OpsPilot

Injury Investigation — User Manual

Regulator-Ready Incident Investigation · AI Engineering Co-Pilot

⚠️ **AI-GENERATED CONTENT · INDEPENDENT VERIFICATION REQUIRED**
This manual was produced with AI assistance and is only as good as the information it was given. Every statement, figure, standard reference and conclusion must be independently verified by a competent, suitably qualified person before it is relied upon. It is a draft aid to your judgement — not a finished, authoritative, or certifying document. Professional and legal responsibility for any reliance rests with you and your organisation. See the full Engineering Disclaimer at opsinnovatech.com/engineering-disclaimer.

What this guide covers — what an injury investigation is (and how it differs from equipment RCA), how the OpsPilot module works, what to have ready, and the report you receive.

1. What is an injury investigation?

An injury investigation establishes how a person came to be harmed — building a fully traceable chain from evidence to immediate cause to the systemic management gap that allowed it — and sets corrective actions to prevent recurrence. Its hallmark is discipline about evidence and a refusal to stop at “the worker made a mistake.”

It differs from equipment Root Cause Analysis in focus: RCA explains why a *machine* failed; an injury investigation explains why a *person* was hurt — so it goes deep on human factors and on why the behaviour was rational in the moment, and it is built to stand up to a regulator.

2. What the OpsPilot module does

Role	Responsibility
🎯 **AI Coach (OpsPilot)**	Guides a regulator-ready investigation — tagging every finding as Confirmed, Assumed or Inferred; testing each cause counterfactually; unpacking the human factors behind the behaviour; analysing every control failure; and building a traceable chain from evidence to root cause to action. It challenges anything that lacks evidence or skips a logical step.
👷 **Investigation Lead (you)**	Provide the ground truth — the facts, the people, the context — and validate the analysis, correcting anything that doesn't match reality.

3. How it works — the 13-phase process

#	Phase
1	Incident overview — who, what, where, when
2	People and competency — training, supervision, JSA
3	Environment and equipment conditions
4	Timeline reconstruction

#	Phase
5	Immediate physical cause + counterfactual test
6	Human factors — why the behaviour was rational in context
7	Contributing factors + counterfactual validation
8	Control failure analysis — missing, inadequate, or not enforced
9	5-Why root cause — the systemic management gap
10	Traceability check — evidence → causes → actions
11	Corrective actions — owner, timeframe, success criteria, verification
12–13	Investigation quality assessment and report generation

4. What you will be asked — have this ready

- The incident facts — who, what, where, when — and the outcome/classification.
- The people and competency context — training, supervision, the JSA that applied.
- The environment and equipment conditions at the time, and a timeline of events.
- The evidence behind each point, so findings can be tagged Confirmed, Assumed or Inferred.

Tip — resist “hoperator error” as a conclusion. Ask why the action made sense to the person at the time — that's where the real, fixable cause lives.

5. What you receive — the output

A complete, defensible investigation report (Word): incident overview, timeline, immediate and contributing causes (each counterfactually tested), human-factors analysis, control-failure analysis, the systemic root cause, the traceability check, corrective actions with owners and verification, and an investigation quality assessment.

6. Worked example (illustrative)

A worker's hand is injured by a machine whose guard was removed. The shallow finding is “worker removed the guard.” OpsPilot pushes deeper. Human factors: the guard had to be removed to clear frequent jams, and production targets made stopping to log a fault costly — so removing it was the rational choice in context. Control failures: the guard interlock had been defeated and nobody enforced its use; the jamming fault was a known issue never actioned. The 5-Why lands on a systemic management gap — production pressure with no enforced consequence for running unguarded, and an unclosed reliability problem. The corrective actions target those, not the worker. Each step is tagged for evidence and counterfactually tested: would fixing this have prevented the injury?

7. Getting the best result

- **Tag every finding.** Confirmed, Assumed or Inferred keeps the report honest and defensible.

- **Use the counterfactual test.** If removing a cause wouldn't have prevented the injury, it isn't the cause.
- **Explain the behaviour.** People act rationally in context — find that context, don't blame the person.
- **Trace evidence to action.** Every corrective action should trace back to a confirmed cause.

OpsPilot — AI Engineering Co-Pilot. Learn more at **opsinnovatech.com**