

BUSINESS TRIZ ONLINE WINTER 2021

Analysis and practice of solving business problems

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TRIZ diagram



Problem Solving	
System Approach	
 Analysis and Synthesis of Needs 	
 System Analysis and Synthesis 	
System Development Law	
System Development Forecast	
IP Strategies Development	
ARIZ	
Sub-Field Analysis	
Function Analysis	
Trimming	
Function – Oriented Search	
RCA - Root Cause Analysis	
Flow Analysis	
AFD – Anticipatory Failure Determination	
Knowledge Base	
• Standards	
Effects	
• Inventive Principles	

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Recourses

Methods of Developing Creative Imagination

Development of Human Qualities

Theory of Developing a Creative Personality

Theory of Developing Creative Collectives

Types of Contradictions



• Superficial Contradiction (SC) – Administrative contradiction

• Contradiction Requirements (CR) – Technical contradiction

• Contradiction of Properties (CP) – Physical contradiction

The Logic Circuit for Solving Non-standard Problems TRIZ ASSOCIATION Superficial Contradiction – SC: Α A – anti-B Contradiction Requirements – CR: **A**, **B** Ideal Final Result – IFR: Contradiction of Properties -CP: $P \rightarrow B$, anti- $P \rightarrow A$ **P** anti-P Solution – S: In space ۲ In time In structure (system) **By conditions** ۲









- 1. Project implementation
- 2. New bank
- 3. IT company business development



Problem statement

- Not all projects are implemented in a sales.
- Sometimes you have to reject potential projects, i. e. lose the additional revenue or increase your costs (time for project preparation). The use of additional resources has its limits, further the project becomes unprofitable.
- What should we do so that the projects, on which the company works, have been sold by 100%?

Analysis of the problem

The abovementioned problem is an inventive situation.

"5 Why" method

- 1. WHY is the sales implementation of projects low?
- Because of poor sales technique:
 - The customer's (decision-maker's) demand is selected not as accurately as possible or incorrectly;
 - The decision-maker is selected by mistake;
 - There is no clear understanding of the decision-making chain, or informal decision-making chain;
 - No sales strategy available (it includes all of the abovementioned items);
- 2. WHY is sales technique poor?
- Because we have little time to prepare the project due to a large number of "urgent" tasks;
- 3. Why do you have many urgent tasks?
- Because of poor planning of all tasks and those tasks that may lead to a sale (in short term perspective).

BIBTA

Problem 1. Project implementation

Analysis of the problem

Superficial Contradiction (SC) anti-B

- Low sales implementation of projects (less than 50%), i. e. low revenue.
- Type of AC <u>Undesirable Effect (UE)</u>
- Bad parameter "anti-B" low revenue.

Contradiction Requirements (CR): anti-B – A

 <u>TC</u>: To get big revenue (A) you need to spend huge resources for preparation which makes the project more expensive and increases the time for its sales implementation (anti-B).

Ideal final result (IFR): A – B

<u>IFR</u>: The growth of total revenue (A) without time increase for the project sales and without increasing project cost (B).

Contradiction of Properties (CP): $p \rightarrow A$; anti- $p \rightarrow B$

- -<u>CP</u>: To get big revenue (A) it is necessary to spend large amount of resources (p) which makes the project more expensive and increases the time for its sales implementation, and it is not necessary to spend resources (anti-p) to reduce project cost and time for its sale (B)
- We spend resources we do not spend resources (in this case, the resources are system engineers, sales managers. Pre-sale. Etc.)

SC

CR

IFR

CP



Solution

SC • <u>Resolution</u>: p anti-p

- Resolution of conflicting properties:
 - in time
 - ✓ Resources are spent in advance, before receiving the order.
 - ✓ Solutions are prepared for typical projects
 - in space
 - ✓ It is possible to use virtual resources
 - by condition
 - ✓ At the time of order the solution is prepared from standard solutions, possibly a slight refinement – the adaptation
 - in structure
 - ✓ The most problems are common problems,
 - ✓ You can create a database with ready-made solutions,
 - ✓ An engineer will take a ready-made solution and not waste his time

CR

IFR

CP



Solution

- We use combination of resolution properties in space and in structure.
- Special platform were created with ready-made solutions.



FRIZ ASSOCIATION



Problem statement

- Kaspi Bank is one of the most advanced banks in Kazakhstan.
- The bank entered the market in a highly competitive retail environment (individuals).
- The bank's primary income from individuals is the sale of loans (consumer loans, mortgages, etc.).
- To attract new customers to sell them a loan, the bank has to decrease the loan rate (knowingly lower its income) and also invest in attracting new customers (without a guarantee that the new customer will buy a loan).
- What does the bank should do?



Analysis of the problem

SC Superficial Contradiction (SC) A

- A bank needs to attract new customers to enter a new market (A)

Contradiction Requirements (CR): A – anti-B

- <u>CR</u>: To attract new customers (A), the bank has to spend a lot of money on marketing and decrease the interest rate of loans, which significantly reduces the bank's profit (anti-B).

<u>Ideal final result (IFR)</u>: A – B

- IFR: The bank gets new clients (A) and does not spend a lot of money on marketing, reduces the interest rate of loans, while receiving high profits (B).

Contradiction of Properties (CP): $\mathbf{p} \rightarrow \mathbf{A}$; anti- $\mathbf{p} \rightarrow \mathbf{B}$

 <u>CP</u>: To obtain new customers (A), it is required to spend significant funds on marketing and reduce the interest rate of loans (C), which increases the cost of the bank's products and makes the business unprofitable, and there is no need to spend significant funds on marketing and reduce the interest rate of loans (anti-C) to get high profits (B).

CR

IFR

CP



Solution

SC • <u>Resolution</u>: p anti-p

- Resolution of conflicting properties:
- in time
 - ✓ bank spends one time money on marketing to attract customers, and then customers come by themselves.
- in space
 - ✓ Clients come to the bank by themselves, since they can only get a service in this bank.
- in structure
 - ✓ The bank clearly understands what the client needs and offers it.
- by condition
 - $\checkmark\,$ The bank offers such conditions that customers cannot refuse.

CR

IFR

CP



Solution

- The bank relied on e-commerce and invested in purchasing of the country's main e-commerce platforms - sites for buying cars and real estate.
- Thus, the bank gained access to a large client base with an understanding of client's needs and, with the help of analytics, began to make very good personal offers to clients.
- The Harvard Business School considers an example of a business model as an excellent case of market share capture.



Problem 3. IT company business development

Problem statement

- To maintain and develop a new business, Company must find, receive and execute orders (projects), but this requires free money or a cashflow in the company to maintain employees (architects, interns and sales managers) and other expenses.
- there is no free money in the company and there is no possibility of obtaining additional investments ... How to be?



Problem 3. IT company business development

Analysis of the problem

SC Superficial Contradiction (SC) A

- For business maintaining a company has to find, get and implement new projects (A)

Contradiction Requirements (CR): A – anti-B

 <u>CR</u>: Business development is supported by new projects (A), this requires stable cashflow (free money) and investment for resources retention, however the company does not have free money and investment (anti-B).

Ideal final result (IFR): A – B

 <u>IFR</u>: Stable growth in the number of new projects (A) without cost (anti-B) for technical and other resources for project implementation.

<u>Contradiction of Properties (CP)</u>: $p \rightarrow A$; anti- $p \rightarrow B$

- <u>CP</u>: To obtain new projects (A), it is required to increase significantly number of engineers and sales mangers (C), which increases the cost for company, but cost decrease (B) requires limited number for engineers and sales managers (anti-C).
- Resources needed (sales and tech) no resources needed

CR

IFR

CP



Problem 3. IT company business development

Solution

SC • <u>Resolution</u>: p anti-p

- Resolution of conflicting properties:
 - in time
 - ✓ Resources will be allocated for specific project only (already received or won).
 - in space
 - ✓ You can use the resources from other companies for the project (JV, partnership, etc.).
 - in structure
 - ✓ the use of virtual resources. Orders are received through video conferencing and other virtual means, and projects are carried out using special computer programs.
 - by condition
 - ✓ The company allocate resources with special conditions (prepayment).

A solution was a combination from all properties.

CR

IFR

CP



Questions and Answers





Thank you!





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