

Proactive Management and Business Ethics



Utrecht, June 2011



Creativity & Generation of Ideas

- 1. What is creativity?**
 - **Elements.**
- 2. Profile of the entrepreneur.**
 - **Demystifying creativity.**
 - **Barriers.**
 - **Stimuli for boosting creativity.**
 - **Indicators.**
- 3. The creative process.**
- 4. Creative goals.**
 - **Setting creative goals.**
- 5. Generation and development of ideas.**
 - **Factors.**
 - **Activities to develop.**
 - **The idea.**
- 6. Techniques.**
 - **What would happen if**
 - **Brainstorming.**
 - **Brainwriting.**
 - **The 6 hats.**
- 7. Final practical analysis.**

Defining creativity

Creativity is a condition for life: the condition of being entrepreneurial



Defining creativity

Being creative means:

Being different.

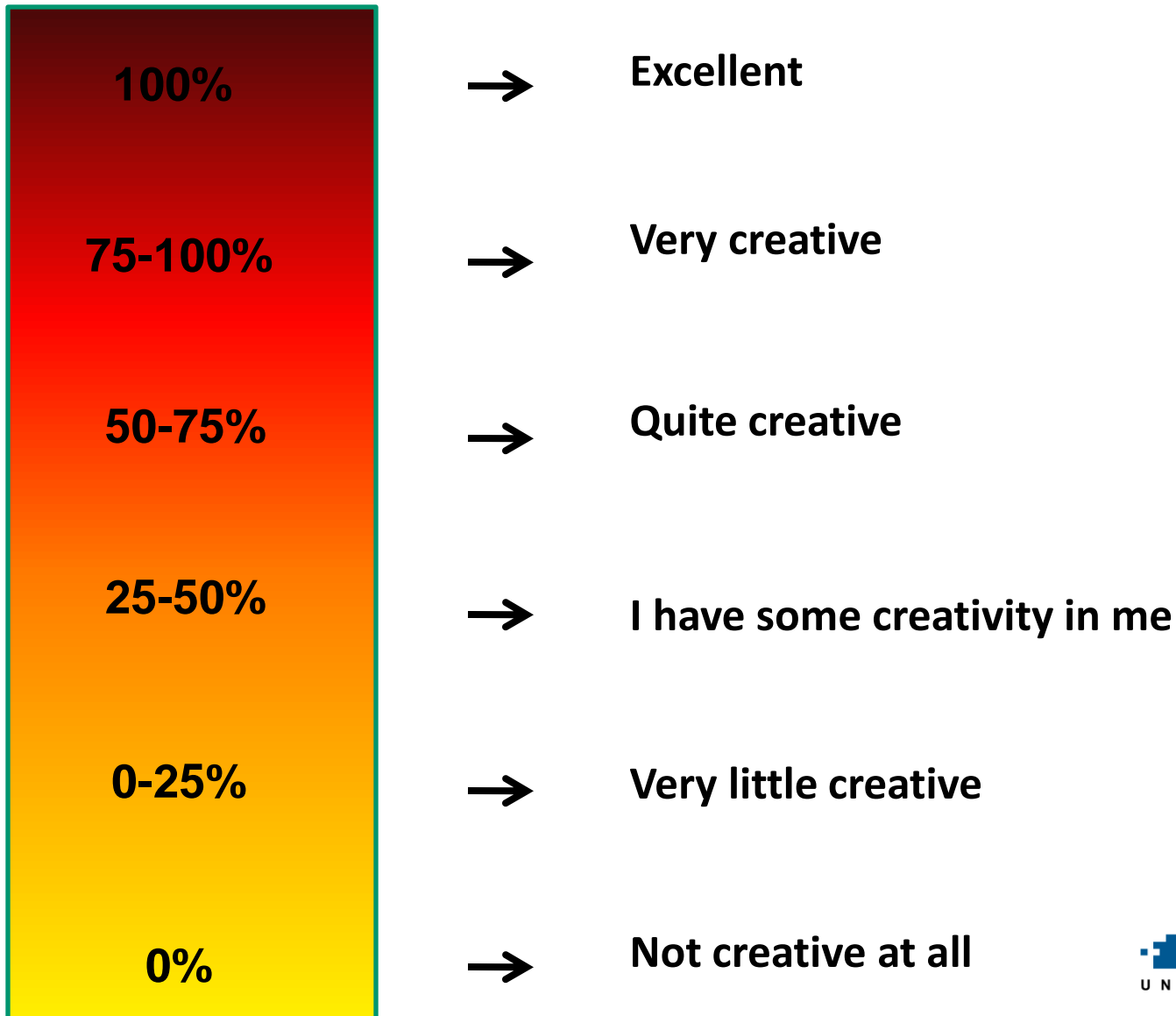
Going beyond commonly accepted rules.

Going beyond the immediate.

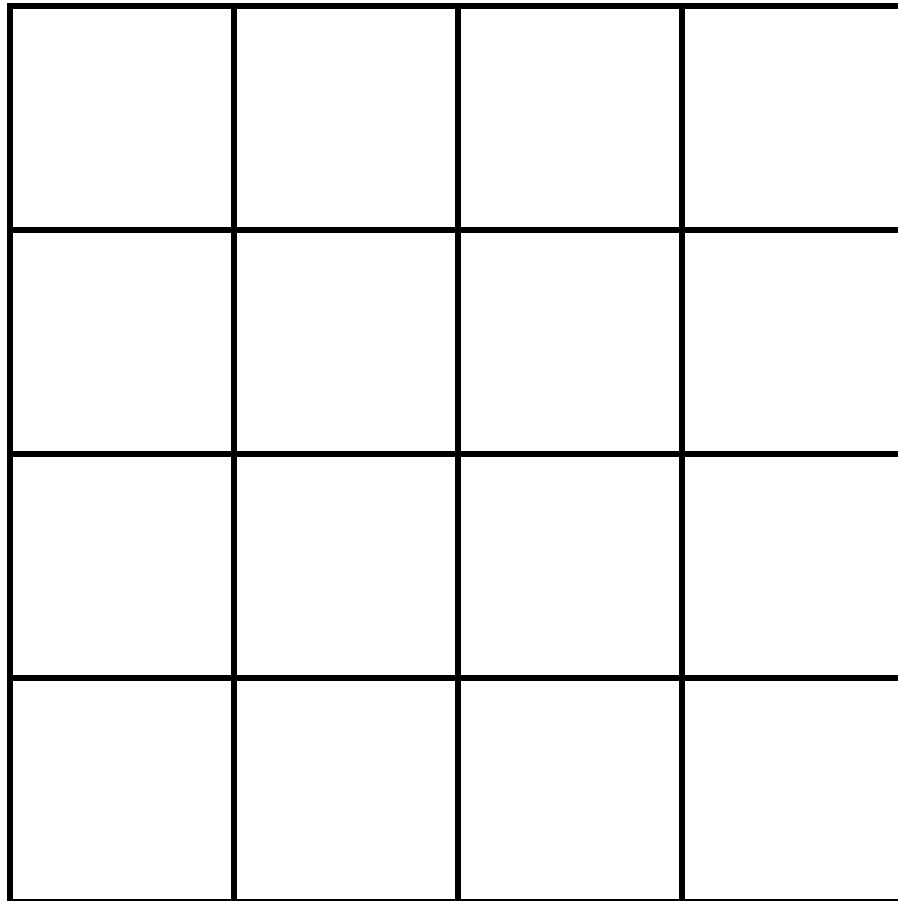
Finding solutions where you wouldn't commonly find them.



How creative are you?



How many squares can you see here?



Let's speak about creative thinking...

Let's foster creative thinking...

We are great artists!!

Shall we draw?



Faced with a problem, we don't know how to be original.

WE MUST GET RID OF SCHEMAS

The creative break...

It means taking a break to “think” about issues that are “usually” disregarded in order to find solutions to potential problems.

Exercises to stay creative

Perspective exercise

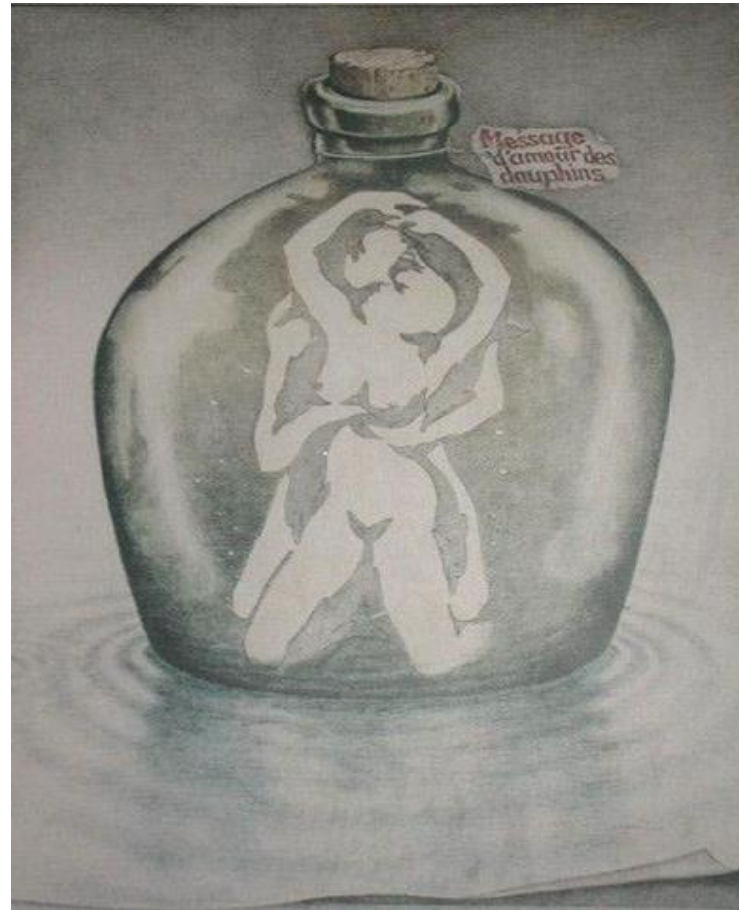
Expressing yourself creatively means looking from different perspectives in order to find the details and a style of your own and to understand other viewpoints. Exchanging opinions is enriching.

It is here that you will find your own expression. Your mind will be more open to learning if you look at things with interest.

Things vary depending on the way we look at them ...



What can you see in the picture?

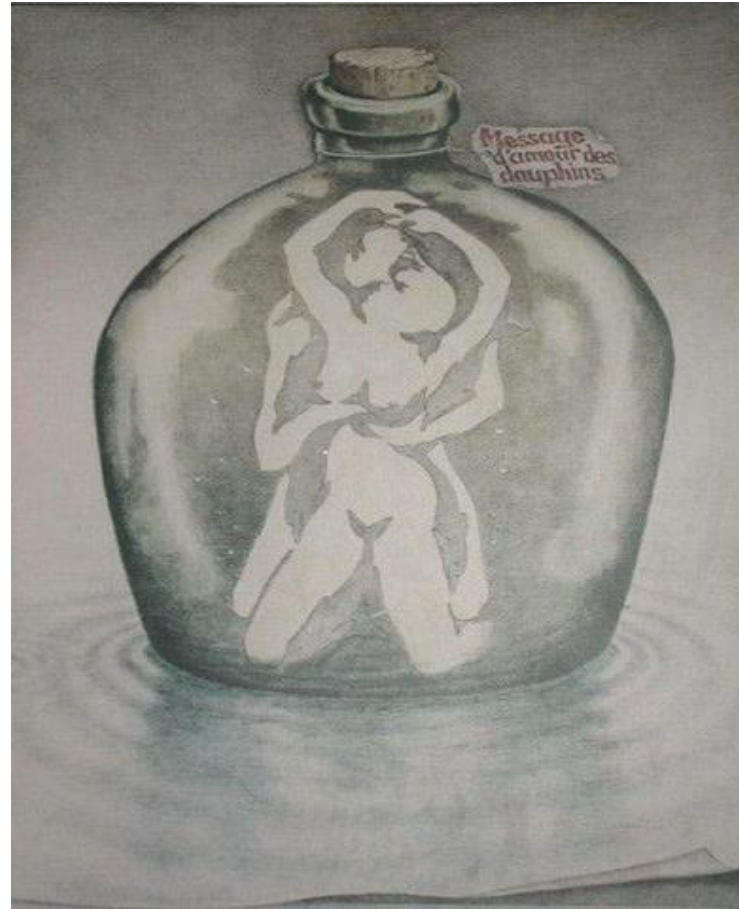


Did you look further?

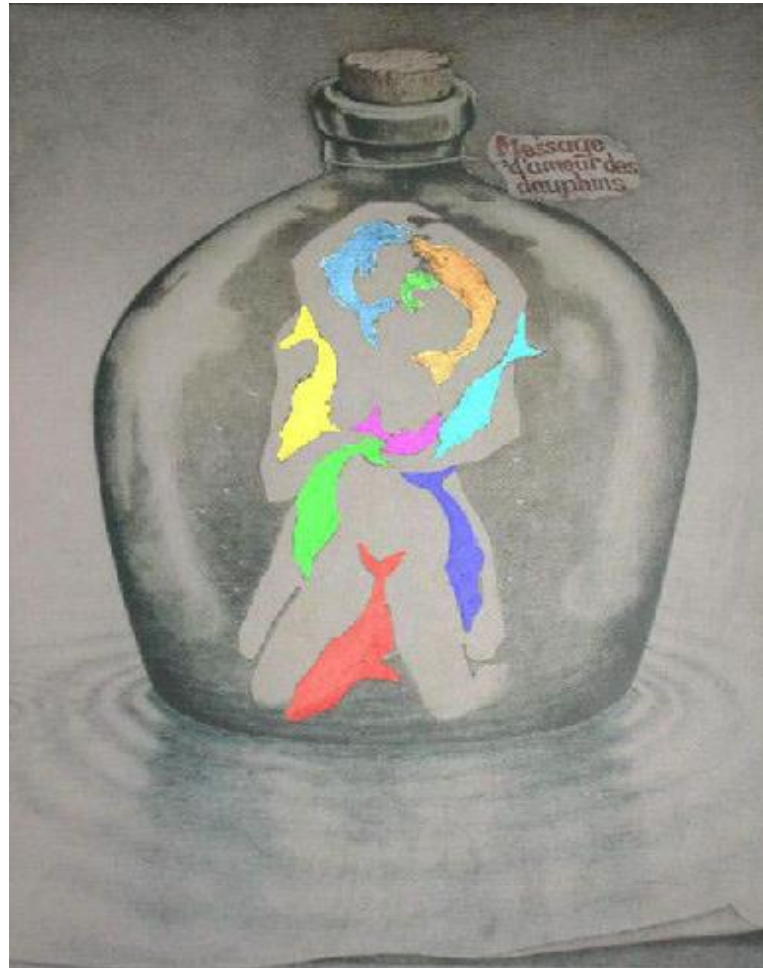
Recent research has proved that children cannot see the couple because their minds are not associated to such a scene.

However, the rest of minds are corrupted enough so as to see something else.

What happens if I look closer...?



What can you see?



We can conclude that...

Children can see 9 dolphins.

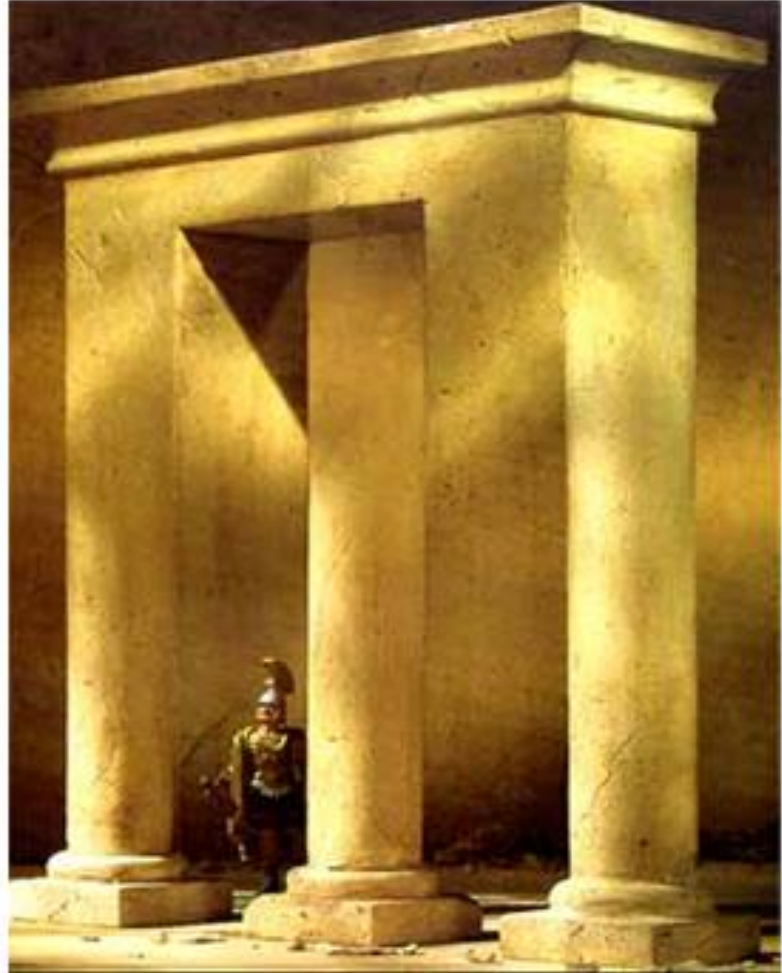
If it takes you longer than 6 seconds to see the dolphins, you need to be CREATIVE, YOU ONLY SEE THE IMMEDIATE.

And... your corruption is beyond limits!

THERE ARE 9 DOLPHINS!

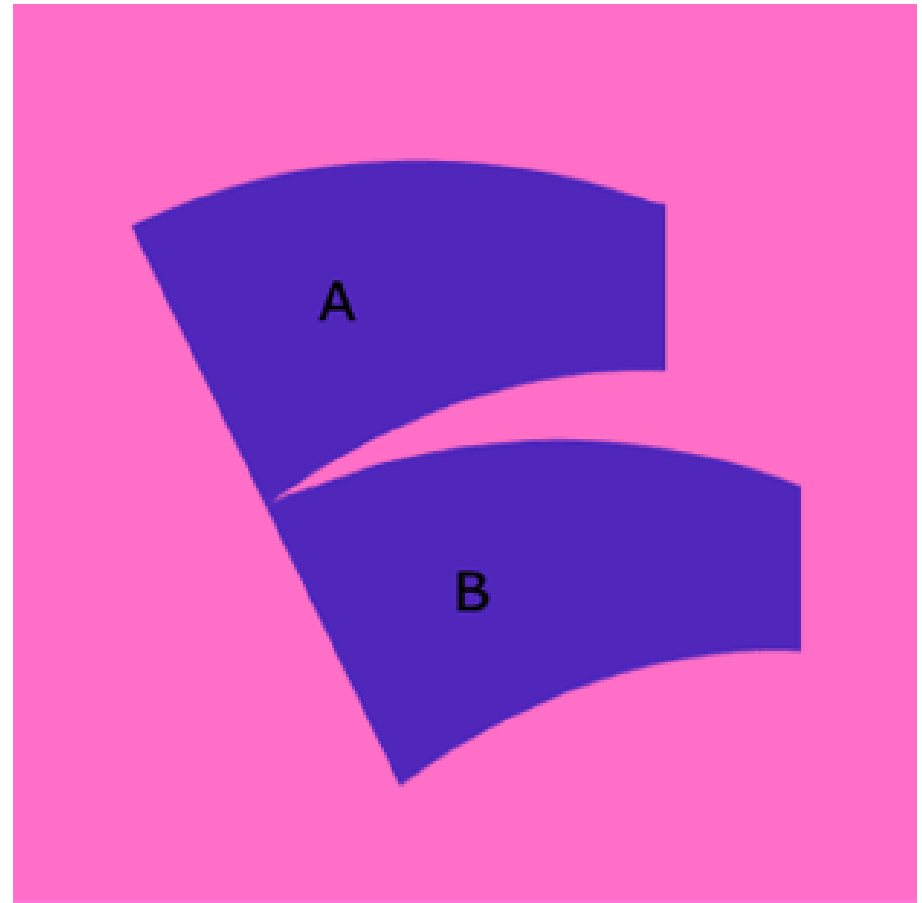
What can you see?

How many columns
are there?
Two square ones or...
three round ones?



What can you see?

Are A and B the same size?

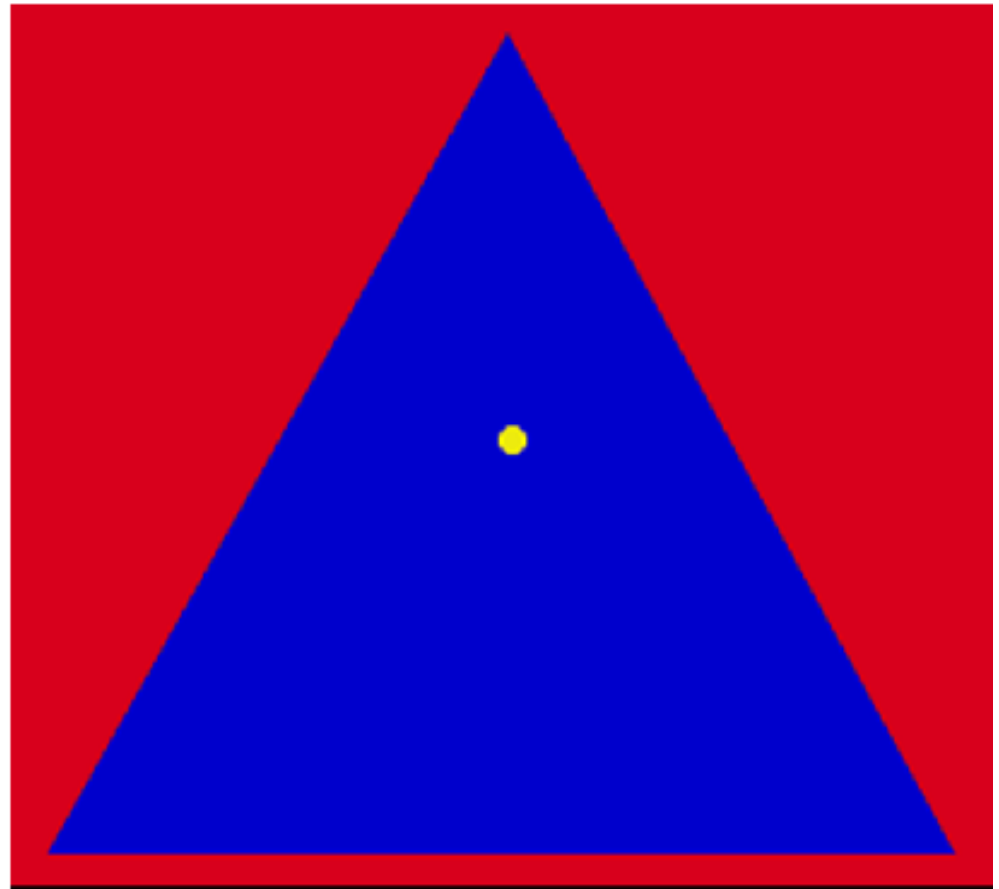


What can you see?

Is the yellow circle
nearer the triangle's
vertex or base?

It's at the same
distance.

Check it.



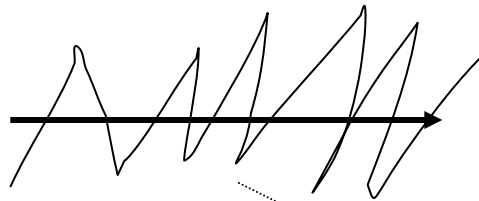
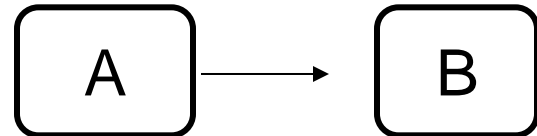
How does our brain work?



BELIEFS



ASSUMPTIONS



Logical relationship (type of thought 1)

Why?

How?

alternatives

High frequency ideas

1. Hunt/fish/harvest
2. Begging
3. Family/friends
4. Steal/rob
5. Exchange

Low frequency ideas

1. Enrol the army
2. Go to prison
3. Celebration (wedding...)
4. Discarded fruit

Type of thought 2

The creative person profile

General features:

1. Fluency or easiness.
2. Flexibility.
3. Originality.
4. Elaboration.
5. Openness to new ideas.
6. Tolerance with ambiguity.
7. Curiosity.
8. Enthusiasm.
9. Energy.
10. Independent thinking.
11. Intuition.
12. Unconstrained by rules.
13. Capacity for innovative combinations.
14. A wish to improve things.
15. Ability to see things from a different perspective.
16. Open-minded to new ideas.
17. Taking initiative.
18. Ability to generate multiple options.

Demystifying creativity



Creativity can be developed, can be learned.

**“To be creative,
you have to
have special
qualities”**

Creativity is not natural talent. Although conditions “at birth” favour (or hinder) a higher (or lower) degree of development, everybody can boost (or atrophy) their creativity as a result of training and environmental factors.

**“The more
intelligent, the
more creative”**

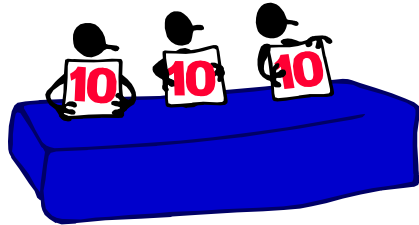
To start with, we should question the notions of “intelligence” and “creativity”, and whether or not the procedures to measure them are reliable.

Nonetheless, research on this issue, though divergent, seems to indicate that to some extent creativity and intelligence grow together (positive but low correlation) and then become independent.

In sum: creativity does not directly depend on intelligence. Creativity does not require intelligence either (and a capacity in a given area) but they are two distinctive concepts.

Demystifying creativity

The creative product must match reality (“Valuable innovation”).



“To be creative you have to be a bit foolish”

Creativity is not foolishness. It is a deliberate and systematic process. Although at some point in the creative process we must ‘escape’ reality, we must also keep our ‘feet on the ground’; a creative idea must be satisfactory and socially accepted, supported by reality, and pass the context test (Systems Model): Person, Field, Scope.)...

“Creativity is just for rebels”

Creativity does not mean “anything goes” as far as it’s different, even if it is useless or inadequate. “Foolishness” is not an end in itself, it is a means to achieve the creative idea (“...any valuable creative idea will be perfectly logical –and even obvious- when considered afterwards.”).

Creativity is not exclusive to rebels. It is true, though, that to be creative you have to ‘get off track’ a bit, but you must also have command of the field and adapt to reality.

“Creativity is in the right hemisphere”

Creativity is not exclusive to the right hemisphere of the brain (it also requires concepts and perceptions from the left one).

When a person works creatively, both hemispheres work simultaneously.

Demystifying creativity



Using creativity requires deliberative work.

“To come up with a creative idea, you must wait for inspiration”

Rather than inspiration or intuition, creativity can make valuable contributions, but it is boosted by means of “deliberative and systematic” creative work (creating is not “wait and see if we come up with something”).

Inspiration must be found (“When inspiration comes, I should be working”)

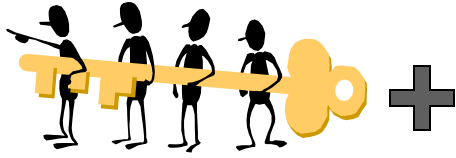
“To be creative, it is enough to be uninhibited

Being uninhibited is important but not sufficient; it must be backed by deliberative creative work allowing us to go higher than our “normal” or usual creative standards.

“Having a creative idea is a matter of luck”

Creativity is not sustained by random search only. It is not shallow success. It is not ‘releasing’ ideas at random hoping some of them may turn out valuable.

Demystifying creativity



Creativity has many sides.

“In order to create, you have to do group work”

Ideally, individual and group work must be combined, as both have advantages and qualities that are perfectly compatible (provided the group works fine at task level and socio-affective level).

“Creativity is for geniuses”

Big-leap creativity is as necessary (it sets new paradigms) as small-leap creativity (it leads to new products without sudden concept changes).

We can differentiate when a person is bright (expresses unusual or interesting aspects), personally creative (brings creative products only known by them) and just creative (produces changes in a specific field).

“Creativity is for artists and publicists”

Creativity can be found in all fields. It has many applications.

It has more to do with our attitude, our life style (it is a decision) and the mutual influence between the person and the context.

What prevents me from being creative?



BARRIERS...

- The right answer should be enough; don't look for multiple options.
- Follow the rules and don't look any further.
- Being scared of making mistakes causes you not to take any risks; mistakes must be considered steps towards new ideas.
- Thinking that playing with a problem is useless; “thinking in-depth” about a problem is important for the creative process.
- Thinking that a question is not within your reach; many inventions are the result of somebody's ‘playing’ with ideas that were not their speciality.

Constraining creativity

1. WHAT KILLS CREATIVITY...

- ◉ Feeling watched
- ◉ Evaluation
- ◉ Rewards –extrinsic motivation
- ◉ Competition
- ◉ Too much control
- ◉ Constrained choices
- ◉ Pressure. The greatest MURDERER: **TIME.**



Constraining creativity

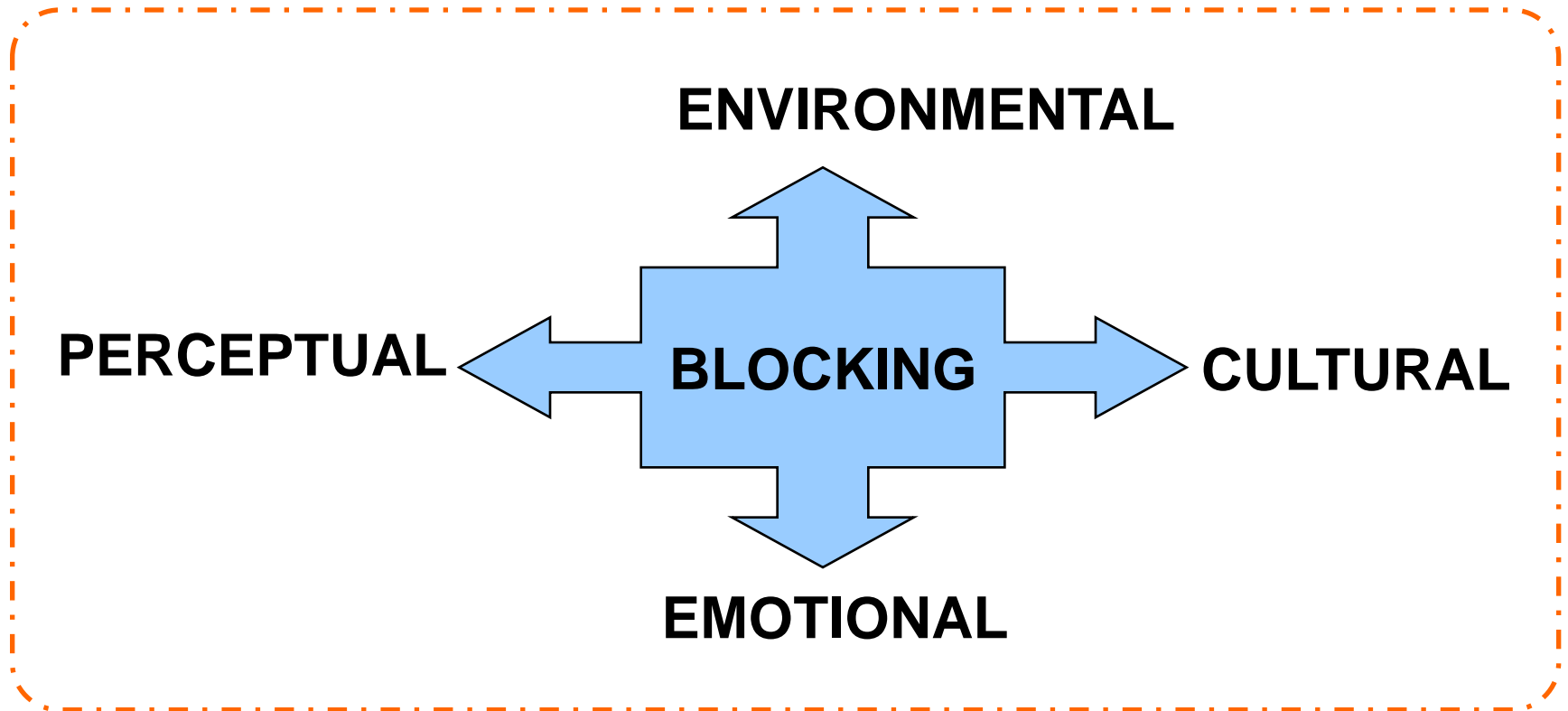
2. BRAIN DRAIN...

- **Society:** specialisation in a field
- **Educational institutions:** T/F as only possible answers
- **Organisations:** inflexibility and rigidity, the creative person is perceived as a threat
- **We:** being afraid of failure; laziness and perception.



Constraining creativity

3. BLOCKING



7 encouraging ways to boost personal creativity



→ EXPLORING! ▶▶ My interest and curiosity are raised.

I change when I “de-learn”, when I question established things, when I wonder “Why not...?” or “What would happen if...?”. I look at things differently and see a bias-free environment.



→ SURPRISE, SURPRISE! ▶▶ I escape the daily routine.

Transformation occurs when I practise “what could be”. My life is itself a creative project. I am more enriched and diverse when I think, feel and act in an unforeseeable way.



→ CONNECT! ▶▶ I discover interrelations.

I generate ideas when I discover novel relationships. I play in my search for new metaphors and combinations, mixing things. Faced with a new situation or problem, I look for different alternatives. I am open to ambiguity, absurdity and uncertainty because my creativity feeds on them.



→ MOVING! ▶▶ I use my body.

Emotion, thinking and body are closely linked. Tell me how you move and I'll tell you what you think and feel. Unblock your body and unwind.



→ SELF-ESTEEM! ▶▶ I acknowledge my singularity.

You have to be courageous to stand out from normality. I discover and value my qualities and peculiarities, what makes me unique and unrepeatable. I personalise my surroundings. I assert myself.



→ LOVE! ▶▶ I help the world with my actions.

Creativity and ethics go hand in hand. I discover and value other people's qualities and peculiarities. I appreciate what is “different”. I build and rebuild. I use creativity with a positive purpose for humankind.



→ I DO THINGS! ▶▶ I dare do what I want to do.

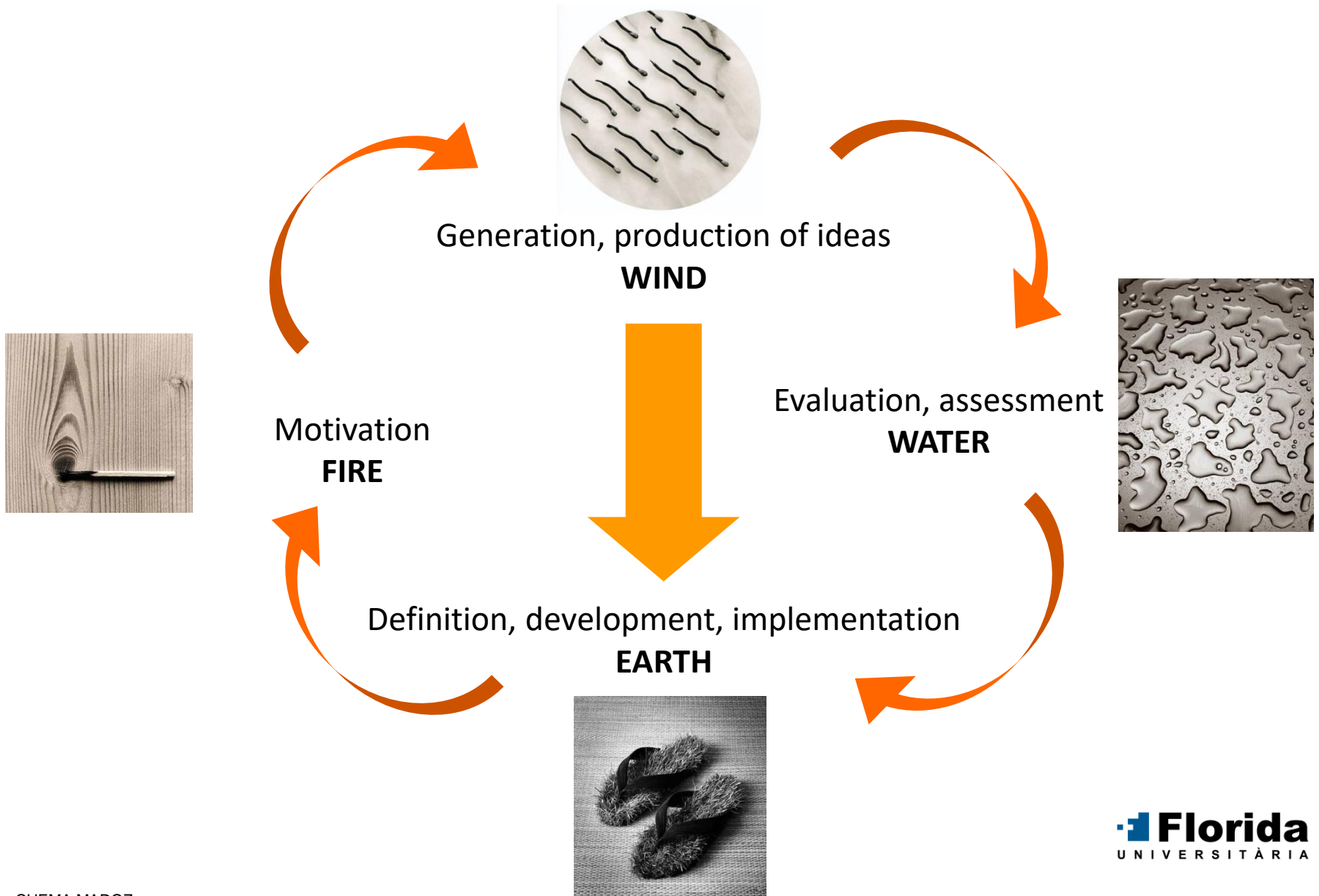
Motivation is essential for creativity. I recognise my wishes and do the things I like more and more while I don't do what I dislike. From now on. I enjoy creating...

Sense of humour = Predisposition

Creating a humour-prone atmosphere

- ⦿ Having fun is essential. Fun moments are necessary for creation. But time must be allowed for: it is not just a question of having “breaks”.
- ⦿ Facilitate “**moments for spontaneity**” around you: chatting, games, jokes, etc.
- ⦿ **Be natural** with people: don’t try to “please” or “impose yourself”.
- ⦿ Be **consistent** with what you say and what you do, what you feel and how you express yourself: you don’t need to always “pull the same face”.
- ⦿ Promote activities which require “**positive personal contact**”: birthdays and anniversaries, childhood photos, sharing recipes, etc.

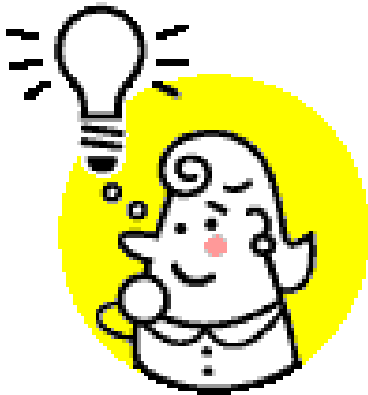
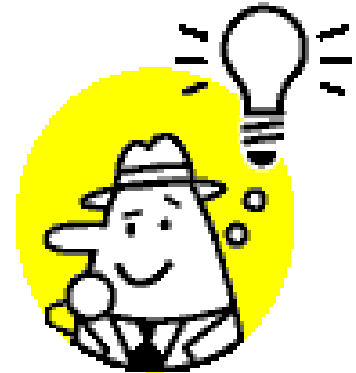
4 Elements of Creativity



Creativity indicators

J. P. Guilford / E. Paul Torrance / Viktor Löwenfeld

- Sensitivity to problems.
- Fluency, productivity.
 - Mental flexibility.
 - Originality.
 - Formulating hypotheses.
 - Redefinition (unusual uses).
 - Product improvement.
 - Establishing remote relationships.
 - Elaboration.
 - Synthesis.
 - Abstraction.
 - Analysis.
 - Organisation.
 - Communication.



Creative process

Poincaré
(1913)



Graham Wallas
(1926)



Other authors...

PREPARING

Immersion (conscious or non-conscious) into creative objective

- Definition of creative objective
- Data collection
- Manipulation (mastication)
- Creativity techniques

INCUBATING

Unconscious work

- The 3 "Bs" (bus, bed, bath)
- Break / Fictitious detachment
- Creative concern

ILLUMINATING

Intuition / Aha! / Eureka!

- Aha! = Insight + positive affect

EVALUATING

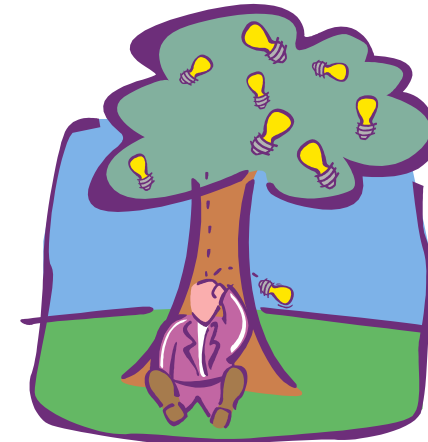
Decide if the idea is valuable

- Emotionally difficult
- Influences internalisation of: field criteria and opinion about environment

ELABORATING

Develop the idea

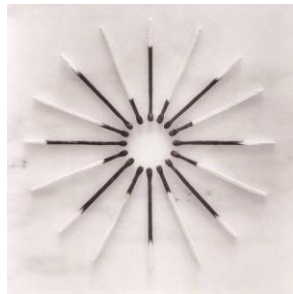
- "1% inspiration and 99% transpiration"
- Communication



Creative process (GROUP)



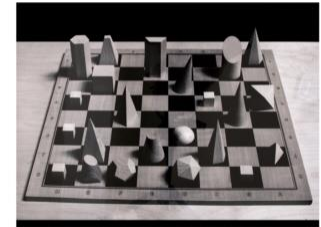
A possible process...



PRODUCTION



WARMING-UP



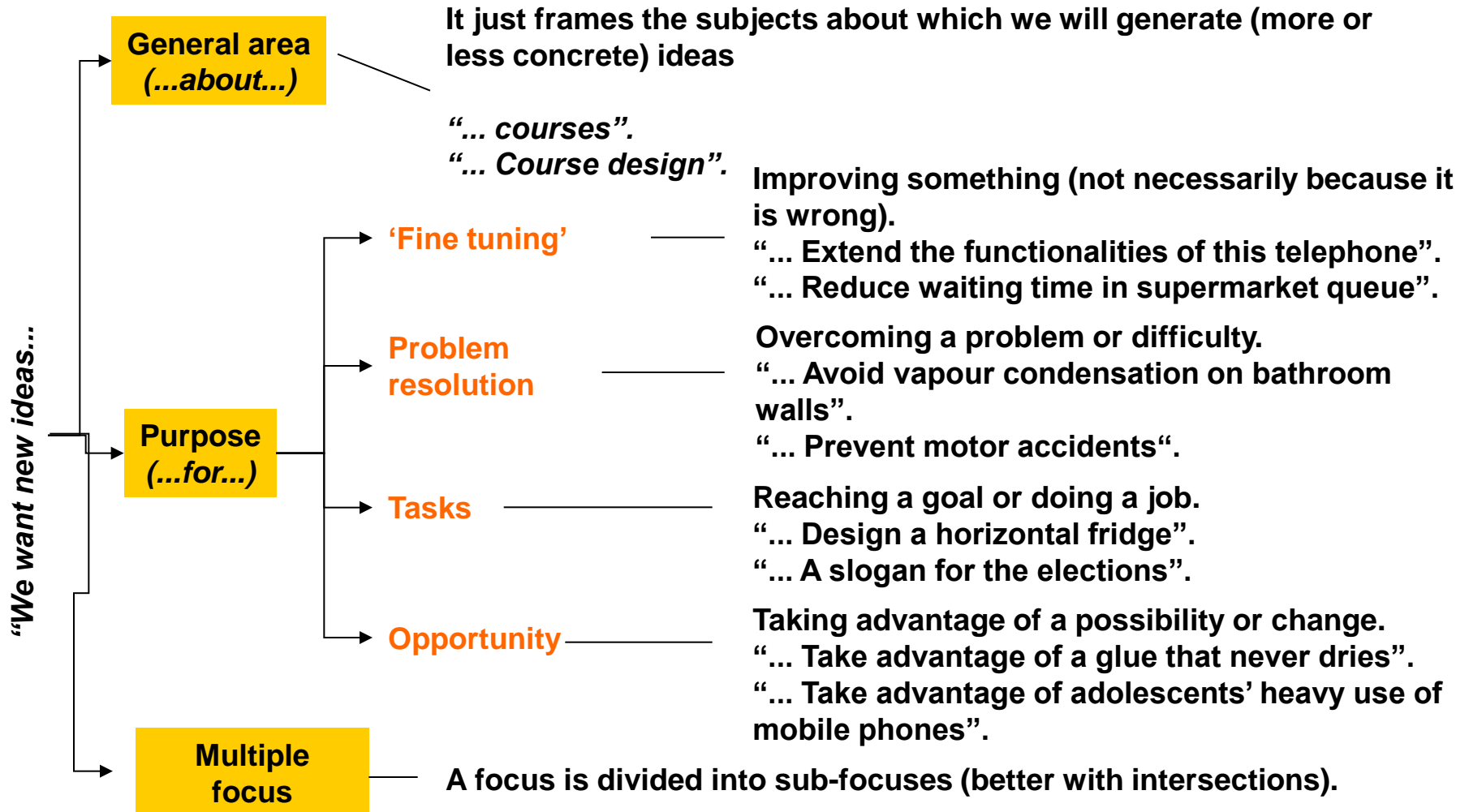
EVALUATION



IMPLEMENTATION

Creative goals: the Creative Focus

Based on:
EDWARD DE BONO (1994):



Creativity techniques: “What would happen if...”

This technique is used for thinking. It is a sort of training.

We produce ideas changing what we see around us in order to foster creative thinking. It is NOT necessary to find solutions.

“What would happen if...” I hadn’t come to this course...

Creativity techniques: “What would happen if...”

- “What would happen if” is an imagination technique by means of which we start questioning the obvious around us by means of assumptions. We can thus identify potential problems or potential opportunities.
- Can be done individually or in group.
- Sentences are built following this structure:
 - What would happen if... + subject + verb and rest of predicate

Example:

What would happen if shoes did not exist?

- Once the sentences are built, the following questions are asked for each of them:
 - Could this actually occur?
 - What is needed for it to occur?

List of verbs and phrases

- not come
- miss
- break down
- get lost
- come
- have
- work
- find
- change
- obtain
- know
- not know
- not arrive on time
- make mistake
- ...

Creativity techniques: BRAINSTORMING

What is it?

A group method for generating **new ideas** to a problem/solution

Fundamentals

- Ability of the brain to **associate ideas** and concepts.
- **Flow** of ideas that occurs when the human being is happy, calmed and in a trustful environment.

Rules

- Ideas **are not criticised**. All ideas are welcome.
- Everybody is **free** to express themselves without being judged.
- **The more** ideas, the better.
- All ideas **are written down**.
- Ideas are **assessed** after some time.

This is not "Brainstorming"

Simple idea production without observing the **rules**. A meeting intended to solve problems without an atmosphere **of trust**.

Benefits



- ✓ Solutions to problems are found quickly and economically.
- ✓ A different even unusual view of the problem is obtained.
- ✓ Participants get involved in problem resolution.
- ✓ Responsibility for final outcome is shared by all.
- ✓ Teamwork atmosphere favours subsequent cooperation.

Creativity techniques: BRAINSTORMING

Phases

1

PREPARING

- ✓ Adequate definition of “question-problem”.
- ✓ Preparing session site.

2

DEVELOPING

- ✓ Setting the objective.
- ✓ Reminding rules.
- ✓ Collecting “all” ideas.
- ✓ Stimulating idea generation.
- ✓ Thanking the group.

3

EVALUATING

- ✓ Reminding objectives and criteria.
- ✓ Quick evaluation of ideas.
- ✓ Reviewing selected ideas.
- ✓ Final evaluation and decision.

Creativity techniques: BRAINWRITING

What?

A brainstorming modality, in writing.

What for?

Created by
Horst Geschka

- A surprising amount of ideas are produced.
- Easier for those who do not like talking in public.
- Combines individual and group generation of ideas.
- Can be done remotely (e-mail...).
- A change for teams that do brainstorming on a frequent basis.

How?

Once the creative objective has been set and, usually before ideas have been generated (can also be used to ponder about ideas on a creative sub-objective resulting from brainstorming).

1°

Arranged in a circle, each person in the group is given a blank sheet of paper. They write their ideas individually within a set period (2 minutes, 3 or 4 ideas is enough).

2°

When told by the leader, all sheets are exchanged at once (e.g. passed on to person on the left, so everybody gets someone else's ideas). The participants read the papers to themselves, and then write new ones (inspired or not in the ones on the paper). The sheets include more and more ideas as they are passed on (more time allowed).

3°

After several rounds, the ideas are read out. Those ideas people like best are circled.

Creativity techniques: Forced Morphological Relationships

What is it?

Developed by Koberg and Bagnall after combining the basic principles from two techniques, the Attributes List (R. P. Crawford) and the Forced Relationships (Charles S. Whiting)

What is it for?

It's very powerful because it enables generating ideas about issues that hadn't been taken into account in the first place and it provokes very inspiring analogies.

How is it carried out?

Once defined the creative focus and generated some ideas using brainstorming, we introduce another turn of the screw...

- 1^o **Descomposing** the creative object in components or blocks. → Ideas which haven't been explored before can emerge.
- 2^o **Listing** in every block, all its parts or sections. → It stimulates generation of new ideas.
- 3^o **Connecting** these parts or sections randomly, making sure we pick elements from every block. → It provokes very stimulating connections that generate unusual ideas.

Creativity techniques: Forced Morphological Relationships

Example: We search for ideas to improve public parks.

	COMPONENTS (step 1)				Maybe we haven't considered...
	PLAY FACILITIES	LOCATION	USERS	MATERIALS	OTHER INFRASTRUCTURES
ASPECTS (step 2)	Swings	Parks	Girls	Wood	Litter bins
	Tunnels	Shopping centres	Boys	Iron	Benches and tables
	---	Squares	Parents	Rope	Fences
		Far from traffic	Elderly people	Plastic	Roofs
		In terraces	Criminals	Rubber	Plants
Maybe we haven't thought about...	Water games...	Portable	Professionals (counsellors, etc)	Styrofoam	Toy renting

CONNECTION (step 3) (the resulting idea will be inspired by these crossings but not necessarily has to include all elements)

- Swings – Parks – Professionals – Plastic- Plants: > Idea: To hire leisure counsellors who provide gardening courses for kids or elderly people

Recommendations to make the most of a team and a creative session:

Goal-orientation: Everybody must be aware of the session's goal.

Group size: Ideally, 4 to 10 people.

Heterogeneity: The creative team is more effective when it includes people with different personal and professional features.

Hierarchy: Any degree of hierarchy between participants should be avoided.

Working periods: Creativity sessions have a set time and regularity. Sessions should not take longer than 2 hours.

Recommendations to make the most of a team and a creative session:

Integration of new members: The atmosphere must be flexible so as to allow new people to join in; ideally, the group should be maintained for a fairly long period.

Working atmosphere: Trust, stability and understanding must be ensured between members.

Venue: Medium-sized room, for people to interact and communicate. With resources and encouraging creativity.

The reporter: This figure notes down the ideas that arise during the session. He/she must write quickly and explain the ideas suggested with other words.

The coordinator: guides the session's work, instructing participants about rules and procedures, stimulating participation, coordinating the session, and facilitating consensus on the ideas generated.

The 6 Thinking Hats

How to generate creative ideas for a
complex issue using
the “6 Thinking Hats” Technique

by Edward de Bono

The 6 Thinking Hats

6 ways of thinking: the 6 hats



The 6 Thinking Hats

Each hat has a different colour and represents a different way of thinking.

The 6 hats, by Edward de Bono



Intuition, feelings and emotions. The red hat allows the participant to express an intuition without having to justify it. The red hat legitimates the participant to share his/her feelings about the matter without justifying or explaining it.



The black hat is used to point out why a suggestion does not fit in with the facts, the experience available, the system used, or the policy followed. The black hat must always be logical.



This hat has to do with positive logic. Why will something work and why will it bring benefits. It must be used to look further, to see the results of a suggested action but it can also be used to find value in something which already exists.



This is the hat of creativity, alternatives, proposals, interesting things, stimuli and changes.



This hat has to do with facts, figures, needs and lack of information. "I need some white-hat thinking at this particular point..." means: Let's put arguments and proposals aside, and let's pay attention to data and numbers.



This is the hat of the overall picture and process control. It is not focused on the specific issue as such but on the 'thinking' about the issue. "When I put the blue hat on, I feel that we need to work more in green-hat thinking mode at this particular point". In technical terms, the blue hat has to do with meta-knowledge.

Summary with examples of comments or questions



- Creativity, alternatives, proposals, interesting things (What would happen if...?)



- Facts, figures, needs and lack of information (What information is missing to be able to value or quantify...?)



- Positive logic (Would this idea promote.... enrich...?)



- Sensibility and caution (Does this endanger... Could it threaten...?)



- Intuition, feelings and emotions (What would happen if...?)

- Overall picture and process control (Did we think about everything or are some viewpoints missing?)



Creative process: Evaluation

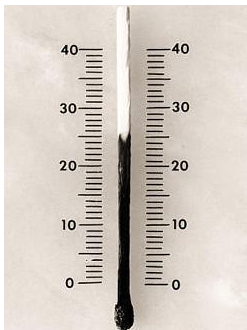


Process...

EVALUATION



- ▶ It's the moment to **ASSESS, SELECT** and **CLASSIFY** the ideas (criticism – constructive of course – is now allowed).
- ▶ Some creative objectives require **only one idea** and others require or enable **a set of classified ideas**.
- ▶ Ideas can be evaluated by **people who have not participated** in the generation of ideas
- ▶ Evaluation **criteria** must be established.
- ▶ Ideas can be classified according to the following **categories**:



- Ideas which are useful / usable as such.
- Interesting approaches (new concepts, usually they are creative focus which can be used as the starting point for new ideas
- Ideas which are good but are not usable at the moment, or are not appropriate for us, or need further consideration or development, or they have little value...
- Rejected ideas.