

Root Causes Processes

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1. Where root causes live
2. Start with the identified condition
3. Doing the root cause analysis
 - Determine the Direct Cause.
 - Determine the Root Cause.
 - Document the results

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Root Cause Process

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1. Direct Cause. Ask the first "Why" and identify the Direct Cause.
2. Root Cause. Ask three or four more "Why's" back along the chain of events and get to a condition or circumstance whose resolution that will permanently resolve the problem (and is still within your scope of responsibility). Find the hole in the System and fill it.
3. Document the results of the analysis as part of the overall Corrective or Preventive Action.

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Identify the Direct Cause

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OR

2. Visualise it: Take a mental picture of the actual occurrence (incident, deviation, etc.). You are looking at the Direct Cause in that picture.



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Example 1

Why was I late for work this morning?

PROBLEM: Why didn't I get to work on time?

DIRECT CAUSE:

CONTRIBUTING CAUSE: Car wouldn't start

CONTRIBUTING CAUSE: Battery was dead.

CONTRIBUTING CAUSE: Dome light stayed on all night.

ROOT CAUSE: Kids played in car, left door ajar.

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Example 2

- Received ticket for safety violation.
- Car exhaust too loud.
 - Muffler knocked loose from tail pipe.
 - Daughter hit pothole.
 - Potholes in road.
 - Winters damaged roads.
 - Govt won't approve extra money for better roads.
 - Govt doesn't have extra money.
 - Govt spent money on welfare and legal issues.
 - Too many lawyers in politics.
- **Solution?** Drive car in Sweden where there are fewer lawyers. (??)

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The Chain of Causes

1. Direct Cause: The cause that directly resulted in an event. (The first cause in the chain.)
 - *This is the answer to your first question (your problem statement).*
2. Contributing Cause: A cause that contributed to an event but, by itself, might not have caused the event (the causes before the direct cause) or are back in the chain of events between the Direct Cause and the Root Cause.
 - *For a very simple problem there may not be any contributing causes.*
3. Root Cause: The fundamental reason for an event, which if corrected, would prevent recurrence or first-time occurrence. (The first cause in the chain.)
 - *Root Causes that are outside the ability of an organization to address it are not useful for anything. Stick to the ones we can actually fix.*


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2. Visualise it: Take a mental picture of the actual occurrence (incident, deviation, etc.). You are looking at the Direct Cause in that picture.

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Look for the Root Cause from the First Principle in ISO/IEC 17025




Capacity

Concept that a laboratory has the resources (PEOPLE with the required skills and knowledge, the ENVIRONMENT with the required facilities and equipment, the QUALITY CONTROL, and the PROCEDURES) in order to undertake the work and produce technically valid results.

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Identify the missing pieces



- Knowledge/skill of the people involved
- Environment surrounding the work:
 - Physical
 - Physiological
 - Equipment
- Quality control / assurance of the work
- Suitability of the procedures involved

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Root Cause Listing



Possible root causes include the following categories.

- Personnel Factors
- Environmental Factors
- Quality Factors
- Procedural Factors
- Organisational Factors

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Personnel Factors



- Physical capacity
- Intellectual capacity
- Physical or physiological stress
- Emotional or psychological stress
- Individual skill
- Individual knowledge
- Care and attention.

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Environmental Factors



- Physical plant and facilities
- Environmental conditions
- Tools and equipment
- Materials and supplies
- Maintenance
- Wear and tear

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Quality Factors



- Quality control
- Quality assurance
- Quality system

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Procedural Factors



- Standard procedures
- Specifications
- Implementation
- Selection of support

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Organisational Factors



- Leadership
- Communications
- Motivation

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Exercise 5 – Addressing the Findings



1. Your group consists of the process owners from the sections within MOTIVA CAB that have just undergone an internal audit. Following on from previous exercises you are now prepared to address the findings from the report. Your team is to examine the findings and conduct the analysis in order to determine any remediation, and the need for corrective or preventive action. As well, any solutions implemented are to be recorded. Use the attached format.
2. Each group is to present their solutions to your facilitator (representing the quality manager). All relevant aspects of the solution are to be presented.

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Exercise 5 – Addressing the Findings



1. Your group is to accomplish the following using the attached forms provided to you for this purpose:
 - You are to write the remediation for one or two of the findings raised during exercises 3 and 4.
 - You are to determine applicable remediation.
 - You are to determine and document the need for implementing full corrective or preventive action.
 - If full corrective or preventive action is needed, you are to determine the root cause.
 - You are to determine an appropriate solution (corrective or preventive) action to address the identified root cause.

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Quiz



25 questions

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Facilitator Evaluation



Please complete it so that we know what needs to be considered for the next course.

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Thank you!



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 International Accreditation Service








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