



**Week 1 – Service
Exploration**

VIAD Service Design FS21

Framing Design

**Introduction to the concepts of wicked problems
and meaning frames**

Week 1 – 24.03.2021, 09:00-10:00

Lecturer: Stefano Vannotti

MAJA GÖPEL

UNSERE
WELT NEU
DENKEN

Eine
Einladung

SPIEGEL
Bestseller



ulstein 

Aim of the Project

Developing a service ecosystem that offers real and immediate benefits for the participants while generating data that is valuable for municipalities in fighting or managing the COVID crisis. The underlying data donation system should be able to process aggregated and individual data.

Transformation



Society

Innovation

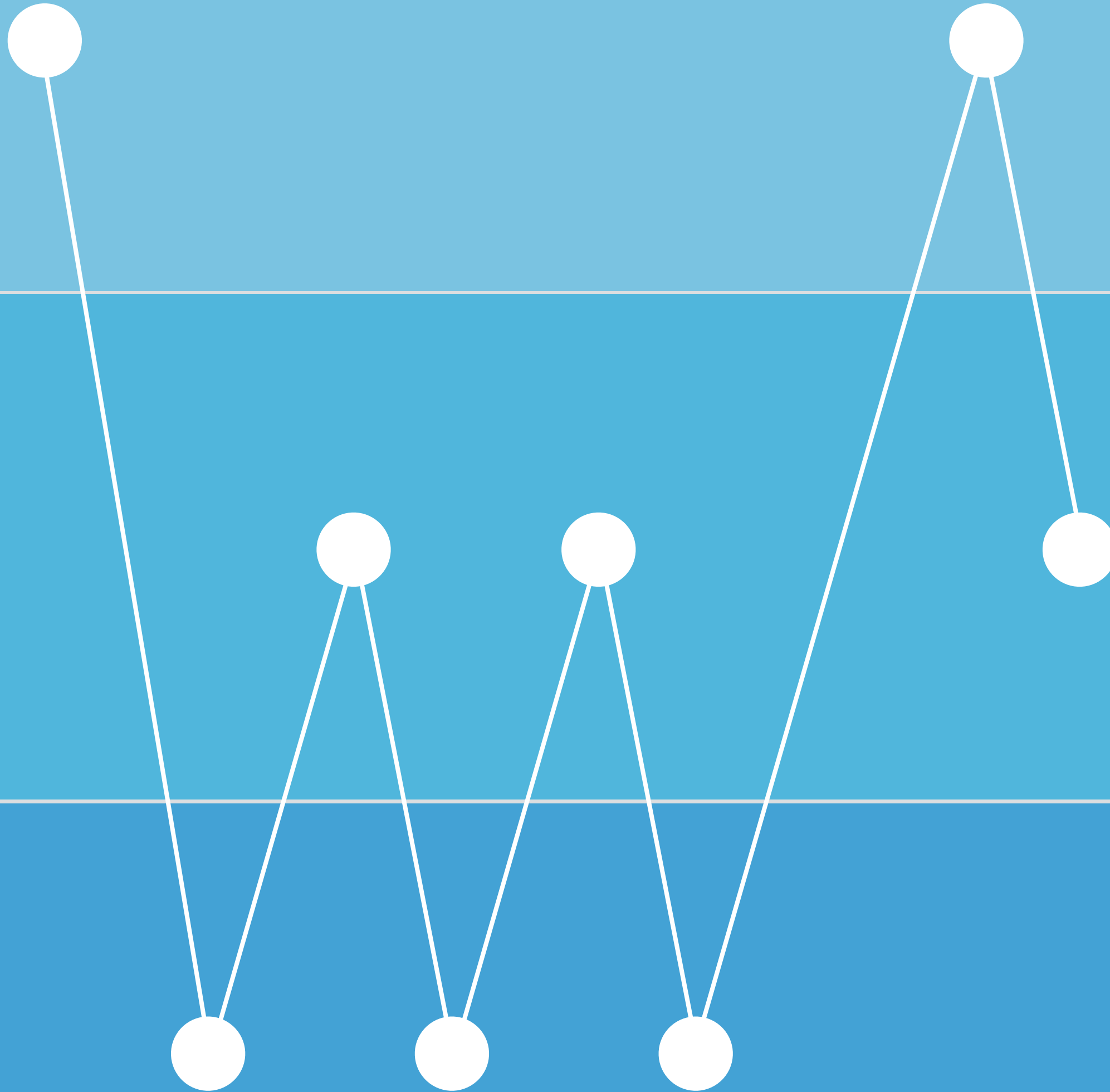


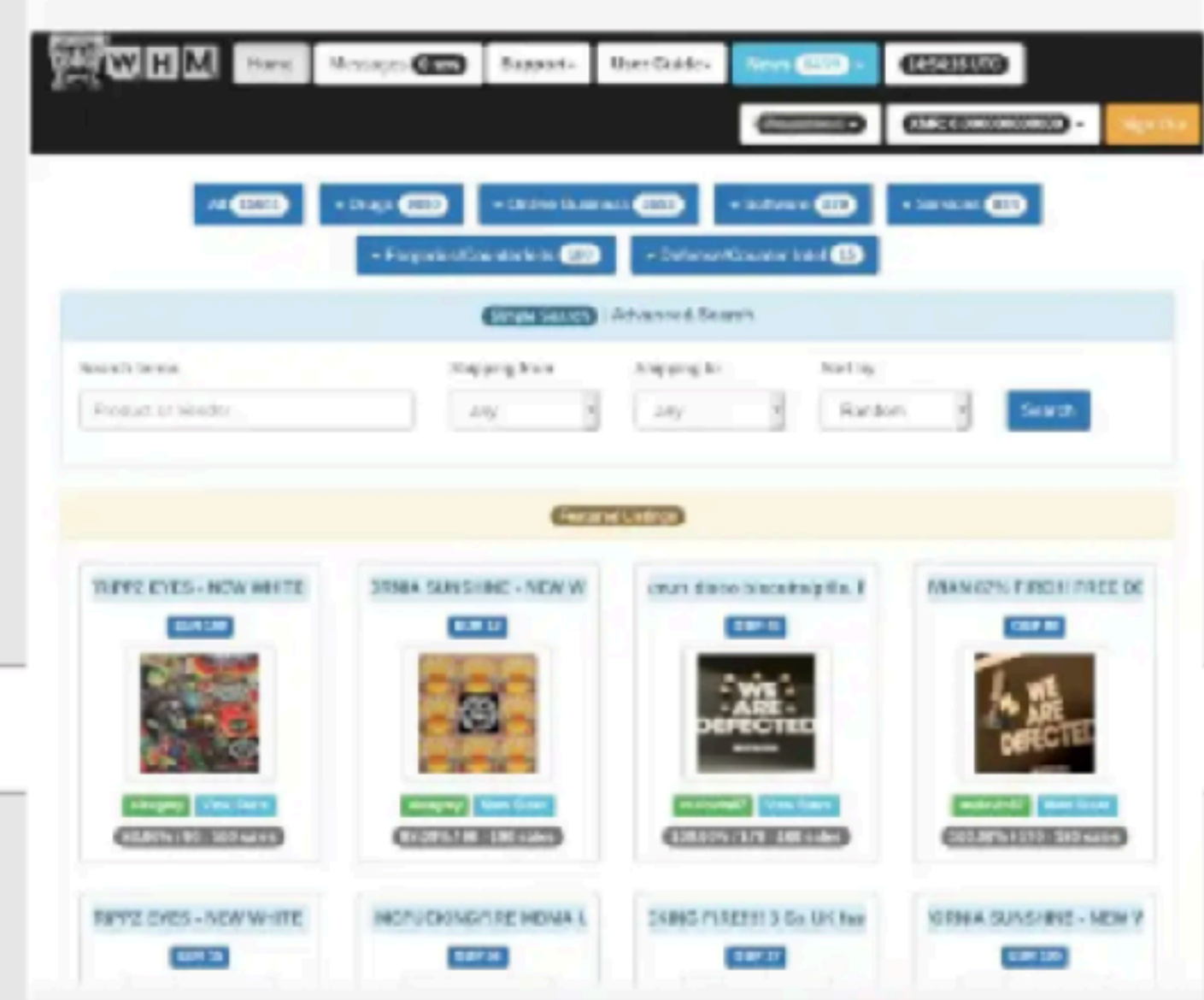
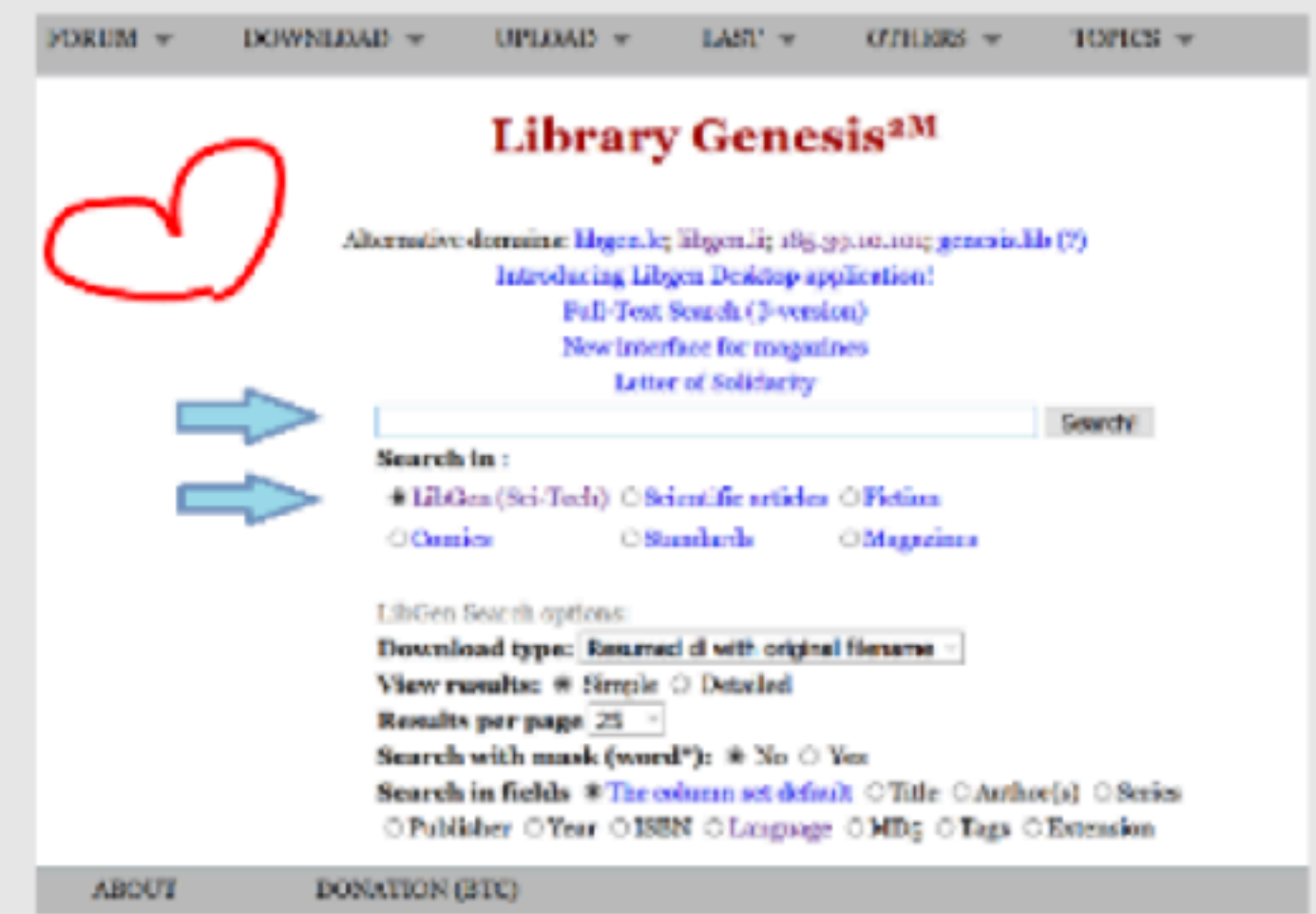
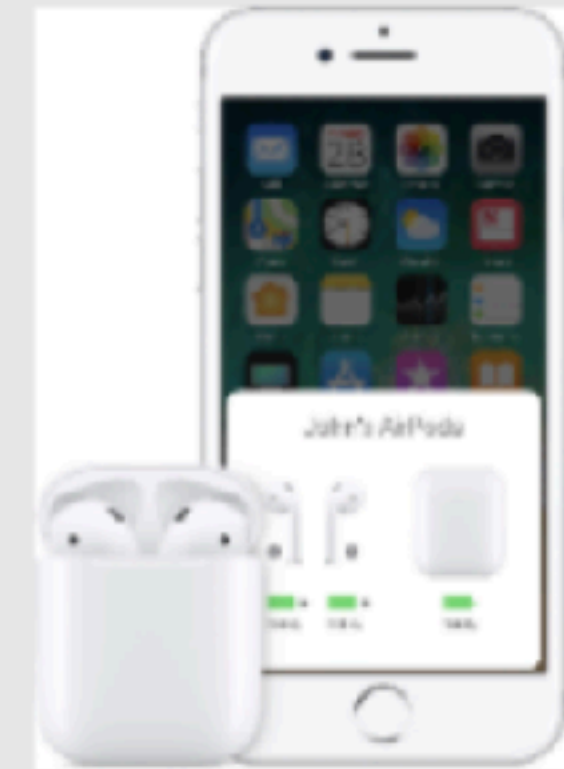
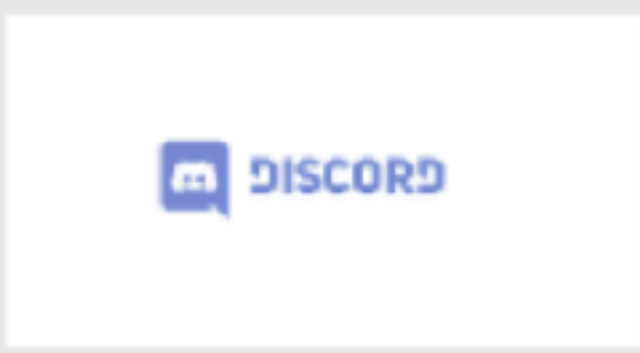
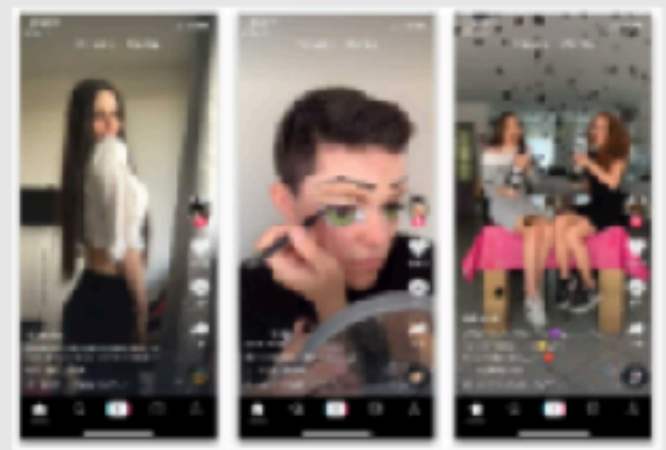
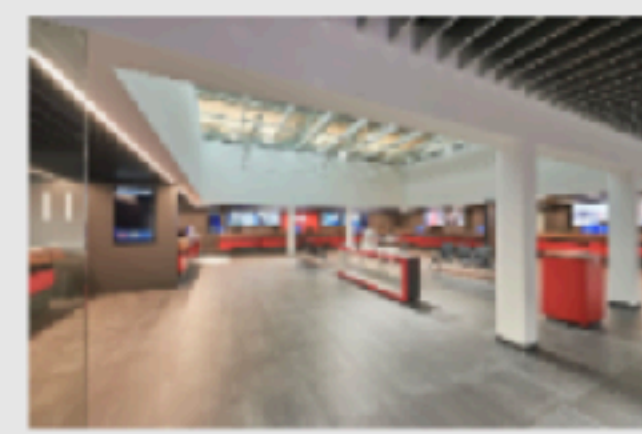
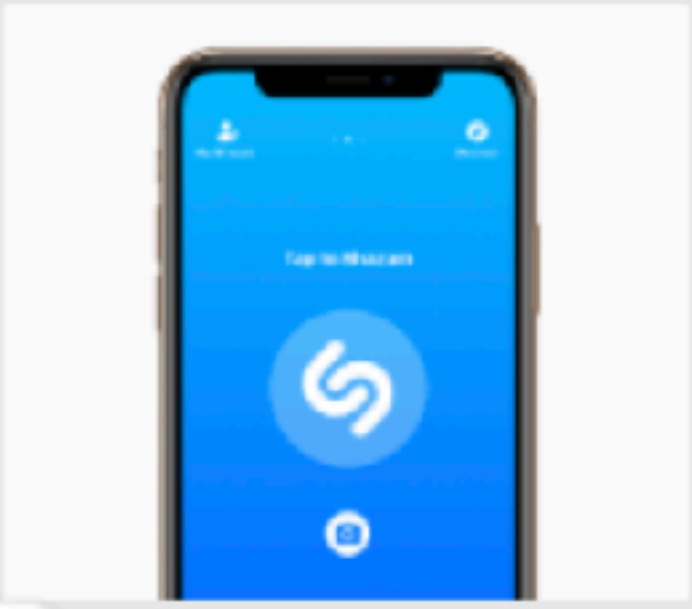
System

Improvements



Product





Discover

insight into the problem

Define

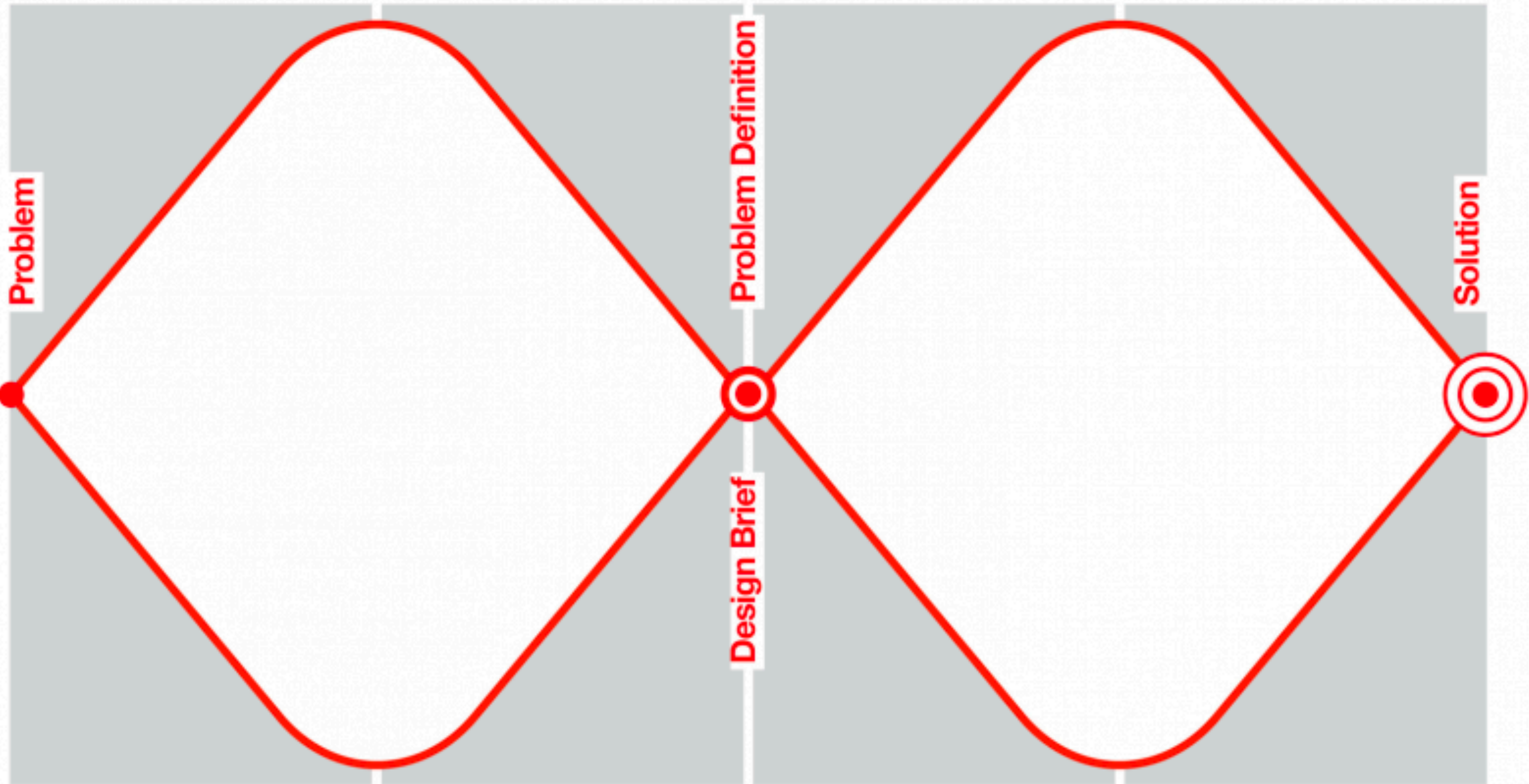
the area to focus upon

Develop

potential solutions

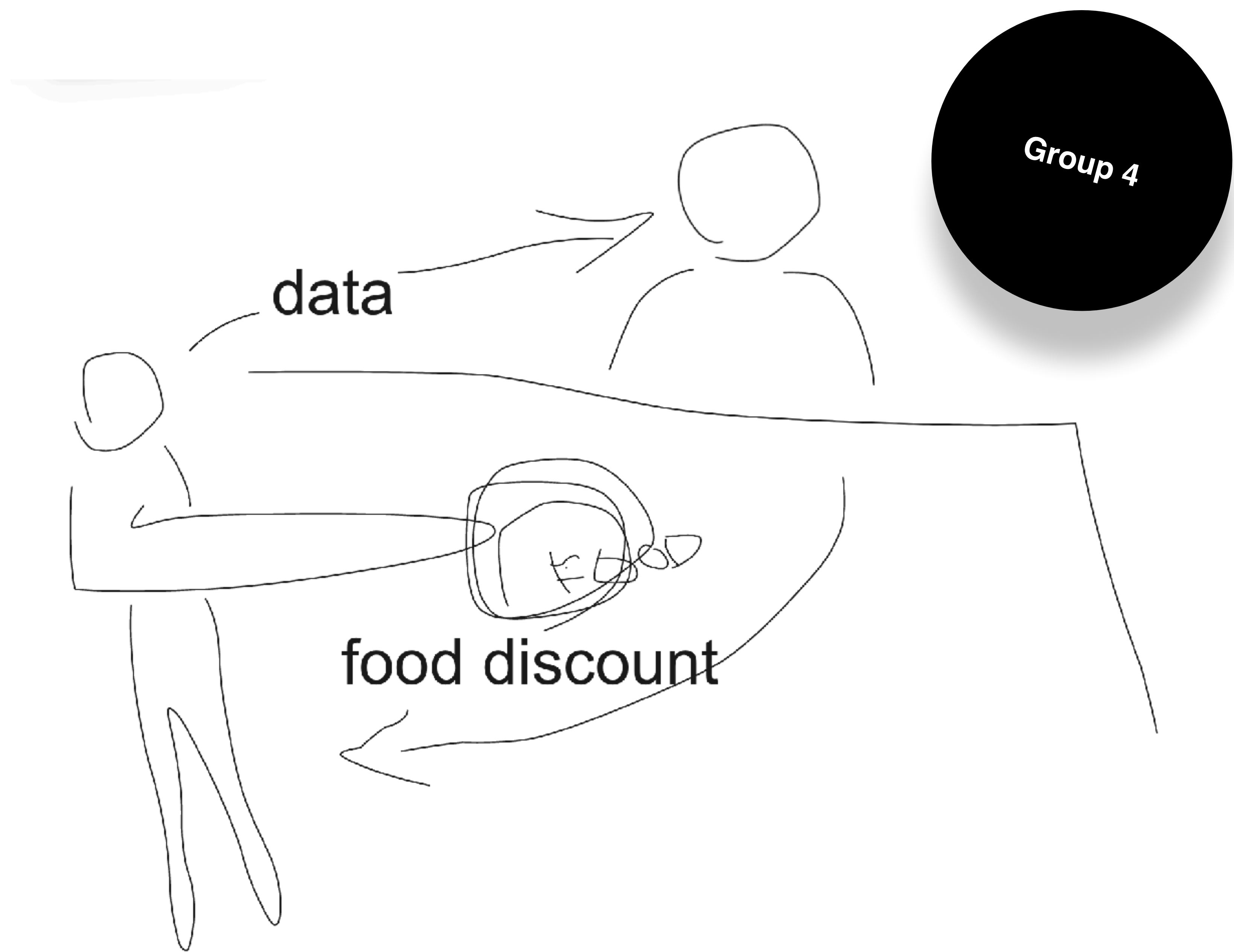
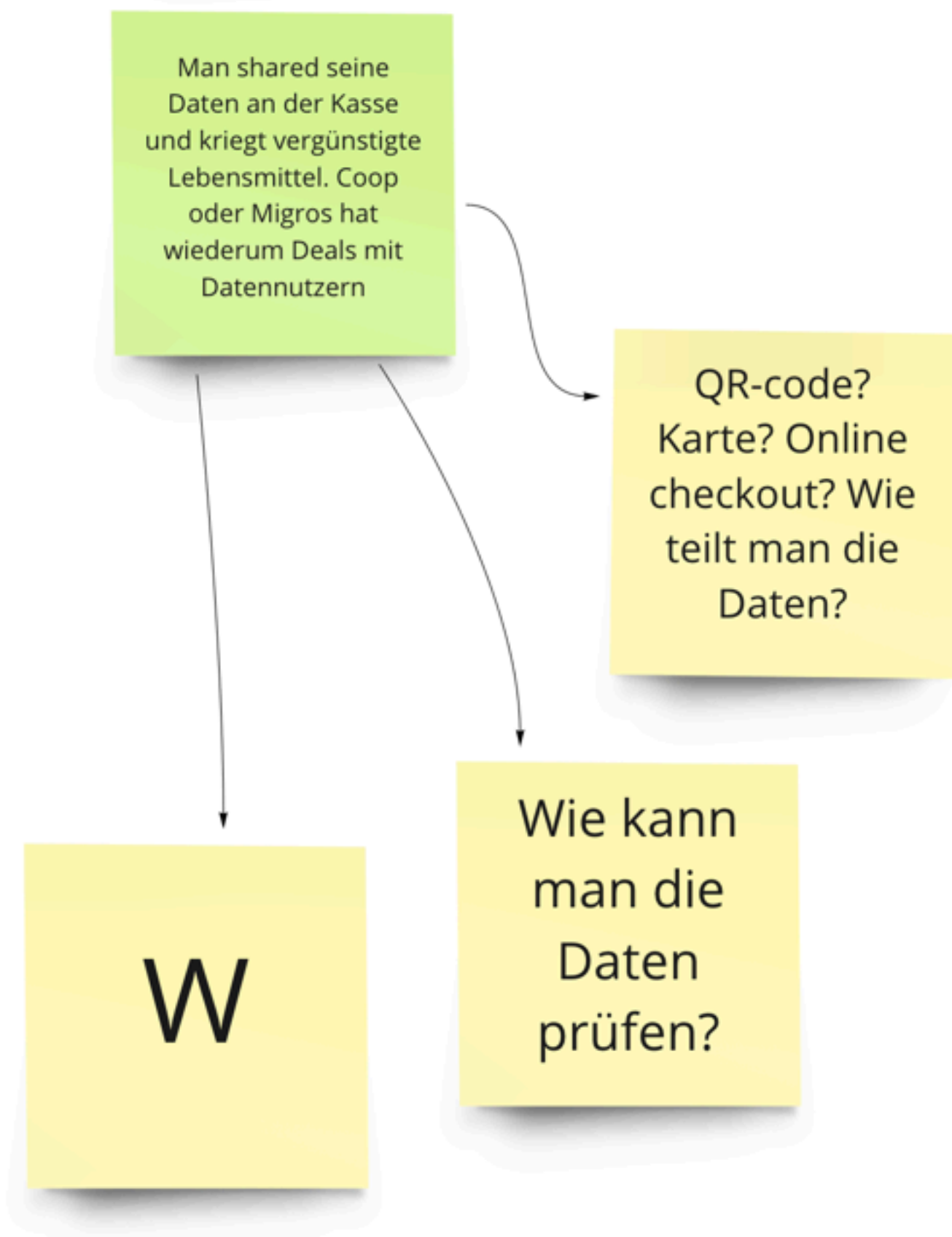
Deliver

solutions that work



If we fail to find diverse data sets, then the service will discriminate/not reach/put off certain groups and give a distorted picture of reality.

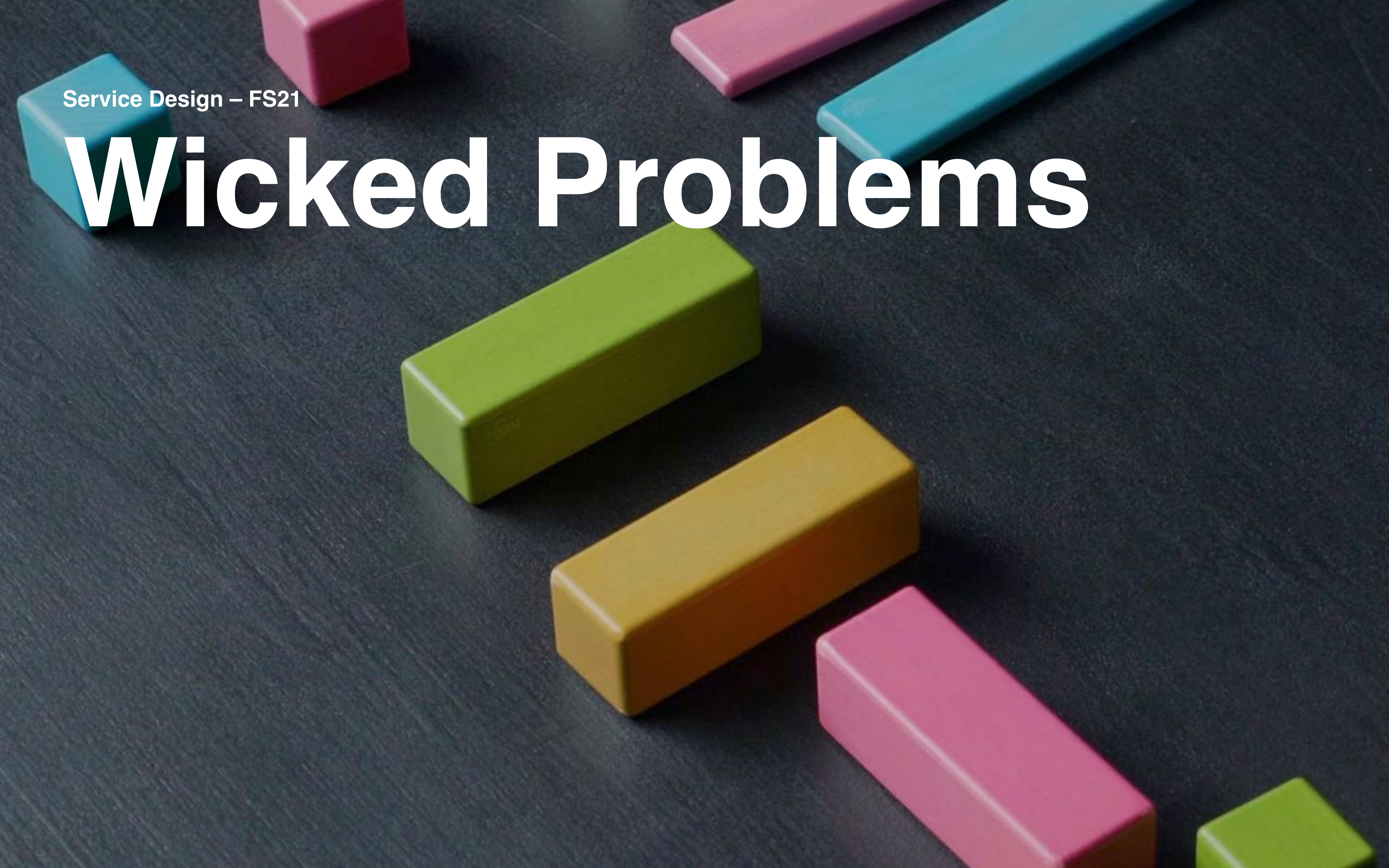
How can we create an incentive for all people and ensure that they can use and understand the service?



why use our tool instead of using the million others which are available? because by using our tool you help society and science

Service Design – FS21

Wicked Problems



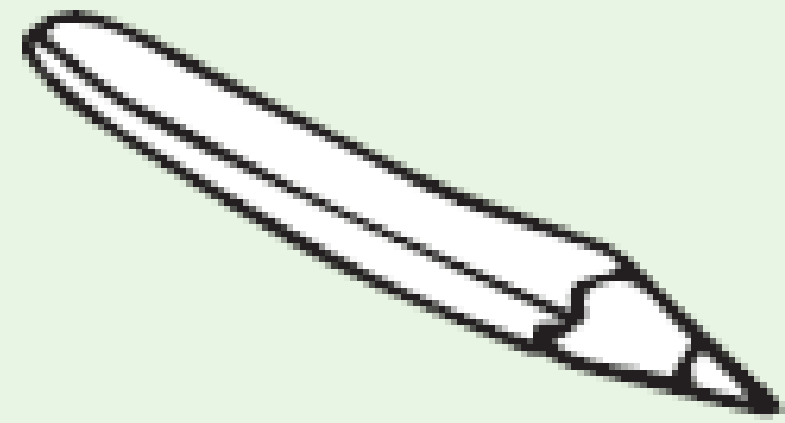
Most of the problems addressed by designers are wicked problems.

Wicked problems are a class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing.

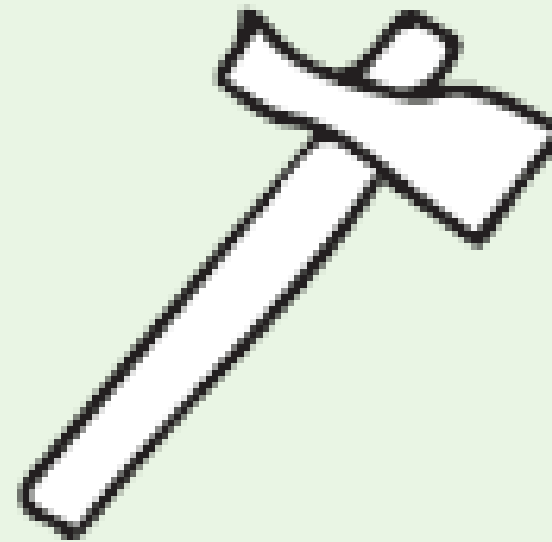
This is an amusing description of what confronts designers in every new situation.



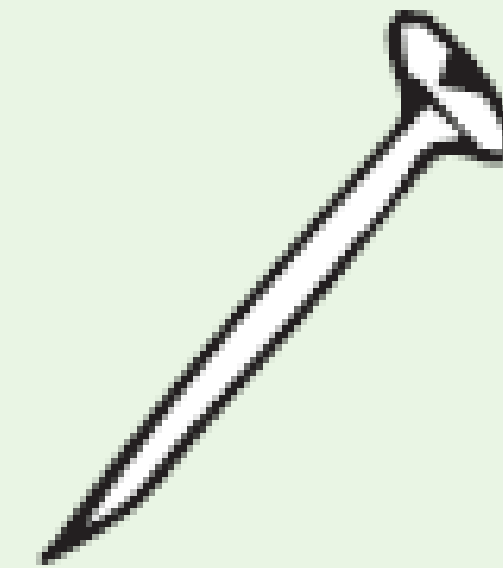
SYSTEMKLASSIFIZIERUNG: EINFACHE SYSTEME



Stift



Hammer



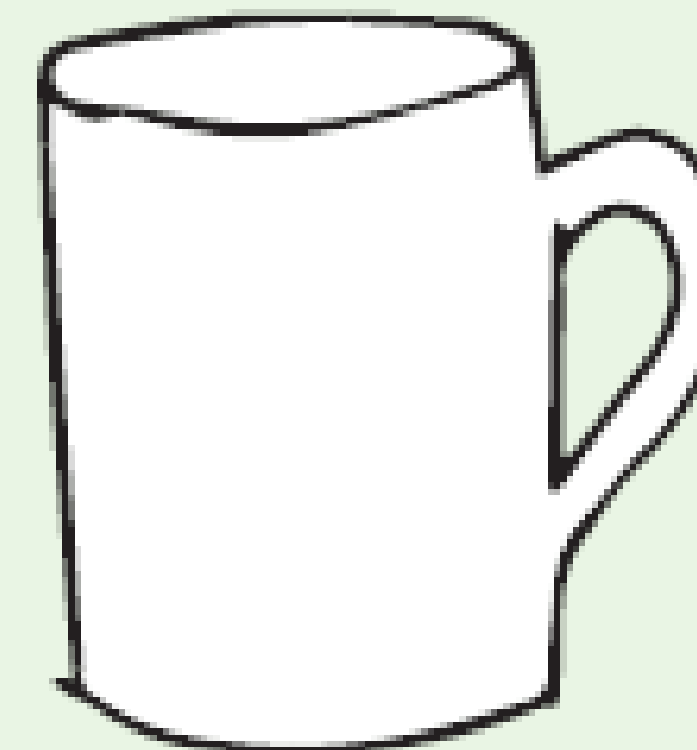
Nagel



Handtasche

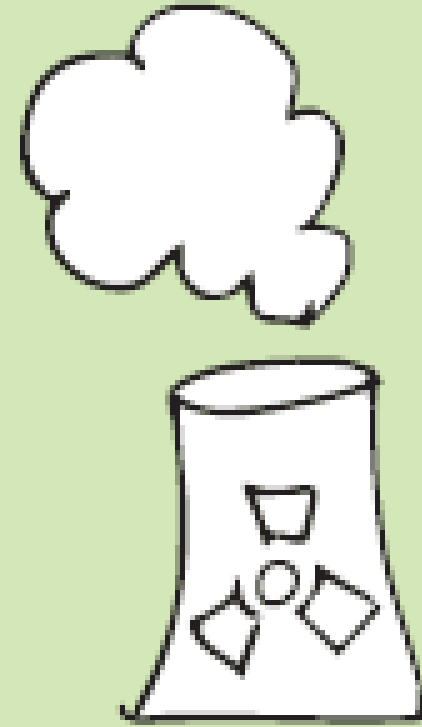


Schuh

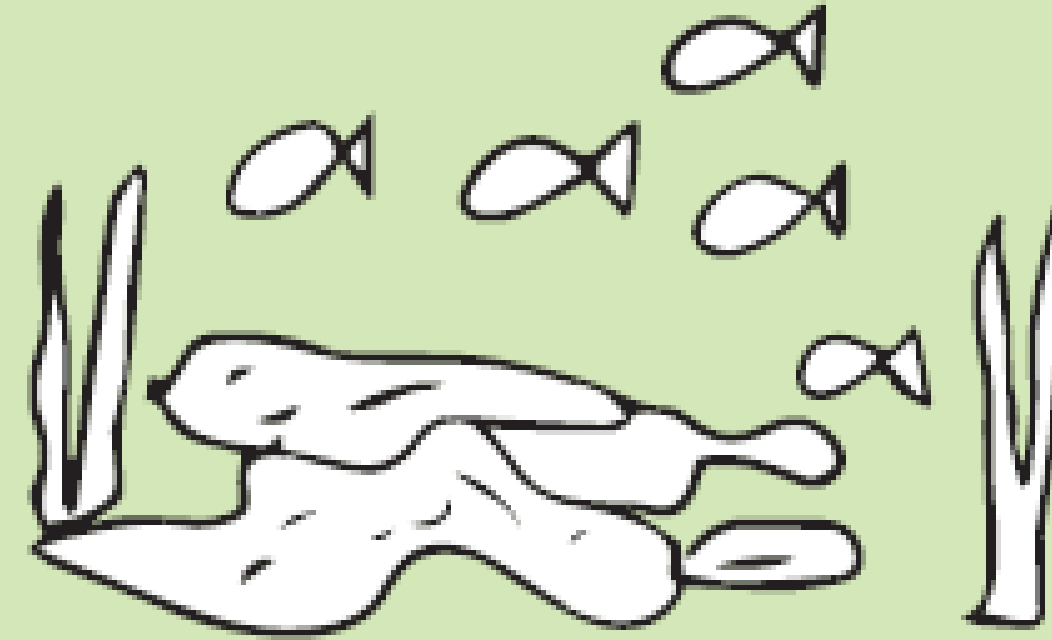


Tasse

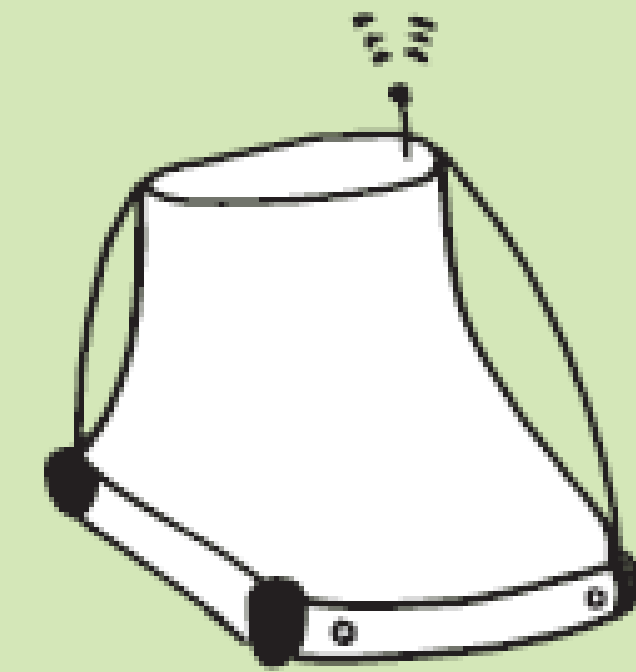
SYSTEMKLASSIFIZIERUNG: KOMPLEXE SYSTEME



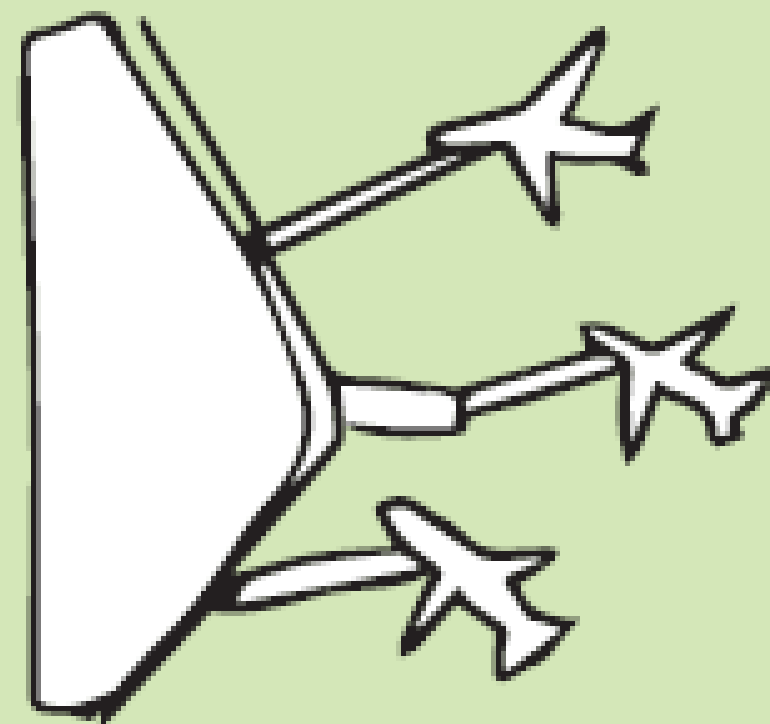
Atomkraftwerk



Korallenriff



Autonomes
Fahren



Flughafen



Menschliches
Hirn

A man with a balding head, wearing a dark suit, light blue shirt, and patterned tie, is speaking. He is positioned in front of a red background with a white inverted triangle. Behind him is a grey backdrop with the name of the institution in multiple languages: German (Bundeshaus Zentrum), Italian (Palazzo Federale), French (Palais fédéral), and Portuguese (Centro da med...).

March 16, 2020

„The situation is serious. Stay at home!“

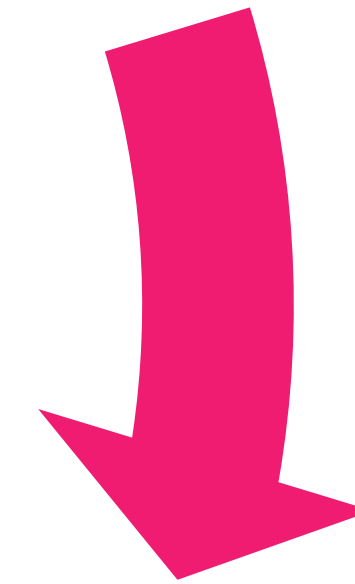
Participation with Impact



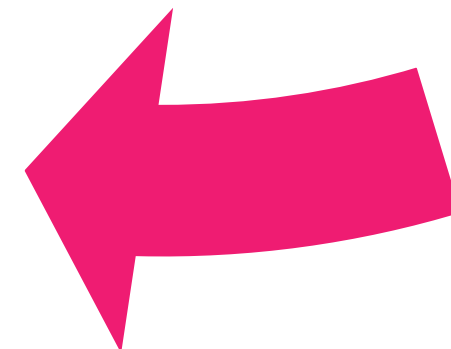
Understanding
& Dialogue



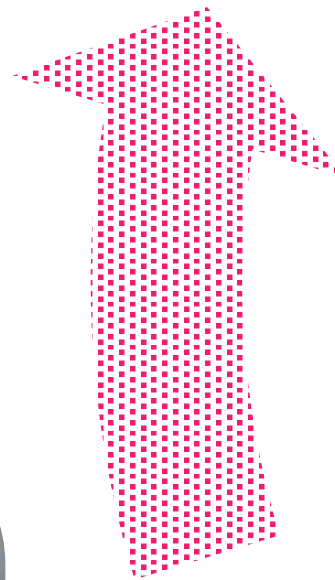
Participation
needs



Projects &
Initiatives



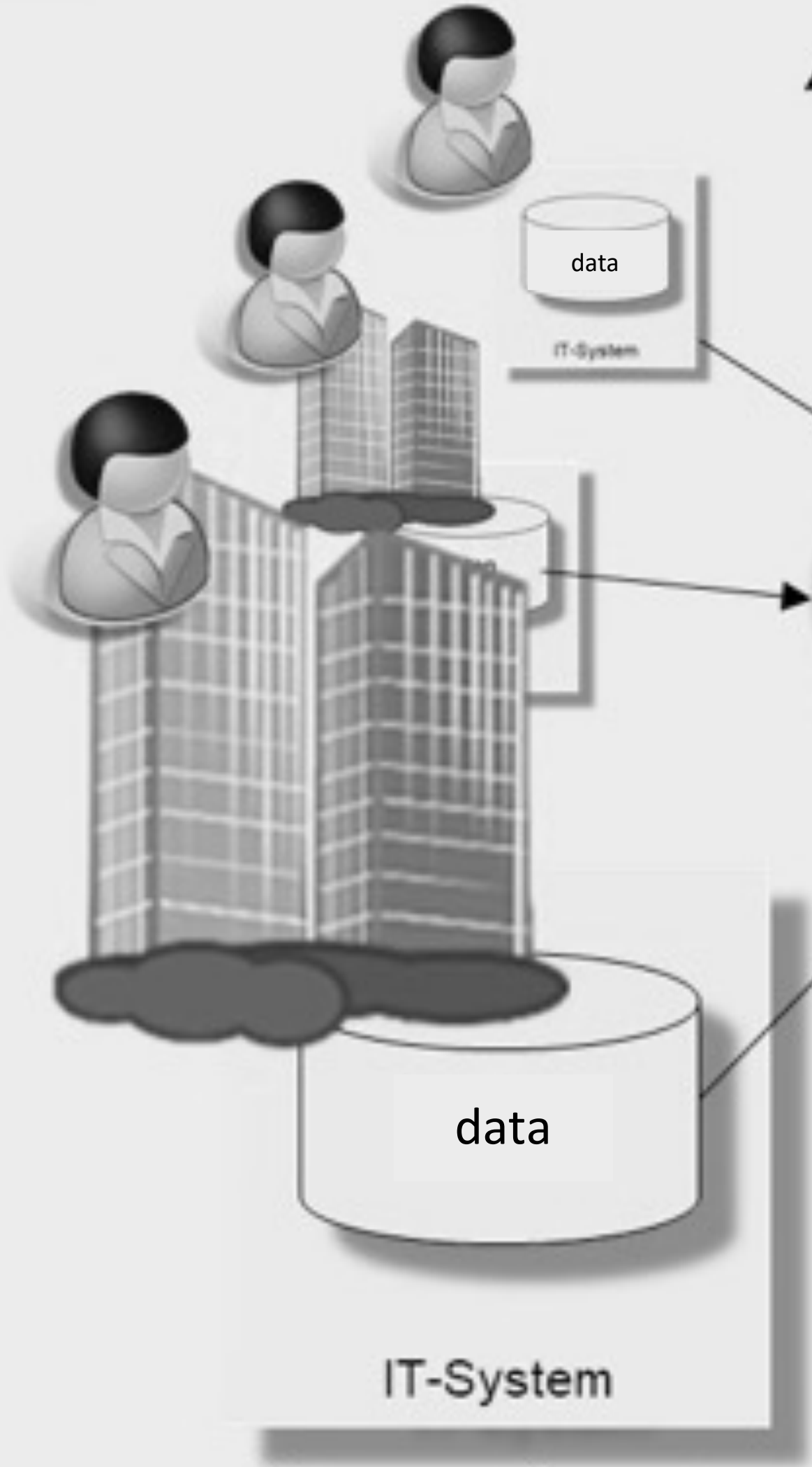
Informal &
formal level



rights,
regulations,
standards



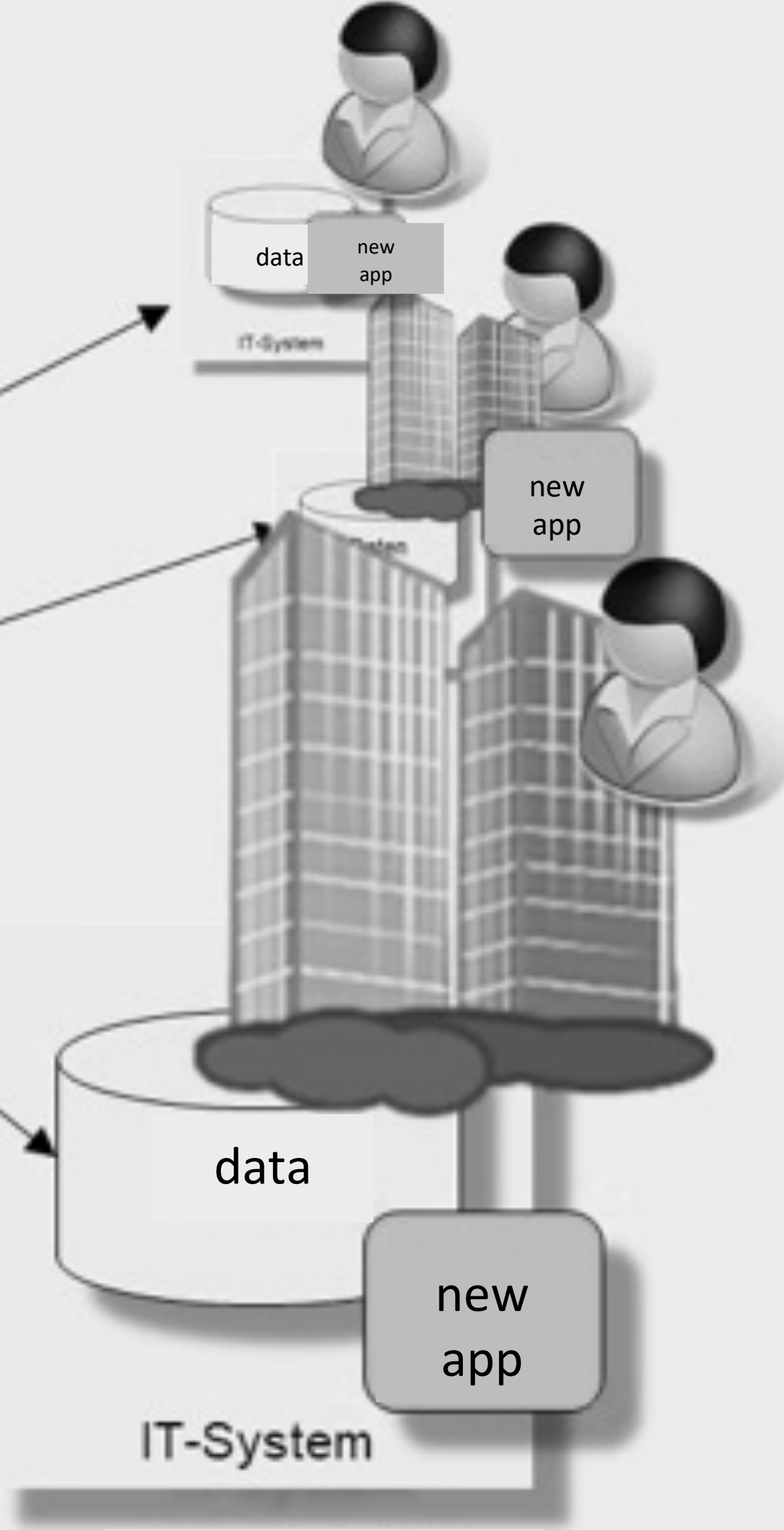
Involved People
(data generator & control)



Data Provider



Data Exchange
(technical and organisational infrastructure)



Data User

provide
data

obtain
data

A tame problem is one that can be solved by choosing and applying the correct algorithm. For instance, suppose that you knew how to make strawberry shortcake for 6 people, but needed instead to make it for 60. Multiplying the ingredients and changing the logistics is a tame problem.

A wicked problem is one for which there is no known algorithm to solve it. Examples include strategic planning, satisfying customers, transforming organizations, or protecting the environment.

??? + ??? leads to **VALUE**
(thing) (working principle) (aspired)

EMOTIONAL INNOVATION

- BRANDS
- MARKETING
- RELATIONSHIPS

BUSINESS
(viability)

EXPERIENCE
INNOVATION

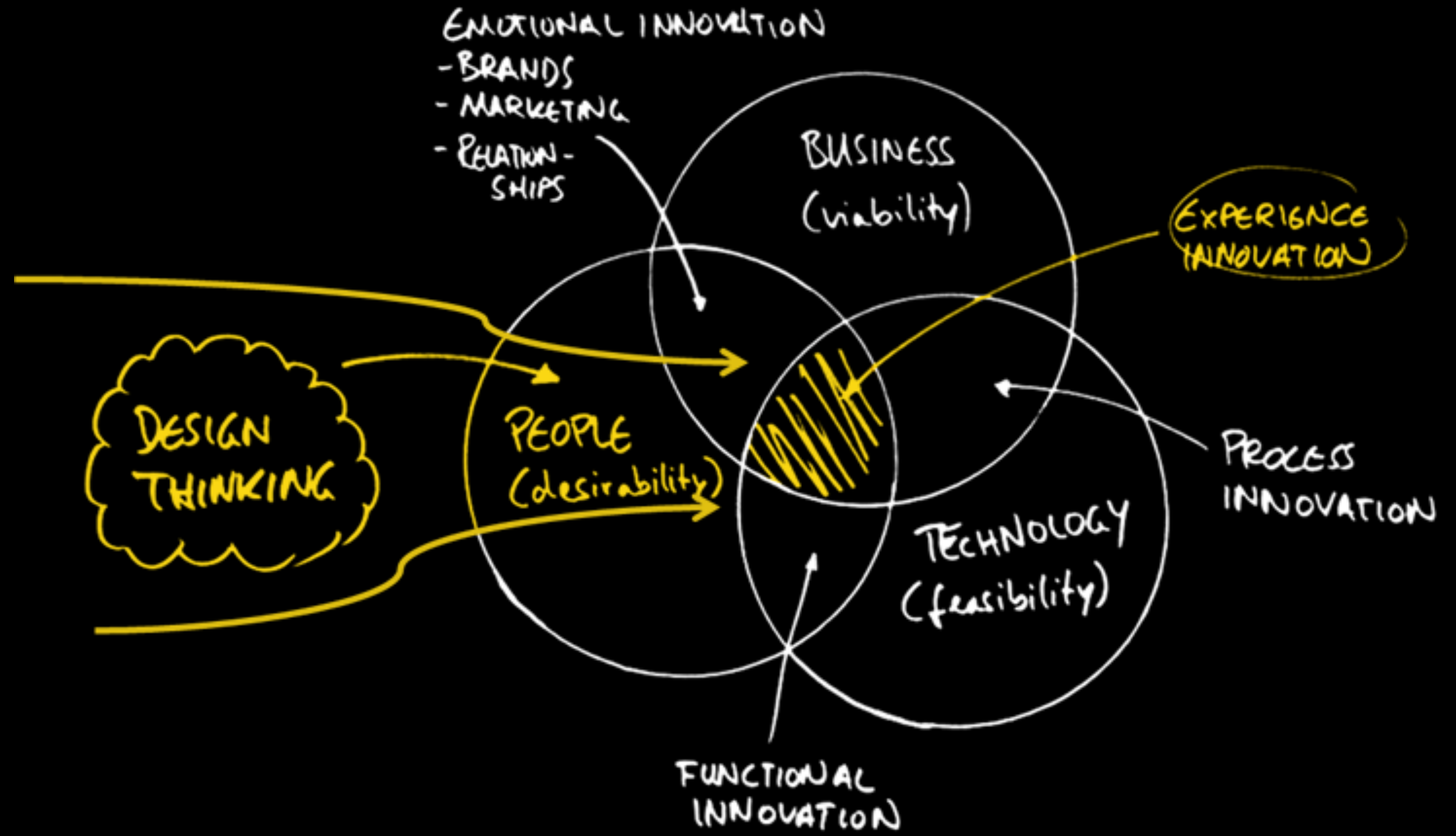
DESIGN
THINKING

PEOPLE
(desirability)

PROCESS
INNOVATION

TECHNOLOGY
(feasibility)

FUNCTIONAL
INNOVATION



Activity - Why are we dealing with a wicked problem in this project? What are the specific characteristics? List 5-10 properties!

Examples of Wicked Problems

Wikipedia tells us that a problem whose solution requires a great number of people to change their **mindsets and behavior** is likely to be a wicked problem. These include **global climate change, natural hazards, healthcare, the AIDS epidemic, pandemic influenza, international drug trafficking, nuclear weapons, nuclear energy, waste and social injustice.**



adapted from: *Dilemmas in a General Theory of Planning*
Horst W.J. Rittel and Melvin M. Webber (*Policy Sciences*, June 1973)

In it, we learn about the **10 properties of a wicked problem**:

1. There is **no definitive formulation** of a wicked problem.
2. Wicked problems have **no stopping** rule.
3. Solutions to wicked problems are not true or false, but **good or bad**.
4. There is no immediate and **no ultimate test of a solution** to a wicked problem.
5. Every solution to a wicked problem is a **“one-shot”** operation; because there is no opportunity to learn by trial and error, every attempt counts significantly.
6. Wicked problems **do not have an exhaustively describable set of potential solutions**, nor is there a well-described set of permissible operations that may be incorporated into the plan.
7. Every wicked problem is essentially **unique**.
8. Every wicked problem can be considered to be a **symptom of another problem**.
9. The existence of a **discrepancy** representing a wicked problem can be **explained in numerous ways**.
10. The planner has **no right to be wrong**.

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Framing as a method



When designers work with wicked and ambiguous problems, they do not define upfront what they are designing or how the solution is going to work; instead, designers create a frame. The frame is a proposal for how the solution will work to achieve an aspired value. Thus, the designer creates both a new way of understanding the problem and a new direction for the solution, which then can be tested and explored further.

Haase, L. M., & Laursen, L. N. (2019). Meaning Frames: The Structure of Problem Frames and Solution Frames. *Design Issues*, 35(3), 20-34.



WHAT'S THE MOST EFFECTIVE WAY TO REFRAME THIS?

Meaning Frames: The Structure of Problem Frames and Solution Frames

Louise Møller Haase,
Linda Nhu Laursen

Introduction

The growing interest in “design thinking” from other disciplines has challenged the design community to be more explicit about its theories, methods, and models, including the concept of “framing.” Framing has found a new and revitalized position in design theory; the discussion of it has moved in two differing directions in the current literature, each suggesting different points of focus.

On the one hand, framing is discussed as a way to approach wicked problems. Frames are highlighted as the designer’s approach to creating a new or redefined perspective on a problem that offers a new and radical direction for resolving it. Framing in this context is used to handle ill-defined, open-ended, and ambiguous problems that other problem-solving methodologies fail to handle. In these discussions, the framing is commonly labeled a “problem frame,” signifying that the problem is the center of the framing activity.¹

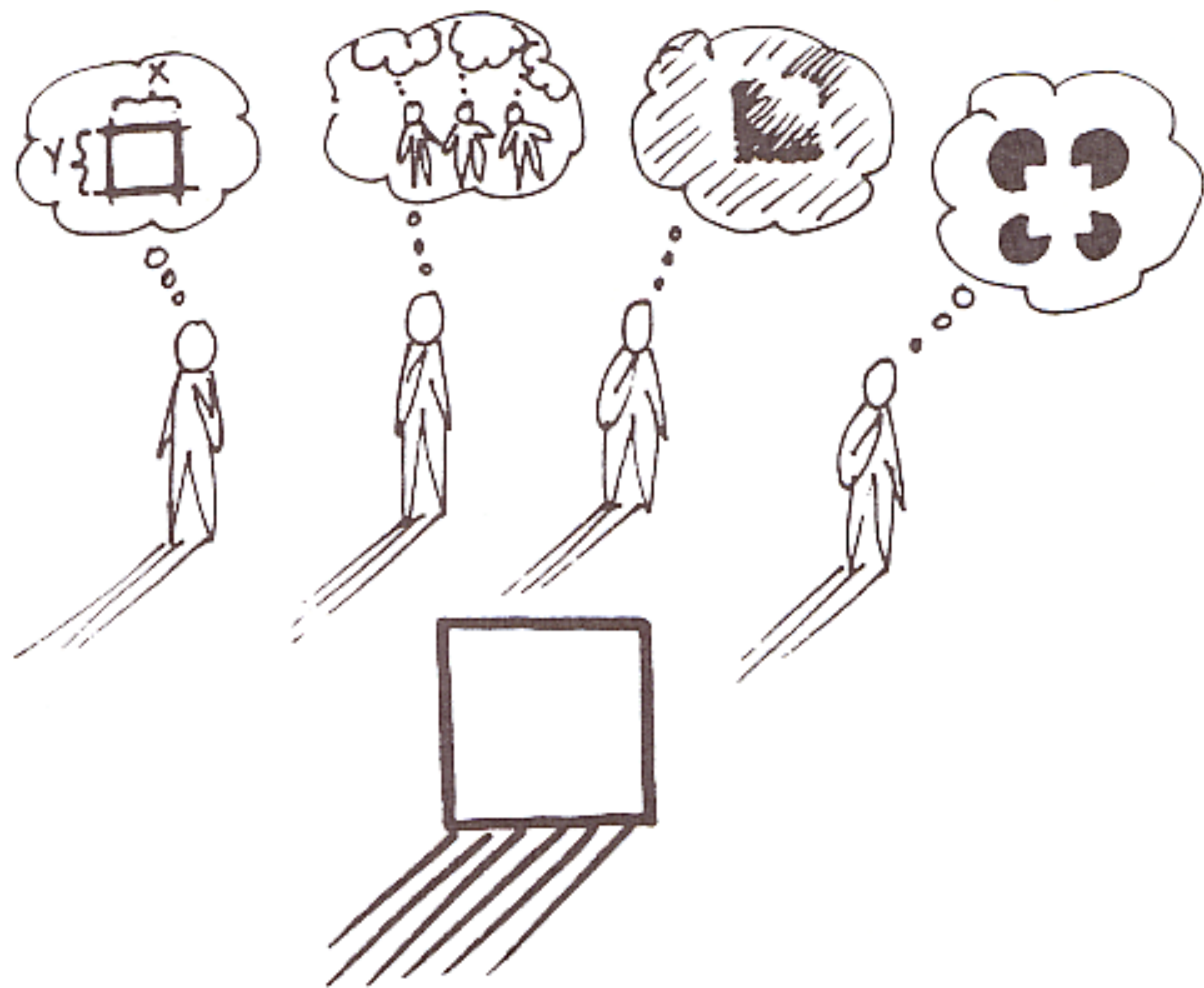
On the other hand, framing as originally developed had the goal of providing a better understanding of design reasoning and its initial think-

#Problem Frames

Frames are highlighted as the designer's approach to creating a new or redefined perspective on a problem that offers a new and radical direction for resolving it.

Haase & Laursen 2019

Meaning Frames: The Structure of Problem Frames and Solution Frames



#Meaning Frames

Frames are defined as the implicit assumptions that influence which issues are seen as relevant, which values and goals are deemed important, and which criteria can be used to evaluate the meaningfulness of given solution.

Haase & Laursen 2019

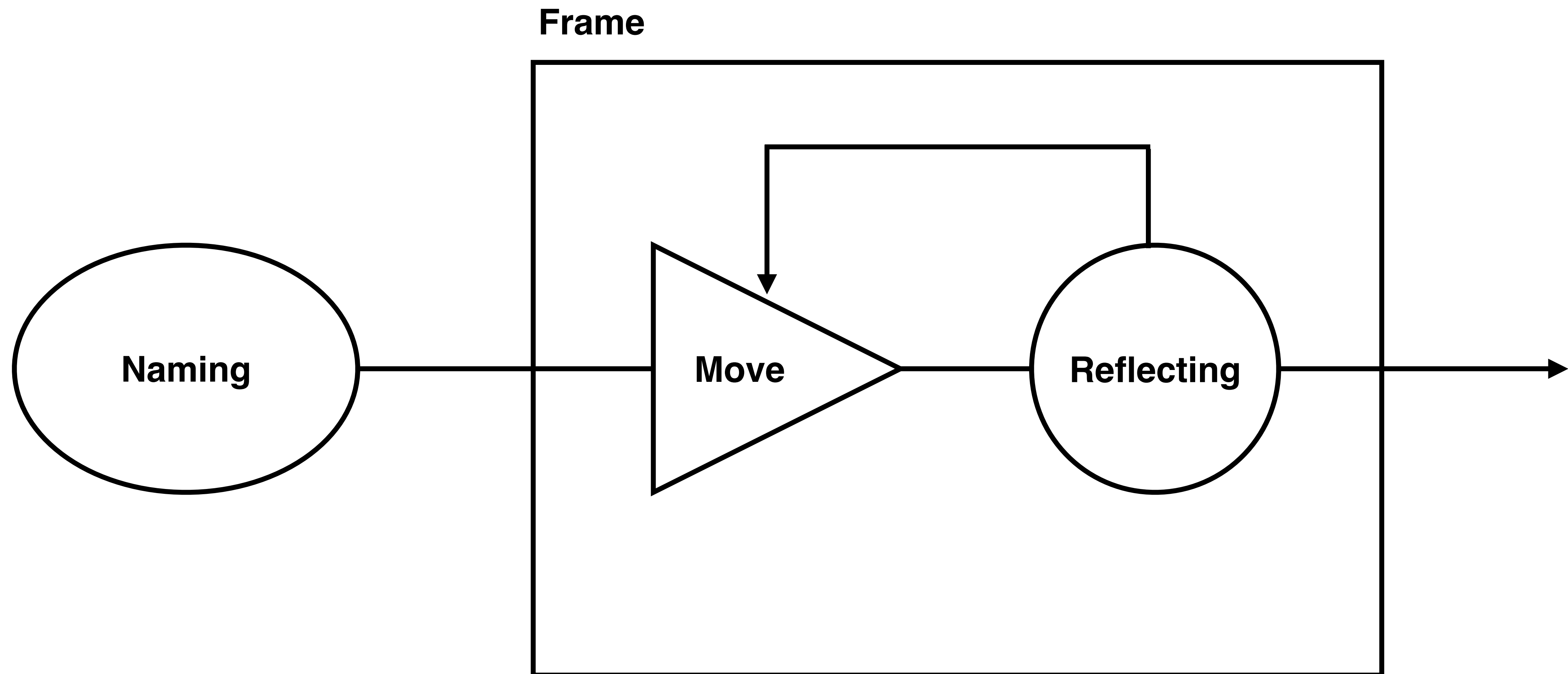
Meaning Frames: The Structure of Problem Frames and Solution Frames

The Reflective Practitioner

*How Professionals
Think in Action*

Donald A. Schön

Reflective Practice



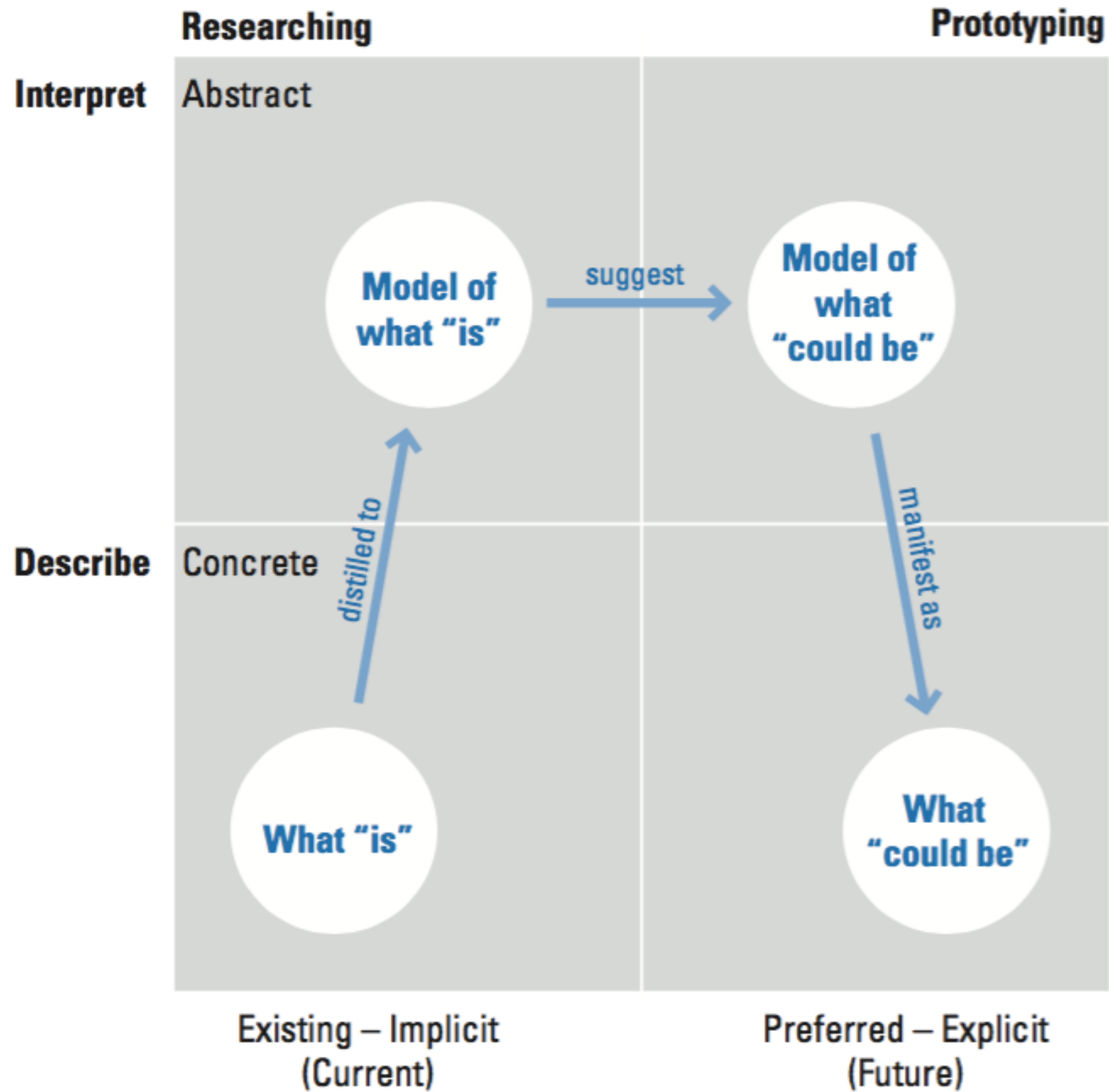
- naming the relevant issues in the design situation
- framing the problem in a certain way
- making moves towards a solution
- reflecting on those moves and the current frame

We can make a distinction between frames concerning the design task (the problem) and frames concerning the solution(s).

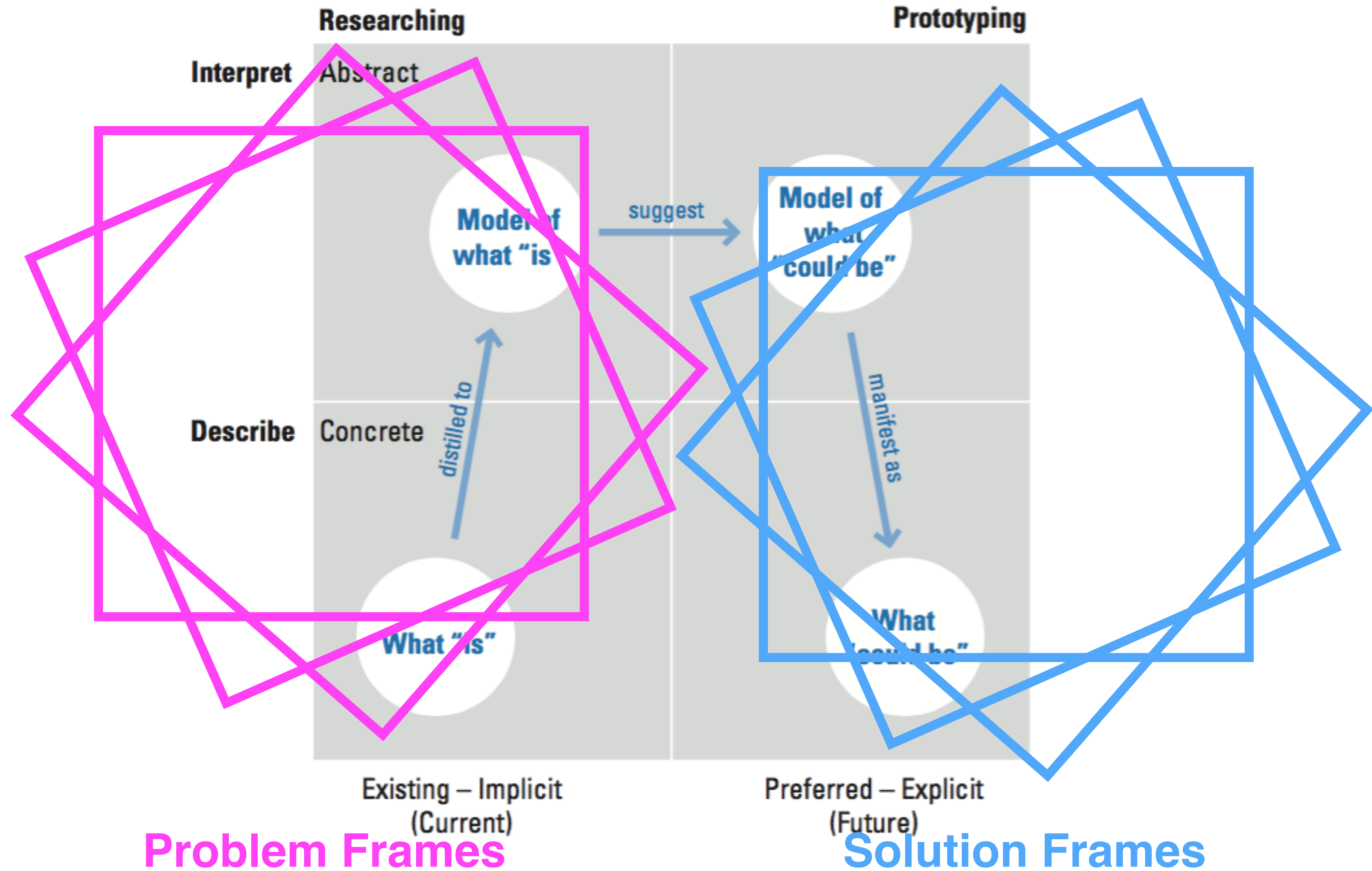
	PROBLEM FRAME	MEANING FRAME
WHAT IS THE PURPOSE OF THE FRAME?	To create a novel standpoint from which a problem can be solved (Dorst 2015, 55).	To create a plausible image that rationalizes, what is being created. (Stompff 2016; Smulders and Brehmer 2011)
WHAT CONSTITUTES THE FRAME IN THE PROCESS?	A new and innovative perspective on the problem situation in the form of e.g metaphors or coherent statements twhich are useful to ‘think with’ (Pee, Dorst, and Van der Bijl-Brouwer 2015; Dorst 2015)	<ol style="list-style-type: none"> 1) A desired end state or goal 2) Relative importance & relevance of features (prioritisation of designers’ attention) 3) Boundaries to the design situation (problem scope, solution scope, resource constraints) 4) Criteria for evaluation (of new information, features and possible solution concepts) (Hey, Joyce, and Beckman 2007, p. 81)
WHAT IS THE ROLE OF THE FRAME WITH RESPECT TO THE TEAM?	A ‘shared way of seeing’ at a specific moment in the design process that directs the team’s actions. (Dong, Kleinsmann, and Deken 2013)	A basis for creating a shared mental model ascribed to the entirety of the knowledge and belief structures associated with the design. (Dong, Kleinsmann, and Deken 2013)
WHAT IS THE TEMPORALITY OF THE FRAME?	Once accepted the frame immediately begins to fade (Dorst 2015)	It gives context to decision making and helps to steer the design process (Zerjav, Hartmann, and Achammer 2013)

The problem frame and the solution frames together provide the designer or design team with a plausible image — a meaning frame — that rationalizes what is being created.

Analysis-Synthesis Bridge Model



Analysis-Synthesis Bridge Model



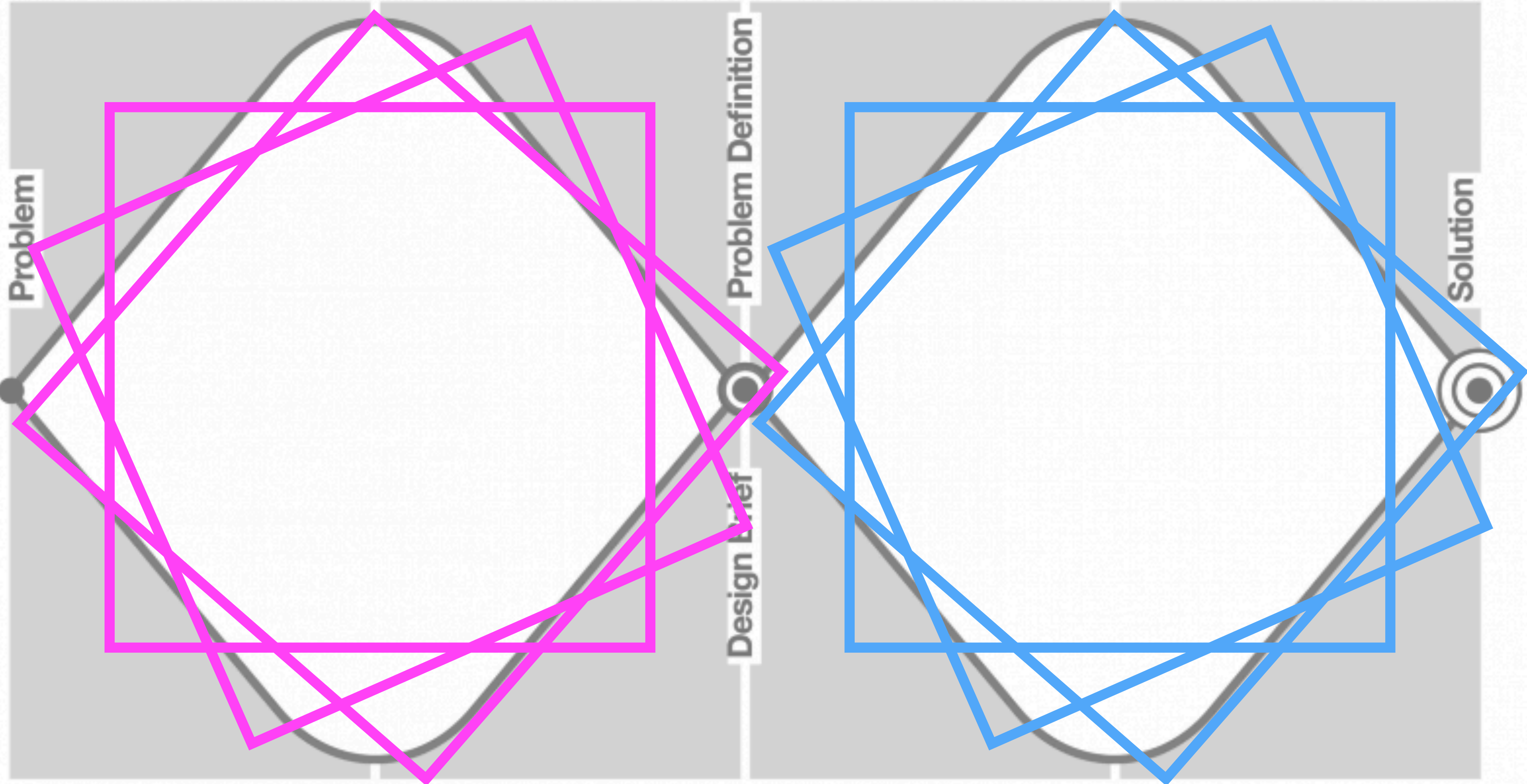
The problem frames and the solution frames together integrate different perspectives, set the boundary for the design situation, and prioritize the designers' attention, both for the overall vision and for the details.

Discover
insight into the problem

Define
the area to focus upon

Develop
potential solutions

Deliver
solutions that work



Problem Frames

Solution Frames

Characterization of a meaning frame:

- A meaning frame is created from a problem frame and a varying number of solution frames, depending on the specific product. The problem frame creates a novel standpoint from which the problem can be solved, whereas the different solution frames add further perspectives or detailed direction to certain aspects of the product
- A meaning frame consists of a number of insights and aspired values that are connected to a set of working principles, often expressed as metaphors or one-liners
- A meaning frame creates a plausible image that rationalizes what is being created
- In the design process, four aspects of the meaning frame can be identified: 1) a desired end state or goal; 2) the relative importance or relevance of features (i.e., prioritization of the designers' attention); 3) boundaries of the design situation (e.g., problem scope, solution scope, and resource constraints); and 4) criteria for evaluation (of new information, features, and possible solution concepts)
- A meaning frame is a basis for creating a shared mental model among design team members and is ascribed to the entirety of the knowledge and belief structures associated with the design
- A meaning frame gives context to decision making and helps steer the design process.



Kontakt

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