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UNIVERSITÄT DES SAARLANDES

Knowledge Entrepreneurship Workshop Manual

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Content Overview

The workshop "Become a Knowledge Entrepreneur" is aimed at both students and employees of each partner university. The workshop can either be conducted in one or two days – two days are however preferred. In the workshop, participants reflect on their own knowledge, skills, and abilities and discuss networking strategies. These strategies are then used to develop initial ideas on how to advance social, ecological, and digital transformations.

To advertise the workshop, the following text can be used:

Unlock Your Career Potentials: Join Our Knowledge Entrepreneurship Workshop!

Are you ready to take control of your professional journey and make a lasting impact on the world? This workshop is designed to empower you with the tools, strategies, and mindset needed to unleash your true career potentials while addressing the pressing challenges faced by society today. Through engaging activities and insightful exercises, you will gain a deep understanding of your strengths and areas of expertise, allowing you to shape a fulfilling and purpose-driven career.

Our workshop emphasizes the importance of social impact and equips you with the tools to tackle societal, digital, and ecological problems head-on. Whether it's addressing poverty, fostering sustainable practices, or leveraging technology for positive change, we'll help you develop innovative and impactful solutions that truly make a difference.

What to Expect: During this workshop, you'll engage in interactive sessions and collaborate with like-minded individuals. You'll leave the workshop equipped with practical strategies, a clear roadmap, and a network of supportive individuals ready to embark on their own entrepreneurial journeys.

Don't miss this incredible opportunity to shape your future and make a meaningful impact. Join our Knowledge Entrepreneurship Workshop today and unlock your true potential while contributing to a better, brighter world. Together, we can create a future that is both prosperous and sustainable.

Register now to secure your spot! Limited seats available.

For more information and registration, visit our website or contact us at [contact information].

Workshop Schedule – 1 Day Workshop

Time	Content
9.00 – 9.30	Welcome and procedure
9.30 - 10.00	Knowledge Entrepreneurship – what is this? Short definition and introduction to effectuation
10.00 – 11.00	Knowledge, Skills, Abilities, and Others (KSAOs) - Reflection of one's own knowledge, abilities, skills and interests
11.00 – 11.15	Coffee break
11.15 – 11. 45	Networking strategies
11.45 – 12.30	Introduction to social, ecological, and digital challenges and transformations and introduction to design thinking
12.30 – 13.30	Lunch break
13.30 – 14.00	Defining challenging transformations
14.00 – 15.30	Using design thinking to address a chosen social, ecological, or digital challenge – Ideating and Prototyping
15.30 – 15.45	Coffee break
15.45 – 16.45	Presentation of the approaches developed for the selected challenges
16.45 – 17.00	Feedback and Closing.

Workshop Schedule – 2 Day Workshop

Day 1

Time	Content
9.00 – 9.30	Welcome and Procedure
9.30 - 10.00	Knowledge Entrepreneurship – what is this? Short definition and introduction
10.00 – 11.00	Introduction to Effectuation
11.00 – 11.15	Coffee break
11.15 – 13.00	Start with your means: knowledge, skills, abilities & other characteristics
13.00 – 14.00	Lunch break
14.00 – 15.00	Other characteristics – Personality, interests, and vision journey
15.00 – 15.15	Coffee break
15.15 – 17.15	Networking strategies
17.15 – 17.45	Conclusion and preparation for Day 2

Day 2

Time	Content
9.00 – 9.30	Welcome and Procedure
9.30 - 10.00	Introduction to social, ecological, and digital challenges and transformation and introduction to design thinking
10.00 – 11.00	Defining challenging transformations
11.00 – 11.15	Coffee break
11.00 – 13.00	Using design thinking to address a chosen social, ecological, or digital challenge - Ideation
13.00 – 14.00	Lunch break
14.00 – 15.30	Using design thinking to address a chosen social, ecological, or digital challenge - Prototyping

15.30 - 15.45	Coffee break
15.45 – 16.45	Presentation of the approaches developed for the selected challenges and discussion
16.45 – 17.15	Reflection on most important vision for own career
17.15 – 17.45	Feedback and conclusion

Detailed Workshop Description – 1 Day Workshop

Time	Content	Materials
9.00 – 9.30	**Welcome and procedure** Trainer welcome participants and explain that the workshop starts with a short introduction of both trainer and participants. They introduce themselves, their backgrounds, and explain why they are conducting this workshop. If participants have not yet filled in the questionnaire on knowledge entrepreneurship, they are kindly asked to do so now (by showing a slide with the link and QR code to the questionnaire). Then, participants are asked to shortly introduce themselves by saying their name. They are asked the following questions: 1) How many semesters did you already study (Bachelor + Master) 2) What is your professional background? 3) How certain are your future career plans at the moment? Then, the trainer hands out pens and moderation cards. Participants are asked to write down what needs to occur during this workshop for them to consider it a worthwhile investment of their time (expectations). The written expectations are collected by the trainer and sticked to a wall or pinboard. The expectations should be sorted by the trainer into different categories. The trainer can react to the different expectations and say whether and if yes, how they might be addressed during the workshop. After the introduction of the participants, the trainer presents the schedule of the workshop and explains shortly what is planned for each section of the workshop. The schedule can either be shown as a slide or be written on a flipchart.	Slides with background information and workshop schedule. (Flipchart with schedule) Moderation cards Pens Adhesive tape OR Pinboard and pins
9.30 - 10.00	**Knowledge Entrepreneurship – what is this?** **Short definition and introduction** Participants are asked to brainstorm on the term "Knowledge Entrepreneur(ship)". Participants are first asked to enter the terms and ideas that come to their mind about entrepreneurship. Afterwards, they are asked to write down their initial thoughts and ideas on what might be the differences between knowledge entrepreneurship and the traditional view on entrepreneurship. Their thoughts can either be collected on moderation cards, which are collected by the trainer and sticked to a wall or a pinboard or the trainer can use free software	Mentimeter.com – word cloud OR Moderation cards Pens Adhesive tape OR pinboard and pins

	such as mentimeter.com and present a slide there. Here, it is recommended to use the function "word cloud". The trainer discusses with the participants the collected answers: - What are similarities? - What are differences? - Do specific categories build up? If yes, how could these be named? This brainstorming is followed by a definition of knowledge entrepreneurship and examples: **Slide:** Increasing challenges (social, environmental, digital) require flexible mindsets and active interventions **Examples for challenges (from slide):** - Supporting the (grand)parent generation in using smartphones and PCs (digital) - Placing a rubbish bin where litter often accumulates (environmental) - Planning and constructing a children's playground (social) - Providing regular community offers (e.g., podcasts or action groups) **Slide:** At the same time challenge of transforming own knowledge and expertise into action **Slide:** Increasing challenges (social, environmental, digital) require flexible mindsets and active interventions + At the same time challenge of transforming own knowledge and expertise into action → Need for Knowledge Entrepreneurs **Slide:** "Knowledge entrepreneurs are people who use their skills to make an active contribution to society. Through their actions, they help society meet the digital, environmental and social challenges it faces." The trainer introduces this definition and emphasizes the main points: - Use of competences and knowledge - Contribution to society (this may involve founding a business, but it is not necessarily required) - Aim: addressing and overcoming digital, social, and ecological challenges The purpose of this workshop is then highlighted: Time and guidance for identifying own knowledge entrepreneurial potential and experiencing first steps of acting as a knowledge entrepreneur	Slides

Introduction to Effectuation – successful entrepreneurs: effectual vs. casual reasoning

Slide:

Developed by Prof. Dr. Sara Sarasvathy

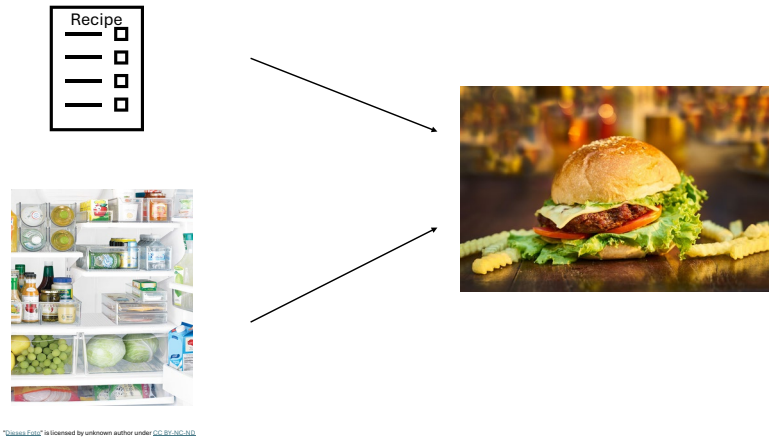
- Sarasvathy, S. D. (2001). *Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency.* Academy of Management Review, 26(2), 243–263. http://dx.doi.org/10.2307/259121
- Derived from research at Expert-Entrepreneurs

Effectuation =

Entrepreneurial thinking and acting as a proactive, creative, flexible and yet controlled behavior in the face of uncertainty

Slide:

Causation (Recipe X leads to result Y) vs. Effectuation (Creative combination of A, B, and C leads to result Z)



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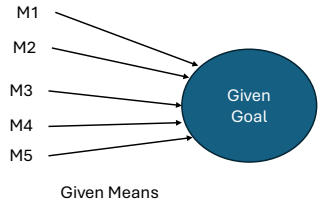
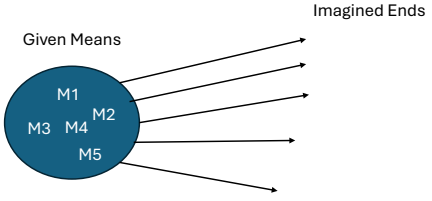
Slide:

Causal vs. Effectual Reasoning

Managerial Thinking (Causal)
Distinguishing Characteristic
Selecting given means to achieve a pre-determined goal

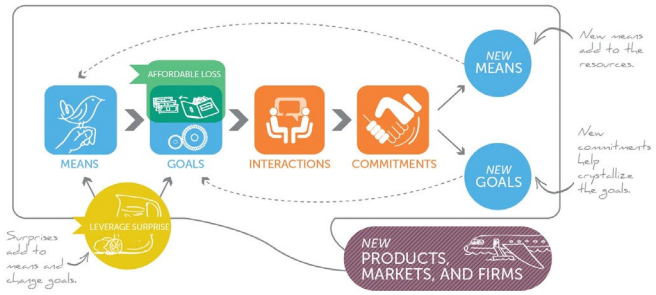


Entrepreneurial Thinking (Effectual)
Distinguishing Characteristic
Imagining a possible new end using a given set of means



The trainer introduces the distinction between means-driven and goals-driven. The focus should be on existing and known values.

	Focusing on goals could lead to problems such as - Big goals do not offer guidance to how to achieve it - Small set goals constrain. Recommendation: Focus on what is available/means without ignoring **Slide:** Exercise: Effectuation STORIES Link: https://effectuation.org/stories Activity: • In small groups, participants explore the Effectuation Stories (if not done in preparation). • They categorize the stories by the type of challenge addressed (digital, ecological, social) and identify where the effectuation principles are applied. • Participants who already read the stories in preparation share where they spotted effectuation principles. • Optionally, they can also share their own examples of effectuation in practice. **Slide:** Exercise: Effectual Thinking (15 Minutes) Take notes on your own: - What is your next step in your career? - What would you do in order to reach this step if you act according to the effectuation principle? 3. Discuss your notes with your neighbour	
	Coffee Break	
10.00 – 11.00	**Start with your means:** **Knowledge, Skills, Abilities, and other Characteristics (KSAOs) -** **Reflection of one's own knowledge, abilities, skills, and interests** ***Slide: Effectuation Circle***	Slides



Picture Source: https://creativebusinessmodels.com/2019/05/a-creative-entrepreneurial-process/

Slide: Introduction of the effectuation principle "Start with your means."

3 categories which should be the basis for all considerations:

1) Who am I? Traits, skills, tastes, …
2) What do I know? Training, education, specific knowledge, …
3) Who do I know? Social and professional networks

The combination of these three categories leads to opportunity development and goal development.

In this part of the workshop, the participants will focus on the first two categories, the third will be in the focus of the next part of the workshop (Networking)

Slide: Knowledge, Skills, Abilities, and Others (KSAOs)

Knowledge → declarative and procedural knowledge, the amount of information and knowledge that a person possesses; learnable

Skills → set of skills, capabilities, characteristics that can be learned in order to master a specific task (e.g. driving a car); learnable

Abilities → basic characteristics (e.g. intelligence) that cannot be learned or are difficult to learn, in order to cope with a whole range of tasks (Aamodt, 2010)

Other characteristics → interests, motives, attitudes, values; difficult to learn

Slide: Examples for KSAO

K: Knowledge about tax declaration, biological processes, …

S: Driving a car, foreign languages proficiency

A: Organizational skills, analysis of situations, communication

O: political orientation, values, interest

Handouts "KSAOs"

Handout – KSAO Workshop

Participants are asked to fill in the Handout KSAO (Attachment 1) (10 Minutes)

Handout Milestone & KSA

Slide: Exercise: Learning milestones and interview (40 Minutes)

	Trainer asks participants to go together in pairs. Each of them writes places or times when they have failed or succeed and learned something out of it on moderation cards. These cards shall be placed on the floor. With their partner, participants are asked to stand at one of the cards. Then, they ask each other: What did you learn at this point? How do you know that you have learned something? → ***Handout Milestone and KSA*** (Attachment 2) Use the following personal reflection questions (e.g. about strengths, values, and knowledge) as moderation cards to support participants in choosing and narrating meaningful situations. (Attachment 2) **Optional Reflection Questions – Moderation Cards for Situation Narration:** These questions (about strengths, values, knowledge, etc.) can be used in addition to the interview questions to help participants narrate their situations in more detail or from different perspectives. (Attachment 2) After 20 Minutes, participants should change the roles. Participants are asked to write down new findings on their handout and specify the KSAOs of their partner on the respective handout. Then, participants reflect in the plenary whether this exercise helped them to come up with new insights. **Slide**: Reflection on exercise Then, participants reflect in the plenary whether this exercise helped them to come up with new insights. How was the exercise? How did you identify the KSAO´s of your partner? What do you now know about your own means?	Moderation cards Pens
11.00 – 11.15	**Lunch Break**	
11.15 – 11.45	**Slide: Warm-up** • Participants stand in a circle. • They perform 1, 2, 3 squats sequentially, counting aloud "1, 2, 3." • The language used for counting can vary to make it more dynamic (e.g., switch between English and local language). Purpose: Light physical activation and team focus before the next workshop session. **Slide: Other characteristics – Personality (Big Five)**	Slides

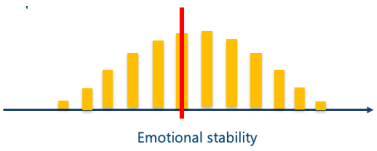
- Openness to experience: High appreciation for new experiences and variety, inquisitiveness, creativity, diverse cultural interests.
- Conscientiousness: Orderliness, reliability, punctuality, discipline, ambition.
- Agreeableness: Altruism, compassion, benevolence, trust, cooperativeness, compliance, need for harmony.
- Extraversion: Sociability, activity, talkativeness, cordiality, optimism, cheerfulness.
- Neuroticism: Nervousness, anxiety, sadness, insecurity, low need for control, inappropriate reactions to stress.

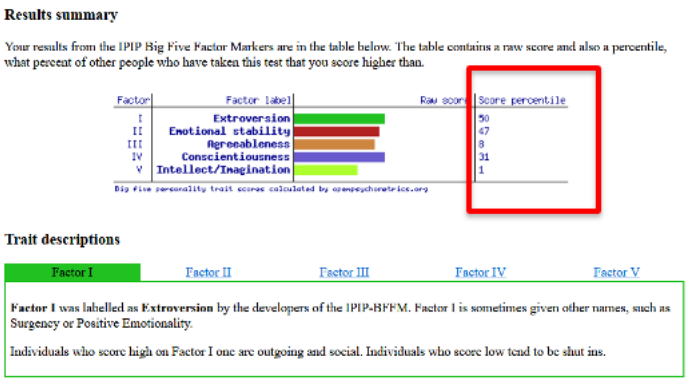
Slide: Exercise – Personality test (10 min)

Participants scan the QR code and complete a short online Big Five personality test. Do the test individually (approx. 10 min).

Slide: Big Five

- Percentile: A score at or below which a given percentage falls.
- Example: 47% of people score lower in emotional stability.
- Personality traits are not something idiosyncratic to a person but show themselves as deviations compared to others.





Results summary

Your results from the IPIP Big Five Factor Markers are in the table below. The table contains a raw score and also a percentile, what percent of other people who have taken this test that you score higher than.

Factor	Factor label	Raw score	Score percentile
I	Extroversion		50
II	Emotional stability		47
III	Agreeableness		8
IV	Conscientiousness		31
V	Intellect/Imagination		1

Big Five personality trait scores calculated by openpsychometrics.org

Trait descriptions

Factor I | Factor II | Factor III | Factor IV | Factor V

Factor I was labelled as **Extroversion** by the developers of the IPIP-BFFM. Factor I is sometimes given other names, such as Surgency or Positive Emotionality.

Individuals who score high on Factor I one are outgoing and social. Individuals who score low tend to be shut ins.

Slide: Other characteristics: nterests

Interest = Cognitive involvement/attention devoted to something.

- Object of interest: Concrete objects, thematic areas of knowledge, specific classes of activities.
- Level of interest: Defined by the subjective appreciation of the object of interest and how positive the associated emotional states are.

Slide: Exercise – Interests (15 min)

1. Draw a mind map: What catches your interest? In which topics/fields are you interested?
2. Create a new mind map and sort themes: Is there a thread? What themes recur?

Exercise – Your future as knowledge entrepreneur (10 Minutes)

Participants are asked to reflect individually on their vision as a knowledge entrepreneur. They should note down the most important points regarding their experience and learning.

- Guiding questions: What do you remember? What was important in relation to your project as a knowledge entrepreneur? Did you learn anything specific from the experience?

Afterwards, participants share their insights briefly in pairs or small groups before returning to the plenary.

Networking strategies

Slide*:* Exercise – Network! (15 Minutes)

Participants are asked to write down 3 questions nobody has ever asked them before. Then, they walk through the room and when they meet someone, they ask each other these questions. They then exchange one of their cards. They should talk about their societal, ecological, or digital transformation/problem. The participants should talk to everyone at least once. The exercise takes approx. 15 minutes

Slide: Effectuation principles

Means (bird in hand)

3) Question = Who do I know? Social and professional networks

Slide: Networking

Networking is building relationships before you need them. Then when you need them, you will know whom to call and he or she will want to help you. (Darling, 2003)

Slide: Exercise – Networking reflection

Participants reflect individually on the question:

- In what situation did you network successfully in the past?

Slide: Example: Paula is an app developer in the area of health management

This slide is use as an example for how networks can look like. The trainer explains the different types of networks and how these could be used by Paula.

Slide: Exercise: Who is in your network concerning your vision as knowledge entrepreneur?

Participants are asked to fill out the handout "Networking" (Attachment 3) asking them who they know:

- In their rolodex (LinkedIn, Facebook, …)
- Classmates, alumni
- Serendipitous acquaintances
- Strangers in their lives
- Where are gaps in their networks?

This should take approx. 10 minutes.

Slide: Exercise – Interview (10 + 10 min)

Participants pair up and ask each other the following questions:

- Who are the persons?
- Who is important for your vision?
- Why is he/she important?
- How is the current contact?
- What is your goal concerning future contacts? (Who is still missing in your network?)
- What have you already done to get in touch with these people?
- What could be done?

Each participant interviews their partner for 10 minutes, then they switch roles.

Slide: Reflection of exercise (5 min)

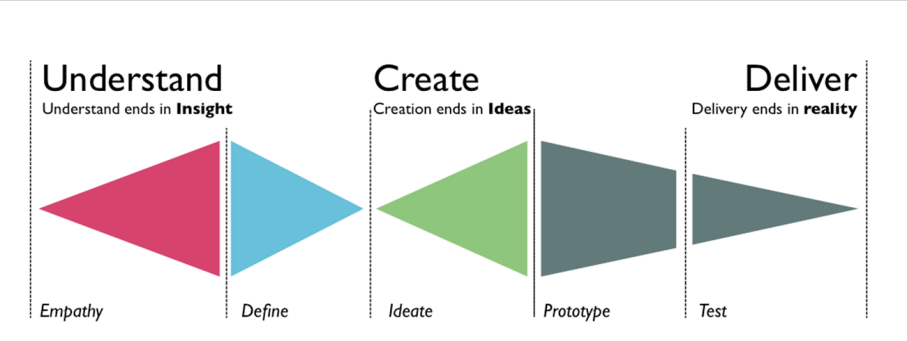
Discuss in plenary: How was the exercise? What gaps did you identify? What are your strategies to close these gaps?

Slide: Steps to establish new contacts

Participants should follow these steps to build meaningful professional connections:

Handout Networking

	• Identify a goal: Why do you want to get in touch with someone? What could this person contribute? • Get to know your counterpart: Ask questions and introduce yourself. • Establish a relationship: Look for shared interests. • Take your time: Building trust takes time. • Offer added value: Contribute something useful or helpful to the other person. • Communicate authentically: Express your concerns and intentions openly. • Maintain the contact: Stay in touch and find reasons to follow up. **Slide: Exercise (10 min)** • What kind of contacts do you need for you vision as knowledge entrepreneur? • Define a goal for networking with the people from this course or for the next week! **Conclusion and preparation for day 2** What do you take home? Knowledge Entrepreneurship, Effectuation, Start with your means, Networking	
11.45 – 13.00	**Day 2** **Slide: Warm-up – Equilateral triangle (10 min)** Participants select two others to form an equilateral triangle without speaking. • The exercise continues until all triangles are formed (best done in a large space). • Afterwards, ask who their chosen partners were. Debrief: Movement of one person affects the whole system → illustrates interdependence and transitions. **Slide: Introduction to societal, ecological, and digital challenges and transformations and introduction to design thinking** Mostly input by the trainer. However, you can also leave room for discussion about the presented thoughts and challenges. **Slide: Design Thinking: Process of flexible thinking to develop solutions for a specific problem** The trainer shortly introduces the design thinking approach. The focus should be on the divergent and convergent thinking during the different phases of the process.	Slides



Slide: Design Thinking

Now, the trainer explains that design thinking is an agile approach that can be used to solve problems in a variety of contexts. It always starts with…

empathizing = talking to other people, to learn about their problems
Define = Clearly define the challenges together
Ideate = Brainstorm possible solutions to the challenges
Prototype = Create a first version of a solution that can be tested
Test = Test this prototype

Slide: Empathize (15 Minutes)

In this workshop, the focus is on transformations that are either societal, ecological, or digital

Slide: Examples of societal transformations

- Globalization and global trade (economic relation, e.g., role of China and Europe)
- Changes in social roles (e.g., gender roles, demographic change in the age distribution)
- Social conflict (migration, war)
- Urbanization

Slide: Examples of ecological transformations

- Environmental protection (transportation, circular economy)
- Climate change (extreme weather events, heating, floodings)
- Change in nutrition behavior

Slide: Examples for digital transformations

- Ubiquitous computing → physical and digital spaces are merging (e.g., Chat GPT)
- Ubiquitous computing → physical and digital spaces are merging (e.g., Chat GPT)

Flipchart, Pens

	- Partial replacement of existing structures with computer-based or fully digital processes **Slide**: Exercise: Empathize and identify problems Participants are asked to get together in groups of 3-4. They shall then brainstorm as many problems as they can think of that care caused by these transformations and note down keywords in their group (5 minutes) **Slide**: Gallery walks Groups are then asked to look at the ideas of the others. Where possible, broader categories are built and connections are drawn.	
14.00 – 14.30	**Defining challenging transformations** **Slide**: Design Thinking After the empathizing phase, we now enter the defining phase in which we aim at defining the challenges more precisely. **Slide**: Exercise: Define challenging transformations (30 minutes) The groups are asked to define 1 of the identified challenging problems more precisely. They should specify: o Who is involved in this problem? o What are the needs of these people? o What causes the problem? o Why does this problem persist? o Write down a concrete problem statement! They can also conduct searches on the internet etc. to gain a deeper understanding. Important: They should only define the problem, not look for solutions. In the end, they should have a clear problem statement that they present to the other groups **Slide**: presentation of results (40 minutes) The groups are asked to present their problem statement. The audience shall take notes. Everyone from the audience is then asked to summarize the presented problem using the following sentence: Users need to … because of … - Participants should decide whether to switch groups and choose a problem to work on.	Slides
	Coffee Break	

14.30 – 15.00	**Using design thinking to address a chosen social, ecological, or digital challenge – Ideating and Prototyping** **Slide**: Design Thinking After the empathizing and defining phase, we now enter the ideating phase in which we brainstorm as many possible solutions to the identified problem as possible. **Slide:** Creativity exercise (5 min) Task: Find as many examples as possible for what a brick can be used for. **Slide:** Creativity • Fluency: Defined by the number of creative ideas that you have. • Originality: Defined by the number of creative ideas you share with other people (probability of an idea). **Slide**: Ideation/Creativity • Many people think that they are not creative at all • Creativity can be learned & ideas are not a coincidence but can emerge from a structured process and the use of different creativity tools • What is a creative idea? New ideas often come from new connections of already known contents à e.g., new combination of 2 terms leads to a solution idea. It should be something new and useful **Slide**: A creative idea… • needs time. • combines several already known things. • is not a coincidence. • needs feedback. • does not come by sitting still and thinking! →So don't select your favourite idea from the start! Good ideas benefit from an open mindset. **Slide**: Exercise Ideation: 4-3-2 (gathering stage) – 10 minutes In their groups of 4, participants write down three ideas to solve their problem on a sheet. He/she then hands this sheet of paper over to the person sitting on her left side. They can then add to the ideas of their group members. The sheets will circulate around for two rounds **Slide:** Exercise – VIP (10 min)	SAP scenes PowerPoint …

	- Form groups of 3–4 members. - Choose a VIP/celebrity all group members know. - Collect ideas on how this VIP would solve your problem. - Present your ideas to the other groups. **Slide**: Exercise (within groups): Selection – Post it comparison (10 minutes) 1. Select the best idea of the list on the sheet of paper that lies in front of you (**Criterion: idea fits to your means**) 2. Write this idea on a post-it 3. Align the post-its of all group members on the table 4. Compare the first idea with the second one and agree which idea is better according to your team´s means 5. Swap the ideas if necessary 6. Continue to rank order all ideas, by comparing one by one **Slide**: Presentation of results: Explain why you selected your idea Participants are asked to present their chosen idea and explain why they did decide to take this idea with a special focus on their KSAOs and networks.	
	Lunch Break	
	Using design thinking to address a chosen social, ecological, or digital challenge - Prototying **Slide**: Applicate - Prototyping **Slide**: Design Thinking We now enter the phase of prototyping. The goal is to develop a first version of a solution to the identified problem that can be tested. **Slide**: Prototyping Prototypes are first examples of an idea (product, service, …) from which all later forms are developed **Slide**: Examples The trainer shows examples for prototypes to show how different they can look like (e.g., click dummies, paper, videos, cardboard tinkering, comics,…) **Slide**: Exercise Prototyping (60 minutes) Participants are asked to develop a first version/prototype to solve the chosen challenge The participants can use different materials (see list on the right).	

	They are given 1 hour. After that, they shall present their prototypes in the plenary and get feedback. **Important**: Participants are asked to think back to the previous sessions – what KSAOs do they have that they can use to address this challenge? What contacts would they need/use? **Slide:** Steps for developing your product/service The trainer highlights the following steps the participants should follow while developing their prototypes. This slide should be shown during the 60 minutes of prototyping. The groups should also address these points in their presentation of their prototype 1. What is the benefit of your product for your target group? 2. In what way does your product / service fit the needs of your target market 3. In what manner is your product / service new, innovative in comparison to other already existing products? 4. Is your business idea realistic / feasible? 5. Why does your product / service match your team´s means (skills, resources, network)?	Different materials for building prototypes: Papers Pencils Lego Clay Glue/Tape Scissors
15.15 – 17.15	**Presentation of the approaches developed for the selected challenges and discussion** Depending on the number of participants – each group/participant has between 5 to 10 minutes to present their prototype and explain it to the other participants. Other participants are asked to provide feedback on the prototype regarding the following evaluation criteria: 1. Value proposition 2. Target market fit 3. Innovativeness 4. Feasibility 5. Match to team's means ++ means 3 points, + 2 points, and ~ 1 point → for each category, points are counted and added to a total score. The team with the highest score wins. The different prototypes/solutions are discussed in the plenary regarding the question how they solve/address the chosen challenge.	Prototypes Cards with the signs ++, + , ~ for the evaluation

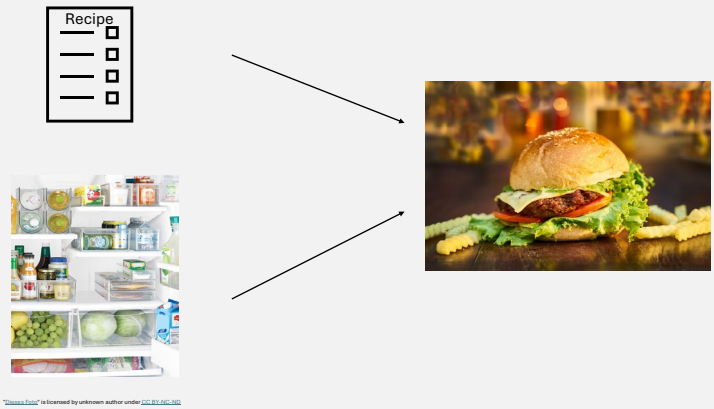
17.15 – 17.45	**Feedback and Closing**. The trainer summarizes shortly the different steps and learnings of the workshop: • Knowledge Entrepreneurship • Start with your means: KSAOs • Networking • Societal, ecological and digital transformations • Design Thinking: Empathizing • Design Thinking: Definition • Design Thinking: Ideatation • Design Thinking: Prototyping Participants are asked to give feedback on how they liked the workshop, whether their expectations from the morning were met and whether they have missed something. At the end, participants are asked to fill out questionnaire 2 for scientific purposes and are thanked for their participation.	Slide

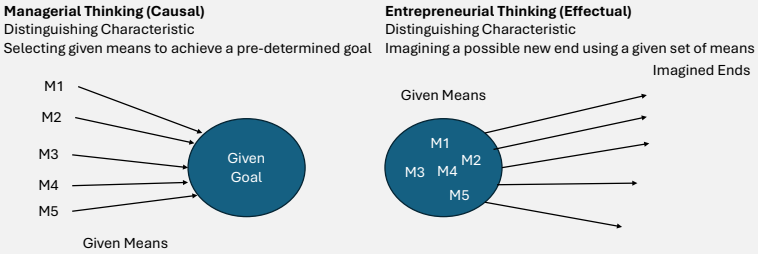
Detailed Workshop Description – 2 Day Workshop

Day 1

Time	Content	Materials
9.00 – 9.30	**Welcome and procedure** Trainer welcome participants and explain that the workshop starts with a short introduction of both trainer and participants. They introduce themselves, their backgrounds, and explain why they are conducting this workshop. If participants have not yet filled in the questionnaire on knowledge entrepreneurship, they are kindly asked to do so now (by showing a slide with the link and QR code to the questionnaire). Then, participants are asked to shortly introduce themselves by saying their name. They are asked the following questions: 1.1. How many semesters did you already study (Bachelor + Master) 1.2. What is your professional background? 1.3. How certain are your future career plans at the moment? Then, the trainer hands out pens and moderation cards. Participants are asked to write down what should happen during this workshop so that they'd say afterwards it was a good one (expectations) The written expectations are collected by the trainer and sticked to a wall or pinboard. The expectations should be sorted by the trainer into different categories. The trainer can react to the different expectations and say whether and if yes, how they might be addressed during the workshop. After the introduction of the participants, the trainer presents the schedule of the next two days and explains shortly what is planned for each section of the workshop. The schedule can either be shown as a slide or be written on a flipchart.	Slides with background information and workshop schedule. (Flipchart with schedule) Moderation cards Pens Adhesive tape OR Pinboard and pins
9.30 - 10.00	**Knowledge Entrepreneurship – what is this?** **Short definition and introduction** Participants are asked to brainstorm on the term "Knowledge Entrepreneur(ship)". They are asked to write down their first thoughts and their ideas what might be differences between knowledge entrepreneurship and traditional entrepreneurship.	Mentimeter.com – word cloud OR Moderation cards Pens

	Their thoughts can either be collected on moderation cards, which are collected by the trainer and sticked to a wall or a pinboard or the trainer can use free software such as mentimeter.com and present a slide there. Here, it is recommended to use the function "word cloud". The trainer discusses with the participants the collected answers: - What are similarities? - What are differences? - Do specific categories build up? If yes, how could these be named? This brainstorming is followed by a definition of knowledge entrepreneurship and examples: **Slide:** Increasing challenges (social, environmental, digital) require flexible mindsets and active interventions **Examples for challenges (from slide):** 1.4. Supporting the (grand)parent generation in using smartphones and PCs (digital) 1.5. Placing a rubbish bin where litter often accumulates (environmental) 1.6. Planning and constructing a children's playground (social) 1.7. Providing regular community offers (e.g., podcasts or action groups) **Slide:** At the same time challenge of transforming own knowledge and expertise into action **Slide:** Increasing challenges (social, environmental, digital) require flexible mindsets and active interventions + At the same time challenge of transforming own knowledge and expertise into action → Need for Knowledge Entrepreneurs **Slide:** "Knowledge entrepreneurs are people who use their skills to make an active contribution to society. Through their actions, they help society meet the digital, environmental, and social challenges it faces." The trainer introduces this definition and emphasizes the main points: - Use of competences and knowledge - Support of the society - Aim: overcoming digital, ecological, and social challenges	Adhesive tape OR pinboard and pins Slides

	The purpose of this workshop is then highlighted: Time and guidance for identifying own knowledge entrepreneurial potential and experiencing first steps of acting as a knowledge entrepreneur	
10.00 – 11.00	**Introduction to Effectuation** **Slide:** Developed by Prof. Dr. Sara Sarasvathy • Sarasvathy, S. D. 2001. Causation and Effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency, Academy of Management Review, 26(2): 243-288. • Derived from research at Expert-Entrepreneurs Effectuation = Entrepreneurial thinking and acting as a proactive, creative, flexible and yet controlled yet controlled in the face of uncertainty **Slide:** Causation (Recipe X leads to result Y) vs. Effectuation (Creative combination of A, B, and C leads to result Z)  **Slide:** Causal vs. Effectual Reasoning	Slides Paper, Pens



The trainer introduces the distinction between means-driven and goals-driven. The focus should be on existing and known values.

Focusing on goals could lead to problems such as

- Big goals do not offer guidance to how to achieve it
- Small set goals constrain.

Recommendation: Focus on what is available/means without ignoring goals

Slide:

Exercise: Effectuation STORIES

Link: https://effectuation.org/stories

Activity:

1.8. In small groups, participants explore the Effectuation Stories (if not done in preparation).

1.9. They categorize the stories by the type of challenge addressed (digital, ecological, social) and identify where the effectuation principles are applied.

1.10. Participants who already read the stories in preparation share where they spotted effectuation principles.

1.11. Optionally, they can also share their own examples of effectuation in practice.

Slide:

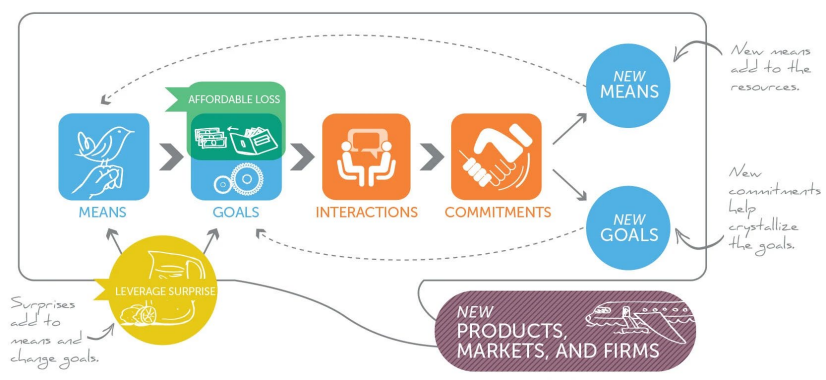
Exercise: Effectual Thinking (15 Minutes)

Take notes on your own:

1. What is you next step in your career?
2. What would you do in order to reach this step if you act according to the effectuation principle?

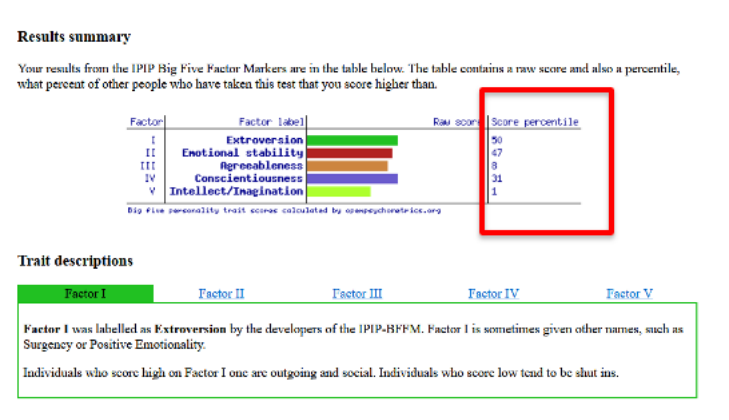
3. Discuss your notes with your neighbour

11.00 – 11.15	**Coffee break**	

11.15 – 13.00	**Knowledge, Skills, Abilities, and Others (KSAOs) -** **Reflection of one's own knowledge, abilities, skills, and interests** ***Slide: Effectuation Circle***  **Picture Source: https://creativebusinessmodels.com/2019/05/a-creative-entrepreneurial-process** **Slide**: Introduction of the effectuation principle "Start with your means." 3 categories which should be the basis for all considerations: 4) Who am I? Traits, skills, tastes, … 5) What do I know? Training, education, specific knowledge, … 6) Who do I know? Social and professional networks The combination of these three categories leads to opportunity development and goal development. In this part of the workshop, the participants will focus on the first two categories, the third will be in the focus of the next part of the workshop (Networking) **Slide**: Knowledge, Skills, Abilities, and Others (KSAOs) Knowledge → declarative and procedural knowledge, the amount of information and knowledge that a person possesses; learnable Skills → set of skills, capabilities, characteristics that can be learned in order to master a specific task (e.g. driving a car); learnable Abilities → basic characteristics (e.g. intelligence) that cannot be learned or are difficult to learn, in order to cope with a whole range of tasks (Aamodt, 2010) Other characteristics → interests, motives, attitudes, values; difficult to learn **Slide**: Examples for KSAO	Slides

	K: Knowledge about tax declaration, biological processes, … S: Driving a car, foreign languages proficiency A: Organizational skills, analysis of situations, communication O: political orientation, values, interest ***Handout – KSAO Workshop*** Participants are asked to fill in the Handout KSAO (Attachment 1) (10-15 Minutes) **Slide**: Exercise: Learning milestones and interview (40 Minutes) Trainer asks participants to go together in pairs. Each of them writes places or times when they have failed or succeed and learned something out of it on moderation cards. These cards shall be placed on the floor. With their partner, participants are asked to stand at one of the cards. Then, they ask each other: What did you learn at this point? How do you know that you have learned something? → ***Handout Milestone and KSA*** (Attachment 2) After 20 Minutes, participants should change the roles. Participants are asked to write down new findings on their handout and specify the KSAs of their partner on the respective handout. Then, participants reflect in the plenary whether this exercise helped them to come up with new insights. **Slide**: Reflection on exercise Then, participants reflect in the plenary whether this exercise helped them to come up with new insights. 1.12. How was the exercise? 1.13. How did you identify the KSAO´s of your partner? 1.14. What do you now know about your own means?	Handouts "KSAOs" Handout Milestone & KSA Moderation cards Pens
13.00 – 14.00	**Lunch break**	
14.00 – 15.00	**Slide: Warm-up** 1.15. Participants stand in a circle. 1.16. They perform 1, 2, 3 squats sequentially, counting aloud "1, 2, 3."	Slides

	1.17. The language used for counting can vary to make it more dynamic (e.g., switch between English and local language). Purpose: Light physical activation and team focus before the next workshop session. **Slide: Other characteristics – Personality (Big Five)** 1.18. Openness to experience: High appreciation for new experiences and variety, inquisitiveness, creativity, diverse cultural interests. 1.19. Conscientiousness: Orderliness, reliability, punctuality, discipline, ambition. 1.20. Agreeableness: Altruism, compassion, benevolence, trust, cooperativeness, compliance, need for harmony. 1.21. Extraversion: Sociability, activity, talkativeness, cordiality, optimism, cheerfulness. 1.22. Neuroticism: Nervousness, anxiety, sadness, insecurity, low need for control, inappropriate reactions to stress. **Slide: Exercise – Personality test (10 min)** Participants scan the QR code and complete a short online Big Five personality test. Do the test individually (approx. 10 min). **Slide:** Big Five The trainer explains what a percentile is (= a score at or below which a given percentage falls, 47% of people score lower in emotional stability Personality traits are not something ideosyncratic to a person, but only show themselves as the deviation to other persons) and explains how to interpret the personality test results. 	Paper, Pens



Results summary

Your results from the IPIP Big Five Factor Markers are in the table below. The table contains a raw score and also a percentile, what percent of other people who have taken this test that you score higher than.

Factor	Factor label	Raw score	Score percentile
I	Extroversion		50
II	Emotional stability		47
III	Agreeableness		9
IV	Conscientiousness		31
V	Intellect/Imagination		1

Big Five personality trait scores calculated by openpsychometrics.org

Trait descriptions

Factor I | Factor II | Factor III | Factor IV | Factor V

Factor I was labelled as **Extroversion** by the developers of the IPIP-BFFM. Factor I is sometimes given other names, such as Surgency or Positive Emotionality.

Individuals who score high on Factor I one are outgoing and social. Individuals who score low tend to be shut ins.

Slide: Other characteristics: Interests:

The trainer defines interests (=Cognitive involvement/attention devoted to something. Object of interest: Concrete objects, thematic areas of knowledge, certain classes of activities. The level of interest is defined by the subjective appreciation of the object of interest and how positive the associated emotional states are.)

Slide: Exercise: Interests (approx. 15 minutes)

Participants are then asked to draw a rough mind map with anything that comes to their mind regarding the questions: what catches your interest? In which topics/fields are you interested?

In a second step, participants should draw a new mind map and sort themes – is there a thread across the areas? What themes are recurring themes?

The exercise and results are then discussed in the plenary.

Exercise – Your future as knowledge entrepreneur (10 Minutes)

Participants are asked to reflect individually on their vision as a knowledge entrepreneur. They should note down the most important points regarding their experience and learning.

Slide: Your future as a knowledge entrepreneur exercise

After the vision journey, participants are asked to note down the most important points of their vision:

- What do you still remember?
- What was important in relation to your project as knowledge entrepreneur?
- Did you learn anything specific from the experience?

Paper, Pens

15.00 – 15.15	**Coffee break**	
15.15 – 17.15	**Networking strategies** **Slide***:* Exercise – Network! Participants are asked to write down 3 questions nobody has ever asked them before. Then, they walk through the room and when they meet someone, they ask each other these questions. They then exchange one of their cards. The participants should talk to everyone at least once. The exercise takes approx. 15 minutes **Slide**: Effectuation principles Means (bird in hand) – 3) Question = Who do I know? Social and professional networks **Slide**: Networking Networking is **building relationships before you need them**. Then when you need them, you will know whom to call and he or she will want to help you." (Darling, 2003) **Slide**: Exercise What is a past situation, in which you networked successfully? The trainer discusses this question with the participants in the plenary. **Slide**: Example: Paula is an app developer in the area of health management This slide is use as an example for how networks can look like. The trainer explains the different types of networks and how these could be used by Paula. **Slide**: Exercise: Who is in your network concerning your vision as knowledge entrepreneur? Participants are asked to fill out the handout "Networking" (Attachment 3) asking them who they know: - In their rolodex (LinkedIn, Facebook, …) - Classmates, alumnis - Serendipitous acquaintances - Strangers in their lives - Where are gaps in their networks? This should take approx. 10 minutes. **Slide: Exercise – Interview (10 + 10 min)**	Slides Handout Networking

Participants pair up and ask each other the following questions:

1.23. Who are the persons?
1.24. Who is important for your vision?
1.25. Why is he/she important?
1.26. How is the current contact?
1.27. What is your goal concerning future contacts? (Who is still missing in your network?)
1.28. What have you already done to get in touch with these people?
1.29. What could be done?

Each participant interviews their partner for 10 minutes, then they switch roles.

Slide: Reflection of exercise (5 min)

Discuss in plenary: How was the exercise? What gaps did you identify? What are your strategies to close these gaps?

Slide: Steps to establish new contacts

Participants should follow these steps to build meaningful professional connections

- Identify a goal (e.g., why do you want to get in touch with someone/ in which way can he/she be useful?)
- Get to know your counterpart (ask questions and present your-self)
- Establish a relationship (e.g., similar interests)
- Take your time - contacts need to grow
- Offer added value to your interlocutors
- Communicate your concerns openly – be authentic
- Maintain the contact (e.g., find follow up reasons)

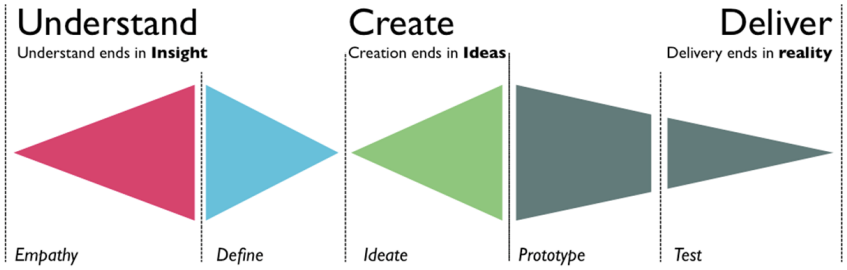
The trainer also collects tips and experiences from the participants.

Slide: Exercise (10 minutes):

1.30. What kind of contacts do you need for you vision as knowledge entrepreneur?
1.31. Define a goal for networking with the people from this course or for the next week!

17.15 – 17.45	**Conclusion and preparation for Day 2** The trainer summarizes shortly what the participants have learned/trained today: - KSAOs - Information seeking - Networking They ask the participants whether they have any feedback for Day 1. Then, participants are asked to think about a social, ecological, or digital challenge for the next day that they would like to address and prepare a short presentation for this challenge.	

Day 2

Time	Content	Materials
9.00 – 9.30	**Welcome and Procedure** Trainer welcome participants and tell them what the schedule for Day 2 is. Then they remind them of the task they had given them on the end of the first day and of the expectations that the participants had at the start of the first day. The trainer asks whether there are any questions regarding the previous workshop day or the schedule for this day.	Slides (Flipchart)
9.30 – 10.00	**Introduction to social, ecological, and digital challenges and transformations and introduction to design thinking** Mostly input by the trainer. However, you can also leave room for discussion about the presented thoughts and challenges. **Slide: Design Thinking: Process of flexible thinking to develop solutions for a specific problem** The trainer shortly introduces the design thinking approach. The main focus should be on the divergent and convergent thinking during the different phases of the process.  **Slide: Design Thinking** Now, the trainer explains that design thinking is an agile approach that can be used to solve problems in a variety of contexts. It always starts with empathizing = talking to other people, to learn about their problems Define = Clearly define the challenges together Ideate = Brainstorm possible solutions to the challenges Prototype = Create a first version of a solution that can be tested Test = Test this prototype **Slide: Empathize (15 Minutes)**	Slides

	In this workshop, the focus is on transformations that are either societal, ecological, or digital **Slide**: Examples of societal transformations - Globalization and global trade (economic relation, e.g., role of China and Europe) - Changes in social roles (e.g., gender roles, demographic change in the age distribution) - Social conflict (migration, war) - urbanization **Slide**: Examples of ecological transformations - Environmental protection (transportation, circular economy) - Climate change (extreme weather events, floodings) - Change in nutrition behavior **Slide**: Examples for digital transformations - Ubiquitous computing → physical and digital spaces are merging (e.g., Chat GPT) - Ubiquitous computing → physical and digital spaces are merging (e.g., Chat GPT) - Partial replacement of existing structures with computer-based or fully digital processes **Slide**: Exercise: Empathize and identify problems Participants are asked to get together in groups of 3-4. They shall then brainstorm as many problems as they can think of that care caused by these transformations and note down keywords in their group (5 minutes) **Slide**: Gallery walk Groups are then asked to take a look at the ideas of the others. Where possible, broader categories are build and connections are drawn.	Flipchart, Pens
10.00 – 10.45	**Defining challenging transformations** **Slide**: Design Thinking After the empathizing phase, we now enter the defining phase in which we aim at defining the challenges more precisely. **Slide**: Exercise: Define challenging transformations (30 minutes) The groups are asked to define 1 of the identified challenging problems more precisely. They should specify:	

	• Who is involved in this problem? • What are the needs of these people? • What causes the problem? • Why does this problem persist? • Write down a concrete problem statement! They can also conduct searches on the internet etc. to gain a deeper understanding. Important: They should only define the problem, not look for solutions. In the end, they should have a clear problem statement that they present to the other groups **Slide**: presentation of results (15 minutes) The groups are asked to present their problem statement. The audience shall take notes. Everyone from the audience is then asked to summarize the presented problem using the following sentence: Users need to … because of … The groups can then choose which sentence represents their problem best.	
10.45 – 11.00	**Coffee break**	
11.00 – 12.15	**Using design thinking to address a chosen social, ecological, or digital challenge – Focus on Ideation** **Slide**: Design Thinking After the empathizing and defining phase, we now enter the ideating phase in which we brainstorm as many possible solutions to the identified problem as possible. **Slide**: Creativity exercise (5 min) Participants are asked to write down as many examples for what a brick can be used as possible. The obtained solutions are then discussed in the plenary. **Slide**: Creativity Fluency: Defined by the number of creative ideas that you have Originality: Defined by the number of creative ideas you share with other people (probability of an idea) **Slide**: Ideation/Creativity • Many people think that they are not creative at all	Slides Paper, Pens

	• Creativity can be learned & ideas are not a coincidence but can emerge from a structured process and the use of different creativity tools • What is a creative idea? New ideas often come from new connections of already known contents à e.g., new combination of 2 terms leads to a solution idea. It should be something new and useful **Slide**: A creative idea… • needs time. • combines several already known things. • is not a coincidence. • needs feedback. • does not come by sitting still and thinking! →So don't select your favourite idea from the start! Good ideas benefit from an open mindset. **Slide**: Exercise Ideation: 4-3-2 (gathering stage) – 10 minutes In their groups of 4, participants write down three ideas to solve their problem on a sheet. He/she then hands this sheet of paper over to the person sitting on her left side. They can then add to the ideas of their group members. The sheets will circulate around for two rounds **Slide**: Exercise: VIP – 10 minutes Again using the chosen problem, participants are asked to think about 1 VIP/celebrity they are all familiar with. They should then collect ideas how this person/character would solve their problem. These ideas are written on a flipchart and later presented to the other groups. **Slide**: Exercise (within groups): Selection – Post it comparison (10 minutes) 1.32. Select the best idea of the list on the sheet of paper that lies in front of you (**Criterion: idea fits to your means**) 1.33. Write this idea on a post-it 1.34. Align the post-its of all group members on the table 1.35. Compare the first idea with the second one and agree which idea is better according to your team´s means 1.36. Swap the ideas if necessary 1.37. Continue to rank order all ideas, by comparing one by one **Slide:** Presentation of results: Explain why you selected your idea	Paper, Pens Flipcharts, pen Post-its, pens

	Participants are asked to present their chosen idea and explain why they did decide to take this idea with a special focus on their KSAOs and networks.	
12.15 – 13.15	**Lunch break**	
13.15 – 14-45	**Using design thinking to address a chosen social, ecological, or digital challenge – Prototyping** **Slide**: Design Thinking We now enter the phase of prototyping. The goal is to develop a first version of a solution to the identified problem that can be tested. **Slide**: Prototyping Prototypes are first examples of an idea (product, service, …) from which all later forms are developed **Slide**: Examples The trainer shows examples for prototypes to show how different they can look like (e.g., click dummies, paper, videos, cardboard tinkering, comics,…) **Slide**: Exercise Prototyping (60 minutes) Participants are asked to develop a first version/prototype to solve the chosen challenge The participants can use different materials (see list on the right). They are given 1 hour. After that, they shall present their prototypes in the plenary and get feedback. **Important**: Participants are asked to think back to the previous sessions – what KSAOs do they have that they can use to address this challenge? What contacts would they need/use? **Slide*:*** Steps for developing your product/service The trainer highlights the following steps the participants should follow while developing their prototypes. This slide should be shown during the 60 minutes of prototyping. The groups should also address these points in their presentation of their prototype 1.38. What is the benefit of your product for your target group? 1.39. In what way does your product / service fit the needs of your target market 1.40. In what manner is your product / service new, innovative in comparison to other already existing products?	Different materials for building prototypes: Papers Pencils Lego Clay Glue/Tape Scissors SAP scenes PowerPoint …

	1.41. Is your business idea realistic / feasible? 1.42. Why does your product / service match your team´s means (skills, resources, network)?	
14.45 – 15.00	**Coffee break**	
15.00 – 16.00	**Presentation of the approaches developed for the selected challenges and discussion** Depending on the number of participants – each group/participant has between 5 to 10 minutes to present their prototype and explain it to the other participants. Other participants are asked to provide feedback on the prototype regarding the following evaluation criteria: 6. Value proposition 7. Target market fit 8. Innovativeness 9. Feasibility 10. Match to team's means ++ means 3 points, + 2 points, and ~ 1 point → for each category, points are counted and added to a total score. The team with the highest score wins. The different prototypes/solutions are discussed in the plenary regarding the question how they solve/address the chosen challenge.	Prototypes Cards with the signs ++, + , ~ for the evaluation
16.00 - 16.30	**Reflection on most important vision for own career** After the presentations, participants are asked to reflect on their own most important vision for their own career and life. They are asked to use their obtained knowledge from the previous day regarding their KSAOs, networking, and how they approached today's task of prototyping. Participants are asked to write down this most important vision accompanied by initial steps how to approach it.	Paper Pens
16.30 – 17.00	**Feedback and closing**. The trainer summarizes shortly the different steps and learnings of the workshop: - KSAOs - Networking	Slide

	- Social, digital, and ecological challenges - Prototyping - Future vision Participants are asked to give feedback on how they liked the workshop, whether their expectations from the first morning were met and whether they have missed something. At the end, participants are asked to fill out questionnaire 2 for scientific purposes and are thanked for their participation.	

Attachment 1

Knowledge, Skills, Abilities & Others (KSAOs)

What do you know?	What do you know?	Who are you?	Who are you?
Your prior knowledge and education		Tastes, values, and prefe-rences	
Knowledge from your studies and job		Passions	
Knowledge from your life		Hobbies	
Informal learning, hobbies		Interests	

Attachment 2

Exercise: Learning milestones and interview

Time: 40 min (20 + 20)

Step 1: Interview

1.43. What happened in this situation?

1.44. How did you act in this situation in order to solve the problem?

1.45. What was the result?

- What did you learn at this point?
- Which ability has been helpful in order to solve the situation?
- If you would encounter the same situation for a second time, would you change something to be more successful?
- Don’t ask questions that can only be answered with yes or no -> instead: Why, what, how!
- Summarize what you understood and ask if it was correct

Attachment 2

Optional Reflection Questions – Moderation Cards for Situation Narration

- What are your strengths? Why?
- How do you determine that this is a strength?
- What are you particularly good at (in terms of skills)?
- What knowledge can you use to solve problems?
- What are your weaknesses? Why?
- How do you determine that this is a weakness?
- Which values are particularly important to you in your life?

Step 2: Specify the means of your partner!

KSA´s	
Knowledge (declarative and procedural knowledge) *Examples:* *Knowledge about tax return, biological processes, ...*	
Skills *Examples:* *Driving a car, speak a foreign language, ...*	
Abilities (cannot be learned) *Examples:* *Organisational skills, analysis of situations, communication, ...*	

Attachment 3

Networking - Contacts

Who do you know?	Who do you know?
Your rolodex, LinkedIn, Plaxo, Facebook, …	
Classmates, alumni	
Serendipitous encounters	
The strangers in your life	