

Complex problems require different TRIZ techniques to solve them. This workshop provides the opportunity to learn the next set of TRIZ tools and find the solutions to the problems. The workshop focuses on advanced TRIZ tools and trains the participants to master these techniques. The participants will learn the advanced methods of problem modeling and strategic prediction in TRIZ.

The techniques to resolve physical contradiction will be covered. Another rigorous problem solving technique, Substance Field Modelling will be introduced and you will have hands-on application on the system of standard models of solution to find the best solutions.

The workshop will touch upon strategic aspects of innovation which are the S-Curve Analysis and the Trends of Engineering System Evolution. Both techniques are good to set the strategic recommendations and predict the future of system changes.

Course	TRIZ Level 2 Practitioner
Facilitator	MyTRIZ-MATRIZ Certified Facilitator
Duration	4 half days (3.5 hours per day)
Training & Certification fee	RM 1,000 per pax
Eligibility	Open to TRIZ L1 Practitioners

### TRIZ Level 2 Practitioner Course Modules

- Recap – TRIZ Level 1
- Physical Contradiction
- System of Standard Inventive Solutions
- Scientific Effects
- S-Curves
- Trends of Engineering System Evolution

**Customized  
Class**



### Training & Certification:

**30 March & 1-3 April 2021**

**9:00 a.m. to 12:30 p.m.**

**Organized for MPC program**

Remote Online Learning

Weblink will be provided upon registration

Interested, please contact:

Contact Person: Tan Eng Hoo or Dr Yip MW

Contact Person Mobile: 012-4081353 or 013-3894491

Contact Person Email: [enghootan@yahoo.com](mailto:enghootan@yahoo.com) or  
[yiptriz@gmail.com](mailto:yiptriz@gmail.com)

*All innovations emerge from the application of a very small number of inventive principles and strategies.*

# Course Agenda

## Day 1

Afternoon session (1:30 p.m. - 5:00 p.m.)

- Recap TRIZ Level 1
- Physical Contradiction
- Strategy to resolve Physical Contradiction

## Day 2

Afternoon session (1:30 p.m. – 5:00 p.m.)

- Recap Day 1 topics
- Su-Field Model
- System of Standard Inventive Solution

## Day 3

Afternoon session (1:30 p.m. – 5:00 p.m.)

- Recap Day 2 topics
- System of Standard Inventive Solution
- Scientific Effects

## Day 4

Afternoon session (1:30 p.m. - 5:00 p.m.)

- Recap Day 3 topics
- Trends of Engineering System Evolution
- Certification Assessment

# Course Outline

## Recap – TRIZ Level 1

- Review key concepts from TRIZ Level 1 course including TRIZ history, Function Analysis, Cause & Effect Chain Analysis, Trimming, Ideality, Engineering Contradictions, System Parameters, Contradiction Matrix, Inventive Principles.

## Physical Contradiction

- Physical Contradiction is applied when we are dealing with contradictions with a single parameter which creates a contradiction at two different values. All Engineering Contradictions have at least one Physical Contradiction. Resolve the Physical Contradiction through Separation techniques i.e. Separation in Space, Time and in Relation.

## Substance Field Model

- Substance Field Model is a method of modeling a problem as two substances that interact through a field. This is in contrast to Engineering Contradictions which is modeling components and functions which interact between components. Study various types of Substance Field Model i.e. Complete, Incomplete, Insufficient, Harmful and Measurement/Detection Substance Field Models
- Concept of Zone of Conflict is used to identify the intersection of Useful Operating Zone and Harmful Operating Zone.

## 76 Standard Inventive Solutions

- Apply the 76 Standard Inventive Solutions to identify specific solutions to resolve the Incomplete, Insufficient, Harmful and Measurement/Detection Substance Field Models.

## S-Curve Analysis

- All systems evolve in the form of an S-shaped curve. S-Curve Analysis is used to identify the various stages of a system through its characteristics and provides recommendations for evolution of these systems.
- The MPV (Main Parameter of Value) of the S-curve provides the voice of product.
- Every system can be staged in terms of Stage 1 (Birth), Stage 2 (Growth), Stage 3 (Maturity), Stage 4 (Decline) based on characteristics. Recommendations are provided to improve the system at each stage.

## Scientific Effects

- Search of Scientific Effects from various industries to solve a problem by researching functions used in a Function Model.

## Trends of Engineering System Evolution

- Introduction of Trends of Engineering System Evolution (TESE) which are statistically reliable lines of evolution that describe natural transitions of systems from one state to another. These trends help predict the future of systems and allow us to project the future features and characteristics of the system. TESE is one of the tools used for Patent circumnavigation.

# Facilitator Profile



**Tan Eng Hoo**

**MyTRIZ V. President & Inno Planet Consultant**

Mr. Tan Eng Hoo is one of leading consultants and project facilitators in systematic innovation methodology. He has conducted many courses on TRIZ (Theory of Inventive Problem Solving). He has been instrumental in proliferating TRIZ to more than 13,000 practitioners in Malaysia and South East Asia.

Over 100 local and international organizations from various industries are practicing TRIZ today and achieving interesting results. Eng Hoo was the founder and vice president of the Malaysia TRIZ Innovation Association (MyTRIZ). He was instrumental in the formalization of Indonesia TRIZ, Philippines TRIZ Association, Pakistan TRIZ Association and several emerging practitioner nations.

Eng Hoo had served Intel Corporation for about 20 years and Multimedia Development Corporation for about 8 years prior to his involvement in TRIZ. He has a broad scope of responsibilities from supply chain management to business management & marketing to product research & development. He has proven records in leading multi-disciplined, cross functional and cross geographical teams.

In addition, he has several years of international experience based in US and Europe with excellent understanding of cultural differences of employees and customers. He has deep passion in developing people and leaders, and driving innovation culture and knowledge. He has a BSc in Chemistry from Universiti Sains Malaysia and originated from Penang.

# Facilitator Profile



## **Dr Yip Mun Wai**

**Former Dean, TAR UC & MyTRIZ Trainer**

Dr Yip Mun Wai is a very experience industry and academic member. He graduates with a specialization in Materials Science and has great interest in the area of TRIZ, Theory of Inventive Problem Solving and Knowledge Management. He is a certified TRIZ instructor and has been imparting his knowledge to thousands of students.

A very passionate academician with more than 20 paper publications and 1 book. He is actively involved in many international and local special interest group community.

Dr Yip has won many innovation and research competition and has embarked on several successful ventures in start-up innovative companies.

He is an excellent and experience instructor who have a great heart to reach out to school students. He is a certified Theory of Open Problem Solving instructor.