

## AN EMPIRICAL-ETHICAL STUDY

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## Timeline

Project Start  
10/2018

Theoretical  
Model of Value  
Judgments  
03/2019

Rapid Review  
04/2019

Pre-Interviews  
ongoing

Development of interview guide  
ongoing

Presentation of  
the project at  
EUSAAT 2019  
10/2019

## Identification of Use Cases

*ongoing*

Expert-Interviews  
from 03/2020  
(planned)

Qualitative  
Content Analysis/  
Philosophical  
Analysis  
*from 06/2020  
(planned)*

Assessment  
of Value  
Judgements  
*from 09/2020  
(planned)*

Formulation of  
Key-Questions  
*from 12/2020  
(planned)*

Publications  
(Interviews,  
ethical analysis)  
*from 12/2020  
(planned)*

## Background/Hypotheses

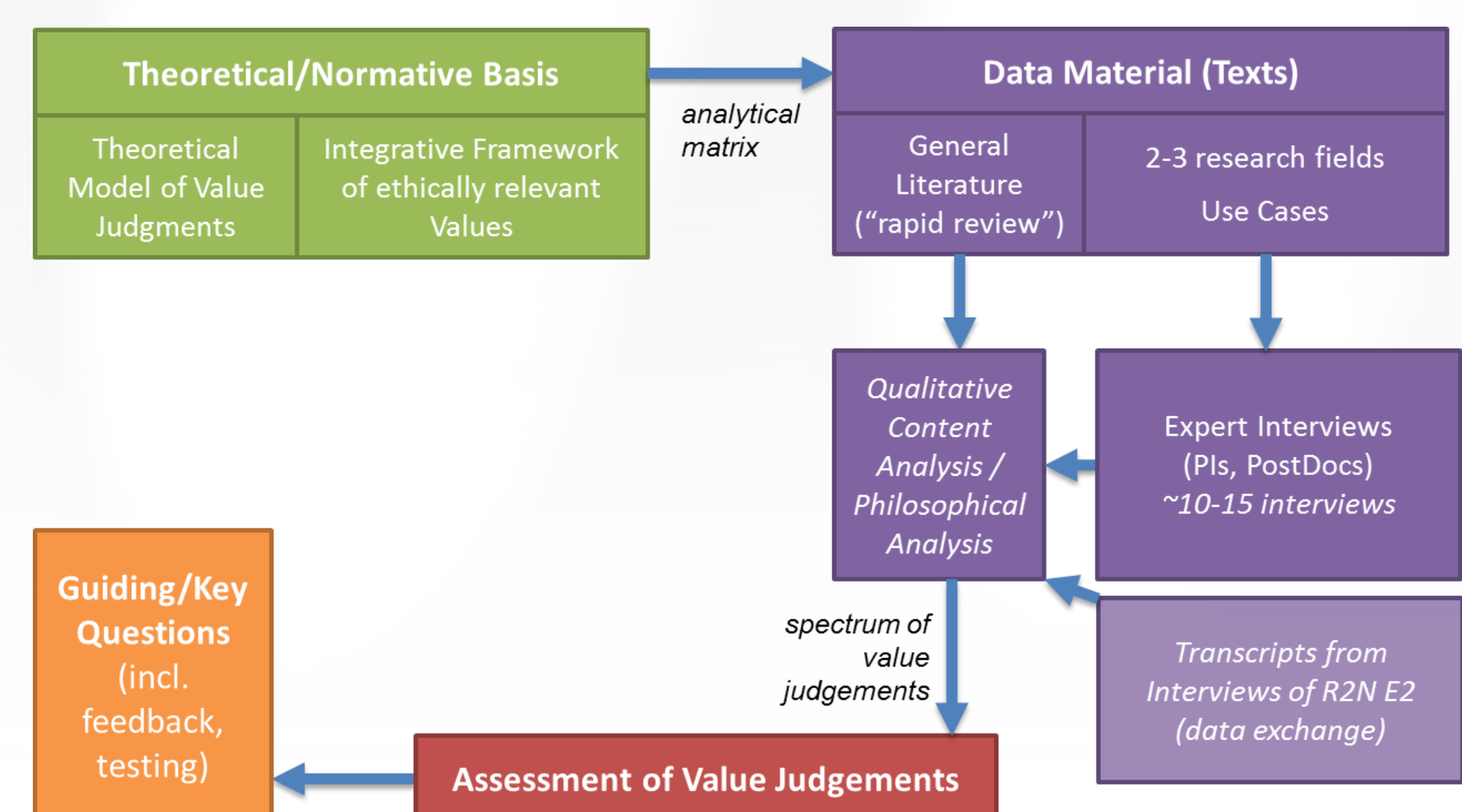
- ▶ Using animals in **basic and translational research in the life sciences** is associated with pertinent **ethical challenges**
  - …▶ i.e. animal ethics, research ethics, public health ethics
- ▶ Valid and practically successful **alternative methods** (⇒ **reduce or replace** of animal models) may mitigate some ethical challenges
- ▶ Unclear whether the **decision for or against possible alternatives** is always based on informed and sound (ethical) reasoning
  - …▶ Which **value judgments** are involved in decision-making?
  - …▶ Which **evaluative and empirical premises** are justifying them?

## Goals

- ▶ Analysis of the structure of the value judgments of researchers
- ▶ Assessment of how ethically defensible value judgments are
- ▶ Formulation of key questions
  - ...▶ help decision-makers navigate through decision-making
  - ...▶ help identifying value judgements involved
  - ...▶ support critical reasoning

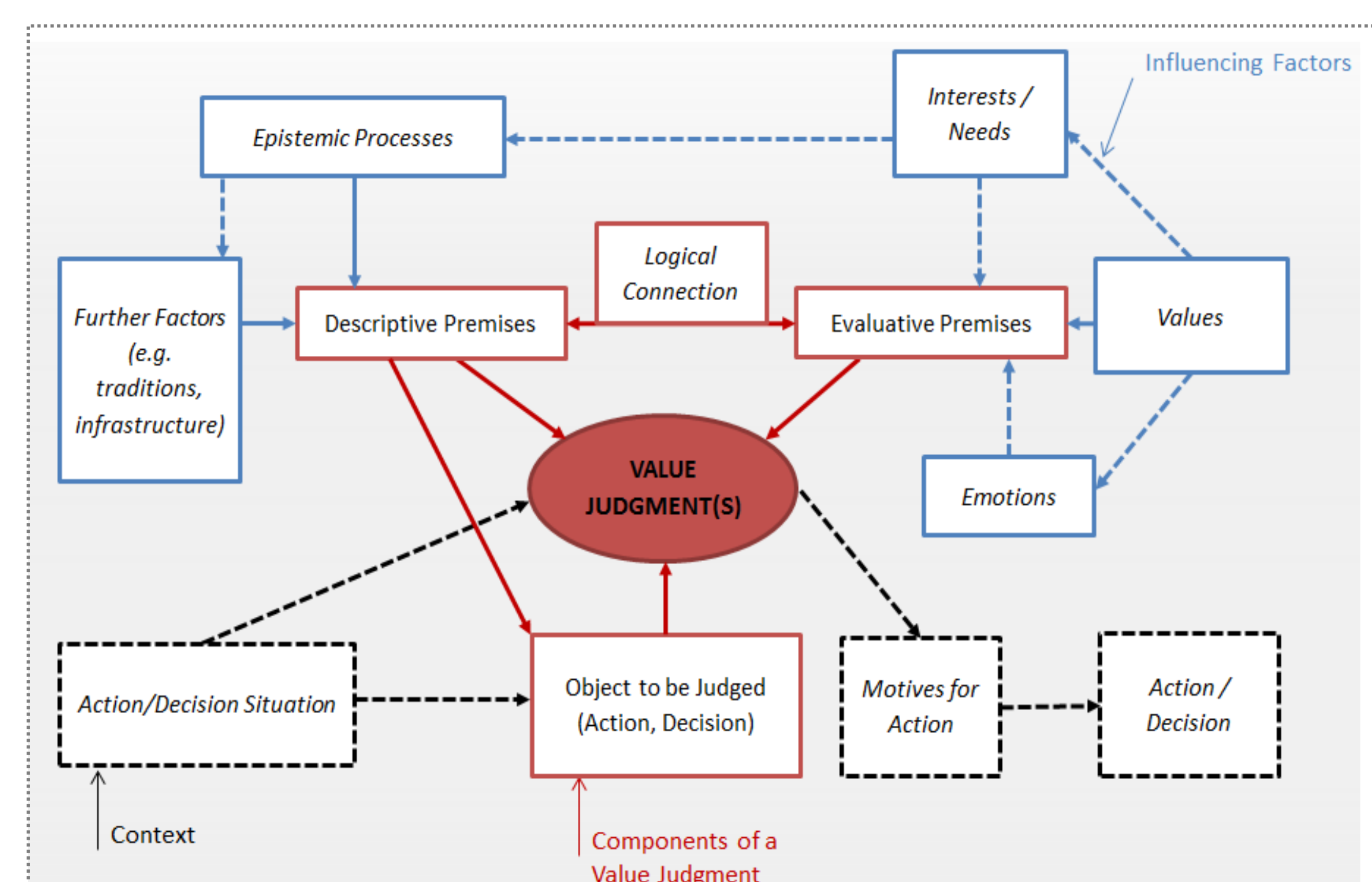
## Method/Plan

- ▶ Combination of **philosophical/ethical** and **socio-empirical methods**
  - ...▶ Theoretical basis/ethical assessment, empirical reality
- ▶ Identification of relevant **use cases in basic/translational science**
  - ...▶ Research possible with both animals and alternatives
- ▶ Interviewing of **PIs and/or PostDocs** working in use cases
  - ...▶ involved in decision-making (⇒ value judgments)



## RESULTS

- ▶ **Rapid/literature review (876 hits screened):** No existing model for value judgments or existing research on value judgments in decision situations found
- ▶ **Theoretical model of value judgments** (see figure on the right):
  - …▶ Value judgments are conceptualized as a **logical judgment** that can be a **motive for action/in decision-making**
  - …▶ Components of a value judgment (*red*) are **descriptive premises** and **evaluative premises**, their **logical relation** and the **action/decision** the judgment is directed to
  - …▶ Further components are **context-related** (*black*) or describe **influencing factors** (*blue*) for the content as well as the truth/plausibility of the premises (e.g. specific values or interests of researchers, existing infrastructure etc.)
- ▶ **Pre-Interviews (n=8, incl. R2N A1, A2):** First observations hint at a diverging understanding of “alternatives”, their availability (“There are no alternatives” vs. “There are alternatives, they are just not well-known”) and their implementation (“Are readily implemented when available” vs. “There are many barriers and a resistance to change”) ⇒ differing value judgments and premises
- ▶ **Use cases:** Kidney diseases proved to be not suitable for the project; focus on Alzheimer diseases and stomach (e.g. diabetes)

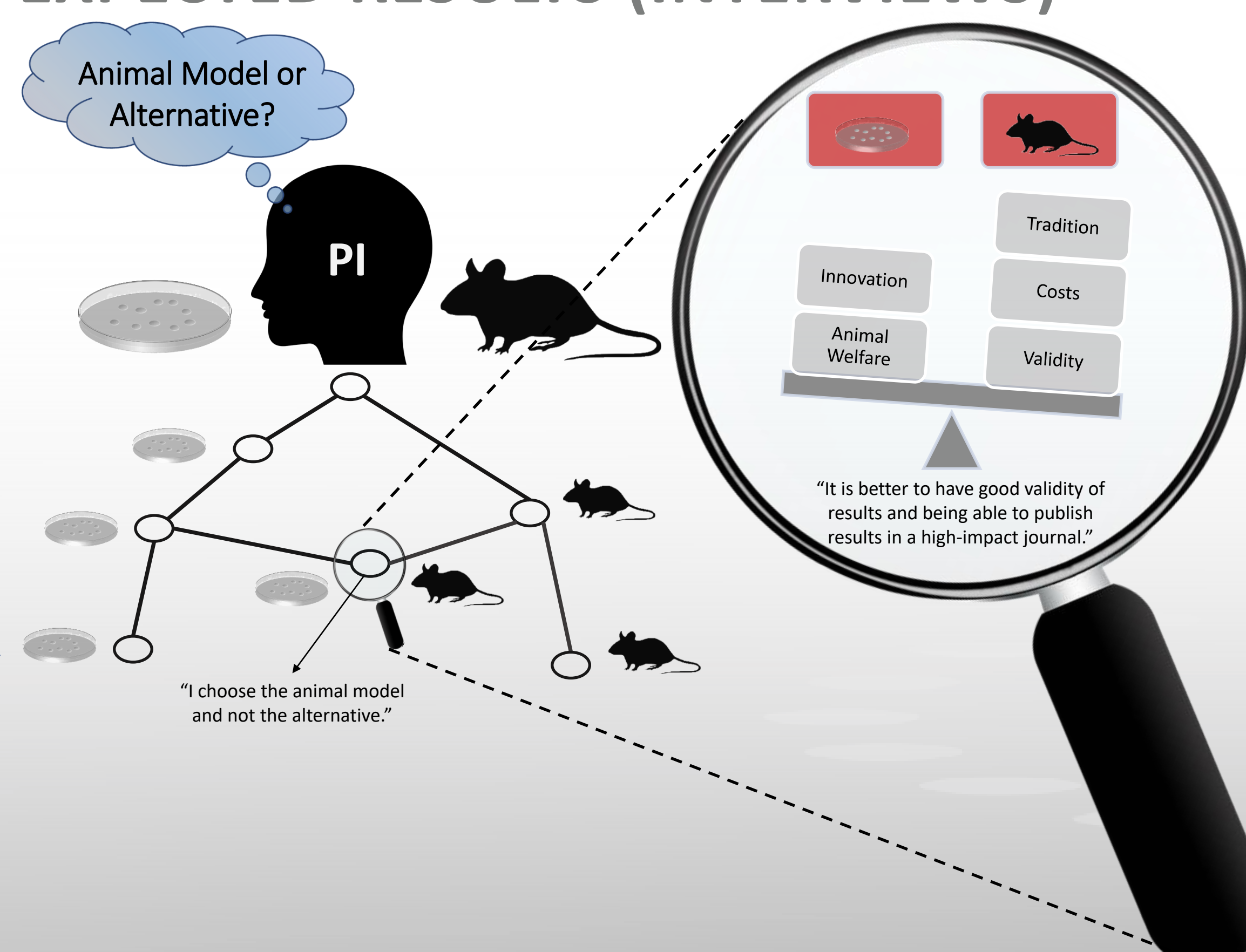


**value judgment** = (def.) An explicit or (mostly) implicit evaluative conclusion in relation to an action/decision, which is based on at least one evaluative and one descriptive premise and which is intended to and can fulfil an evaluative function

Example:

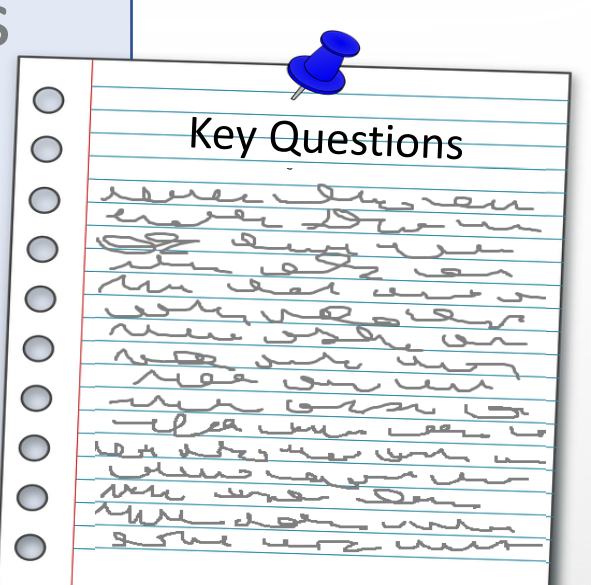
*Descriptive premise “For this research question, there exists no alternative to the animal model”; evaluative premise “The animal model is valid for this research”; value judgment “The animal model is a good/the only choice”; decision “I choose the animal model (and do not look further for alternatives)”; epistemic processes: It was not sufficiently searched for alternatives, or alternatives were not sufficiently evaluated, influencing the truth of the descriptive premise*

## EXPECTED RESULTS (INTERVIEWS)



## „NEEDS & OFFERS“

- ▶ We need: **Relevant and available interview partners**
  - involved in decision-making
  - working in fields with animal models *and* alternatives
- ▶ We offer: **Ethical reflection to improve decision-making processes and promotion of use and development of alternative methods**
  - **Guiding/key questions** for researchers (“tool”)
  - Insights into **actual decision-making and reasoning** of researchers involved in animal and non-animal research
  - Contribution to the understanding of various **normative factors** influencing the use and development of alternatives



in cooperation with R2N E



Hermann, L., Hoppe, N., Kahrass, H., Lohse, S., Mertz, M. & Pietschmann, J. (2019). *ALTEx* 36(4):681

How ethics, law and philosophy of science can help make progress in the development and use of alternative methods

The German research unit *R2N – Reduce and Replace based in Lower Saxony* aims at “developing scientifically-sound alternative methods on all levels of biomedical science to either minimize the quantity of animals used, or to fully replace existing animal experiments” (<https://r2n.eu/home>).

policy analysis) and the social sciences (e.g., empirical social research) to explore the normative landscapes in which science and technological development takes place. In line with ELSI research, the normative research groups in R2N explore topics related to the ethics of animal research and the 3R principle, the legal framework for alternative methods in conjunction with regulatory practice, and social aspects of scientific (self-)regulation, including the social epistemology of scientific research.

alternative methods, i.e., including self-regulation in basic science. The group aims at analyzing factors that influence the development and use of alternative methods at the interface of science and policy-making. These factors include legal requirements in translational research settings, social and infrastructural aspects of research, and "socio-epistemic" issues in science – such as different criteria for the validity of new approaches. The final goal of this analysis is to identify potential for improvement of the