



## ► Innovation Acceleration TRIZ Training

Using the Theory of Innovative Problem Solving to improve your innovation efforts

**T**RIZ has recently gained western popularity as a powerful business tool for enhancing innovation and creativity. TRIZ, which is the Russian acronym for the "Theory of Inventive Problem Solving," is a structured approach to managing innovation that puts a scientific process behind problem solving so individuals can generate more solutions of a higher quality, in less time.

Many Fortune 500 companies use TRIZ in everyday business to:

- ❑ Generate new ideas and solve problems faster
- ❑ Forecast technologies and track product evolution
- ❑ Build stronger patents and work around existing ones
- ❑ Maximize the potential for new product success
- ❑ Streamline the use of resources
- ❑ Improve understanding of customer requirements
- ❑ Save time and money when developing new products



TRIZ complements performance improvement programs because it focuses on finding innovative new solutions rather than fixing problems inherent in an existing process. TRIZ is especially useful for new product development teams and in operational environments, but can be used in just about every situation to accelerate and streamline innovation and problem solving.

### AT A GLANCE

#### Course Length:

4 consecutive days.

#### Who Should Attend:

Anyone with a problem they have not satisfactorily resolved. Designers, engineers, R&D professionals and managers involved in product development or in process-based problem solving.

#### Course Requirements:

A laptop computer, pre-reading and definition of problems for in-class use.

#### Certification Requirements:

Course attendance and participation, completion of assignments, and successful completion of exams.

#### CEUs:

BMGI is authorized by IACET to offer 3 CEUs for this program.

### Course Description

BMGI's four-day Basic TRIZ program offers an intensive introduction to the foundational elements of TRIZ. The curriculum covers the three basic tenets upon which TRIZ was built: the concept of the Ideal Final Result (IFR), which suggests that systems evolve to perfection; the use of resources to maximize effectiveness within a system; and the idea of contradiction elimination as the primary evolution driver. In the workshop, students gain an understanding of these primary tenets and how to use them to solve problems quickly and innovatively.

Inside the classroom, students learn the history of TRIZ and participate in discussions on the importance of innovation and creativity within organizations. They learn how typical idea-generating systems such as brainstorming lack consistency due to their emotional and psychological biases.

The basis of the class is to teach students how to use the empirically-based TRIZ methodology to generate new ideas in ways that are repeatable, reliable and predictable.

"I was extremely pleased with BMGI's TRIZ training and I'm eager to incorporate it in my Six Sigma program. The future of Six Sigma will be influenced and advanced through a structured objective problem-solving methodology as TRIZ demonstrates."

- Ray Daines  
Director, Process Improvement  
American Red Cross

### KEY LEARNING OUTCOMES

- ❑ Explain TRIZ as a problem-solving methodology.
- ❑ Define the Levels of Innovation and explain their importance.
- ❑ Understand and explain psychological inertia.
- ❑ Identify and define problems in terms of contradictions.
- ❑ Resolve contradictions using the Contradiction Matrix Theory, Separation Principles and the System Approach.
- ❑ Create a function model of a system and use it for contradiction identification and resolution.
- ❑ Explain and use Polovinkin's Heuristics.
- ❑ Understand and practice a number of key TRIZ concepts such as:
  - Zones of conflict
  - Functional Analysis
  - System Constraints
  - The Ideal Final Result & Ideality
  - The Utilization of Resources

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### Agenda

This four-day program covers the basic concepts of TRIZ and shows how to implement the methodology to solve problems. Significant class time is devoted to interactive problem solving using real problems. Every day, students put their new skills to use on problems they bring to class using the principles of TRIZ,

#### ► Day One

- Psychological Inertia
- The Ideal Final Result/Ideality
- The Technical Contradiction
- Interactive Problem Solving

#### ► Day Two

- Physical Contradiction
- Contradiction Conversion
- Modeling by Nine Screens
- Interactive Problem Solving

#### ► Day Three

- Resources
- Derivation & Modulation of Resources
- Interactive Problem Solving Workshop
- Introduction to Function Model
- Afternoon TRIZ Field Trip

#### ► Day Four

- Field-Trip Debrief
- Function Modeling



"The way to increase your company's innovation value proposition is to take control of it yourself, not to outsource it... Basically, innovation isn't and shouldn't be a sometimes thing, driven by the bright few and held back by the average many. Rather, innovation should be an all-the-time thing driven by trained people in every part of the organization. With such collective momentum, an organization breaks the stronghold of its own inertia and creates a true force of continuous evolution."

- from *INSourcing Innovation: How to Achieve Competitive Excellence Using TRIZ* by David Silverstein, Neil DeCarlo and Michael Slocum, Taylor & Francis Group, LLC (2008)

BMGI holds this class regularly in cities around the world.

Classes can also be scheduled on-site for groups of six or more.

Curriculum is available for licensing.



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