

5 Whys with evidence and alternative branches

Build a causal explanation with evidence at each link, retain a competing explanation and define a test whose result could change the decision.



The missing attachment is an event, not an attitude

Fictional service team: three change-request packets arrived without a required drawing. Reviewer Sol is asked to finish a five-whys form that already ends with staff not paying attention. The team can inspect packet histories and reproduce submission in a training environment.

Your role and the reference condition

Process owner and frontline colleague investigating the specific omission.

Normal: Every submitted change packet includes the applicable drawing or an explicit approved exception.

Gap: Three recorded omissions; no evidence yet connects them to attention.

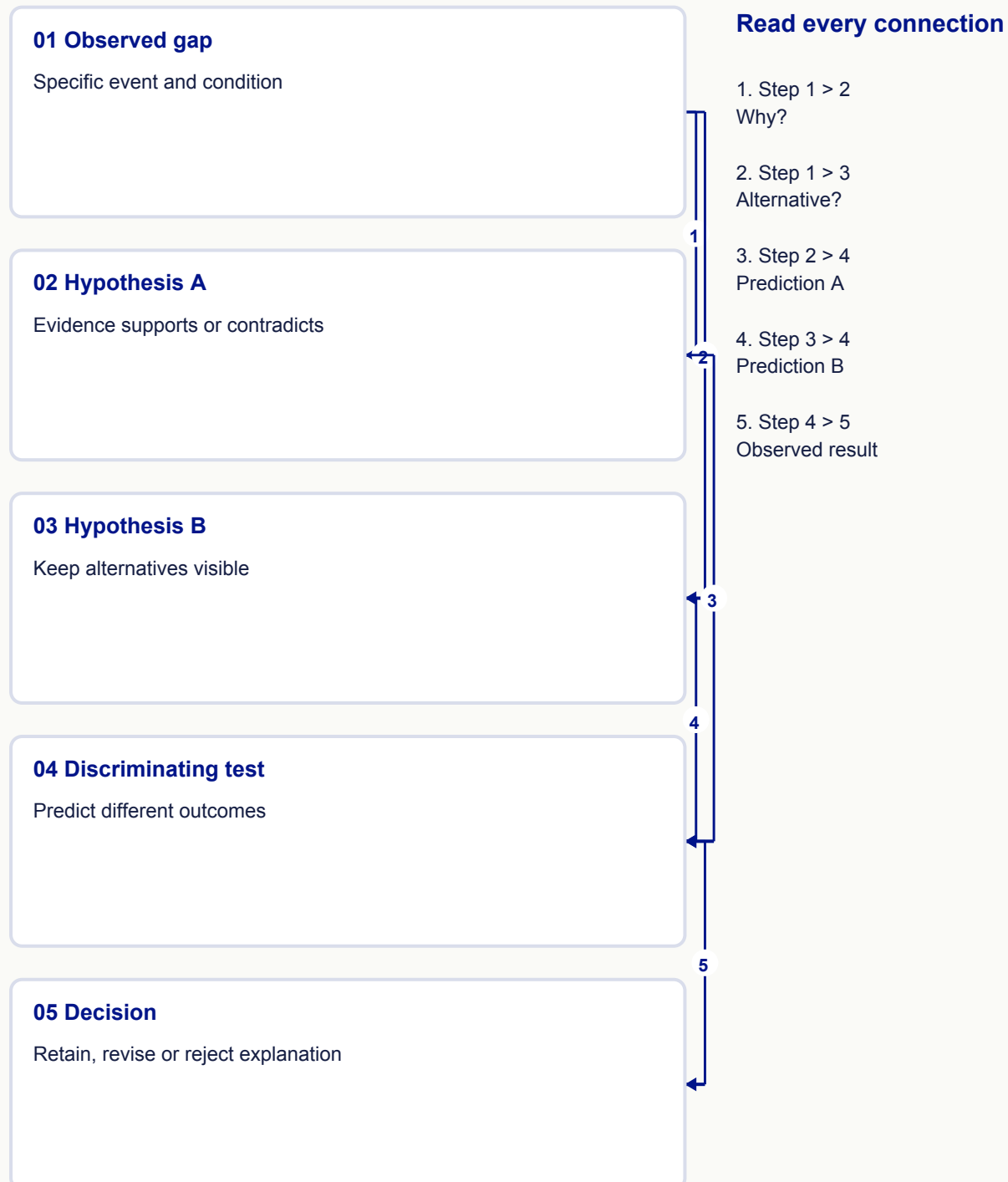
Work within these conditions

1. Use synthetic test packets; do not alter live customer requests.
2. A plausible chain is a hypothesis until its links are supported; five is not a mandatory stopping count.

Fictional teaching case. Supplied observations support the exercise; proposed actions are not verified customer results.

See how the method works

Begin with a specific observed gap. For each proposed cause, ask what evidence supports the link and what observation would contradict it. Keep alternative explanations visible when the evidence branches. The number of questions is less important than reaching a cause that can be tested and acted on. Do not stop at a label such as human error, and do not invent certainty to complete a chain. A countermeasure should change the mechanism and be checked for effectiveness. Complex interacting variables may require another analysis method. The diagram supports disciplined reasoning; it is not proof by itself.



Connected method map: Observed gap, Hypothesis A, Hypothesis B, Discriminating test, Decision. Every authored connection is shown with a numbered arrow and named legend.

Follow the evidence and decisions

Inspect the supplied case inputs

Fact	Status
Three omitted drawings	Observed in packets R11, R14 and R19
Submission routes	Email and portal both used; route for each not yet reconciled
Claim A	Portal may permit submission without attachment
Claim B	Attachment may be lost during transfer
Attention claim	No supporting observation supplied

01 / State the event precisely

Sol records packet identities, required drawing and point of detection. He asks where the attachment should first enter the process and separates that point from review.

Why: Investigating where the omission was found can miss where it arose.

Evidence / check: Event statement and expected handoff are explicit.

02 / Make each why a supported link

The team asks why a packet could arrive without the drawing and labels each proposed answer observed, hypothesized or unknown. It does not copy staff inattention into the cause field.

Why: A judgment about people does not describe a mechanism that can be checked.

Evidence / check: Portal acceptance and transfer loss remain separate hypotheses.

03 / Design a discriminating observation

Use a training packet without a drawing to test whether the portal accepts submission; separately send a packet with a uniquely identified test drawing and trace whether it survives each handoff.

Why: The two tests distinguish omission at entry from loss after entry. One generic successful submission cannot distinguish them.

Evidence / check: Before testing, record predicted results for each explanation and retain actual results separately.

04 / Follow the result instead of the form

If the portal rejects an empty attachment, revise the entry hypothesis rather than adding more unsupported whys. If a trace loses a drawing, inspect that precise transition and test the proposed change.

Why: Contrary evidence narrows learning. A cause claim needs a verified mechanism and an effective response, not a filled chain.

Evidence / check: The completed planning record leaves results open and defines the next decision for each outcome.

Completed hypothesis/test plan - results not yet supplied

Claim	Test / expected distinction	Current status
A: omission accepted at entry	Submit empty training packet; acceptance supports A	Untested
B: attachment lost later	Trace identified attachment across handoffs	Untested
Staff inattention	No observation connecting it to event	Unsupported label
Next decision	Retain/revise claims from actual test results	No root cause established

Both mechanisms occur

In a fictional follow-up, one route permits an empty packet and another loses an attachment during conversion.

Decision

Keep two evidenced branches and their affected scopes; test responses for both. Do not force all events into the first explanation.

Reasoning

A recurring outcome may have multiple mechanisms.

What would change the decision?

Link each reproduced event to route, condition and observation; verify occurrence and escape controls separately.

Practise with a changed case

An unsigned handoff

New fictional office case: four handoff records lack receiver acknowledgment. The sender says the receiver forgot; the receiver says the notification never arrived. No delivery log has been checked.

Evidence	Supplied status
Four missing acknowledgments	Observed
Notification sent	Sender assertion only
Notification received	Unknown
Receiver forgot	Hypothesis, not verified

Your task

1. Separate observed facts from hypotheses.
2. Write a test that distinguishes notification failure from acknowledgment failure.
3. Explain what result would challenge your preferred explanation.

Use the next page to record your reasoning before reading the answer.

Your practice worksheet

An unsigned handoff

Specific gap and expected handoff

Causal claim / status

Prediction under each explanation

Test and evidence source

Revised claim / next action

Complete your reasoning before turning to the answer. Use the separate learner workbook for group practice.

Check your reasoning and transfer it

1. Missing acknowledgments are observed; sending, delivery and forgetting are not yet established.
2. Trace one synthetic notification end to end and observe the receiver acknowledgment step. Confirmed delivery with no acknowledgment points to a different transition than failed delivery.
3. A delivered message does not by itself prove forgetting: access, task clarity or competing workflow may explain the next gap. Continue from facts.

Suggested completed record

Claim / evidence	Interpretation / next step
No acknowledgment	Observed outcome
Delivery absent	Investigate notification transition
Delivery confirmed	Observe acknowledgment conditions
Preferred cause contradicted	Revise branch; do not blame

Plausible wrong turns

1. Exactly five answers do not validate a cause.
2. Retraining is not an evidence-backed countermeasure merely because the last box names a person.

Evidence of a sound answer

1. Label evidence status honestly.
2. Make competing predictions distinguishable.
3. State contrary evidence and a bounded next step.

Take the learning back to work

Commitment	Agreed follow-through
Owner	Process owner with people performing the affected handoffs
Record	Evidence-labelled cause/test record
Review	After each test and after the proposed response is trialed
Verification evidence	Reproducible mechanism, contrary evidence and recurrence/escape verification
If unresolved	Retain uncertainty, improve observation or use a more suitable analysis method.

Help someone else apply the method

Prepare

1. Event and hypothesis cards
2. Blank cause-test record
3. Synthetic packet example

Minutes	Activity and coaching prompt
5	Separate facts and labels Which claim could another observer verify?
7	Build competing test plans What result differs between A and B?
8	Practice acknowledgment case What would disprove your explanation?
5	Debrief branches Must there be one cause?

Debrief

1. Ask for a mechanism when a learner names attitude.
2. Do not reward chain length over tested reasoning.

Individual or remote practice

Write the competing prediction before imagining any result, then check the suggested reasoning.

Connect the method and check its boundaries

Before application

1. Specific event or gap
2. Access to process facts

Outside this lesson

1. Five is not a mandatory count
2. Human error is not a sufficient causal explanation

LEI: 5 Whys

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Cause chain, not exactly five repetitions; gap-from-standard focus

Method reference; original OPEX scenario and diagram are synthetic teaching content, not source case results.

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