Practical Reliability Institute

Root Cause Analysis (RCA)

REVOLUTIONIZE YOUR OPERATIONS WITH RCA EXPERTISE! WHERE INDUSTRIAL CHALLENGES MEET INNOVATIVE SOLUTIONS.

Available as a Public or Private Workshop

go2learn

"The extensive background of the Latino team in the field of reliability provided value-added input with a wide range of practical experience in formulating solutions to achieve the desired results."

General Manager, Pembroke Cracking Company

"The team at Prelical takes a genuine interest in what people are doing. They have been extremely generous with their time and understanding of the RCA process and their ability to communicate it has been incredibly helpful!"

Physical Security Vulnerability APAC Lead/Risk Management

"The team at Prelical brought a wealth of knowledge to our facility. They were the most impactful group in our 100+ year history at our mill, redirecting our efforts from reactive to proactive."
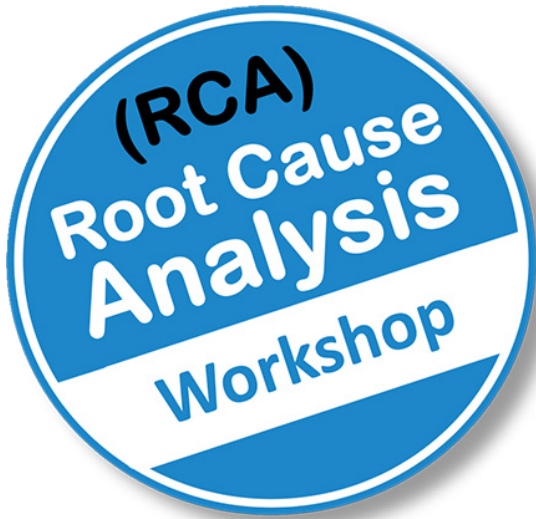
Property Conservation Manager, WestRock Company

"The Prelical team was instrumental in the implementation of our reliability program at our paper mill. Our mill was one of the largest in North America with over 50000 assets and we saw dramatic improvement in MTBF on nearly every class of equipment."

Maintenance Manager, H&M Electric Service

"On behalf of the Syncrude Canada Ltd., Mining Division, I would like to extend our sincere appreciation for the support you and your team provided in helping us incorporate your reliability concepts. We now have a fully functioning reliability program completely integrated throughout the Mine."

General Manager, Syncrude Canada, Mining

Go2Learn's Practical Reliability Institute presents its flagship course, the **Root Cause Analysis Essentials Workshop**. This comprehensive program is meticulously designed to equip professionals with critical skills in identifying and addressing the fundamental causes of issues in various operational contexts. The workshop focuses on practical, real-world applications, ensuring that participants can immediately implement their learning in their work environments. Root Cause Analysis (RCA) is an invaluable tool for improving reliability and efficiency, and this workshop lays a solid foundation for mastering these techniques. Ideal for professionals seeking to enhance their problem-solving abilities, this course marks the beginning of a journey towards operational excellence.

Practical Reliability Institute

- **Root Cause Analysis Essentials**
- Practical Reliability
- Defect Elimination
- Operator Rounds

Workshop has been held in:

- USA
- Canada
- Middle East
- Europe

RCA Essentials Workshop Content

1. **Introduction to Root Cause Analysis**
   Participants will learn proven RCA methodologies and techniques to delve deep into complex issues, enabling them to find effective solutions that prevent recurrence.

2. **Defining an Accurate Problem Statement**
   Participants will learn proper techniques and strategies to ensure they have properly defined the problem in an accurate manner.

3. **Quantifying the Right Problems to be Analyzing**
   Calculate the annual costs associated with chronic failures that are hidden in plain sight and relegated to the budget as a 'cost of doing business'. Chronic failures typically are under the radar of a trigger, but more costly overall.

4. **Data Collection and Analysis**
   Learn effective techniques for gathering and analyzing data to identify contributing factors accurately.

5. **Assembling a Proper RCA Team**
   It is critical to have the right people on an RCA team. We will discuss the roles of both the RCA facilitator and team members.

6. **RCA Methodologies**
   Explore various RCA methodologies, such as 5 Whys, Fishbone Diagrams, Cause and Effect Diagrams, and more.

7. **Human and Organizational Performance**
   Recognize the role of human factors and management system deficiencies in failures and how to address them in the RCA process.

8. **Corrective Action Planning**
   Develop robust action plans to address root causes effectively and prevent recurrence.

9. **Assessing the Quality of an RCA**
   Many leaders don't know how to properly review and assess an RCA presented to them. An assessment 'report card' should be discussed as a job aid to help improve RCA quality.

10. **RCA Case Studies**
    Engage in real-world case studies to apply RCA techniques in industrial contexts.

Introduction
RCA Essentials Workshop

The Root Cause Analysis (RCA) Essentials is dedicated to imparting time-tested methodologies in root cause analysis to industrial professionals. Our flagship offering, the RCA Essentials Workshop, is meticulously structured to deepen understanding and enhance skills in identifying and addressing the fundamental causes of operational challenges.

RCA Essentials specializes in transforming industrial professionals into problem-solving experts. The RCA Academy is an interactive workshop, and designed to provide in-depth knowledge and practical skills essential for pinpointing and rectifying the core issues in industrial operations.

RCA Essentials Overview

In-Depth Understanding of RCA: Delve into the bedrock principles of Root Cause Analysis, exploring its critical role in systematic problem-solving within various industrial sectors.

Long-Established RCA Techniques: Gain expertise in well-established RCA methods such as 5 Whys, Fishbone Diagrams, and Fault Tree Analysis, proven to be effective in a myriad of industrial scenarios.

Data Collection & Analysis Mastery: Learn to meticulously gather and analyze data, an essential step in accurately pinpointing root causes.

Focus on Human & Organizational Factors: Understand the impact of human behavior and organizational culture in contributing to industrial incidents and how RCA addresses these aspects.

Development of Action Plans: Equip yourself with the skills to create comprehensive corrective action plans that effectively address root causes and prevent their reoccurrence.

Application Through Case Studies: Engage with real-world case studies that offer practical experience in applying RCA techniques in diverse industrial contexts.

Enhanced Learning Experience

The RCA Essentials is more than just lectures; it's an interactive experience combining expert-led discussions, group workshops, hands-on exercises, and case studies. Participants are encouraged to bring examples of challenges from their work environments for a more personalized and relevant learning experience.

Root cause analysis is not about temporary fixes; it's about finding and solving the core of a problem. In an industrial context, this means:

- L**ong-Term Solutions Over Quick Fixes**: RCA enables professionals to move beyond surface-level solutions and develop strategies that address the heart of the problem.

- **Cost Efficiency & Reduced Downtime:** By targeting the root cause, organizations can significantly reduce recurring costs and prevent operational interruptions.

- **Safety & Quality Improvement:** A thorough RCA approach leads to safer working environments and enhanced quality of products or services.

- **Sustainable Continuous Improvement:** Embedding RCA within organizational practices ensures ongoing improvement and adaptation to new challenges.

Who Should Attend

The RCA Essentials is designed for a wide range of professionals across various industrial sectors such as manufacturing, pulp and paper, oil and gas, mining, transportation, energy, utilities, and construction. It is particularly beneficial for engineers, supervisors, safety personnel, quality assurance professionals, maintenance teams, and managers focused on operational excellence and process improvement.

Logistics:
Program Dates, Location, Tuition Fee & Registration

Program Availability

RCA Essentials will be available publicly in 2024:

- **October 1 - 2, 2024**

Private courses are scheduled with 12-16 weeks lead-time. Scheduling can be tailored to the participants' availability.

Email for details: info@go-2-learn.com

Tuition $USD

Private Workshop avaliable at your location. Email us for details at: info@go-2-learn.com

Public Workshop:
  1 attendee: $ 2,695.
  2 + attendees: $ 2,395. each
  3+ attendees: $ 1,995. each

How to Register

Call +1 917 414-2933 or visit
RCA Essentials

Instructors:

Kenneth C. Latino

Ken Latino had extensive Maintenance and Reliability experience in both continuous process and batch manufacturing plants. His work has helped large asset intensive companies to increase production rates and reduce maintenance costs while improving safety and environmental performance.

He has an extensive background in Root Cause Analysis (RCA), Reliability Improvement work processes, Reliability Centered Maintenance (RCM), Failure Modes and Effects Analysis (FMEA) and a host of other areas of Asset Performance Management (APM).

Ken also has a strong background in the use of SAP PM/GE Digital (Meridium) APM and has developed enterprise-level work processes and tools to improve asset performance. These tools and work processes include tank integrity management, motor management, RCA, paper machine roll management and history, maintenance budget forecasting and analysis and many others.

Ken is the Co-Author of Root Cause Analysis: Improving Performance for Bottom Line Results (5th Ed., June 2019, c. 331 pp., ISBN: 13:978-1-138-33245-4, Taylor & Francis)

Robert J. Latino

Robert J. (Bob) Latino is currently a Principal with Prelical Solutions, LLC (www.prelical.com). Bob is a former owner and CEO of Reliability Center, Inc. (RCI). This was the Latino family business which was founded in 1972 by Charles J. Latino. RCI is still currently a Reliability Consulting firm specializing in improving Equipment, Process and Human Reliability, after being acquired in 2019.

Bob has been facilitating RCA analyses with his clientele around the world for over 38 years. He has taught well over 10,000 students in 30+ countries, the PROACT® RCA Methodology and associated software solutions. He is the author or co-author of ten (10) books related to RCA, Reliability, FMEA and/or Human Error Reduction. Bob is an internationally recognized author, trainer, software developer, lecturer, and practitioner of best practices in the field of Reliability Engineering with a specialty in all aspects of a holistic Root Cause Analysis (RCA) system.

Bob currently serves on the Board of Directors for CHOL (Community of Human and Organizational Learning - https://www.cholearning.org/). He also has a book series entitled, 'Reliability, Maintenance, and Safety Engineering: A Practical View of Getting Work Done Effectively' for CRC Press/Taylor & Francis (www.taylorandfrancis.com).

Section One

Introduction to Root Cause Analysis (RCA)

This workshop is designed to demonstrate a systems view of RCA. RCA is not simply a task to be conducted only when something fails. RCA is a critical element of a holistic Reliability Engineering process. Analysts will learn you cannot have quality RCA outputs without quality inputs. RCA is about conducting analyses on the right type of undesirable outcomes, at the right time. An effective RCA system will demonstrate, on average, 600% ROI, making it a self-funded effort when applied properly.

Section Two

Defining an Accurate Problem Statement

In our experience, 80% of the time we were called upon to assist in an RCA by our clients, the 'problem' they were working on was a symptom, and not the true problem at hand. Many consider taking the time to develop a proper 'Problem Statement' a waste of time. However, the old adage applies here, "We NEVER seem to have the time and budget to do RCA right, but we ALWAYS seem to have the time and budget to do it again". Taking the time to develop a proper Problem Statement will reduce the risk of having to do it again when the failure recurs.

Section Three

Quantifying the Right Problems to be Analyzing

Analysts have to recognize the RCA end game. At the end of this analytical process, we will be asking leadership for funds to implement corrective actions. Typically, such leadership personnel will be finance-minded individuals. Therefore, we need to speak their language, which is the language of 'money'! In this workshop we will teach analysts how to calculate the total annual loss of the undesirable outcome they are working on, in order to begin making their business case. Analysts will also be made aware that ROI is not always in hard dollars, but also conveyed in the form of reduced risks.

Section Four

Data Collection and Analysis

The majority of the time it takes to conduct a full-blown RCA is spent on data collection. This is true of any investigative occupation. So it stands to reason that when RCA analysts are time-pressured to complete the analysis, their shortcuts will be taken from the time to gather evidence. Analysts will be taught how to develop and execute a disciplined data collection strategy prior to entering the analysis phase of the investigation. They will come to realize it is nearly impossible to accurately reconstruct a failure event with little to no data.

Section Five

Assembling a Proper RCA Team

Contrary to popular belief, the 'technical expert' in the nature of the failure at hand, should NOT be the RCA team leader. Such individuals tend to 'already know the answer' and view the formality of the team as a waste of time. As a general rule of thumb, if an RCA team leader has anything to lose or gain by the outcome of the analysis, they should not be leading it. Also, an ideal RCA team will have a diversity of backgrounds as well as levels in the organization. The key to an effective RCA team is to be acutely aware of potential bias and to minimize it!

Section Six

RCA Methodologies

After collecting data and gathering a proper RCA team, it is now time to reconstruct the failure (undesirable outcome). Depending on the severity of the bad outcome, different tools will be employed, some more intensive than others. Not all failures require in-depth RCA. In this section we will discuss what 'triggers' are in place at their facilities that will require a full-blown RCA, and which will lean more towards a Defect Elimination type of approach. Analysts will learn the technical pros and cons between the 5 Whys, Fishbone Diagrams, and Causal Factor Trees/Logic Trees. Each has its strengths and limitations, and it is critical to know which tool is appropriate for the failure at hand.

Section Seven

Human and Organizational Performance

In Section Six we discussed appropriateness of tools for graphically expressing event reconstruction. For the events that resulted in more severe outcomes, analysts will be taught about the need to delve deeper into the root systems and identify human and organizational performance issues. Virtually all undesirable outcomes will involve decision-making that triggered an unintended path forward. A true RCA will seek to thoroughly understand why the decision made sense to that person at the time. Typically, the decision was made with good intent, but the information on which the decision was based (management systems), was less than adequate. We will also explore how shortcuts that initially work to save time and production often become the norm…until they don't work one day!
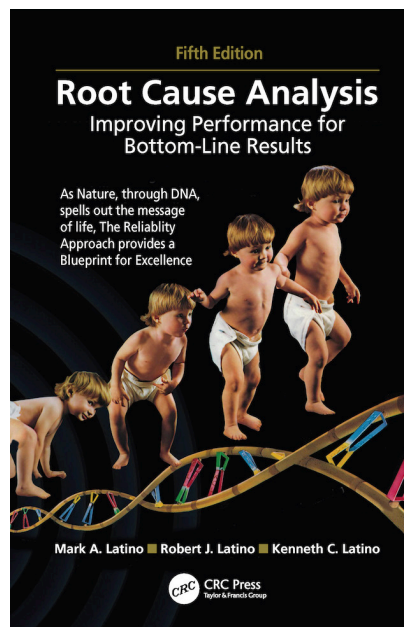
Section Ten

RCA Case Studies

Analysts learn from 'doing', not 'talking'. This workshop will be heavily involved in real-time engagement with the analysts. Analysts will be encouraged to bring to the workshop failures/problems that are currently on their plate. They will be applying what they learn directly to events where they have a vested interest in making them go away. For those funding the RCA workshop, this demonstrates that the potential for producing significant ROI's starts in the classroom!! The instructors will certainly have case studies from their own backgrounds, and from the industries the analysts will be familiar with, but the focus of the workshop is for the analysts to start solving their own failures/problems, using what they have learned.

Section Eight

Corrective Action Planning

In this section we will discuss how if we fail to execute our corrective actions, all our previous work was for nothing. Developing the appropriate corrective actions, getting approvals to execute them, assigning persons responsible a due date (and completion date) are critical to a successful RCA system. Absent the proper execution of such corrective actions, it is impossible to prevent the risk of recurrence which is a very dangerous and unsafe proposition.

Fifth Edition

Root Cause Analysis
Improving Performance for Bottom-Line Results

As Nature, through DNA, spells out the message of life, The Reliablity Approach provides a Blueprint for Excellence

Mark A. Latino   Robert J. Latino   Kenneth C. Latino

CRC CRC Press
Taylor & Francis Group

Section Nine

Assessing the Quality of an RCA

When leadership authorizes funds to support an RCA effort, they expect to see bottom-line results that justify the activity. As we spoke about in Section Three, quantifying the annual losses, we will now have to make a business case for the effectiveness of the RCA effort. For every $1 invested in an RCA effort, on average, leadership should expect to see a $6 return. However, we will discuss the many reasons those returns are not realized. One of those reasons is that leadership often has no idea what their analysts are learning from root cause analysis. Therefore, when RCA teams present their findings, leadership doesn't know how to assess the quality of the RCA. In this section we will teach analysts (and leadership) what to look for in an RCA and how to quantifiably assess its quality. We don't blame as much those who do poor analyses as we do those who accept them!

Note: All attendees will receive a copy of the best-selling text by the authors, "Root Cause Analysis: Improving Performance for Bottom-Line Results (5th Ed)", which comprehensively addresses the learnings from the workshop (and much more).

Benefits of Attendance

- **Master Problem-Solving Techniques:** Learn cutting-edge RCA methodologies to dissect complex issues and implement effective, lasting solutions.

- **Minimize Downtime & Expenses:** Acquire skills to identify root causes, leading to streamlined processes, reduced downtime, and significant cost savings.

- **Elevate Safety & Quality:** Develop strategies to uncover and mitigate the fundamental causes of incidents, ensuring safer work environments and superior quality of products or services.

- **Embrace Continuous Improvement:** Incorporate RCA into your continuous improvement strategies, helping your organization to evolve and meet emerging challenges.

How You Will Learn

Dynamic Workshop Experience

Experience a blend of expert-led presentations, dynamic group discussions, hands-on activities, and insightful case studies. Our workshop encourages participants to bring real-life industrial challenges for a more tailored and impactful learning experience.

Embrace the fundamentals of root cause analysis with the RCA Academy. Transform your approach to industrial problem-solving by grounding yourself in the proven methodologies that have stood the test of time.

Deliverables

Root cause analysis is a critical process in any industrial setting, as it enables organizations to address issues at their source rather than merely treating symptoms. By attending this seminar, industrial professionals can:

- Enhance Problem-Solving Skills
- Reduce Downtime and Costs
- Improve Safety and Quality
- Foster Continuous Improvement

Root Cause Analysis Essentials – Where Time-Honored Techniques Forge the Path to Operational Excellence.

Course details are subject to change.
For the most up-to-date information, please see our website at:
go-2-learn.com

Delierd by: **Prelical** Practical Reliability Solutions

Presented by: **go2Learn**