Design Thinking

[dɪˈzaɪn ˈθɪŋkɪŋ]

What is Design Thinking?

Strictly focusing on *customers' needs*, Design Thinking provides a systematic *approach to innovation*.

It helps develop solutions to *complex challenges*. Design Thinking is not only about *thinking* but also about *building* something.

Design Thinking consists of ❶ a structured *process*, ❷ a multidisciplinary *team* and ❸ a *place* encouraging creativity.

Customer centricity starts with building empathy - for example by interviewing the target users.

Areas of Application

Design Thinking is applied to *wicked problems*, which are characterized by …

- having *no single* definitive *solution*,
- involving a high degree of *uncertainty*,
- requiring *compromises* between different priorities,
- having no *endpoint* to solving the problem.

Typically these problems require innovations in *products, services* or *concepts*.

Typical Wicked Problems

- Biodiversity Loss
- Climate Change
- Conflict Resolution
- Education Reform
- Global Pandemics
- Health Care Reform
- Poverty
- Sustainable Development
- Urbanisation and Infrastructure
- … and many more.

Advantages

Contemporary *challenges are too complex* to be mastered by one lone inventor, one department, or even just one company.

The collaborative approach of Design Thinking - based on a cooperative team - addresses this situation. It integrates *diverse competencies* and opinions.

Design Thinking supports the development of social and *creative skills* in the team. This systematically generates *new ideas*.


Be open to different solutions
No "but" - this is not the time for criticism
Develop specific solutions
One person speaks - and everyone else listens
Redesign
In a world in which fast food is rarely
an option for healthy nutrition

The Design Thinking Challenge

Wicked problems are formulated as *challenges*. They define a (specific) task for which a solution needs to be developed.

The challenge can be specific or more open, focusing on uncovering unknown needs and opportunities. It can cover *any topic*.

Only when the challenge has been defined the team can enter the Design Thinking process.

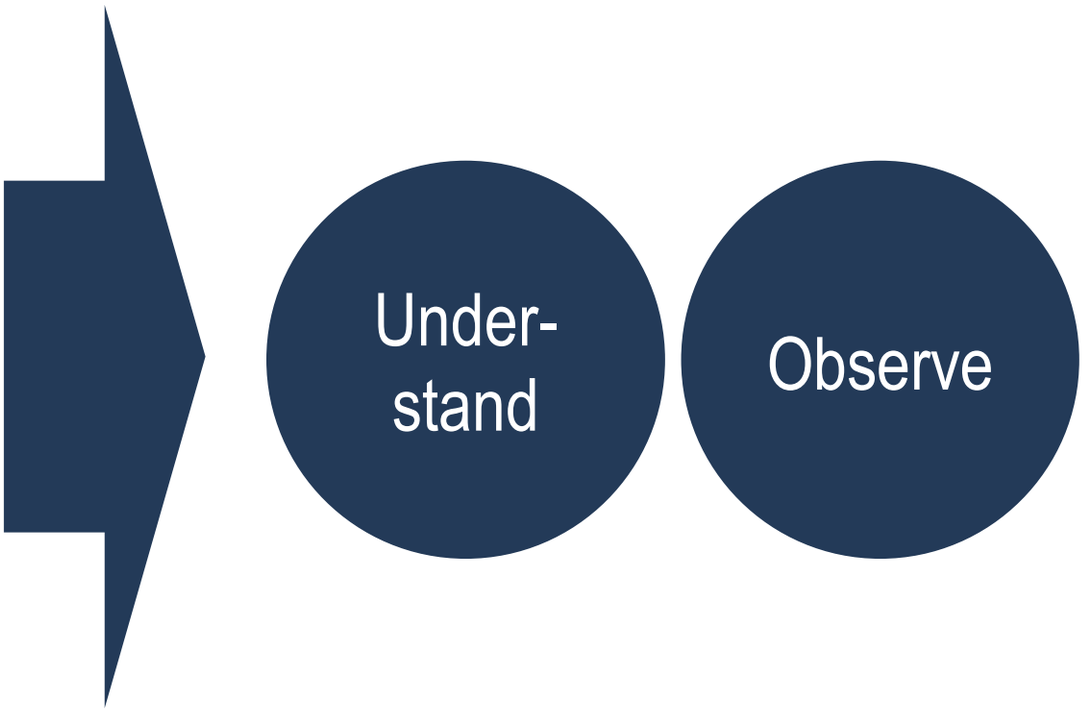
A Typical Design Thinking Challenge

„Redesign the way food is handled in a society in which about a third of the food is thrown away.“

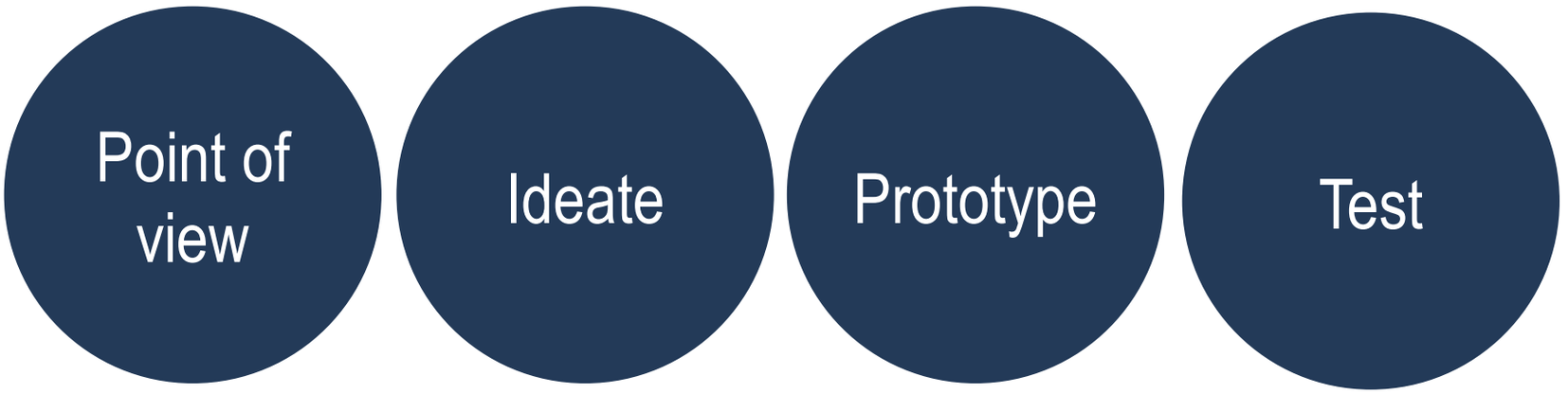
The Design Thinking Process

Design Thinking follows a *systematic process*. It is divided into six phases:
I: Understanding the problem,
II: Building empathy,

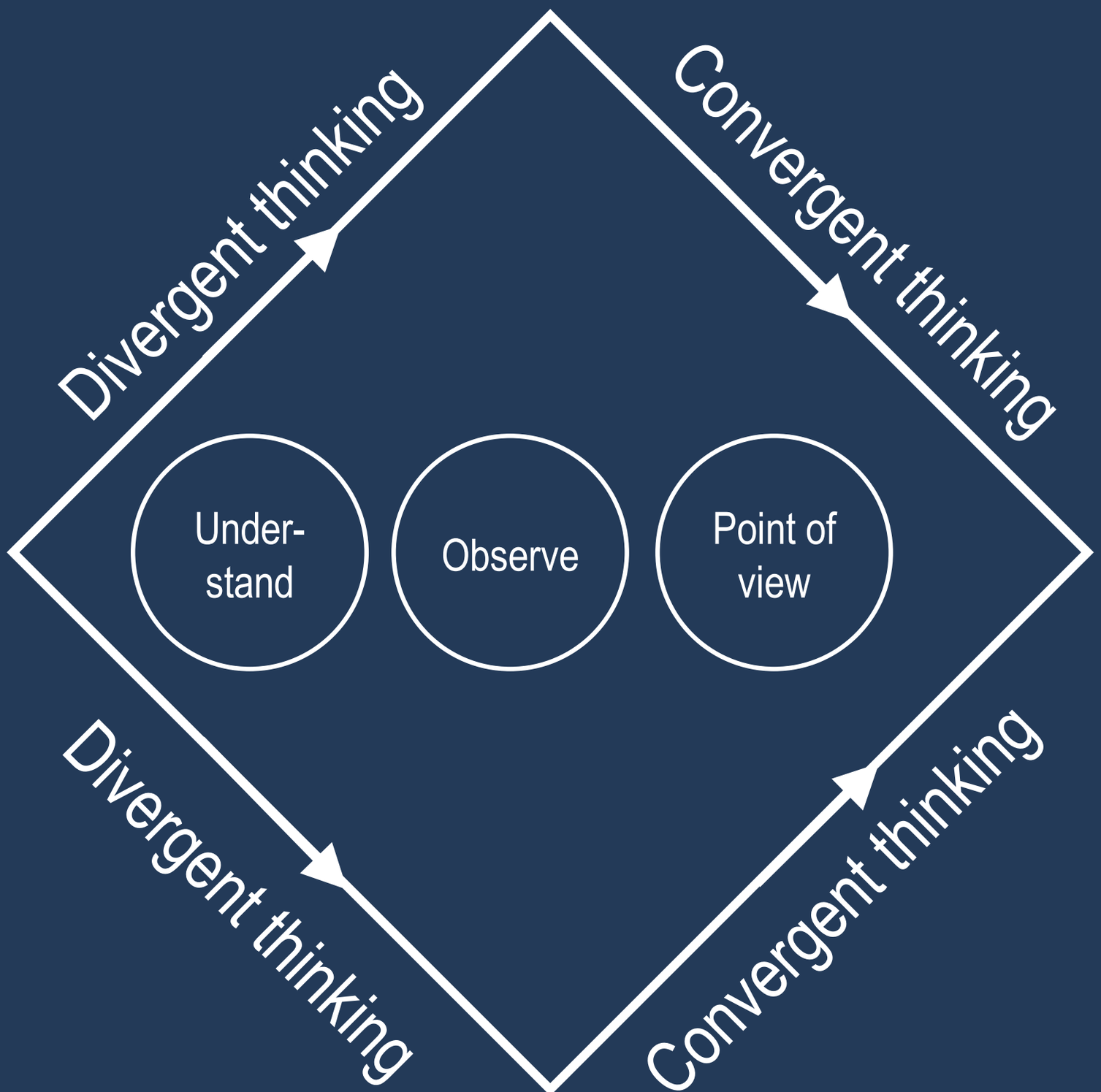
Challenge

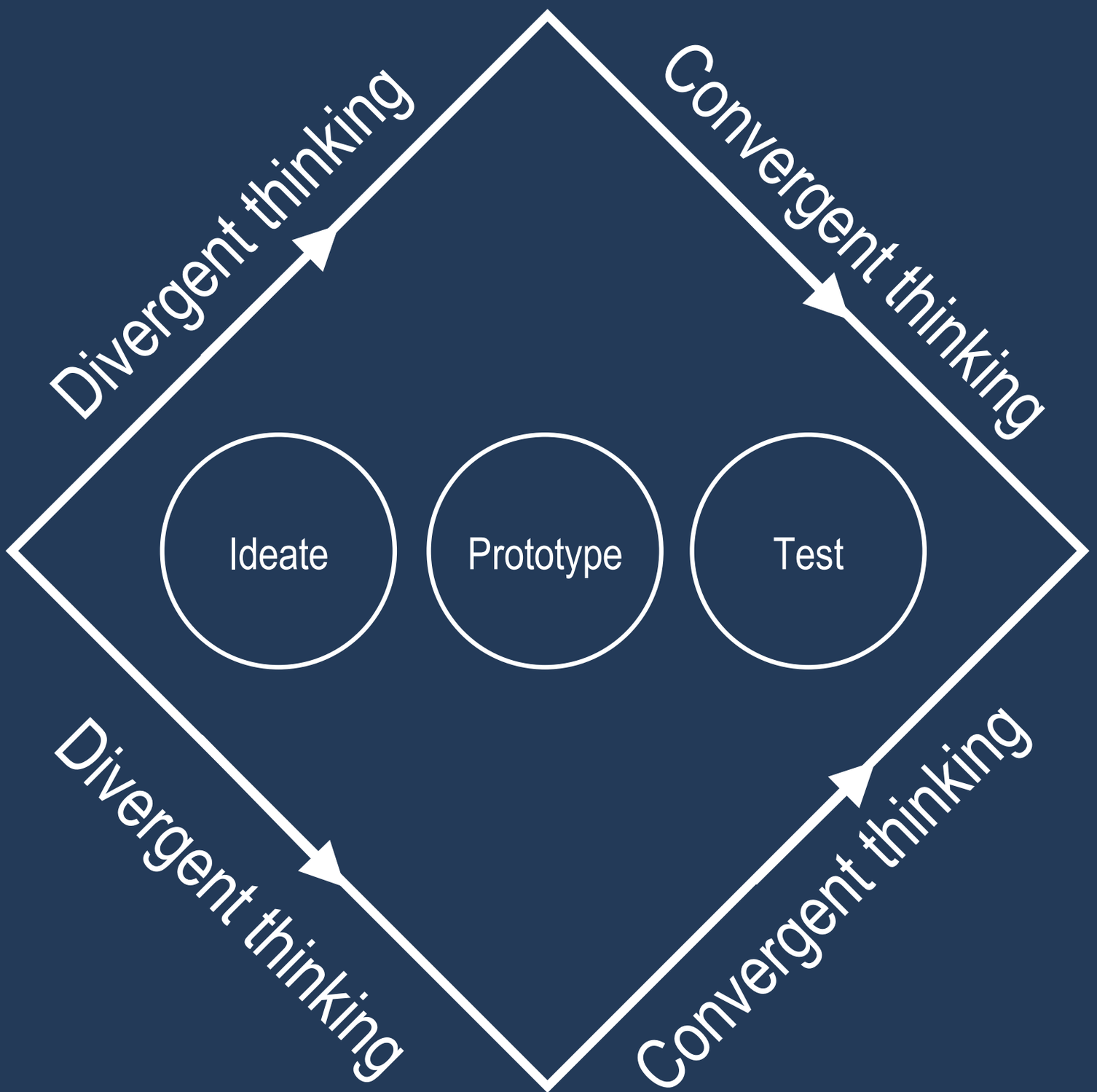


III: Capturing the user perspective,
IV: Collecting ideas,
V: Building prototypes, and
VI: Testing prototypes.



The Design Thinking Process

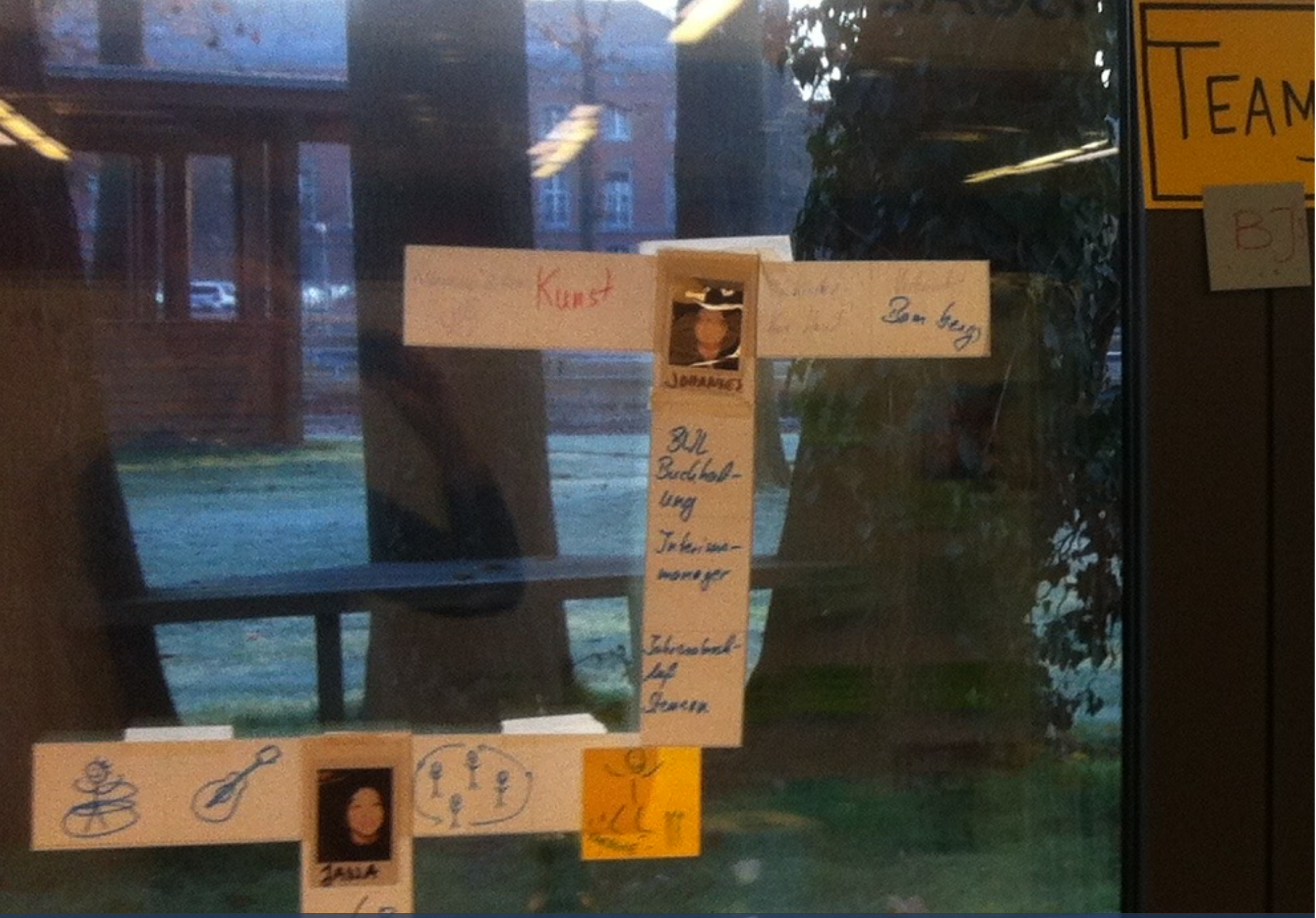



Divergent thinking
Convergent thinking
Ideate
Prototype
Test
Divergent thinking
Convergent thinking

The Design Thinking Team

Design Thinking is performed by *multi-disciplinary teams*: Team members need different talents and backgrounds to approach a challenge from different perspectives.

This requires *”T-shaped” personalities*: The vertical part of the letter “T” stands for specialist knowledge in a discipline, and the horizontal part symbolises a broad general knowledge and a wide range of interests.



Each team member is asked to fill in four areas of **specialist knowledge** and four areas of **broad expertise** like hobbies or interests.

The Design Thinking Environment

Design Thinking projects are run in a place that encourages *experimentation* and *visualisation*.

In Design Thinking, flexible room concepts with much space are preferred:

High tables, whiteboards, and many materials are available for prototypes' rapid creation.

Design Thinking requires a **suitable place** with equipment and material supporting the process.

Material required

Whiteboards for visualising ideas, brainstorming, and capturing insights from participants.

Moveable furniture like seating and tables arranged in a way that encourages collaboration and creativity.

Timer to keep activities on schedule and ensure that participants have a clear sense of time limits.

Markers and Sticky Notes to sketch, write, and organise thoughts during ideation.

Craft Supplies like scissors, glue, tape, string, and other supplies for prototyping and building physical models.

Prototyping Supplies such as paper, cardboard, modelling clay, pipe cleaners, fabric, or any other materials.


RULES of PLAY
RAPID PROTOTYPING TOOLS
for making + ideating
RESET
THIS SPACE
quick grip CLAMPS
C - CLAMPS
IRWIN
DUST MASKS
EARPLUGS
SAFETY GLASSES
BOLT CUTTERS
TAPE
GLUE
PAPER
STICKS
FOIL
LAUNDRY
CLEANING

Information on Design Thinking

Brown, T. (2008), *Design thinking*, Harvard Business Review 86, no. 6, p. 84.

Grots, A. & M. Pratschke (2009), *Design Thinking - Kreativität als Methode*, Marketing Review St. Gallen, no. 26, pp. 18-23.

Jacobsen, B.P. (2024*), Introduction to Design Thinking: Background, Elements, Tools*, NMC Education.

Kelly, T. and D.M. Kelley (2013), *Creative Confidence: Unleashing the Creative Potential Within Us All*, IDEO.

Meinel, C., Weinberg, U. & T, Krohn (2015), *Design Thinking Live*, Murmann Publishers.

https://cantwait.ideo.com/

https://dschool.stanford.edu

https://hpi.de/school-of-design-thinking

https://www.orghandbuch.de/OHB/DE/OrganisationshandbuchNEU/4_MethodenUndTechniken/Methoden_A_bis_Z/Design_Thinking/Design%20Thinking_node.html

https://en.wikipedia.org/wiki/Design_thinking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