



# Basic TRIZ (Theory of Inventive Problem Solving)

Finding creative solutions to complex problems



## Course At-A-Glance

**Appropriate For:** Anyone with a problem they haven't satisfactorily resolved as well as designers, engineers, R&D professionals and managers involved in product development or process-based problem solving

**Length:** 5 consecutive days, 36 hours of instruction

**Cost:** \$3,575, €2,999, £2,599

**CEUs:** 3.6

## About Basic TRIZ (Theory of Inventive Problem Solving)

A powerful problem-solving method, TRIZ relies on the study of patterns of problems and solutions to overcome barriers and derive creative solutions. Formerly used by researchers and scientists, today TRIZ is used by companies every day to generate new ideas, improve customer insight, solve problems faster, forecast technologies, track product evolution, develop intellectual property, build stronger patents, improve new product success, streamline resources, and generally save time and money.

This course is an intensive introduction to the foundational elements of TRIZ, covering such topics as the Ideal Final Result (IFR), the use of resources to maximize effectiveness within a system, and the idea of contradiction elimination as the primary driver of human progress and innovation in business.

A unique hallmark of this course is that it doesn't teach TRIZ as a detached system or set of tools but as part of a larger problem solving context so participants understand, for instance, when one needs a TRIZ tool versus a Six Sigma tool versus a creative thinking technique.

Additionally, relative to university-based alternatives, this course has a definite applied focus, making it much more

*"One of the best weeks of training and tools (methodology) I've ever been exposed to. TRIZ is invaluable, if not in the tools, then certainly in the mindset and approach it offers to shift paradigms regarding problem-solving."*

**- Thomas Deasy - Director of Engineering and Operational Excellence, Extant Aerospace**

valuable to those with an imperative to solve specific problems or make product, process and business innovations in real organizations on a more pervasive scale.

Participants are encouraged to bring problems and contradictions from their organizations to class. Whether you're from a manufacturing, service, transactional, healthcare or research environment, instructors are experienced in applying TRIZ in all of these domains and challenge participants to extract the most value from the learning experience.

## Learning Objectives

Upon completion of this course, participants will be able to:

- 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 elements, such as:
  - Zones of conflict
  - Functional Analysis
  - System Constraints
  - The Ideal Final Result & Ideality
  - The Utilization of Resources

## Agenda

### Day One

Foundations

- Introduction & Agenda
- Learning Styles
- Introduction to TRIZ
- Psychological Inertia

TRIZ Analysis Techniques

- Ideality
- Ideal Final Result
- Resources

Simulations

### Day Two

TRIZ Analysis Techniques

- Nine Screens
- Functional Analysis

TRIZ Database Techniques

- Technical Contradictions

Simulations

### Day Three

TRIZ Database Techniques

- Physical Contradictions
- Contradiction Conversion
- Scientific Effects
- Su-Field Modeling

Simulations

### Day Four

TRIZ Database Techniques

- Trend Analysis and Forecasting

Algorithm of Inventive Problem Solving (ARIZ)

Hands-On Inventive Problem Solving

### Day Five

Field Trip

- Identification of Inventive Problems
- Discovery of Inventive Principles

Hands-On Inventive Problem Solving

Wrap-Up

To register for this course, visit [leanmethods.com/basic-triz](https://leanmethods.com/basic-triz)  
or call +1 (303) 827-0010.