

INTRODUCTION TO ROOT CAUSE ANALYSIS

14 HOURS ZOOM & PHYSICAL PROGRAM



 **HYBRID TRAINING**
27 & 28 Apr 2026 (Mon & Tue)
 **Remote Online Training (Zoom) &**
 **Dorsett Grand Subang Hotel,
Selangor (Physical)**
**** Choose either Zoom OR Physical Session**

LEARNING OBJECTIVES



Here are the learning objectives for the two days training program; after completing this program, participants will be able to:

1. Carry out successful RCAs and introduce the RCA process into their company's or team's daily activities.
2. Be aware of the changing business environment and how to apply RCA to drive continuous improvements in safety and to lower costs and minimise environmental footprint.
3. Understand the impact of human reliability and the various methods used to improve this important area.
4. Understand the basics of Change Management and the methods used to securely anchor this process and make it routine.
5. Gain appreciation for a holistic "Asset Management" program, and know where and how the RCA process integrates, and the benefits that it will deliver.

TARGET GROUP

This course is aimed at Managers, Executive, Engineers, Superintendents, Supervisors, Operators and Technicians from all disciplines.

COURSE OVERVIEW

Eliminating failures is a proven strategy that can improve operation. With minimal investment, it can reduce errors in operation . Root Cause Analysis is a systematic, evidence-driven process that helps you find the true underlying (and often hidden) causes that result in unwanted events. Minor failures do matter and can escalate out of control. It is, therefore, critical to:

- Select the problems and issues that matter the most (prioritisation)
- Utilise structured and proven approaches to explore potential causes and root causes (process)
- Apply the right techniques to seek the relevant evidence (tools)
- Know how to find and select the right solutions (action planning)
- Rigorously review and fine tune solutions employed (continuous improvement)

DAY 1

- 1. Introduction**
 - a. Understand course outcomes and key topics discussed
 - b. Understand course agenda and structure
 - c. Understand participant course expectations and modify/supplement course materials as necessary
 - d. Agree ground rules - how we will work together for these five days
 - e. Introduce personal Action Plan templates
 - f. Establish course syndicates – how participants work together
- 2. Introduction to RCA**
 - a. Understand what RCA is (Video and discussion)
 - b. Where did RCA come from and its place in the AM Process
 - c. Understand the terminology of the words and acronyms used
 - d. Understand the capabilities of the RCA process (what it will deliver and what it will not)
 - e. Gain an appreciation of the RCA process flow
 - f. Understand the business case and the need to learn from incidents.
- 3. Overview of RCA Methodologies**
 - a. Understand the many RCA tools available and how to apply
 - i) 5 Whys,
 - ii) Fish bone,
 - iii) Pareto,
 - iv) Brain storming,
 - v) Six Sigma,
 - vi) Flow Charts,
 - vii) Histograms,
 - viii) Kepner –Tregoe,
 - ix) Story Telling,
 - x) Failure Mode & Effects Analysis,
 - xi) Reality Charting
 - b. Understand the key deliverables (criteria) of RCA
 - c. Understand and appreciate that not all tools can deliver against the identified 6 key criteria
 - d. Understand and appreciate the methodology that is going to be used in this training and why
 - e. Understand the types of problems
 - f. Understand the 4 steps to effective problem solving
- 4. Cause and Effect principles**
 - a. Understand the 4 Cause and Effect principles
 - b. Understand Actions and Conditions
 - c. Understand Causal Language
 - d. Understand Causal Connections
 - e. Understand what the evidence is and when it is required
- 5. Problem Definition**
 - a. Understand the importance of accurately determining the problem
 - b. Understand the 4 elements of problem definition
 - c. Understand the WHAT
 - d. Understand the WHEN
 - e. Understand the WHERE
 - f. Understand the significance
 - g. Be able to clearly define a problem
- 6. Triggering the RCA & Communicating the problem**
 - a. Understand what the visual definition of the problem is
 - b. Understand where these problems arise from
 - c. Understand the need for objective evidence
 - d. Knowledge of how to determine problem/ incident impact by use of a Risk Assessment Matrix
 - e. Understand the need for a formal process to manage and monitor the RCA process
- 7. Gathering Data**
 - a. Understand the sources of Cause
 - b. Know where to look for Causes
 - c. Understand Cause Triangulation
 - d. Understand the elements of an effective interview
- 8. Cause and Effect Analysis Charting**
 - a. Understand what Reality Cause and effect charting will deliver
 - b. Understand the five elements of a Cause and Effect chart
 - c. Understand the usefulness of simple block flow diagrams to map the process
 - d. Understand the importance of Language (descriptive)
 - e. Be able to create a Reality Cause and Effect Chart.

COURSE CONTENT

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DAY 2

9. Solution Development

- a. Understand the criteria for effective solutions
- b. Understand what is detrimental to creative solutions
- c. Be able to apply a creative solution process

10. Reporting, Communicating Outcomes

- a. Understand how to mitigate risk
- b. Reinforce the need for an accurate accessible repository for plant data
- c. Understand the need for a robust audit trail
- d. Understand how this process can drive continuous improvements by sharing the learning

11. Documenting Outcomes and Leveraging Results

- a. Reinforce the need for an accurate accessible repository for plant data
- b. Understand the need for a robust audit trail
- c. Understand how this process can drive continuous improvement
- d. Appreciate the various options for documentation and data management and the need to use or adapt what fits your individual needs

12. RCA Facilitation and Working As Team

- a. Understand the Company's responsibility
- b. Understand the importance of the right team composition
- c. Understand the need to overcome the limitations of the group
- d. Understand the need for shared ownership and the need for group diversity
- e. Understand the need to challenge and be creative and think outside the square
- f. Manage the group theme – Prevention, not Blame
- g. Understand the non-tangible effects of group participation.

13. Insight to Human Reliability

- a. Understand that the principle finding of many RCAs point to human error, and that error is predominately caused by latent organisational failures. This understanding is key to effectively addressing the root causes and initiating continuous improvements

- b. Gain further insight into the world of Human Reliability (behaviours, attitudes and beliefs)
- c. Gain an understanding of some of the tools and techniques used to help manage Human Reliability.

14. Implementing & Institulising RCA

- a. Understand that most new initiatives need to be managed as a project
- b. Understand what constitutes an RCA Plan and when it is required
- c. Understand that RCA must have a process champion at senior level
- d. Understand the need for continuous improvement of the process, quality control, reporting, corrective action tracking and close out to anchor the process.

15. Consolidation Exercise “Major RCA”

- a. Synthesise and apply knowledge gained to date (thereby reinforcing the process and key concepts)
- b. Share learning ideas and insights
- c. Be able to confidently and capably carry out an RCA
- d. Develop actions to take back to the work place to integrate this new knowledge into your daily activities

16. Outcomes

- a. Close out any outstanding Parking Lot issues
- b. Close out previously identified concerns and issues
- c. Address the need to catch up on any module overrun and any outstanding actions, if required

17. Recap Tools & Techniques & Close Out

- a. Reinforce the process and key concepts
- b. Ensure Course Objectives have been achieved
- c. Ensure all pre identified expectations and concerns have been met or mitigated
- d. Receive feedback on the course
- e. Present participants with course certificate of completion

THE END