# APPLICATION OF TWO INNOVATIVE METHODS TO ECONOMIC/SOCIAL CHALLENGES:



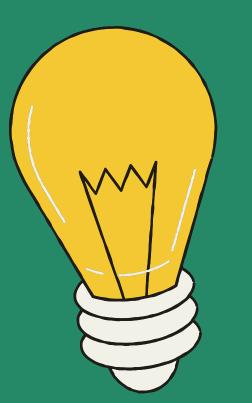
De Bono's Six Thinking Hats and Inventive Problem Solving

# INTRODUCTION

TRIZ, the Theory of Inventive Problem Solving, systematically approaches innovation by resolving contradictions. It transforms specific problems into general terms to find standard solutions that can be applied to solve the original issues.

### **ADVANTAGE NO.2 IN** APPLICATIONECTIVE

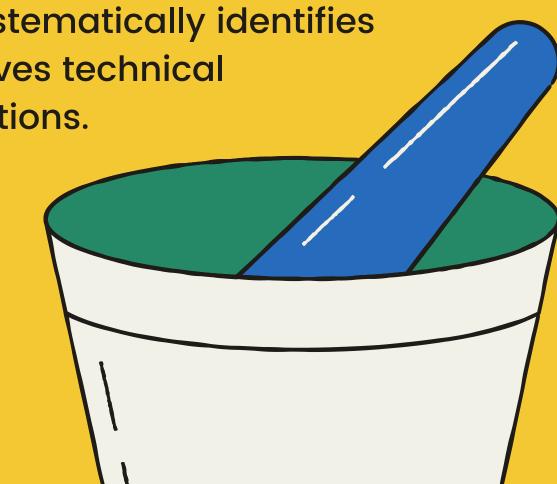
TRIZ quickly identifies many options for practical solutions, leading to confident decisions faster than traditional methods.



# **CORE COMPONENTS**

- 40 Inventive Principles: A significant amount of innovations are based on these general solution principles
- 39 Engineering Parameters: Innovations are made possible by overcoming contradictions between these parameters.

• 39x39 Contradiction Matrix: This matrix systematically identifies and resolves technical contradictions.



# **ADVANTAGE NO.2 IN APPLICATION**

TRIZ combines creative brainstorming and systematic problem-solving, using 40 inventive principles and a contradiction matrix to expedite conceptual solutions, leveraging historical innovations for quicker, viable solutions.

> MPORTANT! TRIZ systematically solves complex problems by using proven innovation patterns.

### ADVANTAGE NO.3 IN APPLICATION

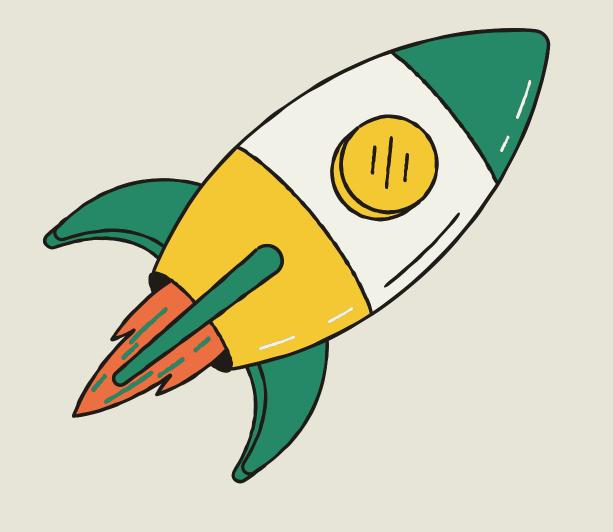
TRIZ enables a direct path to innovative solutions, bypassing the slow accumulation of knowledge via traditional brainstorming. It offers a systematic, efficient approach from problem to solution, enhancing innovation efficiency.

# Authors

Hao Zhu Jiachen Xu Yuhan Liu

#### Affiliations

**Durham University** Professional Skills (COMP 51915) **Structured Innovation GROUP 16A** 



# INTRODUCTION

The Six Thinking Hats, created by Edward de Bono, uses six colored hats to represent different thinking styles, helping in more comprehensive and systematic problem-solving and decisionmaking.



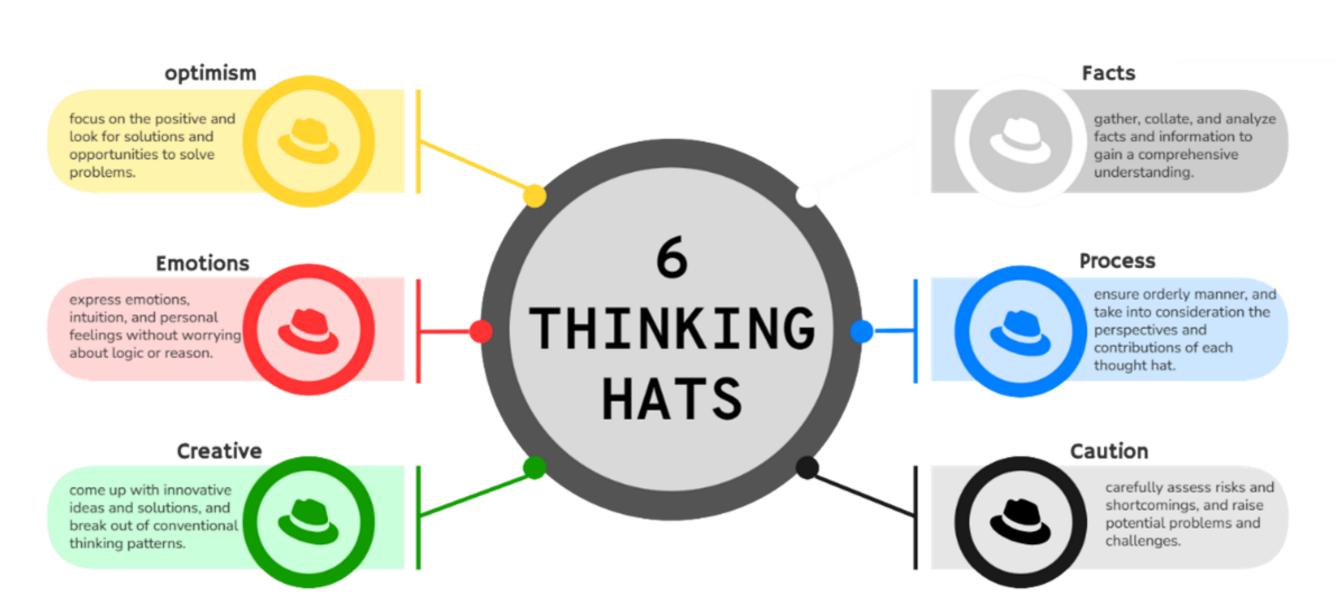
#### HERE IS A TYPICAL STEP-BY-STEP APPLICATION OF THE SIX THINKING HATS IN A MEETING:

- Identify the problem (White Hat)
- Suggest solutions (Green Hat)
- Highlight benefits (Yellow Hat)
- Point out drawbacks (Black Hat
- Share intuitive feelings (Red Hat)
- Conclude and decide (Blue Hat)



# APPLICATION

The Six Thinking Hats method enhances both individual and team decision-making by using colored hats to promote diverse and comprehensive thinking, thus improving problem-solving efficiency and quality.



# CONCLUSION

Six thinking caps are not only applicable to individual thinking but can also be applied to teamwork and decision-making processes. Through the flexible use of different colored thinking caps, people can avoid one-sided thinking, thus solving problems in a more comprehensive and diversified way and improving the efficiency and quality of thinking.