

# Innovative Entrepreneurship

Faculty of Engineering Management

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Once a week, on tuesday 11:00 - 12:00

Only online | Online meeting link: [Go to...](#)



Once a week, on monday 10:00 - 11:00

Stationary | building: [A30](#) , room: 366

# Schedule

**06.10.2022, 13.10.2022.**

Step 0: Getting Started

Why do we need innovation?, Problem characterization, Problem Solving Approaches, Talented Thinking, Thinking in Time and Scale, Theory of Inventive Problem Solving.

**20.10.2022**

Step 1: Market Segmentation

Step 2: Select a Beachhead Market

Step 3: Build an End User Profile

Step 4: Calculate the Total Addressable Market (TAM) Size for the Beachhead Market

**27.10.2022**

Step 5: Profile the Persona for the Beachhead Market

Marketing Research, Personal Interview

**03.11.2022**

Step 6: Full Life Cycle Use Case

Step 7: High-Level Product Specification

Thinking in Time and Scale

**10.11.2022**

Step 8: Quantify the Value Proposition

Functional Analysis

# warm-up

- **Why do we need innovation?**

1. Realisation, Progresss, Novelty
2. Solutions, Self-fulfilment, Wealth
3. Development, self-fulfillment, Laziness, Rescue, Money
4. Attrackting, Improvment,
5. Better Society, Scientific research
6. People, progress, Improvement

- **Why it is difficult to innovate?**

1. Stagnation, Concerus, Opportunities
2. Recources, Risk, Competition
3. Challenge, Money, Fear, People
4. Time-comsuming, Crrativity, Understanding
5. Trust, Risk, Funding
6. Challenges, Stagnation

# Innovation: obstacles

**(1) PSYCHOLOGICAL INERTIA**

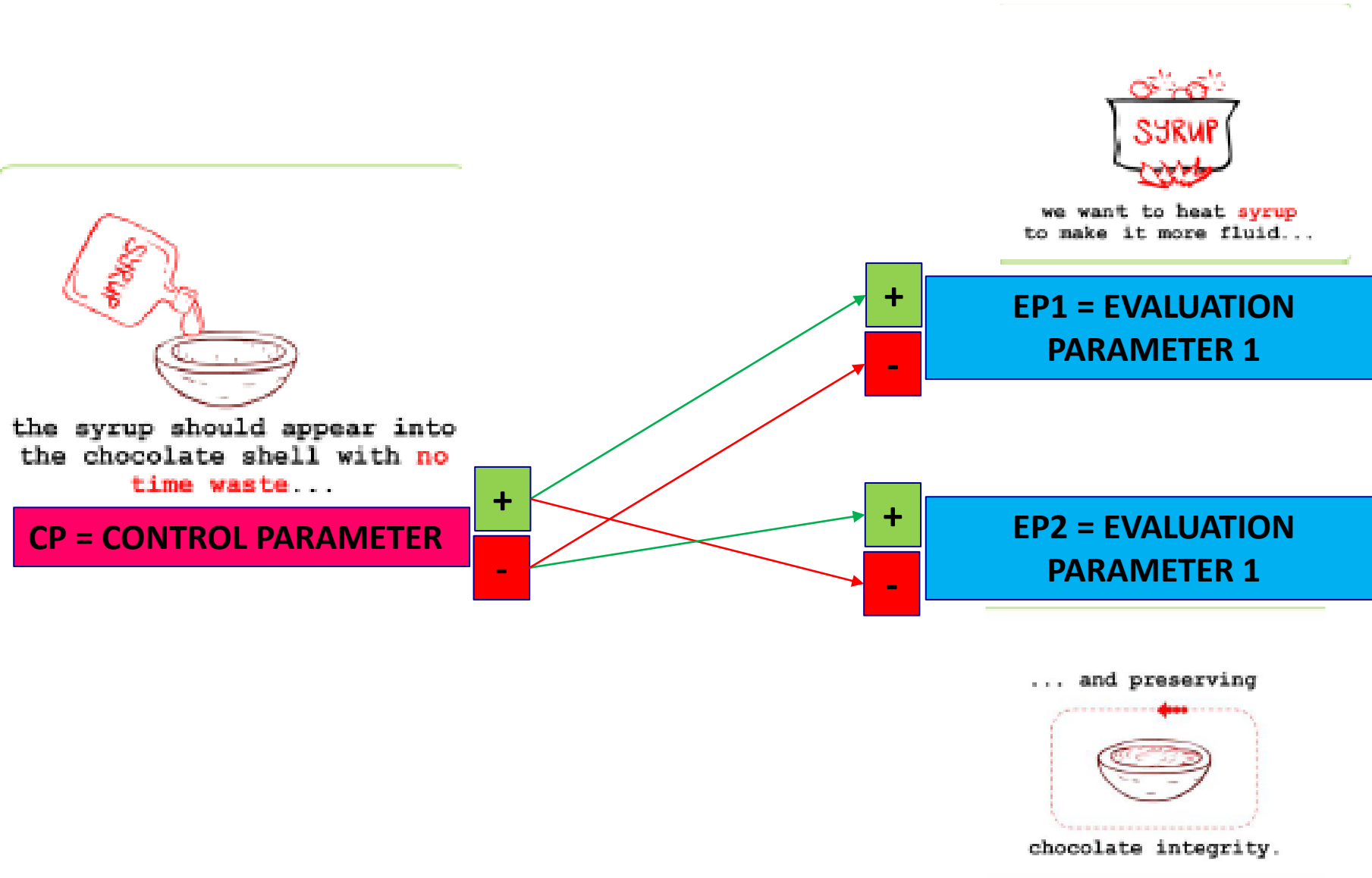
**(2) LACK OF A STRUCTURED APPROACH: not everywhere**

**(3) DESIGN CONFLICTS**

# Interrelated parts

- It was a young girl's birthday. One of the guests brought a big box of chocolate candies. The candies were shaped like a small bottles filled with thick raspberry syrup. Everybody like tchem. One of the guest said, „**I Wonder how these candies are made?**”
- „**Firest they made the bottles and then they filled tchem up with syrup**”, explained another guest.
- „The syrup would have to **be very thick**, otherwise the candy would not be sturdy enough”, said the third guest. „At the same time, the syrup would be **very difficult to pour into the bottle**. It is possible to warm the syrup making it more liquid. The problem now is that the **syrup would melt the chocolate bottle**. We would gain in quantity and lose in quality. There would be many defective candies.”

# What is a Contradiction?



# Inventive Solution

- **Interrelated parts**: changing one part of the system may have a negative effect on the system's other part.
- An improvement in one part of a system that impairs other parts of the system, or adjacent system, creates a Technical Contradiction.

An **INVENTIVE SOLUTION** always has two requirements:

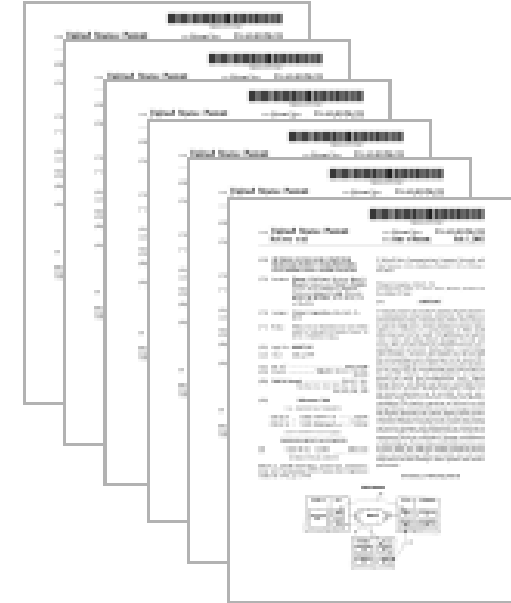
- (1) **Improve** a single part or characteristic of the system **without**,
- (2) **Impairing other parts** or characteristics of the system or adjacent systems.

# Theory of Inventive Problem Solving (TRIZ)



## Genrich Altshuller (1926 – 1998)

Analysis of hundreds of thousand  
inventive solutions



- **99%** of inventions use already known solution principle.
- Less than 1% are really pioneering inventions.
- Breakthrough solutions emerge from **resolving contradictions**.
- Inventors and strong thinkers use patterns.
- Creative problem solving **patterns are universal**.
- Creative ideas can be produced in **a systematic way**.



# Market Response

- **PROBLEM-SOLVING**
- **CONTRADICTION MODELLING**
- **CUSTOMER NEEDS**
- ...

# The Perfect (Elevator) Pitch

- How to speak about their business to others?

## THE ELEVATOR PITCH

- it should last no longer than the average elevator ride.



# Clever pitch-builder

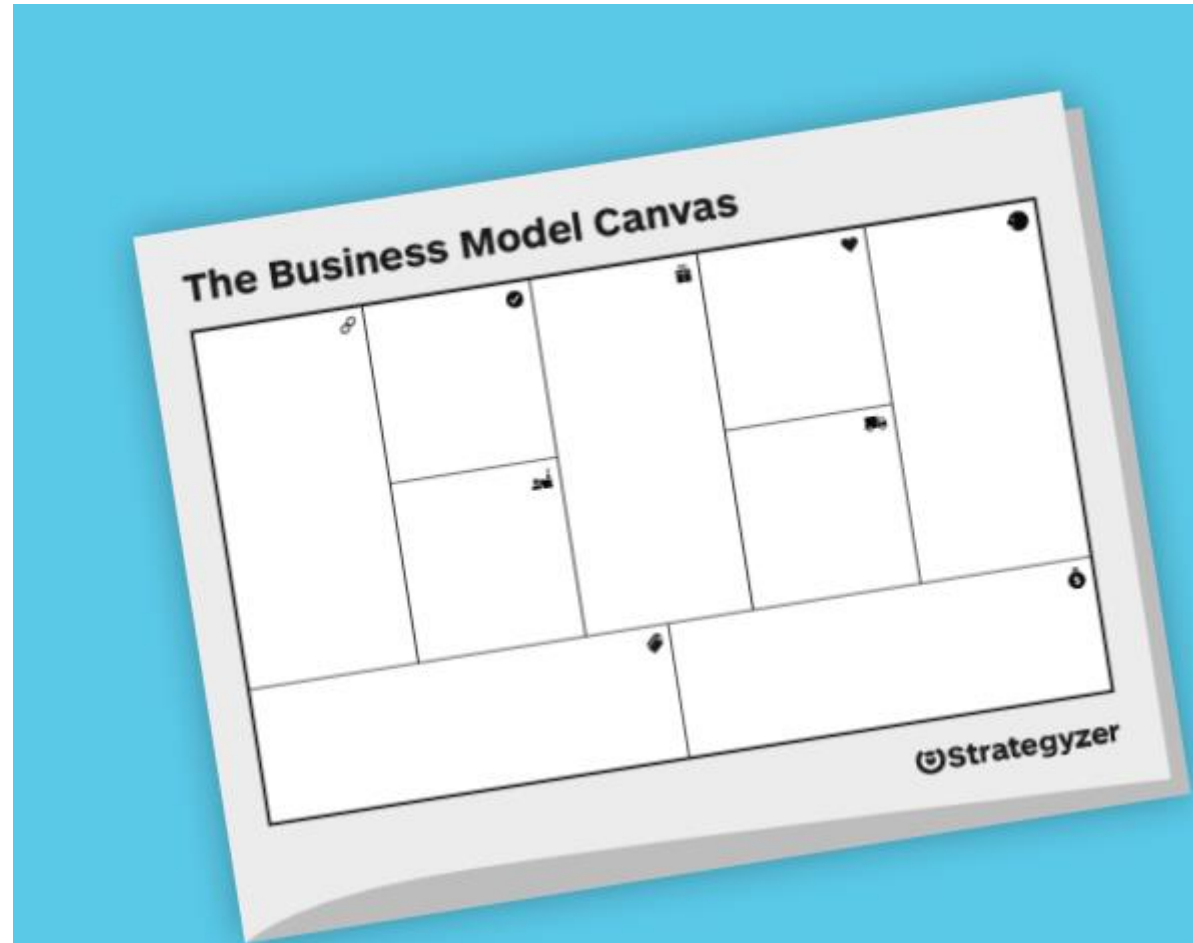
- Who's your target audience?
- Who you want to reach?
- What's their problem?
- Describe their issue or need.
- What's your solution?
- State your name, product or idea.
- What makes you unique?
- How are you different?
- How do they benefit?

# What's the WOW factor for your audience?

- Now that you clarified 5 key facts, it should be easier to identify the “What if” statement that will wow people
- What if you could save 50% more time and money on your next project?
- What if your school could teach a foreign language to twice the students in half the time?
- What if you could go out of town at a moment’s notice knowing your pets are safe?
- What if you could power your entire home with only solar energy

# The Business Model Canvas

- Canvases visualize complex business issues simply and collaboratively.



# The Customer Buying Process

