European Software
Skills Alliance.

ESSA Learning material

DEVELOPER (EQF 6)

PLO 8 - Soft competences:

LEARNING UNIT (LU): 8.2 Get trained and informed

TOPIC:

Creative thinking for professional efficiency - Trainee booklet

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Authors: Global Knowledge France

softwareskills.eu

Disclaimer

This learning material has been developed under the Erasmus+ project ESSA (European Software Skills Alliance) which aims to skill, upskill, and reskill individuals into high-demand software roles across the EU.

Co-funded by the Erasmus+ Programme of the European Union

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About ESSA

The European Software Skills Alliance (ESSA) is a four-year transnational project funded under the EU's Erasmus+ programme. It ensures the skills needs of the rapidly evolving Software sector can be met — today and tomorrow.

ESSA provides current and future software professionals, learning providers and organisations with software needs with the educational and training instruments they need to meet the demand for software skills in Europe.

ESSA will develop a European Software Skills Strategy and learning programmes for Europe. It will address skill mismatches and shortages by analysing the sector in depth and delivering future-proof curricula and mobility solutions; tailored to the European software sector's reality and needs.

Project partners

The ESSA consortium is led by DIGITALEUROPE. It is composed of academic and non-academic partners from the education, training, and software sectors.

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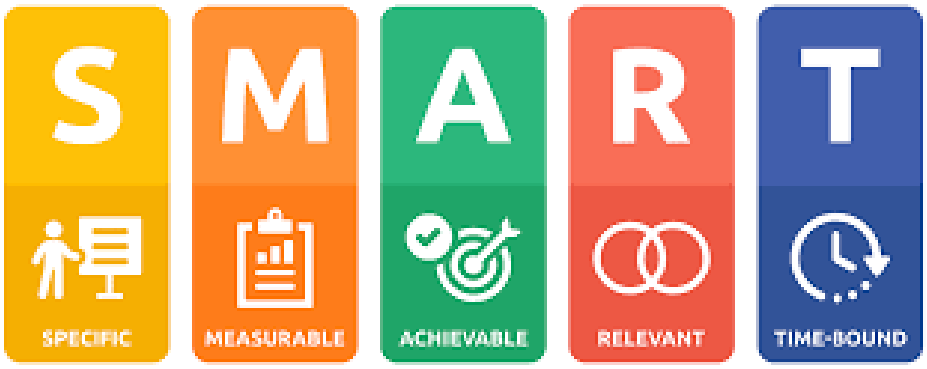
Introduction

Welcome to this module. In this module, you will learn how creativity can be used as a tool for professional efficiency. This is the trainee booklet. There is also a separate exercises booklet. The word **EXERCISE** in this booklet refers to the accompanying exercise in the exercises booklet.

Objective

At the end of this module, you will be able to:

- Understand the key concepts of creative thinking
- Identify your own creative levers
- Acquire reference tools and working methods
- Build your action plan



Rules and organisation of the group

- Respect the start and end time of the training
- Respect of the defined schedules for the morning, lunch and afternoon breaks
- Should we address each other informally
- For Visio training; Turn on the camera, mute the microphone and trigger the appropriate emoticon when you want to speak
- Don't cut off when someone is speaking
- Remain benevolent and non-judgmental.
- Apply the principle of confidentiality
- Right to experiment and make mistakes
- Say "stop" to an exercise you don't want to do
- Notify in case of absence
- Wait for breaks to make calls

The wheel of creativity and the different stages of a creative process

EXERCISE 1 Definition

Definition of creativity

Creativity describes — in general terms — **the ability of an individual to imagine or construct and implement a new concept, a new object, or to discover an original solution to a problem**.

It can be more precisely defined as:

> *" a psychological or psycho-sociological process by which an individual shows imagination and originality in the way of associating things, ideas, situations and, through the publication of the concrete result of this process, changes, modifies or transforms the perception, use or materiality of a given public."*

The wheel of creativity

Based on a press review, structured around 35 creative approaches in the following fields:

- About the product
- Meta-product
- Technological
- From the commercial
- Strategy
- From the consumer
- Sensory,

It is possible to systematically feed the search for new products. An innovation concept includes the following items...

CONSUMER

A new (product category)

Intended for (Target)

In (the universe) of

He/she is designed to:

- Satisfying (the need) to

- Be used for (consumption situation)
- When, before or after, during (time of day)
- To respond to a societal issue such as

PRODUCT

Inscribed in the (trend

He/she must be able to: (functionality

and/or (feature 2)

He/she can draw inspiration from the early market of

Formulated in a new (architecture) of the type of

Or by merging/taking inspiration from another typical product category

META-PRODUCT

Its originality can be enhanced by:

A (packaging) of type

This product could be signed by (creator

Or benefit from co-branding

It can be designed specifically for (the event)

He/she can be inspired by the (early market) of Or

in the case of a package-mix or a (global offer)

Integrate or remove (support) products, complementary and coordinated such as.....

COMMERCIAL

Distributed via the distribution channel(s) Commercially

it can be purchased by (purchase status) Offered in

(promotional offer)

It can be designed specifically for (the event)

As for (communication), it can be based on

TECHNOLOGY

Technologically, it can be designed to meet the requirements of the following (technological challenge)

Or rely on a new technology or (process) such as

Or meet a new standard or (regulation) such as

It may be interesting to integrate a new (raw material) such as Or

an (atypical ingredient) such as

Or exploit the functional or chemical properties of an (additive) like

SENSORY

Don't forget the sensory side of the product, by focusing on the following properties:

Color, Visual

Sound, noise, music

Touch & Texture Smell,

Fragrance Taste,

flavour, aroma

STRATEGY

The company could organize itself to/

Driving an (organizational change) such as

Follow a new (policy) like

Or a new Business Model

Could be inspired by a benchmark like

The company could also develop this project in (collaboration) with

EXERCISE 2 The wheel of creativity

The 4 steps of the creative process

Step 1: Impregnation

"I'm searching, I'm browsing"

The creative process begins with preparation: gathering information and materials, identifying sources of inspiration, and gaining knowledge about the project or problem at hand.

This is often an internal process (thinking deeply to generate and reflect on ideas) and external (going out into the world to gather the necessary data, resources, materials, and expertise). Long phase; hours, days, years.

Step 2: Incubation
"My unconscious mind takes over"

Then, the ideas and information gathered in step 1 infuse into the mind. As ideas simmer, the work deepens and new connections are formed. During this germination period, the artist moves away from
the problem and allows his mind to rest. While the conscious mind wanders, the unconscious engages in what Einstein called the "combinatorial scenario": taking diverse ideas and influences, and finding new ways to bring them together.

Long phase; hours, days, years.

Step 3: Illumination
"My unconscious communicates its discovery to the conscious"

Then comes the moment of revelation. After a period of incubation, ideas arise from the deep layers of the mind and burst into the conscious mind, often dramatically. It's the "*Eureka!* that happens out of the blue when you're in the shower, out for a walk, or busy with an unrelated activity. The solution presents itself, as if by magic.

Short phase; seconds, minutes, hours.

Step 4: Production
I evaluate my findings and formalize my solution"

Following the revelation, words are written, the vision takes shape through painting or clay, the business plan is developed. Whatever ideas have sprung up in Step 3, they are brought to life and developed. The artist uses his or her skills in critical thinking and aesthetic judgment to refine his or her work and communicate its value to others.

Middle phase; hours, days, weeks, months.

The 5 stages of creativity according to Hubert Jaoui

In order to be able to understand creativity in all its dimensions, Hubert Jaoui proposes to approach it from different angles. This is how one has to go through several steps, the initials of which make up the acronym **PAPSA**.

P: Perception

This is the first step, which, as the name clearly implies, is to **grasp all the data of the problem and explore the context from all angles**. Here, it is important to be both **curious** (divergence) and **skeptical** (convergence). We should not hesitate to ask any questions that come to mind, the aim

here being to have a detailed view as well as a **clearer and more precise idea of the problem**.

A: Analysis

Once everything seems clear to us, it is now time to move on to the analysis. Here, we must try to **break down the problem** in order to see its various constituent elements. It will then be necessary to try to reconstruct them into different explanatory models. This will make it possible to **prioritize problems as** well as **identify critical areas and areas of research**.

P: Production

It is in this stage that we will try to generate as many ideas as possible. To do this, we can rely on different methods of idea production such as brainstorming, the lotus flower technique, etc. The ideas will then be translated into **creative solutions** that are **original,** effective **and, above all,** feasible**.**

S: Selection

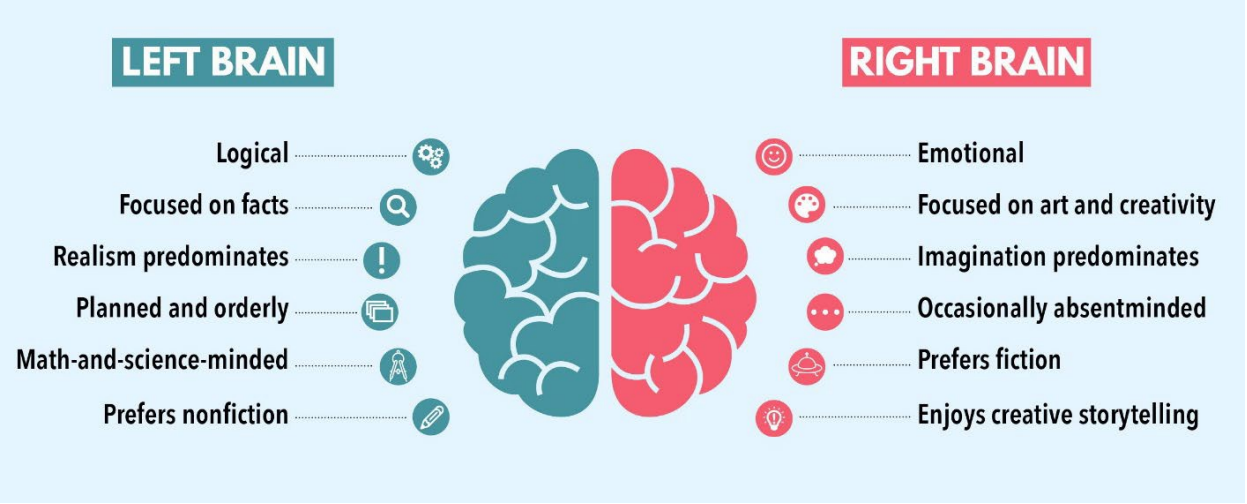
Now that there are many ideas available, they need to **be examined** and **evaluated** in order to decide which ones will be retained and implemented. In this stage, it is important to have **an open and positive mind** since it will be a question of classifying the ideas in accordance with scientific rigour.

A: Action

It is in this stage that the ideas retained in the previous stage will have to be implemented. In other words, this is the place to take action. That said, we must first start by identifying the pitfalls and pitfalls that can stem the path of change and innovation. Therefore, in formulating the actions to be undertaken, it is important to develop a process for success, both progressive and methodical.

Right and left hemisphere of complementary functions

The different functions of our brain



Human beings have two hemispheres:
The left hemisphere **THE VERBAL.** It is the seat of speech, logical, rational thought, of mathematical calculation.
And the right hemisphere **THE NON-VERBAL.** It is the seat of the relationship, of the vision, of the imagination, of the intuition.

Each hemisphere has different and complementary intellectual and mental functions. Our type of communication and our representations of things depend on which part of these hemispheres we use first.
If a person uses the left hemisphere of the brain first, he or she thinks with words. Above all, it is attracted by rational facts, numerical data; attentive to value for money and concrete evidence.
If a person uses the right hemisphere of the brain first, they feel things, often by intuition. Above all, she is attracted to novelty and is sensitive to feelings and well-being; attracted by fashion, touch and scents.

Brain function has three principles:

- First, the brain is a whole separated into two hemispheres.
- Second, although the brain functions as an integrated whole, each hemisphere is able to function independently of the other.
- Third, each hemisphere has a specific mode of operation: it processes information in a way that is both opposite and complementary to the other.

WHAT DOES EACH HEMISPHERE DO?
The left brain does one thing at a time, proceeds in sequence, analyzes the details one by one; logically, it deduces cause and effect, and it is above all receptive to what is objective. The left brain

operates according to pre-established codes, information that is already stored.
The right brain does several things at once, it is able to process complexity simultaneously. Analog, he notices correspondences and resemblances; It collects emotions, produces pictorial spatial thought, perceives and produces melodies. The right hemisphere explores patterns that are not organized into sequences grouped around sensations.

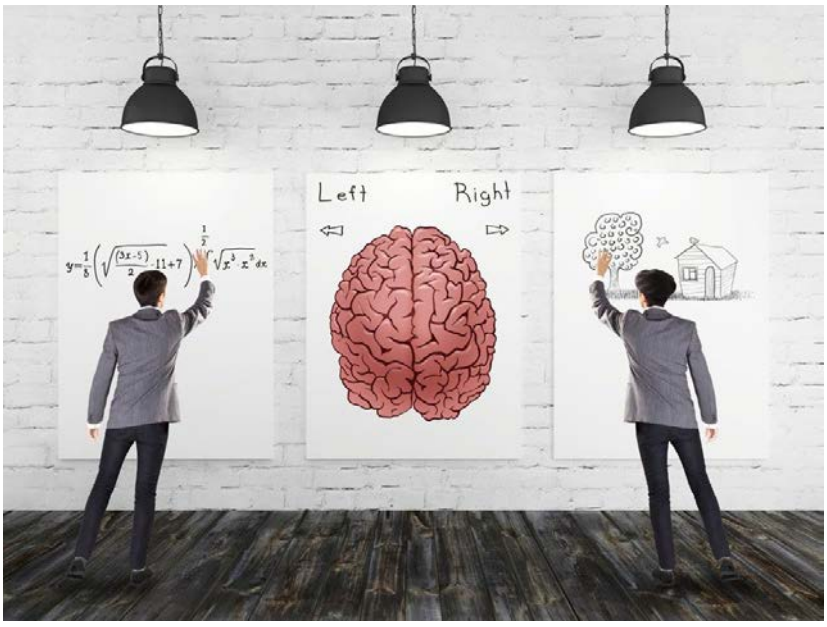
Faced with a problem that arises, the left hemisphere turns to the past, to the reference; consults a book or a specialist. The right hemisphere discovers and experiments with new solutions.

In learning, the left hemisphere learns and seeks to know, it uses its memory and retains formulas, words, dates, numbers. The right hemisphere experiments, compares with other areas. He tries to understand the main idea, the general functioning.

The left hemisphere privileges the past, transposes into the future situations that are already known. It plans, administers, and organizes based on concrete or logical data. The right hemisphere is at ease in unprecedented and impromptu circumstances. He guesses the impalpable and irrational elements. He anticipates and finds the answer to situations not foreseen by the left.

Knowing and understanding your brain allows you to get to know yourself better and understand how you function and why others don't think or function like you.

Which part of the brain do you use first? Are you imaginatif.ve, or logical, do you need to reason before deciding, or do you decide by intuition? Are you a decision-maker or analyst, do you consider yourself to be a good leader or a good manager? You will find these answers through the mechanisms of your brain. You are unique, you function differently from others, because your character, the education you have received, the experiences you have lived, the family and socio-cultural environment in which you have evolved, make you different.



How to use the two brain parts

The left hemisphere (logic, analysis, organization, etc.)?

There are a lot of things in our way of life that help develop the left hemisphere: reading, writing, listening to a lecture, making lists, keeping a diary, doing logic and math exercises.

The right hemisphere (intuition, imagination, present moment, ...)?

Draw, make collages, create or color Mandalas, meditate, sign up for an artistic activity (painting, music, ...)

EXERCISE 3 Brainstorming

EXERCISE 4 Test

The characteristics of the two brain parts

LEFT

For 80% of people in our Western societies, the left brain is dominant. The left brain is the brain of reason.

It is logical, Cartesian, sequential (it processes only one piece of data at a time) and specific.

For the left brain, one question = one answer. It works in binary, implying that there is only one way to do things.

RIGHT

The right brain is the seat of intuition, creativity, imagination, emotions and lightning thinking.

It operates much more powerfully than its colleague on the left. People who have a dominant right-brained brain may have problems integrating into society and may have a hard time coping with their difference.

The first thing is that the right brain thinks in a tree structure. As a result, he explores several avenues at once and has a global vision of things.

Then, the senses are more developed (hyperesthesia) and can sometimes mix with each other (synesthesia). This means that one person can associate a sound with a color, a date with a personality, while others see numbers or words in color when they are written in black and white!

The emotions of the dominant right brains are also more intense, they have greater sensitivity and have a very high level of empathy, i.e. they can literally feel the emotions of others.

Intellectual influences according to colours

Each person processes information in different ways. So far nothing very transcendent, but a certain William E. "Ned" Herrmann, known for his research on creative methods of thought based on the theorization of human brain functioning, has developed a map of the brain. Rough mapping, not suggesting precise analysis but rather general influence.

The first part separates the right side of the brain from the left side:

A quick reminder:

The **right** side represents the world of emotions: feeling and imagination, The

left side, on the other hand, is attracted to reflection: reason and method.

You knew that! But do you know colors?

Colours

After the left/right separation comes the limbic (lower brain) and cortical (upper brain) separation. Thus defining the brain into 4 zones:

- The left cortical part: the **blue**,
- The right cortical part: the **yellow**,
- The right limbic part: green,
- The left limbic part: **red**.

Each person has an intellectual influence towards one of these four colors.

A. Blue: Analytical Thinking

- Keywords: logical, factual, critical, technical and quantitative.
- Strengths: compiles facts, analyzes, argues rationally, formulates theories, measures accurately, solves problems logically, reasons, understands technical elements, critical analysis, works from numbers, statistics, is accurate.
- The rational EGO: **oriented towards "FACTS",** it is rational in its approach. He is interested in the FINANCIAL, PERFORMANCE, LOGICAL and TECHNICAL aspects.

B. Green: Sequential Thinking

- Keywords: prudent, structured, organized, detailed, and planned.
- Strengths: points out shortcomings, approaches problems practically, follows through with things, develops detailed plans and procedures, looks at problems from a planning perspective.
- The cautious EGO: **oriented towards "FORM"** is a person gifted with "ORGANIZATION", CAUTIOUS, FACTUAL and NORM. She knows how to take her time before making a decision.

C. Red: Interpersonal Thinking

- Keywords: interpersonal, emotional, spiritual, sensitive, kinesthetic.
- Points of strength: understands relational difficulties, anticipates the feelings of others, intuitively understands the feelings of others, perceives non-verbal elements resulting from stress, generates enthusiasm, persuades, reconciles, teaches, shares, understands emotional

elements, takes into account values.

- The Relational EGO: **oriented on the "FEELING**", it has an imperative need to "COMMUNICATE", it is an "INTUITIVE" oriented "HUMAN" very comfortable with people with a large part of "EMOTIONALITY" which can play tricks on it sometimes. In short, it's an AFFECTIVE.

D. Yellow: Imaginative Way of Thinking

- Keywords: holistic, intuitive, integrative, synthetic and conceptual.
- Strengths: Reads signs of change, sees things globally, recognizes new possibilities, tolerates ambiguity, integrates ideas and concepts, defies established rules, synthesizes diverse elements into a new whole, invents new solutions, solves problems intuitively, integrates different inputs simultaneously.
- The Experimental Self: oriented "ACTION", "INNOVATION" is a very CREATIVE person who comes up with a new idea every minute "he conceives" "IMAGINES and DEVELOPS new strategies. He hates ROUTINE and is inclined towards the FUTURE.

So, to touch someone **blue**, you just have to talk to them about facts, to persuade someone who is red, you have to talk to them about emotional richness; a **green** person must know the schedule before launching and a **yellow** one must not lock him up!

Of course, this is a **general** diagram but it's interesting and fun to know your color and guess that of others!

Collection and processing of information: "the sensitive" and the "intuitive"

Sensation mode and intuition mode

Sensation is a process of being aware **of sensory information and often involves responding to this sensory information** without any judgment or evaluation of it. Sensory information is inherently **concrete** and **tangible**. In the Sensation process, the focus is on **actual experience,** facts**,** and **data**. As an active perceptual process, it is more than just the stimulation of the five senses, it is the recording of this stimulation that is actively related to the concrete realities of the outer world or to the memories of familiar experiences of the inner world.

Intelligence **is** a process of perceiving **abstract information**, such as symbols, conceptual forms, and meanings. It is an **intangible** "knowledge" of what something **means,** how it relates to something else, or what might happen. This is sometimes referred to as "the sixth sense." This process is sometimes triggered by an external event, or sometimes this abstract information just seems to present itself to our consciousness. They are "Elsewhere and Tomorrow".

Understanding the differences to create complementarity

Sensitives notice the facts, details, and realities of the world around them, while intuitives are more interested in the relationships between things and possibilities.

Sensitives are practical and generally down-to-earth, while intuitives are imaginative, trusting their instincts and taking pride in their creative force. They are "Here and Now."

How do you know our profile?
Using the MBTI model, which is a personality indicator describing four psychological preferences of an individual and their relationship to each other (personality type).

Two of these preferences concern cognitive processes (perception and judgment) and the other two concern our relationship to the world (which world we prefer to renew our energies and which cognitive function we prefer to use in the external world). These four preferences are derived from a

choice we have between two mutually exclusive orientations.

The 2nd letter that we may have in our personality type (e.g. ISFJ or INFJ) describes the way we notice information (perceptual function). If two people have this letter in their type, they will tend to see life from the same angle.

EXERCISE 5 Sensory or Intuitive? Test

Intuitive, sensitive, how do you recover information?

INTUITION	SENSATION
Idealist	Realistic
Future-oriented	Present-oriented
Ease with abstract things	Ease with concrete things
Focuses attention on what could be, on the possibilities, the unknown, and the new	Focuses attention on what is, on the facts, what is certain, known and traditional
Telescopic Vision: Likes to see the big picture, to consider ideas in a global, general way	Microscopic Vision: Likes to consider the details of things, understand them accurately
Sees life as something that can be improved, expects more, and desires it to be inspiring	Take life as it is, accept it and want to enjoy it
They prefer imagination to observation	They prefer observation over imagination

They are willing to sacrifice the present for the future	They are more reluctant to sacrifice the present moment for the future
They value initiative, enterprise and inspiration	They value fun and playtime

Intuitive, sensitive : benefits & risks

What the sensitive brings

- Accurate Diagnosis
- Rigor of observation
- Realism
- Sense of usefulness

What can bother with the sensative

- "Nose in the handlebars"
- Impeding change, bureaucratization
- Exacerbation of details
- Overly long and detailed presentations
- Willingness to preserve traditions

What intuition brings

- Ability to take a long-term view
- Sense of the global
- Imagination
- Understanding Relationships

What can get in the way with intuition

- "Head in the Clouds"
- Contempt for "Stewardship"
- Difficulty in taking action
- Abstract, Smoky Discourse: Professor Nimbus
- Willingness to change

To get along with the sensitive

Appreciate how they get things done by being realistic, concrete, and practical
When communicating with them, stick to the facts and don't stray from the topic. Use real, real-life examples.
Be explicit

Highlight the practical applications of your ideas if you want them to be accepted When

explaining how to do something, give step-by-step instructions

Participate with them in sensitive activities (sports, gardening, art, etc.)

To get along with the intuitives

- Appreciate their inventive minds, original ideas, and ability to solve problems creatively
- Don't flood them with facts or overload them with unnecessary details
- Listen to them as they brainstorm new concepts or possibilities and participate with them in developing new ideas
- Trust their ability to gather information from their hunches. Don't constantly ask them about why or how they "know"

Suggestions for the sensitive

- Avoid reasoning from specific examples when discussing or disagreeing, especially when dealing with iNtuitives
- Give yourself time to look beyond the obvious and imagine new possibilities to deal with or improve a situation. Don't automatically exclude ideas that don't seem practical
- Try to listen to what may seem distant or weird. Play with your own imagination
- Learn to recognize other forms of knowledge, such as forebodings, dreams, and imagination
- To further develop your skills, attend a creative writing class or read **books** on philosophy, spirituality, or psychic phenomena. Have Discussions About the Meaning of Life
- **Open your imagination**: spend a quarter of an hour a day dreaming, imagining activities of no immediate interest, looking for answers to the question "what would I do if..." (I lived in another city, I had a year off...)?
- **Develop your creativity**: take two different objects and invent everything you can do by combining them, look for a third solution in the presence of an alternative, write science fiction scenarios
- **Work on the meaning of the relationships between things**: draw up short summary notes, practice analogy, comparisons, metaphors
- **Enrich your symbolic life**: read poems, watch or listen to works of imagination in various fields of art, seek new meaning in familiar places
- **Communicate**: in a global, synthetic way: give a general picture; highlight the novelties, the potentialities, indicate the long-term results

Suggestions for Intuitives

- Be open to feedback on the practical reality, feasibility, and possible pitfalls of your ideas and visions
- Try not to always live in the future. Train to be here and now
- Plan a project and force yourself to write down the implications step by step
- To further develop your Sensation, attend a cooking class, receive and practice massages, try art and exercise, hiking, gardening, or DIY; Try to focus on your physical sensations and surroundings
- **Develop your attention to the "here and now "**: take a break between different activities, become aware of your breathing, practice relaxation, work each of your 5 senses successively
- **Pay attention to the details of everyday life**: reconcile your bank statements with your pay stubs, take care of household items, be aware of repetitive tasks both at home and at work
- **Engage in hands-on activities**: work with your hands to make something useful, tinker, paint still lifes, prepare a travel itinerary by gathering all the documentation for each interesting

place, learn to play a musical instrument

- **Communicate**: precisely, concretely, detailed, provide examples; show the benefits, discuss the difficulties with a proposal for a solution

- Take the time to observe, listen, smell, feel and taste things. Indulge your senses one after the other

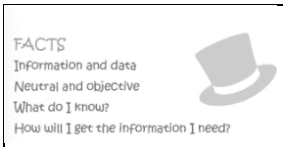
Techniques and tools to develop creativity

The "DE BONO" thinking hats

Mr. Edward De Bono has devised a methodology to generate ideas in the best conditions, i.e. by removing the impact of criticism and judgment on ideas, by freeing participants from the conditioning of their habit and by removing all the limits and barriers induced by their culture (societal, corporate, etc.).

The thought patterns are divided into 6, each symbolized by a hat of a specific color.

Description of the 6 hats:

	**The White Hat** This is the hat of rationals. You focus on concrete and available data. You don't interpret. These are facts, figures, information. The White Hat thinks ***information***. It is the colour of neutrality, of objectivity.
	The Yellow Hat It's the hat of optimists. You think positively. You consider all the benefits of the decision and their value. You are constructive. The yellow hat thinks advantage. It's a sunny and positive color
	**The Black Hat** It's the hat of pessimists. You're looking for all the negative aspects of the decision. You are looking for precaution, danger. You're trying to see why it's not going to work. You're looking for weak spots. The Black Hat thinks ***caution***. It's a gloomy and negative color
	**The Blue Hat** This is the controller's hat. In a meeting, the person chairs the meeting. It controls the process. She calls on the group to change hats. He's the conductor. The Blue Hat thinks **coordination**. It is the color of the sky that is above all things.
	**The Green Hat** It's the hat of creatives. You strive to come up with creative solutions, you let your imagination run wild. You are not criticizing the ideas that have been put forward. You're trying to look beyond what's known. The Green Hat thinks alternatively. It is the colour of the grass, of the vegetation, of the fertility
	**The Red Hat :** it's the hat of the emotional. We look at problems using our intuition, our emotions, our instinctive reactions. You are the opposite of unbiased, objective information The Red Hat thinks ***feeling***. It's the color of anger, rage, emotions

EXERCISE 6 The 6 hats of reflection

Synectic: thinking by analogy

It's about looking for ideas in areas that have already been explored to solve problems. In concrete terms, a problem is transposed into an opposite field of application in order to look at it from different angles and to generate new ideas and stimulate creativity.

"Visual synectics" consists of offering the creative team random visual supports, allowing them to change their point of view and awaken a creative process. This approach has its origins in "synectics", an analogical technique developed by the American William Gordon in 1944 on the basis of intensive research into thought processes and problem-solving. Both of these methods allow you to come up with new ideas, for example, ski + motorcycle = snowmobile

Analogy = Figuratively speaking**, analogy** is a thought process that consists of noticing a similarity between two things, of different nature or class.

VISUAL SYNECTICS: THE STEPS:

Step 1: Write down the goal

- Write down the goal so that the whole team can see it.

Step 2: Submit images to the team and choose three

- The images don't have to relate to each other or to the topic of the meeting. Choose images that will appeal to the emotion of the participants, that will awaken their imagination, that will shock them, provoke them or make them laugh.

Step 3: Develop a list of 30-40 terms

- Present the selected images to the participants one after the other. Each person describes what appeals to them or touches them in the image. Associations, feelings, and imagination must be given free rein. The facilitator writes down all the terms and statements without saying a word. The list might look like this: acceleration, fast integration, real chaos, hide, heat, etc.

Step 4: Relate the terms to your goal

- Now choose a term from the list. What ideas does this term elicit in participants? What spontaneously comes to mind? It is important that they do not stick to the words, but that they give free rein to the associations of ideas. Only in this way will a good basis be found for achieving the set goal. When the flow of ideas dries up, you can take the next term from the list and use it to come up with new ideas.

2. Synectics

Synectics, too, are about consciously moving away from the problem. It aims to relate knowledge from other fields to the initial problem (parachute – dandelion egret) in order to derive creative solutions. The following table shows the different steps of the synectic approach. Each phase is designed to provide a framework for a creative process.

In the context of creative brainstorming, the analogy exercise consists of: To

project your problem or your brief into another universe,

Then to find solutions/ideas in this new context,

And finally, to put this idea back into the original context.

Here, for example, is a very nice analogy work done byAnuhiHe compared spam to rain to come up with anti-spam ideas.

"The most common idea is obviously to shelter from the rain with an umbrella. But let's try to imagine something other than an umbrella, we are in the visual imagination and do not impose limits on our creativity! »

Take a look at this little drawing that illustrates the analogy:

EXERCISE 7 The Synectic process

EXERCISE 8 How would so-and-so solve this problem?

The worst-case scenario

Albert Einstein said, "You don't solve a problem with the ways of thinking that gave rise to it."
According to this principle, the matter we define as a problem limits our ability to generate new ideas.

The worst-case scenario exercise (also known as reverse brainstorming or anti-problem) consists ϕ looking for all the ideas contributing to the failure of a project.
The objective is not to reflect on the reasons for success (the object of the majority of creativity techniques) but to focus on the elements that could lead to disaster.

Where reverse brainstorming is in the type of solutions sought. We will therefore look for solutions to:

Create the problem you're trying to solve in the first place

Making it worse

Achieve the opposite goal to the one initially set

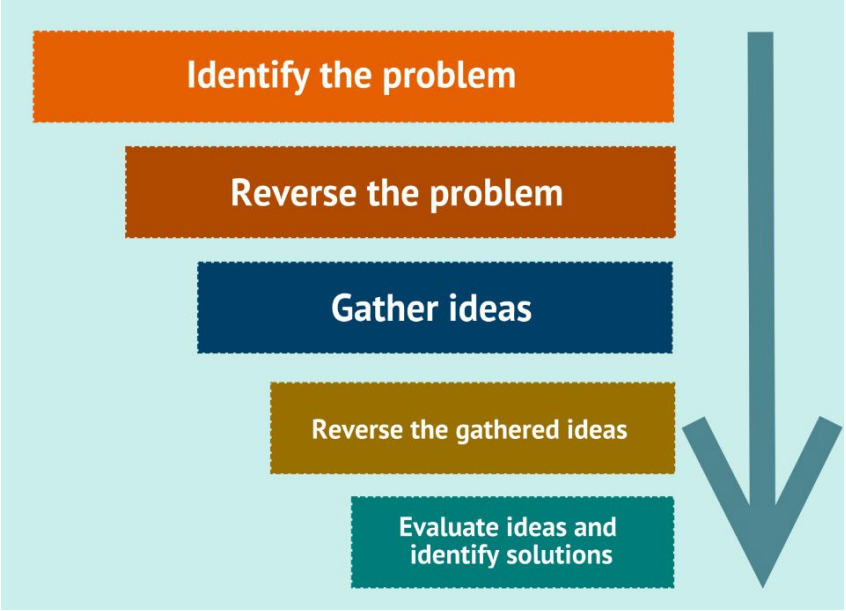
The reverse brainstorming process in a nutshell:

As in classic brainstorming, you start by formulating a problem. Subsequently, however, the problem will be **reversed** to focus on solutions that go the opposite of the original problem.

We will then look for ideas, as in a classic brainstorming session, to respond to this inverted problem.

Once we have generated enough ideas, we will reverse them one by one. The result is **a collection ơ ideas** that can be applied to the original problem (before it is reversed). The session will conclude by selecting the most relevant ideas.

The steps of reverse brainstorming



This tool takes place in 5 distinct steps:

1. **Define the problem.** Clearly identify the problem to be solved, and put it in writing. This is the real problem, which is the end goal of your work session.
2. **Reverse the logic of the problem.** Rather than looking for solutions to solve this problem, reverse the logic of searching for ideas. To do this, ask yourself the following questions:

"How could we create this problem?"

"How do you get the opposite effect?"

"How can this problem be made worse?"

3. **Gather ideas.** As in a classic brainstorming session, generate as many ideas as possible, which in this case are inverted solutions. Suspend judgment, aim for quantity, bounce off other people's ideas, and don't be afraid to come up with "crazy" ideas.
4. **Invert the logic of ideas.** Once as many ideas as possible have been generated to solve this inverted problem, take each idea and reverse it in turn.
5. **Evaluation and selection of ideas.** Evaluate these ideas, and select the ones that seem most relevant to you (feel free to combine ideas with each other).

EXERCISE 9 The worst-case scenario

Scamper method

The SCAMPER method is therefore a **creative method** for examining an idea/ concept/ product /project/ problem and generating new ideas in a systematic way through the application of the following checklist of questions:

1. Substitute

Substitution is the act of replacing, exchanging one element with another in order to **bring about a change, an unexpected idea, a renewal.**

The principle is therefore to ask what can be replaced:

What can I replace to make an improvement? By

whom/what can it be replaced?

How can this product be modified? Is

there another approach?

Another product?

2. Combine

To combine is to **merge two concepts, two ideas together.**

What could we combine to multiply the possible uses?

What talents can we combine?

Who can we involve for the project?

3. Adapt

Here, it is a question of **placing your idea in another context and drawing inspiration from what is already being done elsewhere**. As with anything when it comes to creativity, taking inspiration from others and copying them is an important first step.

What could I copy?

From what, from whom could I draw inspiration? What

other processes could be adapted?

Is there something comparable used elsewhere, in another industry for example?

4. Modify/Modify

To modify is **to change the size, shape, color** of one or more elements of the project, idea or product.

Can we change the meaning of the project? Can

we change the size, the aspect of the idea?

Is it possible to change the colour, the movement, the sound, the smell, the shape of the idea, the project?

What can I enlarge? Beautify?

What could I add? Time? Resources?

Note that the questions may seem very abstract at the moment. The important thing is to apply them to the problem that concerns you and develop all the ideas behind them.

5. Put to other uses

It's about **finding another use, another application** to the product, to the idea, to the concept if it were ever to be modified. Often, products are diverted from their original use, such as the old travel trunk that serves as a coffee table.

Are there other possible uses, if we change the primary use of what we are trying to develop?

6. Eliminate

As with many things, eliminating the superfluous is essential. Often, going back to basics and taking a step back from your product, your idea is a good thing. It is therefore necessary **to subtract, to delete, to sort** out.

"To create is to subtract", isn't it :) ?

Can we subtract? Delete? Diminish a part or an element? Can

certain rules be eliminated?

7. Reverse/Rearrange (Rearrange or Reverse)

Reversing and/or reversing the product/situation leads to surprising solutions, *out of the box*. So the goal here is to **deceive expectations, to be original.**

How can I go against this?

Putting it up and down? Bottom up?

Can things be reversed?

Which sequence would be most beneficial for my idea, my product?

Can I do the exact opposite of what was normally planned?

3. Steps in the process

Now that we know a little more about the basics of this method, let's take a look at its starting point.

The first step is to **identify the problem and formulate it clearly** as a question:

How could I improve this product? This idea? That slogan? This character I'm writing? This music I'm composing? My house? My garden? My life?

The second step is simply to **submit your problem, your idea to the question checklist** and observe the result. Do you like it?

EXERCISE 10 The Scamper method

Creativity: things to be exercised on a daily basis

Working on your creativity is not something to do once in a while when you need to come up with anidea. It's a daily workout that never stops, since every moment of your life can be inspiring.

The 5 keys to initiating your creative dynamic:

- **Key 1**: We are all creative/ creativity is our common asset
- **Key 2**: Be creative in your organization
- **Key 3**: Be creative in your project management
- **Key 4**: Be creative in your relationships with others
- **Key 5**: Make creativity your philosophy of life

Here are a few ways to develop your creativity...

- Share & Exchange
- Let loose
- Take notes
- Read
- Be inspired by the competition
- Break new ground
- Take the time to be creative

ACTION PLAN THE FIRST STEP TO TAKE... IT'S UP TO YOU!

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