

ROOT CAUSE ANALYSIS

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Find the cause of problems quickly
and reliably

KT's systematic approach to handling and responding to quality problems, validations, complaints and recalls is used by organizations worldwide to find the cause of problems and prevent them from recurring.

Description

In this two-day work session, you will learn our acclaimed approach to respond to deviations that is focused, rapid and fully documented. Using our industry recognized approach, you will learn to eradicate these issues with complete and well-documented investigations.

How you will benefit

By using KT's best-practice approach for every deviation, you will remarkably improve the quality of your root cause analyses by:

Listing and prioritizing issues

Uncovering the true issues that need to be solved, and understanding and agreeing on the correct problem statement

Assessing complex issues systematically to support trouble shooting activities

Understanding true root cause to avoid expensive work and fixes

Using structured thinking to close investigations

1 Describe Problem

State the problem

- List the object and the deviation.

What object (or group of objects) has the deviation?
 What deviation does it have?
 What tells us a deviation exists? (senses, measures)

Specify the problem

- Describe as completely, factually as possible.

	IS	IS NOT
WHAT	<ul style="list-style-type: none"> What specific object(s) has the deviation? What is the specific deviation? 	<ul style="list-style-type: none"> What similar object(s) could have the deviation, but does not? What other deviations could be observed, but are not?
WHERE	<ul style="list-style-type: none"> Where is the object when the deviation is observed (geographically)? Where is the deviation on the object? 	<ul style="list-style-type: none"> Where else could the object be when the deviation is observed, but is not? Where else could the deviation be located on the object, but is not?
WHEN	<ul style="list-style-type: none"> When was the deviation observed first (in clock and calendar time)? When since that time has the deviation been observed? What pattern? When, in the object's history or life cycle, was the deviation observed first? 	<ul style="list-style-type: none"> When else could the deviation have been observed first, but was not? When since that time could the deviation have been observed, but was not? What could be the pattern? When else, in the object's history or life cycle, could the deviation have been observed first, but was not?
EXTENT	<ul style="list-style-type: none"> How many objects have the deviation? What is the trend* in the number of objects with the deviation? What is the size of a single deviation? What is the trend* in the size? How many instances of the deviation are on each object? What is the trend* in the number of instances? 	<ul style="list-style-type: none"> How many objects could have the deviation, but do not? What could be the trend* in the number of objects, but is not? What could be the size, but is not? What could be the trend,* but is not? How many instances could be on each object, but are not? What could be the trend* in the number of instances, but is not?

*Pattern = continuous, periodic, sporadic, single occurrence
 *Trend = increasing, decreasing, stable

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Who Should Attend

Anyone involved with classifying, investigating, or providing assistance in closing deviations, approving, or providing input to root cause analyses in the areas of quality assurance, quality control, regulatory, audit or manufacturing.

Root Cause Analysis

A 2-day intensive learning experience during which you will learn how to use a disciplined, results-oriented process to find root cause.

Describe the problem:

1 Create a clear and factual understanding of the problem to guide analysis and discussion.

- Create a high-level statement of the problem for which you want to know the cause
- Document a factual description of four critical dimensions of the problem: what, where, when, extent
- Compare similar things that do not have the problem as a way to better understand the problem itself

Understand what truly constitutes a problem:

2 Often, people use the word problem to indicate a wide range of issues needing their attention. Effective Root Cause Analysis requires you to:

- Understand the difference between expected and actual performance
- Assess whether both are being measured in a factual, consistent way
- Be able to move to other actions or activities if cause is already known
- Considering data gathered from prior investigations

Identify possible causes:

3 Discuss and come up with ideas as to why the problem is happening.

- Better engage with knowledgeable experts and leverage their experience
- Use the comparison of things without the problem to find unique distinct features
- Leverage these features to look for critical changes that could create the problem
- Brainstorm hypotheses using all the information you have and state them in a way that assists in testing
- Focus on only relevant changes rather than all changes

Root Cause Analysis

4 Evaluate possible causes:

Test hypotheses using structured information about the problem.

- Methodically examine each hypothesis
- Eliminate any hypothesis not clearly supported by known facts
- Record all assumptions or questions
- Agree on the most probable cause as a team

5 Confirm true root cause:

Ensure confidence in the root cause before taking action to fix it.

- Identify the fastest, cheapest, surest and safest strategies to confirm
- Discuss the pros & cons of methods such as verification
- Plan monitoring to confirm that these actions taken have mitigated all effects

6 Additional Topics:

Covered if time and/or learner interest are available.

- Understand the use of complementary approaches like 5 Whys and Fishbone (Ishikawa), Six Sigma, Lean, 8D Diagrams
- Identify where else the root cause may be causing problems
- Ensure that the fix and related actions do not create unintended problems
- Learn how to use this process for many kinds of problems

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Kepner-Tregoe Root Cause Analysis Workshop Outline

