

Pragma Academy

Smart learning for Smart Asset Management



Structured Problem Solving

 pragma

This course gives learners a structured methodology to solve problems. It uses the define, measure, analyze, improve, and control (DMAIC) methodology and provides learners with a variety of supporting tools which are applied practically during each of the DMAIC steps.

About this course

Identifying problem areas compromising business performance and either eliminating those business risks or if unavoidable, managing these risks through the application of cost effective solutions, is a requirement for continuous improvement.

Remain abreast of the latest techniques and strategies for “focused” interventions to make substantial improvements in specific aspects of asset management. This high impact, hands-on course will equip dedicated teams with the necessary knowledge and skill to identify problems and implement effective solutions to prevent problem reoccurrence.

The course gives an in depth view of the fundamental aspects of problem solving with the specific objective of creating a structured and practical process for solving problems. It is essential for anyone responsible for the management and maintenance of physical assets, who aims to succeed and thrive in today’s highly demanding environment.

This training course is aligned with the GFMAM’s 39 Subjects with a specific focus on the subject of fault and incident response.

Course Outcomes

At the end of this course learners will be able to:

-  **Introduction to structured problem solving**
Explain structured problem solving principles in context with other related improvement principles.
-  **Define**
Develop a clear, concise problem definition.
-  **Measure**
Explain the current process and measure the current performance.
-  **Analyse**
Use recognised analytical techniques with proper verification to find the real root causes of problems before proposing any solutions or jumping to conclusions.
-  **Improve**
Select the best approach to solve the problem.
-  **Control**
Explain how to implement the best solution.
-  **Focused improvement example**
Perform a number of practical exercises.
-  **Managing the improvement process**
Explain how to manage the improvement process.

Introduction to structured problem solving

This module forms the framework for the rest of the course and provides insight into:

- structured problem solving in context with other related improvement principles
- identify where to focus improvement activities
- introduction to the problem solving steps and its incorporation in the organisational structure.

Define

The key steps to follow to:

- develop a clear, concise and exact problem definition
- determine the significance of the problem
- define the goals and targets for the project.

Measure

Understand the current process and measure the current performance: gather and interpret data and facts in a structured fashion, rather than relying on opinions, intuition or perceptions.

Analyse

The essence of effective problem solving which is often neglected.

- Identify potential causes for the problem
- Use recognised analytical techniques with proper verification to find the real root causes of problems before proposing any solutions or jumping to conclusions.

Improve

Select the best approach to solve the problem.

- Prove and verify solutions using a pilot implementation prior to executing full-scale implementation
- Implement sustainable long term countermeasures.

Control

The implementation of the best solution.

- Formalise solutions to make them sustainable
- Roll out to other similar assets and areas
- Complete the project and hand over the improved process to the process owner, with procedures for sustaining the gains
- Continue to monitor key performance indicators to confirm that the problem solving solution was successful and achieved the desired results.

FI project example

- Witness the practical application of the problem solving steps employing an exciting real world case study.
- Perform a number of practical exercises to simulate the application of the theory in a real world situation.

Managing the improvement process

We look at an improvement process that assists with:

- identifying possible improvement projects
- prioritising the identified projects
- choosing a relevant project team
- ensuring lasting improvements are implemented.





Who should attend?

- Senior managers and executives
- Reliability engineers
- Asset and maintenance managers
- Project engineers
- Production and operations managers
- Maintenance and production engineers
- Cross-functional teams involved in improvement projects



Format and duration

- 3-day classroom training
- 24 notional hours: blended learning comprising 6 x 4 hour virtual classroom sessions and online learning



Take-home tools

- A3 project report
- Storyboard template



Certification

- Learners completing this training can obtain SAAMA CPD points.



RECOMMENDED PRIOR LEARNING

Fundamentals of Maintenance Management



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