



AI Recovery Governance Checklist

Practical Guidance for Fail-Closed AI Recovery and Restoration Workflows

Version 1.0

Operational Governance Framework

Recovery integrity is more important than recovery speed.

Prepared for technical teams, governance practitioners, consultants,
and operators responsible for AI system recovery assurance.

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Executive Summary

Modern AI systems increasingly depend on recovery mechanisms to restore operation after faults, failures, degraded states, configuration errors, security incidents, or governance interventions. While many recovery approaches focus on technical restoration, far less attention is given to whether recovery itself remains trustworthy.

The AI Recovery Governance Checklist provides a structured framework for evaluating recovery as a governed process rather than a purely technical event.

Rather than asking:

"Did the system recover?"

This framework asks:

- Was recovery legitimate?
- Did recovery follow authorised sequencing?
- Was continuity of proof maintained?
- Did the system fail closed appropriately?
- Was trust re-established explicitly?
- Can recovery itself be independently verified?

The objective is not simply to restore operation.

The objective is to ensure that recovery itself remains trustworthy.

It is designed to help technical teams assess whether recovery pathways remain legitimate, fail closed appropriately, preserve continuity of proof, maintain bounded authority, and support safe restoration under operational constraints.

This framework introduces eight core recovery dimensions that collectively assess recovery integrity, restoration sequencing, fail-closed behaviour, governance continuity, operational stability, and recovery confidence. Rather than treating recovery as a binary success-or-failure outcome, the framework encourages organisations to evaluate recovery maturity across multiple governance dimensions.

In practice, restored operation does not necessarily mean restored trustworthiness.

A system may resume execution while governance remains degraded, authority boundaries have drifted, verification chains are incomplete, recovery sequencing was bypassed, or unstable behaviour continues beneath apparent recovery.

The checklist is intended for AI engineers, technical leads, governance practitioners, compliance teams, consultants, operators, and organisations deploying AI systems where recovery behaviour may influence safety, trust, operational assurance, or regulatory obligations.

This document is not a certification standard and does not guarantee operational safety. Instead, it provides a practical assessment framework to help teams identify recovery weaknesses, improve governance maturity, and prioritise implementation efforts.

Framework Purpose

AI Recovery Governance Checklist helps technical teams evaluate whether their AI systems can recover safely, fail closed correctly, and maintain operational legitimacy under degraded or unstable conditions.

Section 1 — Why Recovery Is Not Enough

Most modern AI and automated systems treat recovery as a technical event.

If services restart, state reloads successfully, and execution resumes, recovery is often considered complete.

In practice, however, restored operation does not necessarily mean restored trustworthiness.

A system may resume execution while:

- governance state remains degraded
- authority boundaries have drifted
- verification chains are incomplete
- recovery sequencing was bypassed
- unstable behaviour continues beneath apparent recovery

In these situations, a system may appear operational while remaining constitutionally incoherent.

This becomes increasingly important in AI systems connected to:

- autonomous workflows
- execution tooling
- agentic pipelines
- infrastructure automation
- decision-support systems

As AI systems become more operationally integrated, recovery can no longer be treated as a simple restart event.

Recovery is not complete when operation resumes.

Continue Reading

The full AI Recovery Governance Checklist includes:

- The Eight Core Recovery Dimensions
- Recovery Governance Self-Assessment Checklist
- Common Recovery Failure Modes
- Scoring & Interpretation Guidance
- Implementation Roadmap
- Governance Principles Reference
- Operational Review Questions
- Future Recovery Governance Considerations

Who this is for — and what you'll actually use it for:

AI Consultant

Identify recovery governance gaps across multiple client engagements.

AI Governance Professional

Evaluate recovery as a governed process, not merely a technical event.

Risk / Compliance Professional

Assess fail-closed behaviour, governance continuity, and restoration legitimacy.

Technical Architect

Use operational review questions to challenge assumptions and verify recovery controls.

See Appendix C for operational review questions and implementation guidance.

This framework is intended for technical teams, AI engineers, governance practitioners, compliance professionals, consultants, and operators responsible for evaluating recovery trustworthiness in AI and automated systems.

Version 1.0

This is the first release in an ongoing governance series. Future versions and companion products will provide deeper treatment of specific recovery dimensions, sector adaptations, and extended assessment methodologies.

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Independent Research in AI Governance, Recovery Assurance, and Constitutional Systems

For the complete framework, implementation roadmap, and governance self-assessment checklist, see the full AI Recovery Governance Checklist.

Continue with the full publication

The complete *AI Recovery Governance Checklist* includes the full assessment framework, implementation roadmap, governance scoring methodology, operational review questions and reference appendices.

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