Whole-System Diagnosis

Begin with the person, the environment, the system, and the question: what changed?

Conceptual Working Paper Prepared for Scholarly Critique

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Before naming a failed component, examine the person, environment, operating conditions, interactions, and recent changes across the whole system.

Status: conceptual framework. Not independently validated. Intended for critique, testing, revision, and possible rejection.

Abstract

This paper develops Whole-System Diagnosis from a practical diagnostic principle: begin with what changed. Component-first troubleshooting often mistakes the first visible symptom for the cause. The whole-system method begins with baseline function, recent changes, interactions among person, environment, machine, procedures, and information, and only then narrows toward components. The framework transfers a field-service logic into a general philosophy of diagnosis while preserving domain limits. It proposes a change ledger, layered inspection sequence, and falsification rules designed to reduce premature replacement, narrative lock, and single-cause bias.

1. Source Basis and Scope

This paper formalizes a chat-derived philosophy preserved in the Aziel-Jeeves node ledger. The source material supplies the core principle and related language; the present document expands it into definitions, procedures, testable propositions, limitations, and reviewer questions. Expansion is analytical and must not be mistaken for validation.

2. Working Definition

Before naming a failed component, examine the person, environment, operating conditions, interactions, and recent changes across the whole system.

3. Core Principles

Principle	Operational Meaning
Baseline before failure	Diagnosis requires a model of prior normal operation.
Change precedes explanation	Recent changes generate hypotheses but do not automatically prove causation.
Context is part of the system	People, environment, maintenance, controls, and information flows can alter machine behavior.
Symptoms are not components	A symptom may be produced by multiple interacting causes.
Narrow by evidence	Move from system-level possibilities to component tests through discriminating measurements.
Repair must restore the system	A successful component replacement is insufficient if the original conditions persist.

4. Operational Protocol

1. Define the reported problem and prior baseline.
2. Ask what changed in time, environment, use, maintenance, configuration, personnel, and information.
3. Observe the person or operator context without blame.
4. Inspect environmental and external conditions.
5. Measure system-level inputs and outputs.
6. Map interactions and dependencies.
7. Test components only after broader constraints are checked.
8. Verify restoration under realistic operating conditions.
9. Document what changed, what was tested, and what remains uncertain.

5. Testable Propositions

P1

The method reduces unnecessary component replacement.

P2
Diagnoses predict failure recurrence when root conditions remain.

P3
Independent technicians can follow the record.

P4
System restoration persists beyond the immediate test.

6. Failure Conditions and Falsification
The framework should be revised, narrowed, or rejected where its categories cannot be applied consistently, where it does not improve prediction or decision quality, where simpler existing methods perform equally well at lower cost, or where its use produces the harms it was designed to prevent.

7. Limitations
- Urgent safety hazards may require immediate component isolation.
- Whole-system review can be slower.
- Some failures are genuinely local and abrupt.
- Human context must not become blame or amateur diagnosis.

8. Ethical Safeguards
- Do not convert a conceptual framework into a diagnosis, legal conclusion, or coercive authority.
- Preserve contrary evidence and failed applications.
- Separate description from moral judgment.
- Require stronger review as consequences become more irreversible.
- Permit affected persons to contest classification and use.
- Keep the author and the framework open to correction.

9. Discussion
The practical value of Whole-System Diagnosis depends on whether it improves disciplined observation, reproducibility, calibration, and accountable action. Its language is intentionally compact, but compact language can conceal ambiguity. Review should therefore focus on whether the framework creates discriminating tests and better records rather than merely memorable slogans.

10. Conclusion
Whole-System Diagnosis is proposed as a working philosophy, not an established doctrine. Its core instruction is: Before naming a failed component, examine the person, environment, operating conditions, interactions, and recent changes across the whole system. The framework earns retention only through clearer decisions, auditable evidence, and outcomes that survive independent review.

Declarations
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Appendix A. Reviewer Questions

- Is the core principle distinct from existing frameworks, or should it be treated as a synthesis?
- Are the defined terms operational enough for independent use?
- What observations would clearly count against the framework?
- Does the protocol improve outcomes relative to ordinary professional practice?
- Where could the framework create bias, coercion, or false confidence?
- Which parts should be separated, merged, or removed?
- What empirical study would provide the strongest test?