Creative night

Resume / Brief description	The event is a moderated creativity session that will let students work on the challenges of companies. Based on prepared questions from the companies, the students will be trained to apply creativity techniques. The companies will receive ideas from students in a structured and documented way.
Target group	The target group are entrepreneurs and business managers who are searching for new ideas for some challenges as well as universities and their students who are interested in thinking out of the box.
Objectives	Link companies and universities, especially faculties of management or commerce, but multidisciplinary teams from all faculties are also potential candidates. Provide companies with new ideas from outside in a short event. Train students to structure creativity.
Requirements	For a smooth conduction of the workshop, the following material is required: Large sheets of paper or roll of paper to document the process. Pin board for each team or a wall with tape to hang the papers. Moderation cards with pens. Sheet of paper that explains the different creativity methods.
Implementation - Overview	This tool can be implemented in five phases; each of them consists of several steps. PHASE 1: PREPARATION WITH COMPANIES In preparation meetings before the event with the selected companies, their challenges have to be defined and clear questions to guide the students have to be articulated. PHASE 2: INTRODUCTION The event begins with an introduction about creativity and an introduction of the participating companies. PHASE 3: FIRST ROUND – LATERAL THINKING After the companies present their questions/problems, the moderator introduces techniques of lateral thinking. Students are grouped in working teams. Each team exercises one method on one of the presented challenges. The representative of the company explains the challenge again in more detail for the individual groups. Students ask questions until everybody understands the questions/problems presented by the company. The students apply the selected creativity technique for lateral thinking. Each group presents their results to the plenum. The representative of the company comments on the results. PHASE 4: SECOND ROUND – VERTICAL THINKING Here the moderator presents techniques of vertical thinking. Students are grouped once again in working teams. Each team exercises one method on one presented challenge. The representative of the company explains the challenge again in more detail for the groups. Students ask questions until everybody understands the questions/problems presented by the company. The students apply the creativity technique for vertical thinking. Each group presents their results to the plenum. The representative of the company comments on the results. PHASE 5: THIRD ROUND – PARALLEL THINKING Finally, the moderator presents techniques of parallel thinking. Students are grouped once again in working teams. Each team exercises one method on one of the presented challenge. The representative of the company explains the challenge again in more detail for the groups. Students ask questions until everybody understands the questions/problems presented by the company. The students apply the creativity technique for parallel thinking. Each group presents their results to the plenum. The representative of the company comments on the results.
	PHASE 1: PREPARATION WITH THE COMPANIES STEP 1.1: Question Preparation In the first phase companies willing to participate in the creative night have to be identified. These should be companies that are looking for new ideas or to overcome some challenges in existing products. In meetings with these companies some challenges have to be selected and clear questions have to be formulated. Each company should formulate three questions. A question for each round of the workshop: one for lateral thinking, one for vertical thinking, and one for parallel thinking. The trainer should support the companies in defining the right questions for these three categories. STEP 1.2: Student Selection The university has to select some students for participation. It is of advantage for the event if one can find students with different backgrounds. A venue has to be found where separated group work in a pleasant atmosphere is possible. Tip: Let the students

sign an agreement of confidentiality. These may be important for the companies to talk more about their challenges.

PHASE 2: INTRODUCTION
After an introduction into creative thinking by the trainer the companies have to be presented briefly.

STEP 2.1: Introduction to Creative Thinking Creativity is one of the most valuable resources to explore new areas of knowledge. Creativity, in its simplest definition, can be understood as ability to create, that is, to produce something out of nothing. Creativity comes from the Latin word creare, which means to generate something new, invent something, produce something, but is also associated with the concept of choice. In order to develop ways of thinking that stimulate idea generation (this is creativity itself) Edward De Bono developed the concept of lateral thinking (De Bono, 1970). This way of thinking seeks to generate alternative thinking directions, in opposition to vertical thinking, which seeks to develop ideas in a thinking direction that is already defined. While vertical thinking is analytical, lateral thinking is provocative in suggesting these new thinking directions. Nevertheless, according to De Bono (1970), these two forms of thought are not antagonistic. In this sense, lateral thinking may be useful to find ideas or directions for problem solving and vertical thinking may be useful to develop them. For stimulating creativity, we need: A Question or Problem to Solve The starting point for being creative is necessarily a question or a problem to solve. This is the beginning of the process of creative thinking and thinking outside the box, for which it is essential to first define what the box is. Therefore, at the start of every creative problem-solving process stands the definition of the problem to solve. Here it is important to concentrate on the task to get the right focus on the problem or question or to divide them into suitable partitions. A creative process based on general or meta questions is difficult to handle and in the end the results are often not satisfactory as they are too general. A Team Experiences and research show that a group is much more effective and productive in creativity than a single individual. The myth of the lonesome inventor who independently finds the solution in their enclosed room is widely disproven in reality as well as by literature. Furthermore, the team should be as diverse as possible in terms of age, culture, discipline, background, department etc. The goal should be to involve different perspectives, backgrounds, and experiences into the creative process. A Suitable Environment Based on the fact that thinking and creativity are highly related to emotions and feelings as well as chemical and hormone functions within our brain and body, a positive and motivating environment influences our way of thinking. As the Walt Disney Method demonstrates, putting oneself in a different perspective can be supported by changing the room or place. Time The majority of the methods for creative thinking are time consuming, which can be costly for the companies. However, creative problem-solving processes are strategically addressing the future and thus are substantially important. Therefore they need adequate time resources. Freedom of Thinking To enable the creativity process it is necessary to think absolutely freely. Every idea is welcome. It might be that one idea is better for the explicit problem than another one, but in the end for lots of creative processes the ideas which were produced below the line led to successful innovations. Therefore: no hierarchies, no prejudice, no taboos.... Craziness is allowed! For freedom of thinking it sometimes might be a good idea if the management is not involved in the idea development process due to possible ambiguous hierarchy behaviour of the team, which could hinder the process or make it uncomfortable. Structuring the Process To make the idea creation process manageable, it is helpful to structure the process into four steps and to allocate the different resources and methods to each single step.

Step A: Defining the problem As mentioned above, it is first necessary to define the problem to be solved and the questions to be asked

Step B: Idea generation This step is related to the task of generating as many quality ideas as possible in a compact time frame. This step mainly uses methods and techniques that are addressing intuitive and unconscious ways of thinking. Following Edward de Bono this way of thinking could be defined as “lateral thinking”.

Step C: Idea selection Following the step of idea generation, we now have to select those ideas that seem to be most suitable for solving the problem. The ideas should be selected and weighted; we have to prioritise them to build the base for the strategic decision at the end which one of them should be implemented or commercialised. Here more discursive and conscious methods and techniques are helpful to structure the group discussions. Those are more related to linear and structural thinking.

Step D: Idea commercialisation In the last step one has to decide which ideas are to be implemented. Here it is necessary to change the perspective and to involve different people. Idea generation and idea commercialisation are two different tasks and few people have equal capabilities in both. After the idea generation and selection process most of the participants love their ideas and stick to them. Hence they are not able to change into a market perspective and to adjust or transform the idea into a product or a solution which the company can implement or commercialise. Because of that reason most companies separate these sections. Let the people do the things they are able to do well.

STEP 2.2: Introduction of the Companies The company representatives

	STEP 2.2: Introduction of the Companies The company representatives give a very short introduction to their company and field of business. These presentations should include an outline on the challenges they face at the time. PHASE 3: FIRST ROUND: LATERAL THINKING STEP 3.1: Introduction to Intuitive Methods The trainer introduces four intuitive methods to the plenum of the students and company representatives. ABC Technique This is a quick and very easy creative technique that is also very suitable for individual idea development. How it works: Develop the question, problem, or topic for the session and write it in the middle of the board. Make sure that everybody understands the question for the session. Write the letters A, B, C, etc. to Z down the side of the paper or the board. Try now to find answers to the question starting with each letter of the alphabet. In the end you should quickly have 26 possible answers (one answer for each letter of the Latin alphabet). Analogies (Synectics) The use of analogies consists of taking the problem that needs to be solved to other knowledge areas or simply to other scenarios. This stimulates the flexibility of the already established thinking structures, facilitating linkages to generate new ideas. The essential part of this method is the selection of the analogy. It is possible that a group cannot find a suitable analogy or that the found analogy does not lead to the generation of good ideas. One should also take into account the knowledge of the selected area. Although the overall exercise simply attempts to make the mind more flexible, a greater knowledge can lead to new associations and understandings. A good analogy may be made with nature, therefore it is recommended to have at least one participant who is an expert on the selected area, in this case, a biologist. An example could be network intelligence: one of the problems with the proliferation of communication networks is to find the best way to communicate. In order to develop ideas for a more efficient communication, we used the analogy with intelligent swarms within nature. Analysing the topic, it is found that ants leave a pheromone at the places where they walk along so that other ants can find a more efficient path to go somewhere, for example, where their food is. From this, one can also think about leaving a mark on information packages for instance, in emails that could be read by other users and thus, make its transmission and storage more efficient. How it works: Define the problem. Search for an analogy. Analyse the selected analogy. Search for analogy elements that are linked to the problem Generate ideas based on the analogies Evaluate and develop ideas. Headstand This method is based on the principle that sometimes it is better to answer the question one doesn't want to be answered than that the question what one wants answered. Therefore, reversing the questions and putting them upside down gives one the possibility to change the perspective. How it works: Develop the question, problem, or topic for the session and write it in the middle of the board. Make sure that everybody understands the question for the session. Turn the question upside down. Don't ask what the company can do for the customers; ask what the customer can do for the company. After answering the reversed questions put them on the ground again and one will have possibilities to solve the problem. Mind Mapping The method was developed by Tony Buyan, a British mental trainer and author of well-known books about creativity. The mind maps are also called spider diagram or conceptual maps and they are built through tree diagrams. How it works: A large sheet of paper, a wide pin board, or a computer with mind-mapping software is needed. Develop the question, problem, or topic for the session and write it in the middle of the board. Make sure that everybody understands the question for the session. For each major subtopic a new branch of the tree has to be started and labelled. For each sub-subtopic a subordinated branch has to be started and labelled. Continue in this way. At the end, a structured picture about the question and the possible answers related directly to the question in the centre is presented.
Implementation - Guidelines	STEP 3.2: Group Work Students are grouped into four working teams. Each team will work with one method on one question of a company. The company representative explains the question the company has on one challenge where they need more new ideas. For example: currently, for product x only a prototype exist. What extra features could be interesting? Before starting: Make sure that everybody understands the question. Make sure that everybody understands the method. STEP 3.3: Evaluation Each group presents their results to the plenum. The representative of the company comments on their results. Factors for evaluation are newness to the company and usefulness. Don't forget to document the results with photos and send it to the company. PHASE 4: SECOND ROUND: VERTICAL THINKING STEP 4.1: Introduction to Discursive Methods Three discursive methods are introduced to the plenum. Morphological Analysis The method was first developed by Fritz Zwickly, a Swiss astrophysicist and aerospace scientist at the California Institute of Technology in the 1940s and 50s. The method is built for the systematic structuring of multidimensional problems and the investigation of complex relationship constructs. The method is based on an attribute list and uses a matrix for visualisation. The morphological analysis consists of the collection and systematic analysis of parameters and their possible values or characteristics, from which possible solutions or ideas are developed. The selection of the parameters and the definition of the possible values or characteristics of each parameter can be made in

groups. In the example of the table above there is a description of parameters of a lamp and possible characteristics that each of these parameters could have. For example, as light source, it is possible the use of a candle, a bulb, halogen lighting or a fluorescent tube. The points connected with lines identify one selection within the possible characteristics of each parameter. How it works: Definition of the problem. Definition of the parameters of the object or problem to be solved. Definition of possible values or characteristics of each parameter. Preparation of the parameter matrix and its values or characteristics. Selection of the characteristics of each parameter and development of the concept or solution to the problem. Evaluation of the idea or solution. Force Field Analysis This method was first developed by Kurt Lewin (1890-1947), a German-born pioneer of social psychology and founder of the theory of group dynamics. The method visualises the different factors and topics involved in the problem and structures them into hindering or helping factors. How it works: First a pin board or a large paper with moderation material is needed. Develop the question, problem, or topic for the session and write it in the middle of the board. Make sure that everybody understands the question for the session. The group now has to identify factors that help or hinder in solving the problem. Draw a line in the middle of the paper or board. Draw the helping forces as upward arrows over the line and the hindering factors as downward arrows under the line. The size and thickness of the arrow should symbolise the power of the factor. Then the group develops ways to strengthen or add positive forces, to weaken or remove negative forces, or recognises the negative forces that are too strong to solve the problem. Fishbone Diagram This method was originally developed during the 1940s by Kaoru Ishikawa, a Japanese scientist who developed a couple of tools for quality management. The diagram shows the causes and effects of a certain event or problem. How it works: First a pin board or a large paper with moderation material is needed. Develop the question, problem, or topic for the session and write it in the middle of the board. Make sure that everybody understands the question for the session. Draw a long arrow in the middle and label with topic or question. This is the backbone of the fish. For every major cause the group can think of, draw a line (one bone) at 45 degrees to the backbone and label it. For every subcause there will be a small arrow or bone in direction of the major cause the subcause is related to. Through group discussion one can identify the key cause as starting point for developing a solution. Below you can find an example of a fish diagram for missed deadlines.
STEP 4.2: Group Work Students are grouped into three working teams. Each team will work with one method on one question of a company. The company representative explains the question the company has about a challenge, where they have to decide about an innovation. For example: Product x is targeting a female market segment. Which arguments could be used, that males support them buying it? Before starting: Make sure that everybody understands the question. Make sure that everybody understands the method.
STEP 4.3: Evaluation Each group presents their results to the plenum. The representative of the company comments on the results. Factors for evaluation are newness to the company and usefulness. Don’t forget to document the results with photos and send it to the company.

PHASE 5: THIRD ROUND – PARALLEL THINKING STEP 5.1: Introduction to Combination Methods Two combination methods are introduced in the plenum. Walt Disney Method The method was developed by Robert Dilts, a pioneer of Neuro-Linguistic Programming (NLP), and goes back to Walt Disney and his process of “Imagineering” within the Walt Disney Company. The method separates participants into three different roles: the “dreamer”, the “realist”, and the “critic”. The Dreamer: this role is producing the visionary big picture. Everything is allowed even thinking the unthinkable. There are no boundaries and limits. The Realist: in this role everything is organised and structured. Think constructively and devise plans and ways to reach the vision. Cut the vision down to suitable and realistic aims and terms. The Critic: this is the role that critically discusses the plan and the solutions of the realist. Here the role should look behind the scenes. What could go wrong, what is missing? What are the consequences, the cost of the solution? What kind of resources are needed and could they be provided and so on. The method can be used with each individual playing one role. Alternatively the whole group can jump from one role to another. It is even possible to change the room and seats. In the Walt Disney Company there were huge studios for the visionary people with room and space to be creative. For the realistic people there were well-structured and organised offices, and for the critical ones there were tiny and small offices. Six Thinking Hats of Edward de Bono The method was developed in the early 1980s by Edward the Bono, a British medical scientist and author of well-known books about creativity. He is the inventor of the theories and methods for lateral thinking. This method involves the systematic analysis of a problem or situation from different points of view. Each view is represented by a “hat”, which is characterised in a specific way. White hat: Focused on data, facts, and information about the problem. What information is available? What data, facts, or information are missing? What data must be obtained and by who? Red hat: with this hat, one can express any feeling or intuition about the problem. The perception and the feelings should be expressed without being criticised by other members of the team. How do you feel? How do you feel about the problem? What sensation comes to your mind? Black hat: This role indicates the errors and gives a critical look at the solution of a problem or the implementation of an idea. One must be careful with it. Is the possible solution profitable? Is there any law or regulation violated? What are the risks? Yellow hat: It is optimistic. When wearing

	the yellow hat, it is necessary to focus on consciously identifying the benefits of a project or an idea. What are the advantages? What does everyone get? What advantages can it bring to other people? Green hat: It concentrates on creative thinking. In this space, new ideas can be generated by complementing the already existing ones. What are the alternatives? Where do you think you can have fallen into paradigms? How can the process be accelerated? Blue hat: This hat emphasises the control of methods and processes. The issues that must be reflected on and the steps to be followed are determined here. What aspects still need to be considered? What is not clear yet? What should be discussed? STEP 5.2: Group Work Students are grouped into two working teams. Each team will work with one method on one question of a company. The company representative explains the question the company has about a challenge, where they have to decide about an innovation. For example: Should this product x be introduced into the market soon? Before starting: Make sure that everybody understands the question. Make sure that everybody understands the method. STEP 5.3: Evaluation Each group presents their results to the plenum. The representative of the company comments on the results. Factors for the evaluation are the newness to the company and usefulness. Don't forget to document the results with photos and send it to the company.
Example of application:	
Templates, Graphics for download	
Additional format/references	

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