

# Ishikawa Diagram

Quality tool

# Ishikawa diagram

(also called **fishbone diagram**, **herringbone diagram**, **cause-and-effect diagram**, or **Fishikawa**) is created by Kaoru Ishikawa - it shows the causes of a specific event/ problem.

The fishbone diagram identifies many possible causes for an effect or problem. It can be used to structure a **brainstorming session**. It immediately sorts ideas into useful categories.

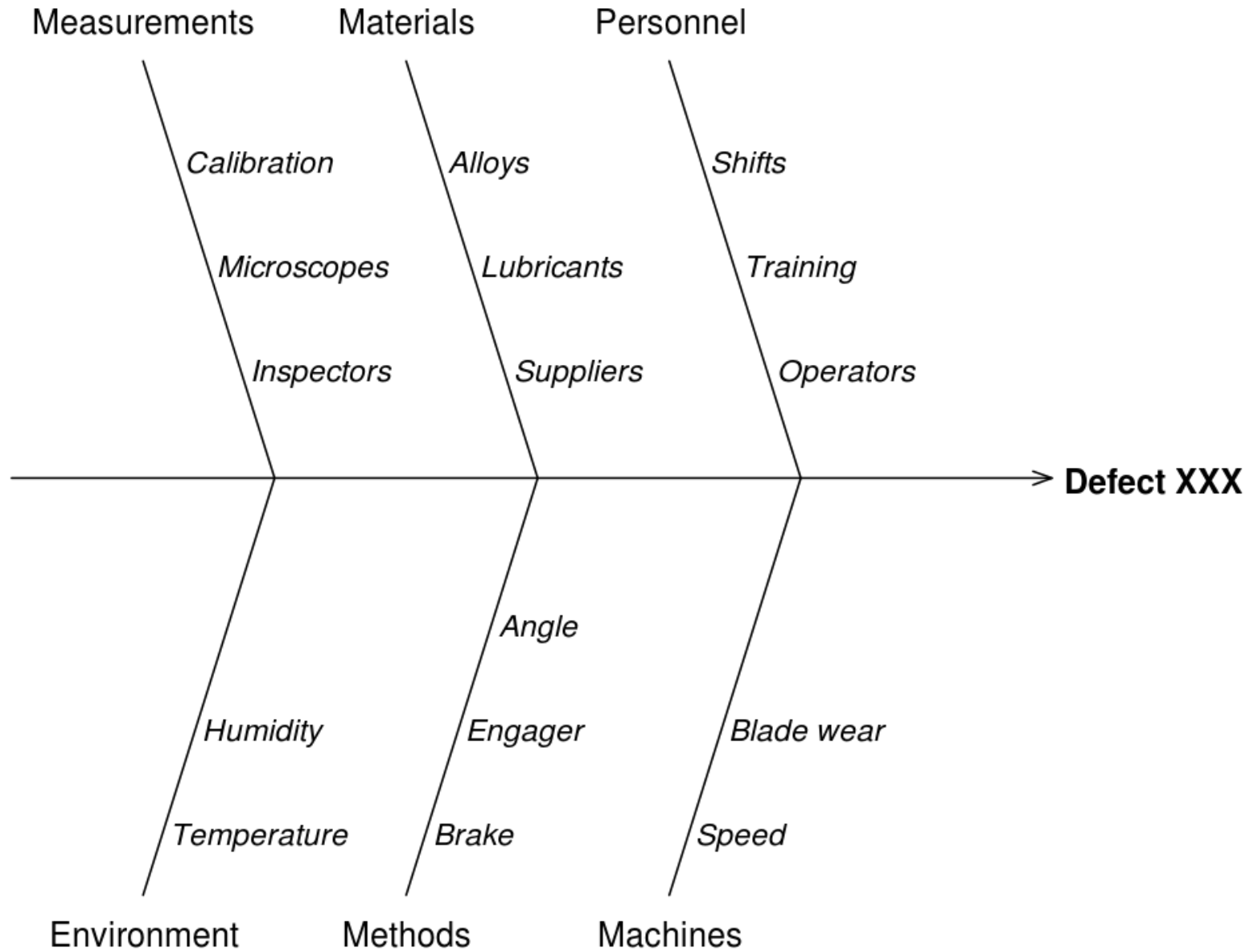


# Steps

- Identify a problem (head of fish).
- Use brainstorming to identify the main categories of causes of the problem. If this is difficult, use general headings (proposed):  
Methods, Machines (equipment), People (personnel, workforce),  
Materials, Measurement, Environment...

If category doesn't match, you can skip it.

# Factors contributing to defect XXX



# 5 why method

## 5 Why?



My tea was cold



(1) Why was my tea cold?



*The kettle didn't heat the water*

(2) Why didn't the kettle heat the water?



*No power – the fuse in the plug was blown*

(3) Why was the fuse in the plug blown?



*An incorrect rated fuse was fitted*

(4) Why was an incorrect rated fuse fitted?



*The required fuse was not specified*

(5) Why was the correct fuse not specified?



*There was no specification for fuses*

**Problem Statement**  
**"The vehicle will not start"**

**Why 1**

**The battery is dead.**

**Why 2**

**The alternator is not functioning.**

**Why 3**

**The alternator belt has broken.**

**Why 4**

**The alternator belt was well beyond its useful service life and not replaced.**

**Why 5**

**The vehicle was not maintained according to the recommended service schedule.**

# 5 WHY





# Ishikawa Diagram



# Fishbone Diagram

