



## Problem Analysis

Problem analysis refers to the processes and techniques used to diagnose the underlying root causes of defects, incidents, and other issues in order to prevent recurrences and systematically improve.

Key aspects of effective problem analysis include:

- **Gathering data** - Assemble all relevant details about the problem, including impacts, timelines, associated defects/incidents, and context.
- **Identifying possible causes** - Brainstorm potential reasons the problem occurred, including process weaknesses, external factors, technology issues, etc.
- **Prioritizing causes** - Determine the likelihood and impact levels of each potential cause using weighting criteria. Focus on most vital few.
- **Performing root cause analysis** - Use approaches like the 5 Whys, fishbone diagram, and barrier analysis to uncover fundamental breakdowns that enabled the problem.
- **Addressing root causes** - Develop solutions tailored to correct the root causes, such as process changes, training, technology fixes, supplier improvements, etc.
- **Implementing corrective actions** - Plan, test, and institute preventative actions in a disciplined manner. Verify effectiveness.
- **Monitoring and follow-up** - Put mechanisms in place to confirm implemented actions permanently resolved the problem. Continue analysis if issues recur.

Thorough problem analysis moves beyond just resolving the surface issue and instead aims to diagnose and treat the underlying systems failures. This prevents wasted effort from recurrences and builds long-term capability.