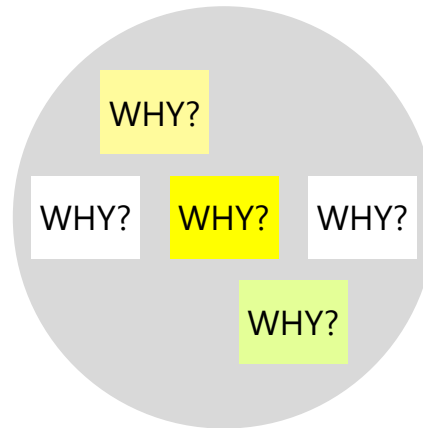


Continuous Improvement Toolkit

5 Whys



5 Whys

5 Whys is one of the common techniques for **problem-solving** and root cause analysis.

Also, one of the simplest techniques and easiest to put into practice.



5 Whys

Used in everyday business situations to identify the **possible causes** underlying a specific problem.



5 Whys

Introduced and made popular by **Toyota** as part of their Toyota Production System.

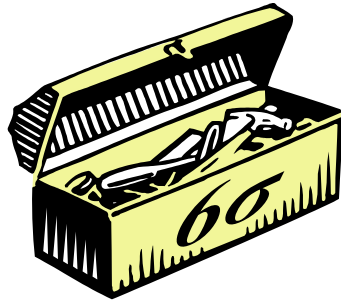
Toyota found that Why needs to be asked successively multiple times to reach the root cause of a problem.



5 Whys

Widely used within **Lean** and **Six Sigma** frameworks.

Used in the
Analysis phase
of Six Sigma
DMAIC
methodology



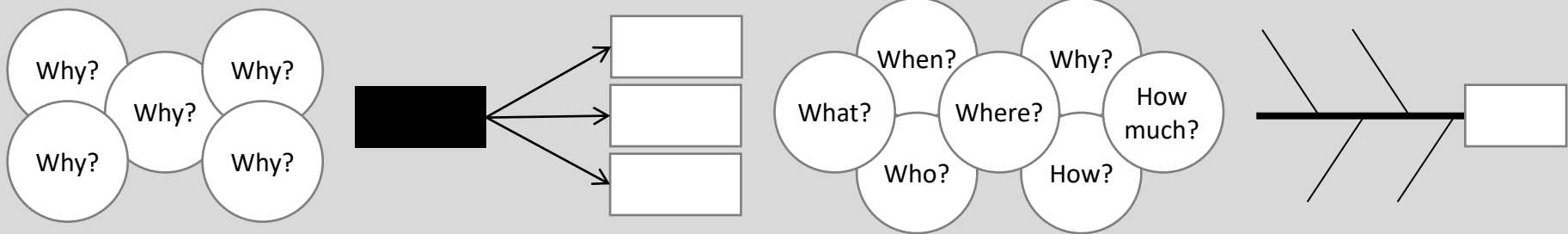
Used in Lean to
identify and
eliminate
wasteful
activities



5 Whys

One of the **cause-and-effect analysis** tools that helps to identify the possible sources of variation in a process.

Should be combined with other root cause discovery methods.



5 Whys

It is so **simple** that can be implemented without collecting data and without the need for advanced statistical techniques.



5 Whys

Only requires to ask, “**Why does this happen?**” several times over a problem, waste or defect.

The answer to each question then forms the basis of the next question.



5 Whys

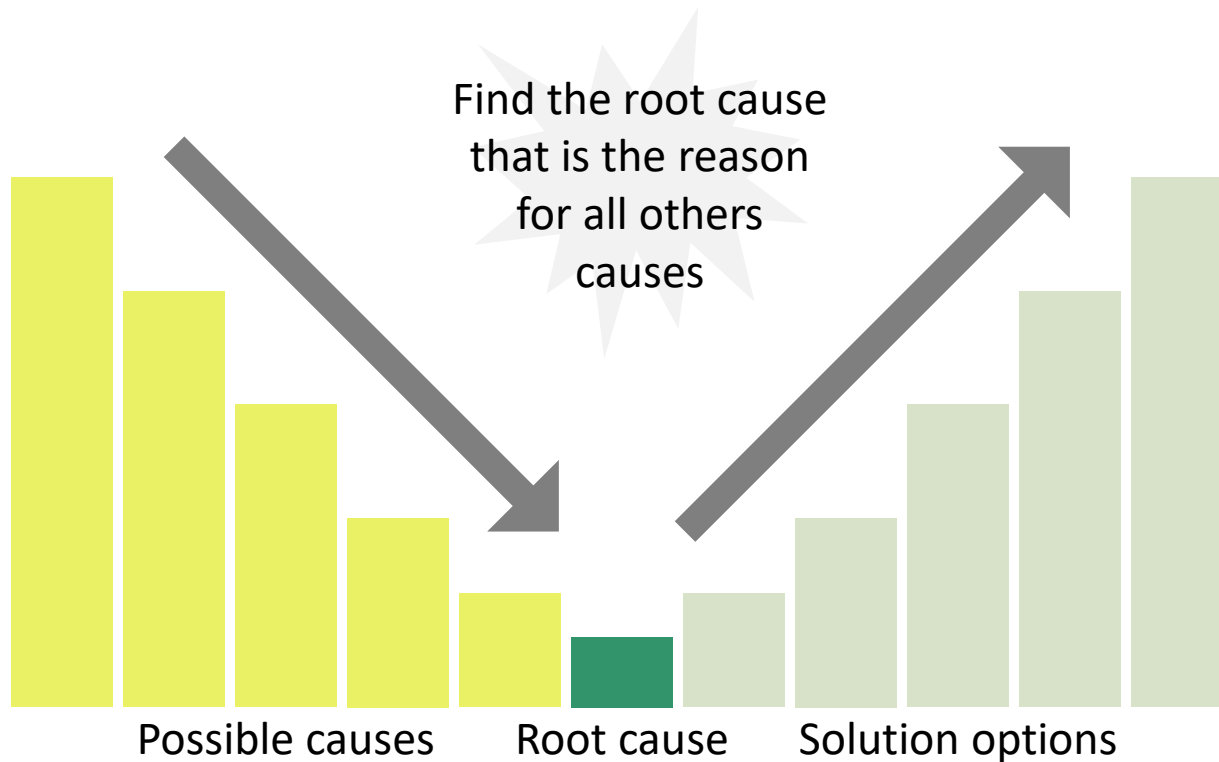
Asking Why multiple times will help to drill down to the **core of the problem** and closer to the solution.

The root cause of your problem will become more apparent.



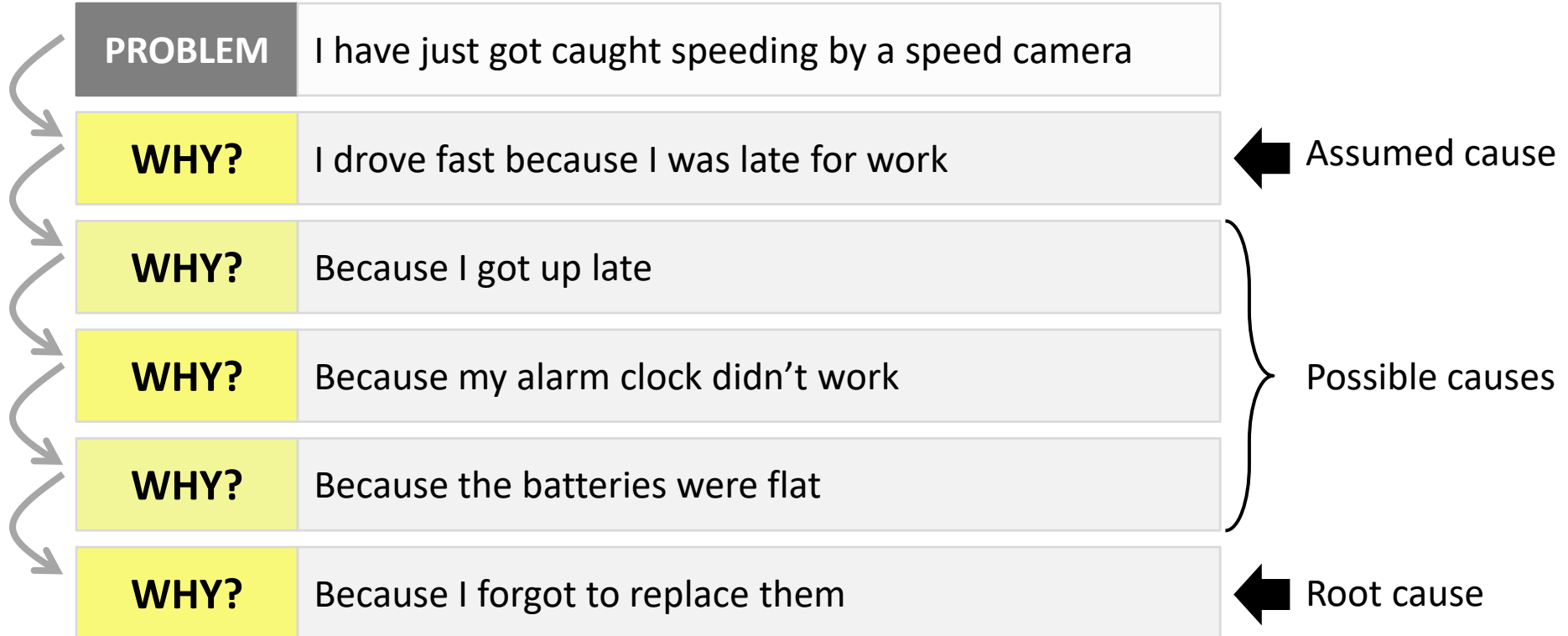
5 Whys

Once the true root cause is identified, the chance for an **effective** solution will greatly increase.



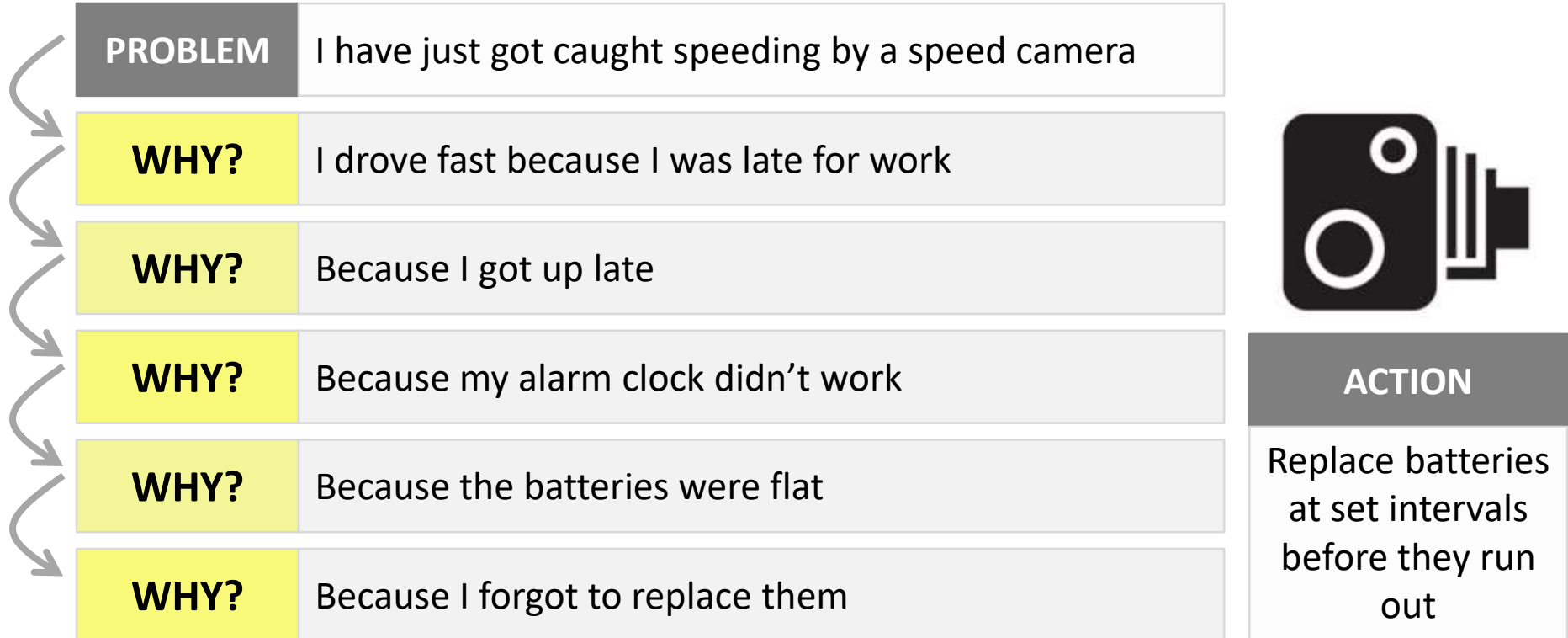
5 Whys

This is often illustrated with the following simple example . . .



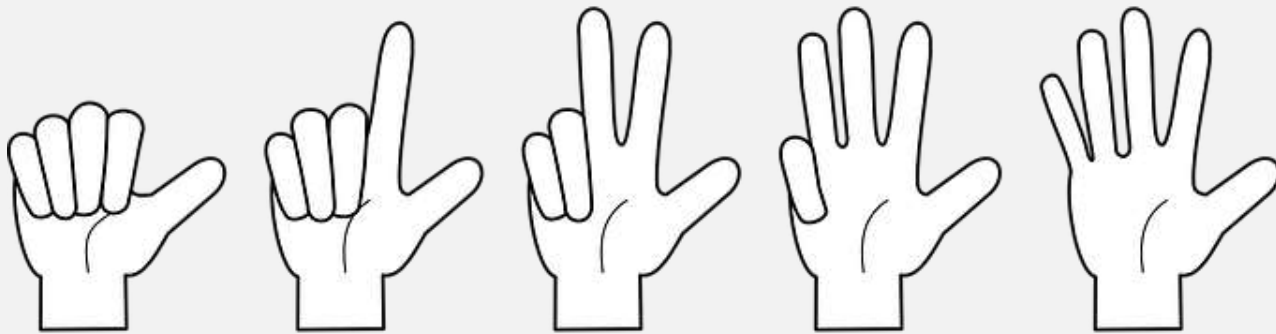
5 Whys

This is often illustrated with the following simple example . . .



5 Whys

Normally, asking Why **5 times** in a row is enough to get you quite close to the root cause.

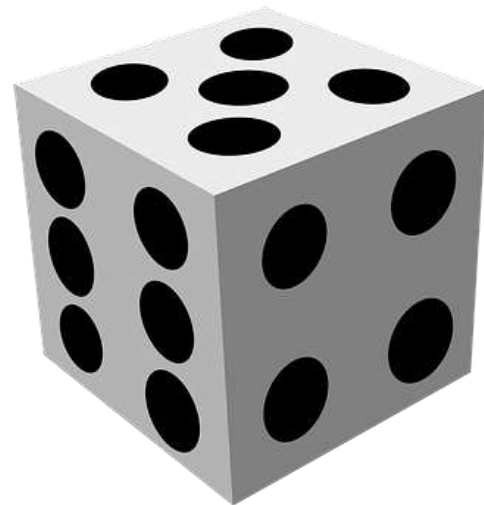


Five seems to be a good starting point (a good rule of thumb)

5 Whys

However, you may find that you need to ask Why **more or less times** depending on the situation.

The goal is to get to a place where you can approach the core of the problem.



5 Whys

The key with finding the root cause is to **keep looking**, you will eventually get to the true cause which you can act on right away.



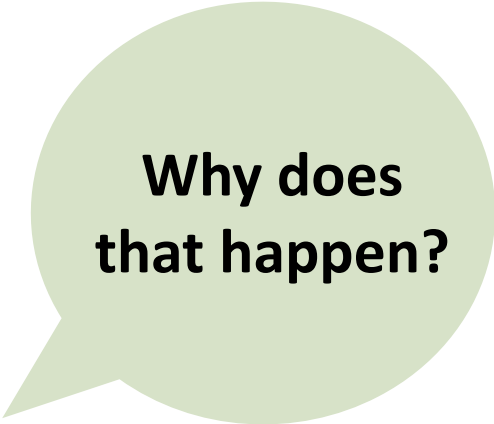
Avoid jumping to a solution that looks great because you think it has never been tried before

5 Whys

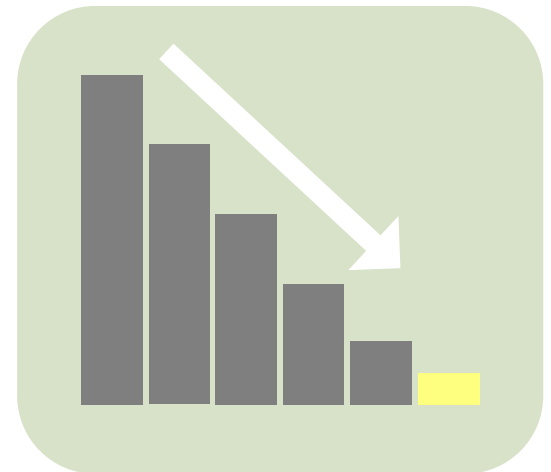
As you dig down deeper, you may produce different **solution ideas** that could be part of the final solution.

Capture your ideas as soon as they enter your mind.

Do not stop unless you reach to an answer that points to a system error, business process or corporate policy. This is probably the root cause of your problem.

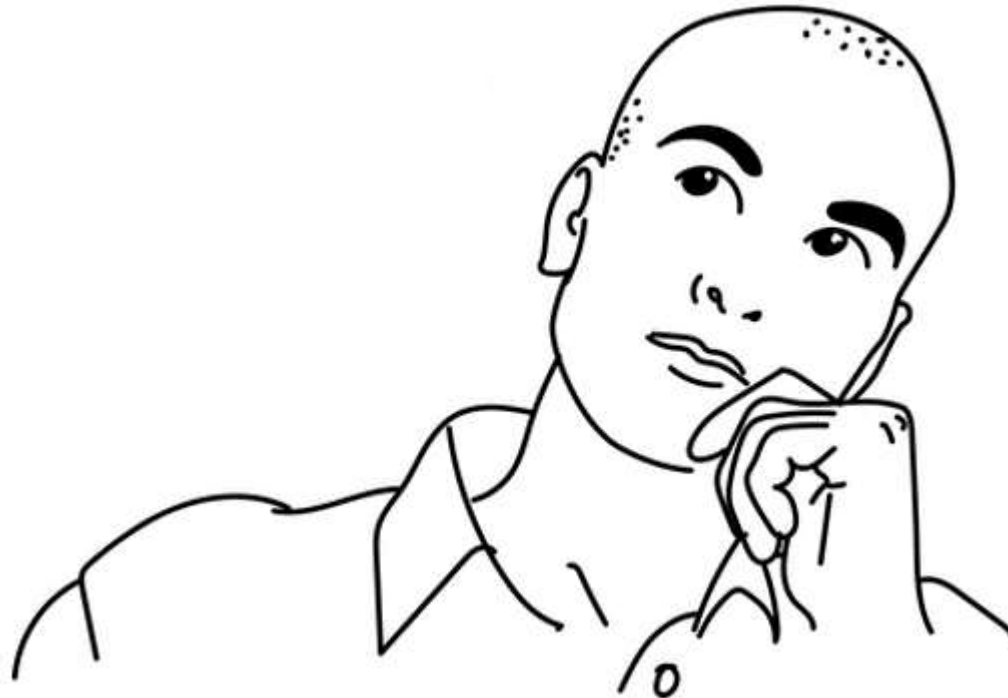


Why does that happen?



5 Whys

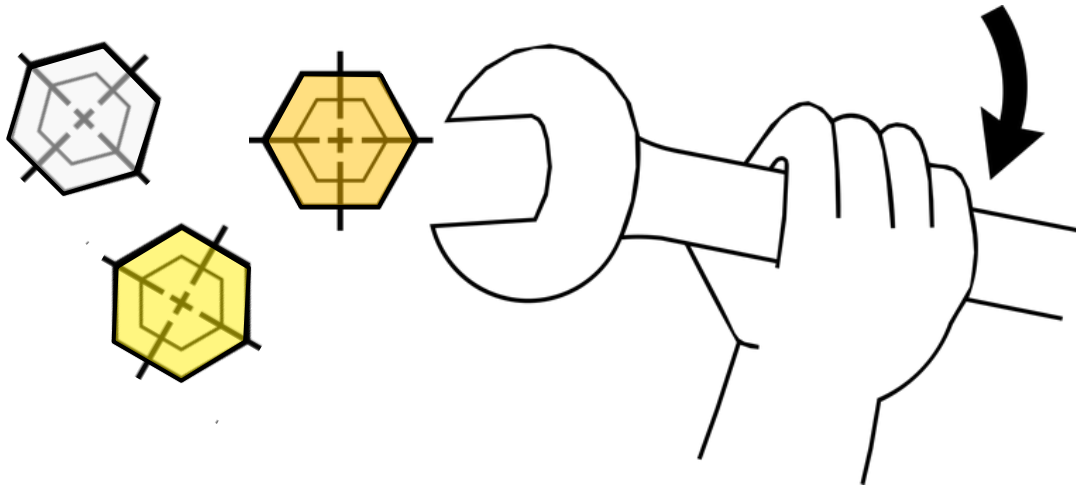
Sometimes when you **cannot answer** the Why question, you are probably at the root cause. That is the problem to be solved!



5 Whys

Once you have discovered why a problem occurs, you then need to take **corrective actions** to solve the problem.

You need to find a permanent solution to the problem.



5 Whys

- ▶ Remember that each Why answer is a **hypothesis** that can be validated by testing the process.
- ▶ Validating the truth of every answer will help finding the true root cause.
- ▶ Or at least, make sure you are supporting your answers with evidences and data.



In some situations, this may be sufficient, in others, you need to perform some data collection and testing

5 Whys

BENEFITS

01

Allows finding the root cause of a problem quickly

02

Encourages deep thinking

03

Allows to look beyond symptoms and assumptions

04

Helps engaging operators in the process improvement

05

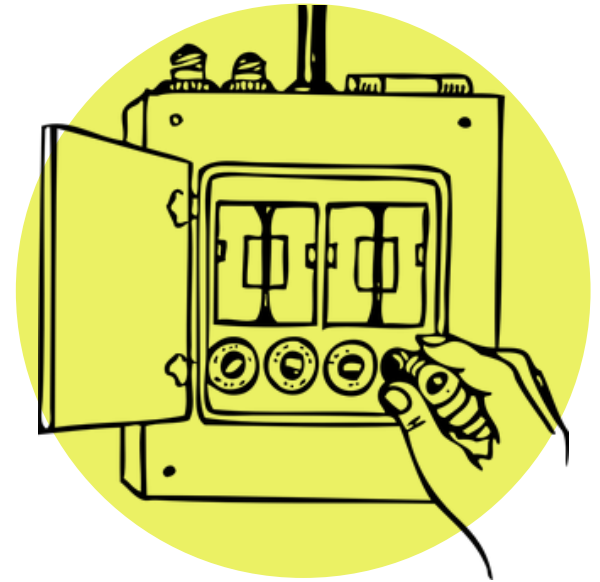
Gives more depth to the problem-solving process

06

Helps understanding how one process can cause a chain of problems

5 Whys

- ▶ Especially useful for shop floor and manufacturing problems.
- ▶ Less useful when it comes to understanding behavioral gaps and failure modes.



5 Whys

How to Use the 5 Whys?

With your team, write a clear and specific problem statement

Ask “Why the problem occurs?”. Write the answer down below the problem

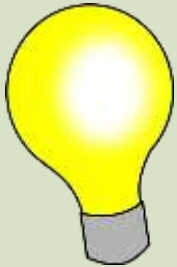
Ask Why again for the generated answer and write the answer down

Keep asking Why until the team identify the root cause of the problem
Or until you get the answer “I don’t know”

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

5 Whys

Tips on How to Use the 5 Whys Approach . . .



Ensure your problem is relevant and solving it will make a difference



Don't stop at what appears to be the true cause, keep asking Why



Challenge each root cause further and always try to get to 5th Why



Keep in mind that people do not fail, processes do

The success of the 5 Whys approach depends on the quality of the answers

5 Whys

Avoid vague or **broad answers** even though they may be true. Answers must be specific enough to help solve the problem.

Lack of communication

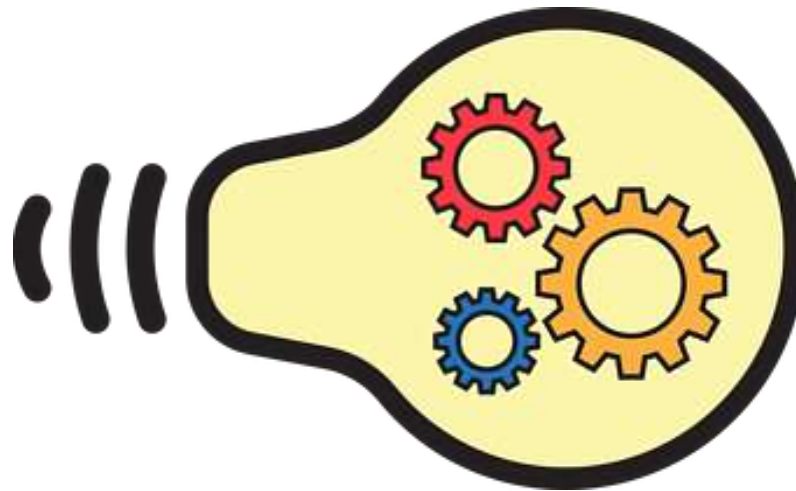
Poor management

Lack of teamwork

Awful suppliers

5 Whys

5 Whys can be used individually or as part of a cause-and-effect analysis.

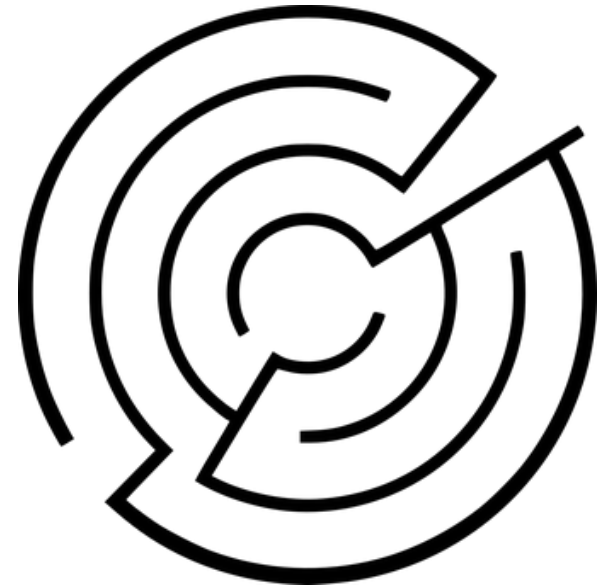


It can be more effective when it is used in combination with other methods and techniques such as fishbone, brainstorming and RCA.

5 Whys

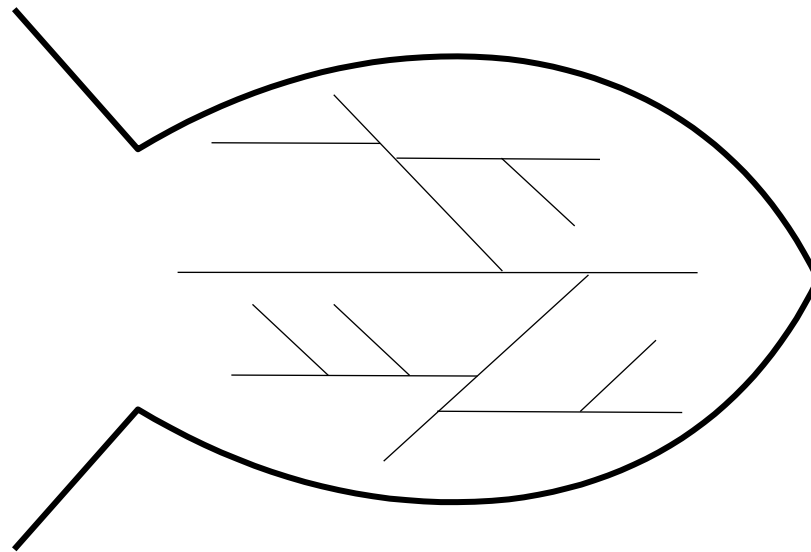
Sometimes, you may have **more than one factor** that contributes to the problem.

Other times, the problem is too complex to be analyzed in a straightforward manner.



5 Whys

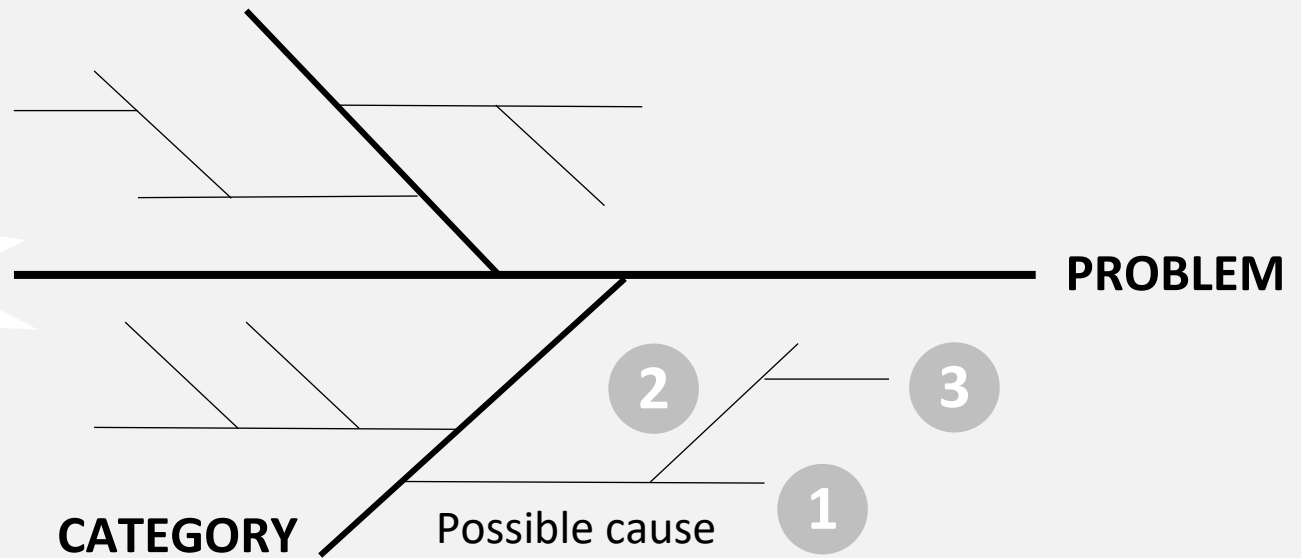
When there is more than one factor contributing to a single problem, a **fishbone diagram** can be used to help identify and arrange all possible causes.



5 Whys

Once all possible causes are identified on the fishbone diagram, you can use the 5 Whys to **drill down** to the root causes for each possible cause.

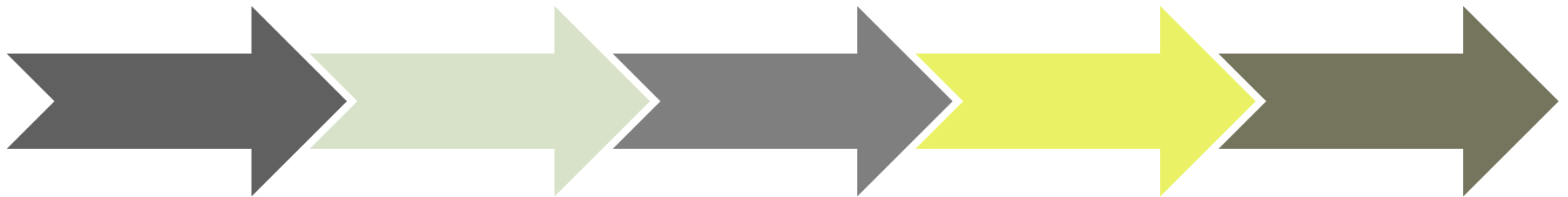
The more branches there are, the more difficult it will be!



5 Whys

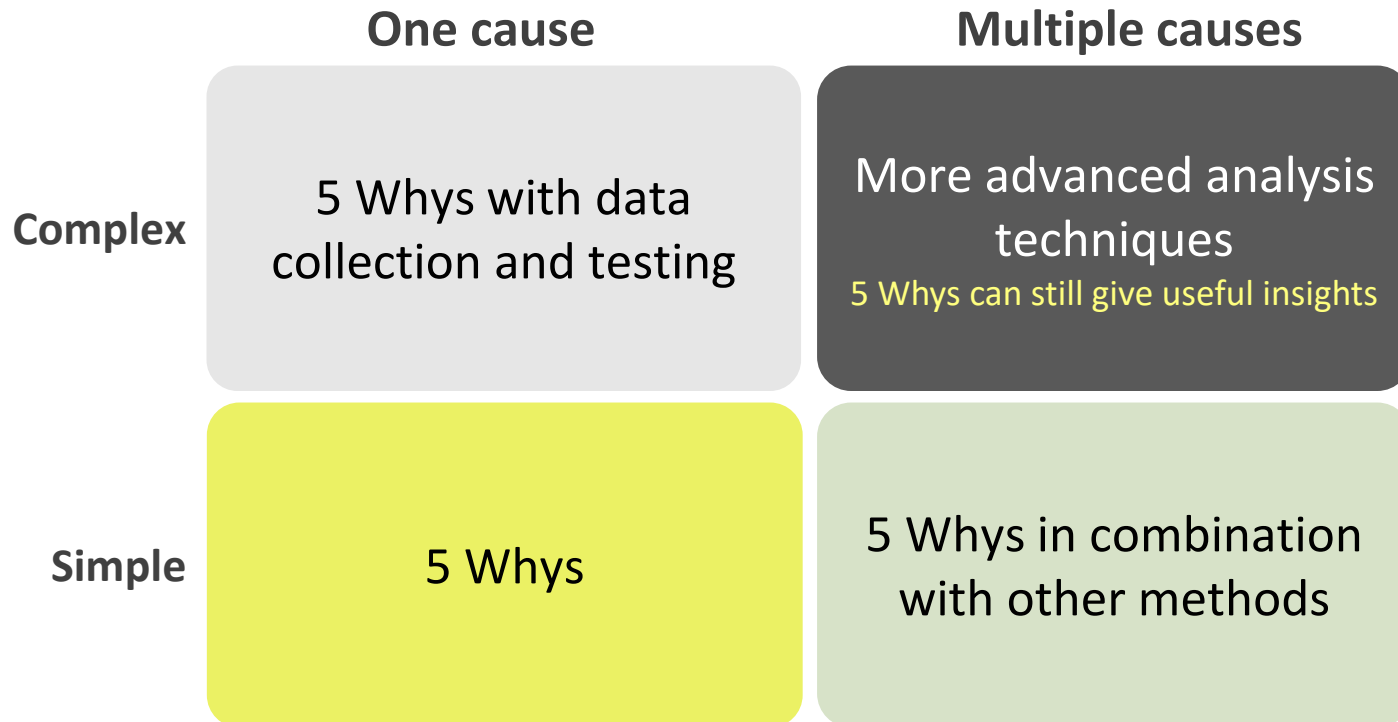
5 Whys is usually best suited for simple problems with few or even **one possible root cause**.

It is usually best with problems that probably have only a single root cause.



5 Whys

Complex problems often need more advanced analytical techniques



5 Whys

Example – Maintenance Department

PROBLEM	It is too cold in the room
WHY?	Because the window is open
WHY?	Because it was too hot
WHY?	Because the heating is too high
WHY?	Because it is still at the winter settings
WHY?	Because nobody told maintenance to change to summer settings
WHY?	Because maintenance department does not have a schedule for routine activities



ACTION

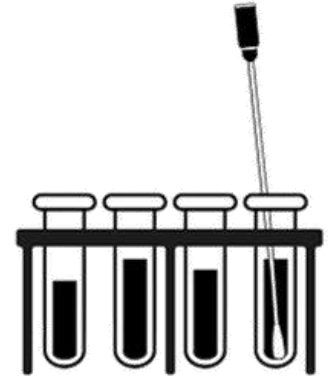
Maintenance should have a schedule for routine activities

*Source: Smallpeice Enterprises
www.smallpeice.co.uk*

5 Whys

Example - Delayed Test Results

PROBLEM	Customers complain about the delayed test results at our laboratory
WHY?	Because our laboratory has too much workload
WHY?	Because more requests for COVID-19 testing continue to come in
WHY?	Because more people need to be tested for the virus
WHY?	Because the country is facing a new wave of the virus



ACTION
Hire more medical staff to help with COVID-19 testing

Only **4 Whys** were required to get to what looks to be the root cause

5 Whys

Example – Sales Figures

PROBLEM	Sales figures are getting worse day by day
WHY?	Because we are selling less
WHY?	Because our customers do not prefer our products
WHY?	Because our competitors have better products with lower price
WHY?	Because we have not produced good products for a while
WHY?	Because we significantly reduced research investment



ACTION
Consider increasing the research budget

5 Whys

Example – Call Center

PROBLEM	Customers complain about waiting too long to get connected to staff during lunch hours
WHY?	Because backup operators take longer to connect callers
WHY?	Because backup operators don't know the job as well as regular operators
WHY?	Because there is no special training nor job aids to make up for the gap in experience
WHY?	Because our company has not recognized this need
WHY?	Because our company has no system to identify training needs



ACTION
Consider setting up a system to identify training needs

Source: Orange Telecom (www.orange.fr)

5 Whys

5 Whys can be done in a **team setting** or on an individual basis.

In case it is a team exercise, participants need to be aware of the problem which makes the exercise more productive even if there are multiple perspectives.



5 Whys

5 Whys will be more effective when the participants consist of **front-end operators** and **Subject Matter Experts**.



Always involve people who are experienced in the process and seek help when needed

5 Whys

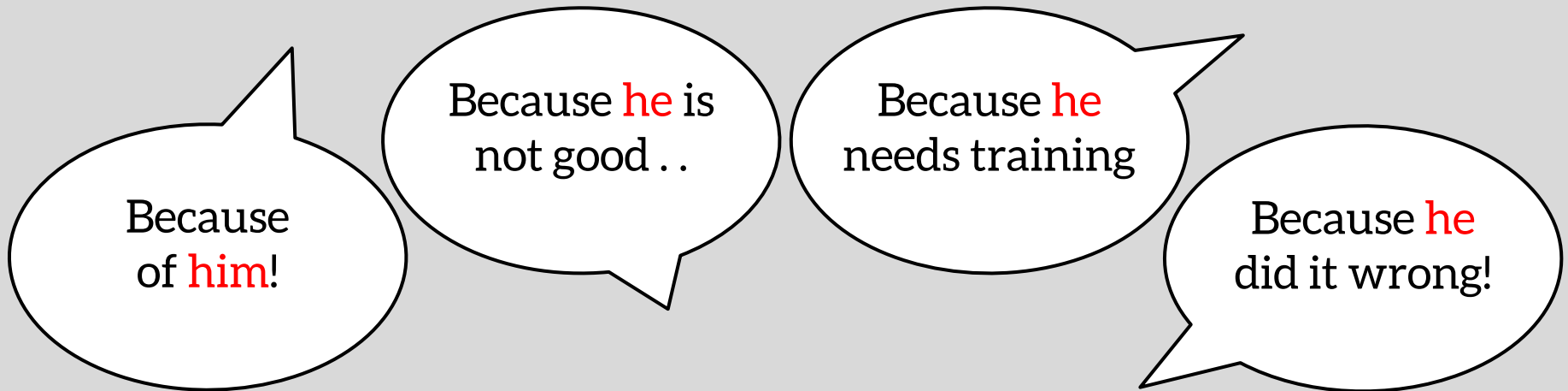
People often don't like been question Why as it is viewed as a **threatening question**.

They take it as personal criticism rather than a fact finding and a problem-solving approach.



5 Whys

Avoid seeing the **capabilities of people** as the only source of the problem.



Any mistake made by an employee is often due to lack of training, lack of time, lack of tools, overwork, or other organizational causes

5 Whys

What about the following answers?

Why?

It is the fault
of HR

It is the fault of
the Company

CFO dislikes
maintenance
cost

CEO
declared cost
savings to be
our priority

5 Whys

5 Whys Template

5 Whys	
Describe the problem:	1 st Why?
	2 nd Why?
	3 rd Why?
	4 th Why?
	5 th Why?

Continue until you get to the root cause of the problem!

5 Whys

Further Information

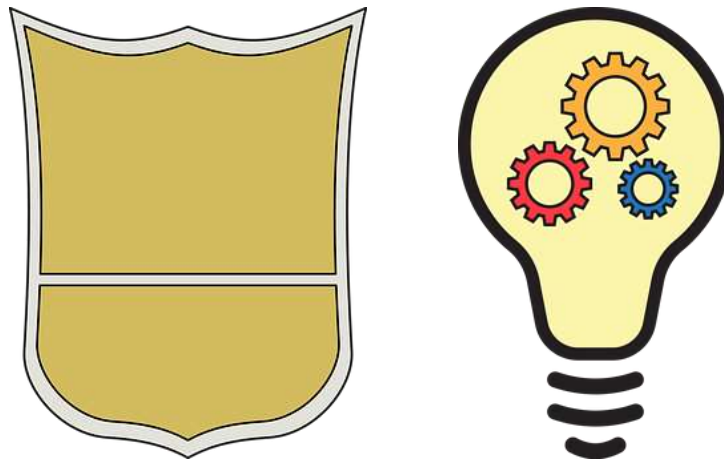
Asking Why is an essential way we all began to learn!
Children often ask Why all the time.



5 Whys

Further Information

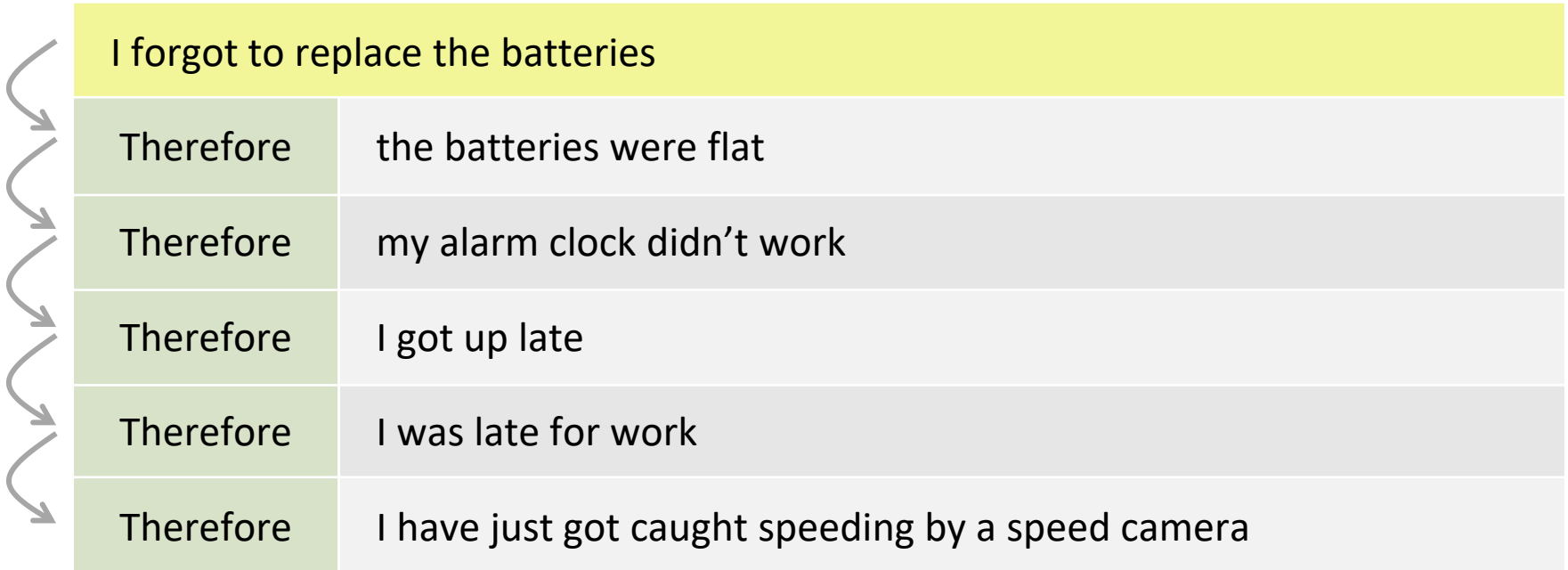
5 Whys is not only a problem-solving method, but it can also be used in **troubleshooting** and in preventing problems from happening in the first place (process design).



5 Whys

Further Information

After completing a 5 Whys exercise, you may use the **Therefore Test** to check the validity of the answers.



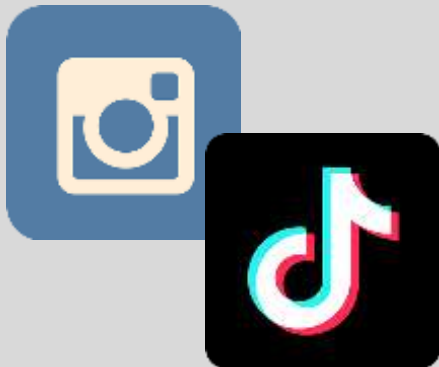
The diagram illustrates the 5 Whys process. It consists of a vertical sequence of six rows. The first row is a yellow bar containing the text 'I forgot to replace the batteries'. The following five rows are light gray bars, each starting with the word 'Therefore' in a green box on the left, followed by an answer. Five curved arrows on the left side point downwards from the top of each 'Therefore' row to the top of the row below it, indicating the flow of the process.

I forgot to replace the batteries	
Therefore	the batteries were flat
Therefore	my alarm clock didn't work
Therefore	I got up late
Therefore	I was late for work
Therefore	I have just got caught speeding by a speed camera

5 Whys

Further Information

5 Whys can also be used to identify the underlying root cause of a **behavior**.



Why do you use social media more than personal face-to-face communication?

Asking Why many times will help to understand the emotions behind a behavior which will help us to deal with it more effectively

5 Whys

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