# Azure Application Stability Framework

Operating model to reduce MIs, improve SLOs, and ensure resilient customer experiences

Framework Overview

Holistic resiliency model using

SRE + cloud-native patterns

Detect early

Learn continuously
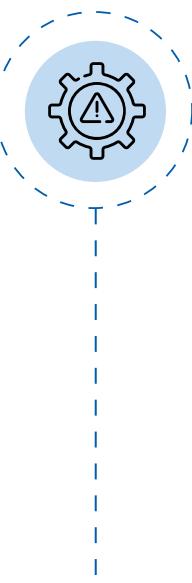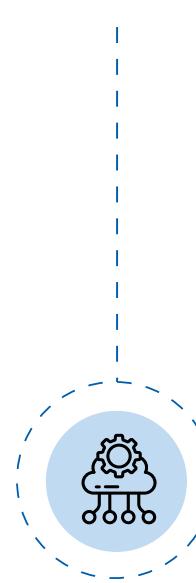
Prevent failures

Respond rapidly

Architecture Resilience

Multi-AZ AKS & App Services

Redis caching • Service Bus async processing

HPA, PDBs, retries/backoff

Idempotent APIs & durable workflows

Circuit breakers • Bulkheads • Timeouts
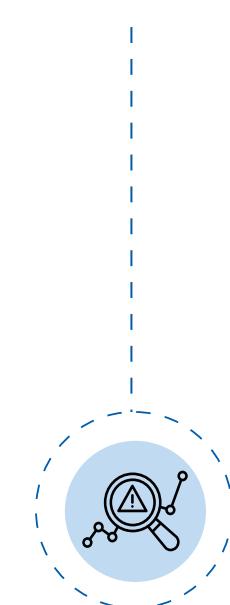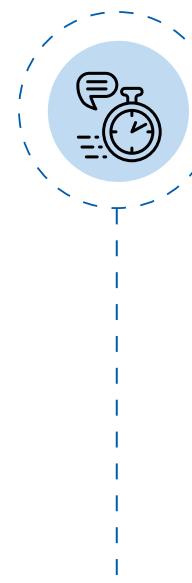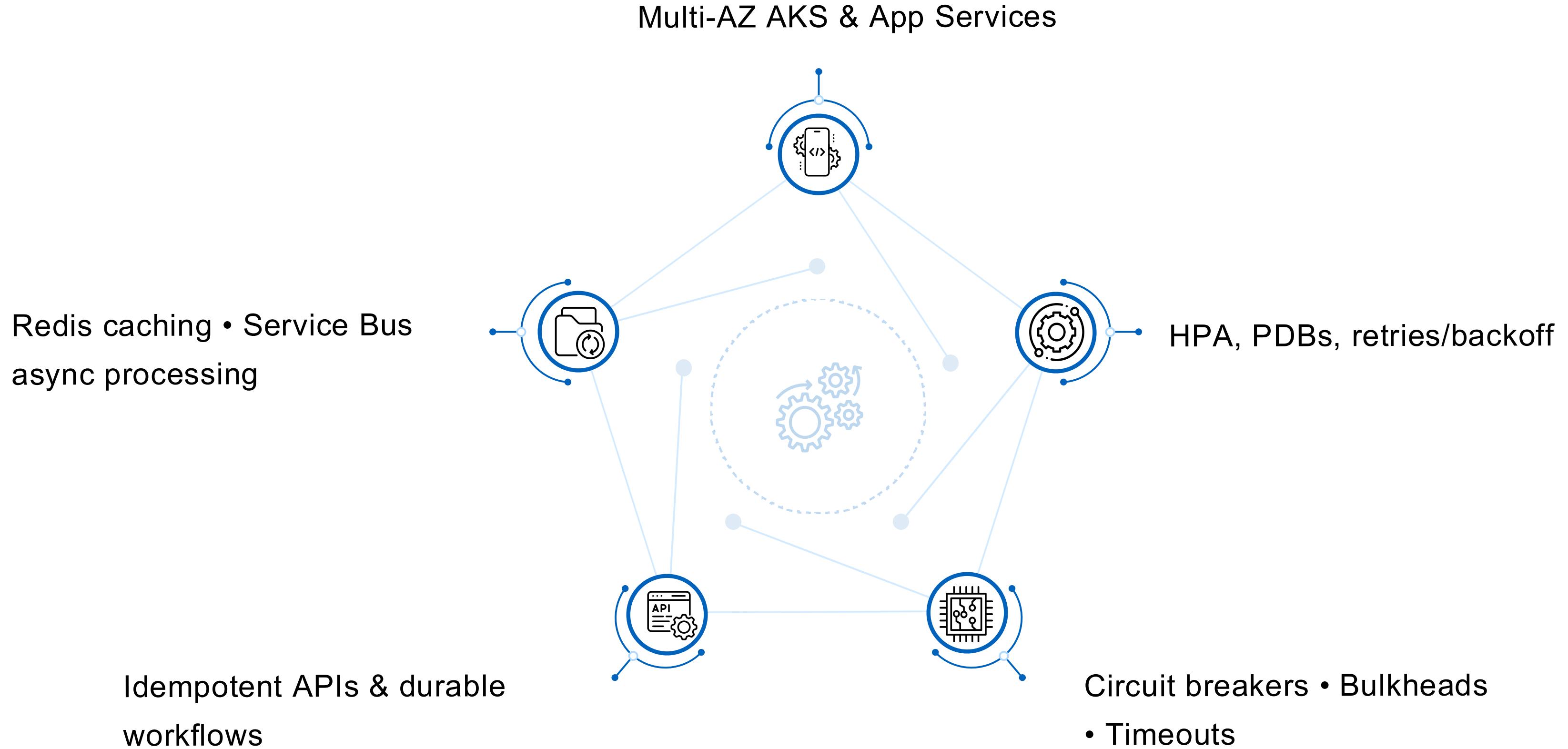
Observability & Telemetry

OpenTelemetry everywhere

Distributed tracing across services
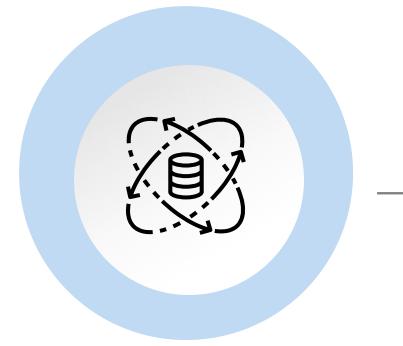
App Insights • Azure Monitor • Log Analytics
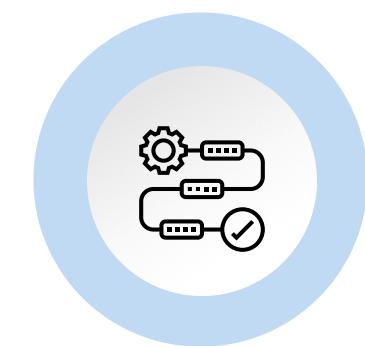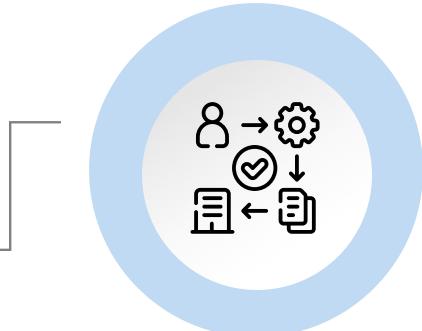
Golden signals:
- Latency
- Throughput
- Errors
- Saturation

Prometheus + Grafana dashboards

Proactive Monitoring & Alerts

Alert rules mapped to SLO/SLA

Auto-remediation: restart, scale, queue cleanup

Synthetic transactions

Log-based pattern detection

Azure Service Health anomaly alerts
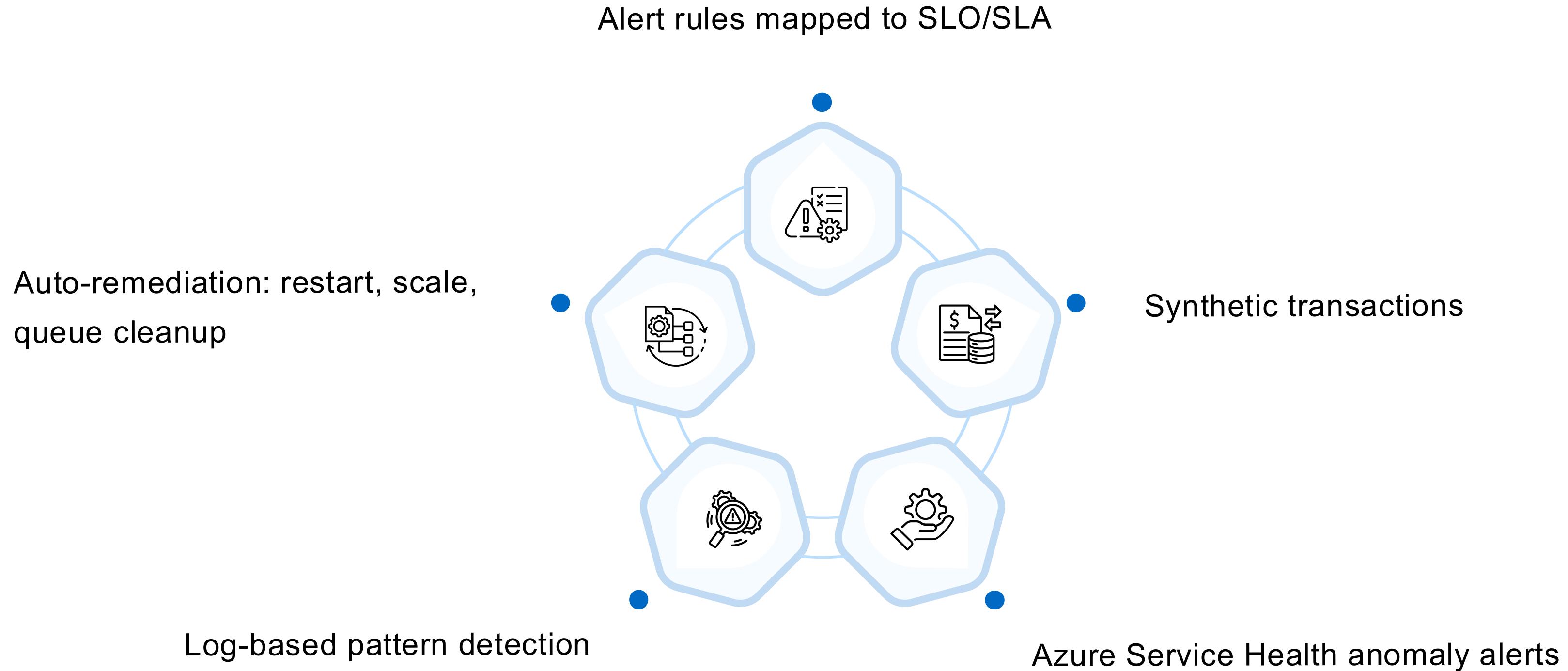
SRE-Driven Operations

Incident prioritization (P1–P3)

Daily SRE standups
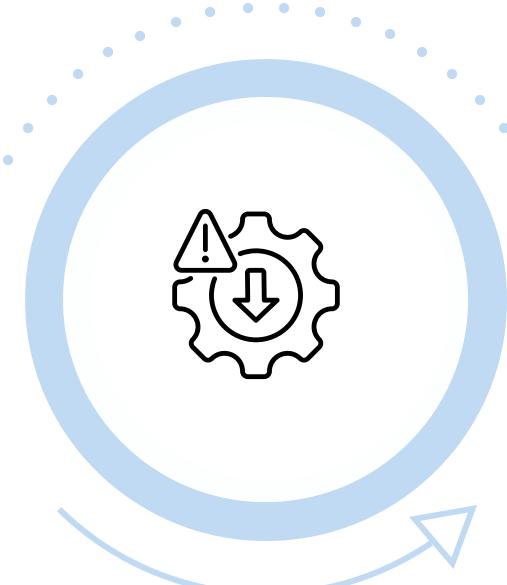
Reliability scorecards + runbooks

MTTR/MTTD reduction playbooks

Weekly stability reporting
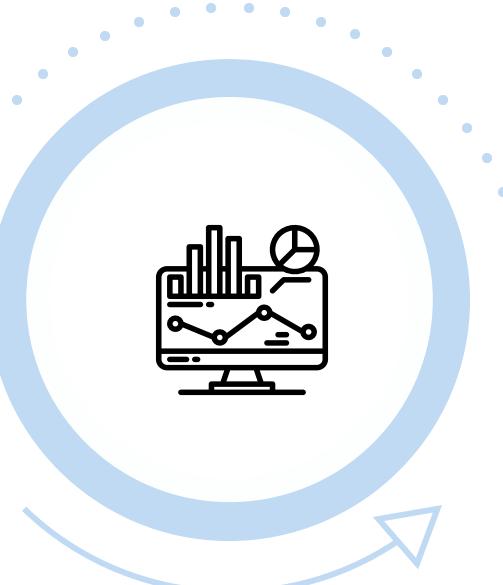
Governance & Continuous Improvement

Post-incident RCA + corrective actions

Monthly stability reviews
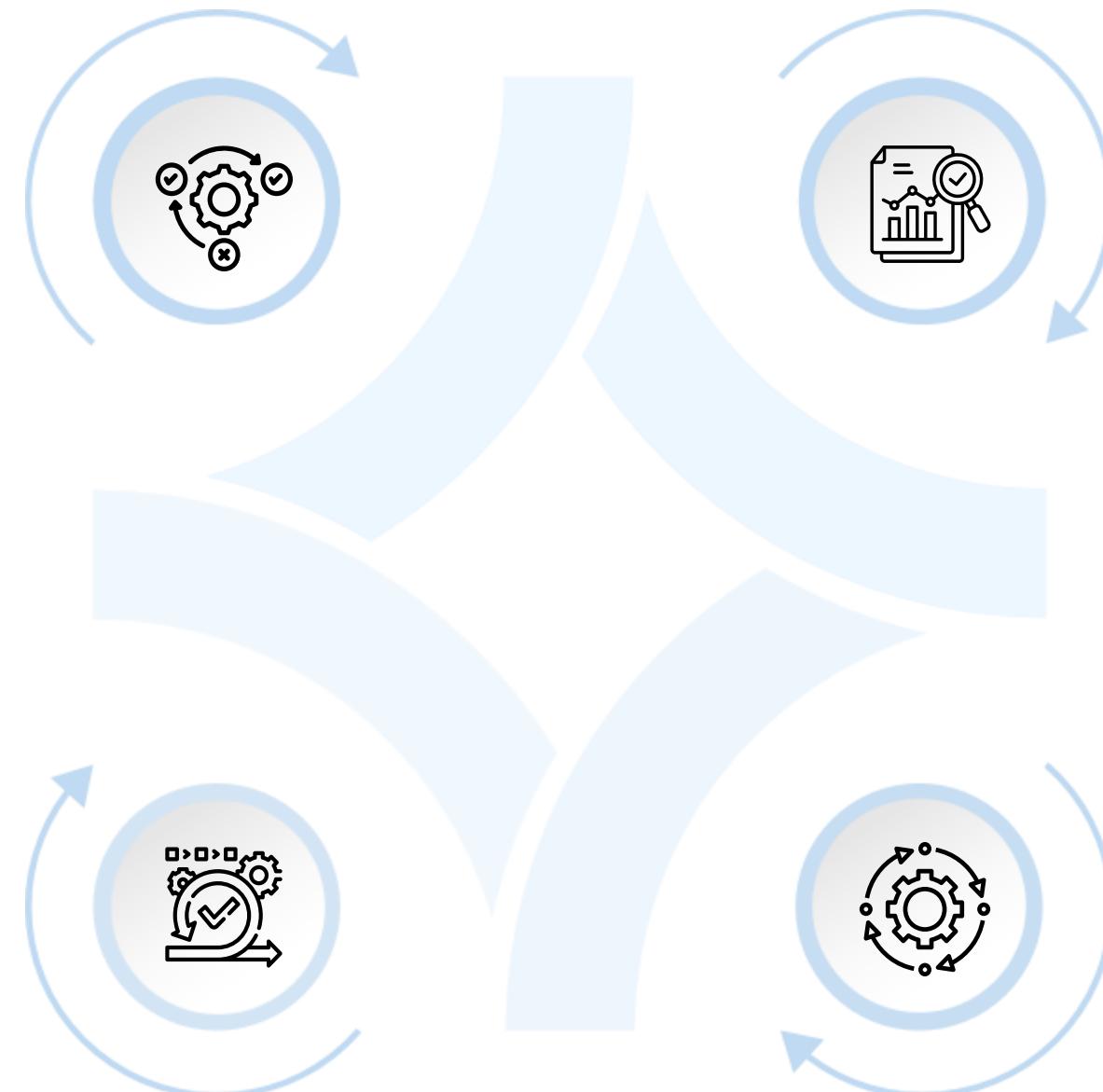
Quarterly chaos & failover testing

Policy enforcement & platform governance

Executive Stability Metrics

IQZ SYSTEMS

99.9%+
Availability

<500ms
API P95 latency

<75%
CPU/Memory

↓ **25% QOQ**
Retries

< 1 hour
MTTR

Operating Model

IQZ SYSTEMS

- Stability report
- Recurring failures

Weekly

- Alerts
- API health
- Priority tickets

Daily

- IT + Business review
- Chaos testing

Monthly

Technology Stack

IQZ SYSTEMS
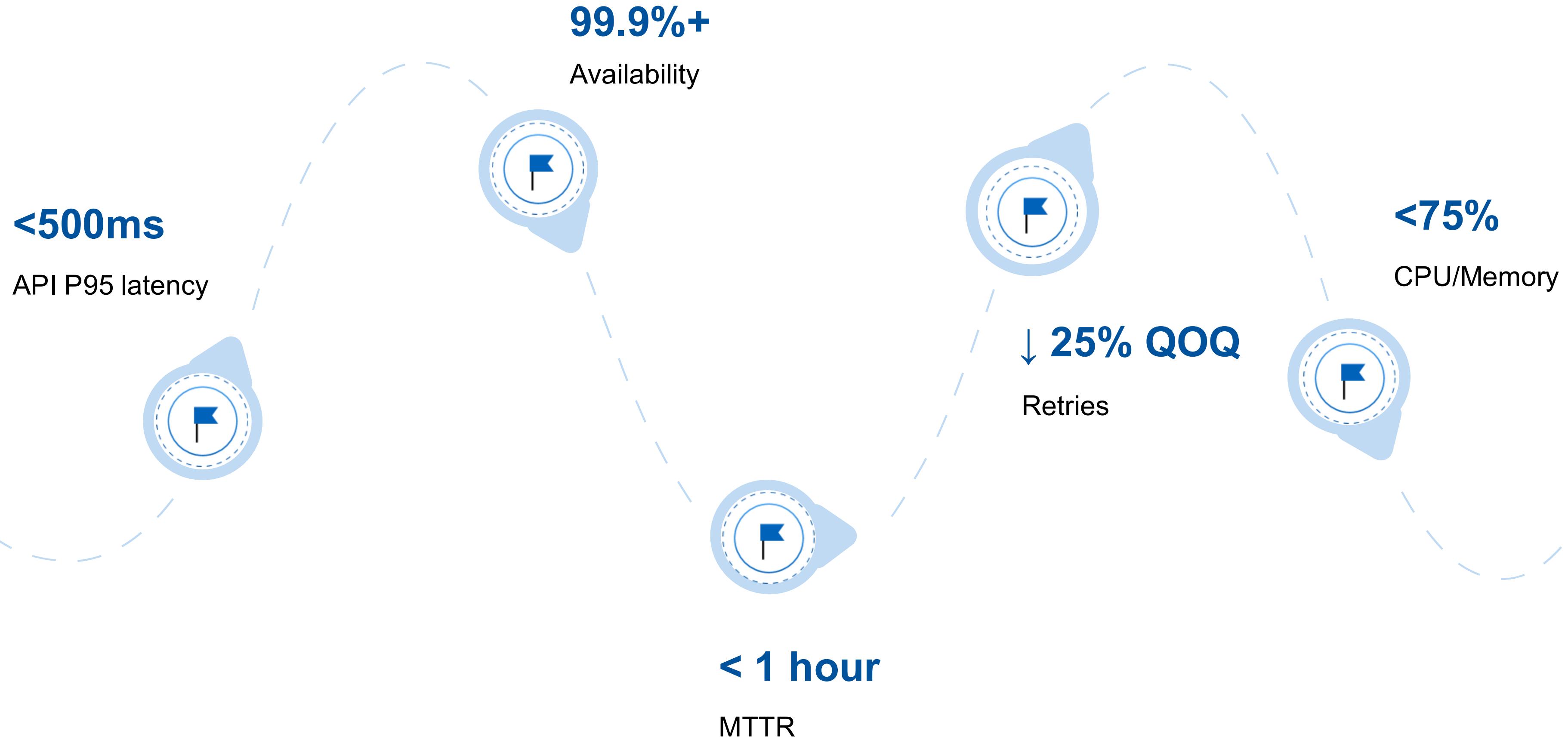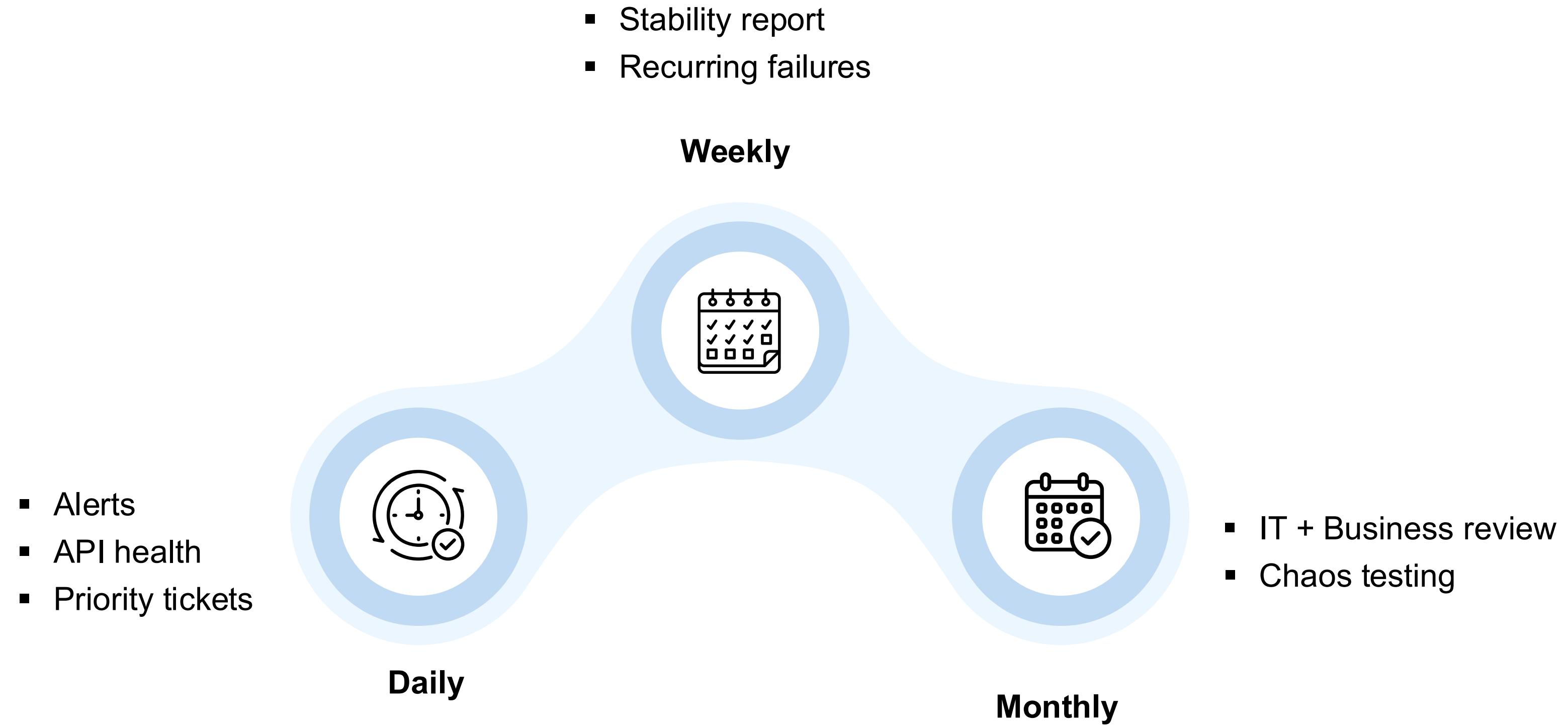
AKS Private Clusters

App Services

Service Bus Topics

SQL MI

CosmosDB

Redis Cache

Azure Monitor

Log Analytics

Grafana

DevOps YAML

Terraform / Bicep

Key Vault

Managed Identities

Azure Policy

30/60/90 Day Roadmap - 0 to 30 Days

IQZ SYSTEMS

Architecture +
incident review

Monitoring & telemetry
gap analysis

Baseline KPIs &
SLOs

Deliverables
- Scorecard
- Top Risks
- Signals Dashboard
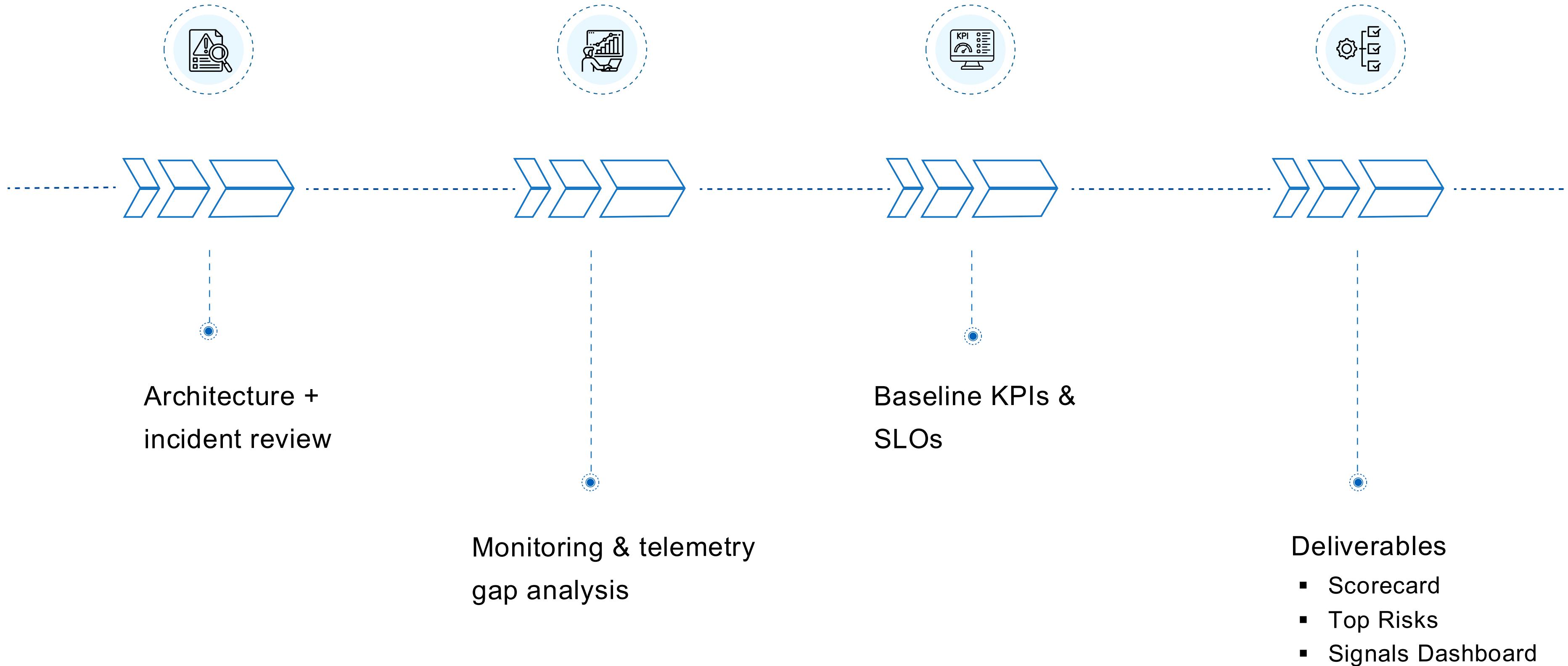
30/60/90 Day Roadmap - 31 to 60 Days

IQZ SYSTEMS

Resilience patterns: retries, timeouts, idempotency

AKS hardening & Redis tuning

Automated remediation runbooks

Deliverables
- Hardening pack
- Runbooks
- Performance report
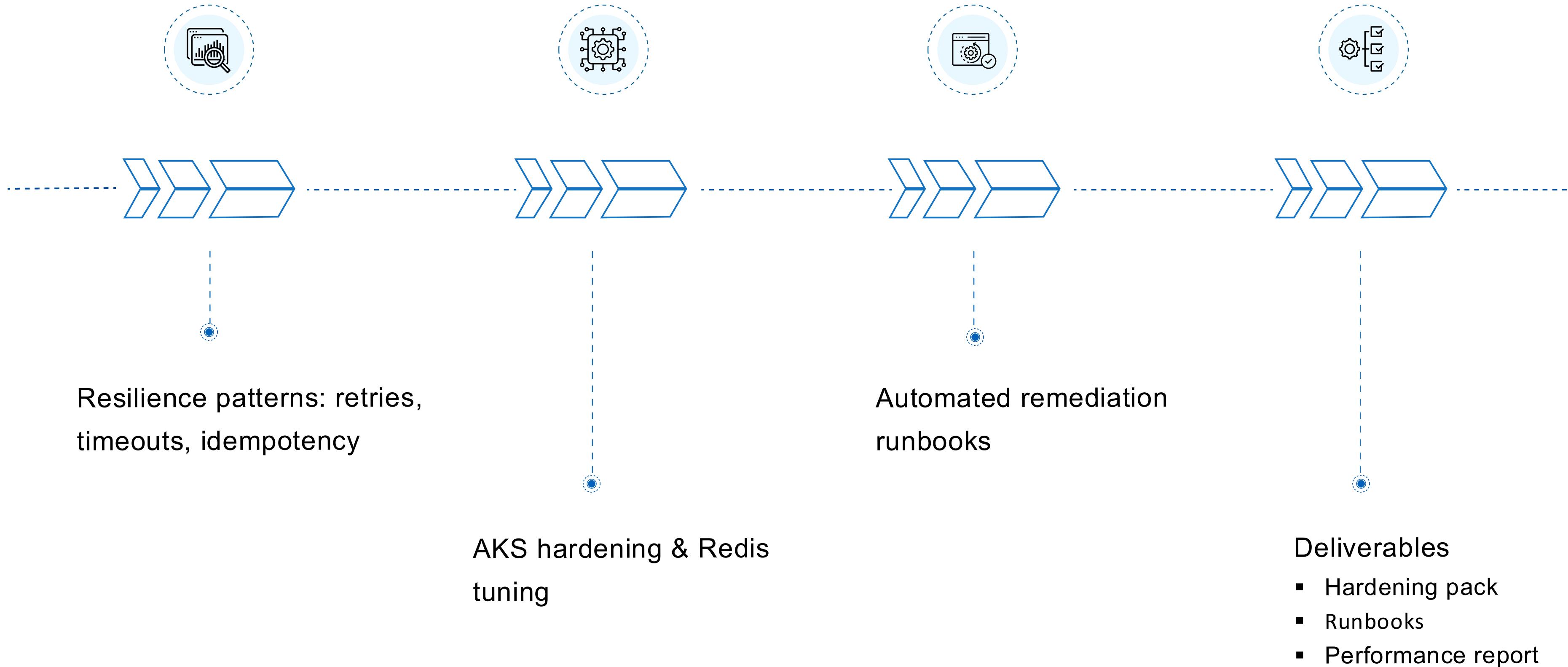
30/60/90 Day Roadmap - 61 to 90 Days

IQZ SYSTEMS

OTel rollout & End-to-end tracing

Chaos engineering & failover tests

Multi-AZ validation

Executive Reliability Dashboard
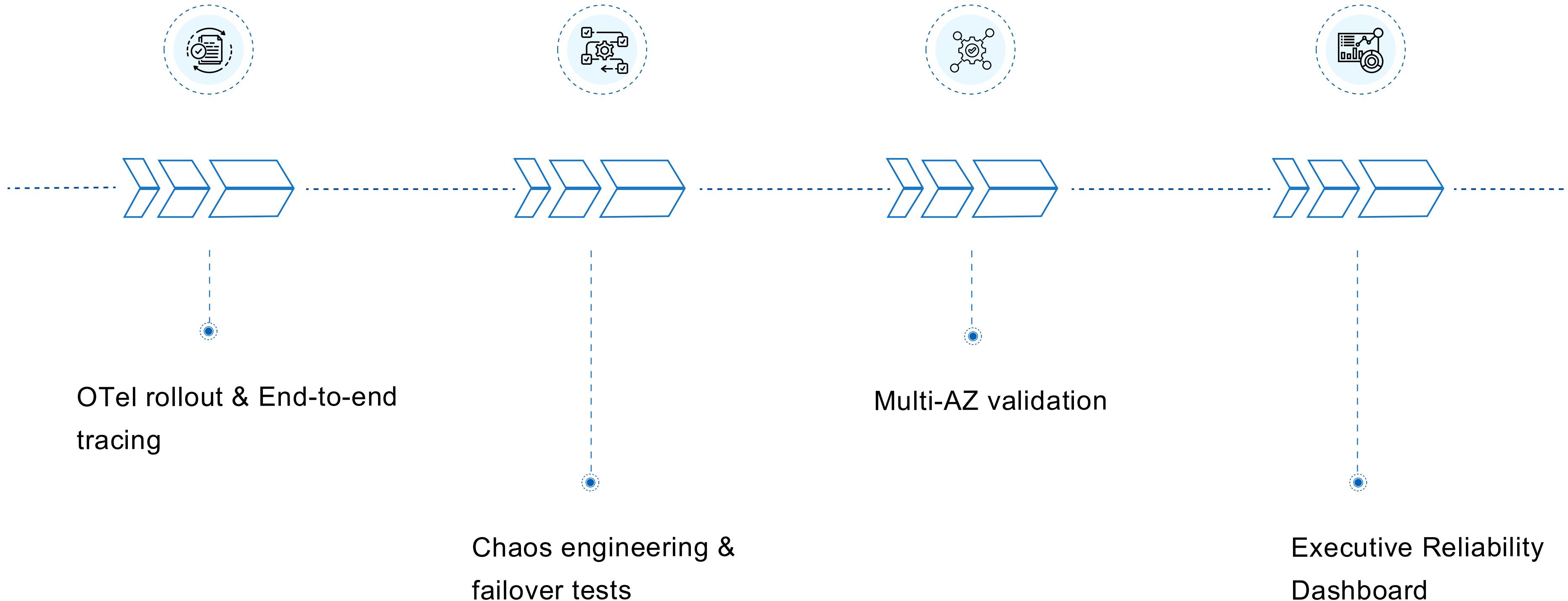
KPIs & Expected Outcomes

IQZ SYSTEMS

↑ **99.9%+**

SLO availability improved

↓ **20–30%**

P95 latency reduced

↓ **40–50%**

Incident recurrence reduced

↓ **From hours to minutes**

Mean time to repair reduced

↓ **10–25%**

Azure cost reduced

↓ **30–40%**

Alert noise reduced

Final Deliverables

Stability Assessment Report

Reliability Scorecard

Top 10 Remediation Plan

Golden Signals Dashboards

Auto-Healing Runbooks

Executive Dashboard + Modernization Roadmap
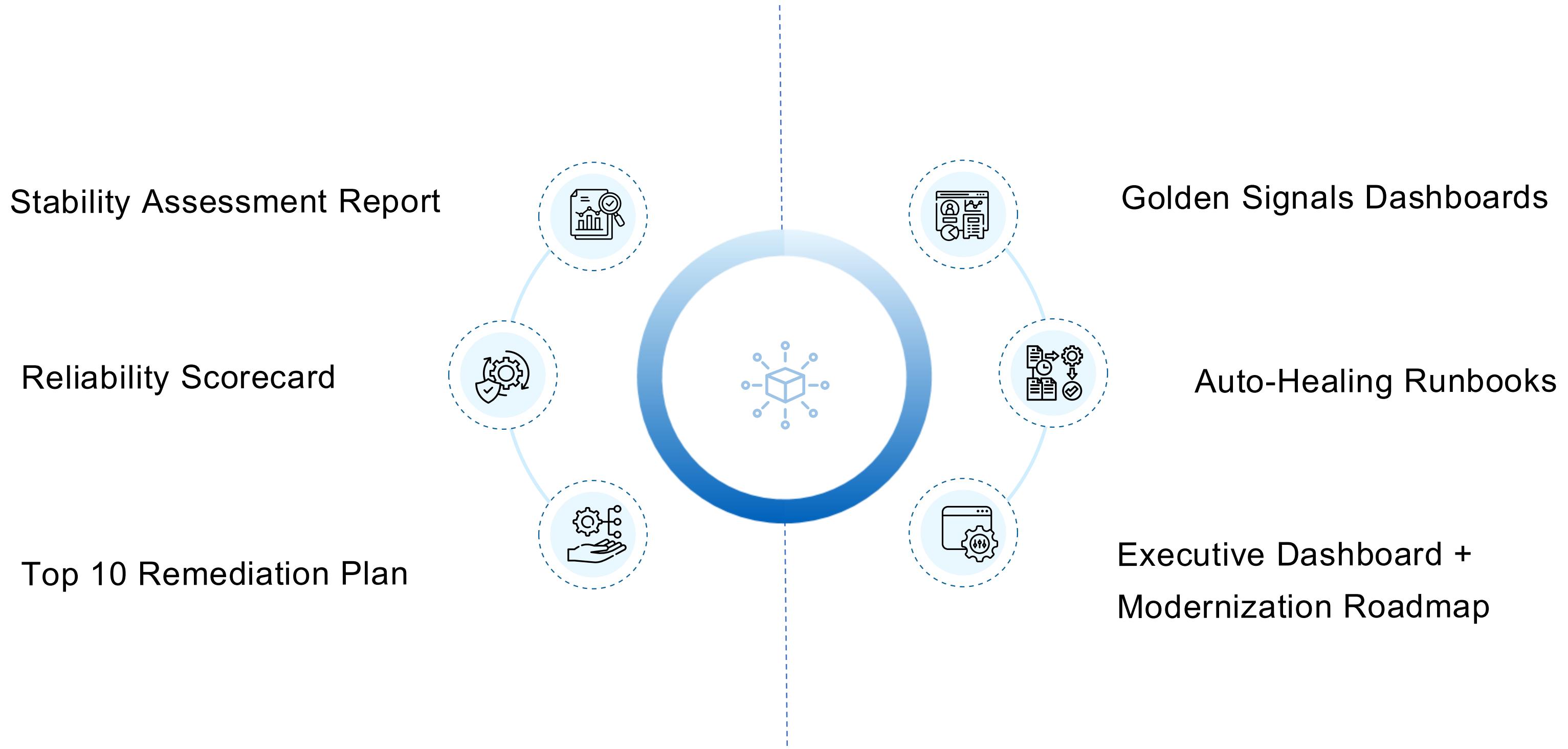
Thank You!

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