

A story about introducing TRIZ to SAMSUNG (TRIZ specialist vision)

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PhD, Master of TRIZ
(TRIZ consultant SAMSUNG 2000-2004)

Introduction of TRIZ approach

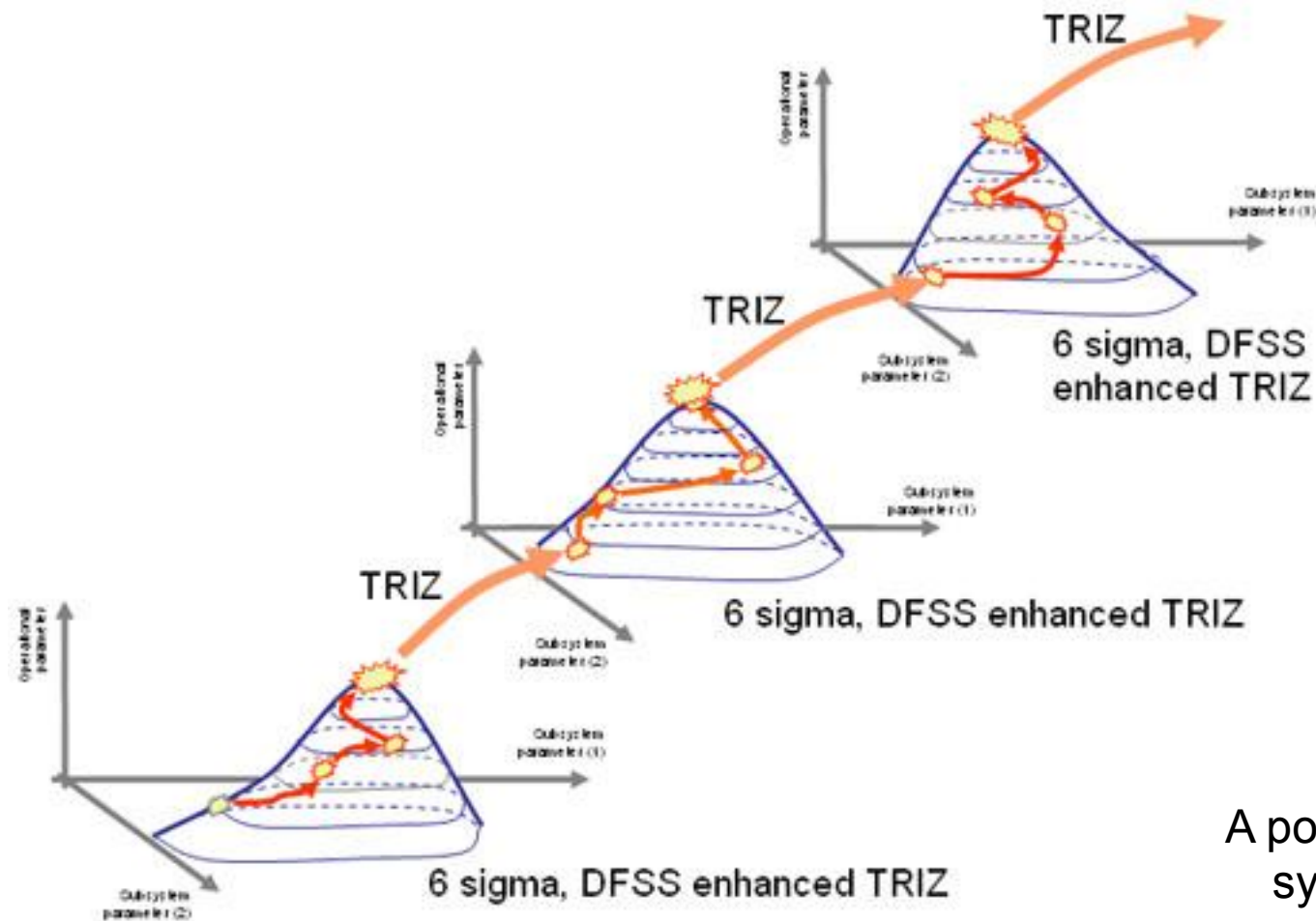
Understanding what kind of problem is
“typical” TRIZ problem

The main contradiction between TRIZ and 6 Sigma:

- The main idea behind 6 Sigma is that quality of an offering should be improved based on evolutionary transformation, avoiding abrupt changes in product or service.
- The main idea behind TRIZ is that evolutionary transformations are effective up to a point, then revolutionary transformations are in order through resolution of defined contradictions.

Introduction of TRIZ approach

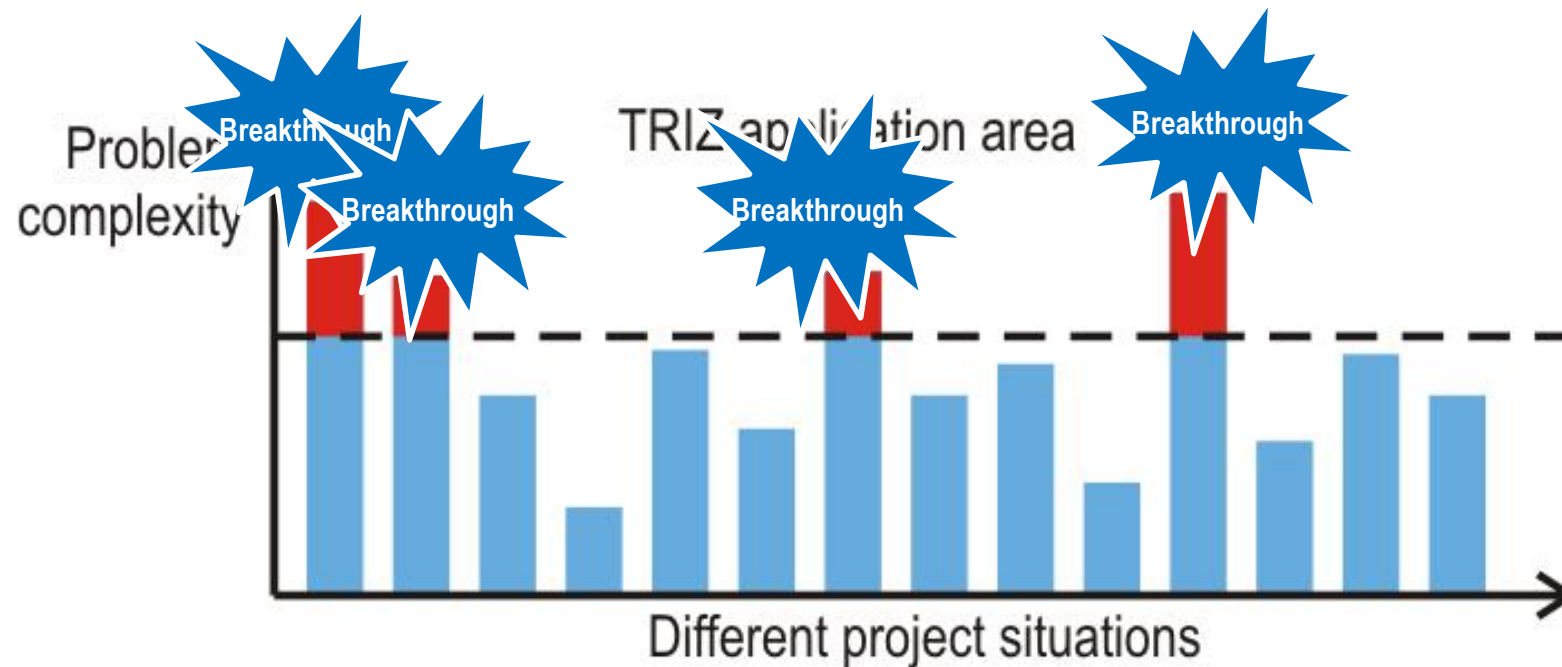
Understanding what kind of problem is
“typical” TRIZ problem



A potential sequence of
system' development

Introduction of TRIZ approach

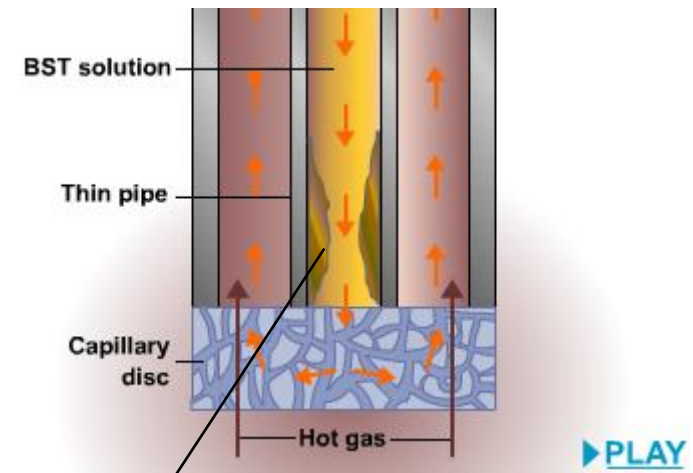
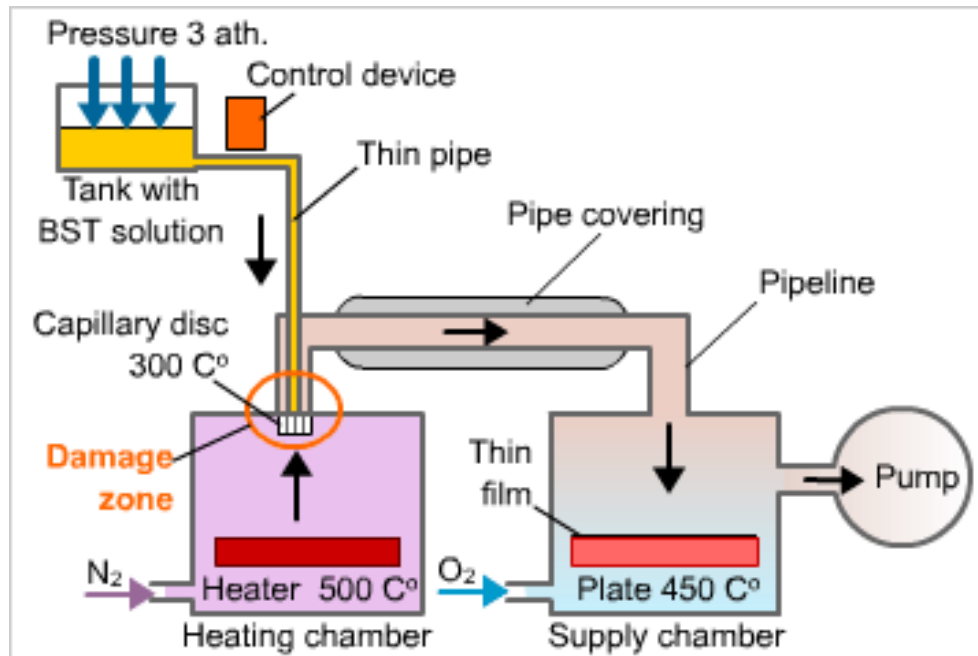
Coordination with other intellectual teams



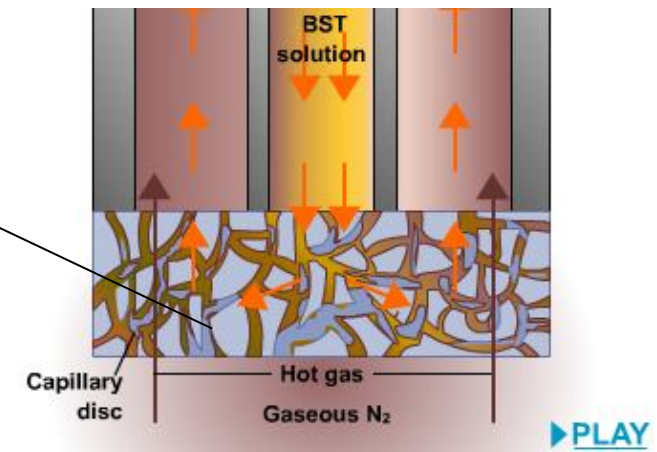
TRIZ application area

Case study

An example. Manufacture of thin BST films



Hard deposit



The problem is:
Short time working between failures

Case study

An example. Manufacture of thin BST films

Traditional methods elimination of the failure:

Changing of diameter of capillaries

Changing capillaries density

Optimization position of capillaries

Using chemical cleaning of the capillary

Make a special gateway system to change capillary disk without losing of vacuum

Change composition of the solution

Case study

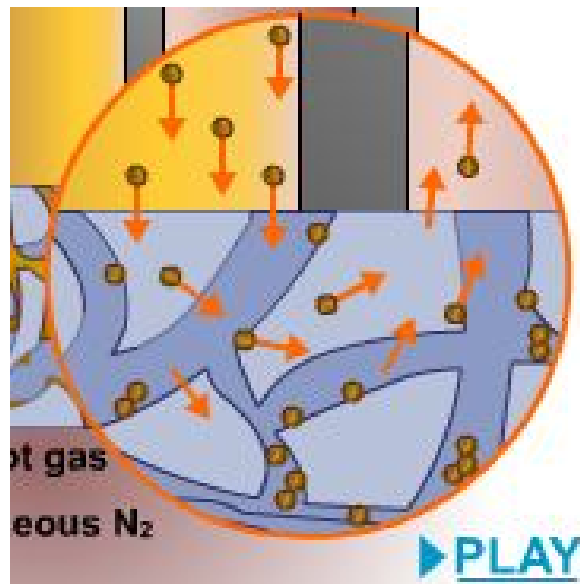
An example. Manufacture of thin BST films

TRIZ approach

Contradiction is following:

Diameter of capillaries should be big for good cleaning of capillary walls

Diameter of capillaries should be small from requirement of technological process

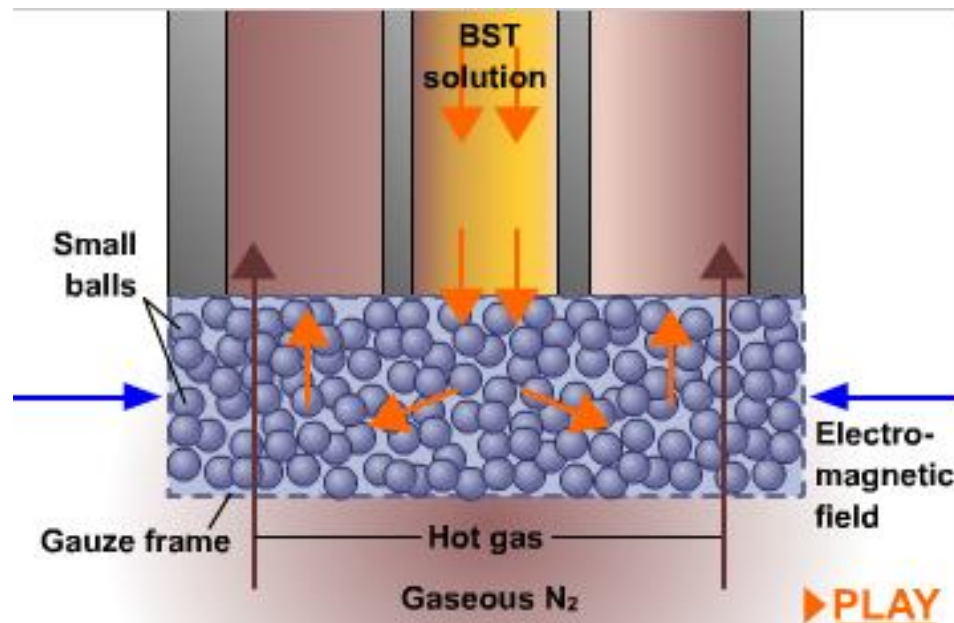


Case study

An example. Manufacture of thin BST films

Resolving of the contradiction

Using hard small balls instead capillary disk. The balls could driven by electromagnetic field provided high frequency vibration. Such a “balls mill” provide very small size of BST particles improving technological process a lot.



TRIZ at SAMSUNG

There are TRIZ team at every company of SAMSUNG group



546

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TECH | 3/07/2013 @ 6:32AM | 42 402 views

What Makes Samsung Such An Innovative Company?

42 comments, 19 called-out

+ Comment Now + Follow Comments

There are critics of [Samsung](#) who argue that its success is mostly due to copying and then tweaking the innovations of others. There is a



...developed the TRIZ method, which uses some 200 different exercises to help develop creative problem solving and is based on the concept of resolving contradictions. It is so popular among Samsung...

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Samsung Gets Ahead Through Its Russian Connection

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It's only 24 hours away from the S 4 launch and Samsung is well and truly in the spotlight. Few people would deny that the Korean company is exerting a lot of pressure on [Apple](#), and Apple until recently was the world's best tech company.



But the Russian group has been critical in Samsung's development. Russian scientists also introduced systematic innovation methods – TRIZ in particular. Samsung has taken this method and made it the company's religion. It now organizes innovation around a large creative elite that is TRIZ qualified.

183

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TECH | 3/29/2013 @ 7:107AM | 8 520 views

How Samsung Became Such a Formidable Competitor

6 comments, 3 called-out

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PAGE 2 OF 2

ogy

targetInvention

Introduction of TRIZ approach

Clarifying of TRIZ effectiveness:

The main question: is the TRIZ performance result of efforts some talented peoples or this is result of the special TRIZ methodology?

The monitoring test showed – TRIZ team and experienced specialists are solving problem in any area of activity.

There were more than 120 projects in following areas:

- Semiconductors
- Microelectronics
- Home appliance
- Displays
- Medicine
- Producing of plastic
- Chemistry
- etc...



CEO of SAIT Wook Sun, TRIZ specialists of SAIT and SAMSUNG SDI. Suwon, 2002

Introduction of TRIZ approach

Clarifying of TRIZ effectiveness:

The main question: is the TRIZ performance result of efforts some talented peoples or this is result of the special TRIZ methodology?

The monitoring test during 3 years was organized. The test shows great economy from activity of TRIZ team and specialists of company studied TRIZ.



CEO of SAIT Wook Sun
hand the Special Award to TRIZ team
for saving 92 Millions USD

TRIZ people teachers and solvers

TRIZ people: teachers, solvers and organizers.



What is TRIZ – some tricks for receiving of “excellence ideas”
or methodology of problem solving?

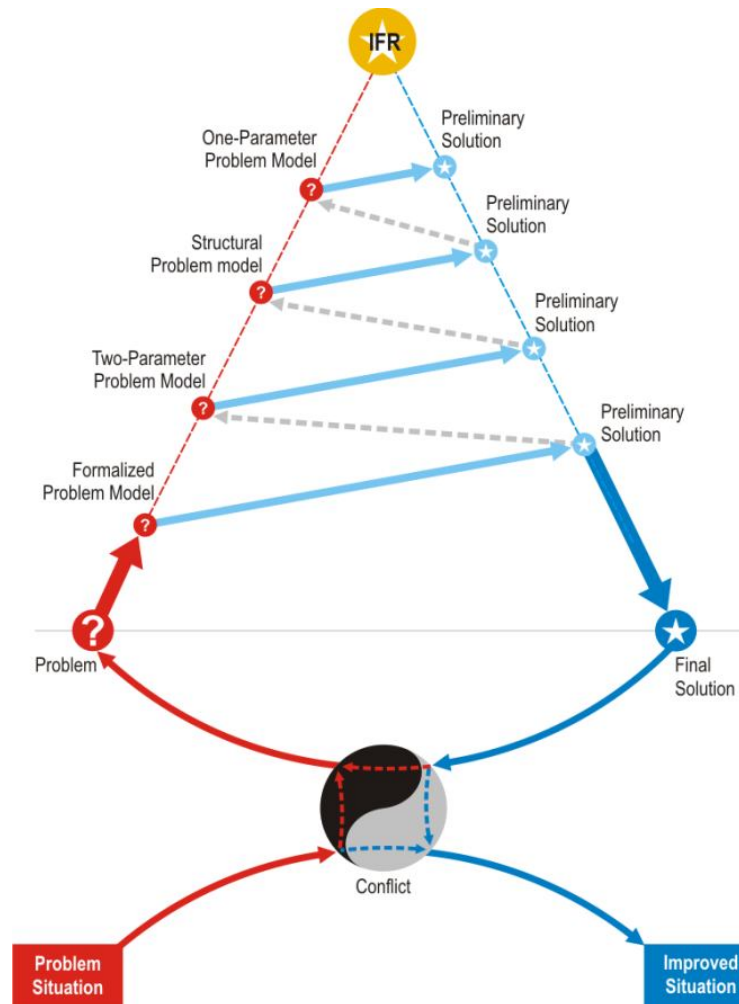
Clarifying of TRIZ methodic



Nikolay Khomenko



Vasily Lenyashin

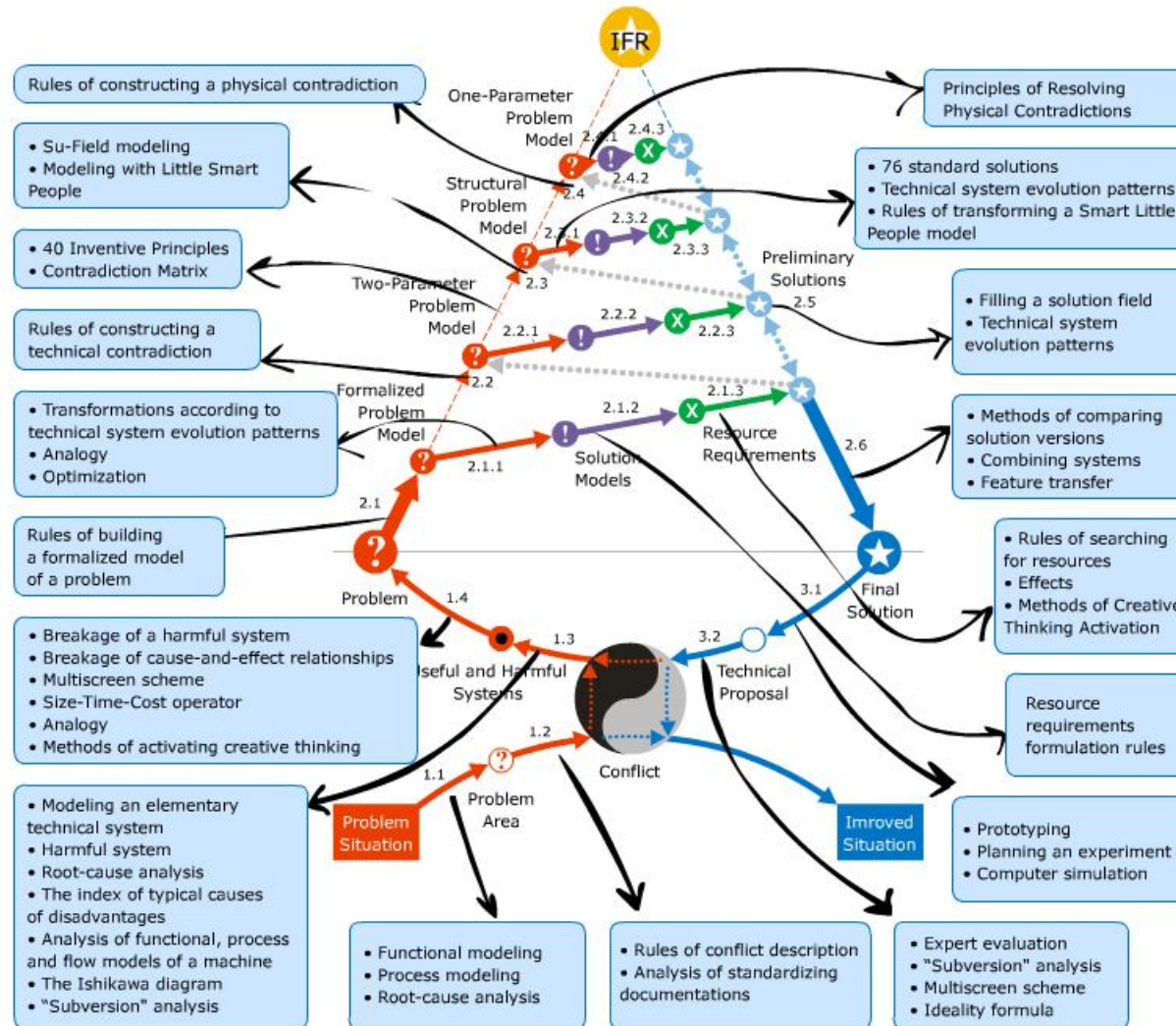


Nikolay Shpakovsky



Elena Novitskaya

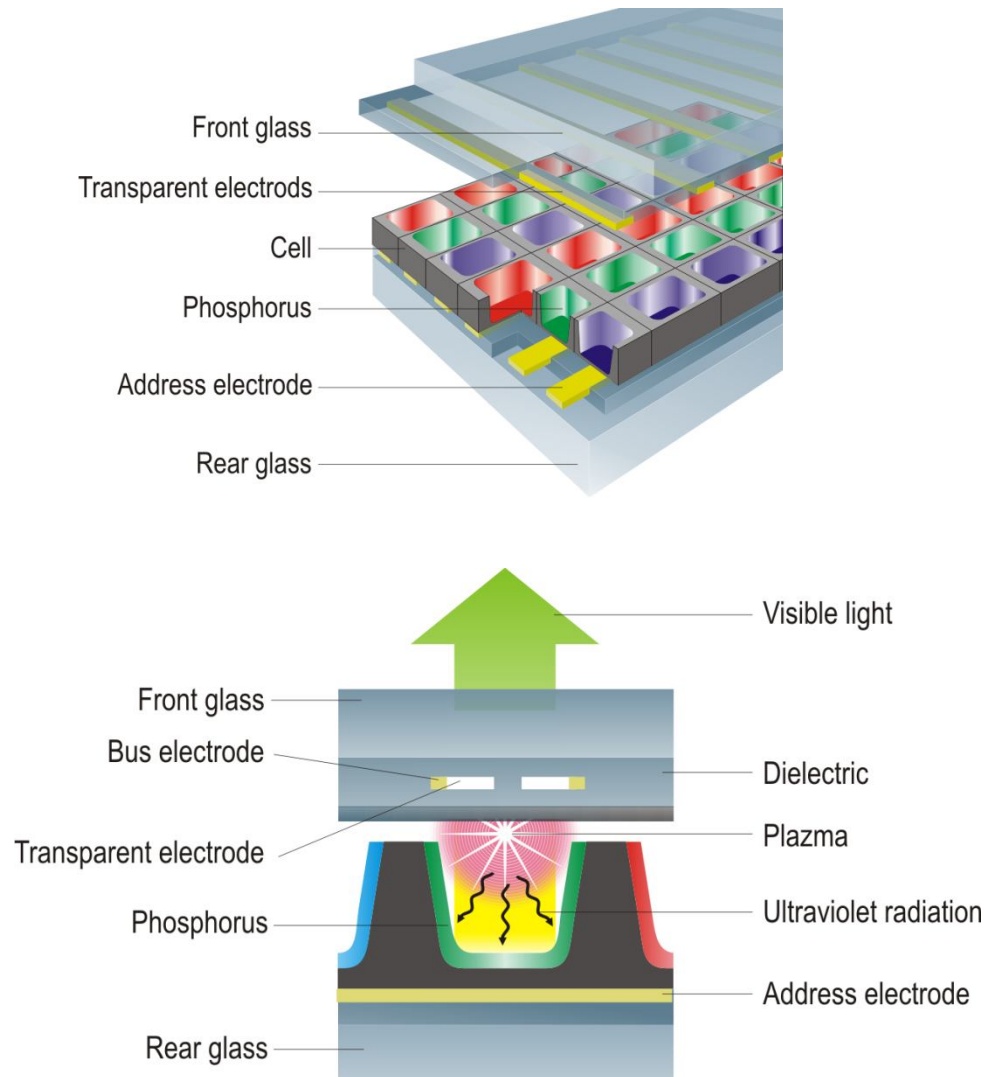
Clarifying of TRIZ methodic



The Algorithm organizes analytical and solving methods into **an integrated system.**

Case study

An example. Plasma display panel



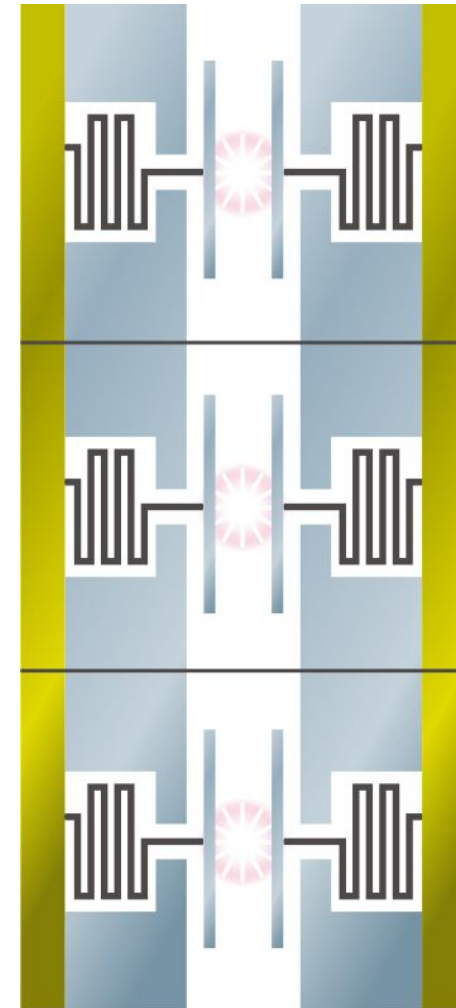
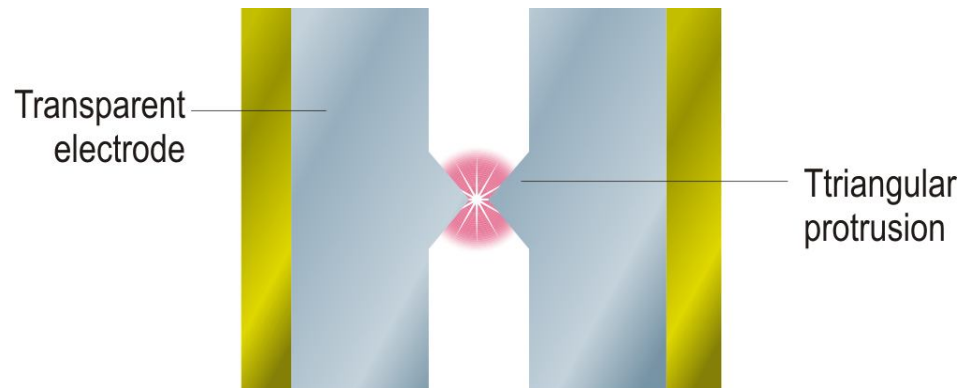
The ratio of light flow produced by the plasma display to the energy consumed is greatly smaller compared to other display types.

Case study

An example. Plasma display panel

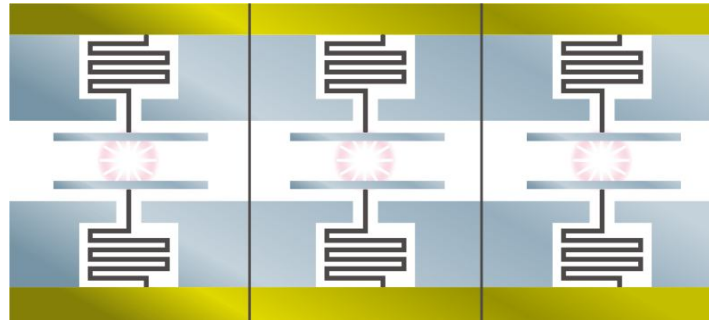
Preliminary solution 1a.

To make triangular protrusions on the electrodes. The apexes should face each other and should be positioned with the minimal gap.

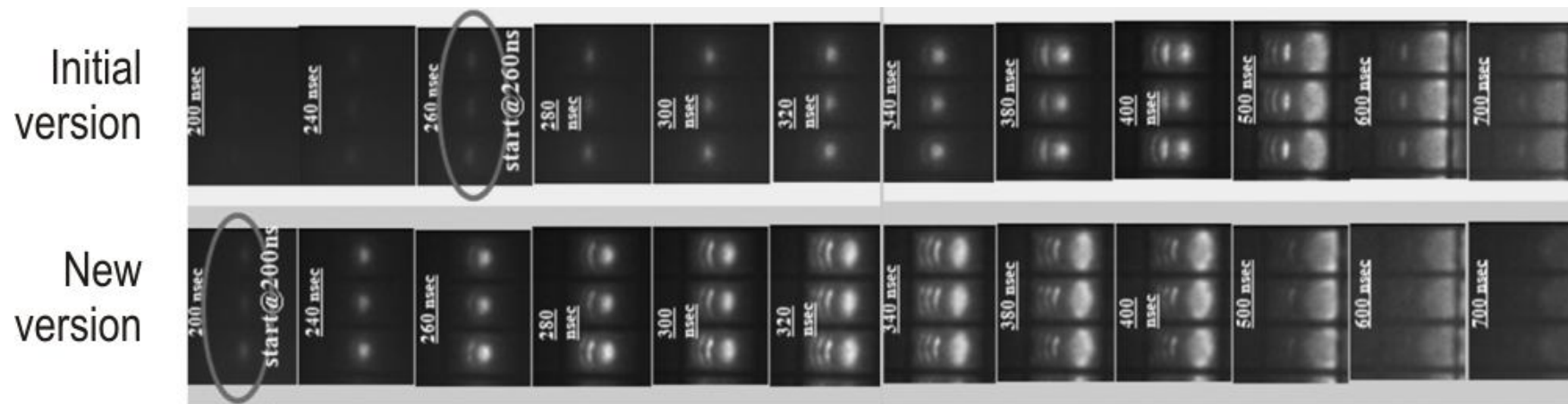


Case study

An example. Plasma display panel

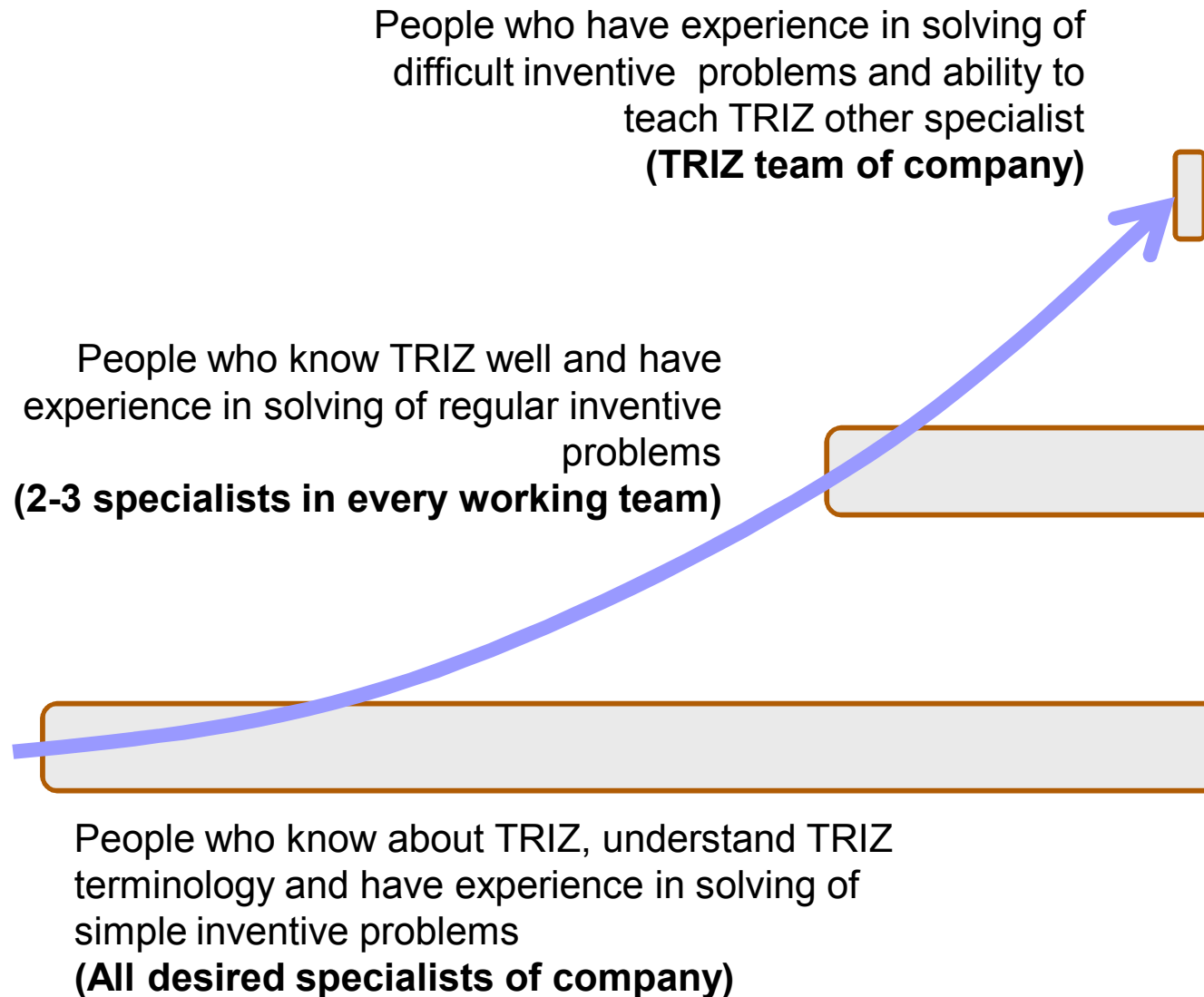


*US Patent
№ 7154221*



Full-size sample testing showed the new display variant effectiveness to increase more than by 40%.

Organization of TRIZ teaching process



Organization of TRIZ teaching process

E-learning course “TRIZ trainer”

How to start?

1 Check Tasks

A set of problems of different complexity and interest. Solving these training problems will help you assimilate some TRIZ methods and then try your knowledge out.

2 Solution Analysis


Learning the problem solving methods by examples. You trace step by step the process of transition from formulating the problem condition to obtaining a solution.

3 Solving Procedure

Describes the problem-solving procedure and explains the main TRIZ notions.

TRIZtrainer

Your Easy Solving Way



Step by step:
General Scheme of
Problem Solution

Use additional Blocks:

Glossary

Contains short explanation of special terms used in the TRIZ-trainer text.

Reference Book

A more detailed material on some theoretical problems as well as references to more detailed information in Internet and books.

Communication

Means of communications between a student and a personal TRIZ-consultant. To use it, you should register.

All Consulting Group

☐ Korean ☒ English [?Help](#)

TRIZ.INFO

About TRIZ

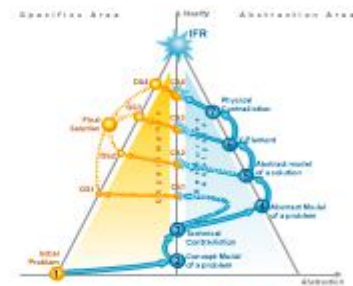
TRIZ is the Russian acronym for the Theory of Inventive Problem Solving...

TRIZ-education system

The Theory of Inventive Problem Solving is being actively developed at...

About TRIZ-trainer

TRIZ-Trainer is an online training system. The appearance of TRIZ-Trainer...



Big size in new window

TRIZ-News

Test: Giraffe in refrigerator...
ETRIA TRIZ-Conference in London: Report from Nikolay Shpakovsky, TRIZ-consultant...
New solution from SAMSUNG's TRIZ-experts...

Task of week

Water tap suspended in the air. In Everland, the famous Korean recreation center, there is a strange water tap. It is suspended in the air..



To task of week

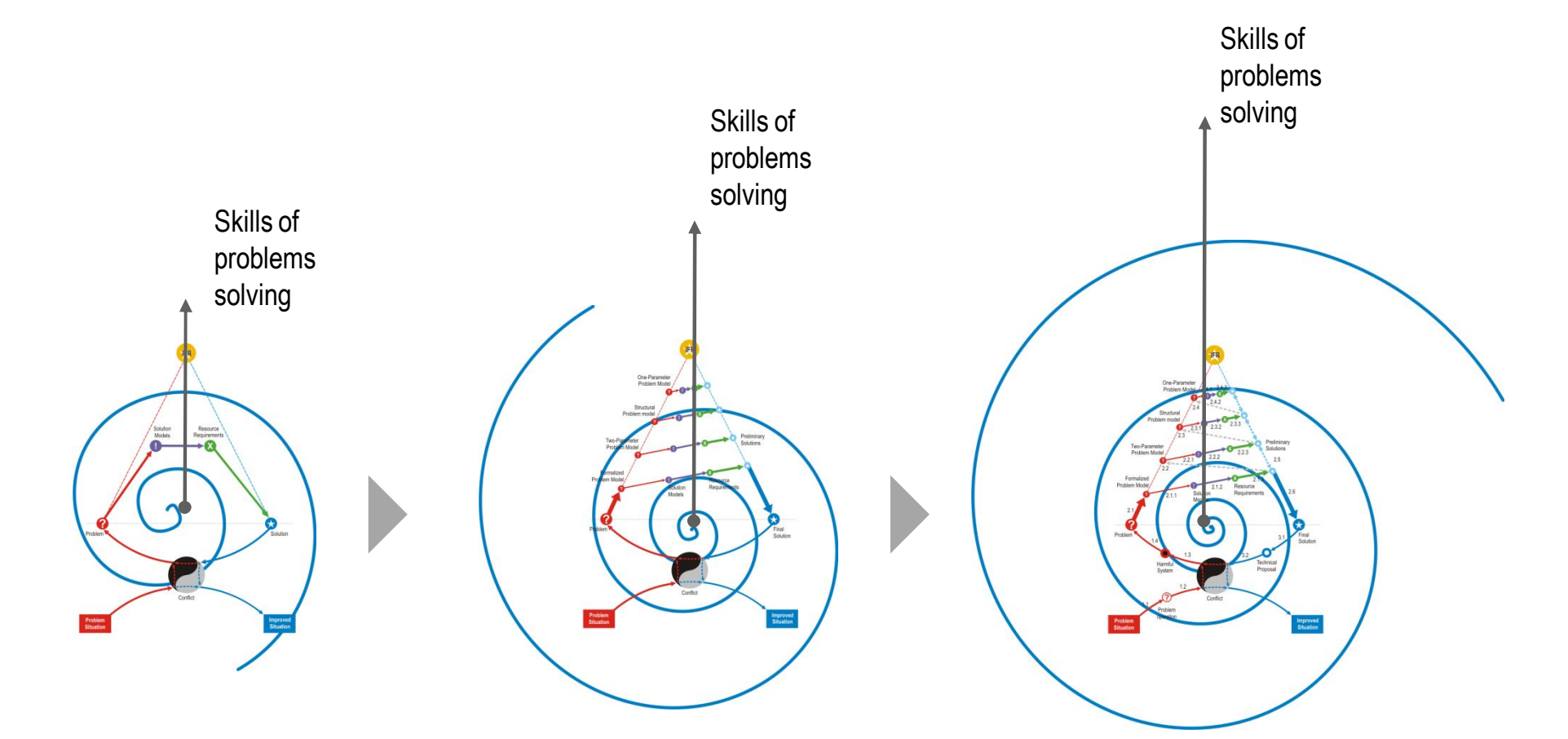
TRIZtrainer-competition

Conditions of Competition:
Any student may participate in TRIZtrainer-competition. Register as student in TRIZ-trainer yourself System and send Your solutions to Consultant...

TRIZtrainer+

Clarifying of TRIZ methodic

Spiral studying by Algorithm of Improving Problem Situations



Questions, please?

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Skype: niko_lay

More information about TRIZ:

<http://gnrtr.com>

<http://target-invention.com>

<http://solving-mill.com>

