

# TRIZ and Related Software:

How to maximize their impact on your organization

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November 29, 2001

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# Typical inquiries

- “We’ve decided to implement TRIZ in our organization. What software should we acquire?”

Manager – New Technologies, Management Consulting Company, Norway

- “We look for the best way to train our leading technologists in TRIZ. Which software could be of most help?”

Director – Strategic Systems, Telecommunication Equipment Producer, Canada

- “I want to train my engineers in TRIZ. The goal is to institutionalize this methodology. What software tool would you recommend?”

Director – Product Development, Power Supplies Manufacturer, USA

# Premises

- Innovation comes from creative individuals.
- TRIZ is a very powerful enhancer of one's analytical skills and creative imagination.
- TRIZ thought processes are key to effective use of this methodology.
- TRIZ-based software may be helpful if it's used to support these thought processes, not replace them.

# Common objections... and a remedy

- “Obviously, TRIZ is very powerful, but it’d take long to be adept in it.”

Attendee of a one-day TRIZ seminar

- “... [TRIZ] is often difficult to use despite its potential power.”

From the invitation letter to this symposium

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- TRIZ-based software is intended to dramatically slash the time needed to master the methodology.

# Is this situation unique?

- “If calculus were invented today, none of our corporations could learn it. We’d send everyone off to the three-day course. We’d then give them three months to try it out and see if ‘it worked.’ After it had failed, we’d conclude that it was of little value and move on to something else.”

» From “*The Fifth Discipline*” by Peter Senge

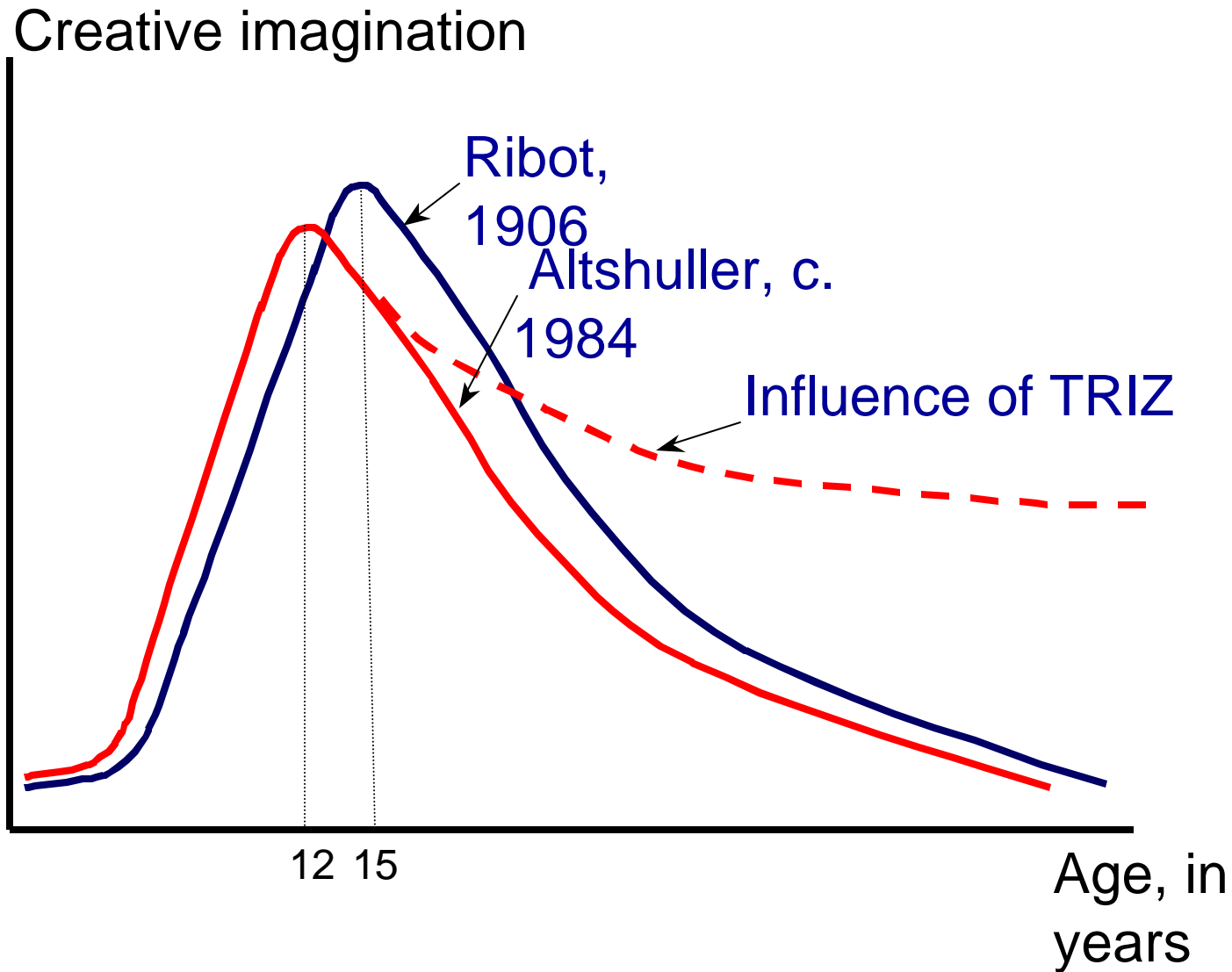
# Can TRIZ software alone succeed?

- Commanding a vast vocabulary doesn't make one a novelist.
- Knowledge of all formulae of mathematics doesn't make one a mathematician.
- Having all information on TRIZ handy isn't enough to make one a TRIZ practitioner.
- To use TRIZ tools effectively, one should be endowed with the TRIZ thought process.

# TRIZ as a thought process

- TRIZ is usually perceived as the most powerful problem-solving methodology.
- However, one of the most important impacts of TRIZ is the change in the mindset of its practitioners
- TRIZ is not just a collection of powerful solution techniques.

# TRIZ helps us think creatively



# What TRIZ students say...

- “Great process of thinking!”
- “I feel like I have an advantage over conventional thinkers in the workplace now!”
- “New way of thinking - forces one to not get caught up in the typical thinking of “experts.”
- “It is the first course on how to think, which is a tremendous tool to have.”
- “Very interesting course, very challenging due to its different mental methodology.”
- “Simplification of the thought process, challenging the conventional engineering approach.”

# “TRIZ thinking”

- Main “dividends” from the TRIZ training:
  - Development of a structured, systemic thinking
  - Ability to control one’s thought process
  - Ability to easily break psychological inertia
  - Ability to perform unusual mental operations
- By and large, these qualities foster effective analysis and problem solving skills of complex technological challenges.

# “Never the twain shall meet”

- Two main vehicles for deploying TRIZ in corporations:
  - Training in TRIZ-based software
  - Training in TRIZ fundamentals and analytical methods (i.e., creating a new mindset)
- Usually these vehicles are used separately, which reduces the effectiveness of each

# What makes TRIZ software good?

- Fast access to a vast collection of TRIZ concepts, techniques and examples.
- Vast and structured database of physical effects and their potential technological applications.
- Problem modeling means.
- Convenience of use within a team environment.
- Report generation means.

# What makes TRIZ software limited?

- These products usually do not encourage the TRIZ thought process

# Introducing TRIZ via software Beginning...



Instructor helps trainees solve the firm's old technological problem. Everybody's excited!



A software product is bought and training, primarily in this product, ensues



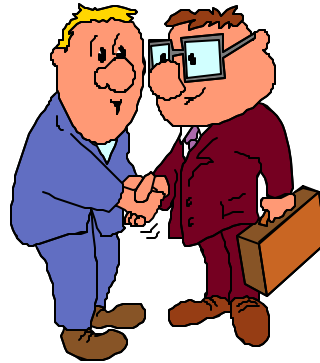
Firm learns about TRIZ

# Introducing TRIZ via software

## Halfway point...



The software vendor helps the firm solve a few more vexing technological problems.  
Excitement grows!



The firm is confident in both TRIZ and the software product and lets the vendor go.



Former trainees try to solve problems on their own.  
More flops than feats.  
Confusion develops...

# Introducing TRIZ via software Finale...



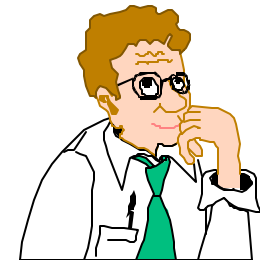
Management gradually stops supporting further TRIZ deployment...



A few enthusiasts still strive to rekindle the interest in TRIZ, but meet either indifference or resistance...



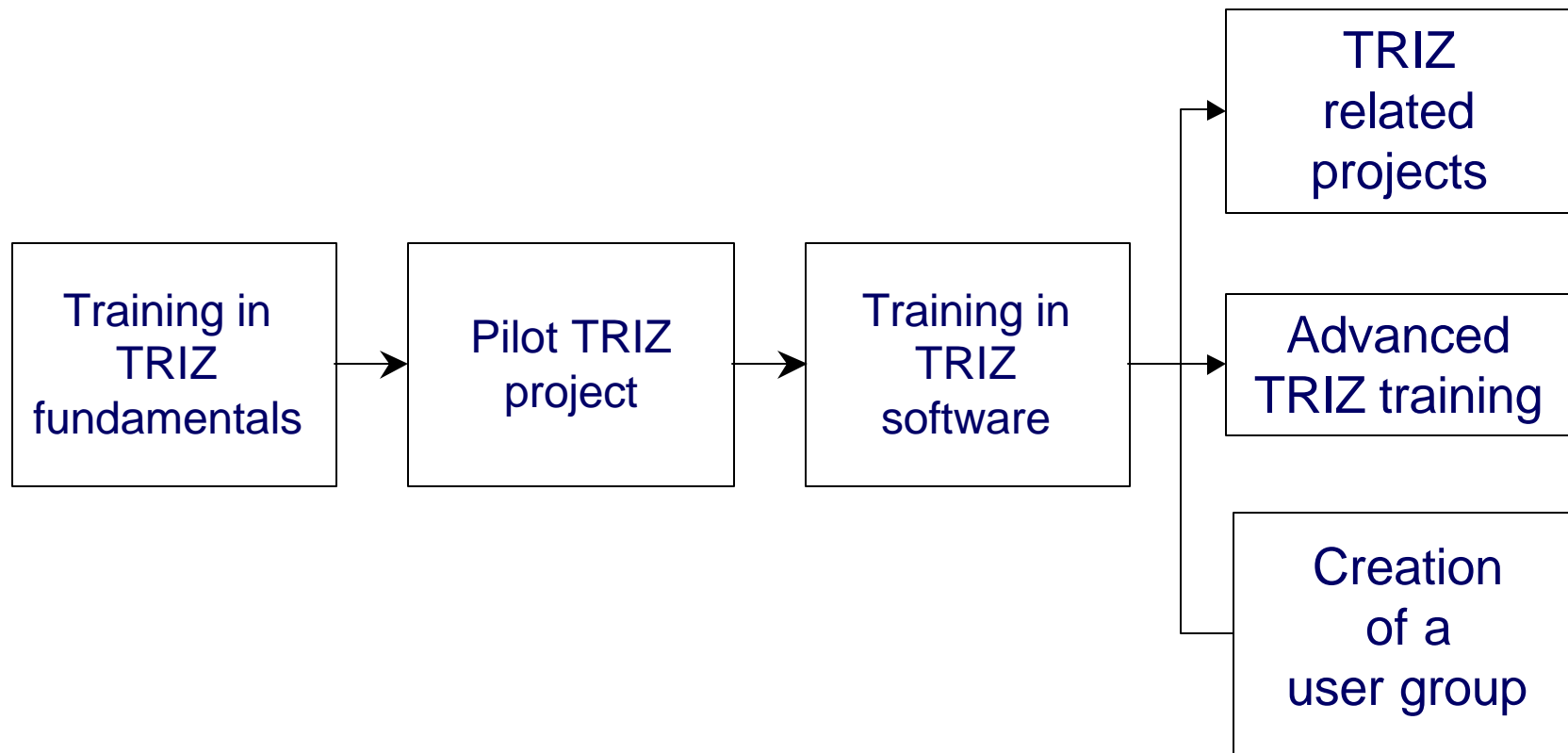
“Well, perhaps it’s time to learn TRIZ beyond software...”



“Well, perhaps TRIZ is good, but it didn’t work out in our company...”

# Introducing TRIZ in a corporation

## A better way



# Conclusions

- TRIZ software products may provide viable support for novel technology development.
- These products are most effective if the users have a solid background in TRIZ analytical methods (thought processes).
- Developing TRIZ “softpower” should be accompanied by the growth of TRIZ “brainpower.”