

Problem Analysis Glossary

Actual How your equipment, system, product, or performer is really working.

Adaptive Action Action taken to make it easier to live with the effects of a problem for a long time.

Assumptions Things that have to be true for a possible cause to fit the facts in the problem specification.

Cause Statement A short statement speculating about cause. Cause statements should contain an object, a deviation, and a description of how the cause creates the problem.

Cause Whatever is producing the problem.

Change Something that is different from one time to another. Look for changes related to differences.

Closed Questions Questions that have their possible answers defined within the question.

Confirm True Cause The fourth and final process step in Problem Analysis. It has one action step: Verify assumptions, observe, experiment, or try a fix and monitor.

Consequences The events that follow the Response and increase or decrease the probability that the behavior will occur again, given the same Situation.

Corrective Action Any action that eliminates or reduces the cause of the deviation.

Day One Deviation See **Start-up Problems**.

Defect See **Deviation**.

Describe Problem The first process step in Problem Analysis. It has two action steps: State the problem and Specify the problem.

Destructive Testing Eliminating possible causes that cannot be explained by the IS and IS NOT facts.

Determine Most Probable Cause The second Evaluate Possible Causes action step, where you identify the cause that best explains the IS and IS NOT specification. The most probable cause has the most sensible, most reasonable, and the fewest and simplest assumptions.

Deviation A performance gap between Should and Actual. Deviations may be positive or negative, desirable or undesirable (defect).

Distinction Anything that is odd, special, unusual, or distinctive about an IS compared to its IS NOT. Distinctions are sometimes called differences.

Evaluate Possible Causes The third process step in Problem Analysis. It has two action steps: Test possible causes and Determine most probable cause.

Experiment Researching to see whether you understand the cause and how it creates the problem (for example, swapping parts to see whether the problem goes away, or making the problem appear and disappear when you want).

Extend the Cause Anticipating hidden damage from a cause or other places where a cause could create damage, and thinking about what caused the cause.

Extend the Fix Considering what could happen if you made a Fix and what other things would need the same Fix.

EXTENT The part of a problem specification that refers to the size, trend, and other dimensions of the object and deviation.

Feedback Performance-based information the Performer receives about progress toward a goal that guides the Performer in maintaining or modifying behavior. See also Ineffective Feedback.

Feedback Mechanism The method by which Feedback is gathered from the source, delivered to the Performer, and displayed for the Performer.

Fix Action to remove the cause of a problem. (The same as corrective action.) A Fix may not always be the first action taken to deal with a problem.

Fluctuating Start-up Problems Start-up problems where the Actual gets closer to the Should, then further away, then closer, but Should has never been met.

Identify Possible Causes The second process step in Problem Analysis. It has a single action step: Use knowledge and experience or distinctions and changes to develop possible cause statements.

Information Knowledge acquired in any manner; data with meaning; facts.

Interim Action Temporary or short-term action taken to limit or contain the effects of the problem and make it less serious.

IS The part of a problem specification that describes the actual problem in detail. The IS information answers the WHAT, WHERE, WHEN, and EXTENT questions.

IS NOT The part of a problem specification that describes a boundary for each dimension of a problem in terms of what could be happening, but is not. IS NOT information should be closely related to the IS information.

KT Clear Thinking Process A necessary sequence of steps by which information and judgments are organized so that a conclusion can be reached and appropriate action taken.

Life Cycle Steps or stages from the beginning to the end of a process or product. Life cycles can include maintenance cycles, operation cycles, sales cycles, and others.

Likely Causes Things that could cause a potential problem.

Look for Changes Searching for variations associated with distinctions to help identify possible

causes.

Look for Distinctions Searching for qualities, features, or characteristics unique to the IS, as compared to the IS NOT to help identify relevant changes.

Most Probable Cause The possible cause that has the fewest and the most reasonable set of assumptions.

Multiple Problems Problems that can be separated because there is more than one object, more than one deviation, or both.

Multiple Start-up Problems Start-up problems where the object(s) performs at various levels and Should has never been met.

Object The thing (or group of things) that has (or may have) a problem.

Observe A way to verify the true cause of a problem by looking at how the cause creates the problem.

Open Questions Questions that do not contain the possible answers. Open questions usually have many possible answers and invite answers in phrases or sentences.

Performance Expectations The specific results, measures, and standards desired of the Performer in completing the work.

Performer The person or group expected to perform.

Possible Causes Object/deviation statements about what might have caused the problem. Possible causes can be checked against the facts in the problem specification.

Problem A type of concern when what is actually happening deviates from what should be happening; you do not know why this is happening; and you need to know why. The existence of these three conditions means it is appropriate to use Problem Analysis.

Problem Analysis A rational process for finding the cause of a positive or negative deviation. It consists of four process steps: Describe Problem, Identify Possible Causes, Evaluate Possible Causes, and Confirm True Cause.

Problem Specification The set of answers to a series of simple questions about the WHAT, WHERE, WHEN, and EXTENT of a problem that will help you understand what IS and IS NOT the problem.

Problem Statement A clear, simple sentence that tells you what has the problem and what is wrong with it. A Problem Statement is written in object/deviation format.

Process A systematic set of steps to meet a goal.

Questioning to the Void Asking follow-up questions until you get the most specific or complete answer.

Recurring Problems The same problems seen over and over. These are problems where the root cause has not been fixed.

Research Verification See Experiment.

Response The specific, observable behavior(s) or actions(s) of the Performer; performance.

Results Verification Installing a Fix and watching to see how it works.

Root Cause The cause that must be removed (fixed) to make a problem go away permanently.

Should How equipment, systems, products, or performers operate when they are working properly.

Signal A cue or indicator to the Performer that action needs to be taken.

Situation In Rational Process, the factors that create a concern (i.e., that create a felt need to act). In the Performance System, the immediate setting in which the Performer works, and which provides the occasion to perform. The Situation includes performance expectations, signals to perform, and the work environment.

Specify Asking questions (also known as specification questions) to get specific information about a problem. The questions asked cover the WHAT, WHERE, WHEN, and EXTENT areas and include both IS and IS NOT questions.

Specify the IS Where the deviation is described factually as it IS in response to the WHAT, WHERE, WHEN, and EXTENT questions.

Specify the IS NOT Where the deviation is described factually as it could be but IS NOT in response to the WHAT, WHERE, WHEN, and EXTENT questions.

Specify the Problem The second Describe Problem action step, where the deviation is described factually in terms of IS and IS NOTs.

Stable Start-up Problems Single object/deviation problems where the deviation is constant and where Should and Actual have never been the same.

Stairstepping Testing the problem statement by asking a series of “Do we know the cause of...?” questions to confirm that the cause of the problem is not known.

Start-up Problem Problems where Should and Actual have never been the same. (Also known as a Day One Deviation.)

State the Problem The first Describe Problem action step, where you name the deviation for which you want to find the cause.

Test Possible Causes The first Evaluate Possible Causes action step, where you compare whether or not a possible cause can explain both the IS and IS NOT specification.

Think Beyond the Fix An approach to avoiding future problems by extending the cause and

extending the Fix.

True Cause The verified cause of the problem.

Turnaround Questions Taking the answer to your question and asking another question based on the answer until you get the most specific answer. A Questioning to the Void technique.

Use Distinctions and Changes An Identify Possible Causes action step, where you develop statements that explain how the deviation occurred using distinctions, changes, a combination of distinctions and changes, or a combination of changes.

Use Knowledge and Experience An Identify Possible Causes action step, where you develop statements that explain how the deviation occurred using knowledge and experience.

Verify Assumptions Checking to see whether assumptions made while testing a possible cause are really true.

Verify Assumptions, Observe, Experiment, or Try a Fix and Monitor The Confirm True Cause action step, where you prove the true cause of the deviation.

WHAT The part of a problem specification that identifies the object and deviation in detail.

WHEN The part of a problem specification that refers to the timing of the deviation (when first, when since, and life cycle).

WHERE The part of a problem specification that refers to the location of the object and the deviation.

Work Environment How the work is planned, the steps involved, and how each step is completed; what resources are available to help complete the work; and the nature of the physical surroundings.