



# INITIATION TO CREativity



ensgsi!



UNIVERSITÉ  
DE LORRAINE



InnovENT-E

imacreated by Raphaël Bary & Hélène Pouille

WHAT IS  
CREATIVITY?



ensgsi!



imacreated by Raphaël Bary & Hélène Pouille

# CREATIVITY

is **SIMPLICITY**

NOT **COMPLEXITY**

# CREATIVITY

is the ability to :

generate original

**IDEAS**



build new **LINKS**  
between existing things



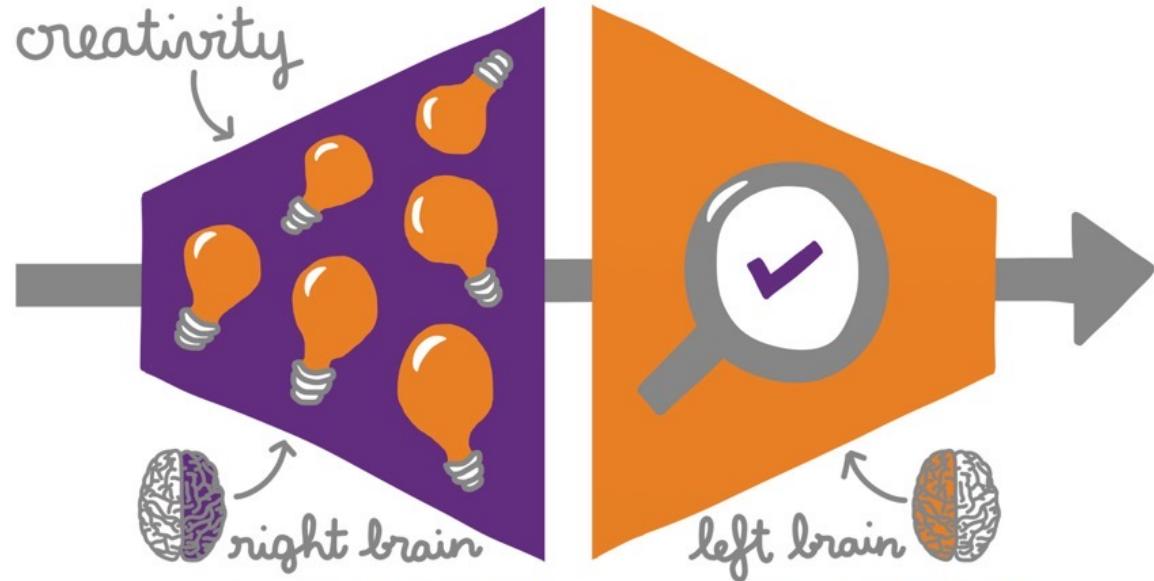
ensgsi!



UNIVERSITÉ  
DE LORRAINE



InnovENT-E



divergent thinking

multidimensional

open up the scope

flexible

convergent thinking

one-dimensional

deepen the focus

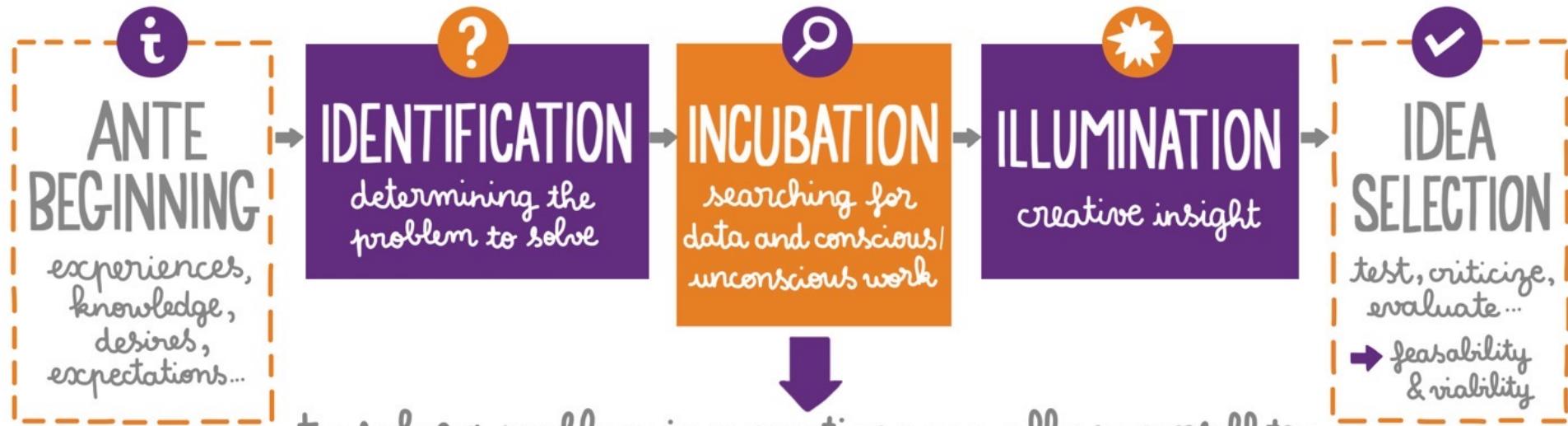
channelled

⚠ never mix up these 2 steps



imacreated by Raphaël Bary & Hélène Pouille

# THE CREATIVE PROCESS



to solve a problem in a creative way, allow yourself to:

➡ TAKE THE LONGEST WAY

do not run straight to the most obvious solution

!!! FEEL FREE

do not censor your speech and express even your dumbest ideas

zzz BE LAZY

take your time to entertain, to dream, to do something else

# HOW TO IMPROVE YOUR CREATIVE SKILLS ?



ensgsi!



UNIVERSITÉ  
DE LORRAINE



InnovENT-E

imacreated by Raphaël Bary & Hélène Pouille

# WHAT INHIBITS CREATIVITY



EDUCATION



LACK OF/ EXCESSIVE CRITICISM



KNOWLEDGE/  
EXPERIENCE



COMPETITIVE SPIRIT

# FEARS



THE FEAR OF BEING RIDICULOUS



THE FEAR OF BEING WRONG



THE FEAR OF NOVELTY/ADVENTURE

## THE TRINITY OF CREATIVE PEOPLE

WELCOME OTHERS' IDEAS

don't censor, blame, criticize



# IMPROVE YOUR POTENTIAL



PLAY



LAUGH



DREAM



FEEL AT EASE WITH YOUR BODY



KEEP YOUR CREATIVITY ALIVE

# OPENNESS



BE CURIOUS



LEARN TO OBSERVE



WELCOME OTHERS' IDEAS

## GO FOR THE TEAM

no individualism, ideas belong to the group

EVERYTHING IS POSSIBLE

they are no limits to imagination



ensgsi!



imacreated by Raphaël Bary & Hélène Pouille



# INITIATION TO CREativity



ensgsi!



UNIVERSITÉ  
DE LORRAINE



InnovENT-E

imacreated by Raphaël Bary & Hélène Pouille

# LEADING A CREATIVITY SESSION



ensgsi!



imacreated by Raphaël Bary & Hélène Pouille

# LEADING A CREATIVITY SESSION



- ?
- PROBLEM DEFINITION
- ?
- GROUP CONSTITUTION
- ?
- PLAN THE SESSION
- ?
- MATERIALS
  
- !
- BREAK AWAY FROM THE ROUTINE
- ✓
- REMIND THE RULES
- ➡
- ADAPT TO THE GROUP
- 🔧
- USE TOOLS
  
- !
- FILL IN IDEA SHEETS
- !
- EVALUATE AND SELECT
- !
- KEEP IN MEMORY

# CREATE THE CONDITIONS



## PROBLEM DEFINITION

confirm you are facing the real problem

search for data (statistics, prospective, analysis, pictures...)

formulate the problem in a non-oriented way

propose graphic/visual representations of the issue



## GROUP CONSTITUTION

gather 5 / 10 people

prefer heterogeneous groups

make sure there is a good chemistry among members



## PLAN THE SESSION

be sure to have enough time

articulate the different steps and tools used

don't forget to include breaks/rest periods

define the results you want to obtain



## MATERIALS

find a comfortable place away from hustle and bustle

prepare individual and collective working spaces

materials needed:  
- paperboards  
- post-it  
- markers  
- scotch tape



# CREATE THE CONDITIONS

# LEAD THE SESSION

# USE THE RESULTS



## BREAK AWAY FROM THE ROUTINE



propose a game to get into a playful mood



tell a tale or a story linked to the theme of the session



do some relaxation exercises



## REMIND THE RULES



welcome other's ideas  
(don't censor, blame, criticize)



everything is possible  
(there are no limits for the imagination)



go for the team  
(no individualism, ideas belong to all)



## ADAPT TO THE GROUP



stay aware of the momentum



don't be a slave to the agenda



avoid mixing up convergent and divergent phases



take your time and do not force people



## USE TOOLS



conscious dreaming  
(don't think your thoughts)



reversed reasoning  
(think the contrary)



analogy  
(think different)



concept mapping  
(lay your thoughts down on paper)



SCAMPER  
(generate ideas in a systematic way)



# CREATE THE CONDITIONS

## FILL IN IDEA SHEETS

 create sheets containing the main elements describing an idea

 fill in the sheets in groups of 2 or 3 people

 try to detail the idea as completely as possible

 propose visual representations, scenarios of use

# LEAD THE SESSION

## EVALUATE AND SELECT

 gather the ideas according to their proximity

 look for links and cross-fertilisation between ideas

 define criteria to evaluate the ideas

 confront the selected ideas with new data, searches, experts...

 be sure to assess both feasibility and viability

# USE THE RESULTS

## KEEP IN MEMORY

 stock the idea sheets (don't bury them!!)

 share your ideas with other company's members

 elaborate a framework to get feedbacks



# CREATIVITY TOOLS



ensgsi!



imacreated by Raphaël Bary & Hélène Pouille

# CONSCIOUS DREAMING

⚡ originally build by Robert Desoille

alone or small group (~8 persons)

at least 45 minutes

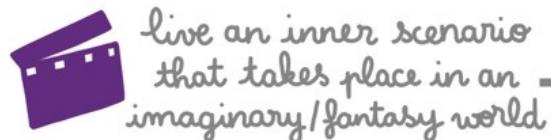


comes from psychoanalytical methods

LET YOUR IMAGINATION TALK BREAK FROM REALITY  
DO NOT TRY TO DOMESTICATE YOUR THOUGHTS



become conscious of a problem or help creative insight with an intermediate state between awakening and sleeping



live an inner scenario that takes place in an imaginary/fantasy world



free your mind and let your imagination talk without trying to dominate or domesticate it



thoughts as concrete as possible with a sensory basis

?

define the problem to be solved

⌚

choose a good moment (the evening, the holidays, the week-end)

📍

be in a quiet and relaxing environment (silence or soft music, half-light, alone...)

😊

be in a good mood

🧠

sit down / lay down and relax while thinking about the problem

📝

write down the ideas produced (during or after the dream)



doesn't need a lot of means and ensures that all the unconscious processes of the mind are used



may be difficult to apply without being coached by an expert / most of all, like any psychoanalytical tool, disturbances inhibits thoughts



ensgsi!



imacreated by Raphaël Bary & Hélène Pouille

# REVERSED REASONING

particular form of  
brainstorming

alone or  
in a group

THE SHORTEST WAY IS NOT ALWAYS THE BEST ONE  
THINK THE CONTRARY OF WHAT YOU ARE LOOKING FOR

- look for solutions that could be applied to the reversed problem initially defined
- ↔ based on one of the most important principles of creativity methods:  
not trying to reach directly the solution

## PREPARATION

- ?? define the problem
- express all the opposite / antiecal formulations
- ✓ choose the best one  
(many tries may be necessary)

## — search for the — OPPOSITE SOLUTION

- 💡 look for all the ideas  
that could solve the  
opposite problem

## back to the PROBLEM

- reverse each opposite  
solution to find out a  
solution to the initial  
problem
- ✓ evaluate and select  
the new ideas

- double creative process: 2 different brainstorming sessions: the search for opposite solution + the return to the initial problem
- possibility for a person alone to carry out each step at different moments, during this time, during this time, a subconscious work (incubation) will help to produce more ideas

- takes long time
- may be difficult to express the opposite formulation of the problem
- most of all, people who do not consider themselves as creative should use this method in a group

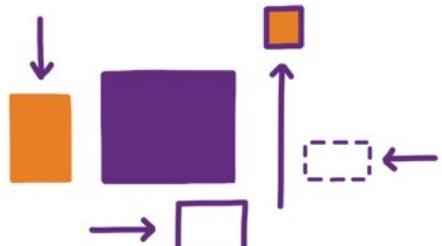


ensgsi!



imacreated by Raphaël Bary & Hélène Pouille

# ANALOGY



the most evident



## DIRECT ANALOGY

wonder in which domains there are similarities with the problem to solve

FIND SIMILARITIES BETWEEN THE PROBLEM TO SOLVE AND OTHERS TAKING PLACE IN DIFFERENT DOMAINS

find out links and relations between separated elements and use these similarities to generate ideas that bring solutions to the problem to solve



## PERSONAL ANALOGY

identify yourself with an object linked to the problem



## SYMBOLIC ANALOGY

throw some poetic light on the problem while expressing spiritual, abstract, general ideas



## FANTASY ANALOGY

consider the problem solved "by magic" and try to find out what this magic could be



## FIELDS FINDING

look for domains with pertinent similarities



## FIELDS EXPLORATION

express all the possible analogies



## ANALOGY SELECTION

study each analogy and keep only those that could be interesting for the problem



## RETURN TO THE PROBLEM

bring back to the field of the problem to generate as many solutions as possible



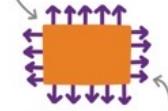
- really easy to handle
- usually give good results



requires a lot of knowledge in a wide range of domains



# CONCEPT MAPPING

created by  
JD Novak  
  
Tony Buzan's  
mind mapping®  
= particular form

LAY YOUR THOUGHTS DOWN ON PAPER • EXPLORE ALL THE FACETS  
OF A PROBLEM • SHOW THE ELEMENTS AND THEIR RELATIONSHIP

represent knowledge with graphics and diagrams (also helpful to formalize problems and find solutions)

all you need is a large sheet of paper

THE MAP

symbolised form of the concept that  
can be modified, improved and shared

links (explained or not)  
arrows or simple lines

⚠ identify clearly the  
concept / main idea

all the dimensions of the concept  
and their relationship



do not try the perfect map on the go, there is no specific step to build the map  
just start writing down all the ideas (elements, links) coming to the consciousness  
and improve this first work



- easy to handle
- particularly suited to "low creativity" persons
- good way to keep a trace of your thoughts and their evolution
- there is a lot of Concept Mapping softwares



to produce a lot of new ideas, it may be necessary to use other creativity tools to foster the Concept Mapping potential



ensgsi!



imacreated by Raphaël Bary & Hélène Pouille

# SCAMPER

developed by  
Bob Eberle



7 thinking  
techniques

GENERATE IDEAS IN A SYSTEMATIC WAY • APPLY ACTIONS TO  
THE PRODUCT / ORGANISATION / PRODUCT TO CHANGE



list of actions to apply to an object or a situation to find unusual ideas  
more a mnemonic for the collection of techniques rather than a technique of its own



## SUBSTITUTE

remove some part of the accepted situation, thing or concept and replace it with something else



## COMBINE

join, affiliate or force together 2 or + elements of your subject matter and consider ways that such a combination might move you toward a solution



## ADAPT

change some part of your problem so that it works where it did not before



## MODIFY

consider many of the attributes of the thing you're working on and change them arbitrarily if necessary  
attribute include: size, shape, dimension, texture, color, attitude, position, history...



## PURPOSE

(put to other use)  
modify the intention of the subject / think about why it exists, what it is used for, what it is supposed to do / challenge all these assumptions and suggest new and unusual purposes



## ELIMINATE

arbitrarily remove any or all elements of your subject, simplify, reduce to core functionality



## REVERSE

change the direction or orientation / turn it upside-down, inside-out or make it go backwards against the direction it was intended to go or be used / you can also "rearrange", modify the order of operations or any other hierarchy involved

⚠️ if you can't think of anything in response to the SCAMPER prompt you're using it, force a response, no matter how ridiculous it seems and think of ways to make the non-logical response work



- quite easy to handle
- particularly suited to "low creativity" persons



still to be found



ensgsi!



imacreated by Raphaël Bary & Hélène Pouille