Introduction to Design Thinking

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blinc

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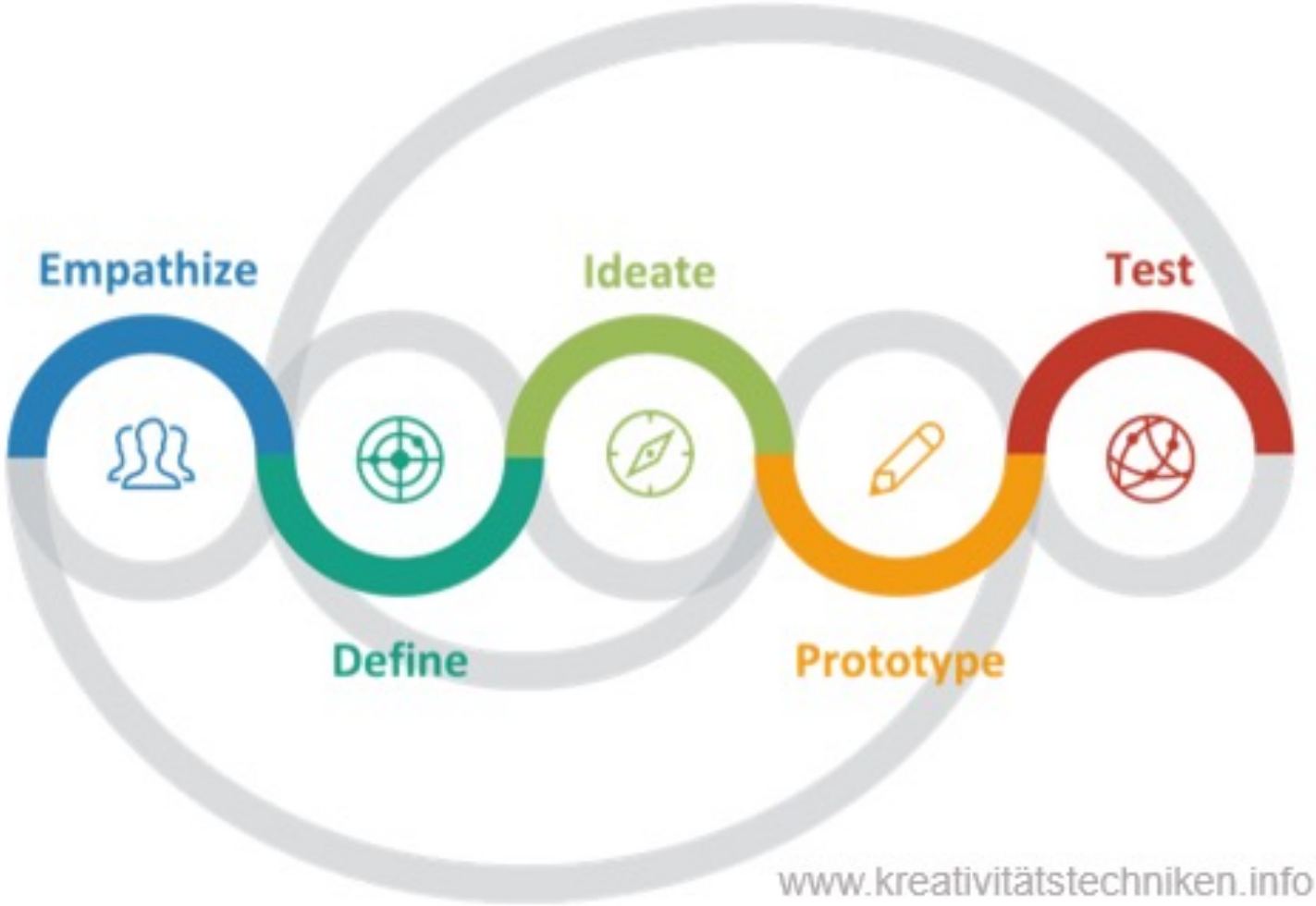
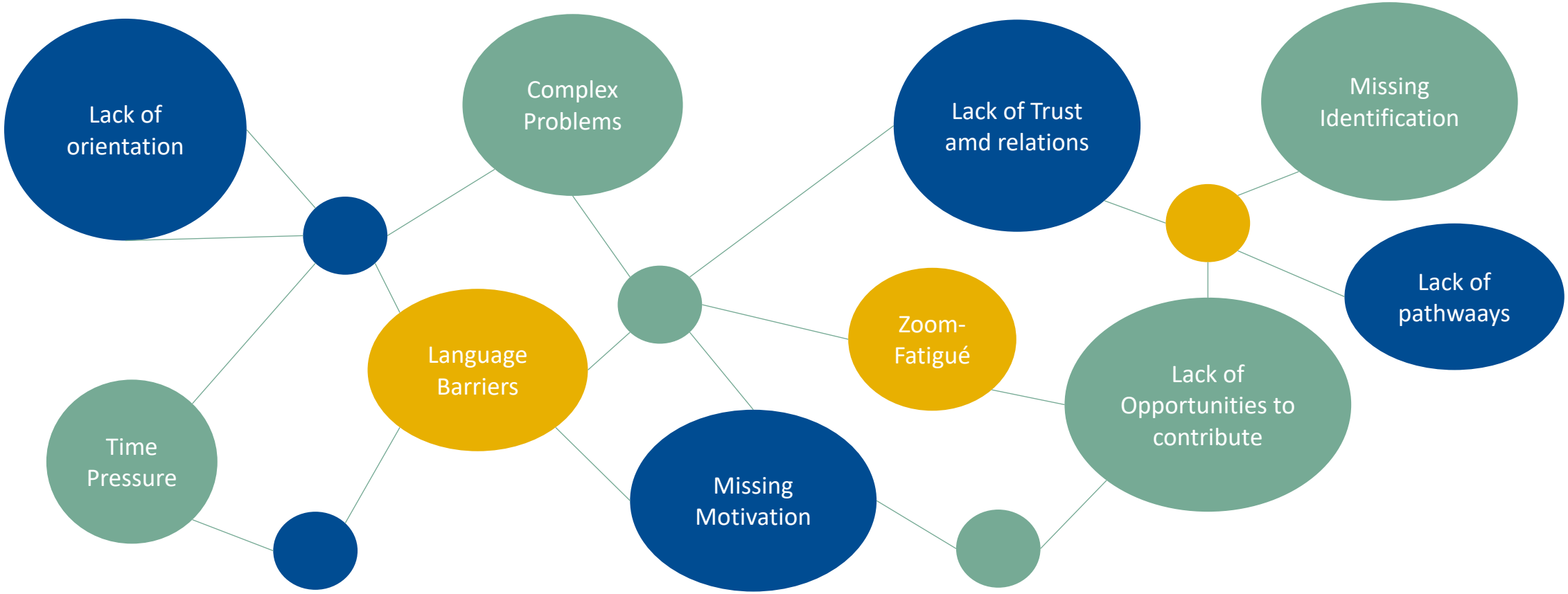
Design Thinking



Design Thinking is…

- A mindset.
- A holistic approach.
- An interdisciplinary approach.
- A human-centred (innovation) process.
- An experiental problem based learning approach.
- A toolbox to promote innovation and economic growth.
- A creativity-enhancing AND structured problem-solving process.
- A method oriented towards the work of designers, going beyond the aspect of aesthetics

CHALLENGES FOR INNOVATIVE ACTING IN (INTERNATIONAL, INTERDICIPLINARY TEAMS

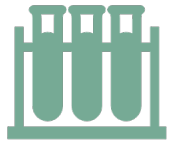


Quelle: Dulebohn & Hoch (2017)

AGILE SETTINGS FOR LEARNING & DEVELOPMENT IN DIFFERENT SOCIETAL AND EDUCATIONAL DOMAINS

- Think about innovation needs and education needs at the same time.
- Create learning spaces to be able to isolate complex problems and work on them in individual (short!) development steps.
- Strengthen the mindset through facilitation by
  - Focusing on **generating benefits**;
  - **Adjusting** results and re-prioritising;
  - **Quickly** discarding ideas when more promising paths are visible;
  - **Continuously improving** one's own approach:
  - Believe in the **self-regulation in the team**

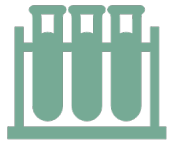
AGILE APPROACH: DESIGN THINKING (METHODS)



UNDERSTANDING EMPATHY SYNTHESIS IDEATION PROTOTYPING TESTING

Quelle: Hasso Plattner Institut (2021)

AGILE APPROACH:
DESIGN THINKING (METHODS & TOOLS)



UNDERSTANDING EMPATHY SYNTHESIS IDEATION PROTOTYPING TESTING

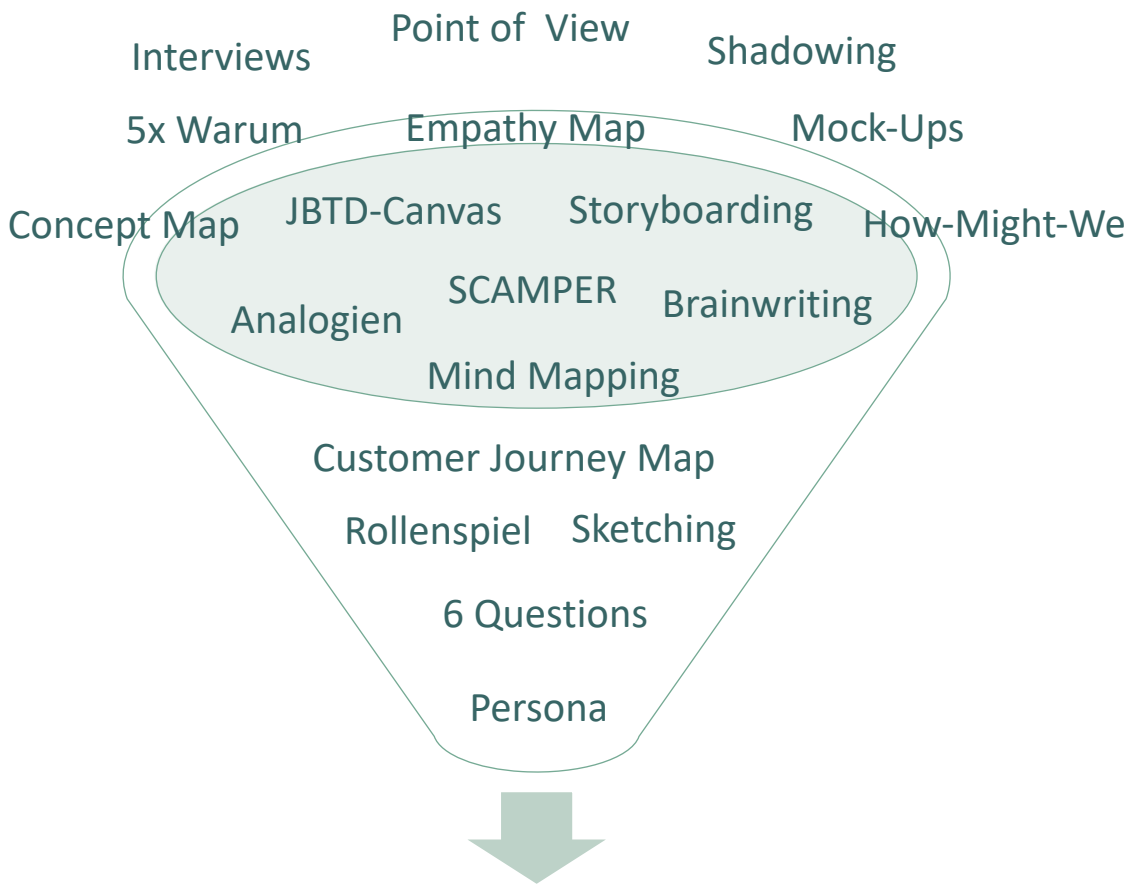
Mind Mapping Interviews Persona Concept Map Analogien Customer Journey Maps NABC Pitch

5x Warum 6 W-Fragen Empathy Map Point of View How-Might-We Mock-Ups Lego Serious Play®

Storyboarding Shadowing JBTD-Canvas SCAMPER Brainwriting Rollenspiel Sketching

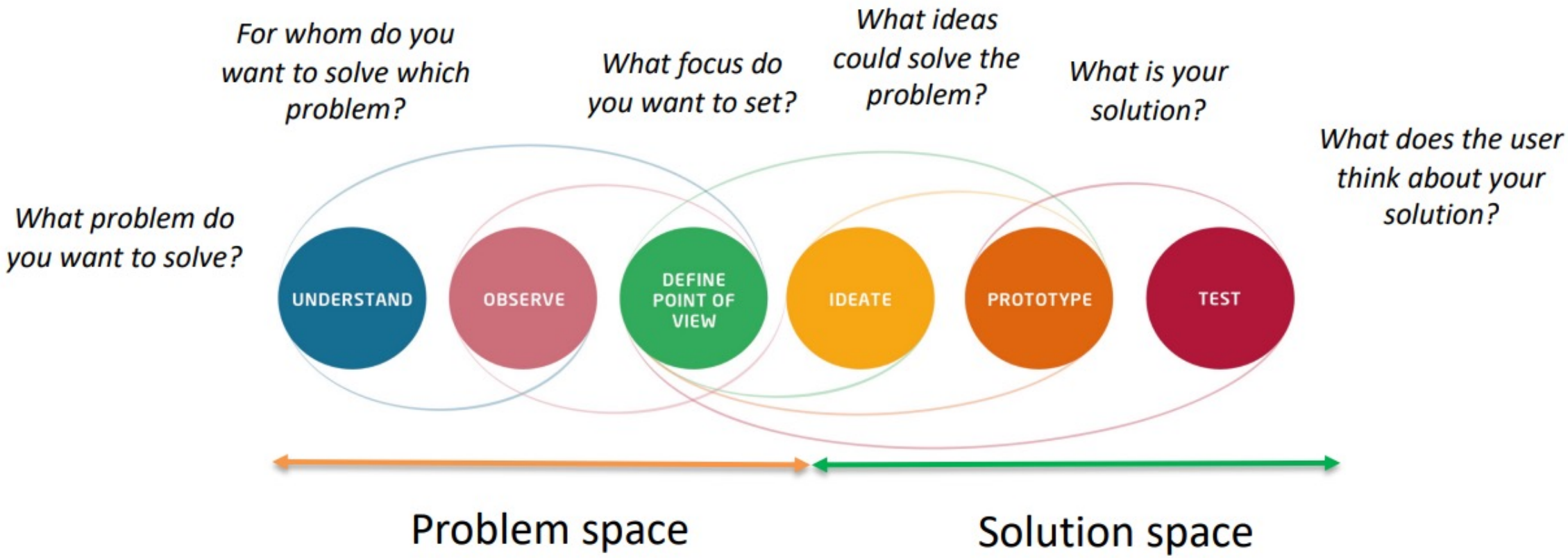
Quelle: Uebernickel et al. (2015))

AGILE APPROACH:
DESIGN THINKING (METHODS)



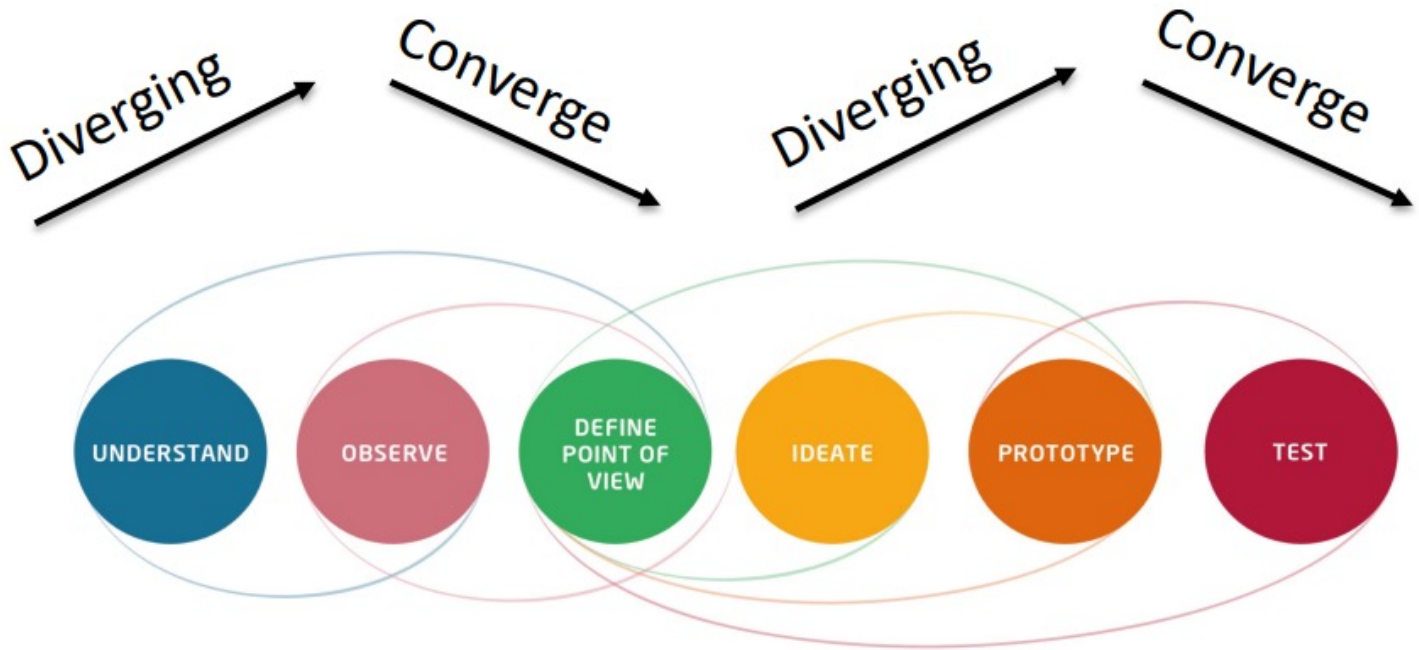
Which methods can we use in which phase of the Innovation process?

Design Thinking as Iterative Process



(Brenner & Uebernickel, 2016; Brown, 2008; Kelly & Kelly, 2013; Lockwood, 2010; Meinel & Leifer, 2011; Liedka, 2011; Thompson & Schontal, 2020; Nicolai, 2022

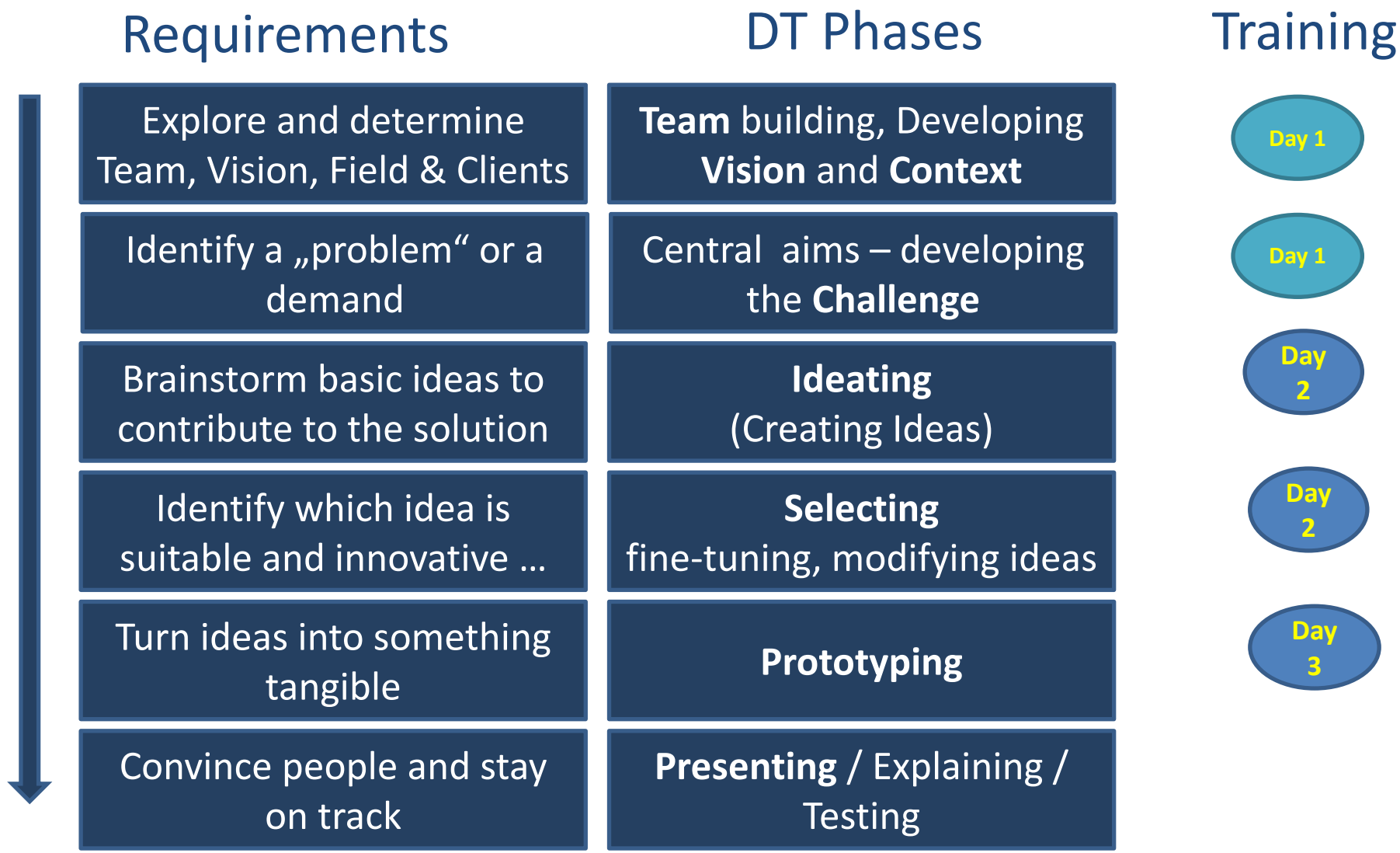
Design Thinking – the Process Phases



Divergent thinking: Broad search for many different and new alternatives. Alternatives can be ideas, information, problem formulations, action steps, etc.

Convergent thinking: Focused, positive and affirmative evaluation of alternatives.

How do we apply it in aCPD?



Workgroups
Design Thinking Approach
Part 1 – Understanding the Challenge

The setting…

- **Team Session**
  you are an international/interdisciplinary group of educational professionals
  - **Start Team Building**
    - ***Present yourselves,***
    - ***List specialities and strengths***

    …Afterwards…

  - **Define a Challenge to invent Open learning**
    - ***Discuss on a context (the intervention area)***
      - **Sustainability (Green deal), Inclusion, Digitalisation**
    - ***5-6 Ws (what, who, why, when, where, how?)***

WG1: Step 1 – The Challenge

Just discussed,
Not presented

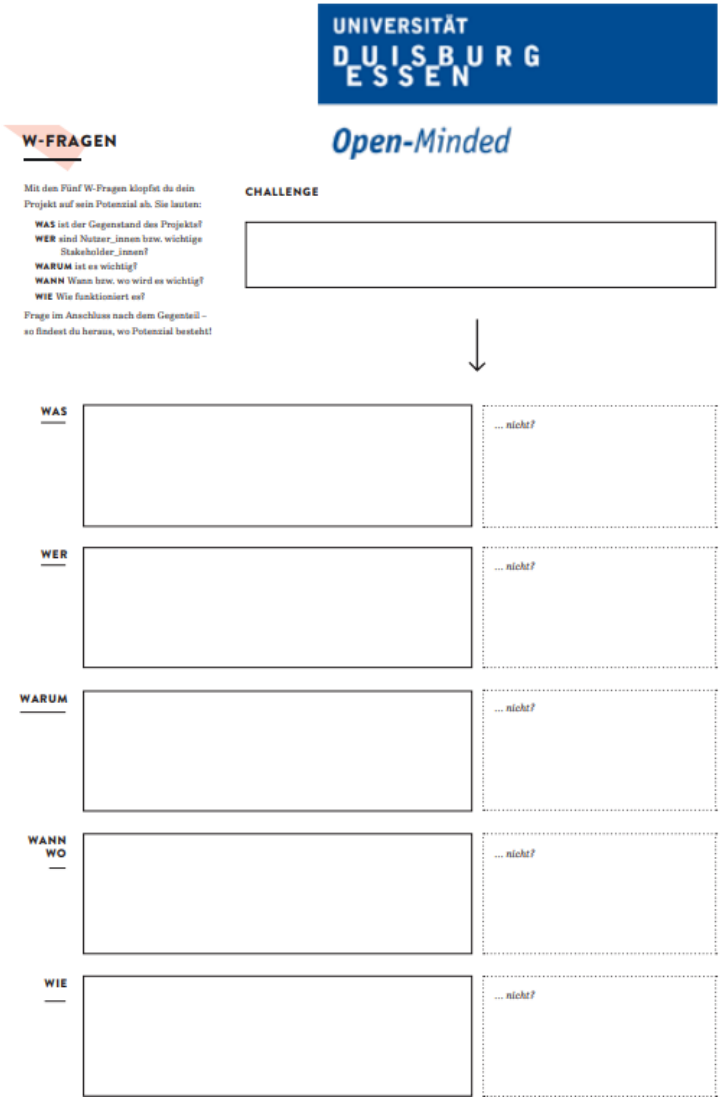
UNDERSTANDING - 6 W-QUESTIONS

- **BRIEF DESCRIPTION:**

Apply the following five W-questions to the challenge and try to gather as much information as possible about the questions.

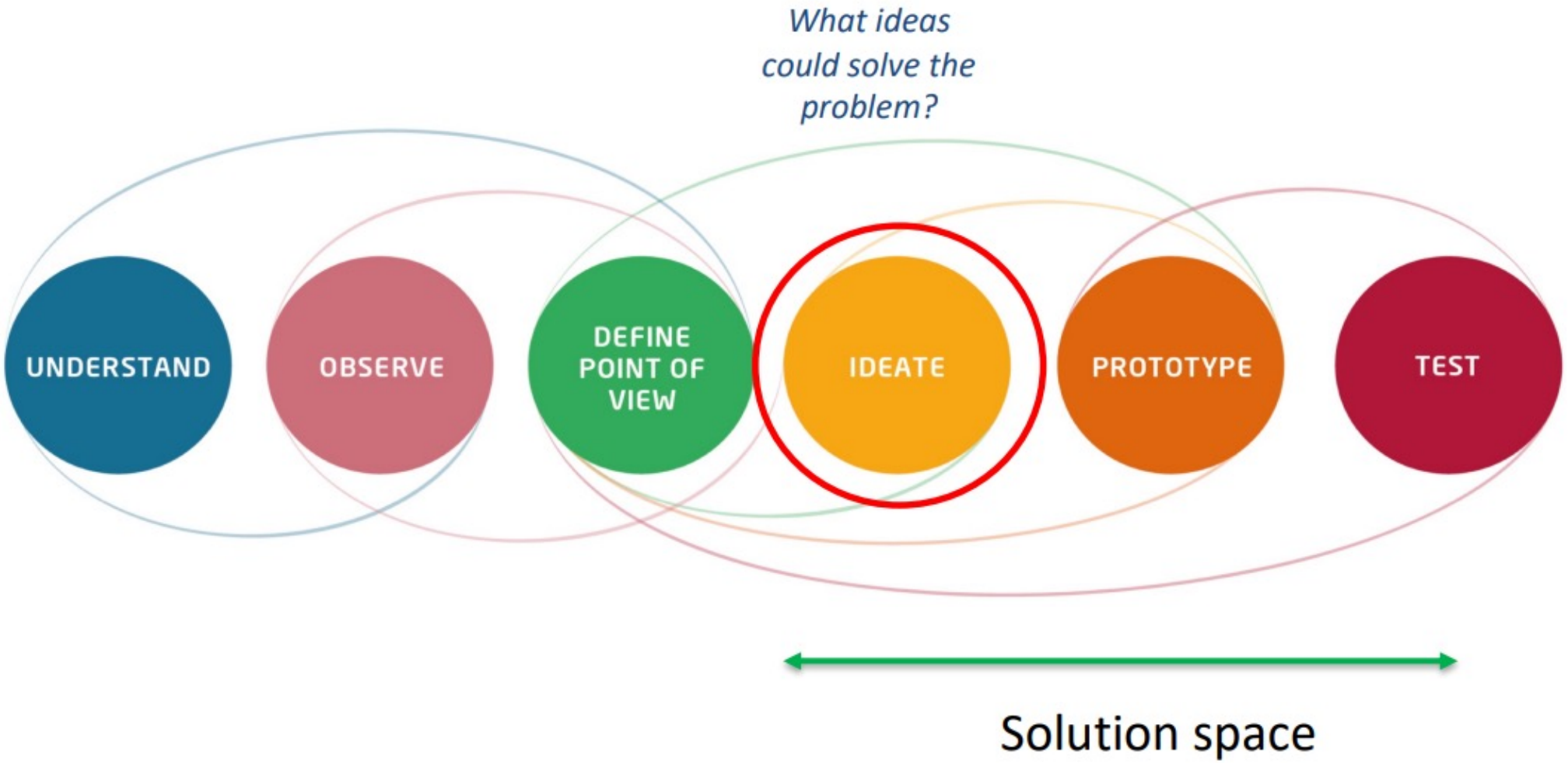
- **Who**: Which people are involved? Who is affected and how?
- **What**: What do you know about the problem? What do you not know but would like to know?
- **When**: When did the problem start?
- **Where**: Where does the problem take place? Where has this problem been successfully solved before? Have there been similar situations?
- **Why**: Why is the problem important? Why does it occur?
- **How**: How could the problem be an opportunity? What feelings do you have when you think about the problem?

20 min.



Workgroups
Design Thinking Approach
Part 2 – Ideation

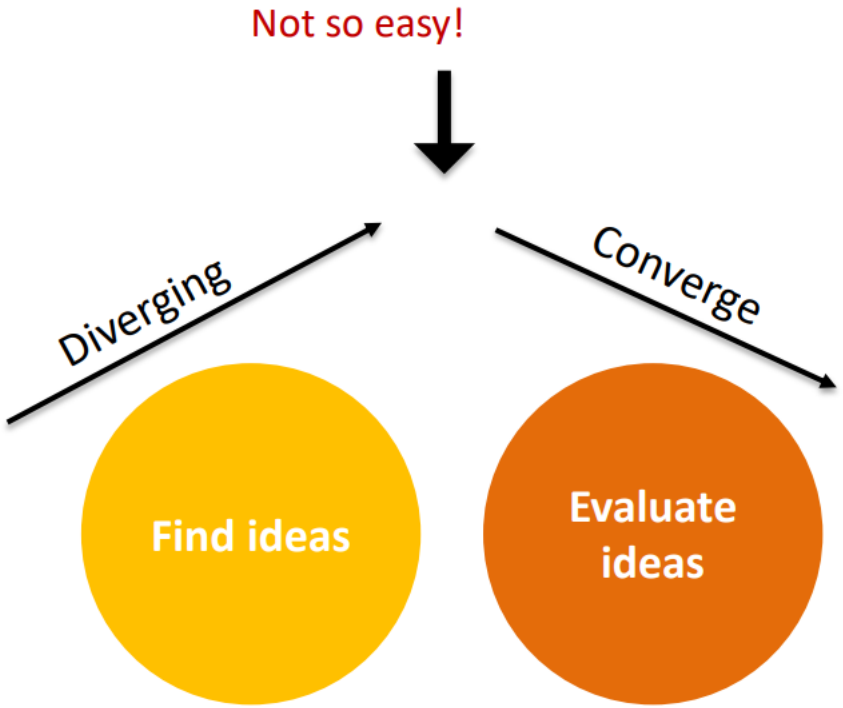
Ideation


What ideas could solve the problem?
UNDERSTAND
OBSERVE
DEFINE POINT OF VIEW
IDEATE
PROTOTYPE
TEST
Solution space

Step 3: Idea Generation

~~*Yes, but ... !*~~

Yes, and ... !



Which **tools** do you know
For Ideation

Tools 2: Brainwriting as ideation tool

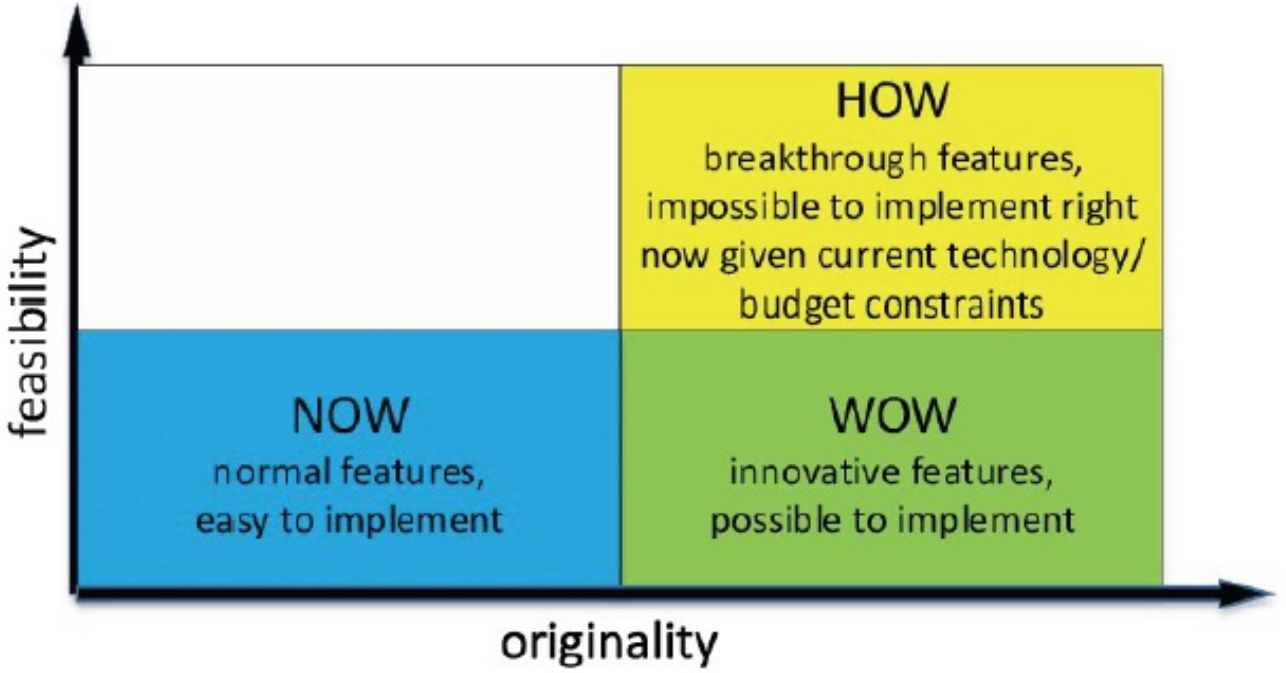
-> Please collect as many ideas as possible and discuss them!

1. Take 15 minutes and note as many ideas as possible in max 5 words (big) on a sticky note
2. Put the sticky notes on a flipchart, present them and cluster them.

Workgroups
Design Thinking Approach
Part 3 – Valuing Ideas

COCD Box

IDEA SELECTION - HOW-NOW-WOW



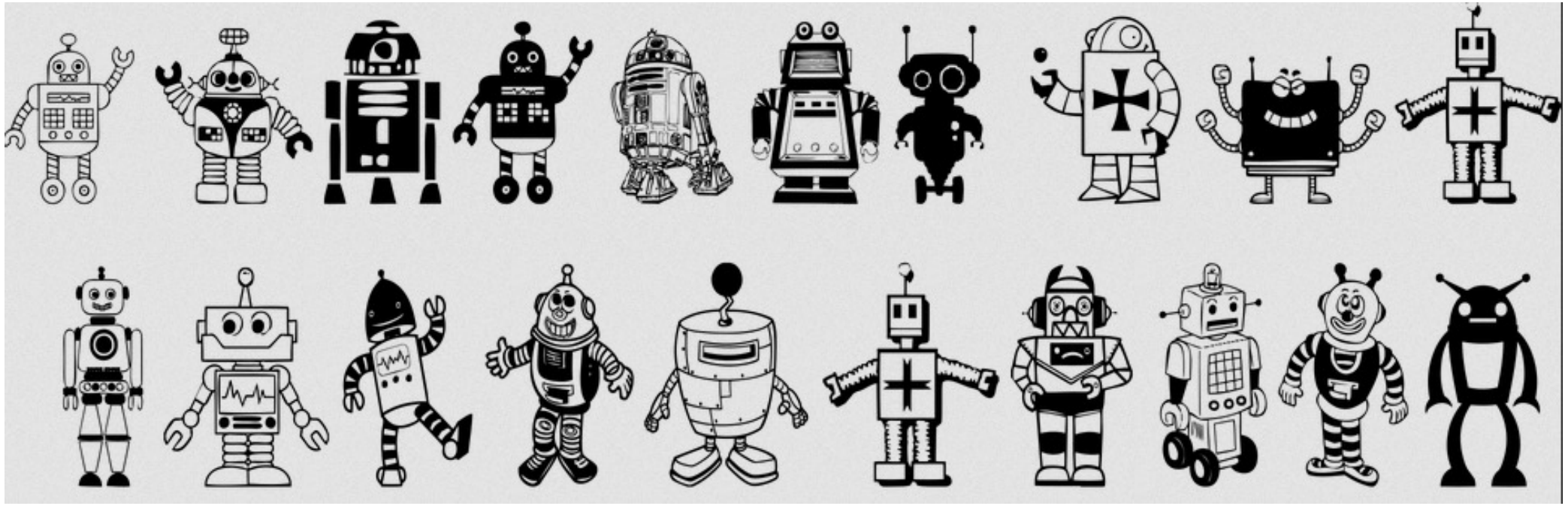
15 min

Rating Matrix

Criterion	Idea 1	Idea 2	Idea 3	Idea 4	Idea 5	Idea 6
Digitalisation Potential	0					
Innovation	0					
Value for clients	0					
Feasibility (realisation)	0					
Viability (economical impact) for the company	0					
your critierion						
	Each tandem can give up to (coloured dots) can give up to 3 points (from 1-3)					
	for each criterion (poor-fair-good)					

15 min

Workgroups
Design Thinking Approach
Part 4 – Prototyping



Prototyping

The fifth phase of the process is a very important one , but also one of the funniest. In prototyping, the thoughts and ideas previously developed are translated into a tangible product. A wide variety of materials can be used for this. Examples of analog models include paper, modeling clay, and building blocks. Digital tools can be used just as well, for example to display an app or to realize an object with the aid of a 3D printer – there are no limits to creativity! The aim is to create a prototype that can be used to obtain feedback

Paper Prototyping

- Simple prototypes made of paper
- represent the essential characteristics of a product or service
- in a simplified manner (nit the full range of functions
- basic understanding and the interaction with the object

Digital Prototyping

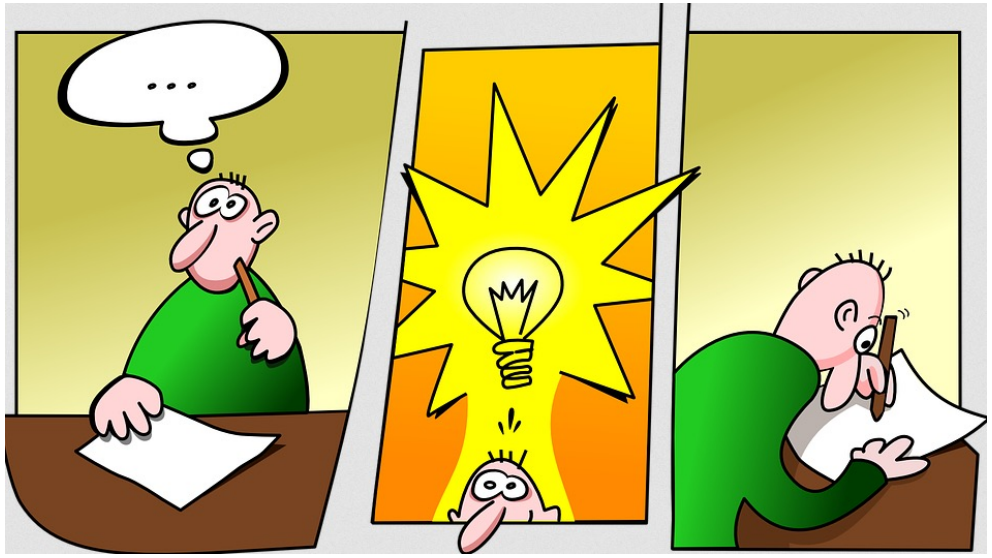
- Mock- ups realistic simulations
- serve as simulations of user interfaces of an applicable program, such as apps .
- This type of prototype enables the team to test the planned solutions in advance without fully developing them.
- Tools that can be used for this are Programs like Adobe Photoshop, Figma, Canva or similar.

Role Play

- One or more (ideally) uninvolved persons simulate a situation with the developed idea.
- Uninvolved people should have a realistic user experience with the prototype.
- They can/should provide the DT team with a gain in knowledge.
- The degree of specifications and improvisation for the scenery can be determined individually.

Story Boarding

- Visualizes an idea through
- a sequence of photos, sketches or collages
- shows the user experience with the prototype.
- helps users to understand the context and
- Simulates processes



Project Partners

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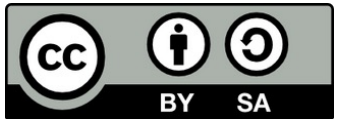

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