N845: Creative Problem Solving for Technical Professionals

Instructor(s): Helen Hill

2 Days	Competence Level: Not Applicable
Classroom Course	

Summary

This course will equip participants with highly practical tools and methodologies to become more creative and effective problem solvers. It is ideal for anyone who encounters complex technical problems, whether as individuals or in groups, across the full lifecycle of the E&P business. Participants leave with an action plan that can be immediately used when they get back to work.

Learning Outcomes

Participants will learn to:

1. Assess the real issues underlying complex problems.
2. Prioritise complex problems to focus time and effort.
3. Evaluate personal preferences regarding innovation and creativity and remove personal and organisational blocks to creativity.
4. Use the 6-Step problem solving framework.
5. Use a variety of creative tools and techniques to produce more creative and innovative solutions.
6. Become more creative in their everyday work.
7. Evaluate the best solutions using objective decision making tools.
8. Conduct creative problem solving sessions with colleagues.
9. Engage stakeholders in the problem solving process.

Duration and Training Method

A two-day classroom based course. This course is interactive and highly practical. It uses group discussions, creative thinking techniques, models, frameworks and exercises where participants use the tools and techniques on their real life situations.

Who Should Attend

This course is designed for those who are responsible for solving complex problems in the E&P business.

Prerequisites and Linking Courses

Think about a current complex problem at work: what has been done to try and solve it; what are the difficulties and who else is involved? Please bring these ideas with you to the course.

Course Content

When faced with complex technical problems, landing quickly on a solution is rarely the best strategy. In order to create the best solutions that effectively address all the key issues, problems need to be clearly defined and success criteria established before a range of creative solutions are developed and refined. These creative solutions need to be evaluated to decide which ones to implement.

N845: Creative Problem Solving for Technical Professionals

Instructor(s): Helen Hill

2 Days	Competence Level: Not Applicable
Classroom Course	

Day 1

Getting Started

- Exercise on multiple right answers/complex problems versus contained problems
- Introductions. Purpose, process and pay-off
- Participant objectives and current key problems

6 Step Problem Solving Framework Overview

- Reasons for a framework
- Set stage that will explore the framework with tools and techniques at each stage
- Using the right technique at the right time

Awareness

- Identify innovation preference and implications
- Evaluate types of blocks to problem solving and how to remove them
- Gauge mind-sets and opportunities to enable creative problem solving
- Analyse the situation from many angles using PESTLE
- Participants apply to own real situation

Defining the Real Problem

- Break down complex problems using Fishbone Analysis and 'How to...' statements to focus efforts on the real issue and prioritise which problem to solve short, medium and long term
- What does success look like? - Defining the outcome
- Analyse stakeholder involvement and need for engagement in the problem solving process
- Participants apply to own real situation

Creating a Range of Innovative Solutions

- Discuss need for a range of methods for stimulating original thought outside of established approaches
- Warm up to remove blocks
- Reversal and springboard technique
- Participants apply to own real situation

Homework

- Review Day 1 learning
- Bring any questions to day 2

Day 2

Review Day 1

- Q & A
- Key learning points

Creating a Range of Innovative Solutions (continued)

- Analogy Analysis technique
- Brain writing pool technique
- Participants apply to own real situation

Judging the Best Solution

- Objective decision making and implications
- Feasibility/attractiveness matrix
- Force Field Analysis
- 6 hats
- Participants apply to own real situation

Implementation and Stakeholder Mobilisation

- Selecting strategy for key stakeholders
- Utilise the change equation to tailor approach that will be most effective
- Participants apply to own real situation

Review Problem Solving

- Importance of review and capturing learning
- Managing own reputation
- Participants apply to own real situation

Action Planning

- Personal action plans
- Participants critique each other's plans in pairs
- Share in wider group