



# Root Cause Analysis

Identifying "root cause" of problems or events and an approach for responding to them.

## Q Today's Agenda

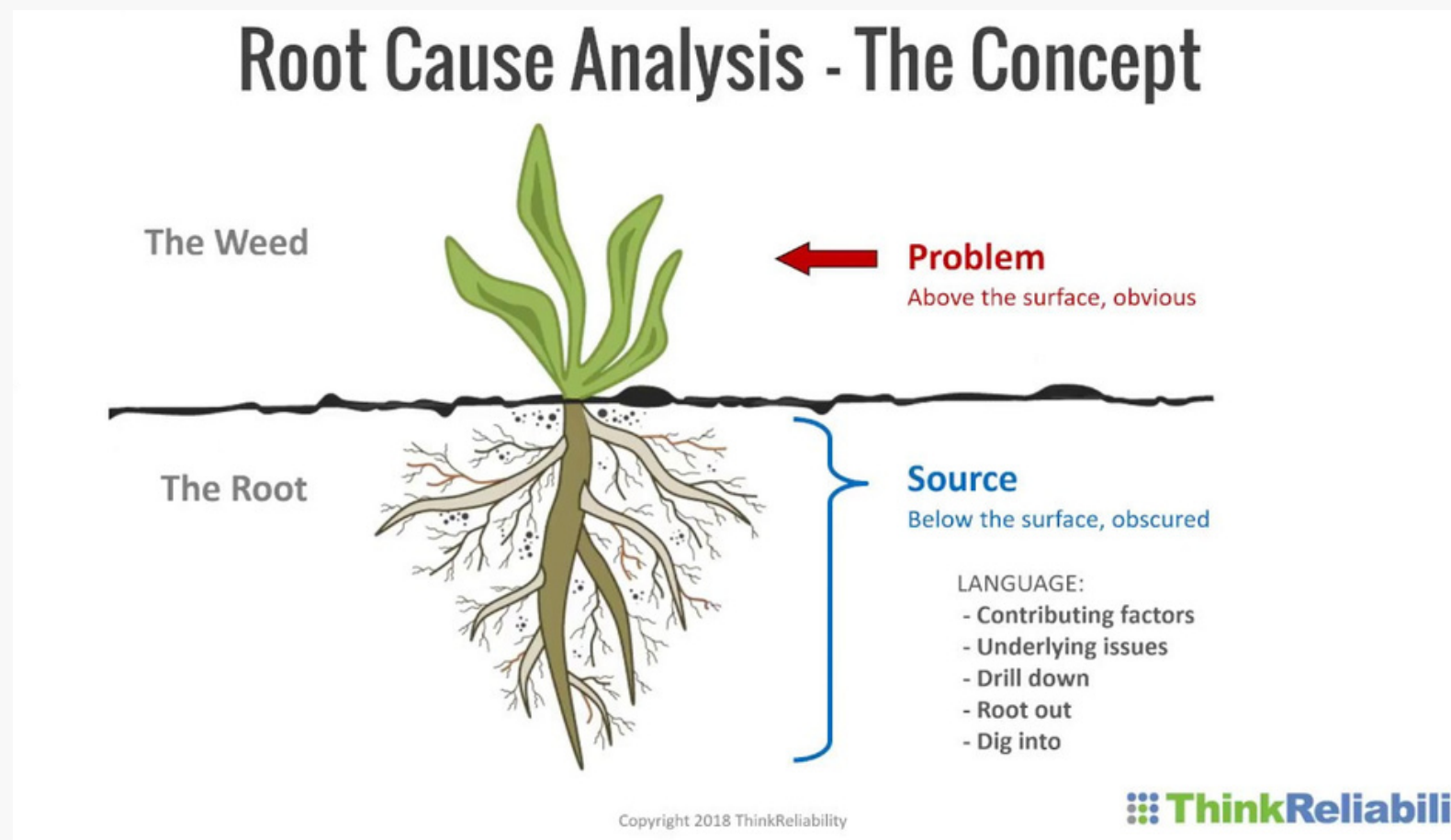
- 1 Introduction to the Session
- 2 What is a Root Cause Analysis and why do we use it?
- 3 5 Steps in the Root Cause Analysis Process
- 4 Tools for root cause analysis
- 5 Examples of root cause analysis
- 6 Summary and Action Items

# Root Cause Analysis

**The root cause** is the core issue- the highest-level cause- that sets in motion the entire cause-and effect reaction that ultimately leads to the problem(s).

A **root cause analysis** is a process used to identify the primary source of a problem or event, and an approach for responding to them.

**Root cause analysis (RCA)** is based on the basic idea that effective management requires more than merely "putting out fires" for problems that develop, but finding a way to prevent them altogether through **process improvement**.



# Root Cause Analysis

RCA assumes that systems and events are interrelated. An action in one area triggers an action in another, and so on. By tracing back these actions, you can discover where the problem started and how it grew into the problem you're now facing.

You'll usually find three basic types of causes:

- 1 Physical causes**– Tangible, material items failed in some way.
- 2 Human causes**– People did something wrong, or did not do something that was needed.
- 3 Organizational causes**– A system, process, or policy that people use to make decisions or do their work is faulty.

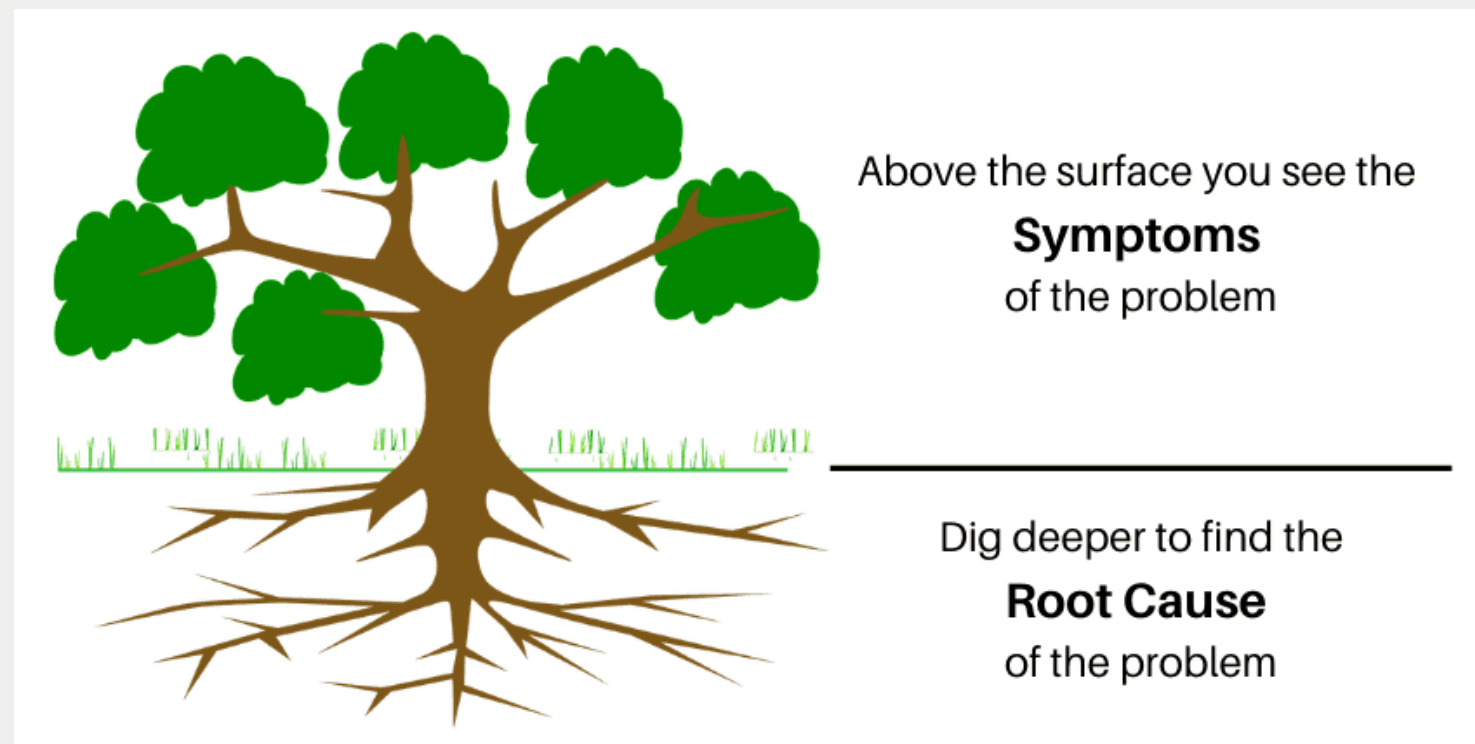
- 1 Define the Problem
- 2 Collect Data
- 3 Identify Possible Causal Factors
- 4 Identify the Root Cause(s)
- 5 Action plan for implementing solution(s).

# Process of Root Cause Analysis

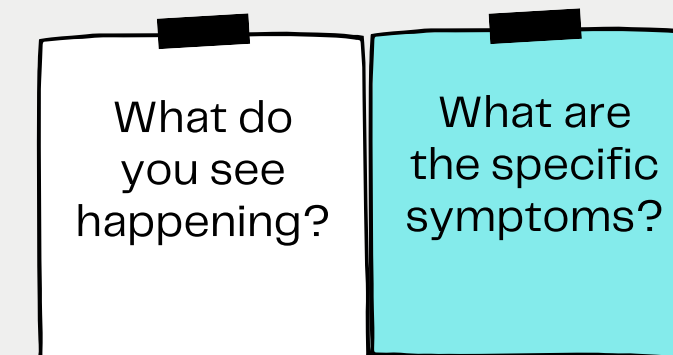
You can apply RCA to almost any situation. The **process** of root cause analysis has these **five identifiable steps**.

# Defining the Problem

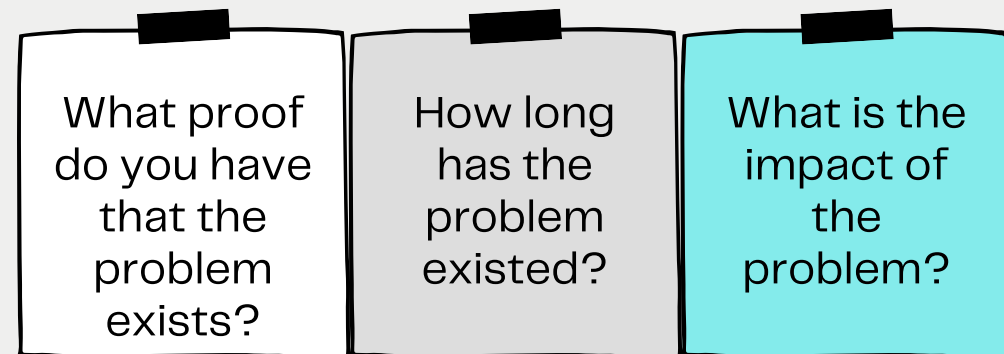
Define the problem within the context of the organizations overall goals by asking questions.



## Ask yourself the following



Without a well-defined problem, an investigation lacks focus and can drift off course. Having the basic background information documented in a standard way helps people reviewing the investigation to quickly locate information. Using a structured problem outline helps a team avoid unproductive debate and quickly understand the total impact of a problem.



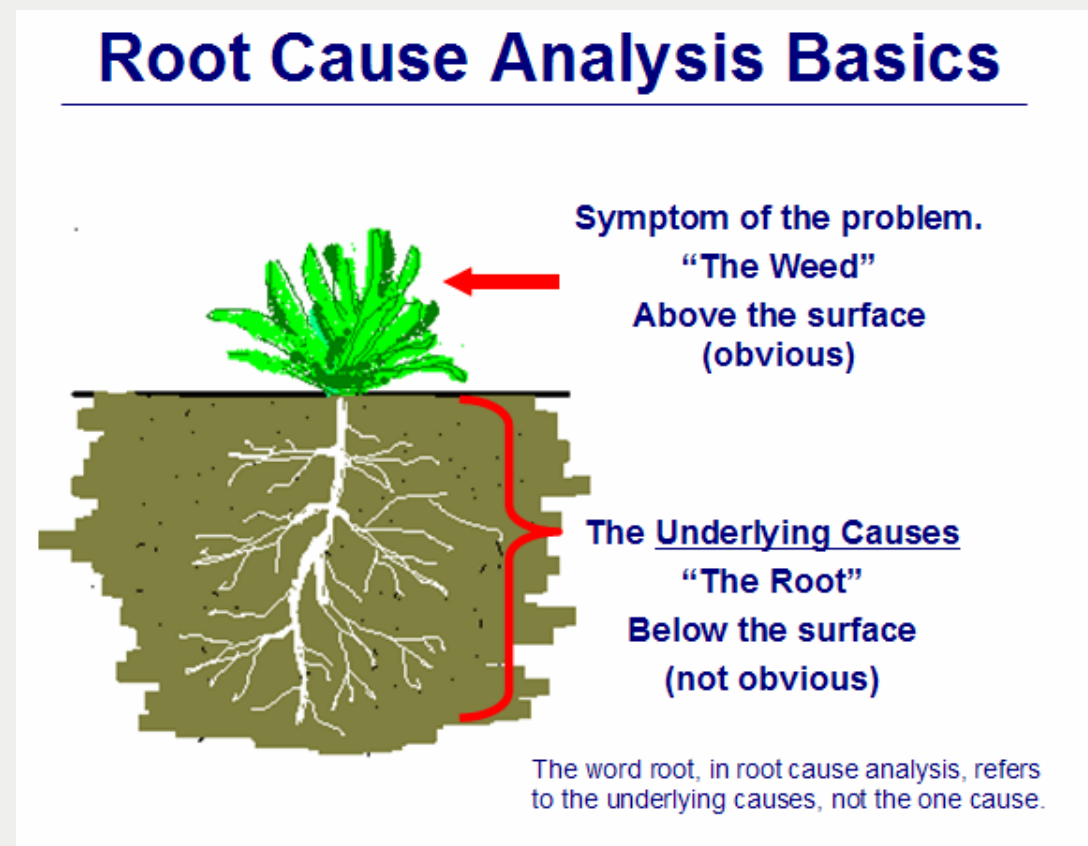
# Collecting Data

You need to analyze a situation fully before you can move on to look at factors that contributed to the problem.

To maximize the effectiveness get everyone together who understands the situation.

People who are most familiar with the problem can lead you to a better understanding of the issues.

Data gathering must begin soon after the event occurs, to prevent loss or alteration of the data.



# Identifying possible causal factors

During this state, identify as many causal factors as possible. Too often, people identify one or two factors and then stop, but that's not sufficient. With RCA, you don't want to simply treat the most obvious causes- you want to dig deeper.



# Use these tools to help identify causal factors:

**1** 5 Why's

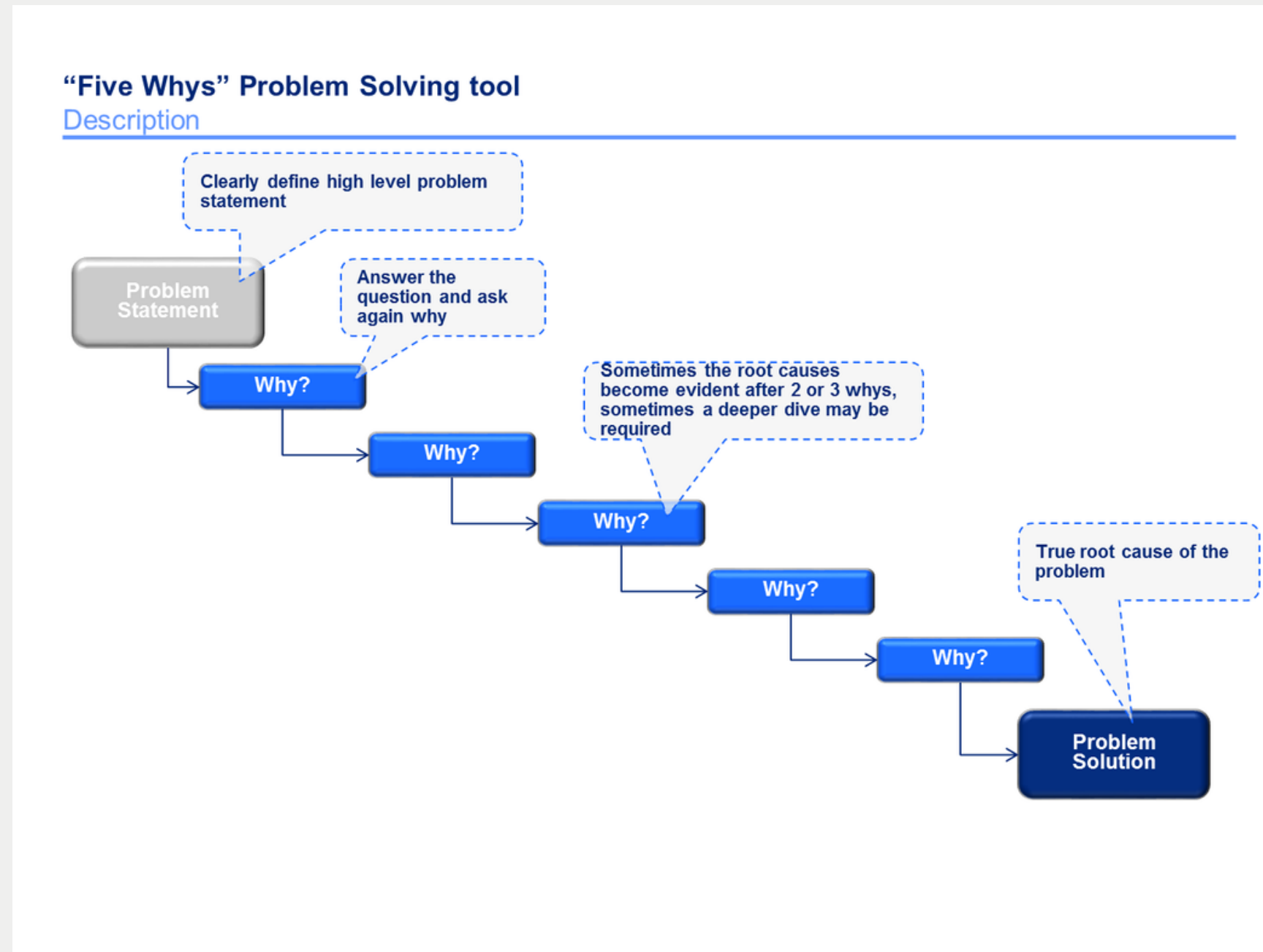
**2** Cause and Effect Diagrams aka Fishbone Diagram

Why does the causal factor exist?  
What is the real reason the problem occurred?

These tools are designed to encourage you to dig deeper at each level of cause and effect.

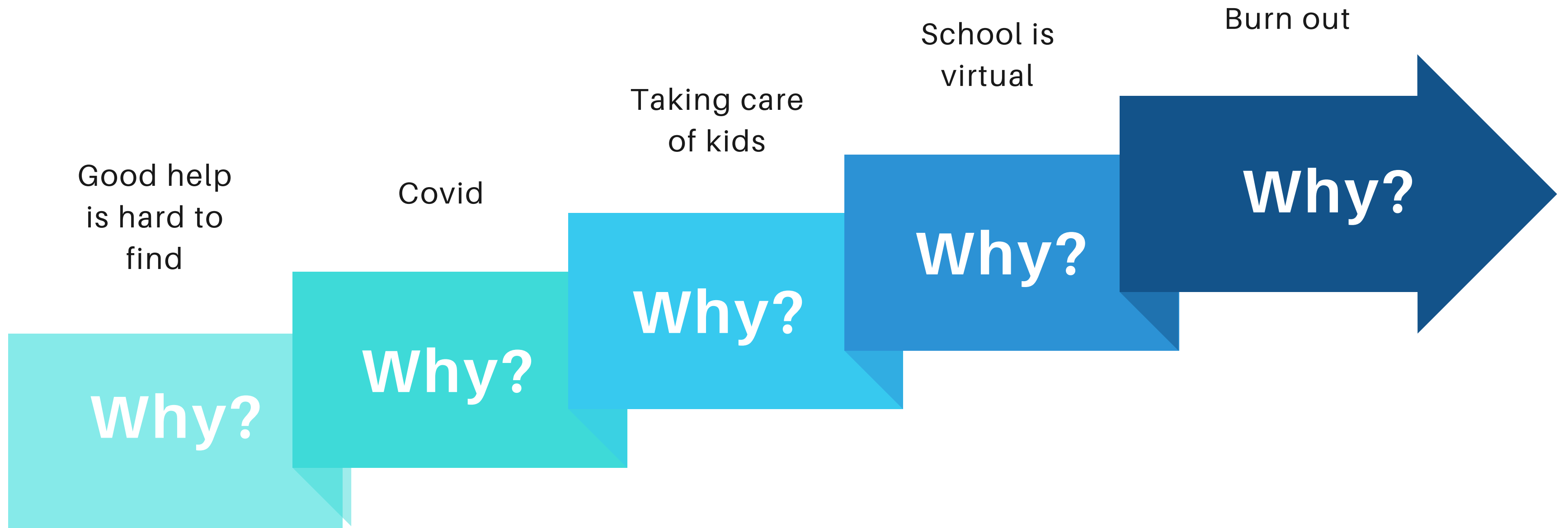
# 5 Whys Analysis

You can use 5 Whys for troubleshooting, quality improvement, and problem solving. It is most effective when the answers come from people who have hands-on experience of the process or problem in question.



# 5 WHY'S PROBLEM ANALYSIS

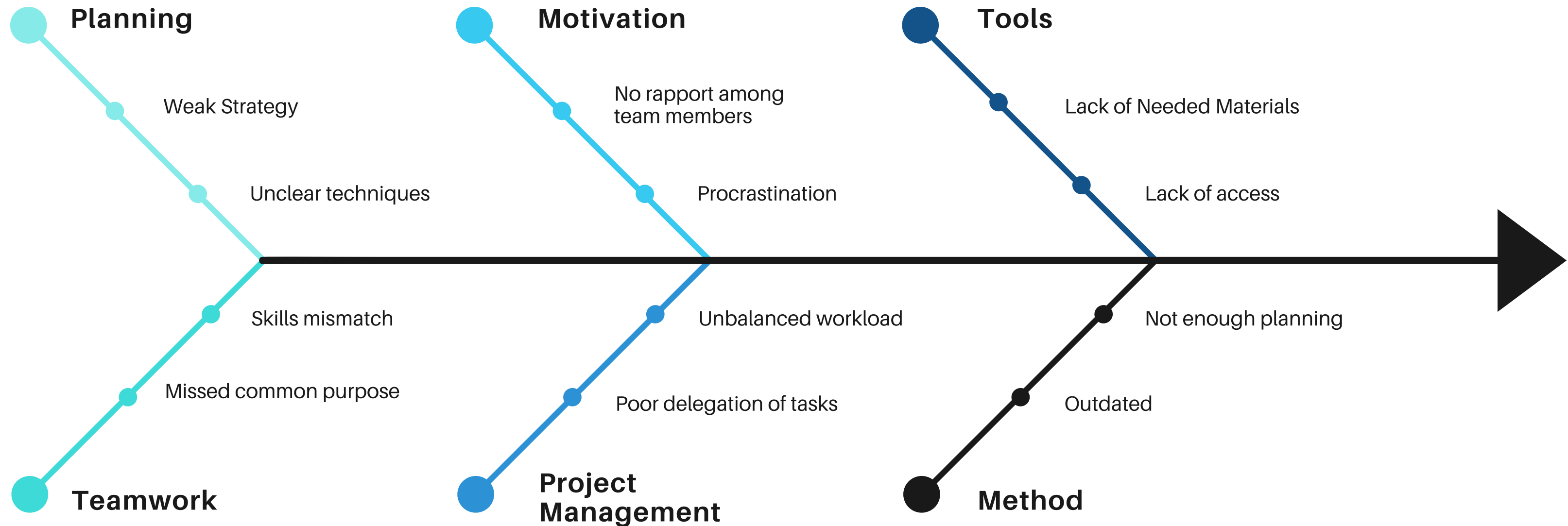
Problem Statement: You cannot optimize production same day when short staffed and negatively impacts wait times.



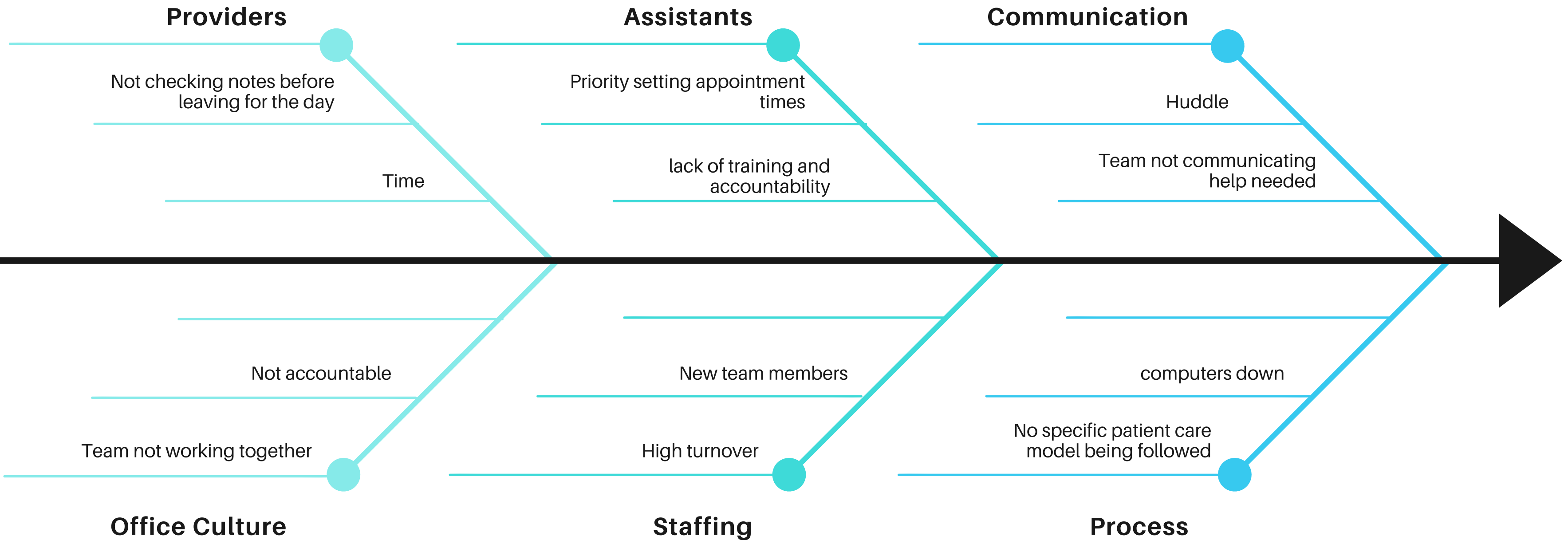
## Cause and Effect Analysis aka Fishbone Diagram

When you have **a serious** problem, it's important to explore all of the things that could cause it, before you start to think about a solution.

# A MISSED DEADLINE



# EXAMPLE- HYGIENE NOTES NOT COMPLETED



# Create & Implement Action Plan

Analyze your cause-and-effect process, and identify the changes needed and the specific detailed plan to implement those changes.

ACTION PLAN						
GOAL 1						
Write your goal statement here.						
ACTION STEP DESCRIPTIONS	PARTY / DEPT RESPONSIBLE	DATE TO BEGIN	DATE DUE	RESOURCES REQUIRED ( staff, tech, etc. )	DESIRED OUTCOME	NOTES

# Recap and Key Take Aways

Root Cause Analysis is a useful process for understanding and solving a problem.

As an tool, RCA is an essential way to perform a comprehensive, system-wide review of significant problems as well as the events and factors leading to them.

- 1** Determine what negative events are occurring.
- 2** Identify key points of failure.
- 3** Determine solutions to address those key points, or root causes.



# Homework

Conduct an RCA from start to finish using one or both of the tools discussed and include your action plan for the desired solution.

Submit to [D4CUniversity@d4c.com](mailto:D4CUniversity@d4c.com) by March 19th.