# TRIZ tools for consulting

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# Agenda

## TRIZ
What iz TRIZ tools? Its Purpose

## Problems
Types of problems in consulting

## Roadmaps
TRIZ-based roadmaps

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# What is TRIZ?

A way of thinking

A family of tools, tool kits, and software

The "way of thinking" can ALWAYS be used, but the tools in the tool kit can be selected depending the nature of the problem

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# Types of Problems

## Harmful effect elimination

It is necessary to eliminate this harmful effect with minimal changes in the system

## Cost decreasing

- High waste rate
- Unjustified costs related to the features of the system
- Unjustified costs related to the technological process

## New application

- Increase product functionality
- Increase sales market

## New product

- Production process problems
- Patent Circumventing

## Fundamentally New product

- Determine the most promising operational principles
- Provide possible problems during its production and use

# Harmful effect elimination

- Cause-Effect Analysis
- Value Analysis
- Inventive Principles
- Su-field Analysis
- ARIZ
- Analysis According to the Evolution Patterns

# Production Cost Decreasing

# New Product Application

- Value Analysis
- Analysis According to the Evolution
- S-curve Analysis

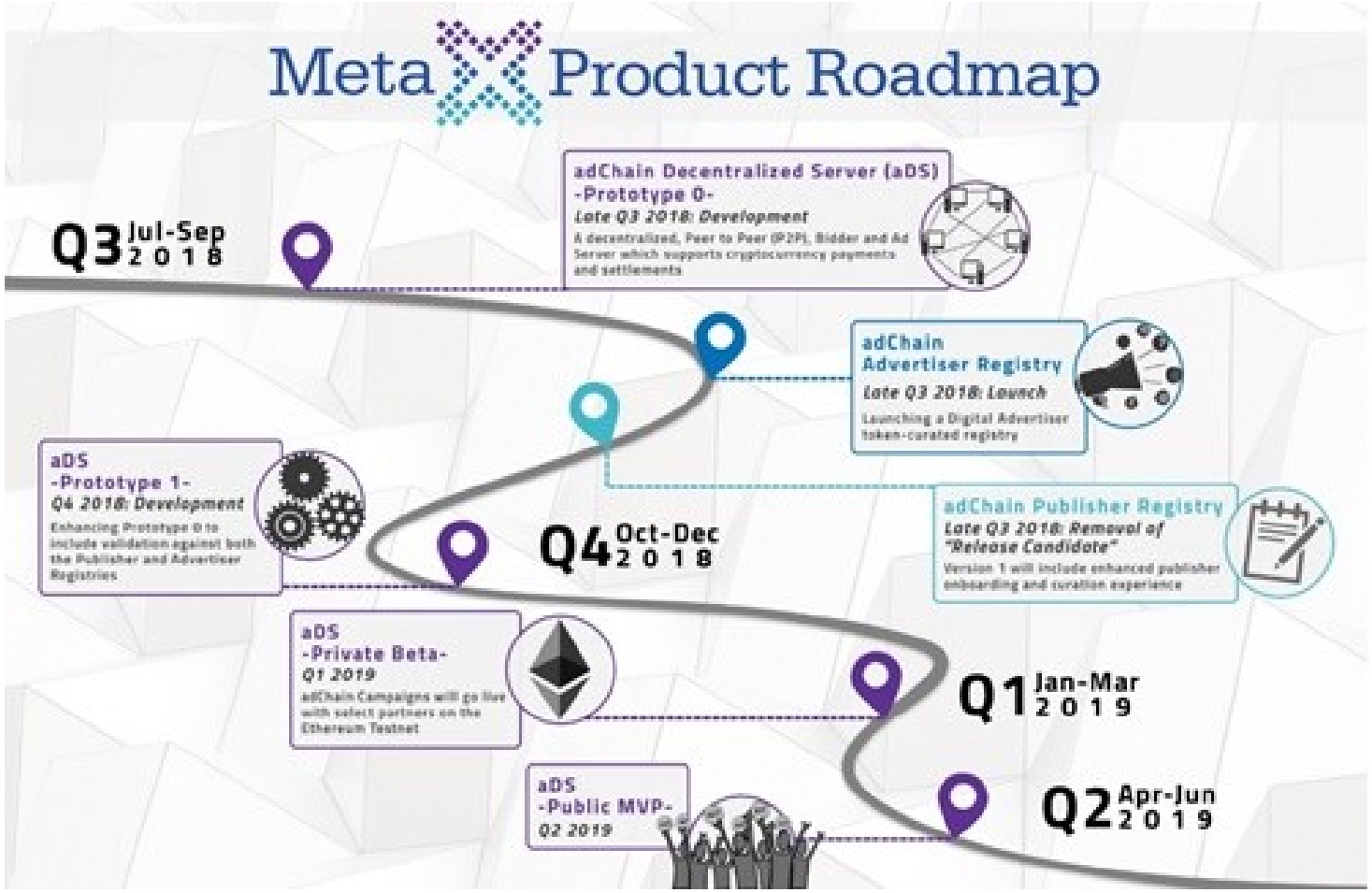
# Preparation of New Product

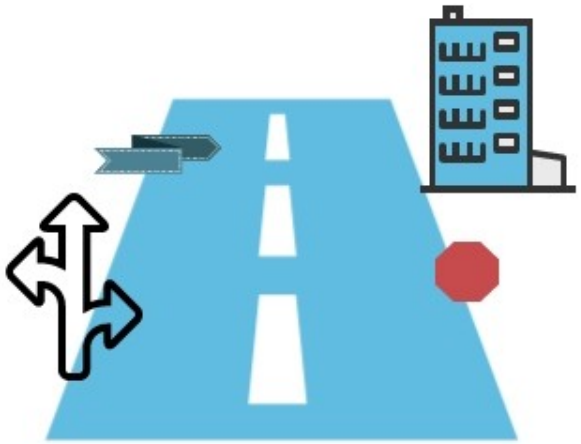
- Cause-Effect Analysis
- Su-Field Analysis
- Value Analysis
- Analysis According to the Evolution Patterns
- S-curve Analysis

# Creation a Fundamentally New Product

- Cause-Effect Analysis
- Inversion Approach
- Analysis According to the Evolution Patterns
- S-curve Analysis

# What is Roadmap



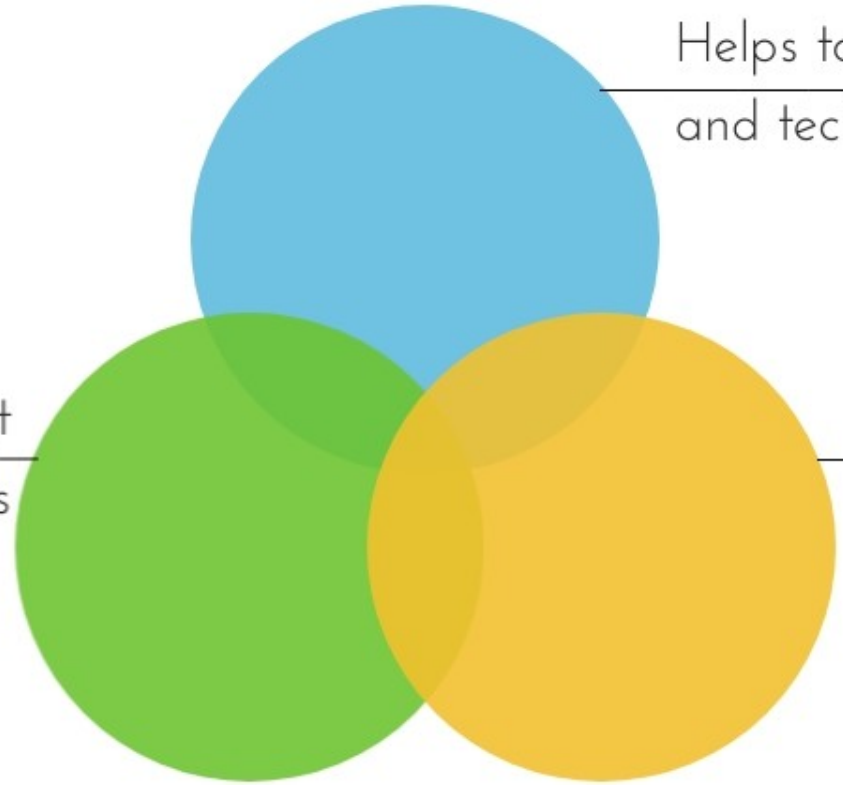



# Roadmap: Direction of Use

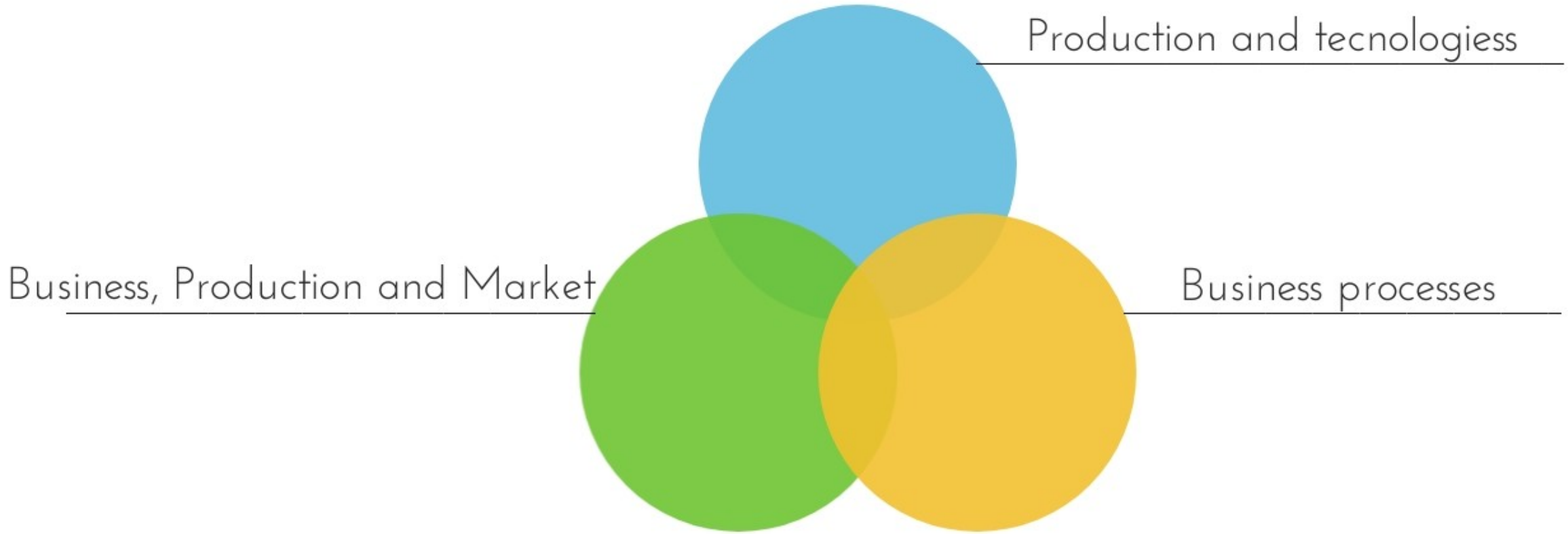
Helps to reach consensus between needs and technologies

Provides a mechanism to help predict the technology development process

Helps to plan and coordinate technical development



# Roadmap: Application Areas



# Key Elements of the Classical Approach to a Roadmap

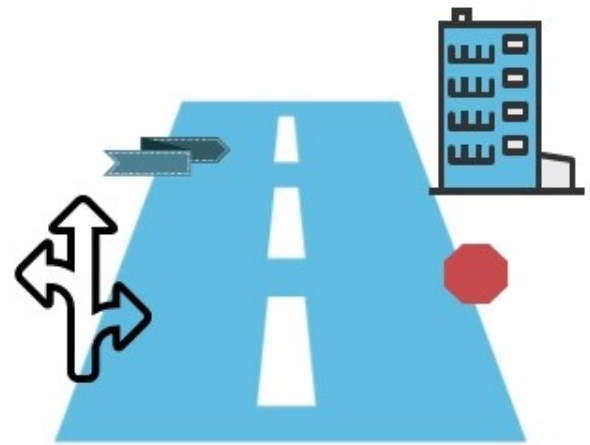
Aims

Checkpoints

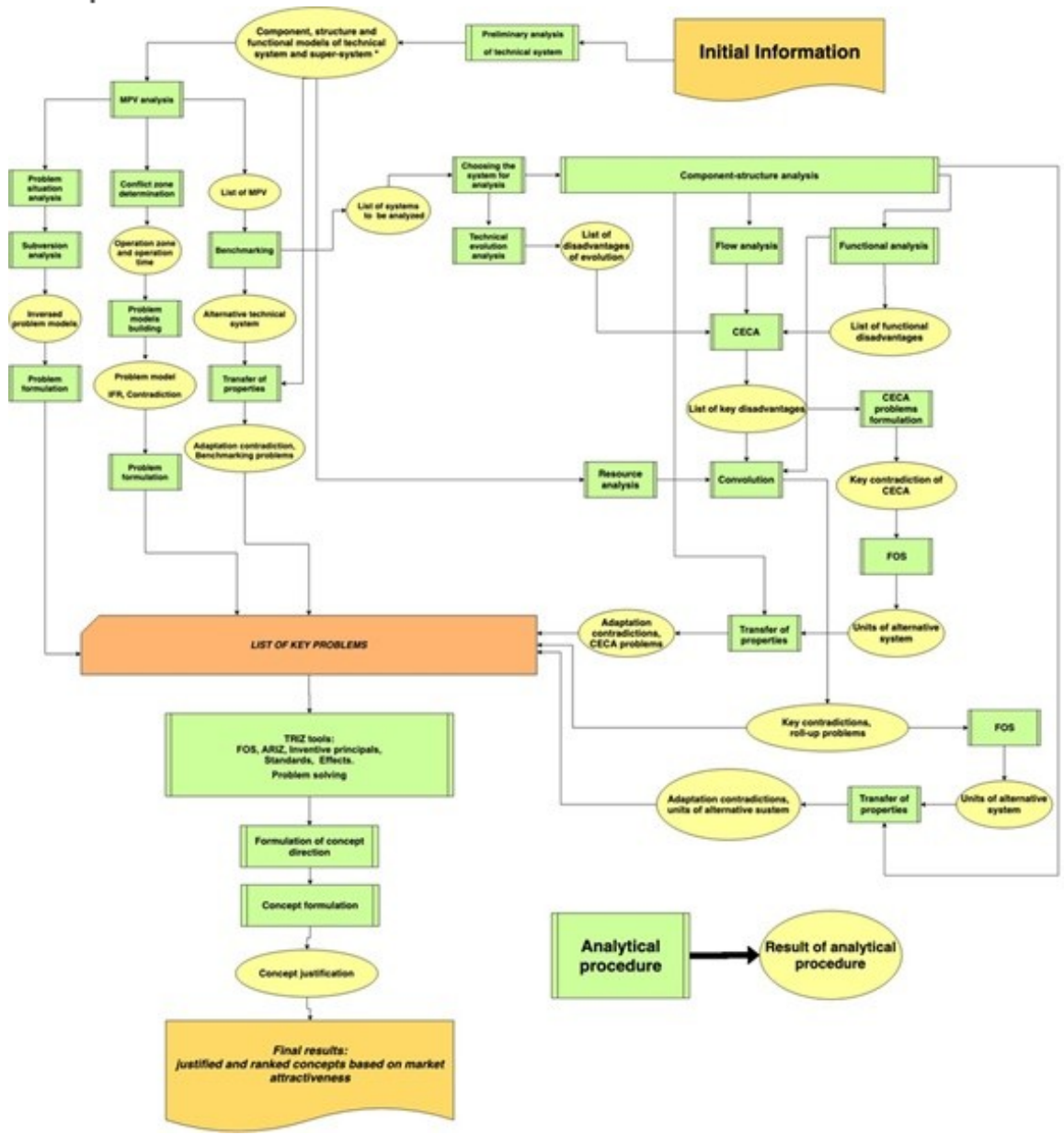
Gaps and Obstacles

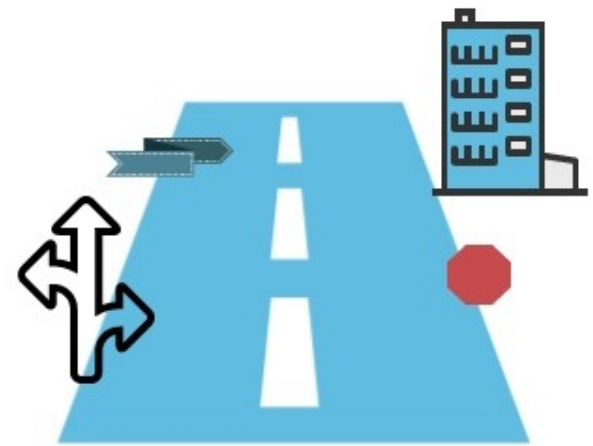
Activities

Priorities and Timeline



# Roadmap with TRIZ Tools



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# Conclusions

TRIZ methods and tools can be used effectively for developing Roadmaps in all consulting activities.

Positive conclusions made by the clients after the consulting completion:

1. The "Roadmap" created with the use of the gained knowledge has strict logic, and communications between stages are logical and clear, and influence of subjective factors is generally eliminated;
2. TRIZ tools which were used for "Roadmap" creation are very practical and effective, including Function Analysis, Cause-Effect Chain Analysis, Function-oriented Search and the Laws of Technical System Evolution (Evolution patterns);
3. Application of the updated Roadmaps helped to reveal shortcomings of initial technical planning of divisions, the insufficient analysis and use of new technologies as well as a lack of cross- and multi-disciplinary cooperation;
4. The updated Roadmap helps new employees to understand quickly the history and current state of company activities;
5. The combination of the updated "Roadmap" and evolution trees and patterns will play an important role in innovation projects.

# About Us

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# The End

THANK YOU FOR ATTENTION!

QUESTIONS?