2 – DAY
ANALYTICAL THINKING, PROBLEM SOLVING AND DECISION - MAKING SKILLS

Introduction

It is really everyone's job to effectively solve problems at the workplace. Analytical thinking, problem solving, and decision-making skills are essential for today's businesses which are thriving on uncertainty and dealing with complex challenges.

Analytical thinking is the mental process of breaking down complex information or comprehensive data into fundamental parts or basic principles. They are used in detecting patterns, brainstorming, observing, interpreting data and making decisions based on the multiple factors and options available. They also involve deductive reasoning, drawing conclusions from givens and applying judgments to reach conclusions from a combination of evidence and assumptions.

This workshop equips individuals with the key thinking processes so that they can successfully anticipate, analyse and solve a wide variety of business problems. They will also learn to assess risks and make appropriate decisions through a series of exercises, activities and group work.

Course Objectives

By the end of this course, you will be able to:

- Get a roadmap with tools and techniques to develop analytical thinking skills
- Learn to use analytical thinking skills in solving problems, assessing risks and making decisions
- Improve skills in rational thinking, inductive and deductive reasoning
- Anticipate problems and analyse the environment, threats and opportunities
- Conduct root cause analysis to identify and pinpoint problems
- Learn techniques to generate alternatives and solutions required
- Evaluate the evidence to identify the best opportunity or most rational solution/ decision
- Communicate findings and recommendations clearly

Methodology

- Expert Input, Demonstrations and Presentations
- Practice Sessions and Role Play
- Group Discussion, Brainstorming and Sharing Sessions
- Quizzes, Challenges and Competitions
- Question-And-Answer Sessions
- Case Studies and Exercises (Individual and Group)
- Visualisation and CD Experience
- Practical hands-on Sessions – Think Outside The Box Activities, Stress Busters, Changing States, Positivity Exercises, Feel Good Activity and Virtual Games

Who Should Attend?

- Staff who want to learn to be a solution provider for their companies
- Managers, Executives, Supervisors, Engineers
- Support, Administrative Personnel

Course Outline

MODULE 1: NEED FOR EFFECTIVE THIKING COMPETENCIES & PROBLEM-SOLVING PROCESS

- Understand brain dominance and thinking styles
- Concepts: anticipate problems and analyse the environment
- Recognition: identify problems with root cause analysis
- Possibilities: generating alternatives and implementing solutions
- Judgment: assess risk and calculate impact against probability
- Analysis: comparison and evaluating choices
- Implementation: design a way forward
- Group discussion and presentation

MODULE 2: STEPS FOR ANAYTICAL THINKING

- Classifying, sequencing, shifting and grouping data
- Data mining – identifying the key issues, focusing on facts and evidences
- Assessing bias and challenging unsubstantiated assumptions
- Making inferences and filling in the gaps
- Verifying evidences to propose recommendations for action
- Using cases studies, exercises and online activities

MODULE 3: DEVELOPING ANALYTICAL THINKING SKILLS

- Learn the skill of comparative analysis
- Be able to dissect and diagnose based on various symptoms
- Examine correlations, determining causal relationships
- Investigate and check on accuracy to solve a problem
- Utilise process analysis to obtain the necessary clarity required
- Group project and challenge

MODULE 4: TECHNIQUES TO ANTICIPATE PROBLEMS & TO ANALYSE THE ENVIRONMENT

- What constitute the environment?
- Learn to compare, contrast, connect and combine
- Determine the deviation and gap
- Identify and resolve strengths and weaknesses
- Anticipate opportunities, possibilities, limitations and threats
- Activity: Bring your work problems to the workshop so that you can produce ideas and results with 3 techniques

MODULE 5: TECHNIQUES TO RECOGNISE AND IDENTIFY PROBLEMS – TESTING PROBABLE CAUSES

- Root Cause Analysis – 5 Why Diagram and 5W1H
- Undertake comparative analysis, examine correlations, determine causal relationships
- Explore the problem from various angles/ viewpoints and to generate different perspectives
- Determine the 20% fundamental causes that will resolve 80% of the problem and to choose the most important changes to make
- Group Project: effective techniques to help you identify, pinpoint and confirm problem areas, where the problems are coming from
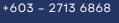
MODULE 6: TECHNIQUES TO GENERATE ALTERNATIVES & SOLUTIONS REQUIRED

- Use a variety of tools and techniques to generate the solutions and outcomes required
- Apply a technique which involves breaking the problem into smaller parts and to seek alternative solutions to these parts – a good tool for incremental innovations in a product/ service
- Use SCAMPER to stimulate and trigger thinking, ideas and outcomes required
- Learn 2 techniques to solve complex and complicated problems
- Group Project: practical techniques to help you generate alternatives and obtain the solutions required

Course Outline

MODULE 7: TECHNIQUES TO ASSESS RISKS & ITS IMPACT

- Work on a practical approach to map your organisation's business processes
- Create a diagram or chart to determine a course of action or show a statistical probability
- Probability and Impact Matrix to aid in prioritising risks and the high probability/ likelihood of occurring which will have a high impact on the project objectives
- Weigh the expected risks and rewards to arrive at an optimal statistical design based on the trade-offs involved
- Group Project: excellent techniques to help assess risks and its impact

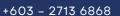### MODULE 8: TECHNIQUES TO ANALYSE & MAKE DECISIONS

- Analyse the alternatives and results generated
- Choose among alternatives for organisational benefit and maximum buy-in
- Assign weight to objectives to make the best decision
- Create a satisfaction scale to choose between alternatives
- Group Work: brainstorming, discussion and presentation