ASSET PERFORMANCE | PRACTICAL LEADERSHIP GUIDE

When Asset Condition Changes

10 Questions for a Defensible Decision

Drawing on established asset-management, integrity, reliability, condition-monitoring, and risk principles, this guide organizes the questions leaders should ask when asset condition or performance changes. The aim is to support decisions grounded in credible evidence, operating context, consequence, and follow-through.

THE TEN QUESTIONS

1 What changed?

Define the observation precisely. Signal, trend, inspection finding, field observation, test result, model output, or performance shift.

2 Can we trust the evidence?

Check source, quality, completeness, calibration, timing, lineage, assumptions, and whether the apparent change may reflect the data rather than the asset.

3 What was happening when it changed?

Establish operating mode, load, pressure, temperature, throughput, environment, recent work, process changes, and other relevant context.

4 What other evidence agrees - or disagrees?

Integrate inspection, integrity, maintenance, process, field, laboratory or metallurgical, historical, and comparable-asset evidence where applicable.

5 What does it mean for intended function?

Connect condition to asset duty, criticality, degradation or failure context, reliability, availability, and performance.

6 What happens if our interpretation is wrong?

Challenge potential safety, environmental, regulatory, production, reliability, financial, reputational, and other material consequences.

7 What legitimate options exist?

Consider continued operation, monitoring, additional evidence, inspection, operating changes, escalation, mitigation, repair, deferral, replacement, redesign, or specialist analysis.

8 Why is one option preferable now?

Compare risk, cost, performance, timing, uncertainty, downtime, resource constraints, remaining life, and reversibility.

9 What would cause us to change the decision?

State assumptions, contradictory evidence, information gaps, thresholds, triggers, and escalation conditions.

10 How will we know the decision worked?

Define ownership, follow-up evidence, effectiveness measures, verification, record updates, and learning.

BASIS & USE

This SOUBEL guide is an independent practical synthesis of established principles. It complements applicable regulations, standards, company procedures, qualified technical judgment, RCM, RBI, FMEA/FMECA, integrity assessment, and other specialist methodologies. Selected basis includes ISO 55013:2024; ISO/CD TS 55014; PHMSA integrity-management requirements; SAE JA1011:2024; GFMAM Maintenance Framework; and condition-based-maintenance literature. Full source context is maintained on the companion SOUBEL Knowledge Library page.

Capture the reasoning behind the decision.

Use the space below during an asset review, escalation discussion, integrity meeting, maintenance-planning session, or leadership decision.

1. What changed?

Describe the condition or performance change precisely. What was observed, measured, reported, or modeled?

2. Can we trust the evidence?

Record source, quality, completeness, calibration, timing, lineage, assumptions, and confidence.

3. What was happening when it changed?

Capture operating mode, load, pressure, temperature, throughput, environment, recent work, or process changes.

4. What other evidence agrees - or disagrees?

Note corroborating, contradictory, and missing information across inspection, integrity, maintenance, process, field, laboratory, or historical records.

5. What does it mean for the asset's intended function?

Connect the evidence to asset duty, criticality, degradation or failure context, reliability, availability, and performance.

Connect consequence, options, action, and verification.

Complete the record far enough that another qualified reviewer can understand what was known, why the decision was made, and what will confirm that it worked.

6. What happens if our interpretation is wrong?

Consider safety, environment, regulation, production, reliability, financial impact, reputation, and other material consequences.

7. What legitimate options exist?

List credible responses, including continued operation, monitoring, more evidence, inspection, operating changes, escalation, mitigation, repair, deferral, replacement, redesign, or specialist analysis.

8. Why is one option preferable now?

Compare risk, cost, performance, timing, uncertainty, downtime, resources, remaining life, and reversibility.

9. What would cause us to change the decision?

Define assumptions, contradictory evidence, information gaps, thresholds, triggers, and escalation conditions.

10. How will we know the decision worked?

Define ownership, verification, follow-up evidence, effectiveness measures, record updates, and learning.

DECISION FOLLOW-THROUGH

Decision / action owner	Decision date	Follow-up / review date	Record / reference