

# ROOT CAUSE ANALYSIS

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02 Root Cause Analysis Training \_

### INTRODUCTION

Velosi Training Institute LLC is a subsidiary of Velosi Asset Integrity Limited, which offers a comprehensive range of specialized courses in Certified Technical Training, Exam Preparatory, HSE, Training in Oil and Gas Field, ISO, NEBOSH, IOSH, Food Safety Courses, Administrative & Business-related training, Corporate and Postgraduate Qualifications.

As a globally recognized service and training provider, we strive to share our practical knowledge and skills with our delegates to help them implement industry safety best practices.

Our latest learning tool and technology help our delegates to sharpen their knowledge and support them for the next phase of their careers, whether as a professional or as owners of their own businesses. Velosi courses, which can be deployed virtually through online collaboration, include hands-on technical training, course materials, interactive labs, and troubleshooting exercises.

At Velosi, our most valuable asset is our experienced trainers, who are specialists in their fields and can customize the curriculum to the unique needs of our clients. Our training and education service has various international accreditations, recognitions, and associations to meet worldwide standards and increase the skills and knowledge of our participants.

WE HELP YOU TO BUILD A STRONG FOUNDATION AND SCORE HIGHER



# ROOT CAUSE ANALYSIS (RCA) TRAINING

The Root Cause Analysis (RCA) Training course will teach participants about root cause analysis, a method for identifying and evaluating the causes of problems in order to figure out what can be done to solve or prevent these problems. This course which includes lectures, practice, and role-playing, is aimed to provide participants with a thorough understanding of how to examine a system and discover the core causes of problems.

This course will teach the participants how to diagnose an issue, solve it, and prevent it from happening again. Your company will save time, money, and resources because of this. Don't just bandage a problem; solve it once and for all. The core underlying reason for an issue is known as the root cause.

#### **BENEFITS OF BEING VELOSI CERTIFIED!**



INCREASED JOB OPPORTUNITIES



CAREER ADVANCEMENT



TECHNICAL EXPERTISE



WORLDWIDE RECOGNITION

# EXPERT TRAINERS WITH GOOD TRACK RECORDS!

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# LEARNING OBJECTIVES

#### By the end of this course, participants will learn to:

- Extensively offer a model for more extensively evaluating problem circumstances and improving problem-solving efficacy.
- Distinguish between analytical and creative thinking, as well as when each is most effective
- Encourage the capacity to offer problem-solving assistance in circumstances where one is unfamiliar with the method or technology
- Increase the number of instruments available for problem-solving analysis

### WHO SHOULD ATTEND?

This course is encouraged for a professional who hopes to learn and perform at a higher level but not limited to:

- Quality, safety, risk, and reliability managers, process engineers, technicians, operations supervisors and personnel, process owners, occurrence investigators, analysts, maintenance directors, reliability professionals, and anyone else interested in improving their ability to solve recurring problems.
- Machinery and computer equipment, chemical and associated products, fabricated metals, electronics, transportation, and measurement/controlling sectors are all core manufacturing markets.
- Consulting/business services, financial services, wholesale/retail, transportation, utilities, and government are all service markets that could benefit from this course.

# **COURSE OUTLINE**

#### Module 1 – RCA Problems in the Real World.

- Why most issue-solving models don't get to the base of the problem, and what you can do about it
- The importance of separating and integrating analytical and creative thinking
- A distinction between content and process thinking

#### STEP 1 : Definition of the Problem

- How can you make sure you're working on the proper problem?
- Prioritization tools and filters
- Formulating a clear and comprehensive problem statement (includes practice)

#### **STEP 2 : Understanding the Process**

- Every problem is a result of a process failure
- How a SIPOC diagram can identify interrelationships and create boundaries
- Drilling down into the right area of the process with flowcharts (includes practice)

#### STEP 3 : Determining the Possible Causes

- Five methods for determining possible causes
- There are three ways to choose or eliminate causes
- On steroids, logic trees as a cause-and-effect diagram (includes practice)

#### Module 2

#### **STEP 4 : Data Collection**

- Population vs. sampling; sampling options
- Check discrete data collecting sheets, graphs, and tables
- Opinions or less exact facts collected through surveys, interviews, and field observation

#### **STEP 5 : Data Analysis**

- Tools for analyzing discrete data (Run Charts, Histograms, Pareto Diagram, Modified Scatter Diagram, Pivot Tables)
- Tools for data of a softer kind (Affinity Diagram, Relationship Digraph)
- Tools for integrating data analysis

#### **Case Study Consultation Practice**

- Participants act out a problem and consult with the instructor about it.
- Key learning topics are reviewed.

#### Human Error and Incidents/Events

- What is the difference between incident and accident analysis?
- Human error: causes and solutions

#### **Case Study Application**

Work on a project that is relevant to the participants' organization

#### **Skills in Facilitation**

- Process facilitation vs. expert content
- Roles of facilitators and intervention options

#### Module 3 – Case Study Practice : Work on a Problem that Requires Integration

#### The Continuation of the Problem Process for Resolving Problems

- Finding and evaluating solutions
- The significance of challenges related to organizational transformation management
- Models for analyzing resistance and preparing for change
- Follow-up, standardization, and implementation

#### **RCA Project Management and Organizational Issues**

- RCA-affecting cognitive biases
- Organizational culture's impact
- Supporting structures/roles for RCA

#### MS Excel and Statistical Hypothesis Testing

- What can the t, F, and ANOVA tests do?
- How to do them in MS Excel?
- Using the chi-square test for count data?

#### Drilling Down into the Data

- Perceiving change as a three-dimensional space
- How should the key components of that variation be sliced?
- Which data comparison tools should you use?

# ROOT CAUSE ANALYSIS (RCA) TRAINING

Trainer Qualification	Certified Trainer has over 14 years of Practical Expertise in the field of FPSO, Oil, and Gas, Metal, Mining, Power for Maintenance & Reliability Best Practices. Having over 6 Years of Technical Training in Various filed under Maintenance, Reliability, and Asset Management. Trainer Holds a Bachelor's & Master's Degree in Mechanical Engineering and a certified CMRP, CAMA, CATII VA. The expert trainer takes up courses teaching the internationally recognized Reliability, Asset Management, and Maintenance Certification.	
Mode of Training	<ul> <li>Online Training via Microsoft Teams (Live)</li> <li>Face to Face Training (Class Room)</li> </ul>	
Course Material	<ul><li>Presentation Slides</li><li>Study References</li></ul>	
Number of Participants per Class	<ul> <li>Minimum of 10 students per batch.</li> <li>Course Duration of 25 Hours including examination &amp; clarifications.</li> <li>The training schedule is flexible and will be either in the mornings on the weekends and evenings on weekdays as per Velosi's approved training schedule (for online training).</li> </ul>	
Admission Policy	<ul> <li>The interested participants should register his/her name and other necessary details through Velosi's online registration form or email confirmation to the designated contact person.</li> <li>Payment must be settled in full after the registration process. Payment can be made online through the payment link provided by Velosi or through a bank transfer.</li> </ul>	
Certification Issuance Policy	• The training certificate (Digital Copy) will be awarded to participants who completed the training and passed the exam with an 80% or higher score.	
After Training Support	• Students will be supported in adding value to their respective courses by the trainers. They will be given extra support to enhance their career opportunities with technical support. VTI focuses on supporting and encouraging the students by bringing qualitative knowledge in the technical field. Students can acquire all possible support anytime.	

# GET READY TO ADVANCE YOUR CAREER!

## **TRAINING CATEGORIES**

From Certified Technical training to Post-Graduate Qualification, our training categories let you quickly select your chosen course and ensure you remain at the forefront of developments throughout various industries. Our training program is divided into the following categories:

- 1. Certified Technical Training
- 2. Exam Preparatory Training
- 3. HSE Training
- 4. Training in Oil and Gas Field
- 5. ISO training
- 6. NEBOSH
- 7. IOSH
- 8. Food Safety Training
- 9. Mobius Courses
- 10. CertNexus Courses
- 11. Administrative and Business-Related Training
- 12. Postgraduate Qualifications

## WHY CHOOSE US

At Velosi, we truly believe in helping and going beyond to guarantee our participants to get the value for what they have paid for.

- Four decades of Industry experience.
- Highly professional company and good working relationship with agencies.
- Reasonably priced training and seasonal discounts.
- Adaptable to your course schedule.
- Accessible from anywhere, at any time, on any device of your choice.
- Continuous Assessment of Training.
- Ability to learn at your own time with access to live recordings.
- Incorporate Case Studies from Real-World Situations.
- Trainees are eligible to earn Continuing Professional Development (CPD) credits.



**DIGITAL BROCHURE** 

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#### **GET IN TOUCH WITH US**



