CAN AI DO MY RCA?

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ROOT CAUSE ANALYSIS METHODS, SOFTWARE AND EXPERTISE TO HELP ORGANIZATIONS SOLVE PROBLEMS.

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RCA AND AI - OVERVIEW

- What can AI do now relative to RCA?

- Recommendations for getting the most out of AI

WHAT CAN AI DO NOW WITH RCA?

Analyze mountains of information to:

- Spot trends/patterns
- Generate summary narratives
- Suggest causes based on context
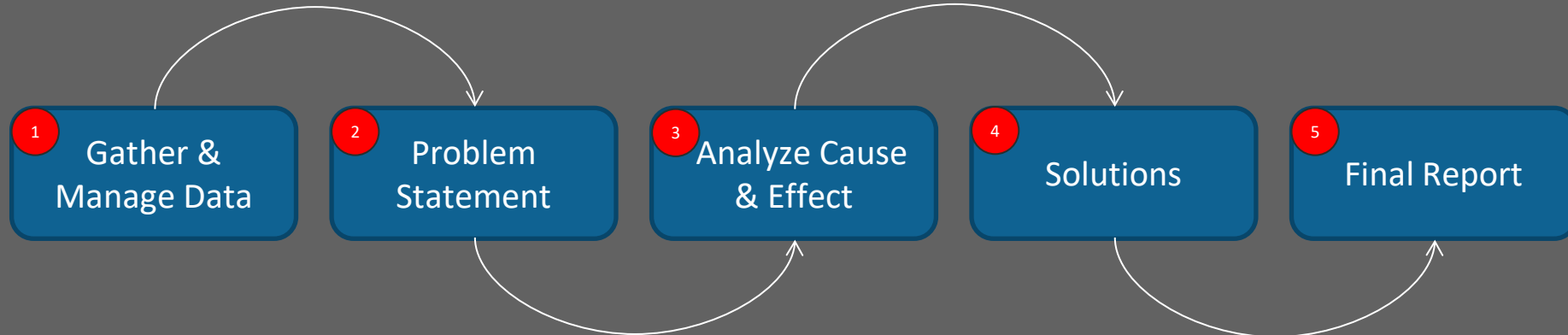- Proposes Solutions

IT CAN SAVE YOU TIME!

If excavating for a new pool......

Both get the job done, but AI is like using a backhoe

THE RCA PROCESS-5 STEPS

1. Gather and Manage Data
2. Create the Problem Statement
3. Analyze Cause and Effect
4. Generate Solutions
5. Produce the Final Report

| 1 Gather & Manage Data | 2 Problem Statement | 3 Analyze Cause & Effect | 4 Solutions | 5 Final Report |

SOME THINGS TO THINK ABOUT.......

Courtesy: Sonja Laukkanen

KNOW WHERE YOUR FOOD COMES FROM

The same goes for the data AI accesses

Courtesy: Sonja Laukkanen

THE RCA PROCESS-5 STEPS

1. **Gather and Manage Data**
2. Create the Problem Statement
3. Analyze Cause and Effect
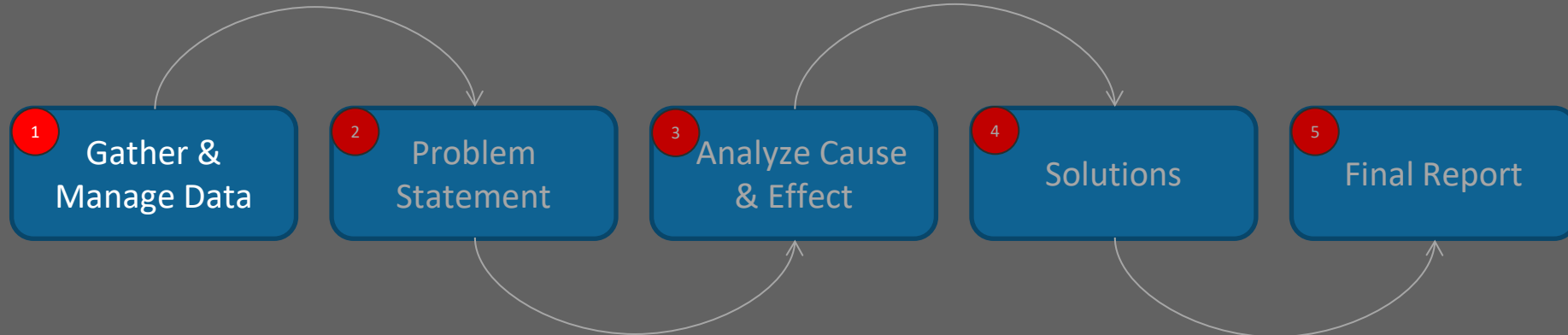4. Generate Solutions
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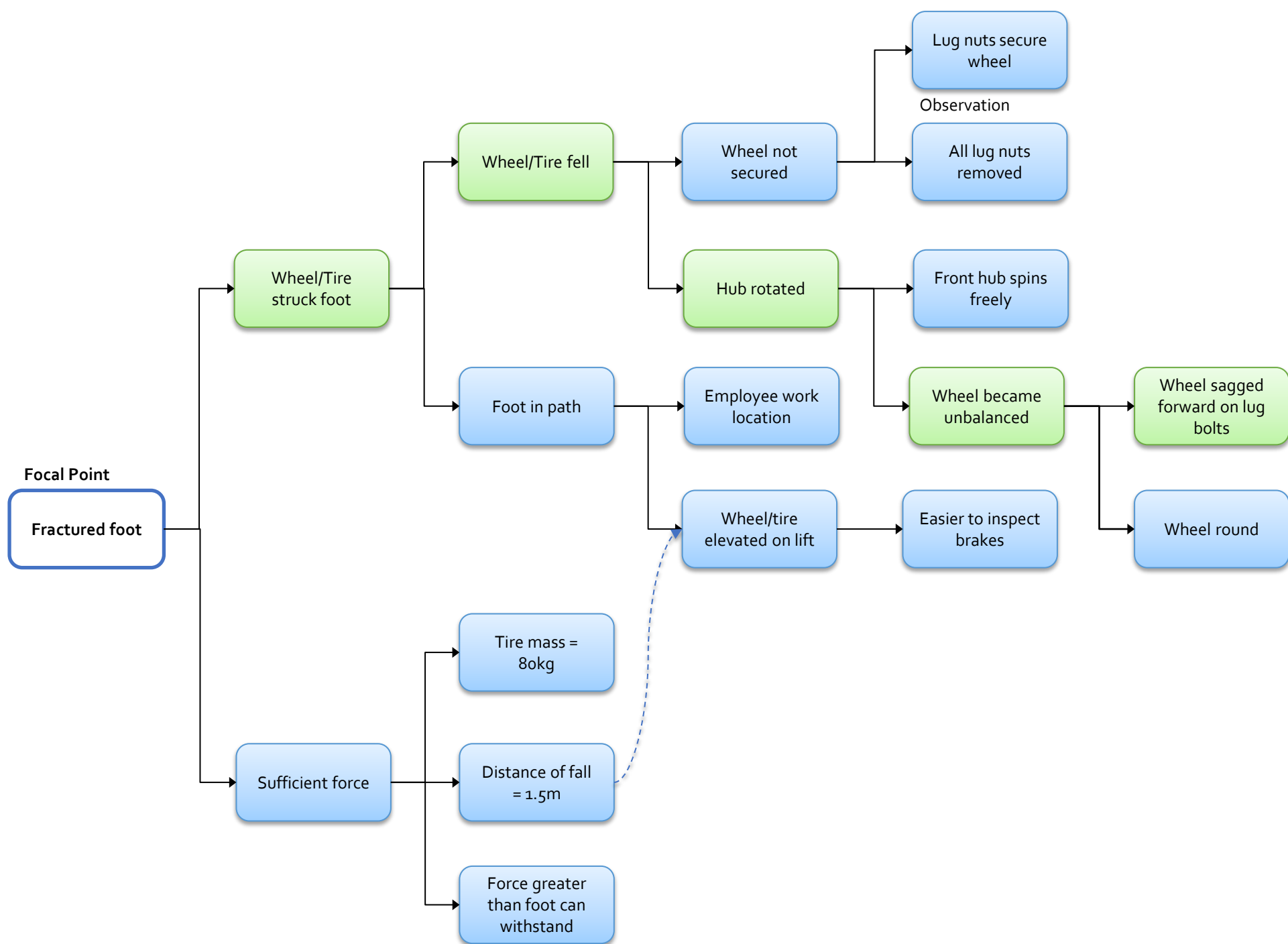
| 1 Gather & Manage Data | 2 Problem Statement | 3 Analyze Cause & Effect | 4 Solutions | 5 Final Report |

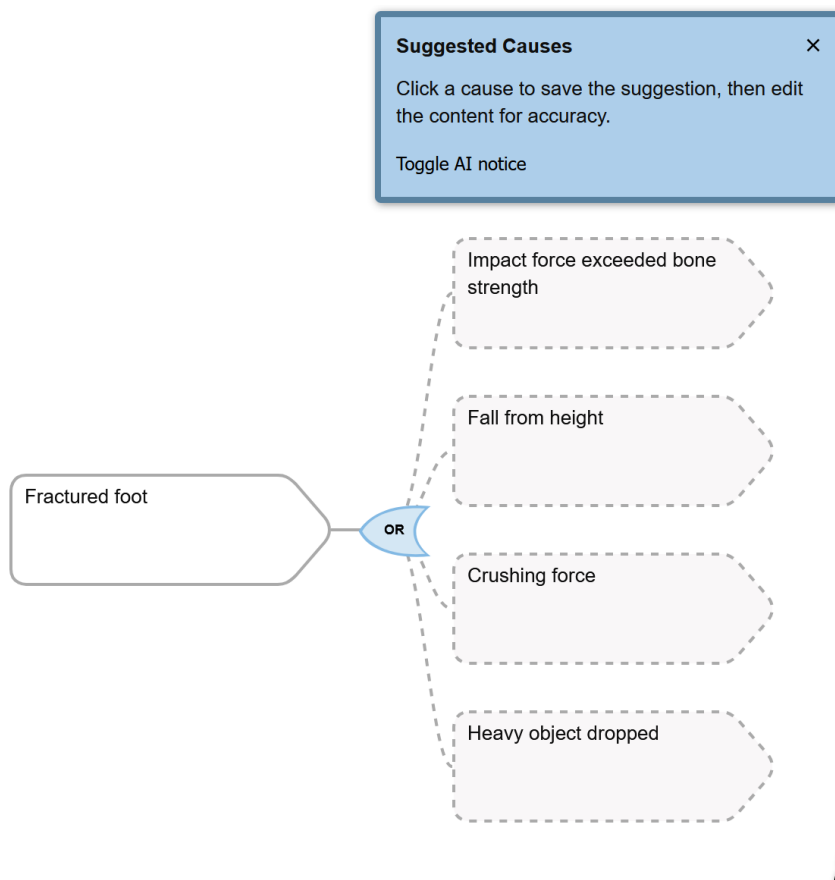# RCA QUALITY ≈ DATA QUALITY, AND QUANTITY
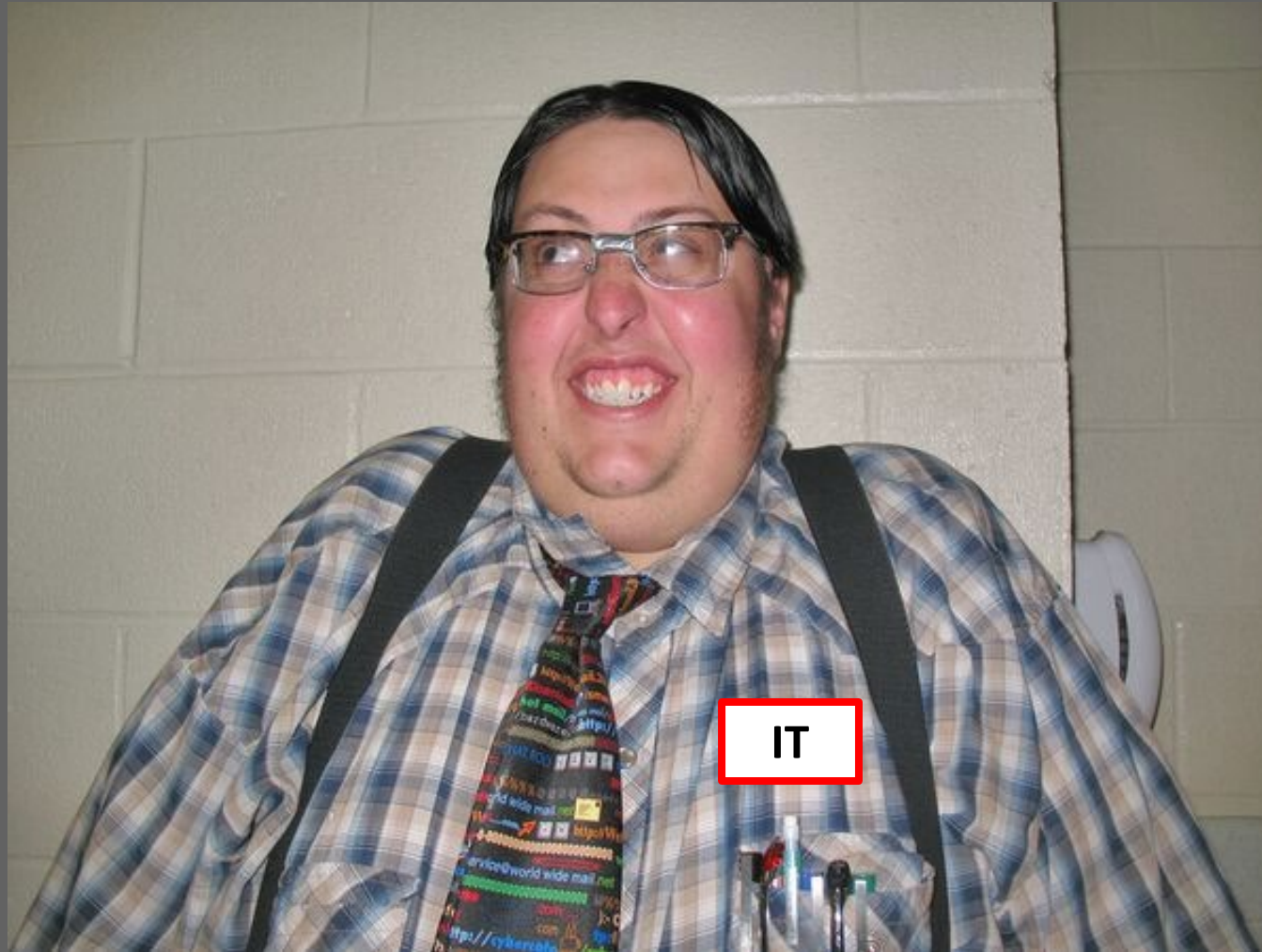
Before plugging incident data into ChatGPT, buy this guy a Red Bull and ask him about it.

CHATGPT (ET AL) PULLS FROM PUBLIC DATA

WHAT HAPPENS TO YOUR DATA WHEN YOU PLUG IT IN??

Focal Point

Fractured foot

Wheel/Tire struck foot

Sufficient force

Wheel/Tire fell

Foot in path

Wheel not secured

Hub rotated

Employee work location

Wheel/tire elevated on lift

Lug nuts secure wheel

Observation

All lug nuts removed

Front hub spins freely

Wheel became unbalanced

Easier to inspect brakes

Wheel sagged forward on lug bolts

Wheel round

Tire mass = 8okg

Distance of fall = 1.5m

Force greater than foot can withstand

LETS SEE HOW AI DOES WITHIN CAUSELINK FOR BUILDING CAUSE AND EFFECT CHARTS
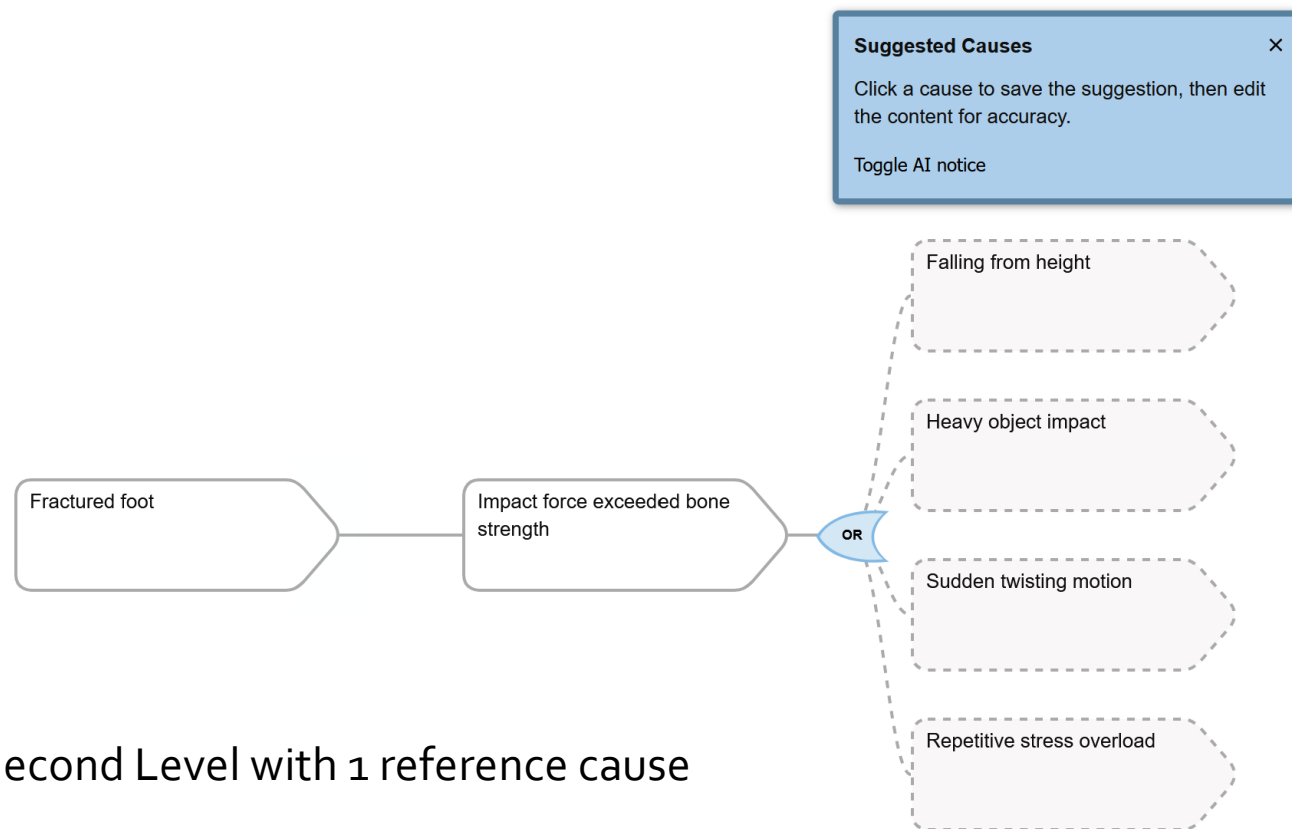
Object stacking height exceeded safe limit

Uneven floor surface

Fractured foot

Impact force exceeded bone strength

Heavy object impact

OR

Rushing to complete task

Missing toe protection

Third Level with 2 reference causes

PPE policy not enforced

Safety shoes not available

Heavy object impact

Missing toe protection

OR

Workers unaware of PPE requirements

Fourth Level with 3 reference causes

Cost-cutting on safety equipment

Lets look at a different problem….

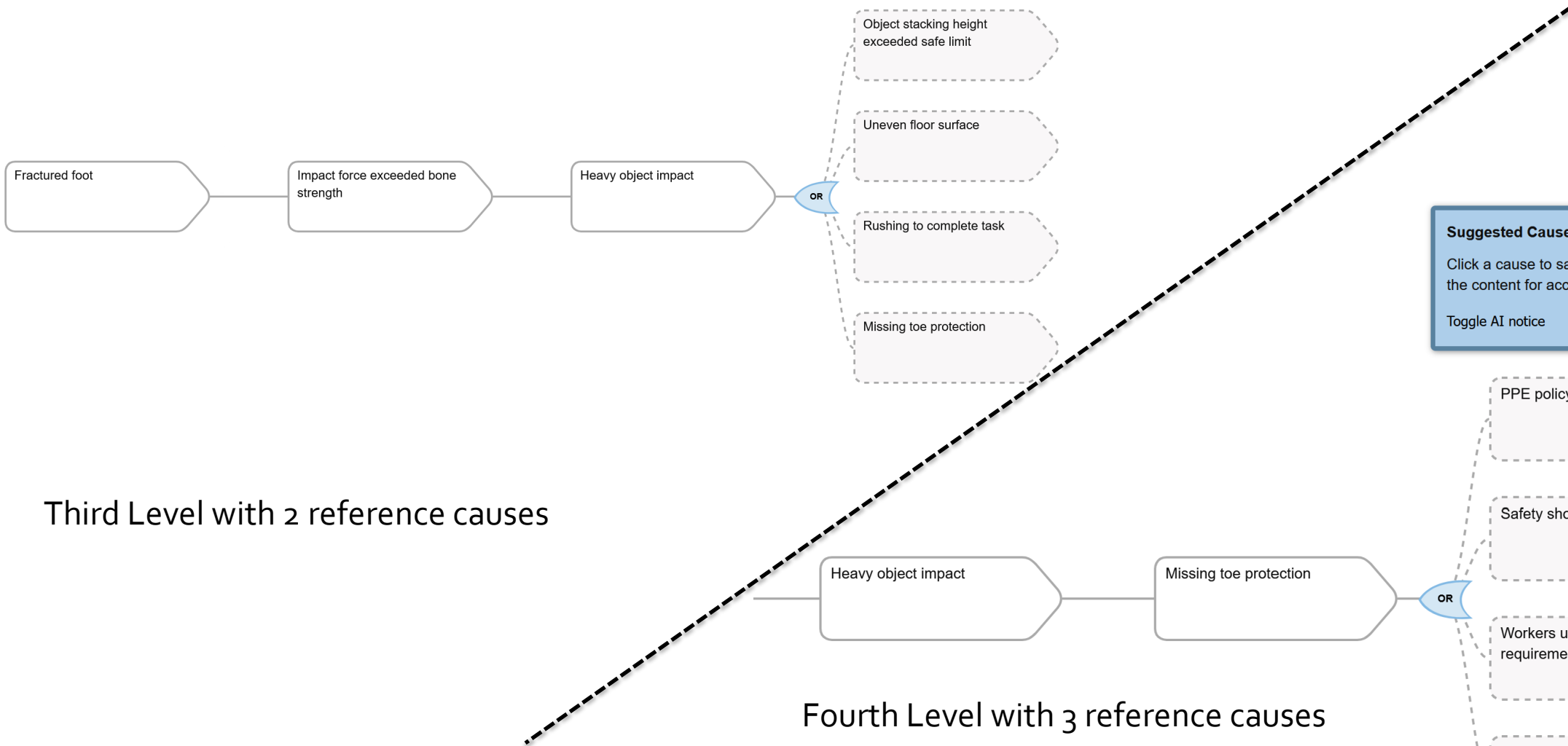## First level

Suggested Causes ✕

Click a cause to save the suggestion, then edit the content for accuracy.

Toggle AI notice

Severe burns to face-- Potential fatality due to arc flash **OR**

- Chemical exposure
- Flash fire
- Hot liquid splash
- Thermal radiation

Second level

Suggested Causes ✕

Click a cause to save the suggestion, then edit the content for accuracy.

Toggle AI notice

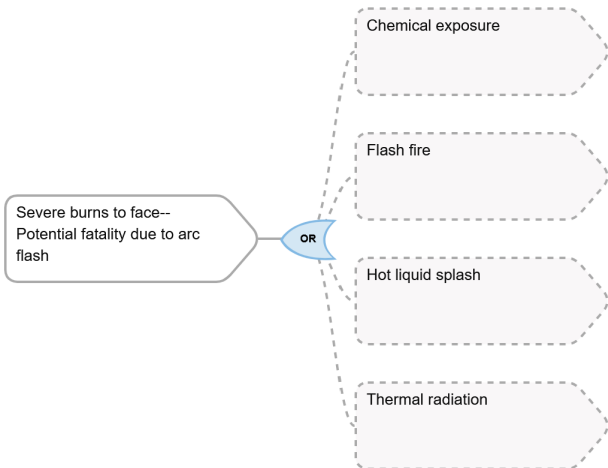Severe burns to face-- Potential fatality due to arc flash — Arc flash occurred **OR**

- Energized equipment exposed
- Missing PPE
- Incorrect voltage rating on tools
- Work performed without lockout

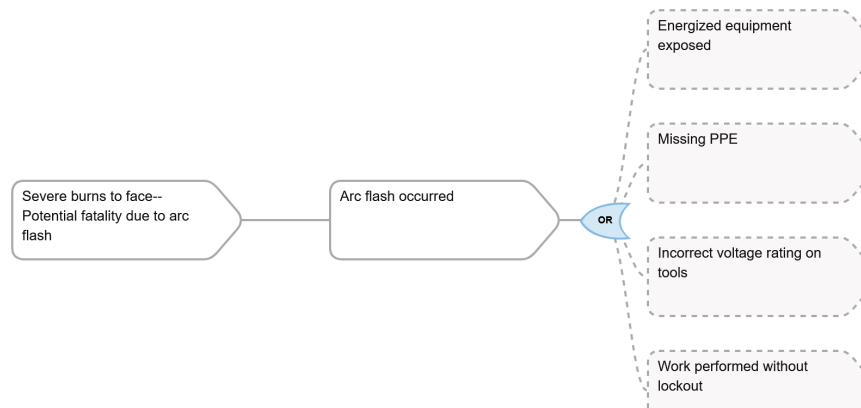## Third level

Suggested Causes ✕

Click a cause to save the suggestion, then edit the content for accuracy.

Toggle AI notice

Severe burns to face-- Potential fatality due to arc flash — Arc flash occurred — Contacts inside of disconnect panel exploded **OR**

- Loose electrical connections caused heat buildup
- Dust/debris accumulation on contacts
- Moisture intrusion corroded contacts
- Overloaded circuit exceeded rating

Suggested Causes ✕

Click a cause to save the suggestion, then edit
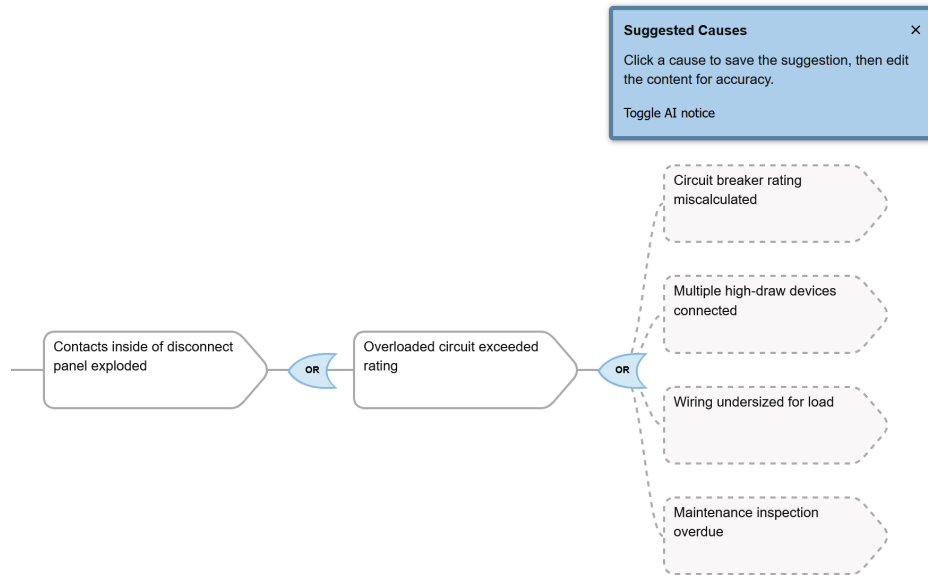the content for accuracy.

Toggle AI notice

Circuit breaker rating
miscalculated

Multiple high-draw devices
connected

Wiring undersized for load

Maintenance inspection
overdue

Contacts inside of disconnect
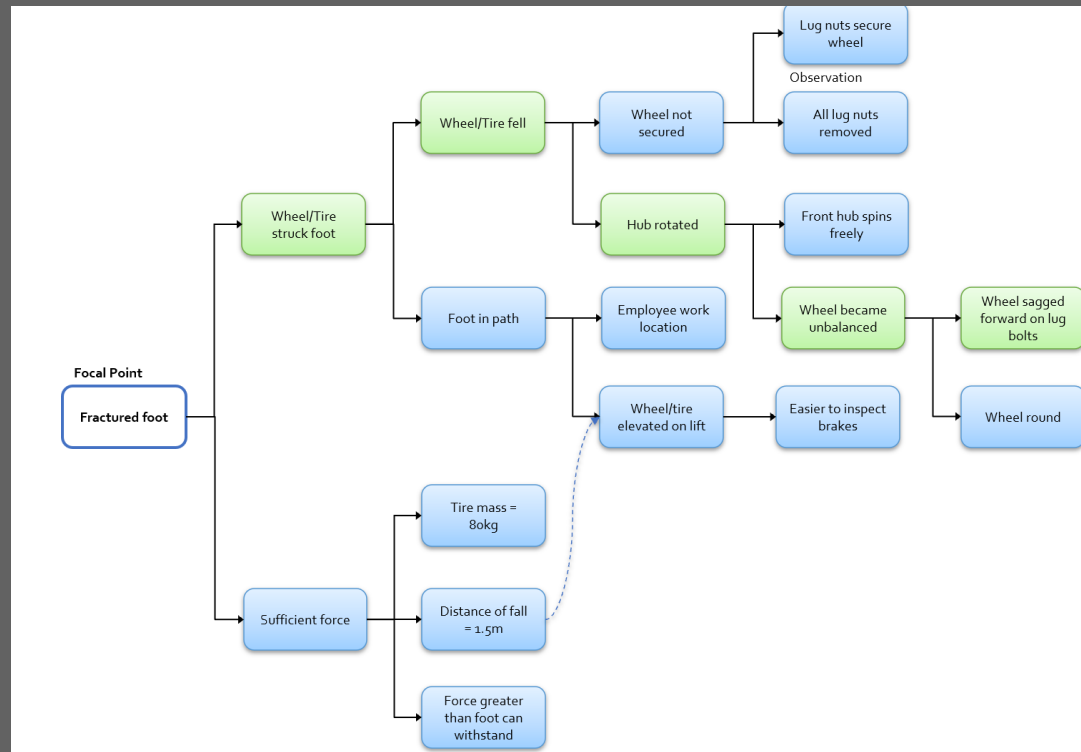panel exploded

OR

Overloaded circuit exceeded
rating

OR

Fourth level

AI-GENERATED SOLUTIONS

AI can read your C/E chart and suggest solutions

Lets take a look……..

AI IS MAKING RAPID PROGRESS

Now assist with building cause and effect charts

At the start of the chart, AI lacks context, so you need to guide it.

Suggest adding 2 to 3 levels of causes before asking AI to contribute—point it in the right direction

GETTING THE MOST OUT OF AI

View it as another team member---not Einstein

Best results obtained when you:

- Ask it to drill deeper for causes, one step at a time
- First create the cause and effect chart before asking AI for solutions and report narrative

IN CONCLUSION; CAN AI DO RCA?

Its not quite there, and may never be completely

But, already today:

- Improves RCA quality by pointing out things that may have been missed
- Reduces time to complete the RCA

PARTING THOUGHTS…...

- Do not outsource Core Thinking to AI

"It is more important to know the right question than the right answer"

Leonardo da Vinci

So, do not stop asking questions…..

Want to try AI on one of your problems?

Free 14 day trial: www.Sologic.com

Navigate to 'Software' , 'Causelink Individual'

-RCA Method (incl. Causelink)

Great Lakes Safety Training Center (Midland)

April 22/23 RCA Specialist (Facilitator)

April 24/25(am) RCA Master (Advanced)

QUESTIONS?

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