

Navigating Complexity with Current Reality Trees

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Suzanne Morrison



About Us

We bring over 45 years of combined hands on experience in product and delivery across industries . We work with leadership and teams providing practical, hands-on guidance so that organisational outcomes can be acheived.

Our approach blends lean, agile, and systems thinking with a strong focus on people, practical delivery



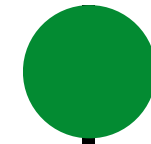
Vinnie Gill



A Tale from the Trenches



Overview



Complex Adaptive Systems - what are they and why does it matter for continuous improvement?



Theory of Constraints - how the ToC toolkit can help us to navigate complexity.



Building Current Reality Trees (CRTs) - what they are, how to build and validate a CRT.



Practical Tips - top tips for using CRTs based on my own failures and learnings.

01

Continuous Improvement in Complex Adaptive Systems





What techniques have your team or organisation used to improve?

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Continuous Improvement



**Plan, Do, Study,
Act (PDSA)**



Visualising Work



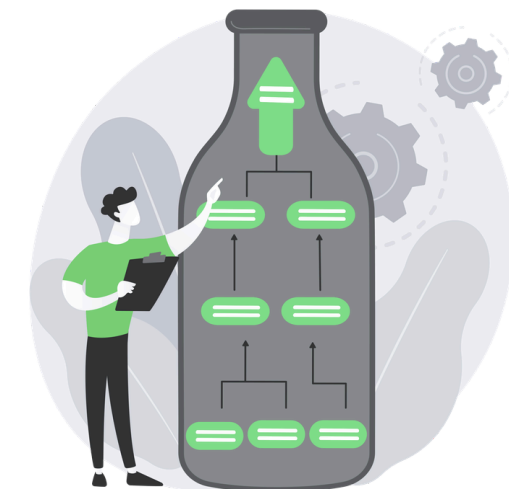
Pair Programming



Retrospectives

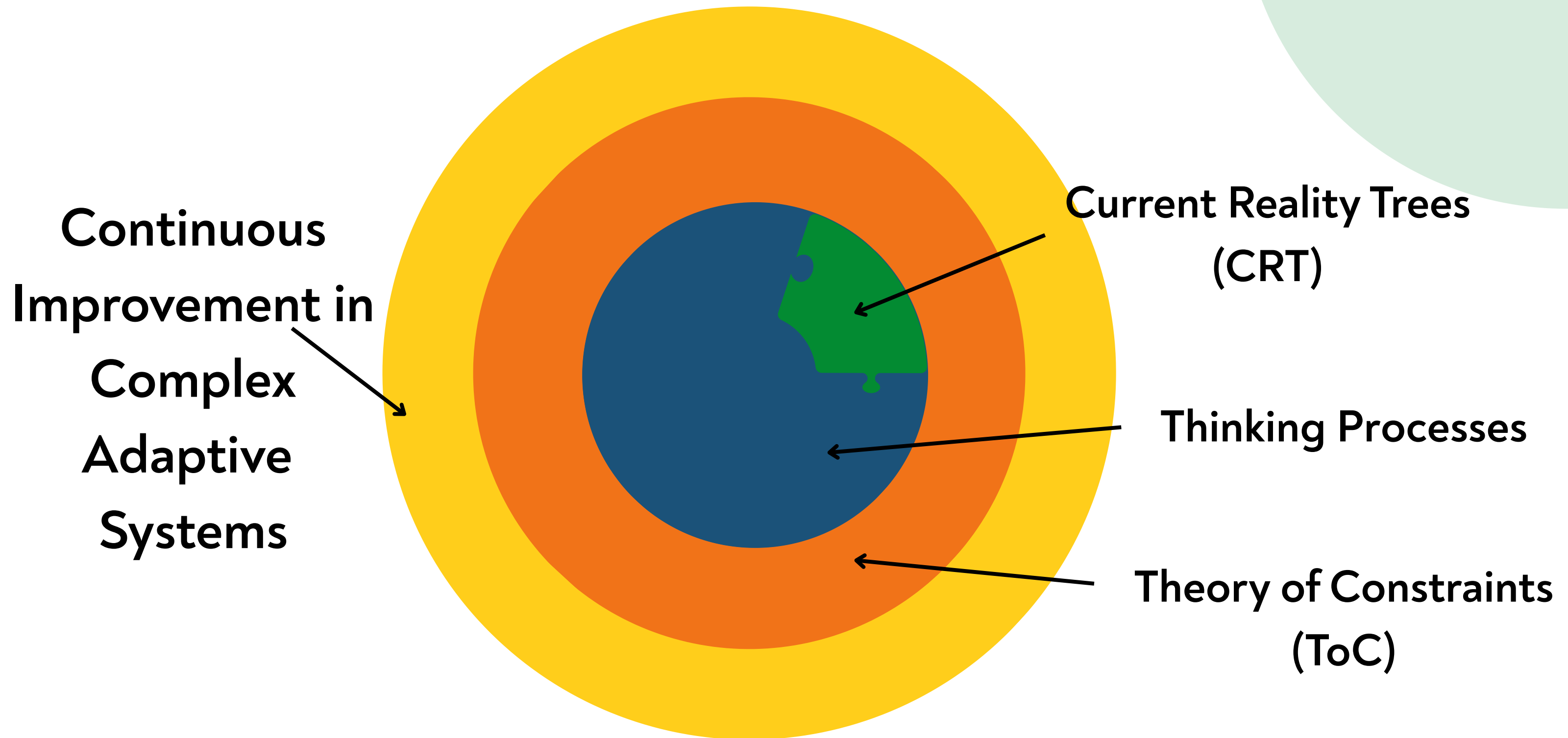


Experimentation



**Theory of Constraints
(ToC)**

Putting it into context



Complex Adaptive Systems in Nature



Credit - [airwolfhound](#) RSPB Minsmere

What is a Complex Adaptive System?

SYSTEM

A set of parts that interconnect to achieve a purpose

COMPLEX

The behaviour of the whole can't be predicted by looking at the parts

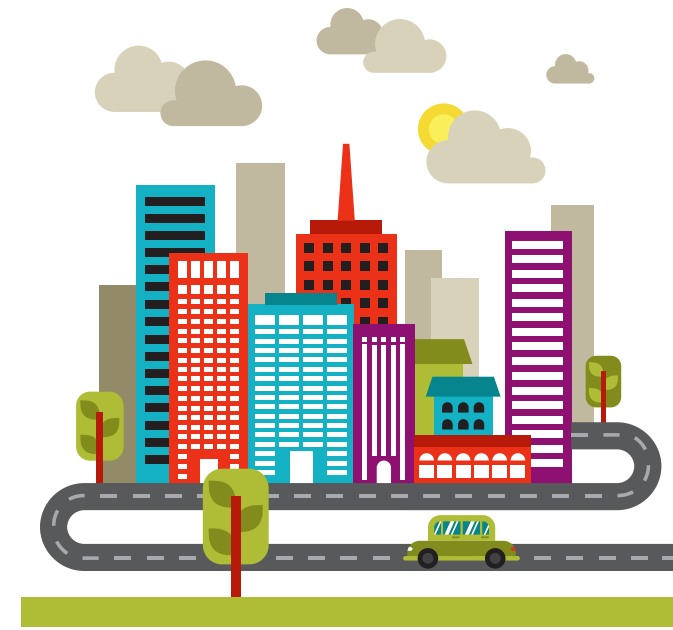
ADAPTIVE

Can change its behaviour according to the environment

More Examples of Complex Adaptive Systems



Forest



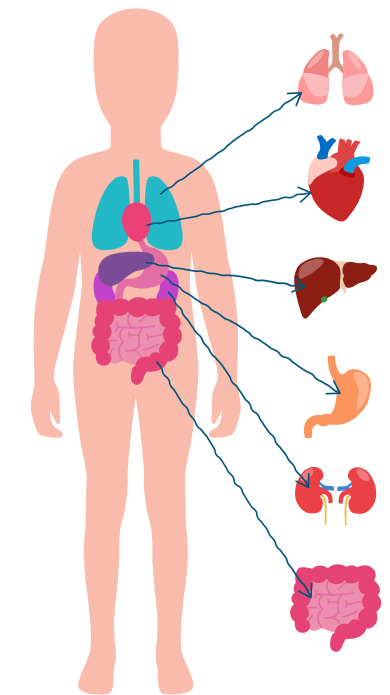
City



Teams and Organisations

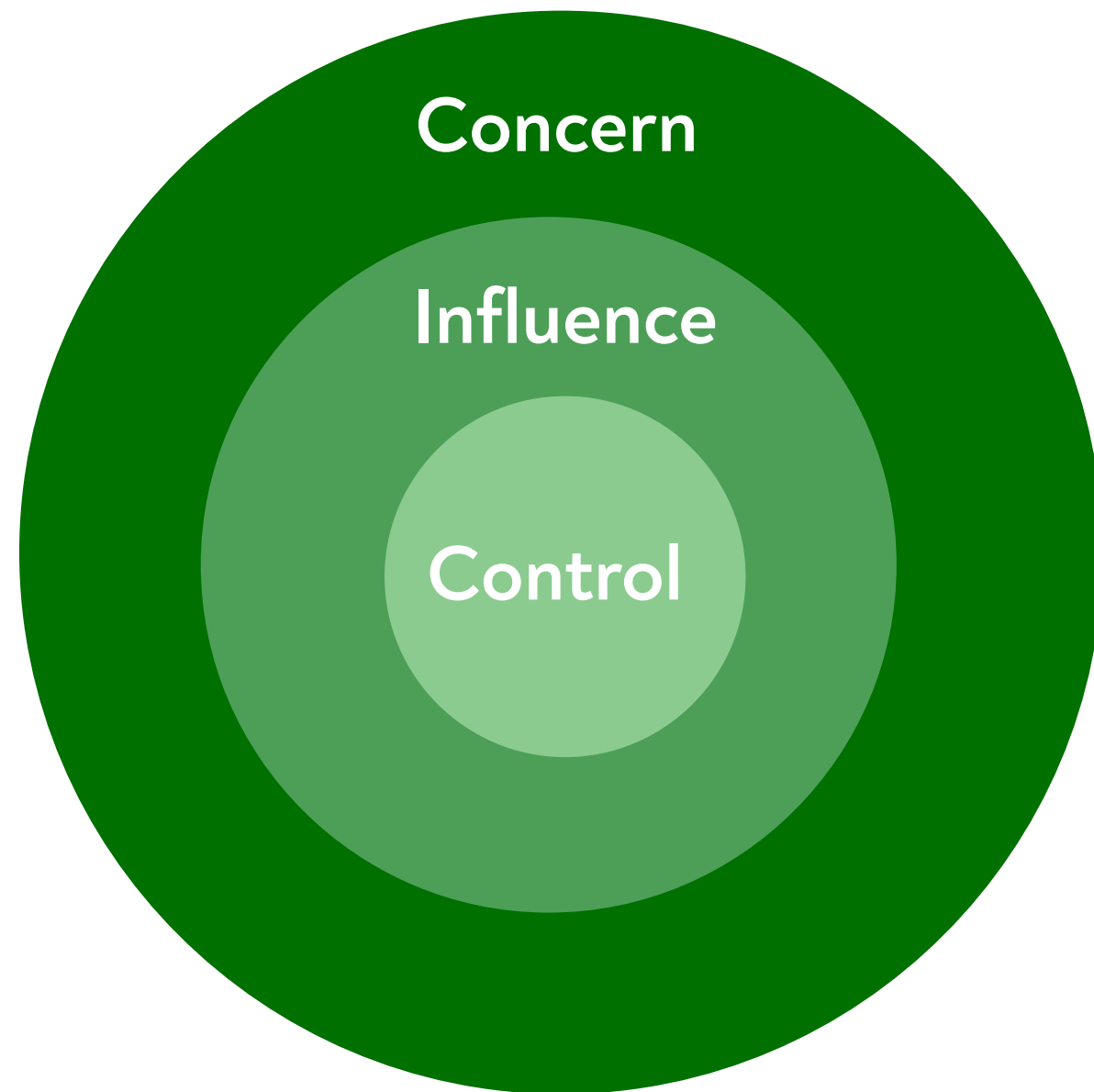


Stock Market



Human Body

Retrospectives - Common Challenges



**Sticking plaster
“solutions”**

02

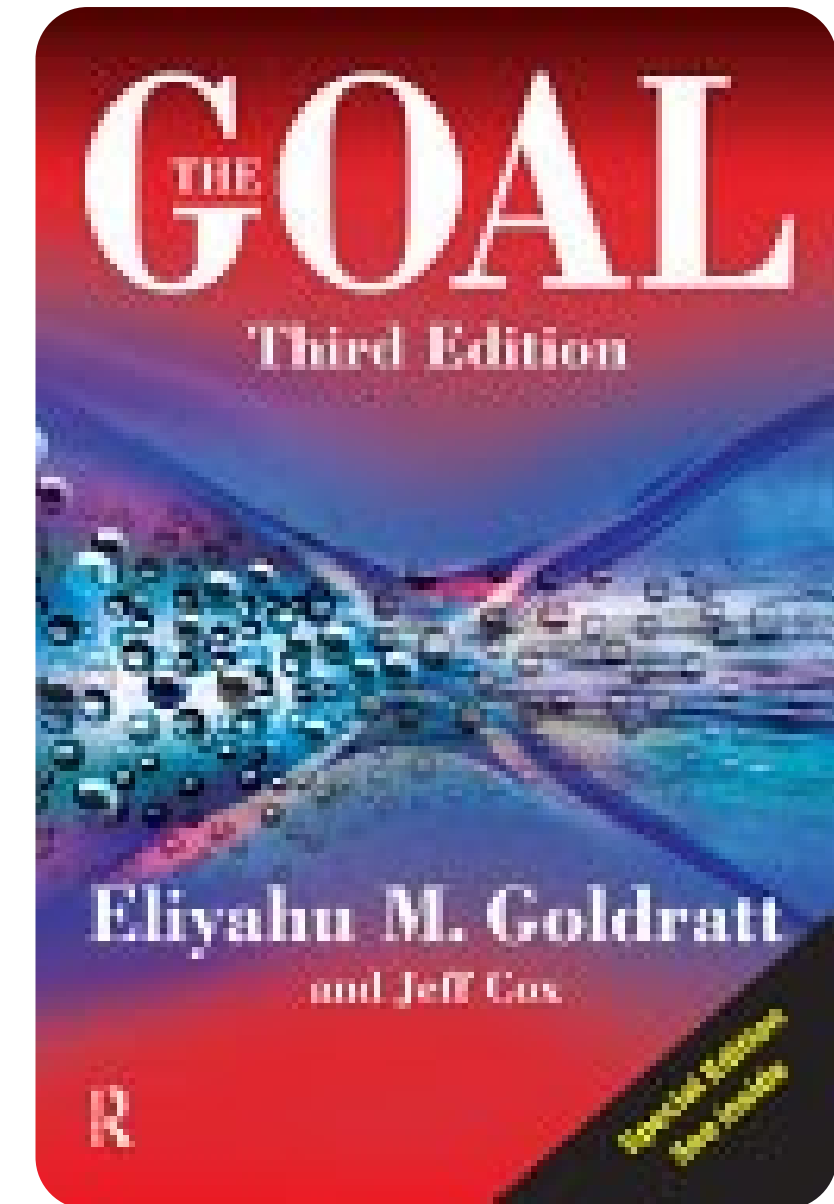
Theory of Constraints (ToC)



Theory of Constraints



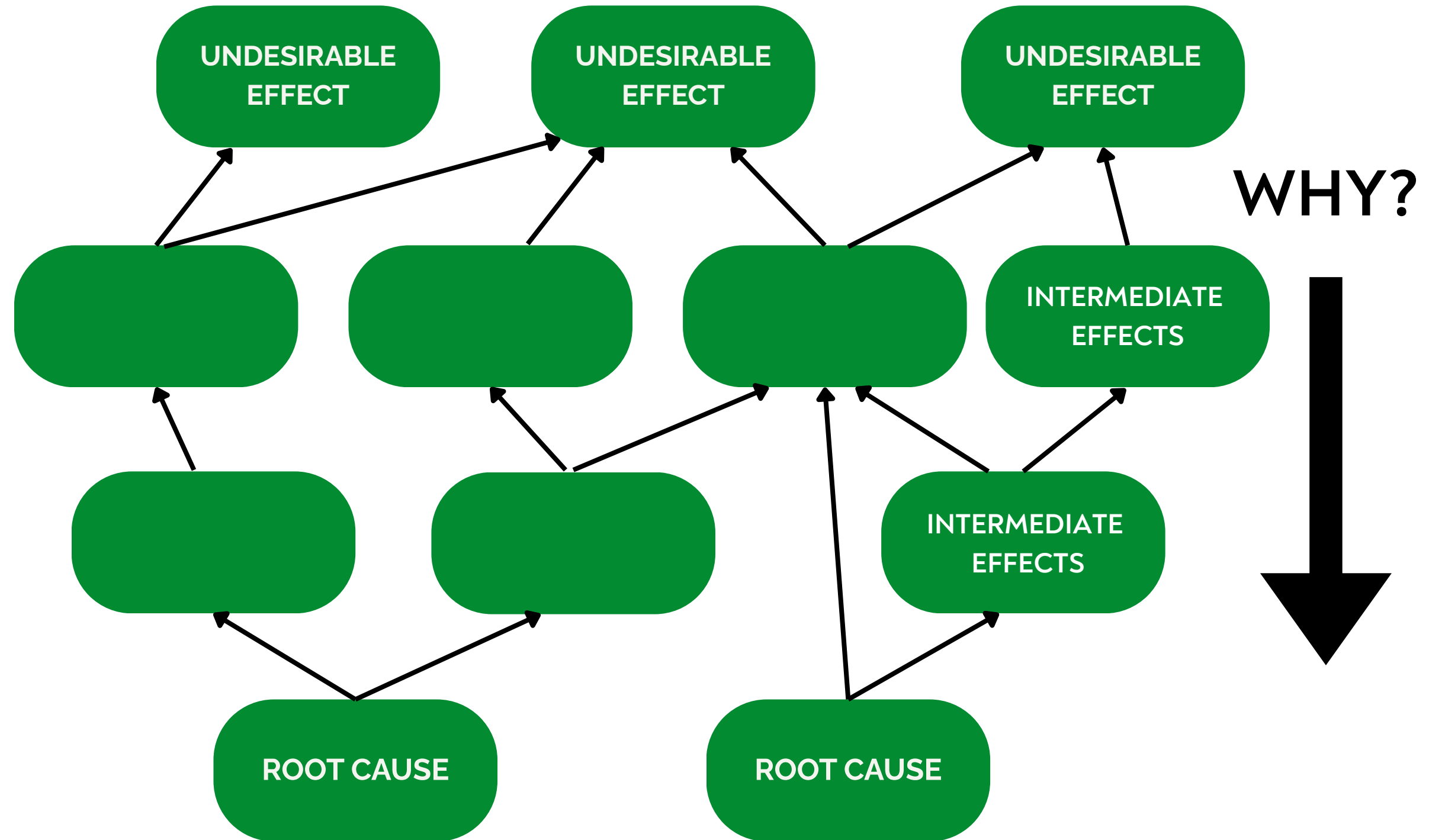
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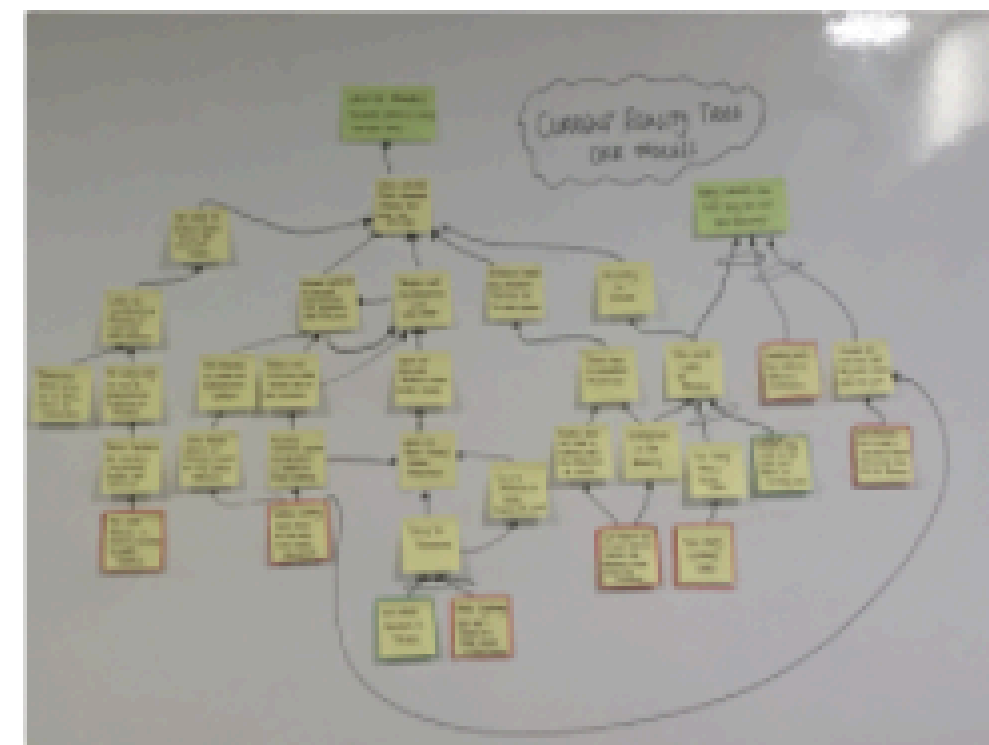
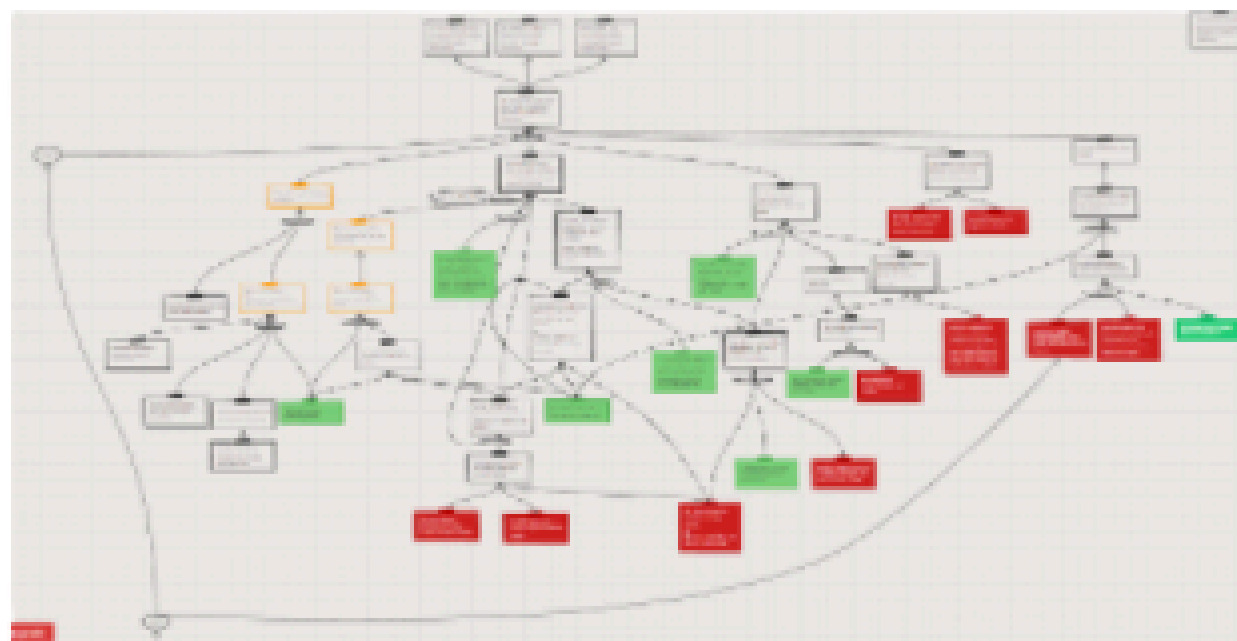
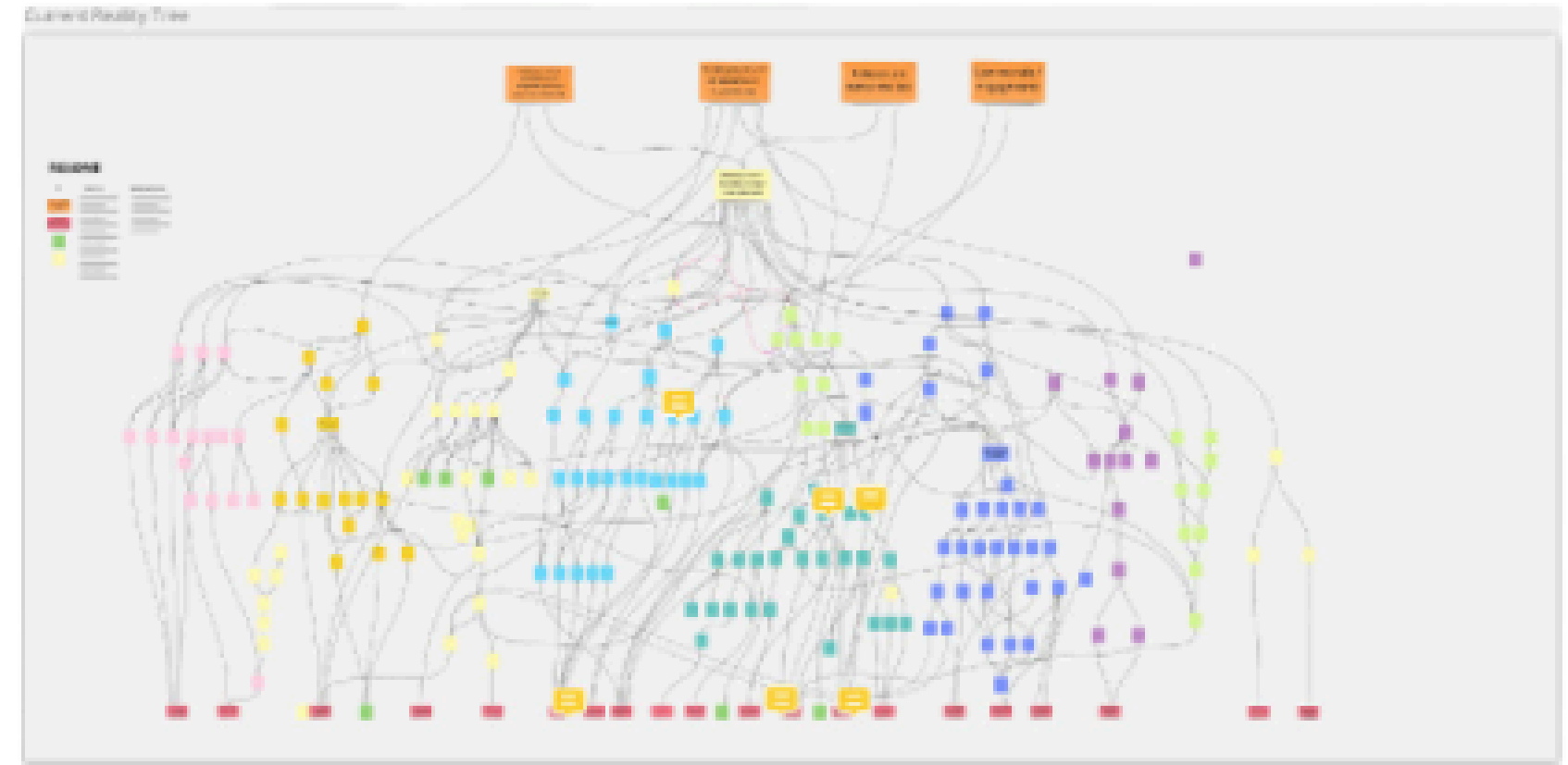
“A **Current Reality Tree (CRT)** is a logical structure designed to depict the state of reality as it currently exists in a given system.

It reflects the most probable chain of cause and effect, given a specific fixed set of circumstances”

- William Dettmer (The Logical Thinking Processes)



Current Reality Tree - Real Examples



We have used CRTs for...



Improving the speed of integration of partners on to the Skyscanner website



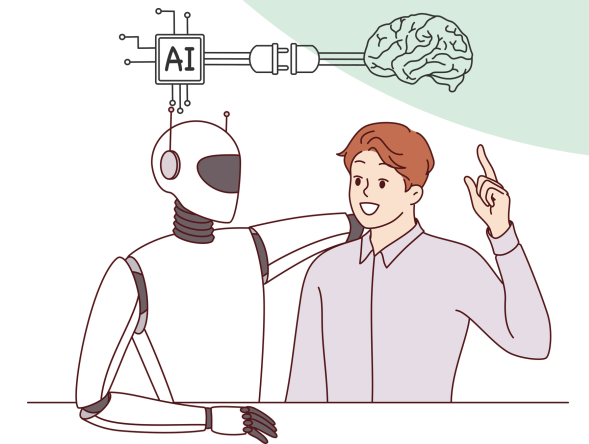
Getting management buy-in to invest in addressing technical debt



Organisational Culture Issues



Improving the recruitment process



AI Implementation



Understanding why an OKR process rollout didn't work as planned

03

Building a Current Reality Tree

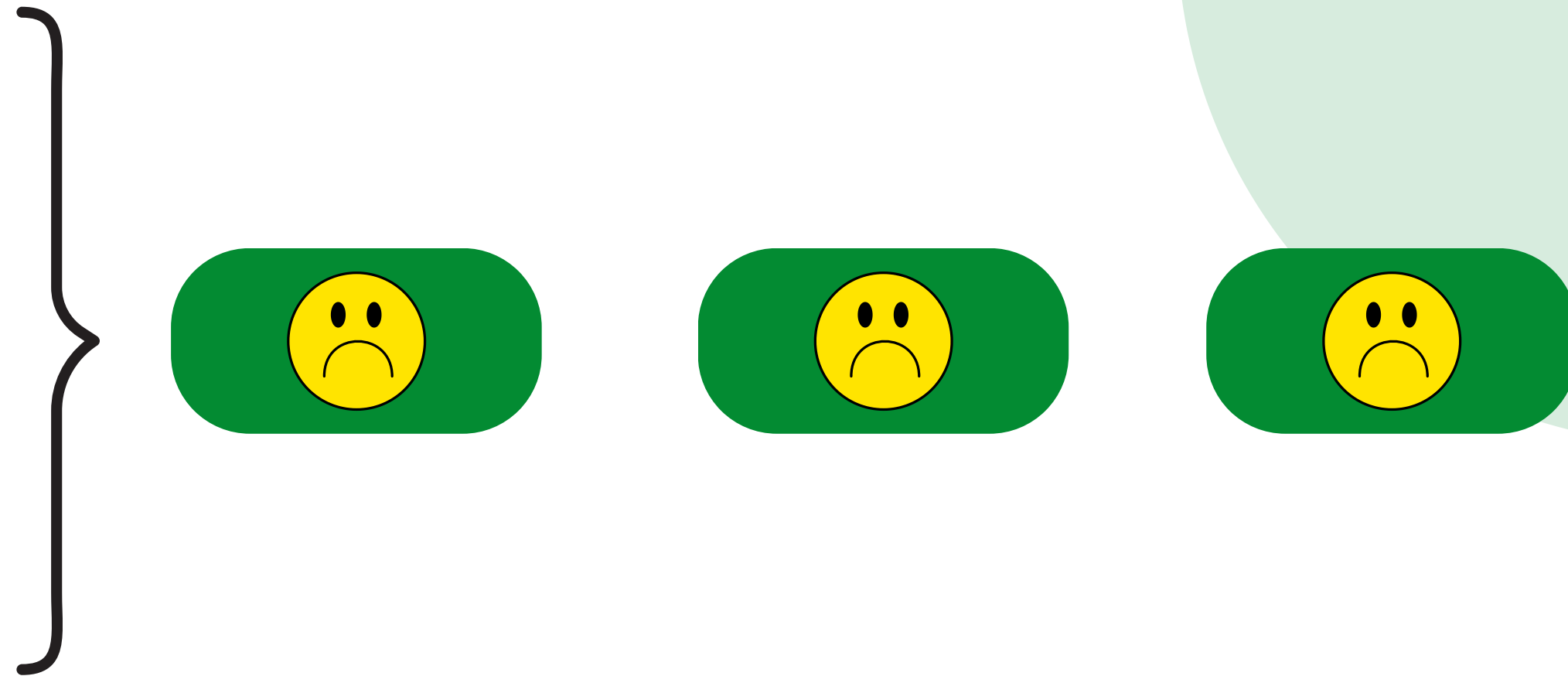


Let's Build A Current Reality Tree



**Operation Cat Drop -
MEOW!!!**

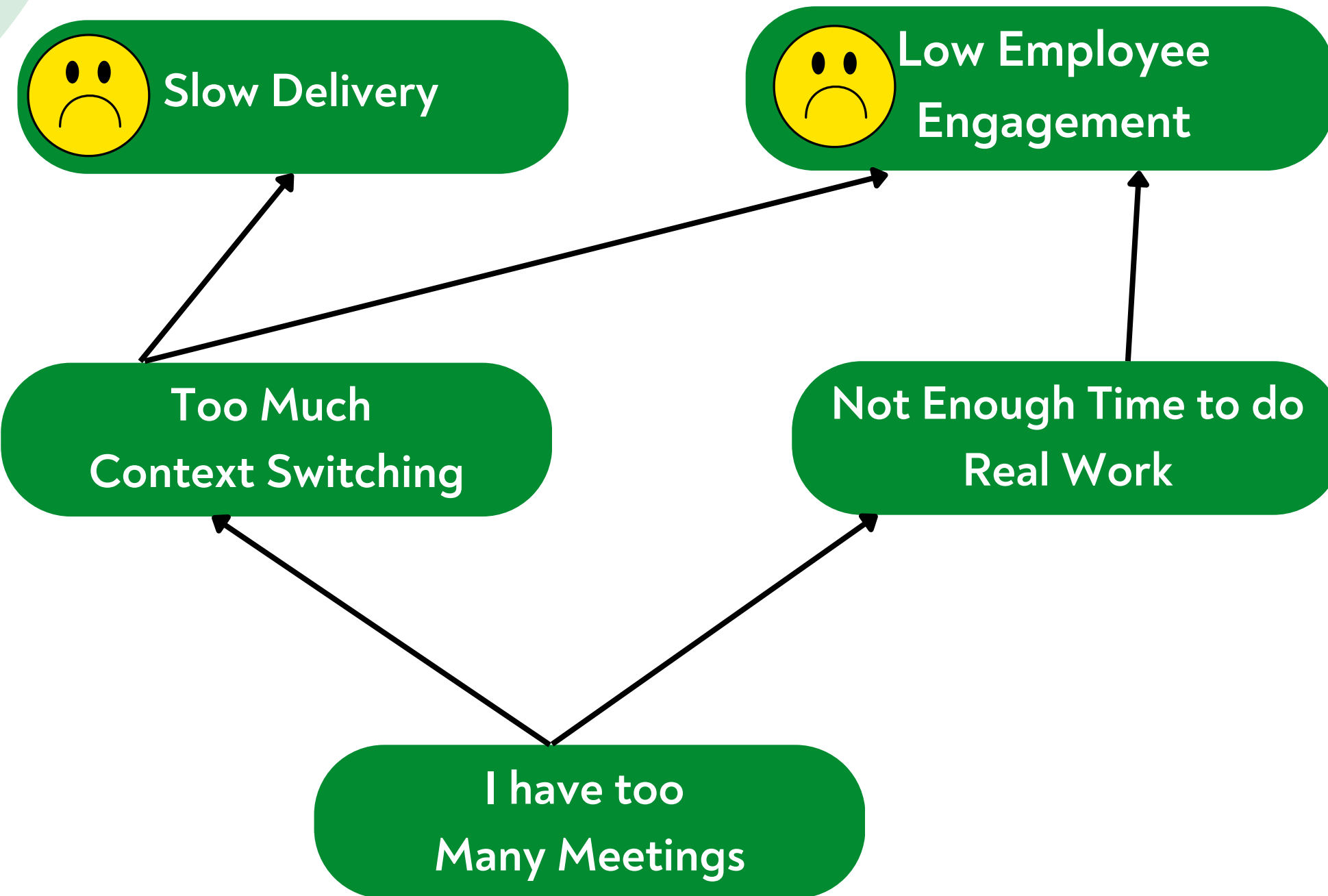
STEP 1 - Identify the Undesirable Effects (UDEs)



“An *UDE* is essentially the first indication you have that something might be amiss in the system. It is something that really exists and is negative on its own merits”

- William Dettmer (The Logical Thinking Processes)

**INTERMEDIATE
EFFECTS**



(UDEs)

What is the impact?
↑
What is the impact?
↑



Operation Cat Drop

What are the UDEs?



What are the Undesirable Effects (UDEs) in Operation Cat Drop?

Overpopulation of rats

0%

People are dying from the Plague

0%

Cats died of DDT poisoning

0%

Caterpillars eating peoples' roofs

0%

Lack of shelter

0%

Cats are being chucked out of planes



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STEP 1 - Identify UDEs

Many people do not have sufficient shelter

Many people are dying from the plague

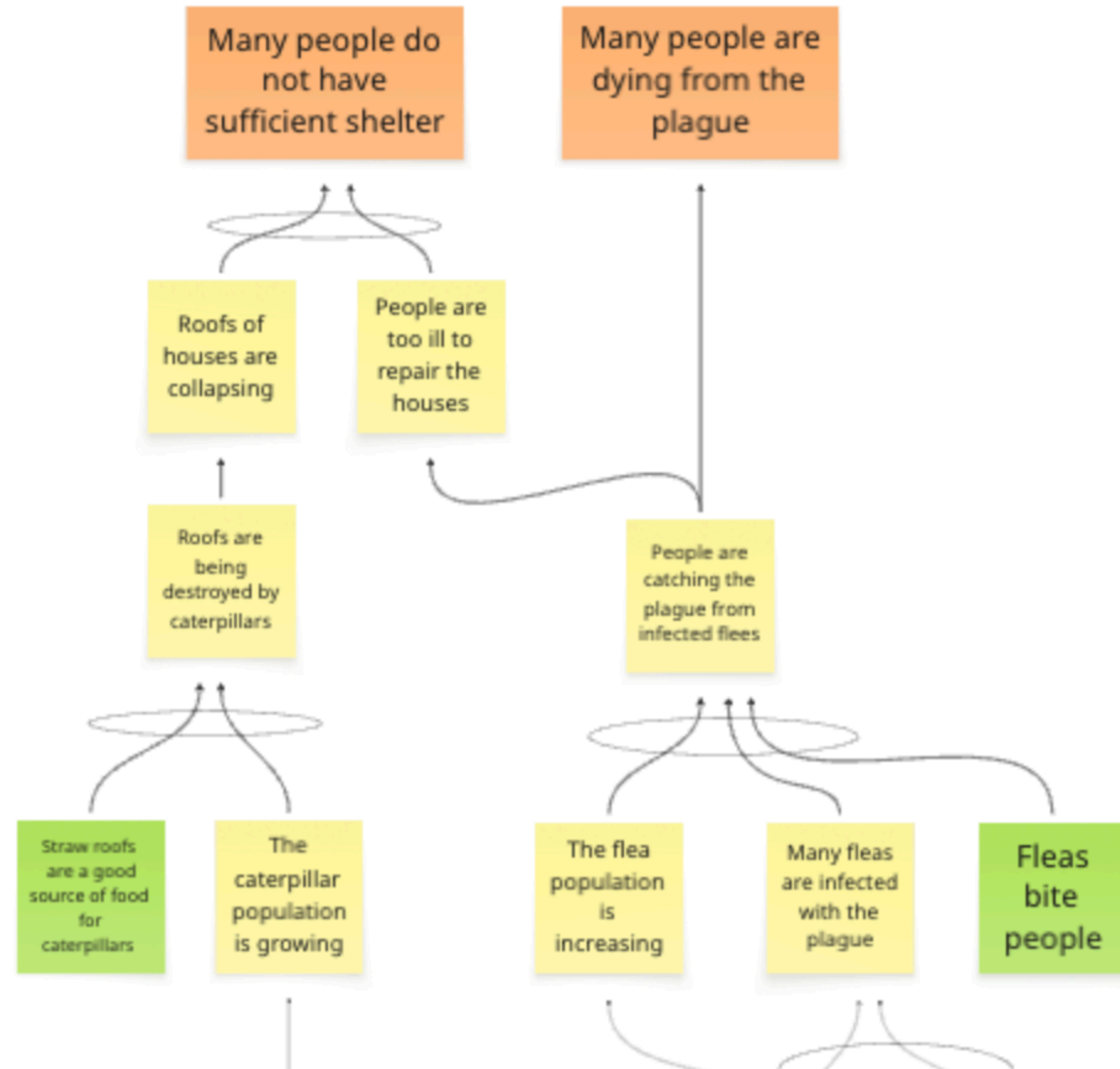
CHECK

- Is it negative?
- Is it happening right now?
- What if I ask “what is the impact of that....”

STEP 2 - Identify Intermediate Effects

TIPS

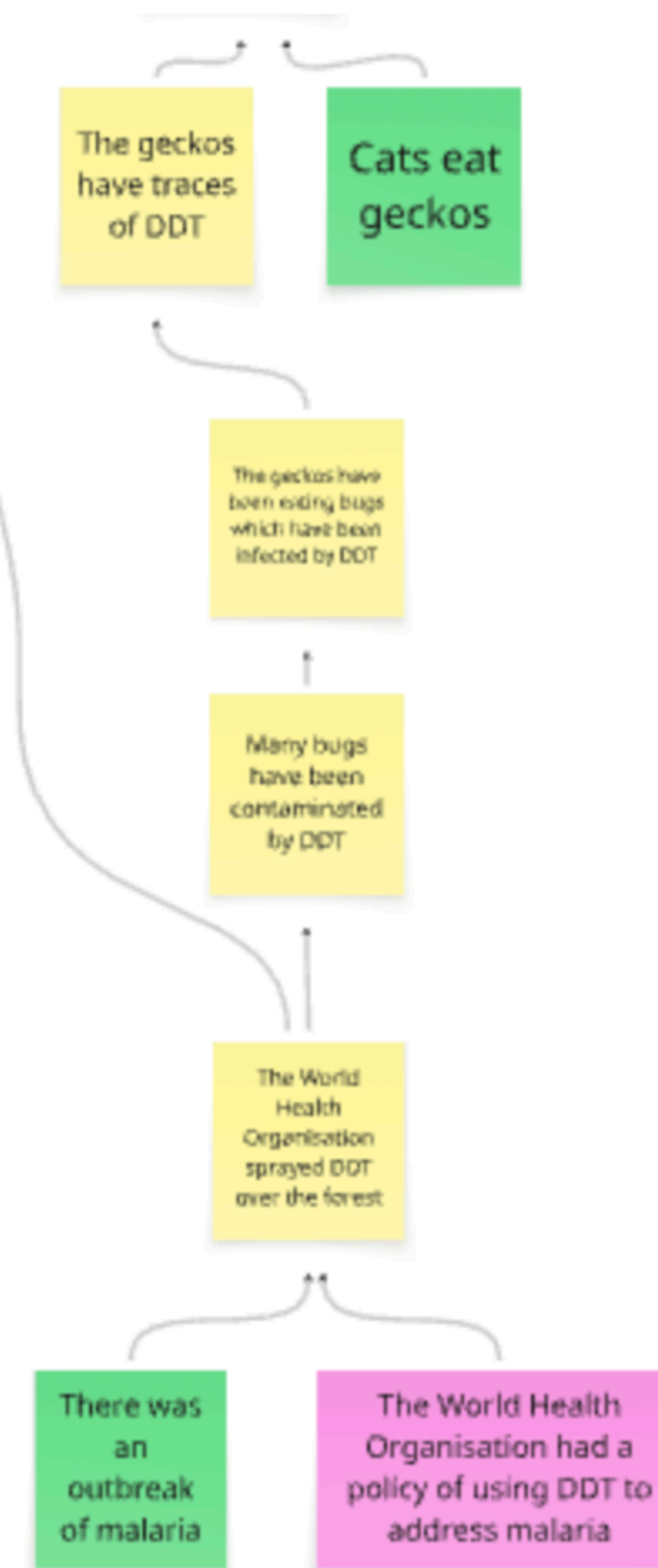
- Ask why?
- Ask what else?
- Keep going...



STEP 3 - Identify the Root Cause(s)

TIPS

- Can you go any further (i.e. another “why?”)
- Is the root cause within the sphere of influence of the organisation?
- Is it definitely causation?



STEP 4 - Validate the Tree



TIPS

Read the tree out loud

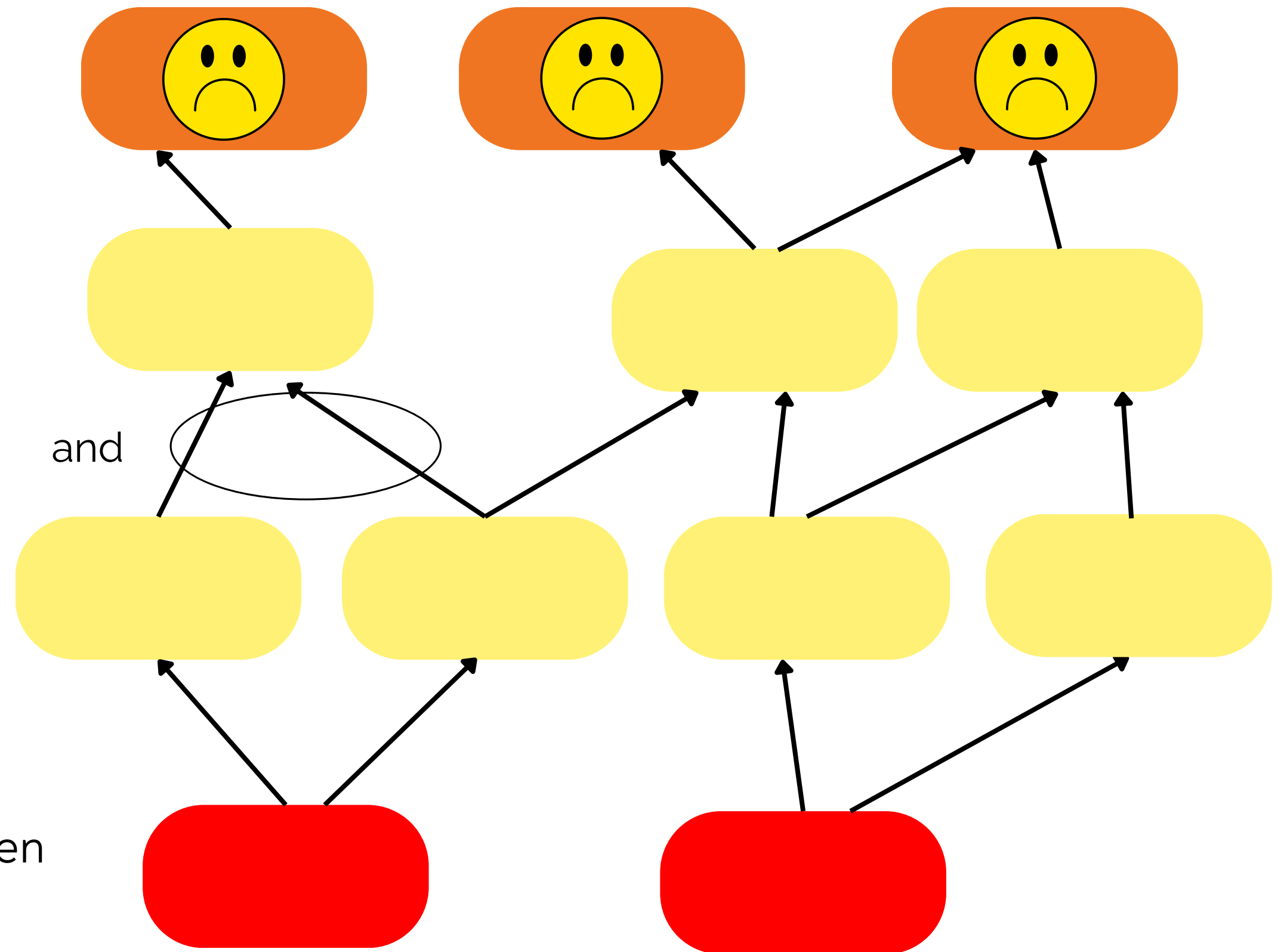
- Top to bottom - “the cause of this was....”
- Bottom to top - “the impact of this is...”

Current Reality Tree Anatomy

Undesirable Effects (UDEs)
- often more than one

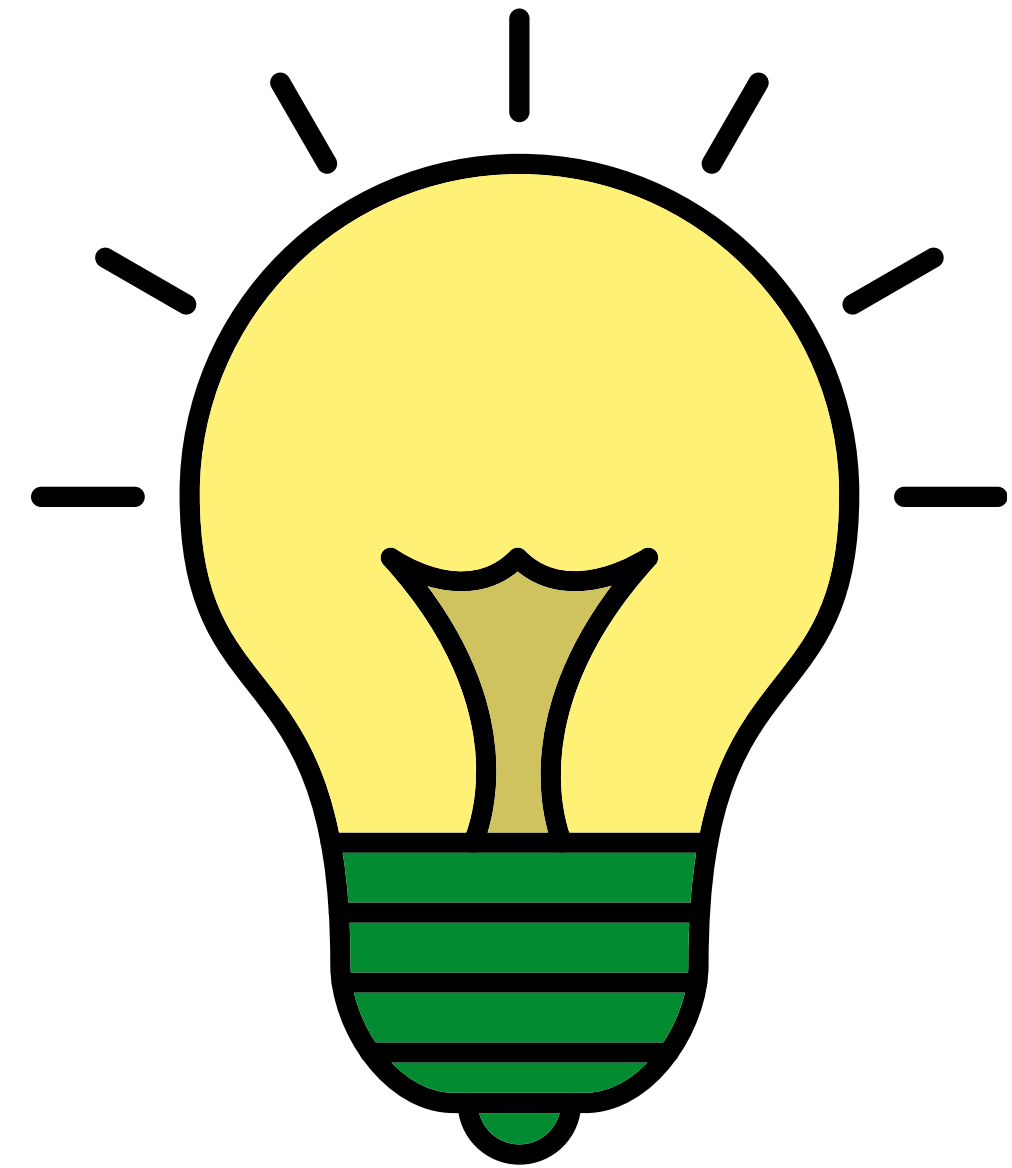
Intermediate Effects -
usually several layers

Root Cause(s) - often
more than one



04

Learnings and Tips



Learnings from Building CRTs...



Start with 1-1s or small groups



Use language without blame



Look for themes - "triangulation"



Get leadership buy-in



Don't agonise over unnecessary precision



Validate the tree, reading aloud with the whole group



Subscribe for our
Free Course
on CRT

don't forget!

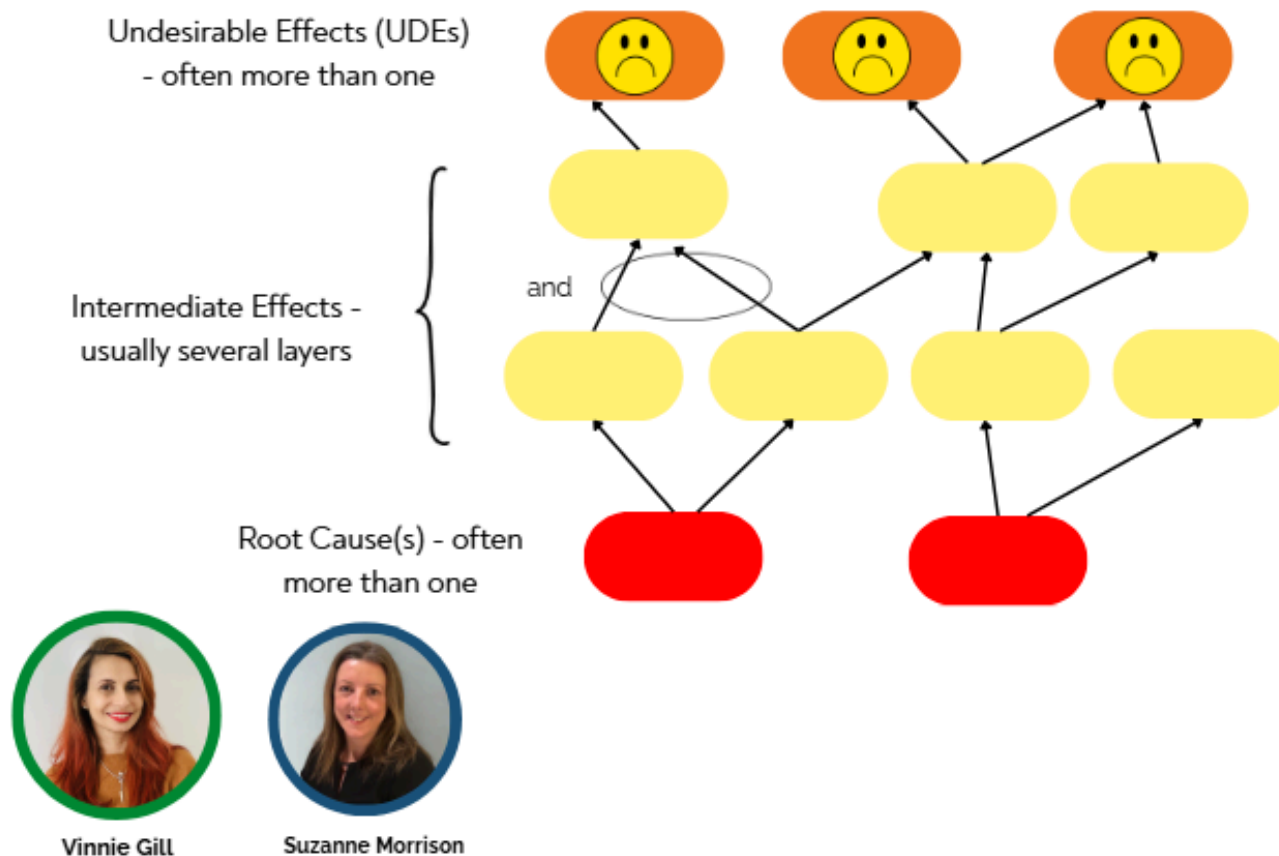
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Current Reality Tree Cheat Sheet

Current Reality Trees (CRTs) can help you to visualise the cause-and-effect chain in your system, allowing you to focus your efforts on addressing the root causes of your problems. As a result, you'll increase your chances of making long lasting changes and improve how your organisation works. This can lead to:

- Faster delivery
- Improved quality
- Better customer outcomes
- Increased staff engagement
- Improved business results

Current Reality Tree Anatomy



Quick Guide to Building a CRT



● Start with curiosity

Come in with an open mind. Ask open questions. Avoid blame.

● Identify Undesirable Effects (UDEs)

Ask: "What's the impact of that?"

Look for things causing frustration, tension or delays.

● Explore intermediate effects

Ask: "Why is that happening?" or "What else is contributing to it?"

Keep peeling back the layers.

● Drill down to root causes

Ask: "Why?", until you reach a cause your organisation can control.

You will often find more than one.

● Use logical ANDs

If two or more things must happen together to cause another effect, use an ellipsis to show a logical AND.

● Validate your tree

Read it aloud as a group.

Going down: "The cause of this is?" Going up: "The impact of this is?"

What's Next? / Want More?

Ready to put these tools into practice? Join our half day course, where we go beyond the Current Reality Tree and explore the thinking, key questions, and facilitation skills that bring it to life. Here is what we cover:

Laying the Groundwork
Mastering CRT
Discovery and Analysis

Facilitation and Validation
Future-Focused Thinking
Beyond the CRT

