

QC TOOLS AND TECHNIQUES



Introduction

Manufacturers can choose from a variety of tools to improve their quality processes. The trick is to know which tools to use for each situation.

Once the basic problem-solving or quality improvement process is identified, the appropriate tools can be used by any professional to ease the quality improvement process, such as: flowcharts, check sheets, Pareto diagrams, cause and effect diagrams, histograms, scatter diagrams, and control charts.

However, the concept behind the basic QC tools came from Kaoru Ishikawa, a renowned quality expert from Japan. According to Ishikawa, 95% of quality-related problems can be resolved with most basic tools. The key to successful problem solving is the ability to identify the problem, use the appropriate tools based on the nature of the problem, and communicate the solution quickly to others. Inexperienced personnel might do best by starting with the Pareto chart and the cause and effect diagram before tackling the use of the other tools.

The most common process for quality improvement is the plan/do/check/act cycle outlined below.

P - Plan	<ol style="list-style-type: none">(1) Define a problem or opportunity(2) Analyze the situation. Study and define the problem, brainstorm for causes and corrective action; and think creatively to determine the best approach and best possible corrective action(3) Develop an implementation plan
D - Do	<ol style="list-style-type: none">(1) Implement corrective action(2) Document the procedure and observation(3) Use data gathering tools to collect information
C - Check	<ol style="list-style-type: none">(1) Analyze information(2) Monitor trends(3) Compare obtained results against expected results from the plan
A - Act	<ol style="list-style-type: none">(1) If the results are as expected, do nothing(2) If the result is not expected, repeat the plan/do/check/act cycle(3) Document the process and the revised plan

Objectives

At the end of the training, participants will be able to understand the importance of Quality in their workplace, the cost of poor quality and the many tools available and what are the ones suitable for their work area and how to use them effectively for analysis and problem solving.

Who should attend

This course is suitable for individuals who are either in product engineering, quality, project or manufacturing environment. It is especially beneficial for those are involved in quality system and any improvement initiatives.



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Course Contents

1. What is Quality?
 - Quality of Design
 - Quality of Conformance
 - Quality Control Circle
 - Cost of Poor Quality
 - Total Quality Control
 - QC Circle Tools.
2. PDCA Concept (see example as above)
3. Data collection and Analysis
4. Brainstorm
5. Pareto Analysis
6. Cause-and-effect diagram
7. Pie and Bar chart
8. Flow Chart
9. Gantt Chart
10. Tree Diagram
11. Affinity Diagram
12. Matrix Diagram
13. Interrelationship Digraph
14. Activity Network Diagram
15. Contingency Diagram
16. Problem Solving
 - 5 Ways
 - 8 Discipline

This programme also focus on hands on and applicable training. It will be a very interactive workshop, hence participants must be prepared to share and contribute to the exercises.

Duration

2 days | 9am – 5pm | 14 hours

Course Fees

Member: S\$406.60
Non-Member: S\$428.00
Registration Fee of S\$17.12 apply
All fees stated are inclusive of 7% GST

Award of Certificate

Certificate of Completion will be issued to participants who have attended at least 75% of the course.



Please refer to this URL
<https://www.sqi.org.sg/courses/>
or QR Code for soft copy
and updated training schedule

Membership Application

Register membership online at www.sqi.org.sg/membership-join/ or contact us to get the membership application form.

Membership Categories:
~ Organisation membership
~ Individual membership

SQI International is a subsidiary of Singapore Quality Institute (SQI). SQI operates as a non-profit professional institute that promotes and advances excellence in the field of quality in Singapore; and actively champions quality initiatives in the region and around the world through networking and collaborating with other international quality organisations.

SQI is a World Partner of the American Society for Quality (ASQ); and a Board Member of both the Asian Network for Quality (ANQ) and the World Alliance for Chinese Quality (WACQ).



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