

Entrepreneurship

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Lecture 2

جامعة الجميع الذكية

تسعى لتكون الكيان الأول الذي يتبنى مبدأ المجتمع التعليمي
التعاوني ويقدم العلم مقابل العمل لتنمية وبناء المجتمعات.

Inside the Entrepreneurial Mind:
From Ideas to Reality

Learning Objectives

1

Explain the differences among creativity, innovation, and entrepreneurship

2

Describe why creativity and innovation are such an integral part of entrepreneurship.

3

Understand how the two hemispheres of the human brain function and what role they play in creativity.

4

Explain the 10 “metal locks” that limit individual creativity.

Learning Objectives

5

Understand how entrepreneurs can enhance the creativity of their employees as well as their own creativity.

6

Describe the steps in the creative process.

7

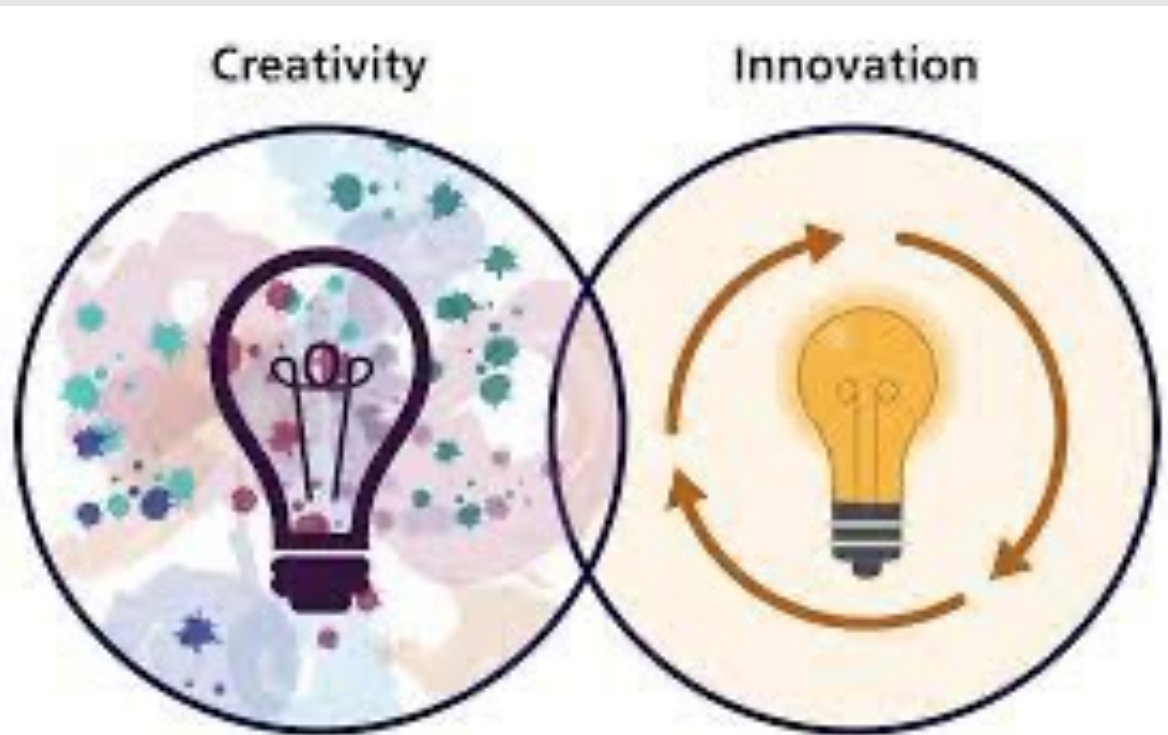
Discuss techniques for improving the creative process.

8

Describe the protection of intellectual property through patents, trademarks, and copyrights.

-

Creativity and Innovation



- **Creativity:** the ability to develop new ideas and to discover new ways of looking at problems and opportunities; *thinking* new things.
- **Innovation:** the ability to apply creative solutions to problems or opportunities to enhance or to enrich people's lives; *doing* new things.



Example of innovative
ideas turned into
products

Failure: Part of the Creative Process!

- Most ideas don't work, and most innovations fail
- For every 5,000 to 10,000 new drug discoveries:
 - 250 get to preclinical trials
 - 5 make it to clinical trials
 - 1 or 2 are reviewed by the FDA
 - Only 1 gets to market
- Failure is part of the creative process





Apple Watch Edition
17000\$



Google Nexus Q
Launched 2012 ended
2013



Microsoft Band
“Prison break” 😊

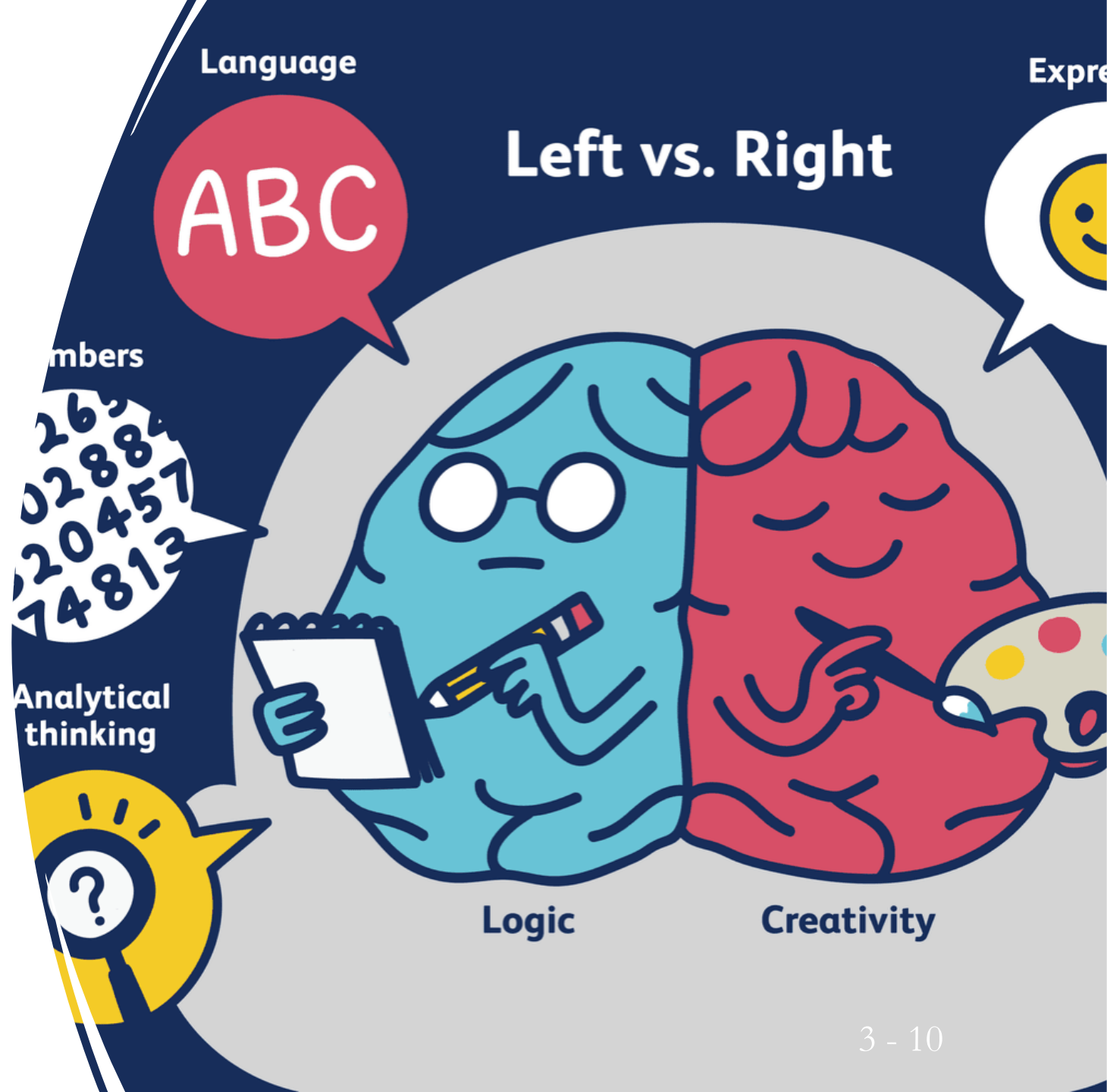


Creativity: Essential to Survival

- Creativity is an important source of building a competitive advantage
- Can we *learn* to be creative? Yes!
- By overcoming paradigms and by suspending conventional thinking long enough to consider new and different alternatives

Right-Brained, Creative Thinkers

- Always ask: “Is there a better way?”
- Challenge custom, routine, and tradition.
- Are reflective.(staring out windows, deep in thought).
- Are prolific thinkers (generate lots of ideas)
- Play mental games.



Chapter 02

Right-Brained, Creative Thinkers

- Realize that there may be more than one “right” answer.
- Know that mistakes are pit stops on the way to success.
- Recognize that problems are springboards for new ideas.
- Understand that failure is a natural part of the creative process.
- Have “helicopter skills.”
- Relate seemingly unrelated ideas to a problem.



Left brain vs. Right brain



THINKING IN WORDS

sequencing

linear thinking

MATHEMATICS

facts

LOGIC₁₁

FEELINGS VISUALIZATION

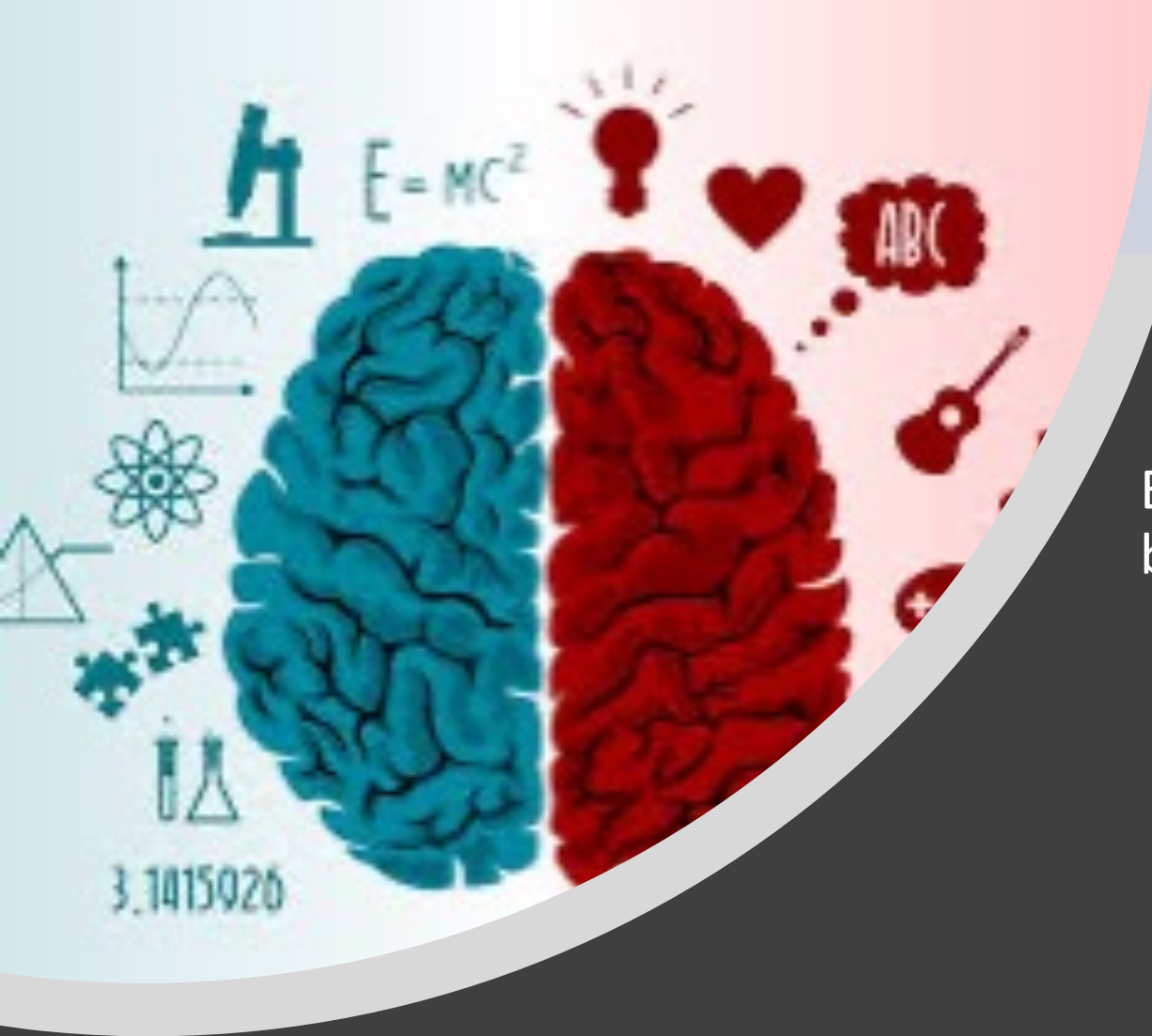
IMAGINATION

intuition

RHYTHM

holistic thinking

ARTS



Left-Brained or Right-Brained?

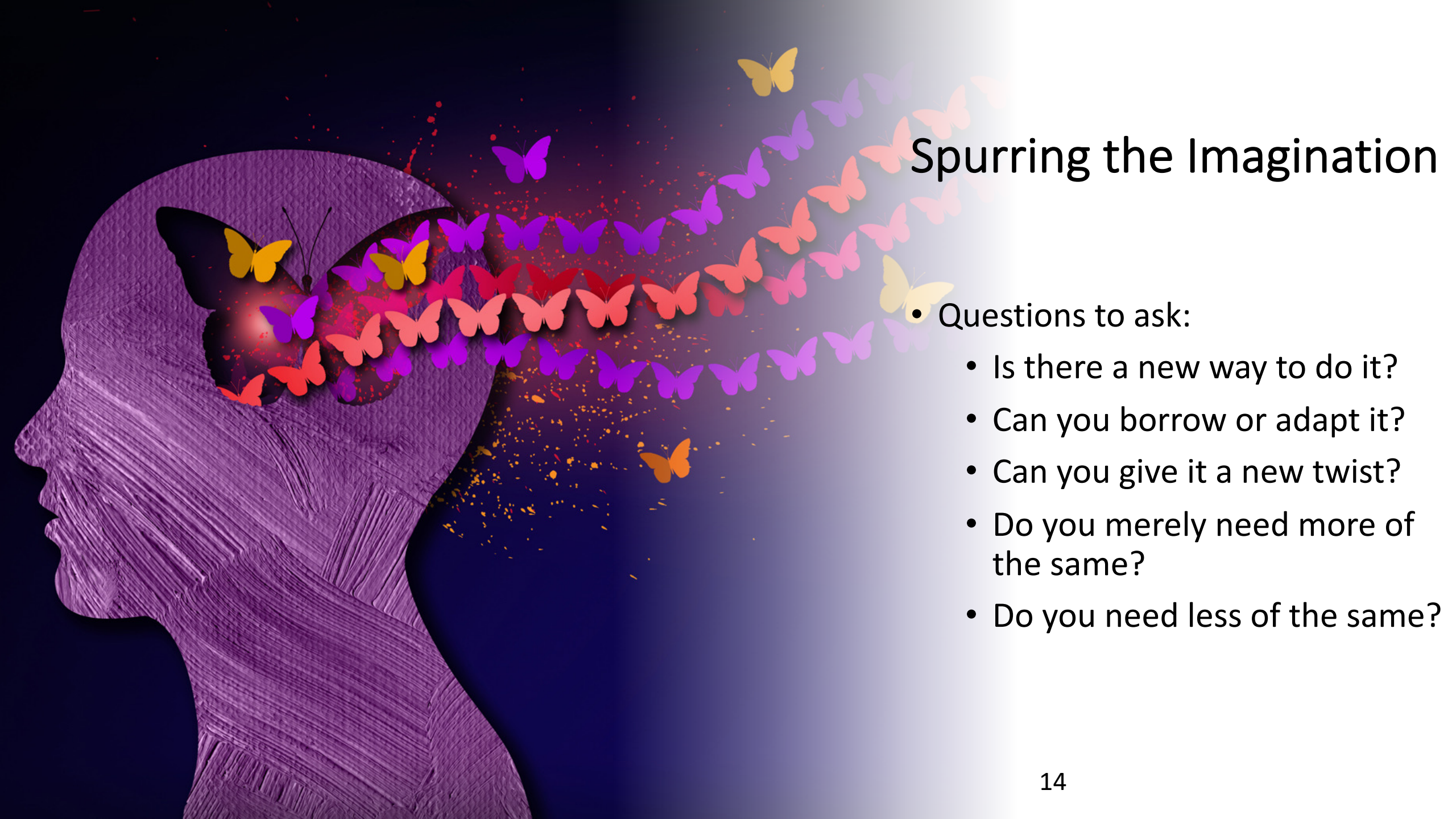
Entrepreneurship requires *both* left-and right-brained thinking.

- Right-brained thinking draws on *divergent* reasoning, the ability to create a multitude of original, diverse ideas.
- Left-brained thinking counts on *convergent* reasoning, the ability to evaluate multiple ideas and to choose the best solution to a problem.

Barriers to Creativity



- **Becoming overly specialized**
- **Avoiding ambiguity**
- **Fearing looking foolish**
- **Fearing mistakes and failure**
- **Believing that “I’m not creative”**
- **Searching for the one “right” answer**
- **Focusing on “being logical”**
- **Blindly following the rules**
- **Constantly being practical**
- **Viewing play as frivolous**



Spurring the Imagination

- Questions to ask:
 - Is there a new way to do it?
 - Can you borrow or adapt it?
 - Can you give it a new twist?
 - Do you merely need more of the same?
 - Do you need less of the same?

Spurring the Imagination (continue)

- 
- Is there a substitute?
 - Can you rearrange the parts?
 - What if you do just the opposite?
 - Can you combine ideas?
 - Can you put it to other uses?
 - What else could you make from this?

Spurring the Imagination

(continued)

- Are there other markets for it?
- Can you reverse it?
- Can you eliminate it?
- Can you put it to another use?
- What idea seems impossible, but if executed, would revolutionize your business?







Factors That Contribute to Companies' Ability to Innovate

<https://www.youtube.com/watch?v=xvCdLqeMOKA>



ALUX.COM



Enhancing Organizational Creativity

- Include creativity as a core company value.
- Hire for creativity.
- Create an organizational structure that nourishes creativity.
- Embrace diversity.
- Expect creativity.
- Expect and tolerate failure.

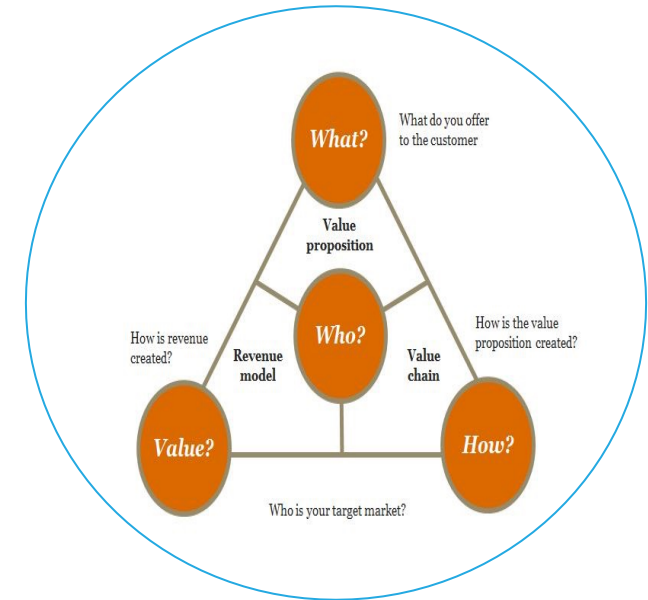
Enhancing Organizational Creativity

(continued)

- Incorporate fun into the work environment.
- Encourage curiosity.
- Design a workspace that encourages creativity.
- View problems as opportunities.
- Provide creativity training.
- Provide support.
- Develop a procedure for capturing ideas.



- Talk and interact with customers.
- Reward creativity.
- Model creative behavior.
- Monitor emerging trends and identify ways your company can capitalize on them.
- Look for uses for your product or service in other markets.
- Don't forget about business model innovation.



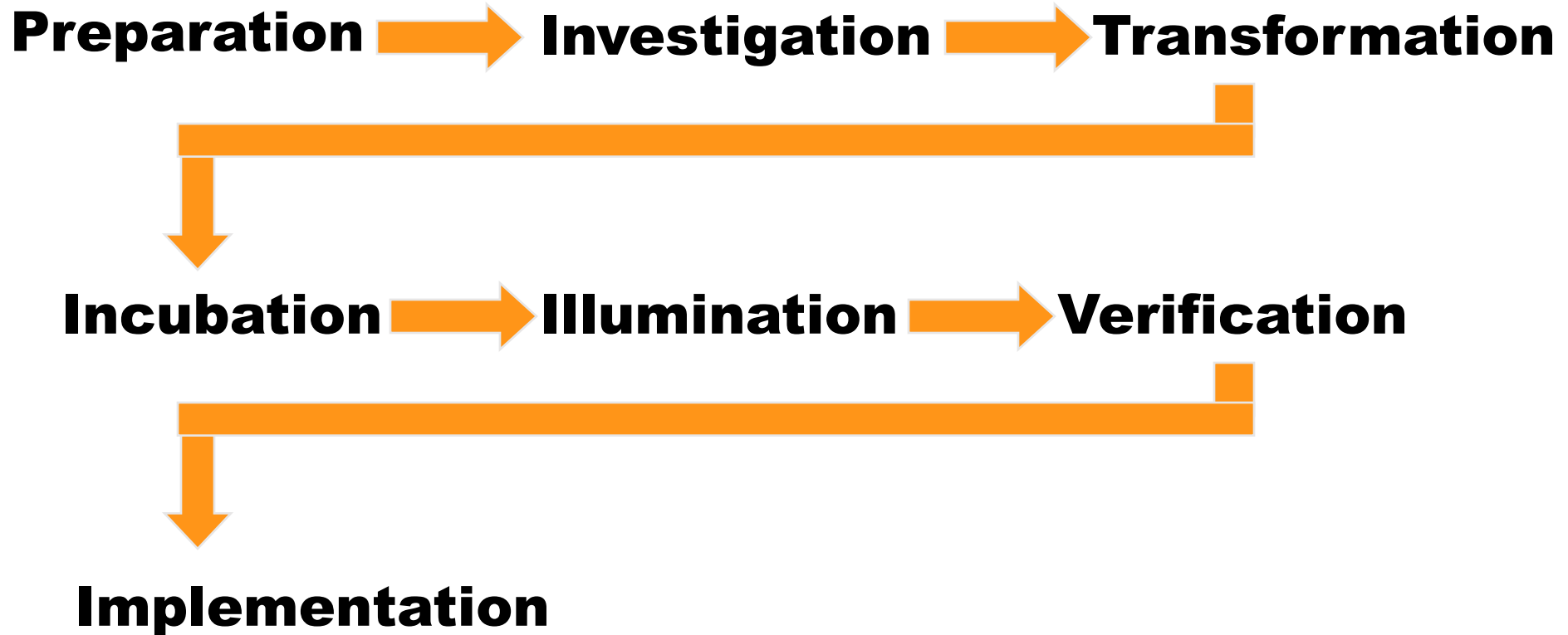
Enhancing Individual Creativity

- Allow yourself to be creative.
- Forget the “rules.”
- Give your mind fresh input every day.
- Take up a hobby.
- Travel and observe.
- Observe the products and services of other companies, especially those in completely different markets.
- Recognize the creative power of mistakes.
- Notice what is missing.
- Look for ways to turn trash into treasure.
- Keep a journal handy to record your thoughts and ideas.
- Listen to other people.
- Listen to customers.

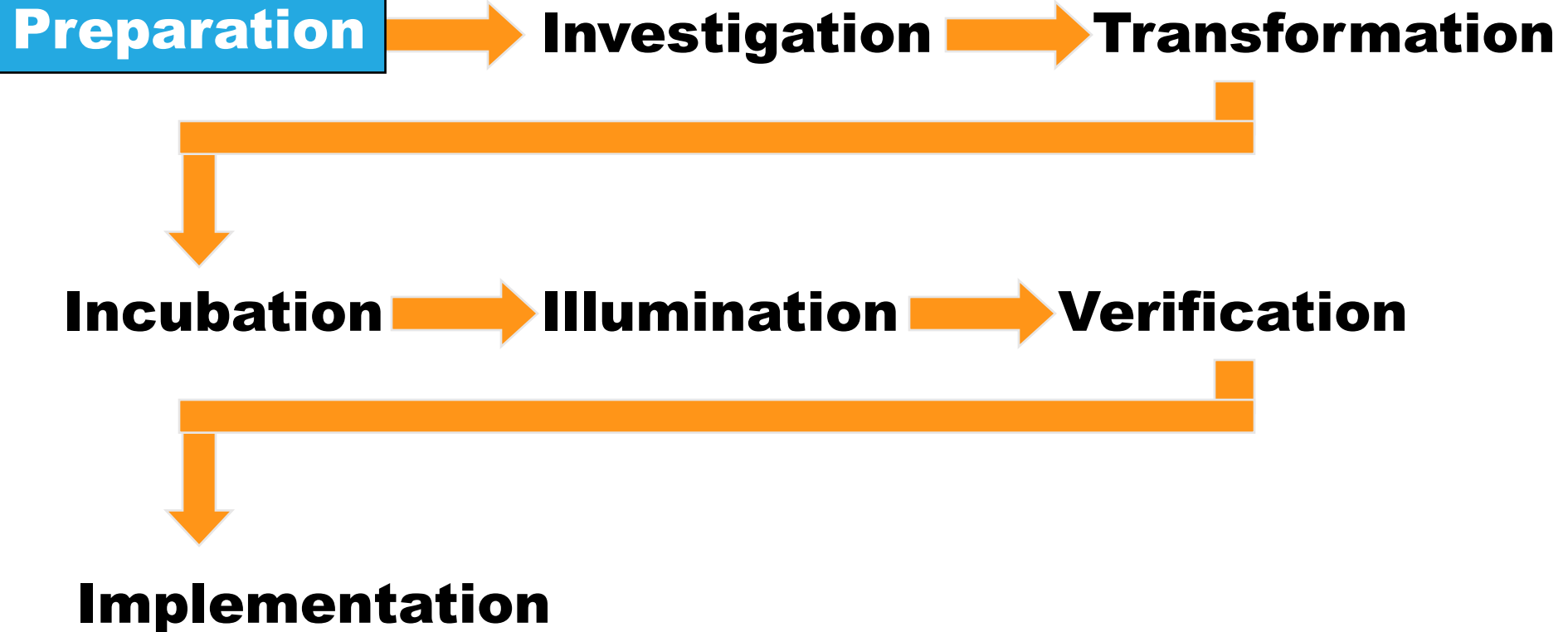
- Watch a movie.
- Talk to a child.
- Do something ordinary in an unusual way.
- Keep a toy box in your office.
- Take note of your “pain” points.
- Do not throw away seemingly “bad” ideas.
- Collaborate with others.
- Read books on stimulating creativity or take a class on creativity.
- Doodle.
- Take some time off.
- Be persistent.



The Creative Process



The Creative Process

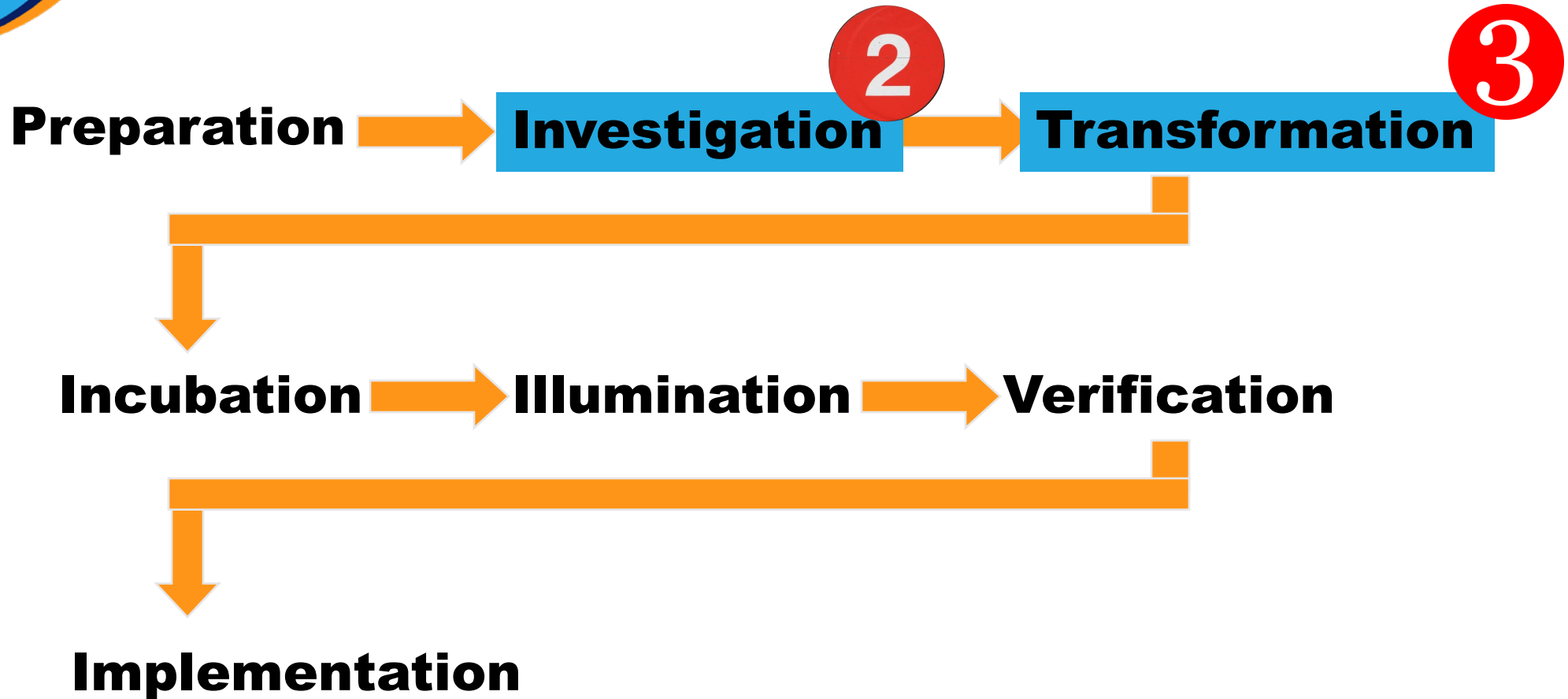


Get your mind ready for creative thinking.

- Adopt the attitude of a lifelong student.
- Read ... a lot ... and not just in your field of expertise.
- Clip articles of interest to you and save them.
- Develop your listening skills.
- Join professional or trade associations and attend their meetings.
- Eliminate creative distractions.
- Take time to discuss your ideas with other people.



The Creative Process

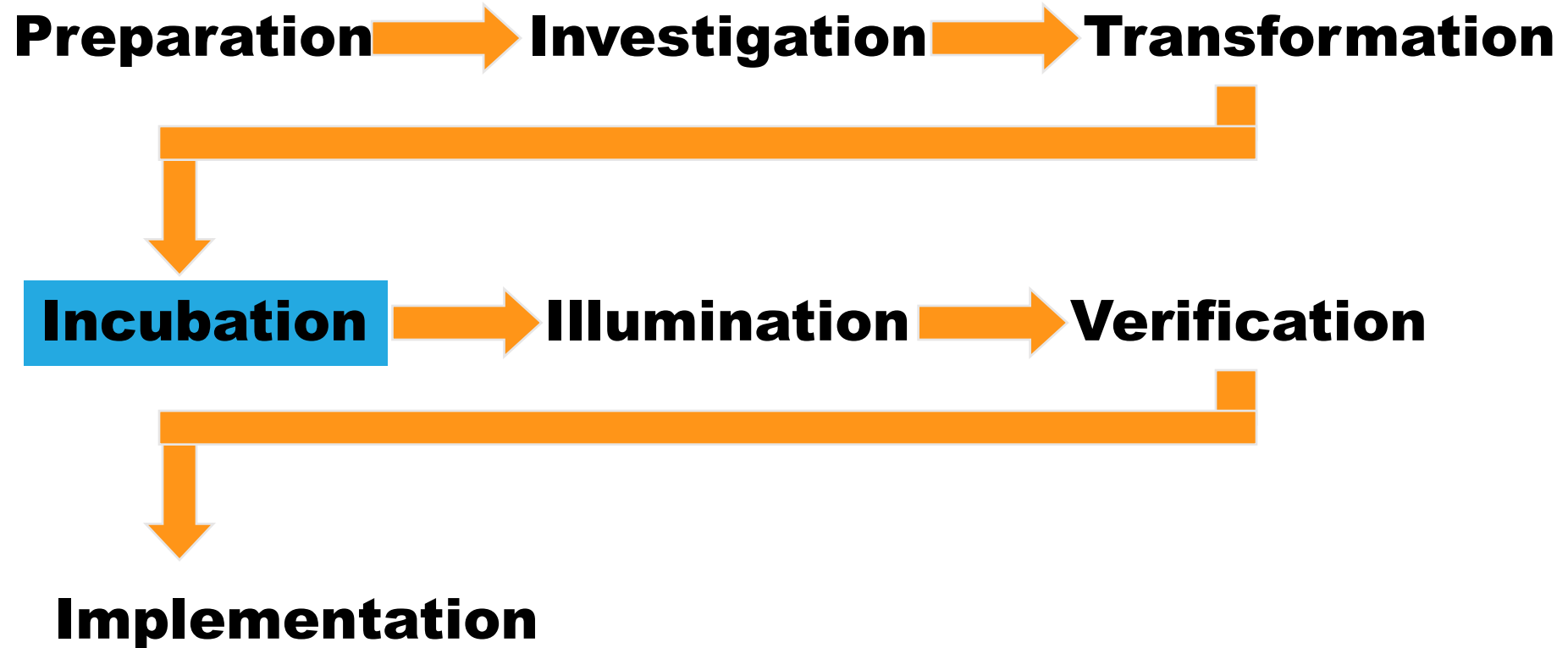




- Involves viewing both the similarities and the differences among the information collected.
- Two types of thinking are required:
 - **Convergent:** the ability to see the similarities and the connections among various and often diverse data and events.
 - **Divergent:** the ability to see the differences among various data and events.

- How can you transform information into purposeful ideas?
 - Grasp the “big picture” by looking for patterns that emerge.
 - Rearrange the elements of the situation.
 - Use synectics: taking two seeming nonsensical ideas and combining them.
 - Remember that several approaches can be successful. If one fails, jump to another.

The Creative Process

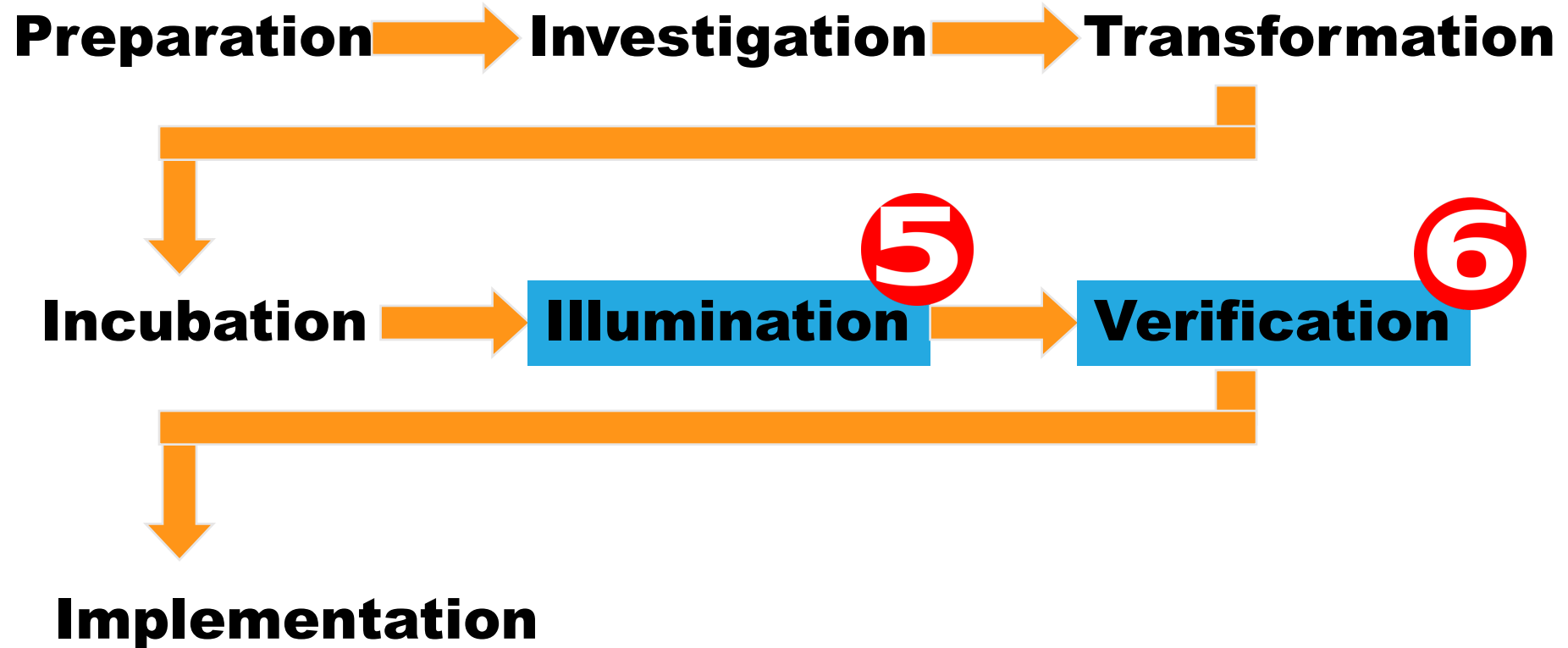


Incubation

- Allow your subconscious to reflect on the information collected.
- Walk away from the situation.
- Take the time to daydream.
- Relax – and play – regularly.
- Dream about the problem or opportunity.
- Work on the problem in a different environment.

4

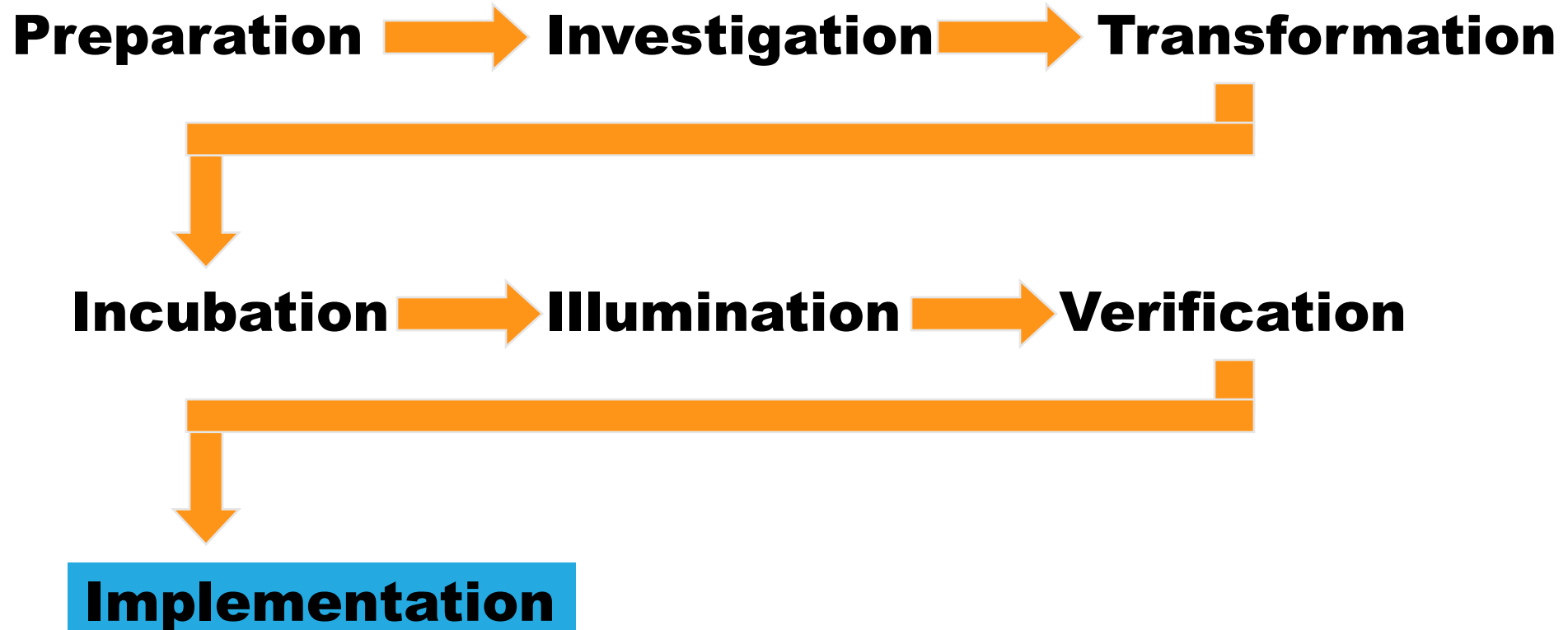
The Creative Process





- Validate the idea as accurate and useful.
 - Is it *really* a better solution?
 - Will it work?
 - Is there a need for it?
 - If so, what is the best application of this idea in the marketplace?
 - Does this product or service fit into our core competencies?
 - How much will it cost to produce or to provide?
 - Can we sell it at a reasonable price that will produce a profit?
 - Will people buy it?

The Creative Process



1. Brainstorming
2. Mind-mapping
3. Force-field analysis
4. TRIZ
5. Rapid prototyping

1. Brainstorming guidelines

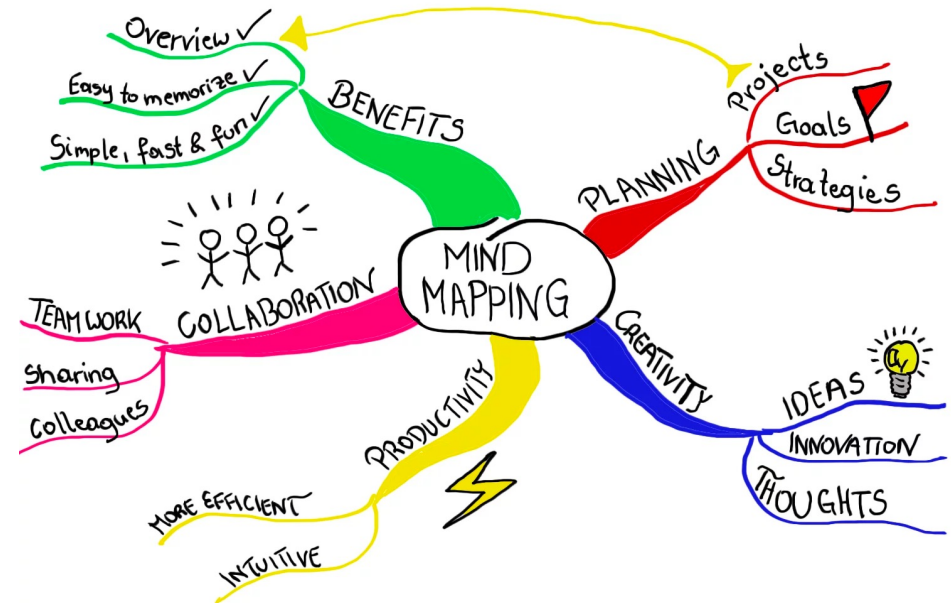
- The goal is to create a large *quantity* of novel and imaginative ideas.
- Keep the group small – “Two pizza rule.”
- Make the group as diverse as possible.
- Do aerobic exercise before the session.
- Emphasize that company rank is irrelevant.
- Have a well-defined problem: why, how, what.
- Provide relevant background material.
- Limit the session to 40 to 60 minutes.
- Take a field trip.



[illegible]

- Appoint a recorder.
- Encourage *all* ideas from the team.
- Shoot for *quantity* of ideas over *quality* of ideas.
- Use a circular or U-shaped seating pattern.
- *Forbid* criticism.
- Encourage idea “hitch-hiking.”
- Dare to imagine the unreasonable.

- **Mind-mapping:** A graphical technique that encourages thinking on both sides of the brain, visually displays relationships among ideas, and improves the ability to see a problem from many sides.

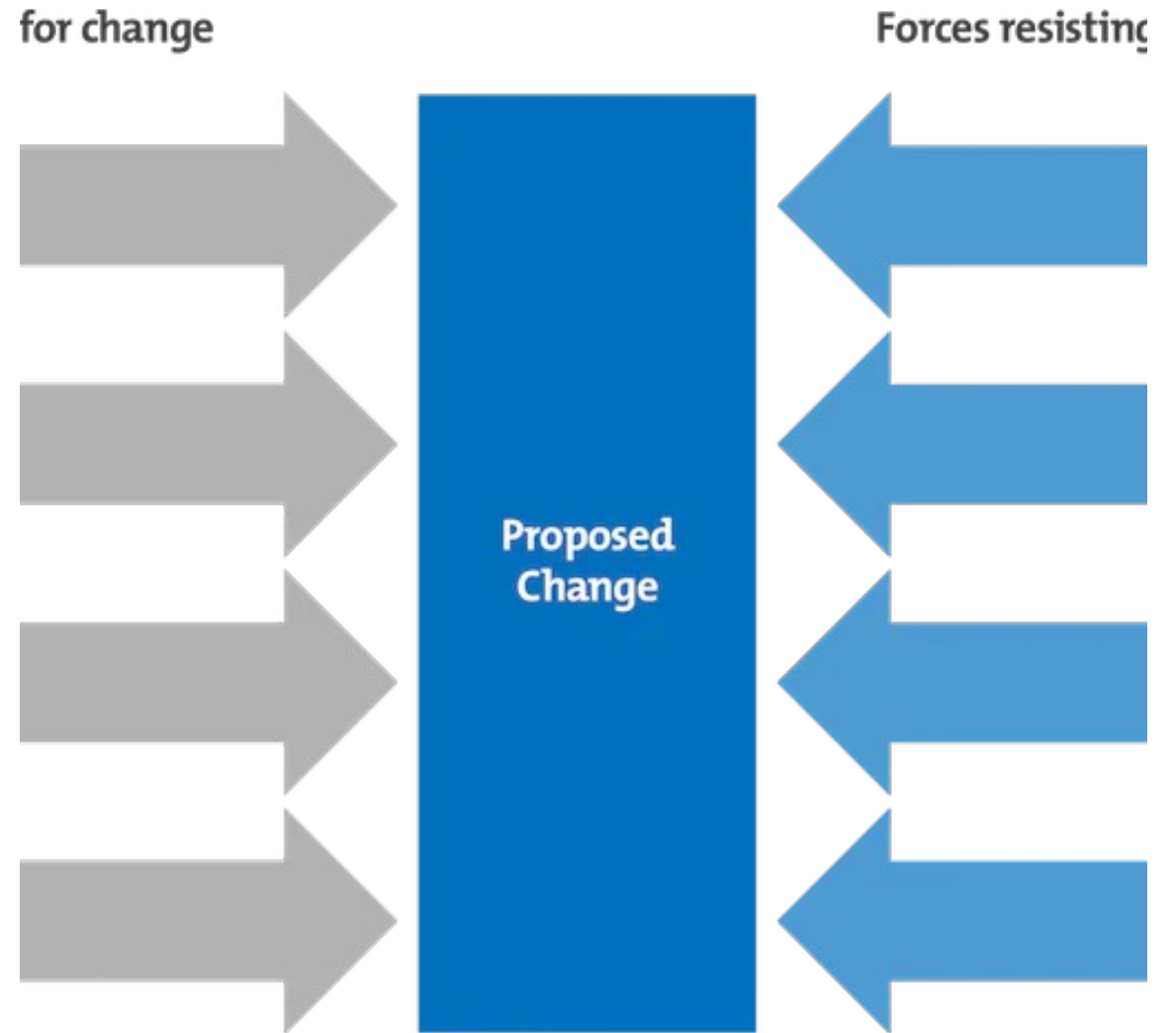


The Mind-Mapping Process

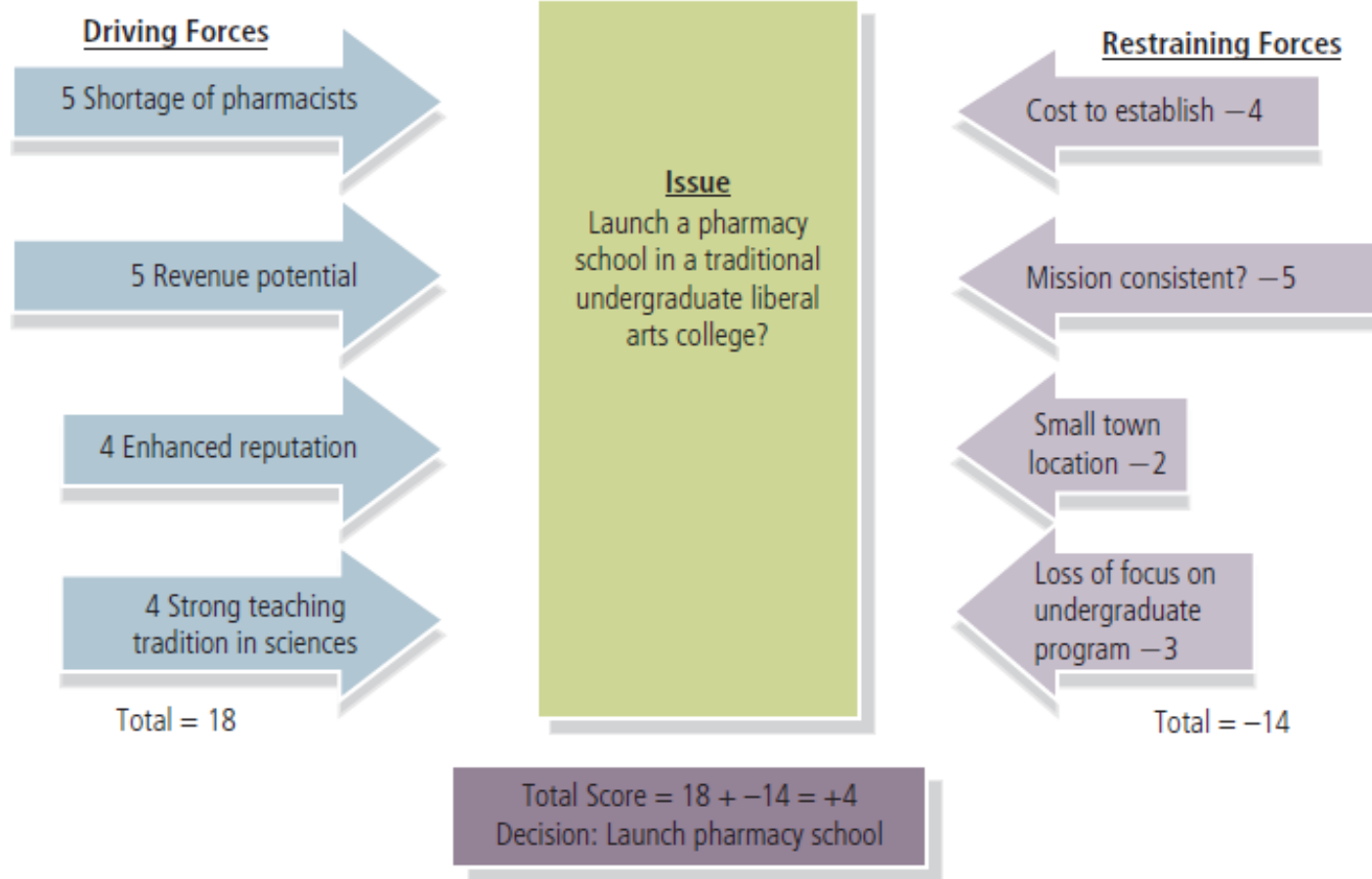
- Start by writing down or sketching a picture symbolizing the problem or area of focus in the center of a blank page.
- Work as quickly as possible and write down every idea that comes into your mind for 20 minutes, connecting each to the central picture or words with a line.
- Don't try to force creativity.
- After a brief rest, begin to integrate the ideas into a mind map.

3. Force-Field Analysis

- Force-Field Analysis is a useful technique for evaluating the forces that support and oppose a proposed change.
 - Three columns:
 - Center: Problem to be addressed
 - Left: Driving forces
 - Right: Restraining forces
 - Score each force (-1 to +4) and add them.

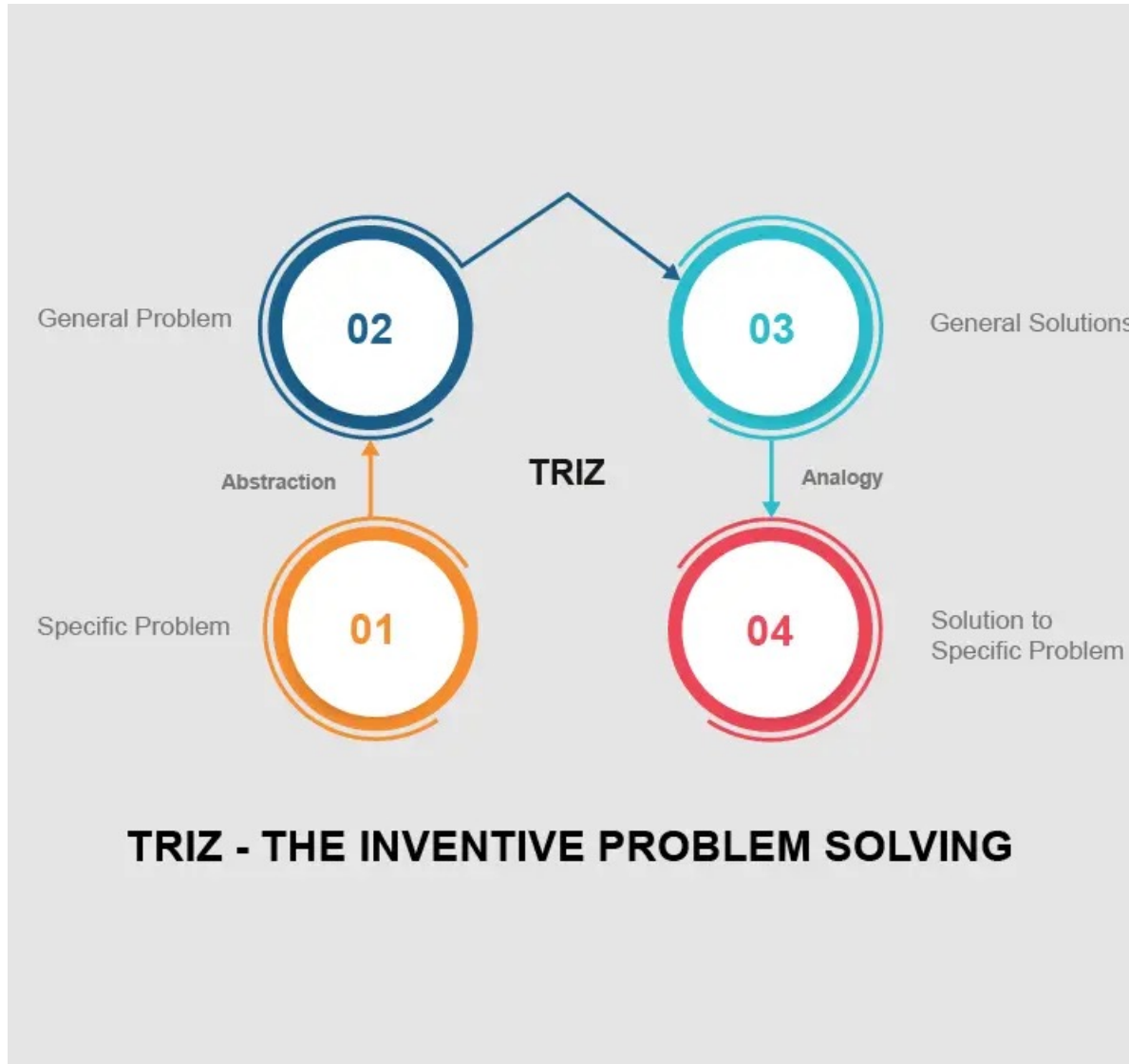


Sample Force-Field Analysis



4. TRIZ

- TRIZ
 - A systematic approach designed to solve any technical problem.
 - Relies on 40 principles and left-brained thinking to solve problems.

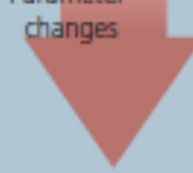
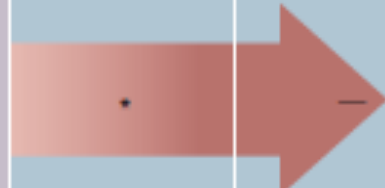


TRIZ PRINCIPLES

1. Changing **the dynamics** of the object or the environment (e.g., making a rigid part flexible)
2. **Discarding or recovering** parts of an object (e.g., dis- solving a protective case when it is no longer needed)
3. Causing an object to **vibrate or oscillate** (e.g., transforming a standard knife into an electric knife by introducing oscillating blades)
4. **Changing the properties** of the object (e.g., freezing the chocolate syrup and then molding the bottles around the syrup).

Chapter 02

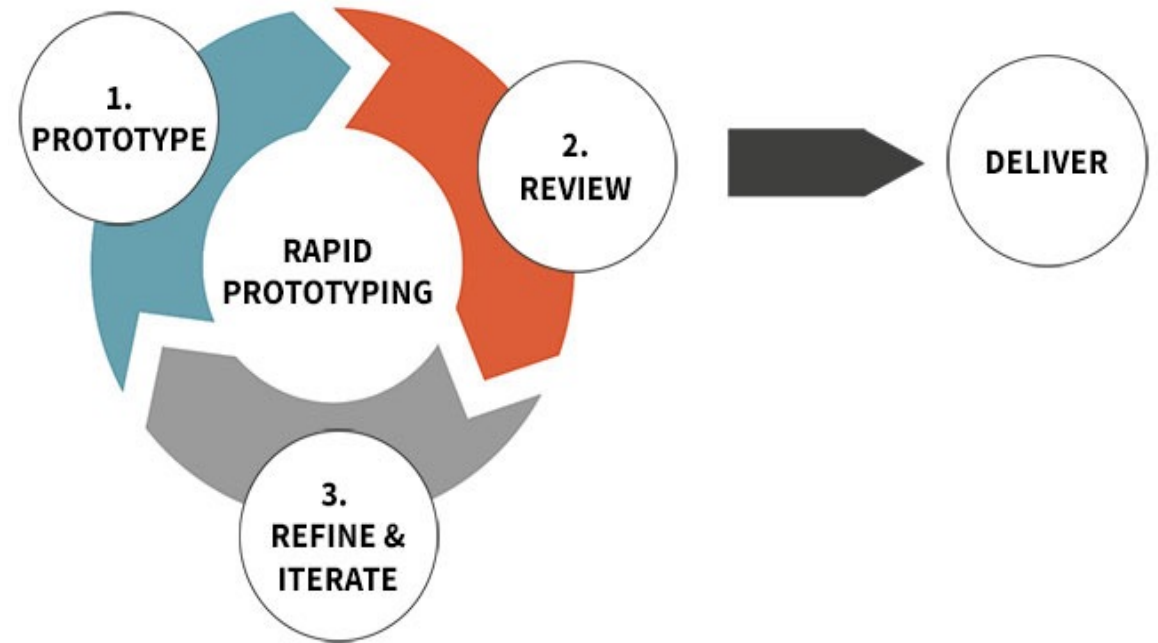
TRIZ Contradiction Matrix

		Characteristic that is getting worse					
		Volume of stationary object	Speed	Force	Stress or pressure	Shape	Stability of the object
Characteristic to be improved	Volume of stationary object	—	*	Taking out Mechanical vibration Thermal expansion	Intermediary Parameter changes	Nested doll Taking out Parameter changes 	Discarding and recovering Mechanics substitution Parameter changes Composite materials
	Speed		—	The other way around Mechanics substitution Dynamics Periodic action	Universality Mechanical vibration Strong oxidants Composite materials	Dynamics Discarding and recovering Mechanical vibration Parameter changes	Mechanics substitution Homogeneity Segmentation Mechanical vibration
	Force	Taking out Phase transitions Mechanical vibration Thermal expansion	The other way round Mechanics substitution Dynamics Equipotentiality	—	Mechanical vibration Skipping Beforehand cushioning	Preliminary action Parameter changes Composite materials Discarding and recovering	Parameter changes Preliminary action Skipping
	Stress or pressure	Parameter changes Intermediary	Universality Parameter changes Phase transitions	Phase transitions Parameter changes Skipping	—	Parameter changes Asymmetry Dynamics Preliminary action	Parameter changes Homogeneity Taking out Composite materials
	Shape	Nested doll Taking out Parameter changes	Parameter changes Discarding and recovering Mechanical vibration	Parameter changes Preliminary action Thermal expansion Composite materials	Discarding and recovering Dynamics Preliminary action Spheroidality and curvature	—	Homogeneity Segmentation Mechanical vibration Asymmetry



5. Rapid Prototyping

❖ **Rapid Prototyping:**
Transforming an idea into an actual model that will point out flaws and lead to design improvements.



1. Patent:

- A grant from an official body to the inventor of product, giving the exclusive right to make, use, or sell the invention for 20 years from the date of filing the patent application.



2. Trademark: any distinctive word, symbol, design, name, logo, slogan, or trade dress a company uses to identify the origin of a product or to distinguish it from other goods on the market.



3. Service mark: the same as a trademark except that it identifies the source of a service rather than a product.



4. Copyright: an exclusive right that protects the creators of original works of authorship such as literary, dramatic, musical, and artistic works. Copyrighted material is denoted by the symbol ©.

Characteristics of Patents, Trademarks, and Copyrights

Protection	What It Protects	Who Is Eligible	Length of Protection	Approximate Cost
Utility Patent	Exclusive right to make, use, and sell an invention	First person to file for a patent	20 years	\$4,000 to \$25,000, depending on complexity
Design Patent	New, original changes in the design of existing products that enhance their sales	First person to file for a patent	14 years	\$4,000 to \$25,000, depending on complexity
Trademark	Any distinctive word, phrase, symbol, design, name, logo, slogan, or trade dress that a company uses to identify the origin of a product or to distinguish it from other goods on the market	Entity currently using the mark in commerce or one who intends to use it within six months	Renewable between 5th and 6th years and 9th and 10th years and every 10 years afterward	\$1,000 to \$2,500
Service mark	Same protection as a trademark except that it identifies and distinguishes the source of a service rather than a product	Entity currently using the mark in commerce or one who intends to use it within six months	Renewable between 5th and 6th years and 9th and 10th years and every 10 years afterward	\$1,000 to \$2,500
Copyright	Original works of authorship, such as literary, dramatic, musical, and artistic works	Author or creator	Life of the author or creator plus 70 years	\$140 to \$200

Conclusion

- The creative process is a tenant of the entrepreneurial experience.
- Success, and even survival itself, requires entrepreneurs to tap their creativity.
- The seven steps of the creative process transform an idea into a business reality.
- Creativity results in value, and value provides a competitive advantage.
- Entrepreneurs protect their creative ideas with patents, trademarks, service marks, and copyrights to sustain a competitive edge.



**thanks for
listening!**