

# Problem solving guide

## Procedure for recurring problems of major importance

### Problem definition - 6W and W-not

<b>Who?</b> <ul style="list-style-type: none"> <li>70% of employees in section A</li> </ul>	<b>Why?</b> <ul style="list-style-type: none"> <li>The coffee is too bitter</li> </ul>	<b>What / Where / Who not?</b> <ul style="list-style-type: none"> <li>The team in section B is satisfied with the coffee there</li> <li>No complaints about the coffee in the canteen</li> <li>Tea in section A is unchanged</li> <li>Employees go to the café outside the plant during the break</li> </ul>	<b>Effects</b> <ul style="list-style-type: none"> <li>Late arrival for meetings as coffee is fetched from elsewhere → 40 min per day in total</li> <li>Lack of attention → Processing time per case increased by 10%</li> </ul>
<b>When?</b> <ul style="list-style-type: none"> <li>Since Monday</li> </ul>	<b>Where?</b> <ul style="list-style-type: none"> <li>Tea kitchen at section A</li> </ul>		<b>Actions taken so far</b> <ul style="list-style-type: none"> <li>Coffee machine cleaned</li> <li>...</li> </ul>
<b>What?</b> <ul style="list-style-type: none"> <li>Coffee does not taste good</li> </ul>	<b>How, how much, how often, how long?</b> <ul style="list-style-type: none"> <li>4 cups of coffee per person per day</li> </ul>		

#### Note:

- Observe the actual state without making assumptions.
- Describe the process.
- Record data (requirements).
- Record as much information as possible in the first report.
- Good documentation and easy access to previous solutions are key to avoiding duplication of effort.

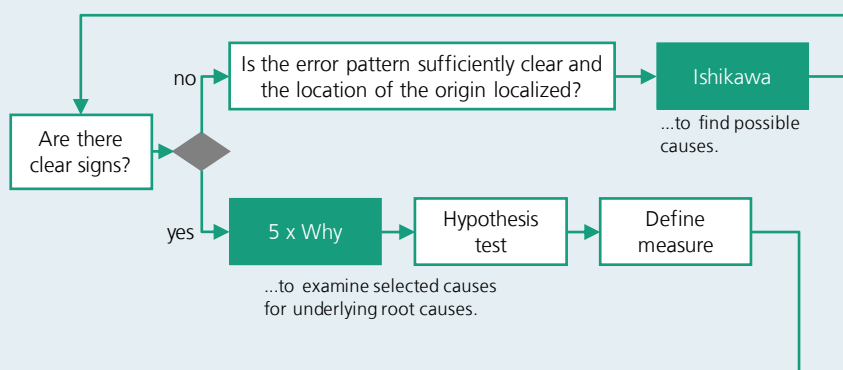
#### Note:

- The overall goal is the starting point for sub-goals.
- It is better to have several concrete goals than one unclear goal.

### Definition of objectives

**S** **M** **A** **R** **T**  
Specific Measurable Achievable Relevant Timely

### Root cause analysis



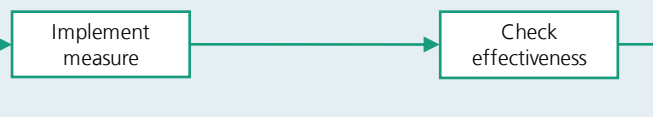
#### Note:

- If the cause is already clear → go straight to implementation
- Stay pragmatic and don't try to test every idea if it's not absolutely necessary.
- If it becomes absurd, stop for a moment and consider whether the end of the analysis step has been reached.
- With Ishikawa, quantity is more important than quality.
- Do not allow stubborn ways of thinking, but challenge them to think in new ways.

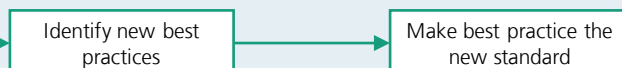
#### Note:

- If there are several actions, determine a reasonable sequence.
- Effectiveness can only be verified if the objectives are well defined.

### Implementation & effectiveness monitoring



### Standardize



#### Note:

- Can the solution also be useful elsewhere?
- Also think about transferability to areas outside of production.

Do you still have questions or need company-specific adaptations? Please contact us!

**Nicole Oertwig**

Corporate Management division  
Phone +49 30 39006-176  
nicole.oertwig@ipk.fraunhofer.de



**Fraunhofer IPK**

Pascalstrasse 8-9  
10587 Berlin  
Phone +49 30 39006-176  
[www.ipk.fraunhofer.de](http://www.ipk.fraunhofer.de)