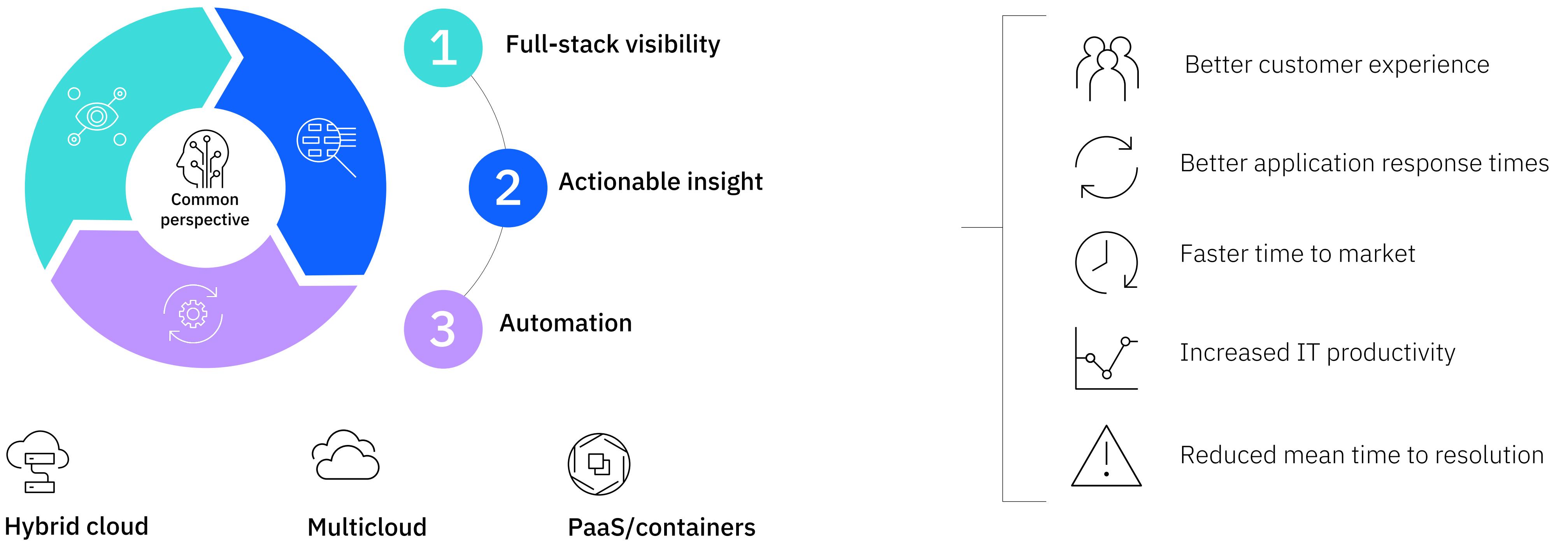
Instana can observe the **entire Hybrid Application Landscape**



IBM Turbonomic Application Resource Management

IBM Turbonomic® Application Resource Management

Continuous application performance while safely reducing cloud costs



IBM Turbonomic

Software (not people) continuously makes complex resourcing decisions to ensure all applications get exactly what they need to perform.

Public cloud optimization

- VM rightsizing
- Storage volume configuration
- Database configuration
- Maximize RI coverage
- Optimize RI purchasing

[Learn more](#)

Kubernetes optimization

- Container rightsizing
- Pod moves
- Cluster scaling
- SLO-driven scaling



Data center optimization

- Continuous compute placement
- VM rightsizing
- continuous storage placement
- Superclusters
- Initial placement

[Learn more](#)

Sustainable IT

- Container rightsizing
- Pod moves
- Cluster scaling
- SLO-driven scaling



What actions can Turbonomic recommend and automate?

1. Vertically scale workloads
(uses more historical data than other autoscalers like OCP VPA)
2. Horizontally scale workloads (to meet SLO)
3. Provision or suspend cluster nodes
(recommend only on s390x)
4. Move pods to different nodes
(unique to Turbonomic)

More details

1

Modify CPU requests and limits, equivalent to:
`oc set resources deployment foo \ --limits=cpu=200m, memory=512Mi \ --requests=cpu=100m, memory=256Mi`

2

Increase or decrease number of pods, equivalent to:
`oc scale deployment foo \ --current-replicas=1 \ --replicas=2`

3

Cannot *automatically* scale nodes on s390x – however you can manually scale when *recommended*

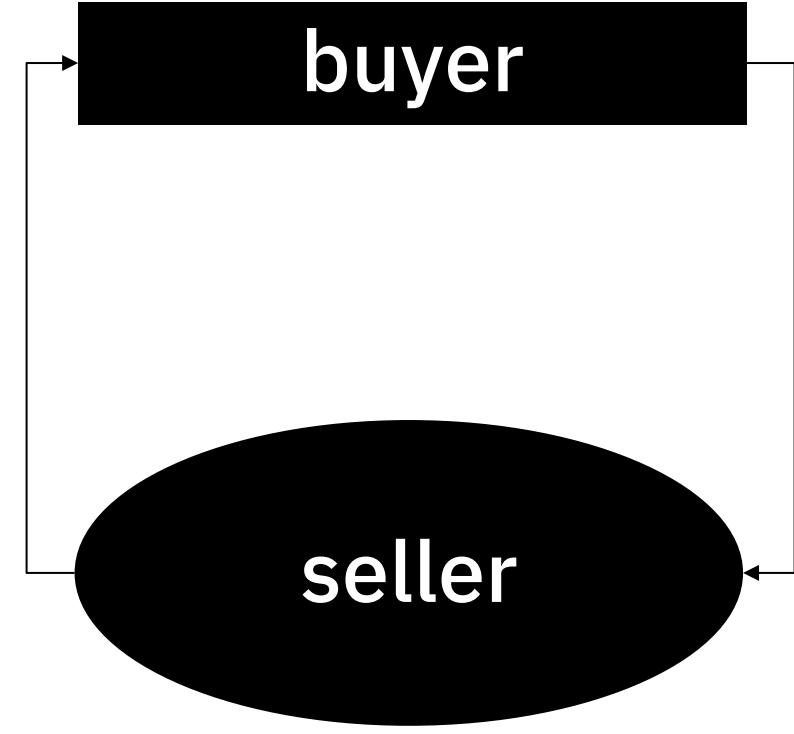
4

Spin up new pod on target node -> ensure it is up and running and passes health checks -> delete original pod

IBM Turbonomic automates resource decision-making

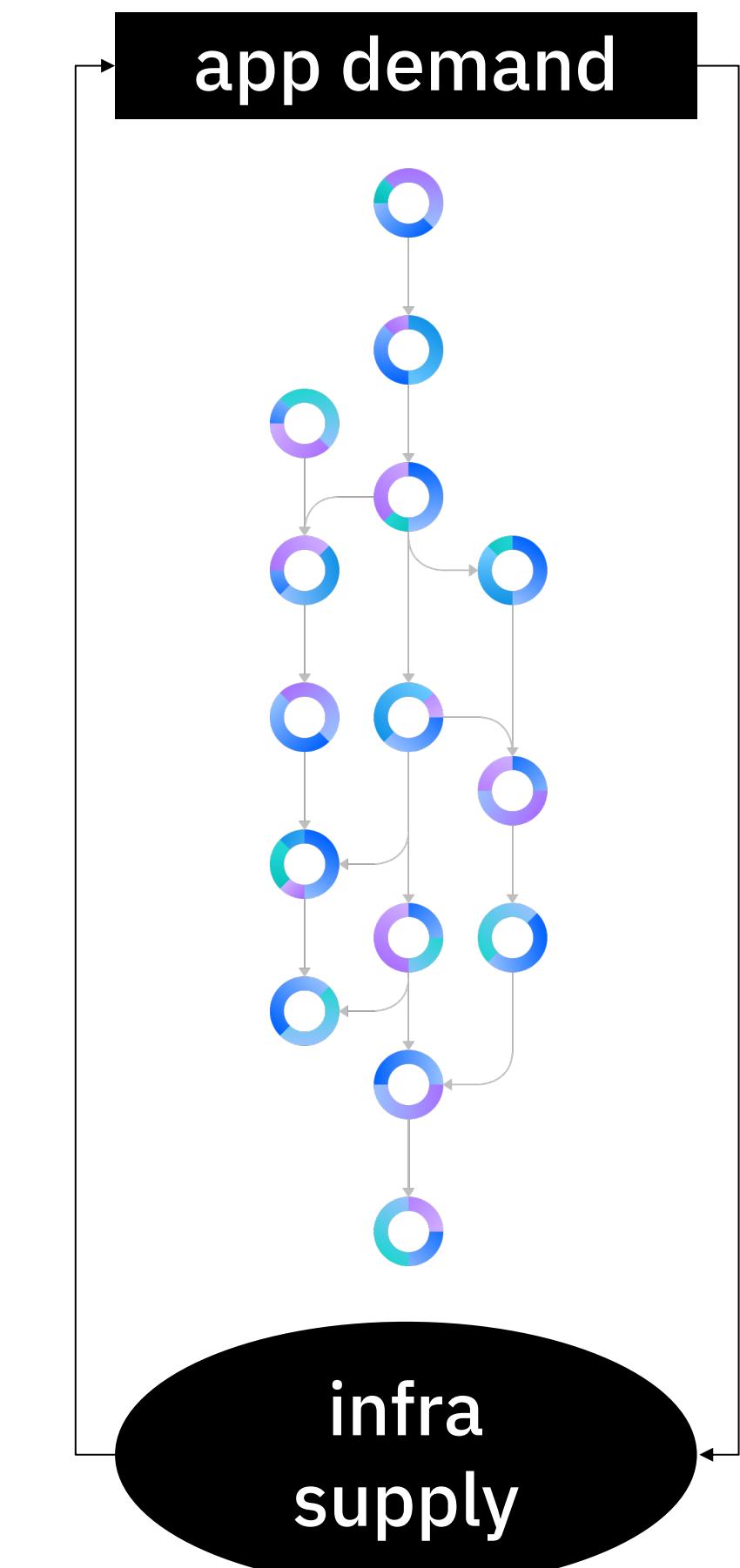
1. Abstraction

Entities in the environment are abstracted as buyers or sellers of application resources (compute, storage, network).



2. Analytics

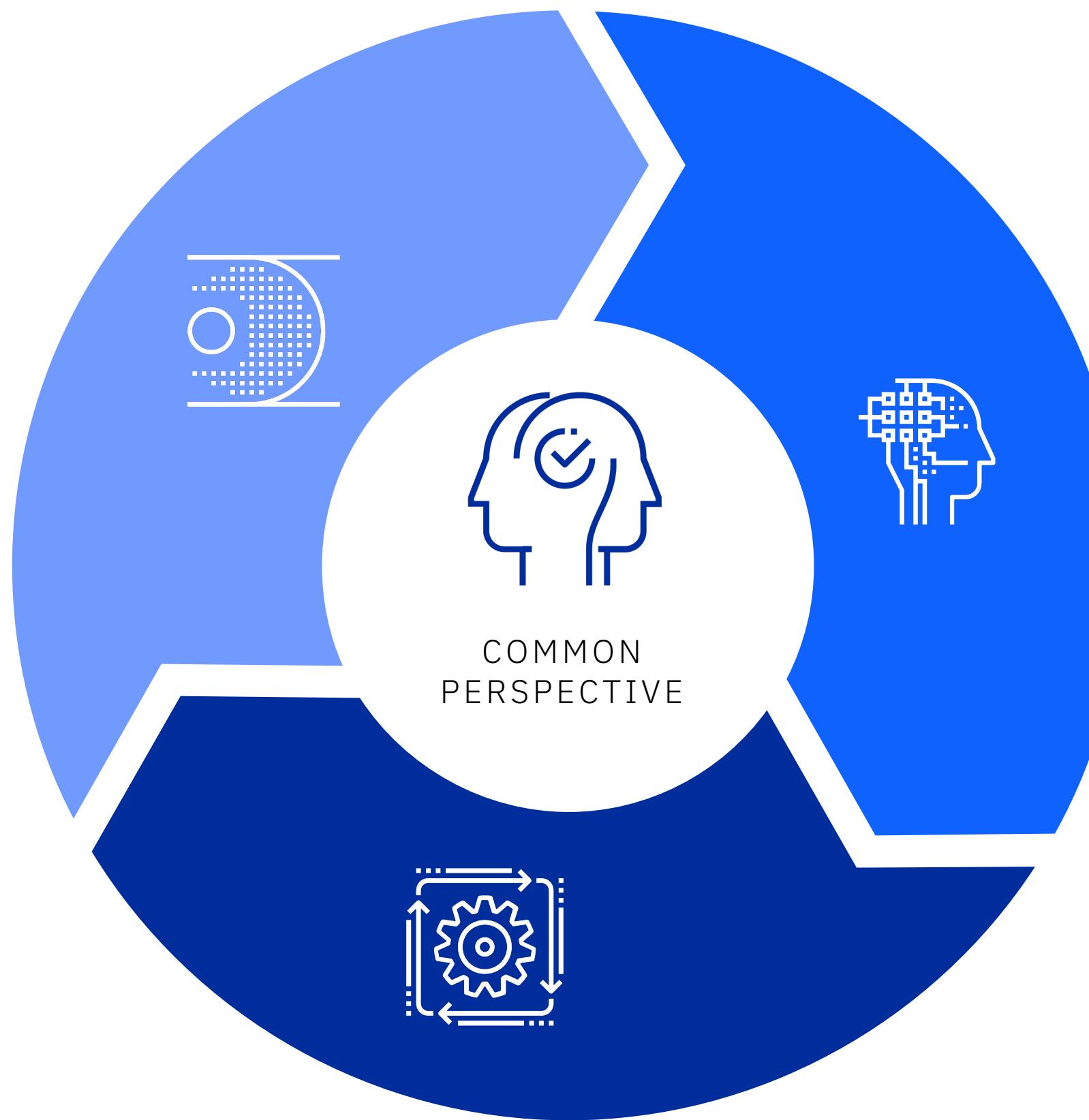
Environment / the application stack is modeled as a market and the principles of supply, demand, and price are applied to match app demand to infrastructure supply.



3. Automation

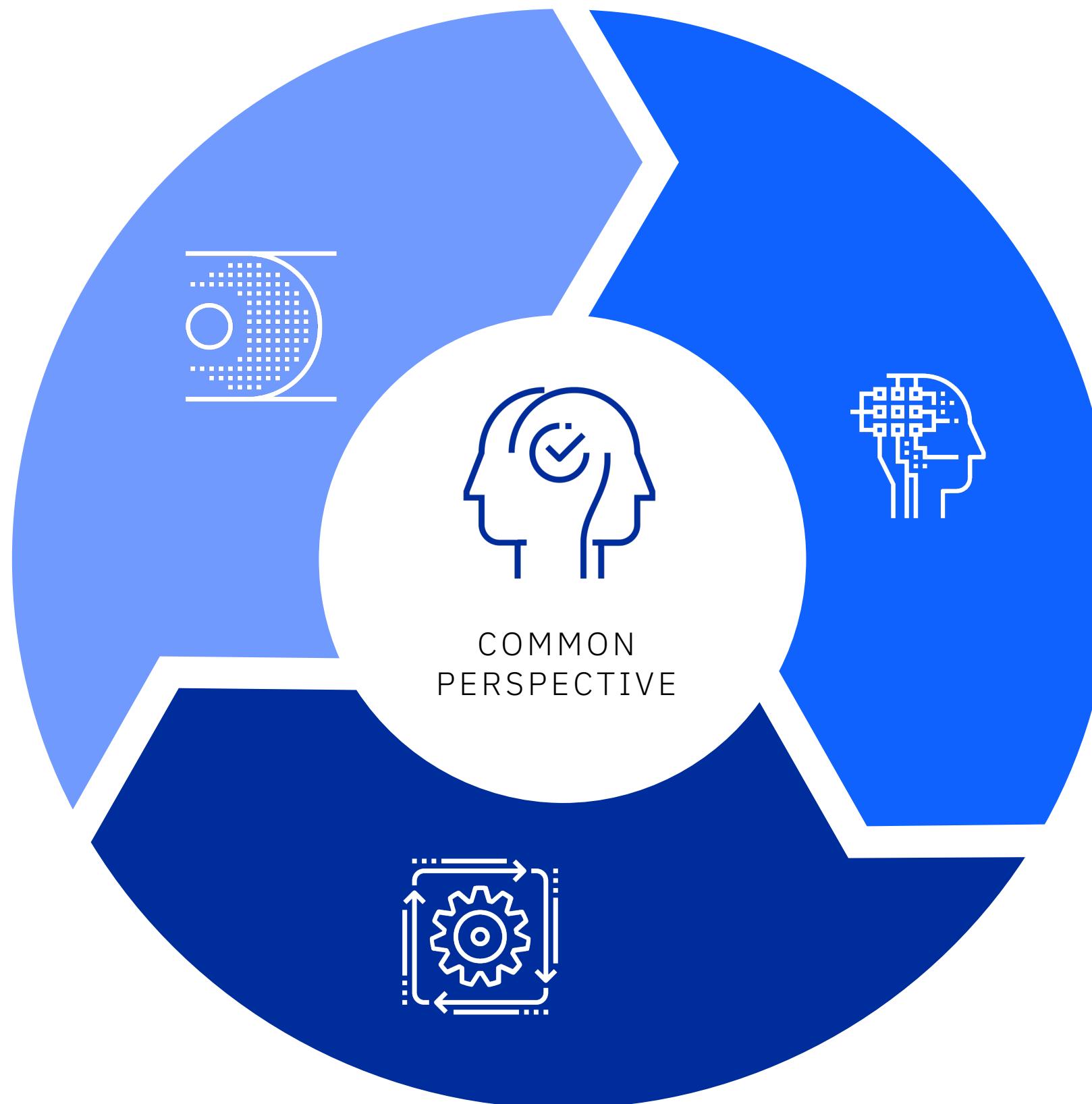
App-first, full-stack approach ensures actions are safe to automate. Clients operationalize automation by integrating actions into pipelines, processes, and workflows

Our approach ensures operational and business success.



- 1 OBSERVABILITY
Application-aware and full-stack. Application resourcing delivers business impact you can see.
- 2 ACTIONABLE INSIGHT
Multidimensional analysis ensures actions are actionable and trustworthy.
- 3 AUTOMATION
Operationalize automation by integrating actions into pipelines, processes, and workflows

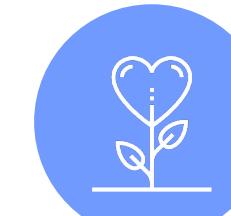
Our approach ensures operational and business success.



1

OBSERVABILITY

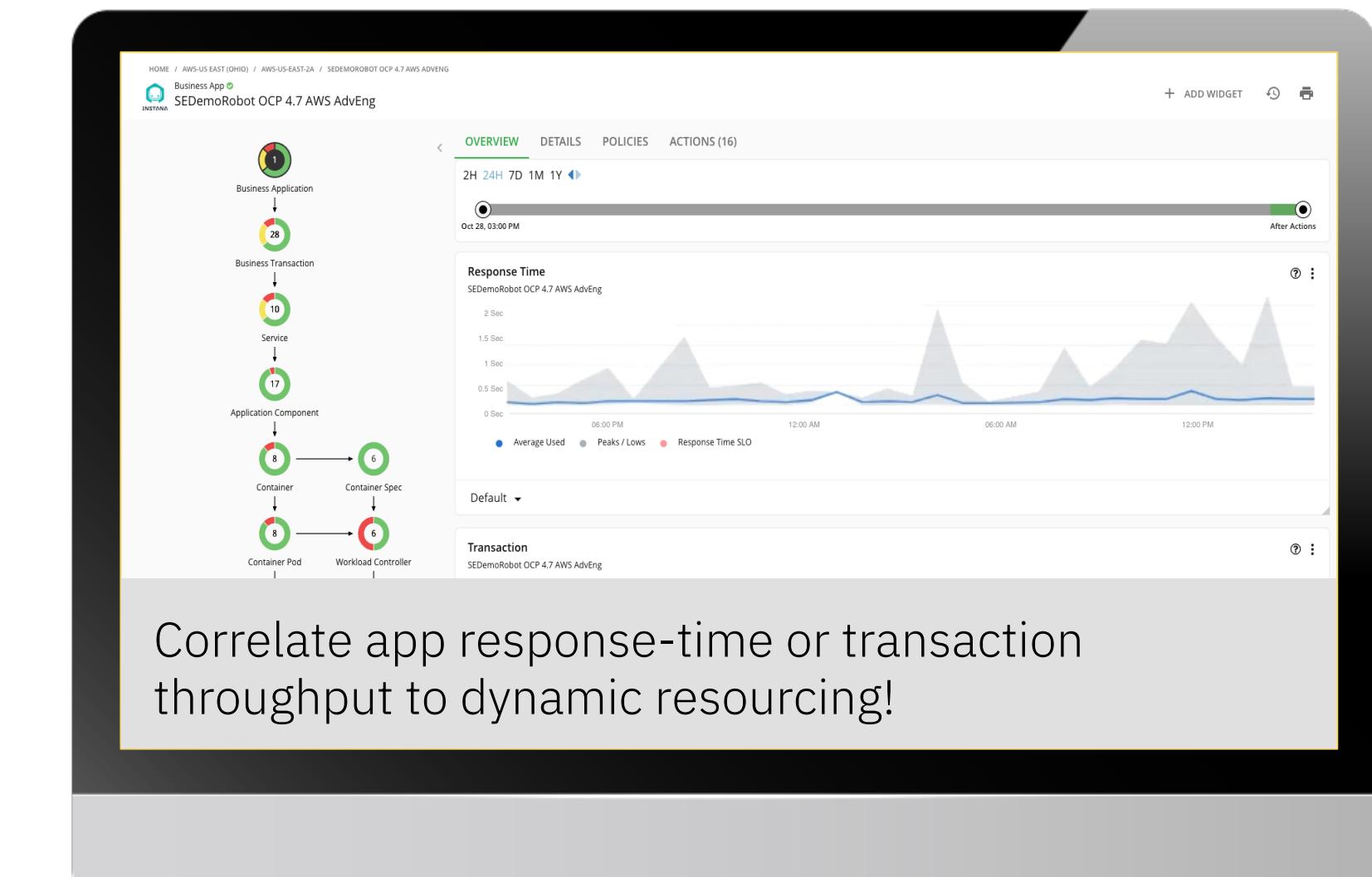
Application-aware and full-stack. Application resourcing delivers business impact you can see.



Build trust with all stakeholders. Help App Owners take actions and automate continuously.

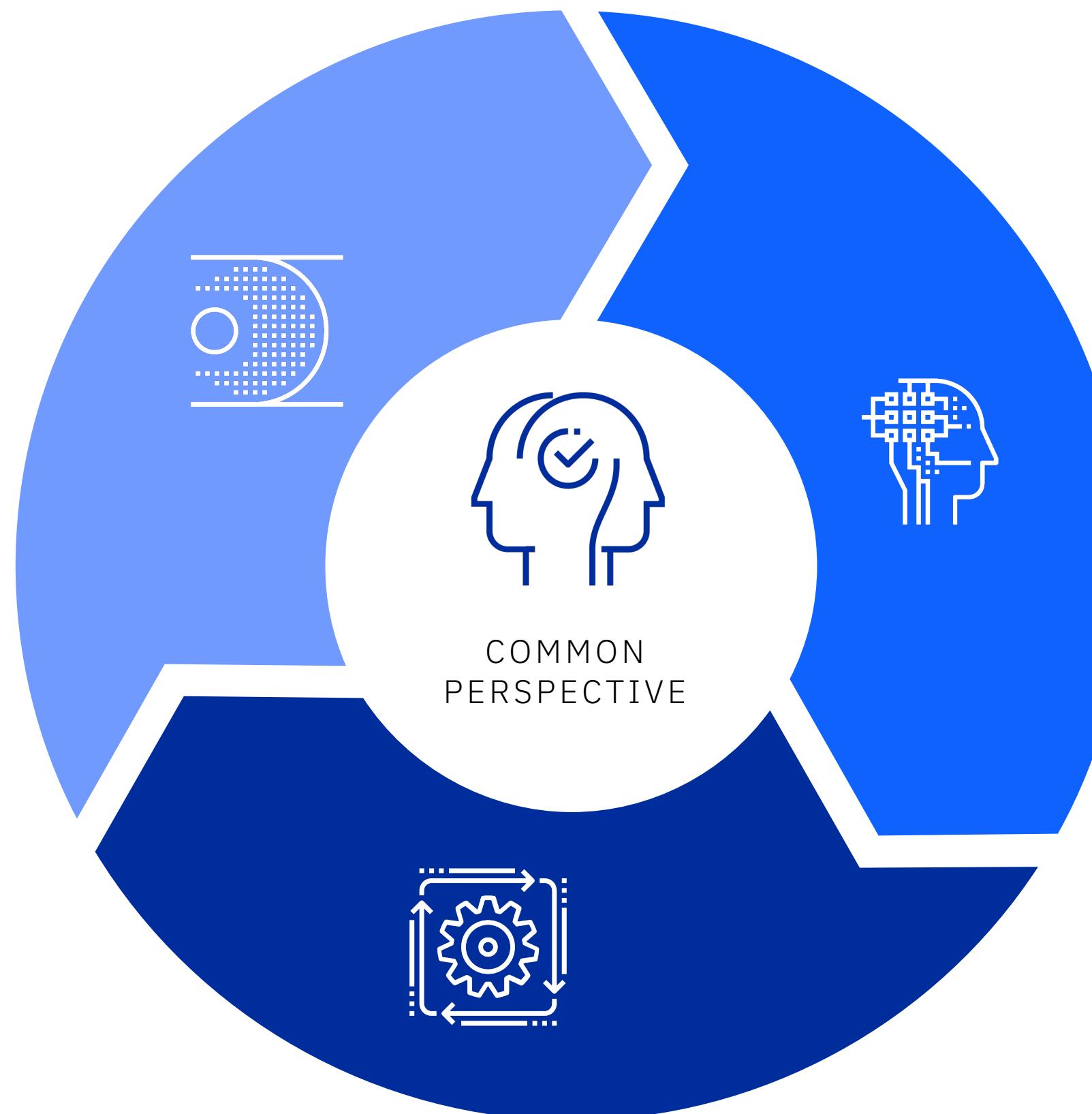


Show automation's impact on the business and customer experience.



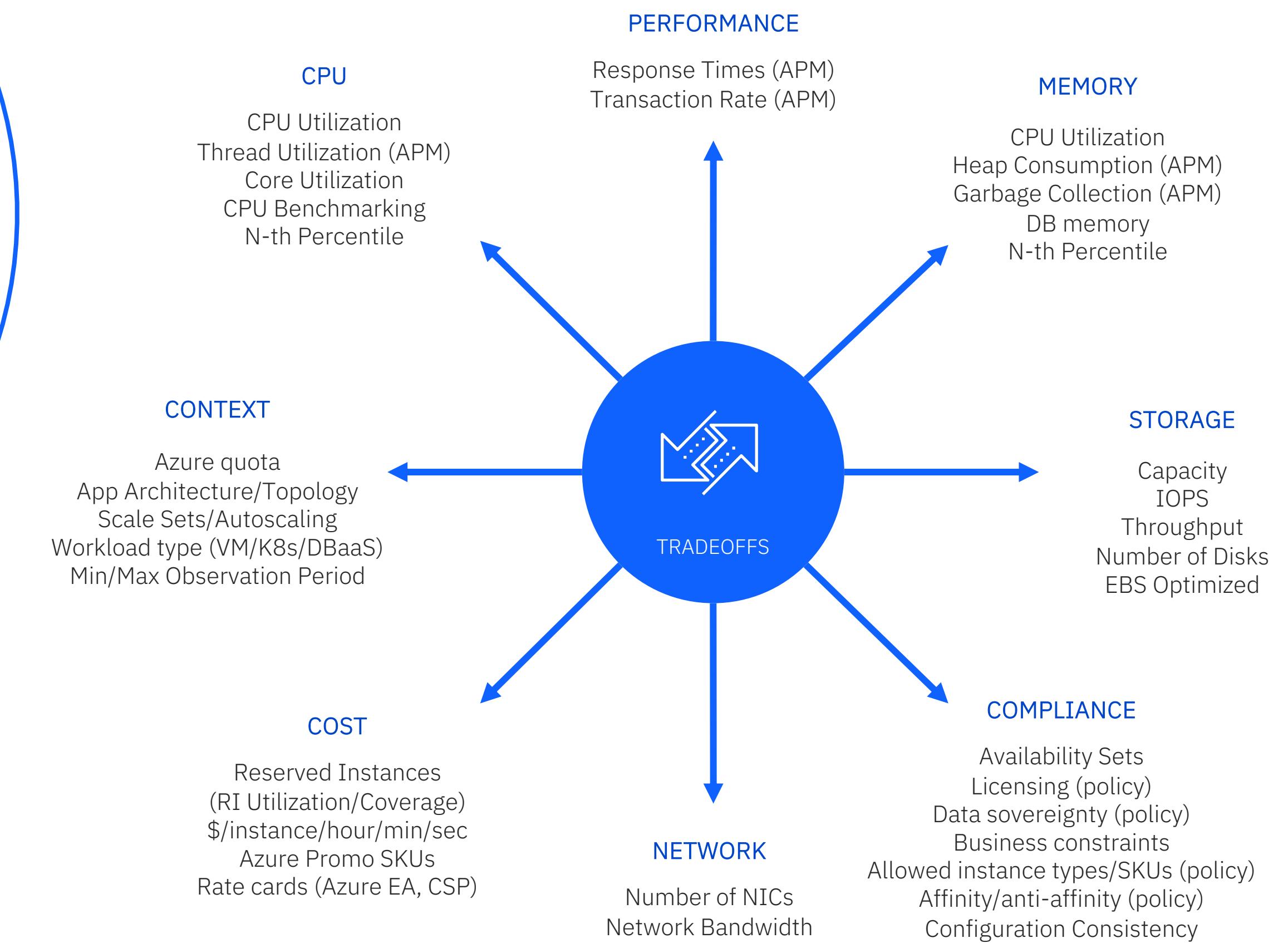
Integrate with Instana, AppDynamics, Dynatrace, New Relic, or other APM solutions. No APM? No problem. We've got you covered with native solutions.

Our approach ensures operational and business success.

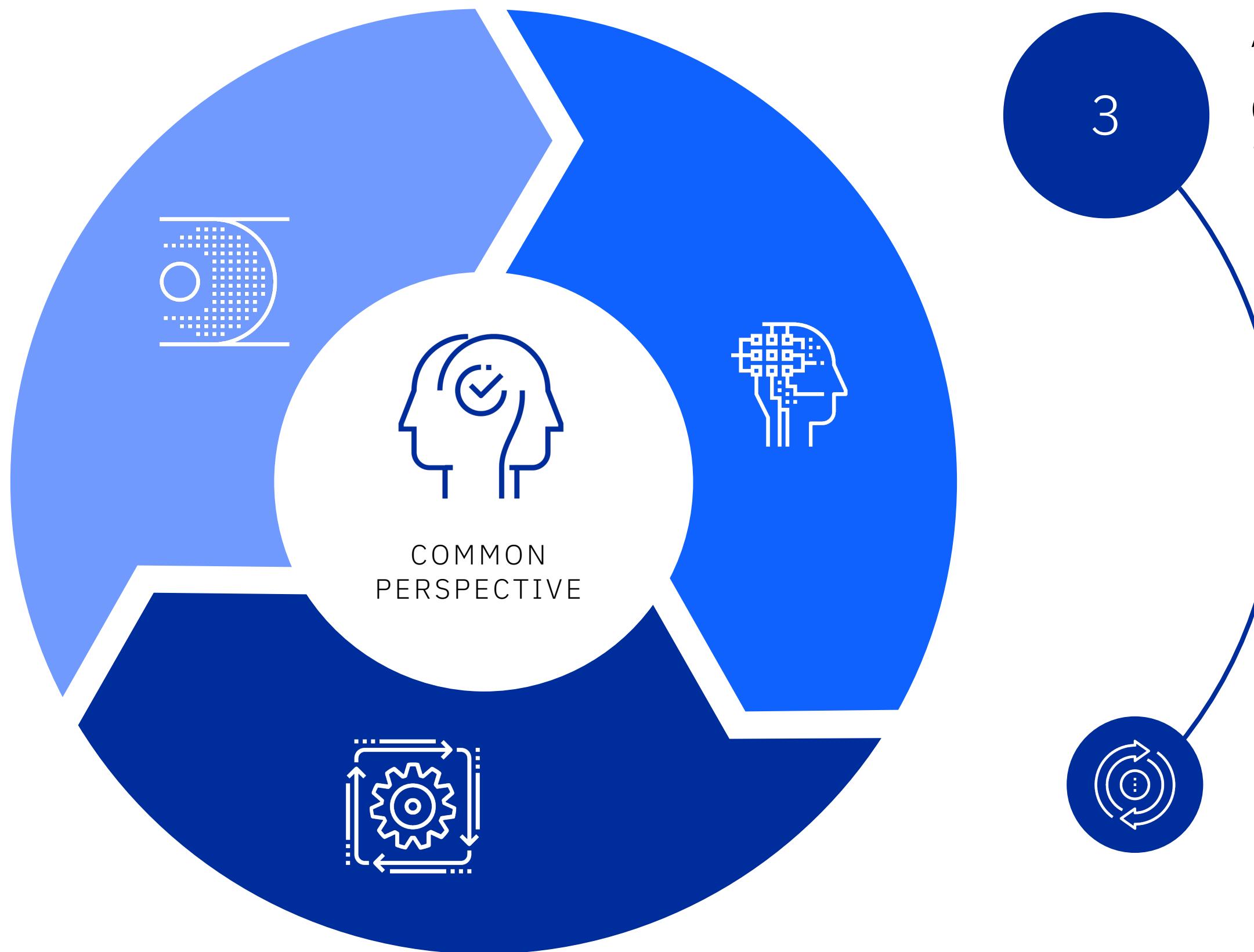


ACTIONABLE INSIGHT

Multidimensional analysis ensures actions are actionable and trustworthy.



Our approach ensures operational and business success.



AUTOMATION

Operationalize automation by integrating actions into pipelines, processes, and workflows.

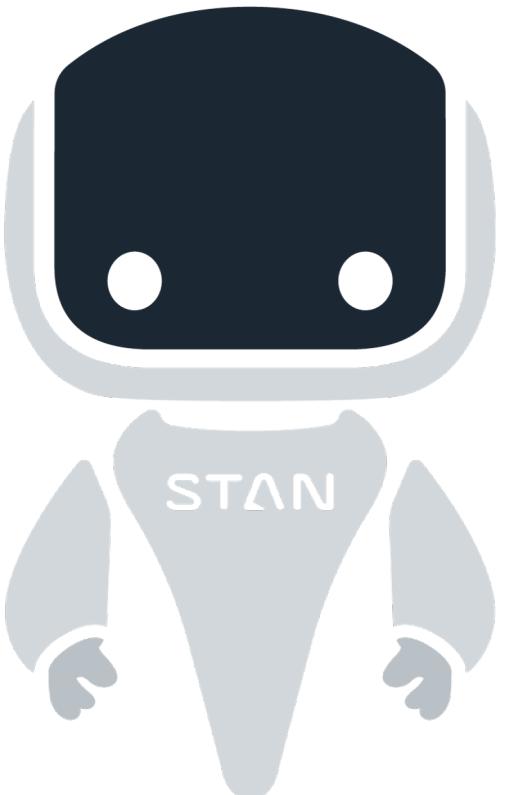
- **Ansible**
- **Azure DevOps**
- **GitHub**
- **GitLab**
- **IBM Cloud Pak for AIOps**
- **Jenkins**
- **Puppet**
- **Slack**
- **Terraform**

...and more!

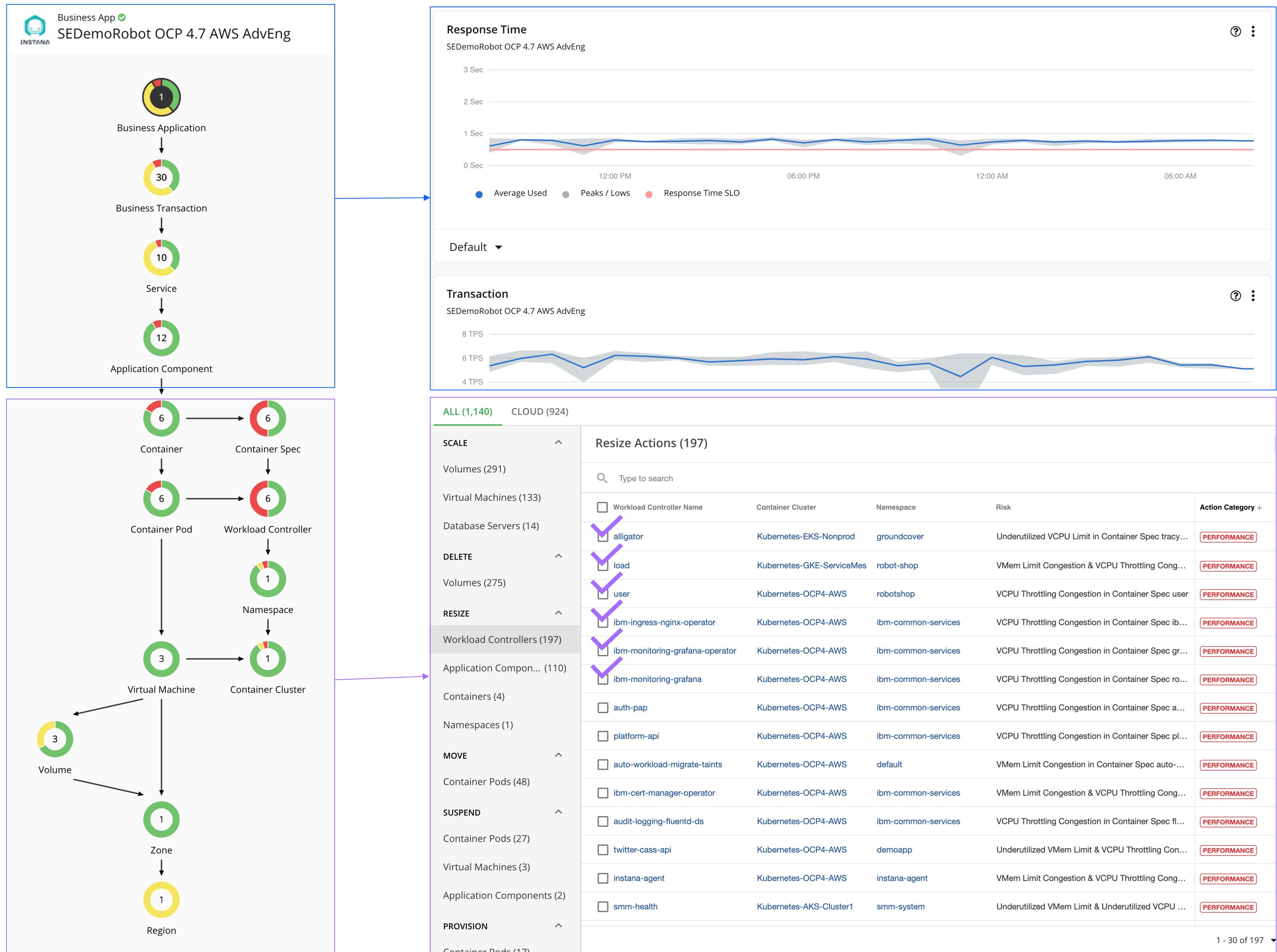
IBM Instana + IBM Turbonomic

Powerful alone,
better together

Only **Instana** provides
real-time observability
data with 1 second
metric granularity



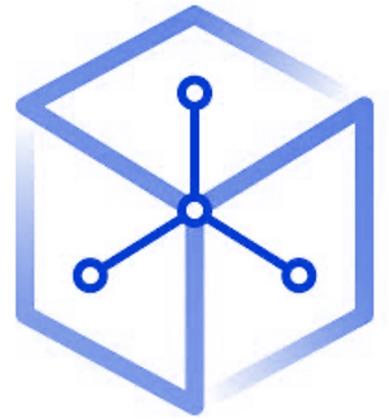
Only **Turbonomic**
provides cost
optimization you can
operationalize and
automate.



IBM Cloud Pak for AIOps

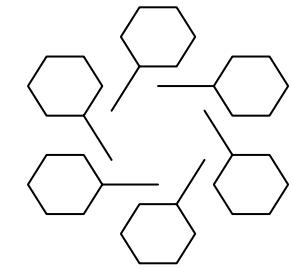
IBM Cloud Pak for AIOps

Proactive problem determination, remediation and avoidance



Proactive incident resolution using AI to eliminate unnecessary down time

Cross Domain Data Ingestion

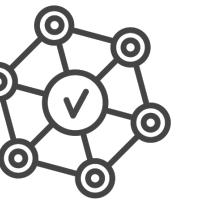


Events, metrics, alerts, topology, CMDB

Tickets, defects, CI/CD events

On-Prem, Cloud, SaaS, VM's and containers, systems, apps, network

Event Correlation

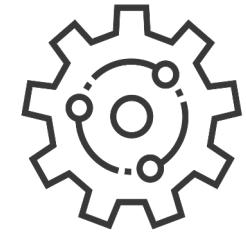


Correlate across all relevant data sources

Detect hidden anomalies, group based on patterns

Find deviations in performance metrics

Proactive Incident Management



Prioritize incidents based on business criticality

Dynamically update application topologies

Recommend fixes based on analysis of past tickets

Runbook Automation



Create runbooks to automate recurring remediations

ChatOps and prescriptive next best actions

Centralize policies across cloud and VM environments



Comprehensive AIOps approach to Real Business Outcomes

Multi-Domain Data Ingest

Automated Data Ingest

Unstructured

CI/CD

Logs

Tickets

Structured

Events / Alerts

Metrics

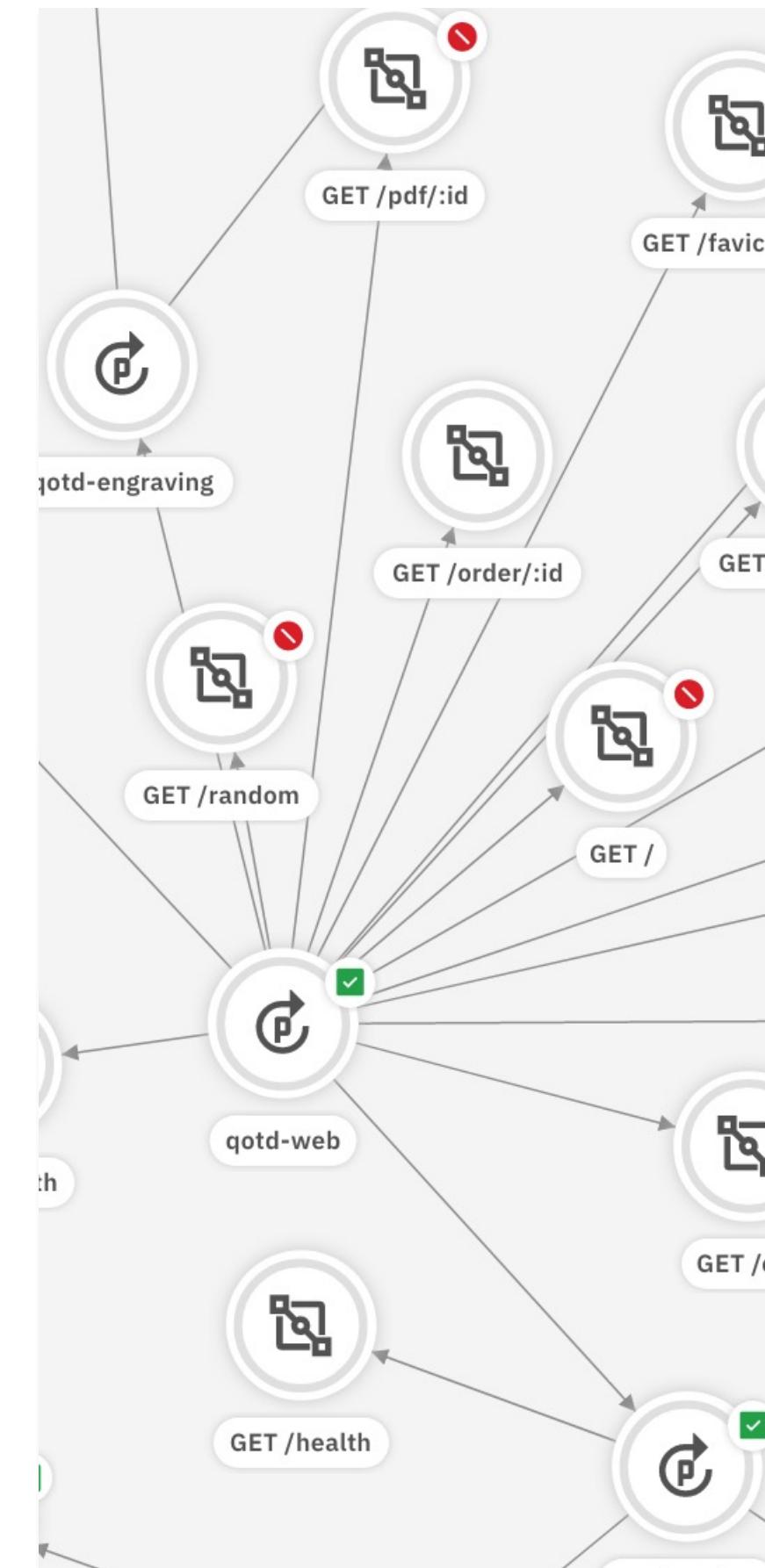
Topology / Changes



Informed, Actionable Insights



Acclimate & Enrich Data



Augment Ops



Take Actions

Trustworthy Analysis

Change Tracking

Anomaly Detection

Event Processing Correlation

& Enrichment

Fault Localization

Blast Radius

Probable Cause Analysis

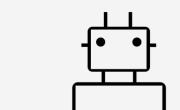
Story Creation



Contextual side-launch



Act Manually (with a click)



Semi | Full Automation



Pipelines & Workflows



Explainability



Collaboration Integration

Together Ops teams
in near real-time...

Assure Performance



Accelerate rates of change



Free staff from toil



Reduce tickets by up to 70%



The Goal

First

Occurrence

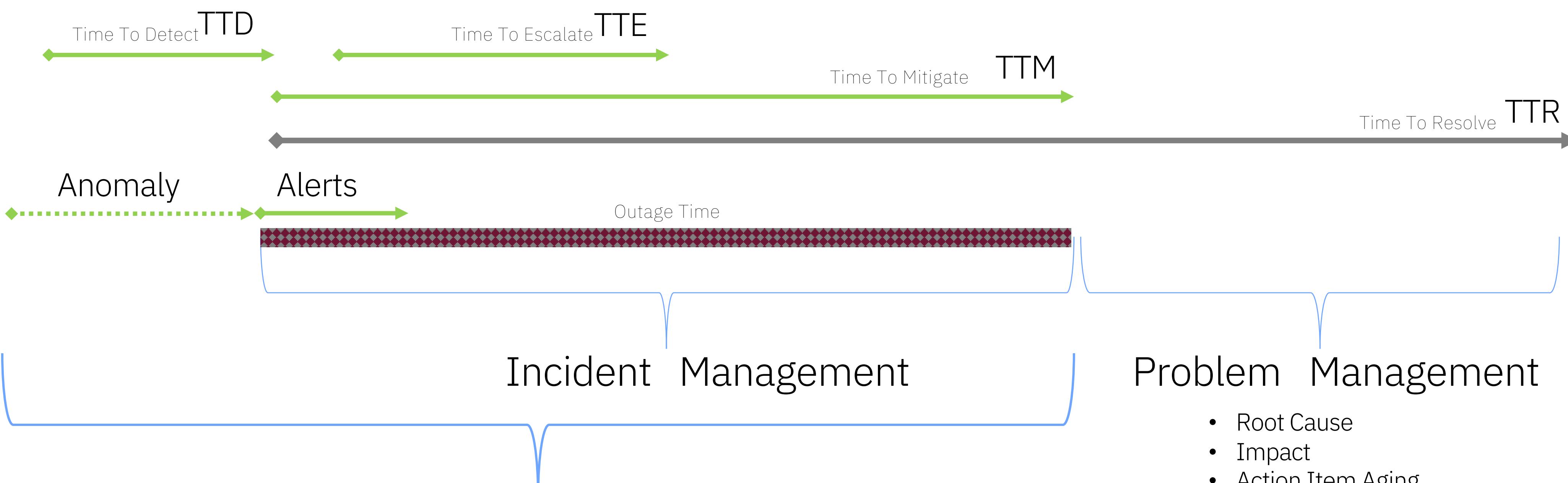
Detection

Escalation

Mitigation

Resolve

- Assess the abnormal
- Confirm the problem
- Assign Correct Resource
- Immediate impact mitigated
- Return to normal operation
- Permanent solution deployed
- No chance of re-occurrence



AIOps

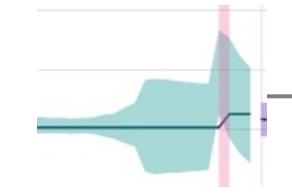
- Root Cause
- Impact
- Action Item Aging

IBM



Comprehensive AIOps approach to Real Business Outcomes

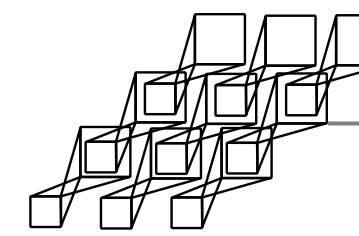
Analytics look to understand “normal”.
When they’re not, ...



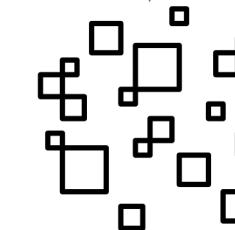
The engine generates Anomalies....



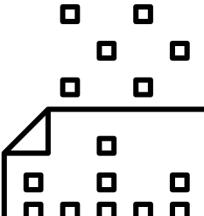
Faults & Events from the entire environment.....



Are de-duplicated and correlated into Alerts



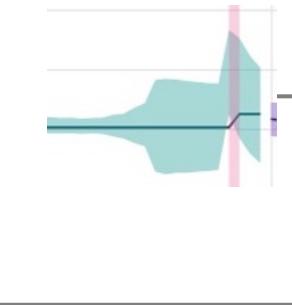
...and are run through analytics to correlate & enrich to understand what is wrong





Comprehensive AIOps approach to Real Business Outcomes

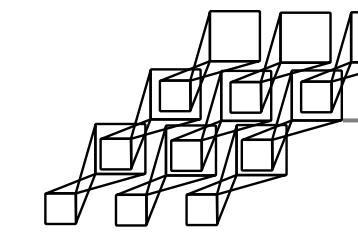
Analytics look to understand “normal”.
When they’re not, ...



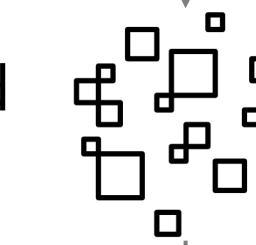
The engine generates Anomalies....



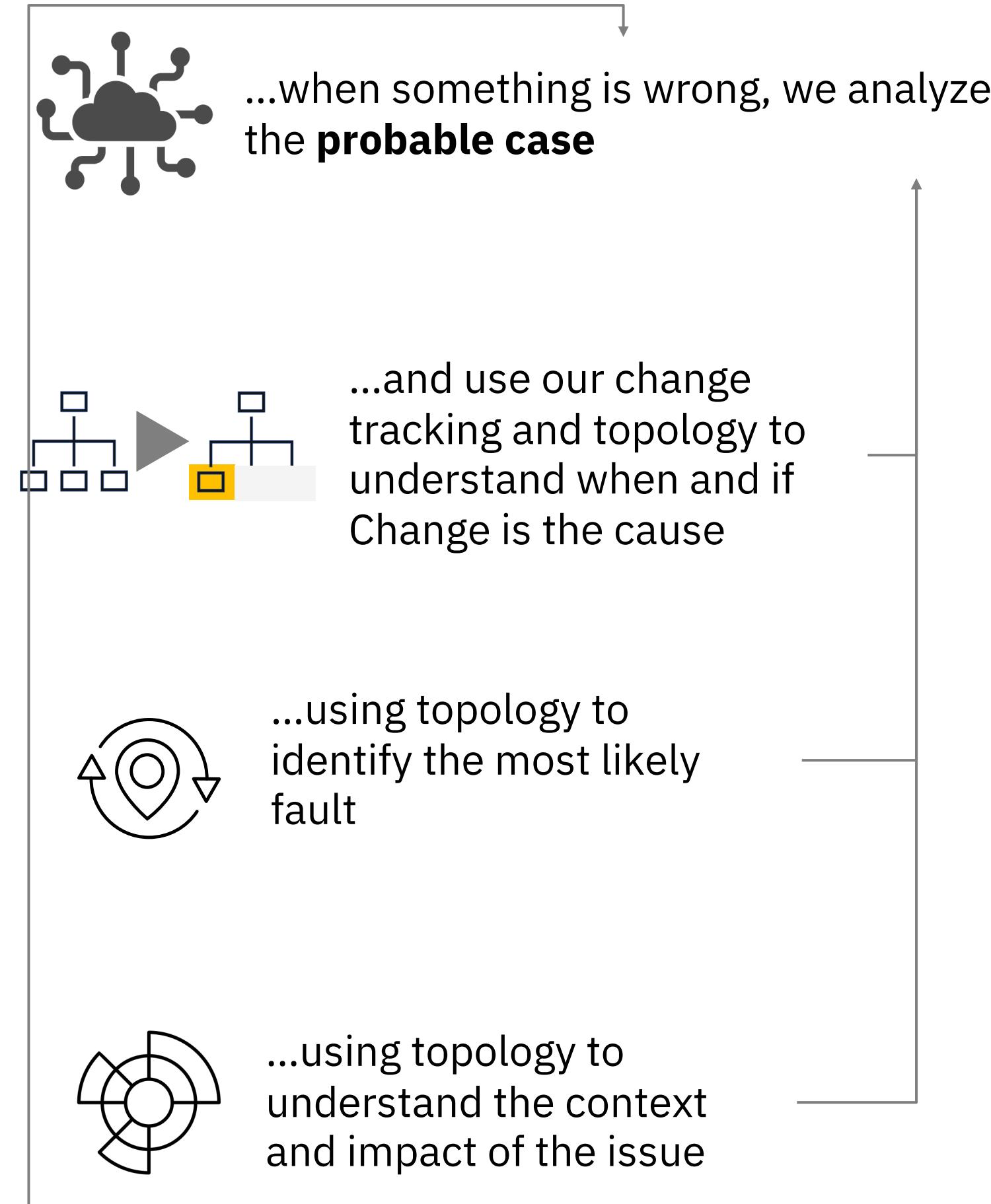
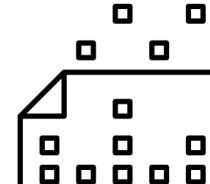
Faults & Events from the entire environment.....



Are de-duplicated and correlated into Alerts

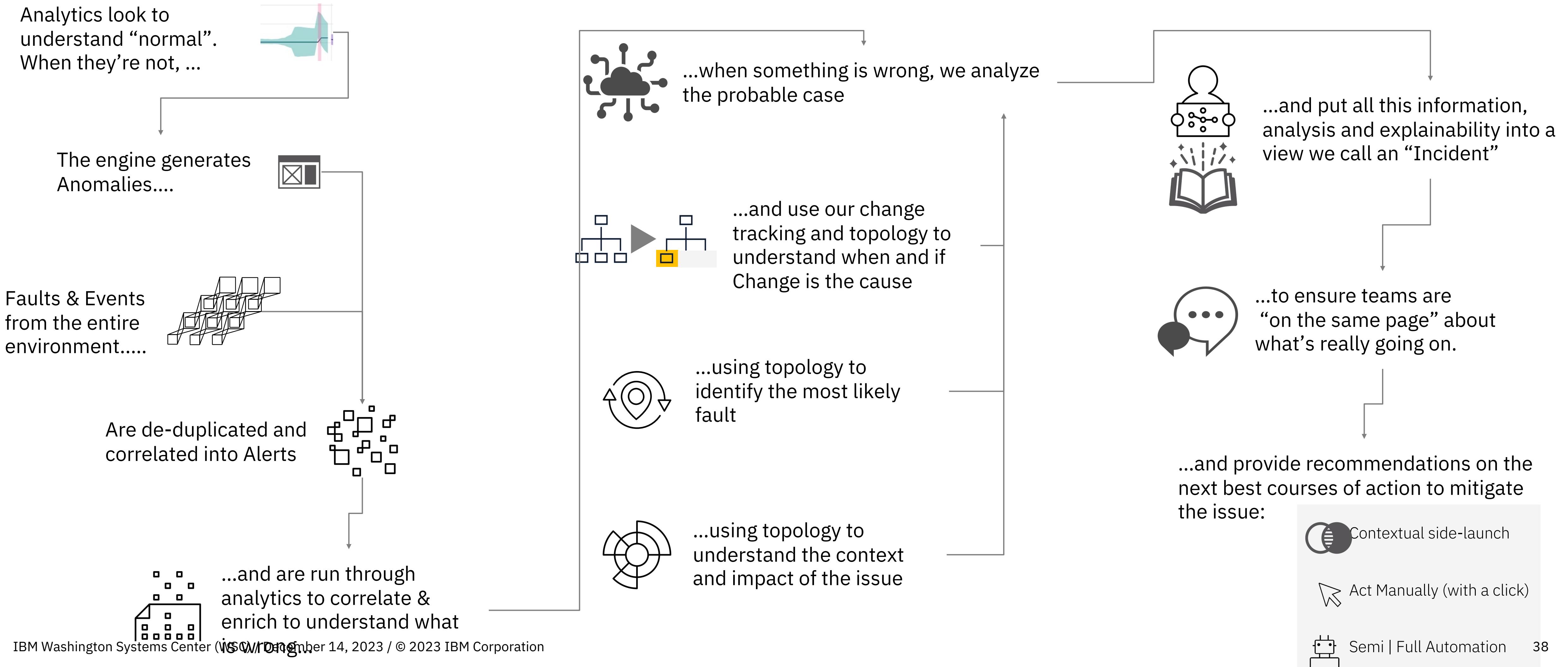


...and are run through analytics to correlate & enrich to understand what is wrong





Comprehensive AIOps approach to Real Business Outcomes



AIOps Incident View

Probable Cause alerts are prominently displayed and ordered by likelihood, with additional details only one click away.

Topology view of affected and associated resources, and historical change tracking to quickly pinpoint the source of an incident and its impact

Recommended runbooks based on incident context and user feedback.

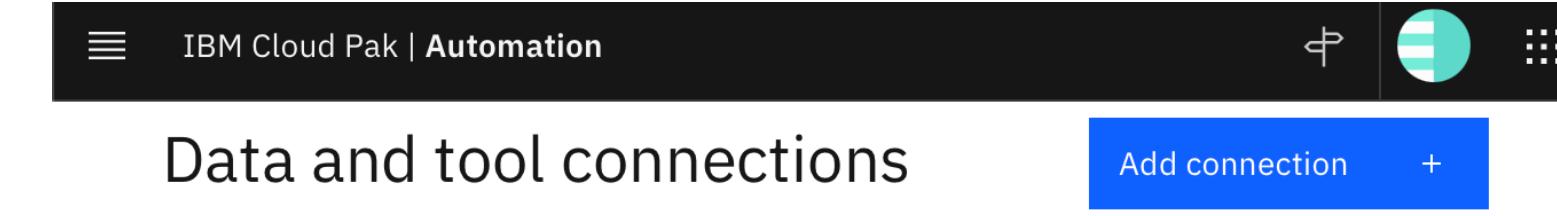
The screenshot shows the IBM Automation AIOps Incident View. At the top, there's a navigation bar with 'IBM Automation' and a search bar. Below it, tabs for 'Overview', 'Alerts', and 'Topology' are visible, with 'Overview' being the active tab. A header bar displays 'Stories and alerts: 1' and 'Change story settings'. Below this, a section titled 'Probable cause alerts: 3' lists three alerts: 'Response time high for ts-ticketinfo-service', 'Log Anomaly - HTTP Response Anomaly (503)', and 'MemoryUtilization is Higher than expected'. To the right of these, a 'Fuel tracker' icon is shown with a callout pointing to a 'Distribution dashboard'. On the left, a sidebar lists 'Runbooks' for each alert. In the center, there's a 'Similar past resolution tickets' section showing two ticket entries. At the bottom, there are two charts: 'Topology churn' showing relationship and property changes over time, and 'Status severity breakdown' showing the distribution of status severities over 24 hours.

Access to ChatOps for team coordination and shortcuts to actions

Direct link to ServiceNow ticket or other ITSM systems

Similar incident tickets, to inform operators of rapid resolution steps as well as tracking recurring types of incidents.

Environment and Tooling Data Connectors



Data and tool connections

Connect to your tools to provide data that will help gather insights for your environment.

Add connection +

Learn more ▾

Manage connections

Schedule connections

Search

Connection type	Total connections	Connection status	Categories
ELK	1	✓ 1	Logs
Instana	2	✓ 2	Events Metrics ...
ServiceNow	1	✓ 1	Tickets Topology
Slack	1	✓ 1	ChatOps
SSH	1	✓ 1	Runbooks

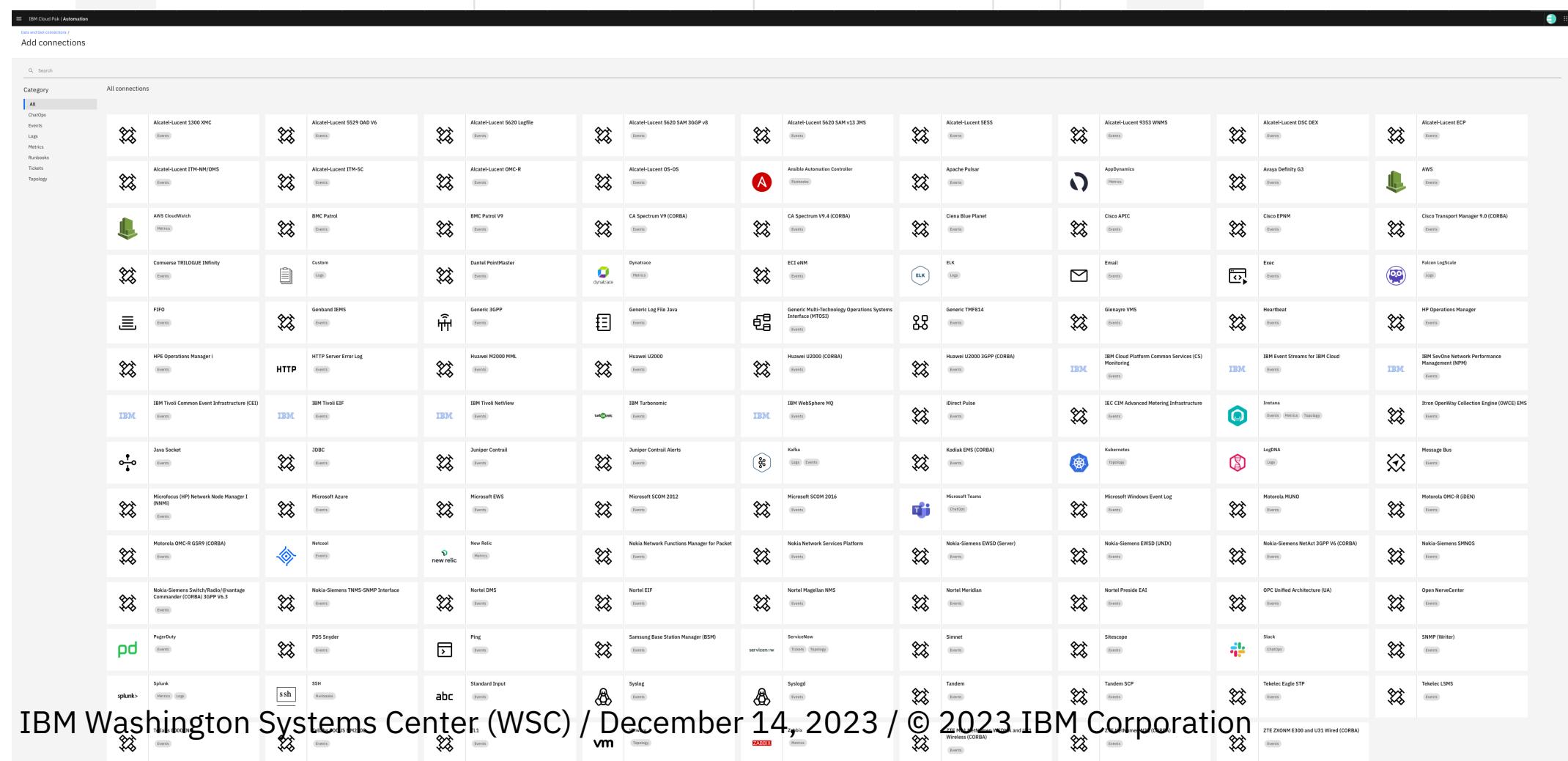
Over 160 industry standard connectors out-of-the-box

Ingest [Events & Alerts](#), [Metrics](#), [Topology](#) and [Logs](#) from across your estate and tooling

Create your own custom connectors using generic connectors and SDKs

Leverage your existing [Netcool Probes](#)

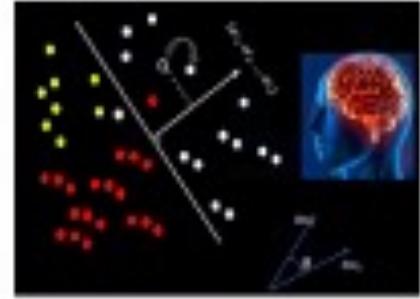
Easy configuration and management





AI Analytics in Cloud Pak for AIOps

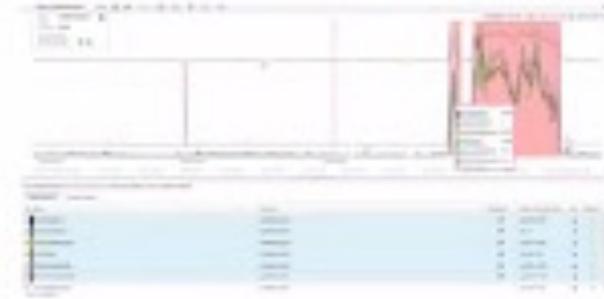
Log Anomaly Detection



Detect anomalies from log messages

- Anomalous time period prediction
- Entity mentions in error logs
- Explanation & Pointer to log messages from anomalous time periods

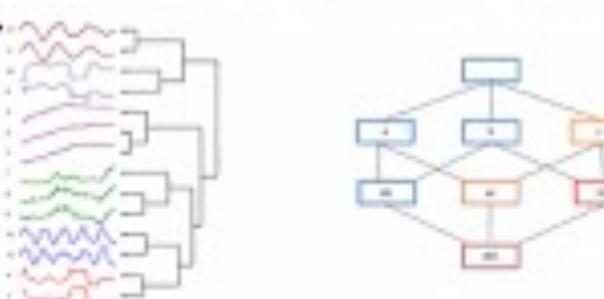
Metric Anomaly Detection



Detect anomalies from time series metrics

- Deviation from normal operating range
- Change from variable to flat
- High & low range changes
- Exceed previous range
- Exceed normal range variance

Event Grouping with Entity Linking



Group events, alerts, anomalies to reduce tickets

- Topological: Group events that are related and/or connected (e.g. "runs on").
- Temporal: To automatically discover events that tend to co-occur
- Scope: Automatically group events based on scope
- Super-Group: Group of Groups

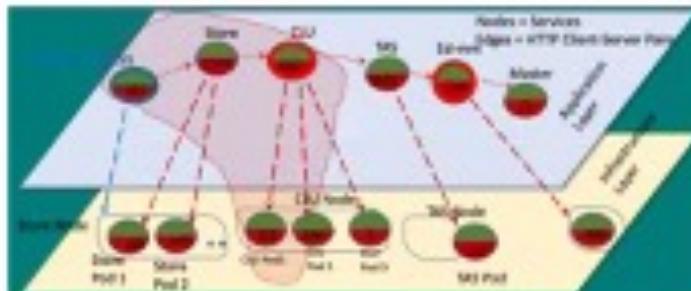
Event Seasonality



Automatically discovers events that occur with a regular pattern

- Identify chronic issues that may go un-detected
- Provide valuable insights into problem solving
- Continual learning over days, weeks, months, and years

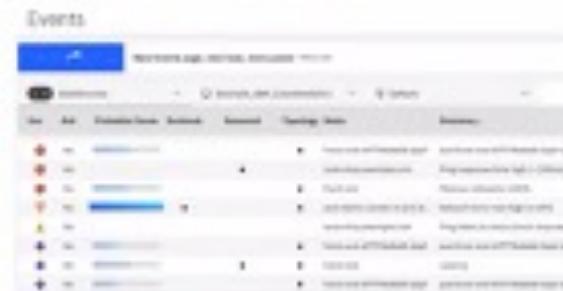
Fault Localization & Blast radius



Derive full scope of components using vertex-weighted topology graph traversal and a Reasoning engine to understand the meaning of the topology relationships

- Blast-radius via directional dependency analysis of the related components that interact with the localised source of the issue.

Probable Cause



Derive probable fault component using vertex-weighted topology graph traversal and a Reasoning engine to understand the meaning of the topology relationships

- Probable Cause localisation to the most likely source of an issue within the application topology

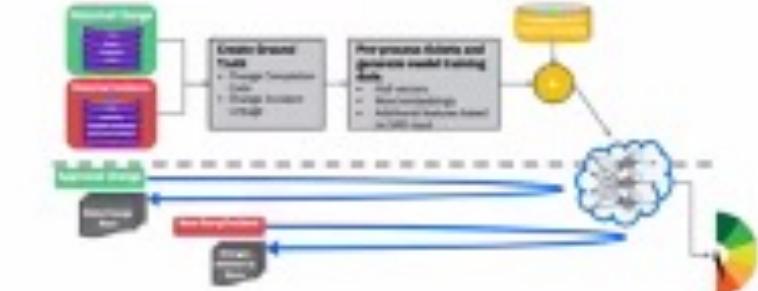
Incident Similarity



For a given problem description, find top k ranked similar incidents from the past. Helps understand the current issue and previous successful resolve actions. Consumes tickets and any data from the ticket progression to closure including human written investigation and resolution actions.

Uses Entity-Action extraction and Action sequence mining to understand tickets and summarize what was done.

Change Risk Prediction



Assess the risk for each proposed change based on issues caused by historical changes.

- Harvest and analyse the change ticket history to identify changes that implicitly failed when applied.
- Identify changes that resulted in subsequent issues if they rolled out



AI Management

IBM Cloud Pak | Automation

AI model management

Training Application coverage Data assets

Models-generating algorithms

Change risk
Training started: 8/4/2022 8:38:54 PM
Version trained v10
Data quality ● No tickets data available

Log anomaly detection - natural language
Last trained: 7/17/2022 1:47:46 PM
Version trained v4
Data quality ● Good

>Error

Temporal grouping
Last trained: 7/5/2022 4:06:39 AM
Version trained v2
Data quality ● -

Complete Deployed

Online algorithms

Log anomaly detection - statistical baseline
Discovers abnormal behavior in log data using a statistical moving average.

Logs On

Probable cause
Analyzes across domain and application boundaries to determine the likelihood of an alert being the cause of an incident.

Events, topology Enabled

IBM Cloud Pak | Automation

AI model management

AI algorithms Manage Coverage Data assets

Trained AI algorithms

These are your most recently trained AI algorithms.

Name	Version	Deployed version	AI algorithms	Schedule	Last trained	Status
similar_incidents_configuration	v1	v1	Similar incidents	Run manually	3/24/2022 9:50:32 AM	Training complete
change_risk_configuration	v1	v1	Change risk	Run manually	3/24/2022 9:52:44 AM	Training complete
metric_anomaly_detection_configuration	v2	v2	Metric anomaly detection	Run manually	3/25/2022 10:10:44 AM	Training complete

Items per page: 10 1-3 of 3 items 1 of 1 page

Log anomaly detection - natural language

Overview Versions Coverage

Training status

3 of 3 complete

Models created

Training started: 7/17/2022, 01:47 PM
Queued
Preparing data
Training
Jobs: 9 jobs View

Log data

Name OGvqDYIBVPLMfCLDWy1F Start date 07/16/2022 4:00 PM UTC
End date 07/17/2022 8:00 PM UTC

IBM Cloud Pak | Automation

AI model management

AI algorithms Manage Coverage Data assets

Log anomaly detection - natural language

These are your most recently trained AI algorithms.

Name	Version	Deployed version	AI algorithms	Schedule	Last trained	Status
similar_incidents_configuration	v1	v1	Similar incidents	Run manually	3/24/2022 9:50:32 AM	Training complete
change_risk_configuration	v1	v1	Change risk	Run manually	3/24/2022 9:52:44 AM	Training complete
metric_anomaly_detection_configuration	v2	v2	Metric anomaly detection	Run manually	3/25/2022 10:10:44 AM	Training complete

Items per page: 10 1-3 of 3 items 1 of 1 page

Start training ▶
Deploy v4 ↗
Delete configuration ⓧ

Overview details

AI type Log anomaly detection - natural language
Version v4
Version deployed v3
Created on 6/21/2022, 9:35:26 AM
Created by jconallen

Data quality ⓘ

Good 3 recommendations

Your data was inspected and looks good for training.
We have detected that a portion of this data is in an unsupported language and could impact the quality of this model.
We recommend that you remove any data containing unsupported languages. Then, run training again.

Models

View resources

9 Resources

Resources with models
Resources without models

IBM Washington Systems Center (WSC) / December 14, 2023 / © 2023 IBM Corporation

42



Incident-Aware Recommended Runbooks

Assign a runbook to alerts

Policy details

Condition set 1

Actions

Customise policy

If this 1 condition is met:

- Value of: alert.resource.name contains all of String: robot-shop
- Value of: alert.summary contains only String: memoryUsed is Higher
- Value of: alert.sender.name contains only String: metric-anomaly-detection

Then take the following actions:

Assign a runbook

Runbook name	Type	Rating	Success rate
Clean up diskspace	Automatic	★★★★★	100%
Runbook 02	Manual		
Runbook 03	Automatic		
Runbook 04	Manual		
Runbook 05	Manual		
Runbook 06	Manual		

Automation Hub

Fully automated:
auto-triggered and run
without human attention

Manual:
step-by-step guidance

Semi-automated:
guidance + pre-set
automated commands
run by user

Integrates with Ansible
and other tools to initiate
additional automated
workflows

Augment Ops

Take Actions

- Contextual side-launch
- Act Manually (with a click)
- Semi | Full Automation
- Pipelines & Workflows
- Explainability
- Collaboration Integration

APIs with a variety of request types across key product capabilities

Authentication Create authentication tokens.

Stories Manage and update your stories and their statuses.

Incidents Match prior incidents to search criteria.

Application groups Manage your application groups.

Two-way integration with ServiceNow

Notification through ChatOps
Stay aware of team members' activities and system events

zeno_aiops_demo1 APP 1:21 PM
▶ Incident detection

Story 3
Title: ts-ticketinfo-service with 4 events
Description: ts-ticketinfo-5XX Internal Server Error + 1 alert, 2 log anomalies

Status: Open Severity: 3
Created: July 13th, 2020 at 1:04 PM by @zeno_aiops_demo1

Updated February 10th at 8:51 AM by @Richard Wilkins

Ansible Automation Platform & Cloud Pak for AIOps

Accelerate IT Transformation & use of Automation. Improve Scalability and tolerance of Change.



The screenshot shows the Ansible Automation Platform interface. At the top, it displays '3691 HOSTS', '83 FAILED HOSTS', and '3 INVENTORIES'. Below this is a 'JOB STATUS' chart showing the number of jobs over time from 16:00 to 2:5. The chart shows a fluctuating trend with peaks around 280 and 300 jobs. Under 'RECENTLY USED TEMPLATES', there is a table with columns 'NAME', 'ACTIVITY', and 'ACTIONS'. The templates listed are 'Deployment pipeline', 'Rollback deployment', 'Deploy to development', 'Test application', and 'Deploy database'. Each template has a corresponding activity bar and a rocket ship icon for actions.

Direct Integration

Register & Invoke Job
and Workflow
Templates into
actions



Provenance of Automation

Track actions when &
where they occur



...this action
occurred on
these elements...

The screenshot shows the Cloud Pak for AIOps interface. It includes sections for 'Augment Ops' (Contextual side-launch, Act Manually, Semi | Full Automation, Pipelines & Workflows, Explainability, Collaboration Integration) and 'Informed, Actionable Insights' (Change Tracking, Event Processing, Correlation & Enrichment, Fault Localization & Blast Radius, Probable Cause Analysis). On the right, there are tabs for 'Overview', 'Alerts', and 'Topology', with specific sections for 'Probable cause alerts' and 'Runbooks'.

AIOps Insights Dashboard

Understanding Operations Performance

Track KPI's and automation utilization to ensure operations teams are benefiting from AIOps and identify new opportunities for automation.

Observe trends and understand application and service performance over time.

Analyze cost impacts of outages, and savings realized with AIOps (Tech Preview)

