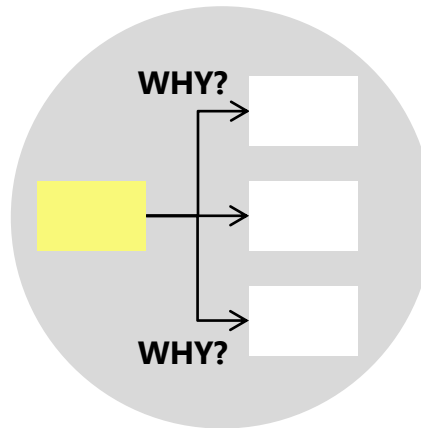


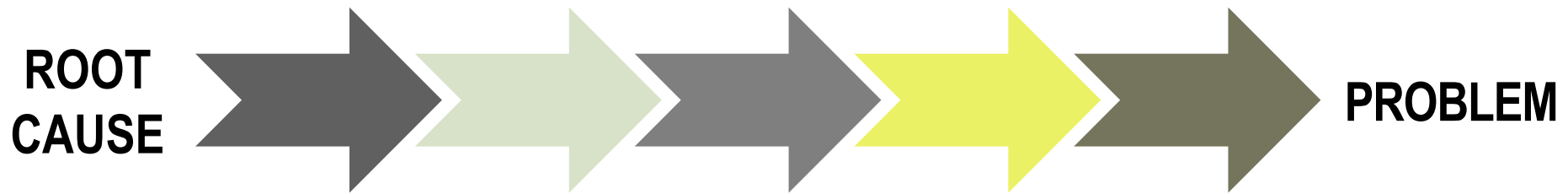
Continuous Improvement Toolkit

Why-Why Diagram



Why-Why Diagram

5 Whys is most effective when used to solve **simple problems** with a single root cause



It follows a path that is **linear** toward the root cause

Why-Why Diagram

Oftentimes, a problem is the result of **multiple causes** occurring together



Each cause is the result of a further cause or multiple causes

Why-Why Diagram

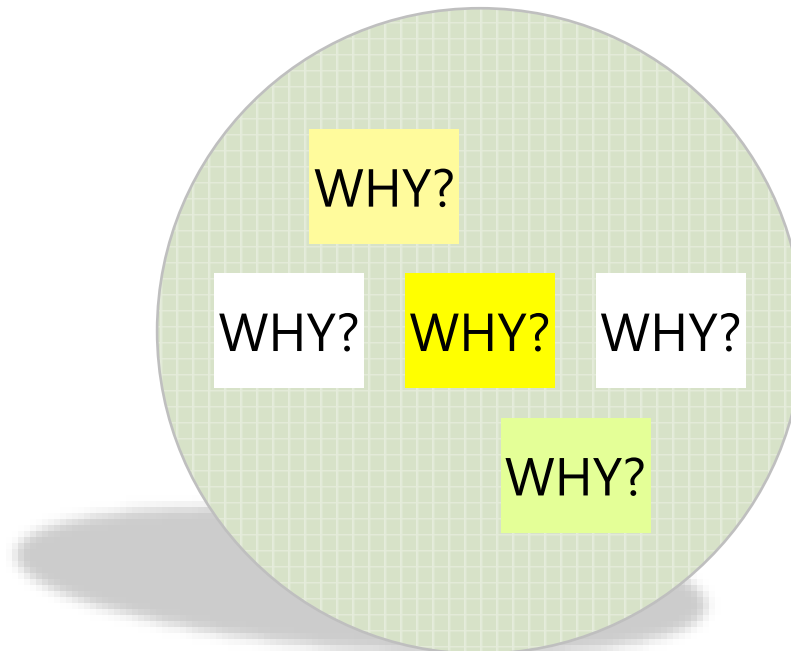
Each time you ask why, there might be more than one answer



In other words, a problem may have different potential root causes

Why-Why Diagram

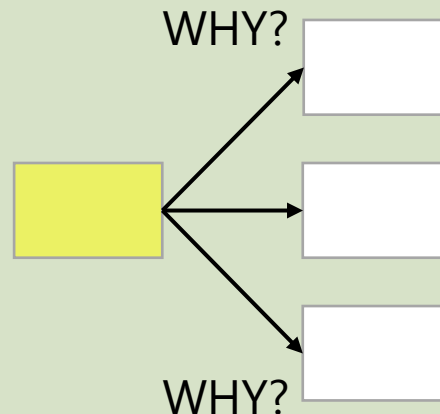
A Why-Why Diagram is an **extension** of the 5 Whys approach



They are **similar** in that they both ask the same Why question multiple times

Why-Why Diagram

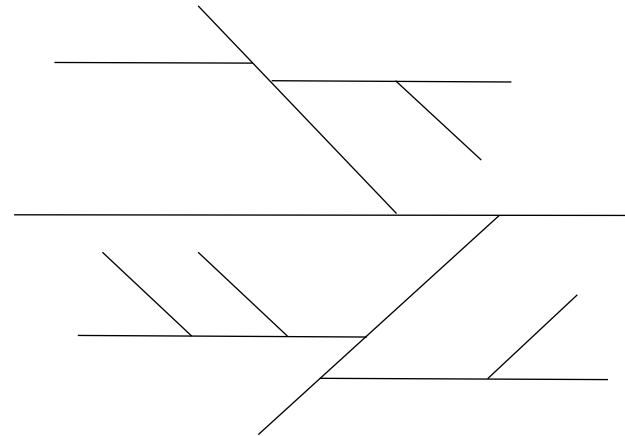
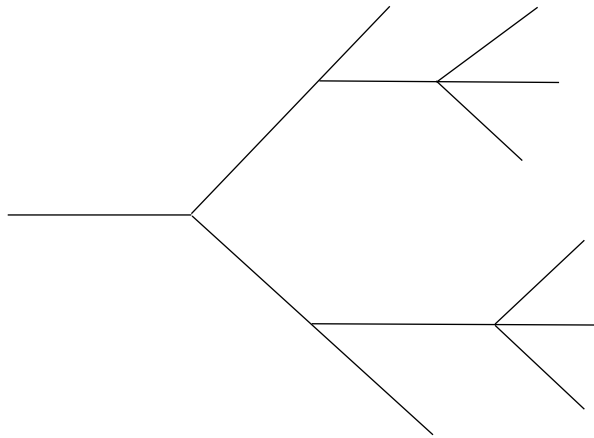
A **Why-Why Diagram** is used to identify the root causes of a problem when there are multiple factors to consider



There may be multiple answers at each stage, and each of these answers need to go through a separate process of the **why-whys analysis**

Why-Why Diagram

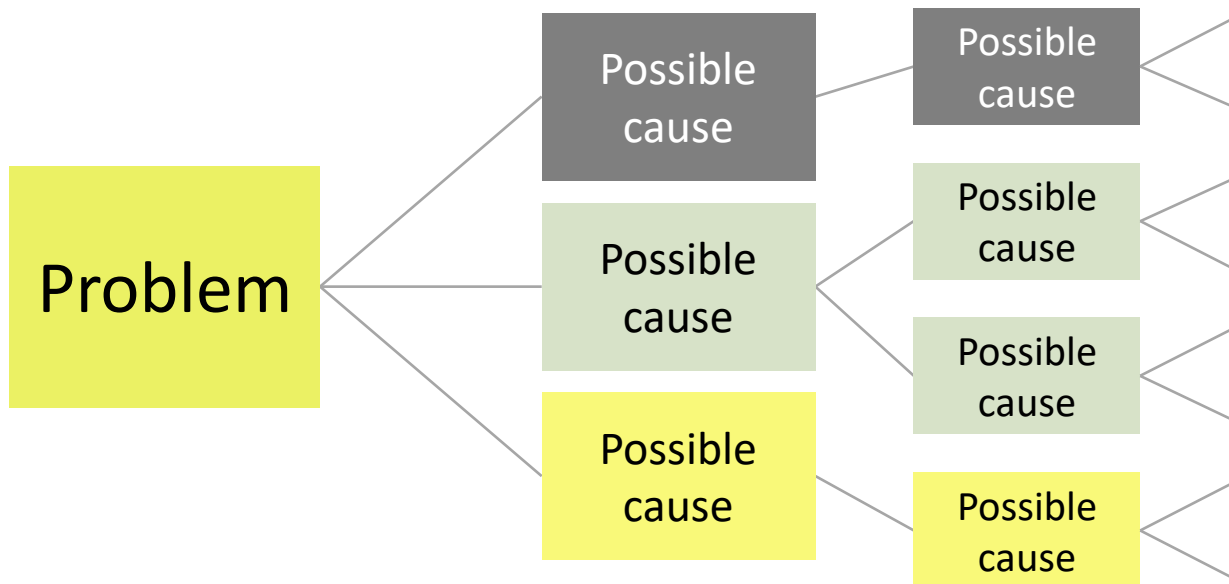
Such hierarchical structure of potential causes can be **represented** in a tree diagram or a fishbone diagram



The information in this diagram is in fact the same as what you would find in a fishbone diagram, but the format is different

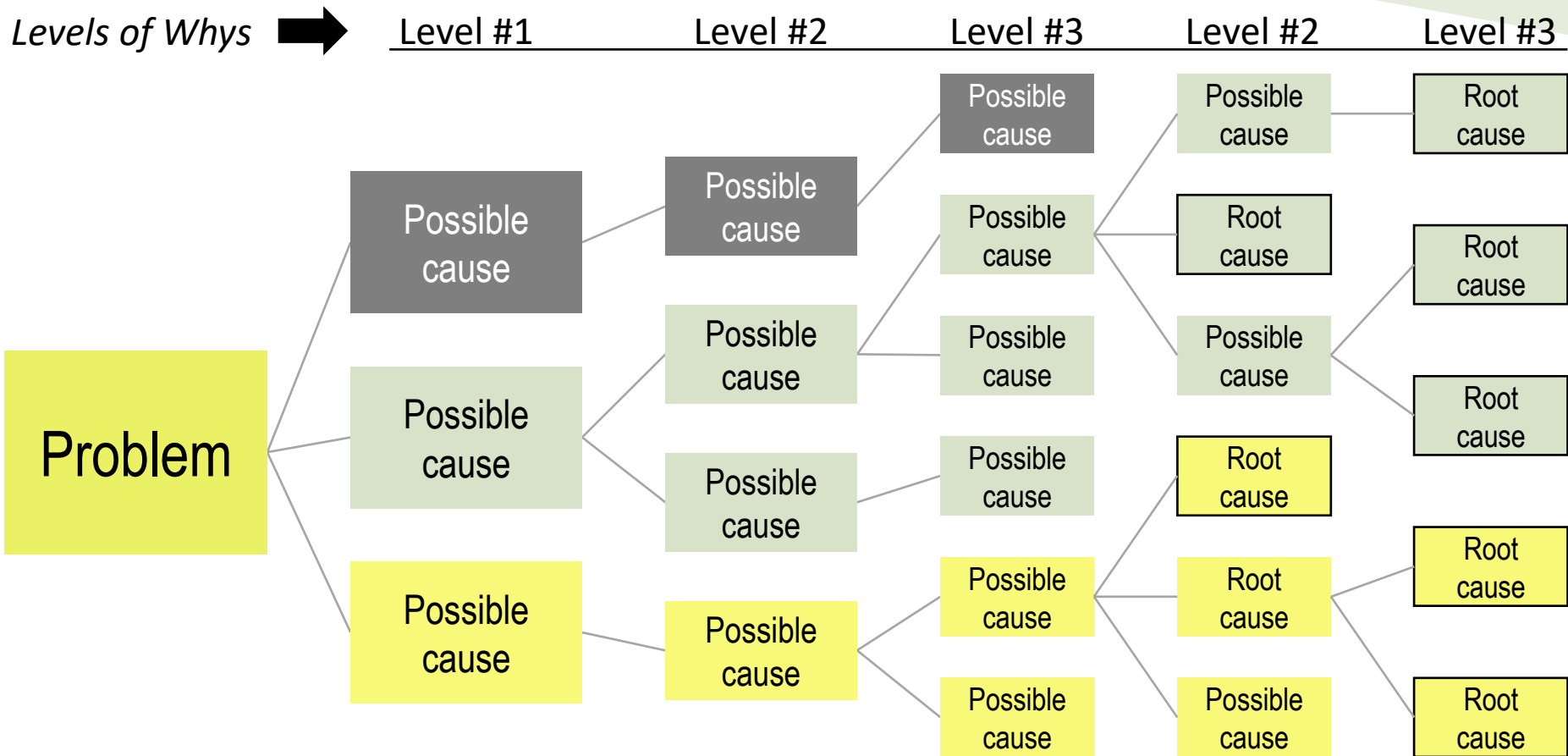
Why-Why Diagram

The problem will normally be placed on the left side of the diagram whereas the most specific causes will be placed on the right side



***Lines** can be used to connect related series of causes*

Why-Why Diagram

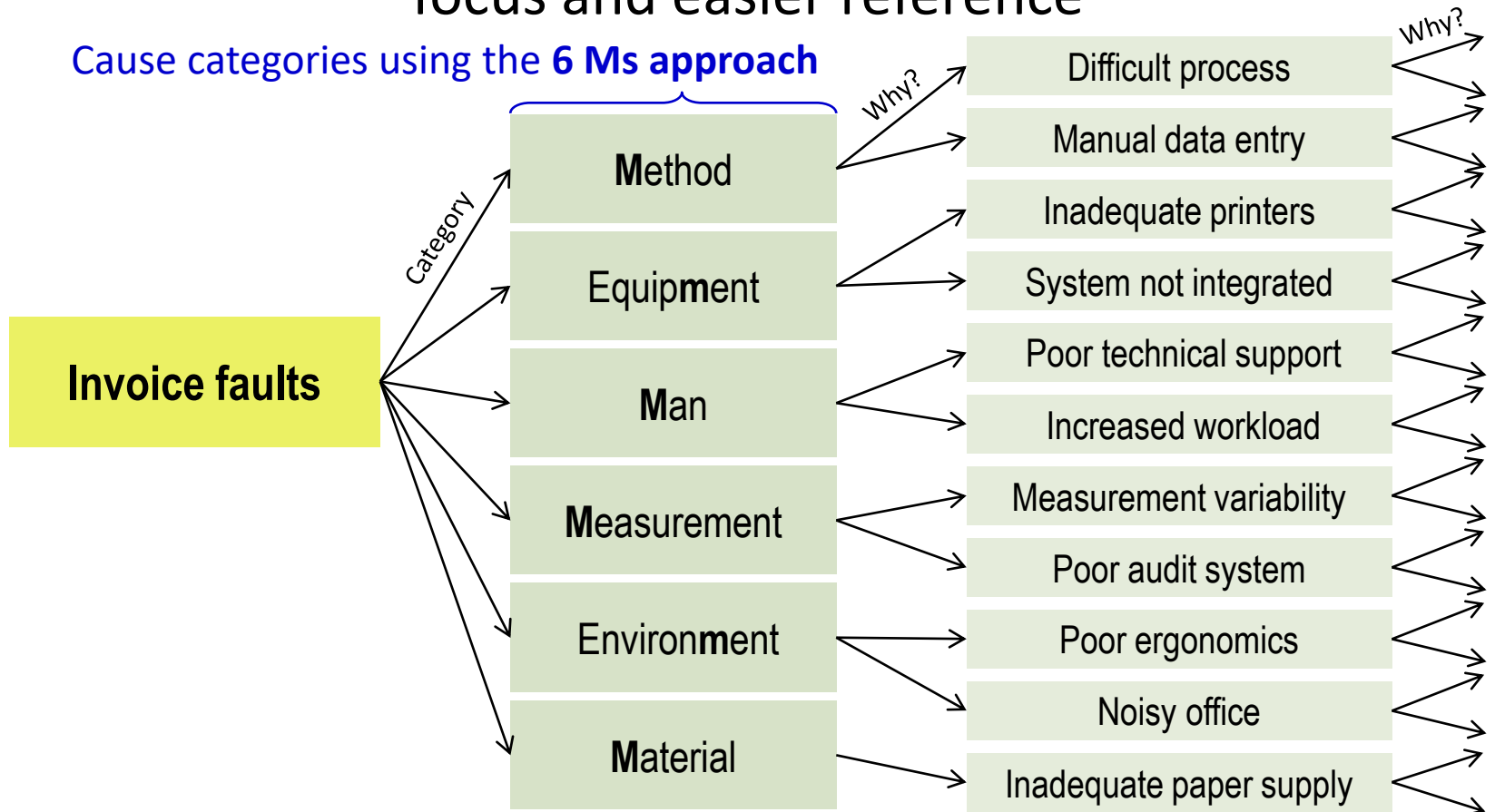


The most specific causes will be reflected as you move toward the right

Why-Why Diagram

Potential causes can be organized into **categories** to provide better focus and easier reference

Cause categories using the **6 Ms approach**



Why-Why Diagram

Benefits

Identifies the potential causes of an undesirable effect in order to solve it

Identifies the potential factors that may cause an effect to prevent future problems

Provides useful information to later problem-solving tools

Why-Why Diagram

Often constructed during **team brainstorming sessions**



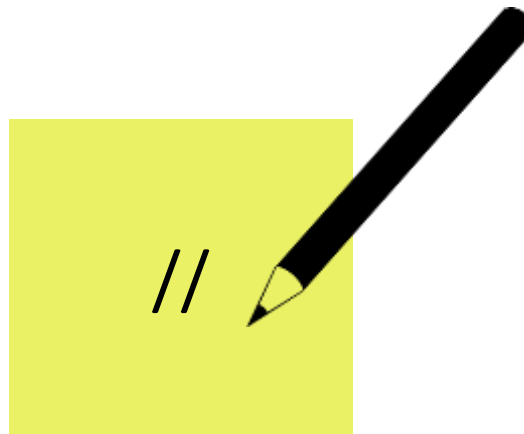
By going through the steps of drawing the diagram with your team, everyone gains a better understanding of the problem, making the solution easier to find later

Why-Why Diagram

How to Construct the Diagram

With your team, clearly **state the problem** then write it on a post-it card

Place the problem card on the left side of a whiteboard or wall

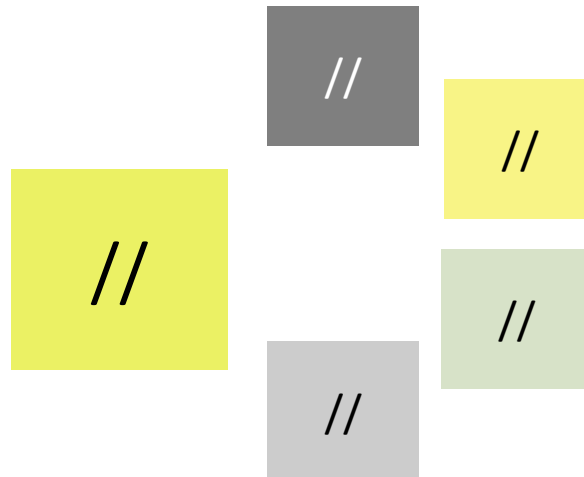


Why-Why Diagram

How to Construct the Diagram

Ask '**Why** the problem occurs'

Let the team members write as many causes as possible on post-it cards, group similar causes together, then stick them up to the right of your problem

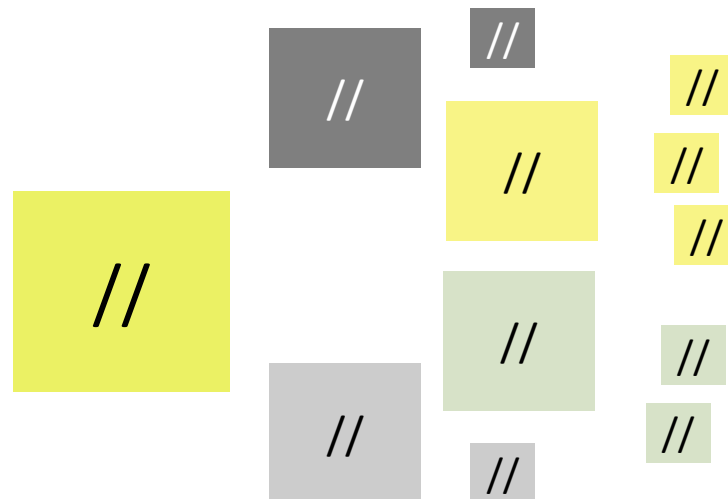


Why-Why Diagram

How to Construct the Diagram

Ask Why again for the generated causes and write the causes to the right

Start with the main causes and then the secondary causes and so on



Why-Why Diagram

How to Construct the Diagram

Keep asking Why until the team **identifies the root causes** of the problem

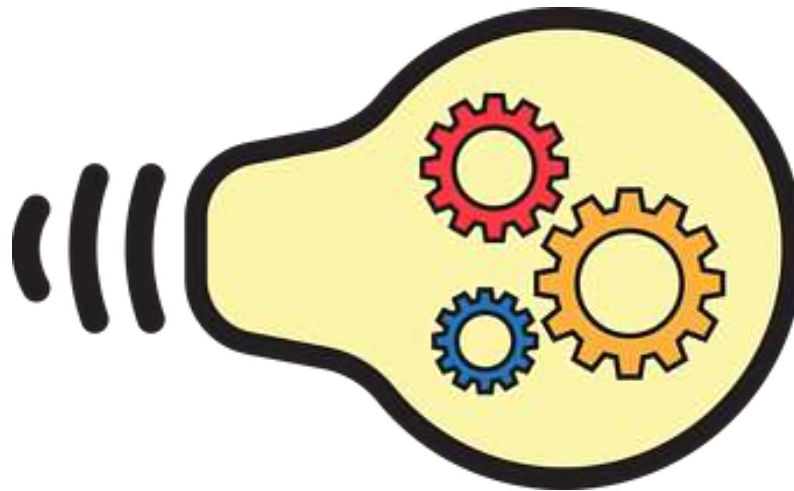
You may need to collect and analyze data to confirm identified root causes are real



Why-Why Diagram

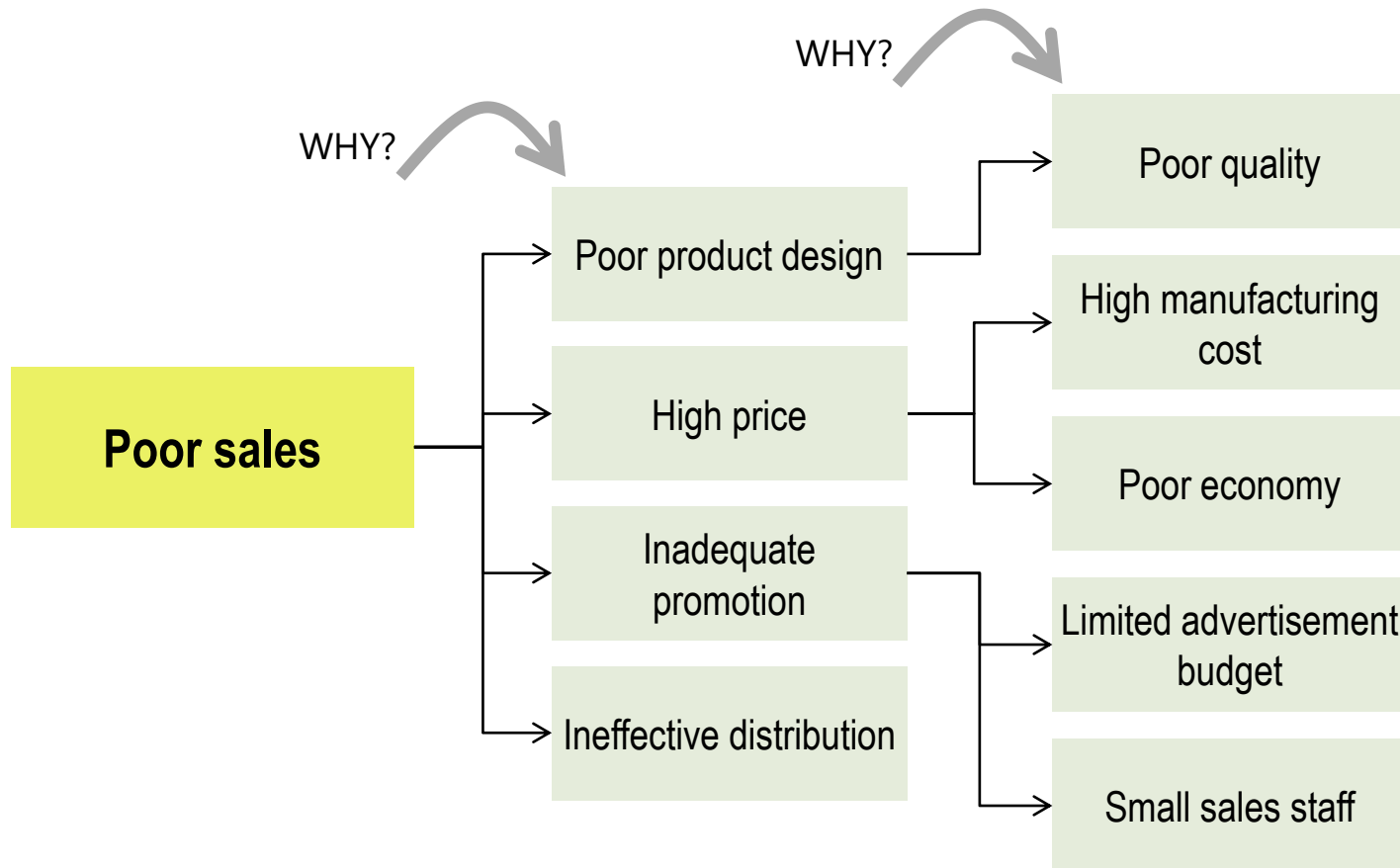
How to Construct the Diagram

Once you are finished, discuss and agree on the **corrective actions** that will permanently solve the problem



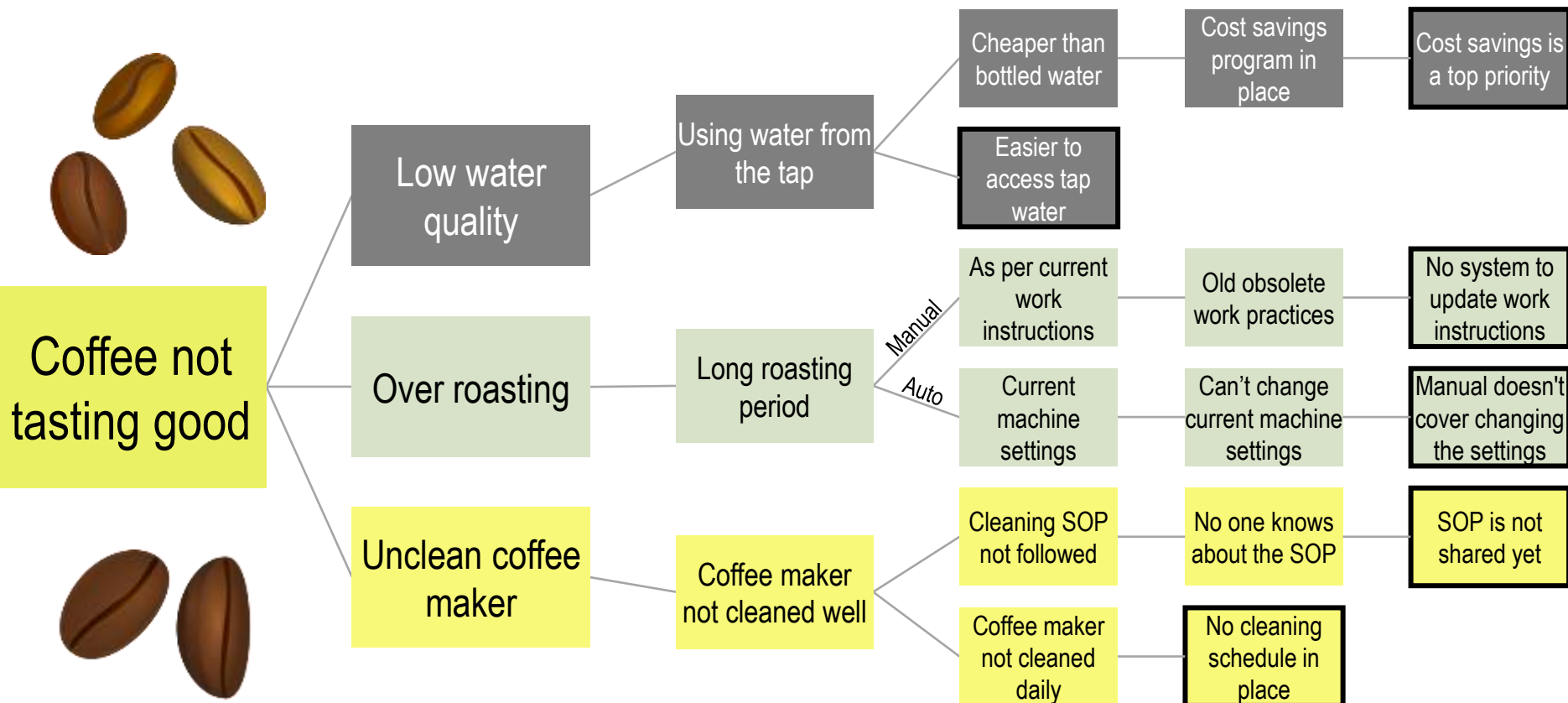
Why-Why Diagram

Example – Poor Sales

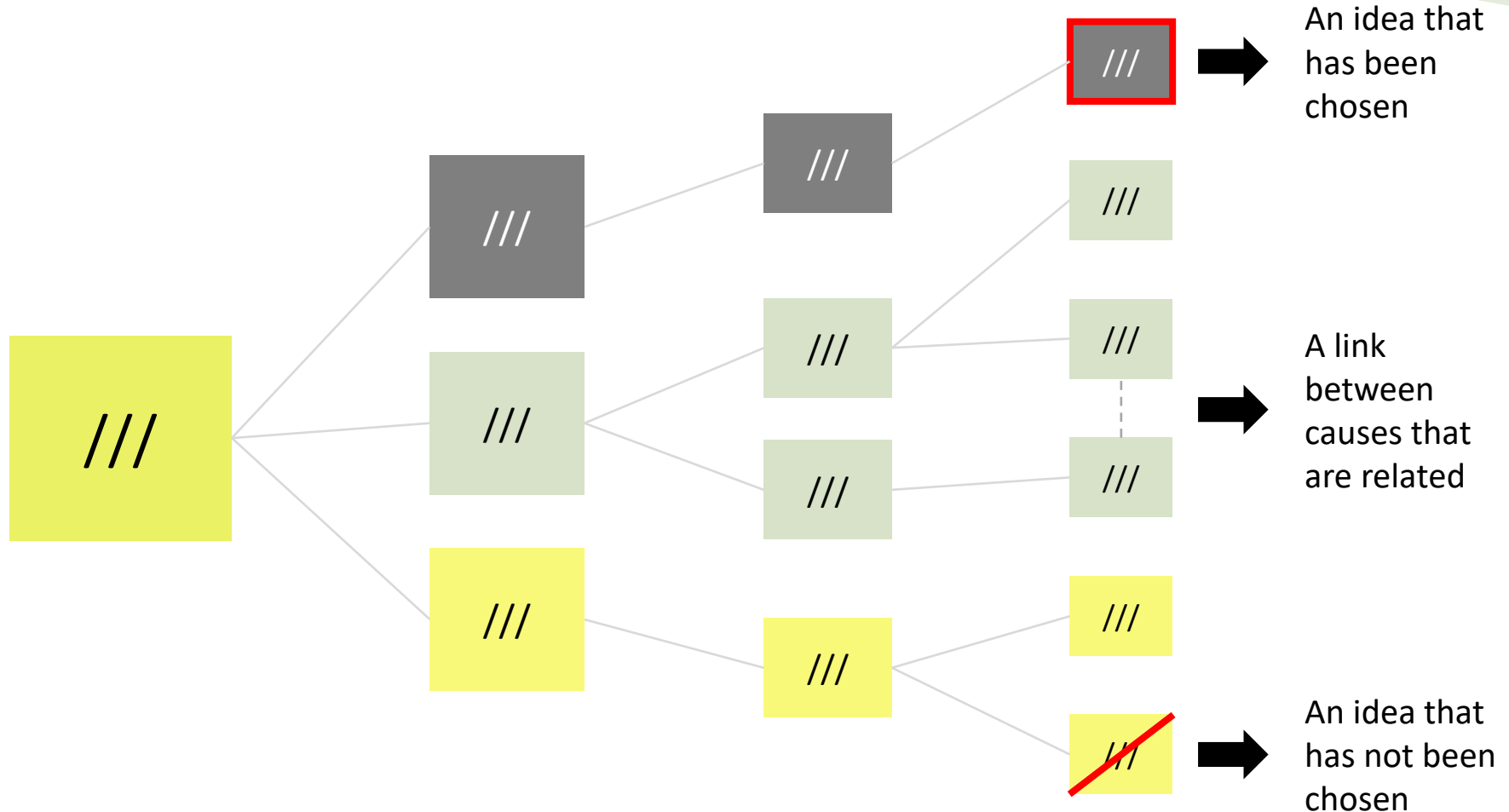


Why-Why Diagram

Example - Customer complaint

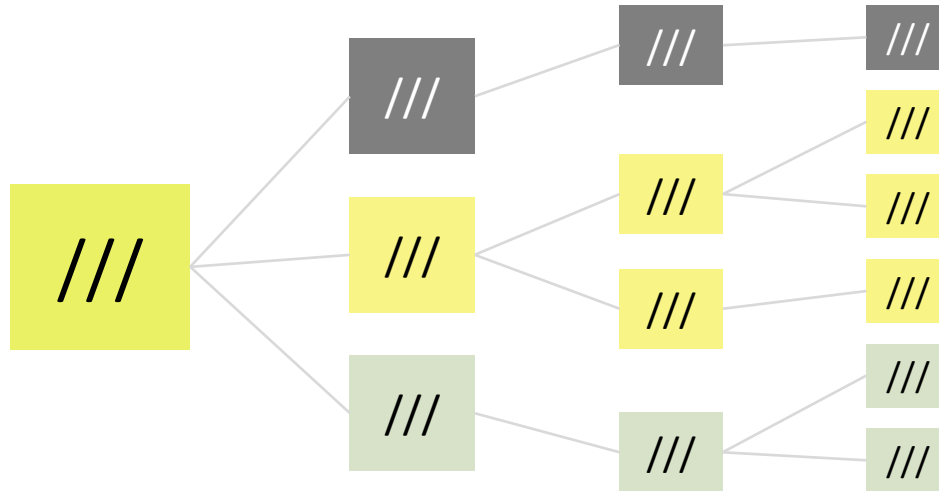


Why-Why Diagram

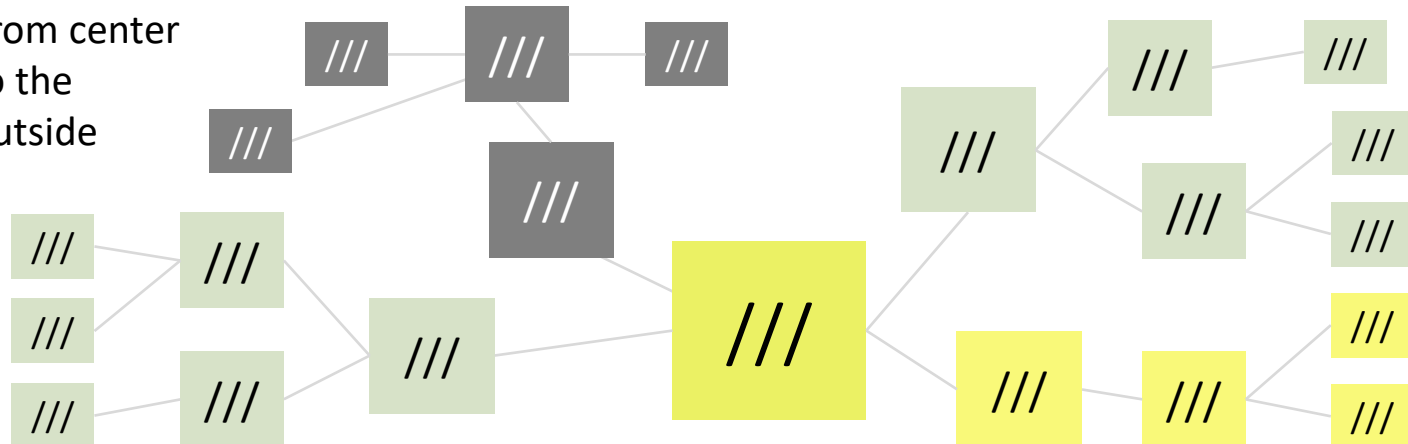


Why-Why Diagram

From left
to right



From center
to the
outside



Why-Why Diagram

Further Information

Be aware of adding causes which are **actually solutions**



The main idea behind the why-why diagram is to brainstorm all possible causes that may contribute to a problem, and not brainstorm solutions

Why-Why Diagram

Further Information

A **cause-and-effect matrix** can be used to prioritize the causes of the problem

Prioritizing and selecting the key causes will minimize the need for more statistical analysis of inputs that are unlikely to have an impact on the output

Why-Why Diagram

Further Information

The measure of success for a fishbone diagram is the quality of answers as well as the **quantity** of ideas

