



# A conceptual model and reflections on transdisciplinary research

Matthias Bergmann

Institute for Social-Ecological Research (ISOE), Frankfurt (Main)  
and Leuphana University Lüneburg

ECCA conference, Hamburg, 18 March 2013



## Overview

- A model of the transdisciplinary research process
- Quality aspects (QA) for transdisciplinary research
- Integration tasks and methods



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## Definitions of Transdisciplinarity

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**Transdisciplinarity is a reflexive research approach that addresses societal problems by means of interdisciplinary collaboration as well as the collaboration between researchers and extra-scientific actors; its aim is to enable mutual learning processes between science and society; integration is the main cognitive challenge of the research process.**

(Jahn/Bergmann/Keil 2012)

## Definitions of Transdisciplinarity

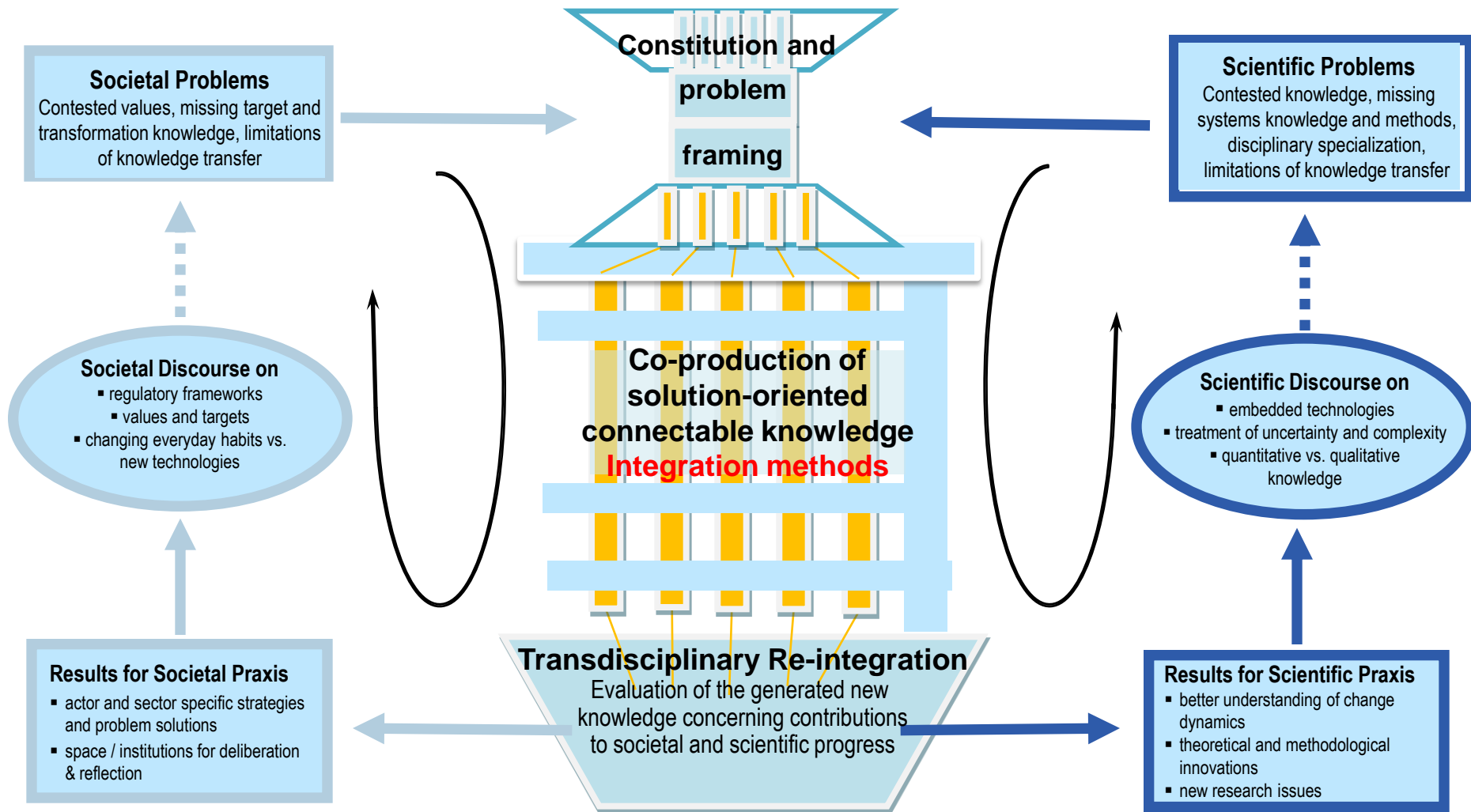
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**Transdisciplinarity is an integrative process whereby scholars and practitioners representing different disciplines and epistemologies, work jointly to develop and use novel conceptual and methodological approaches, that synthesize and extend discipline-specific theories, methods, and translational strategies, to yield innovative solutions to particular scientific and societal problems.**

(Stokols, Hall, & Vogel (in press). Transdisciplinary Public Health: Definitions, Core Characteristics, and Strategies for Success)

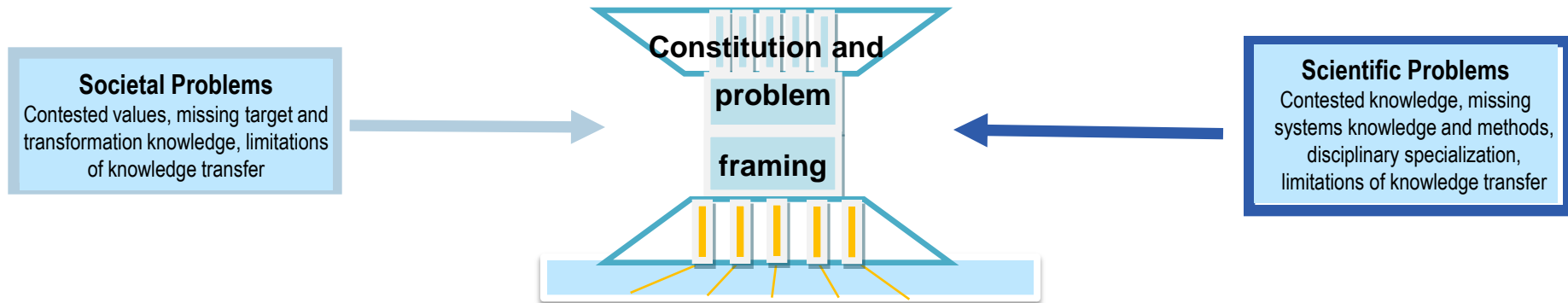


# The reflexive transdisciplinary research process – a model



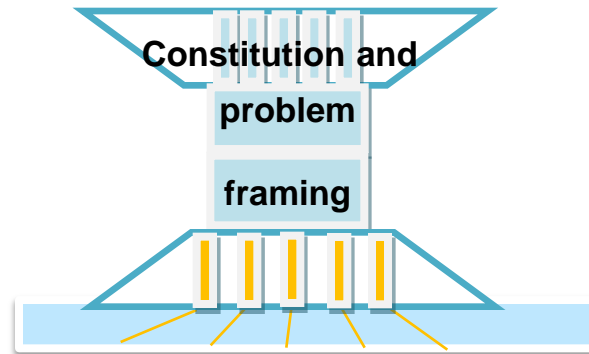


## The reflexive transdisciplinary research process – a model





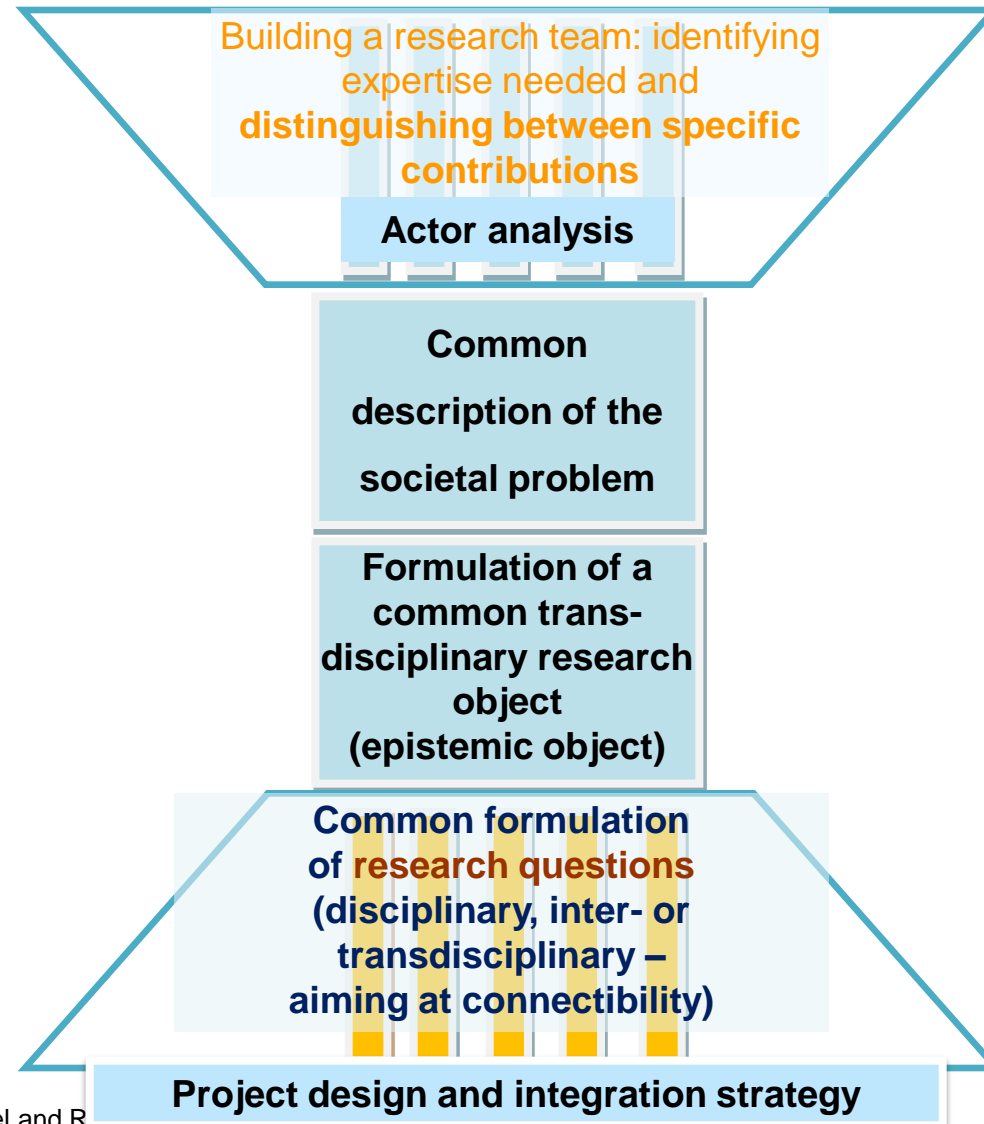
# Project constitution and problem framing





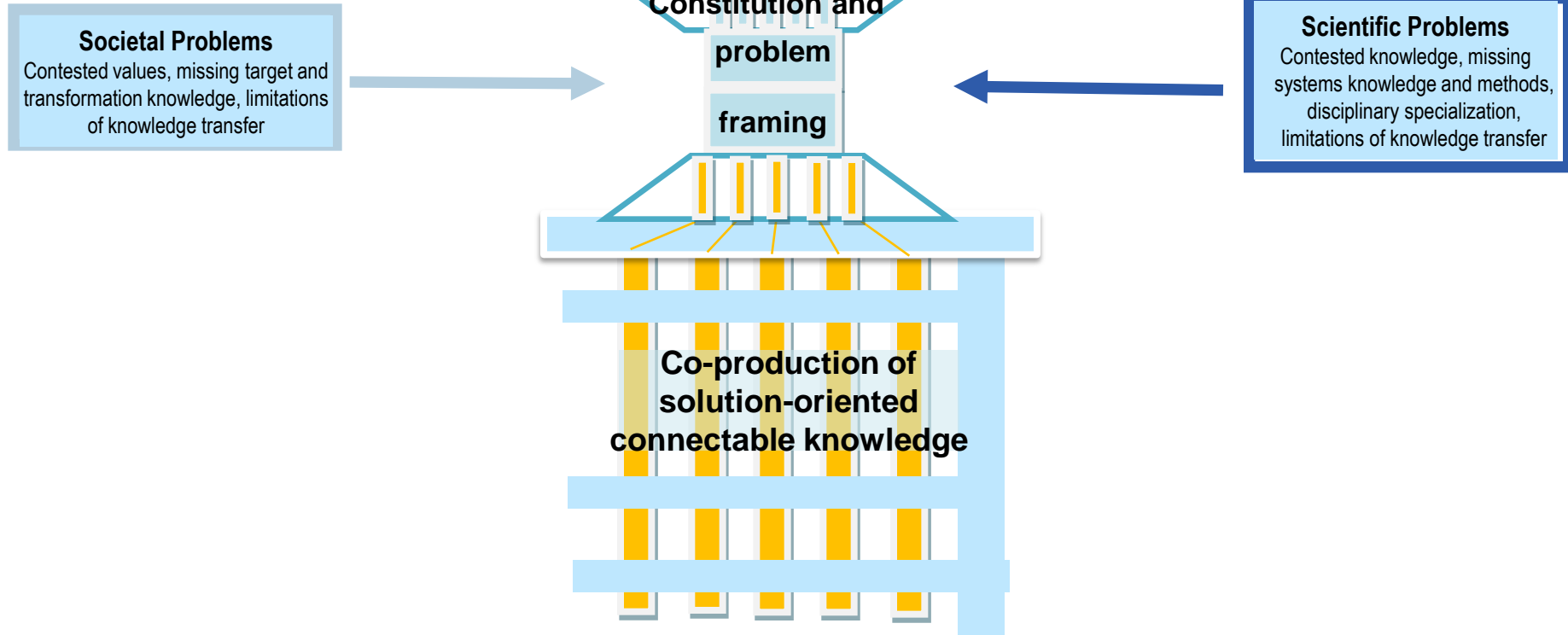


# Project constitution and problem framing



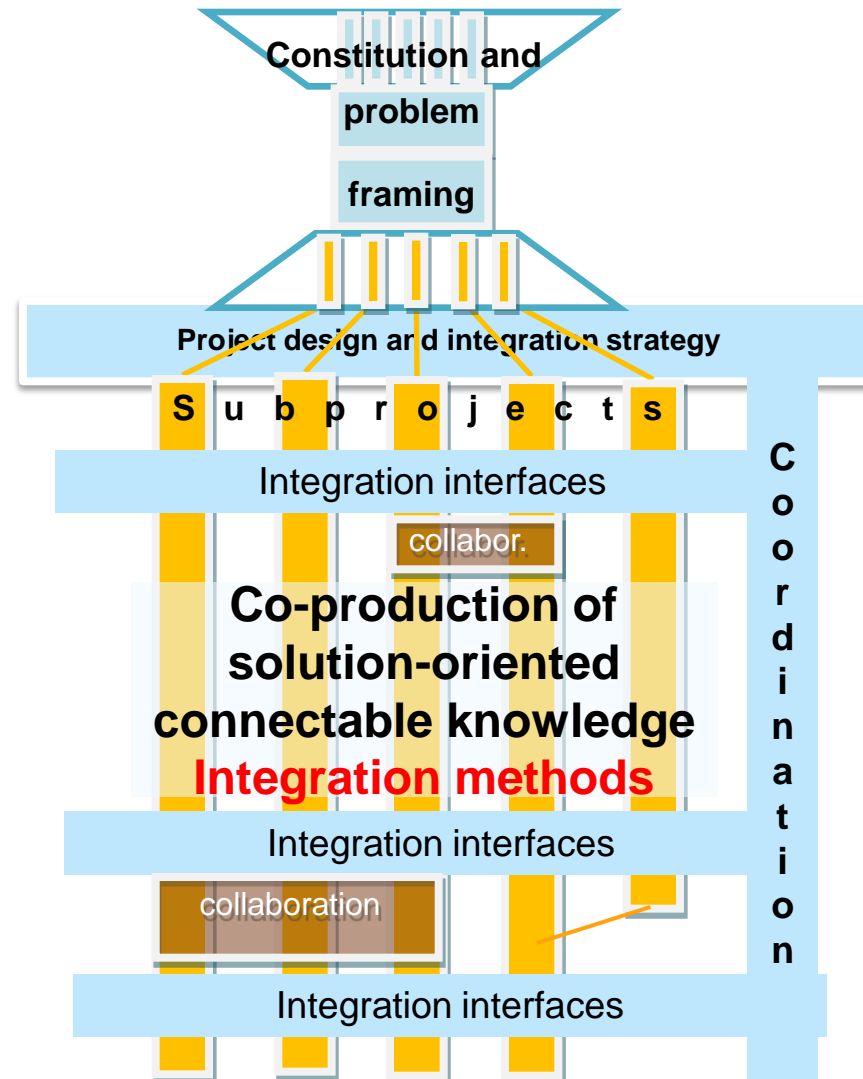


# Co-production of knowledge



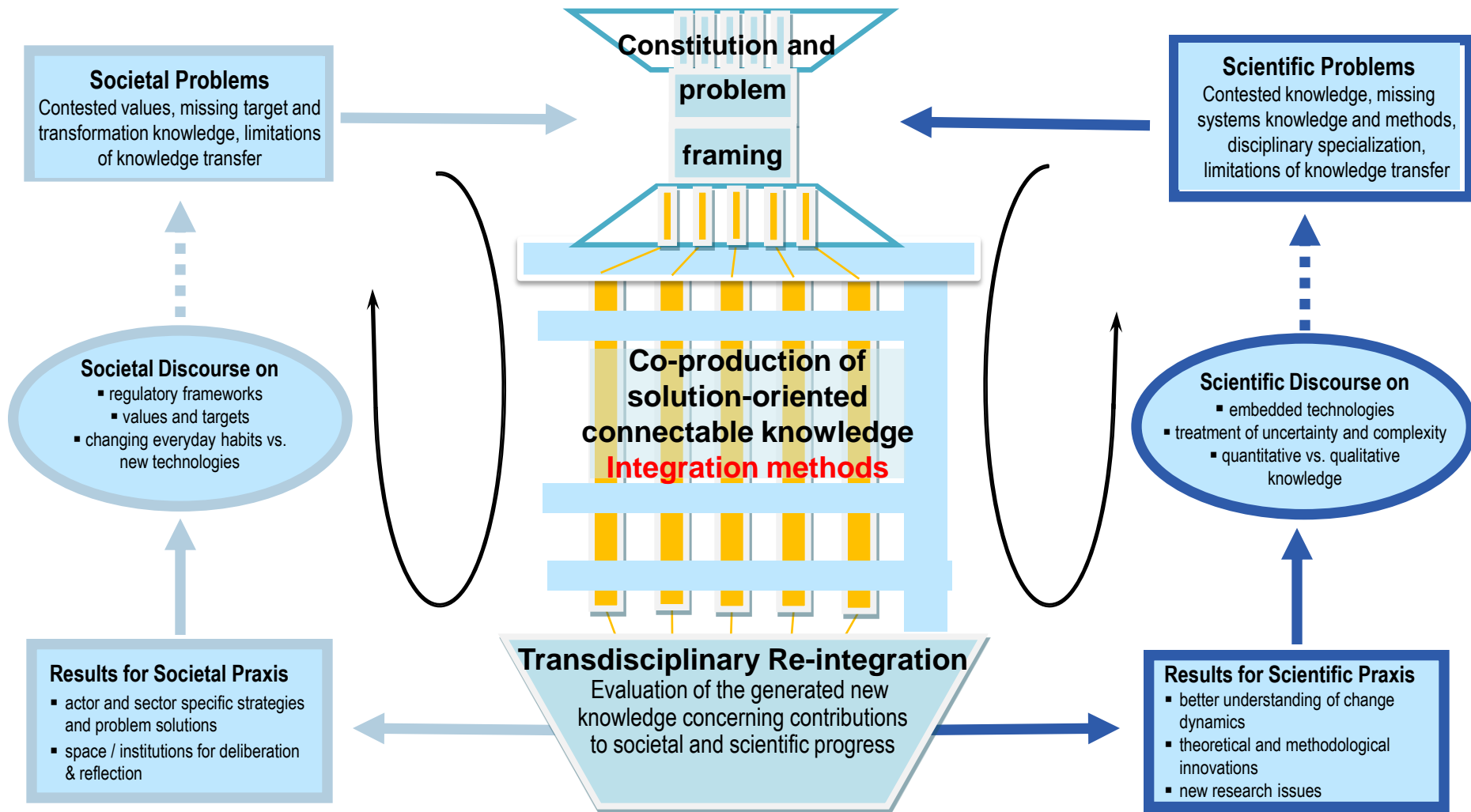


# Co-production of knowledge





# The reflexive transdisciplinary research process – a model





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## Quality criteria in sciences – a starting point

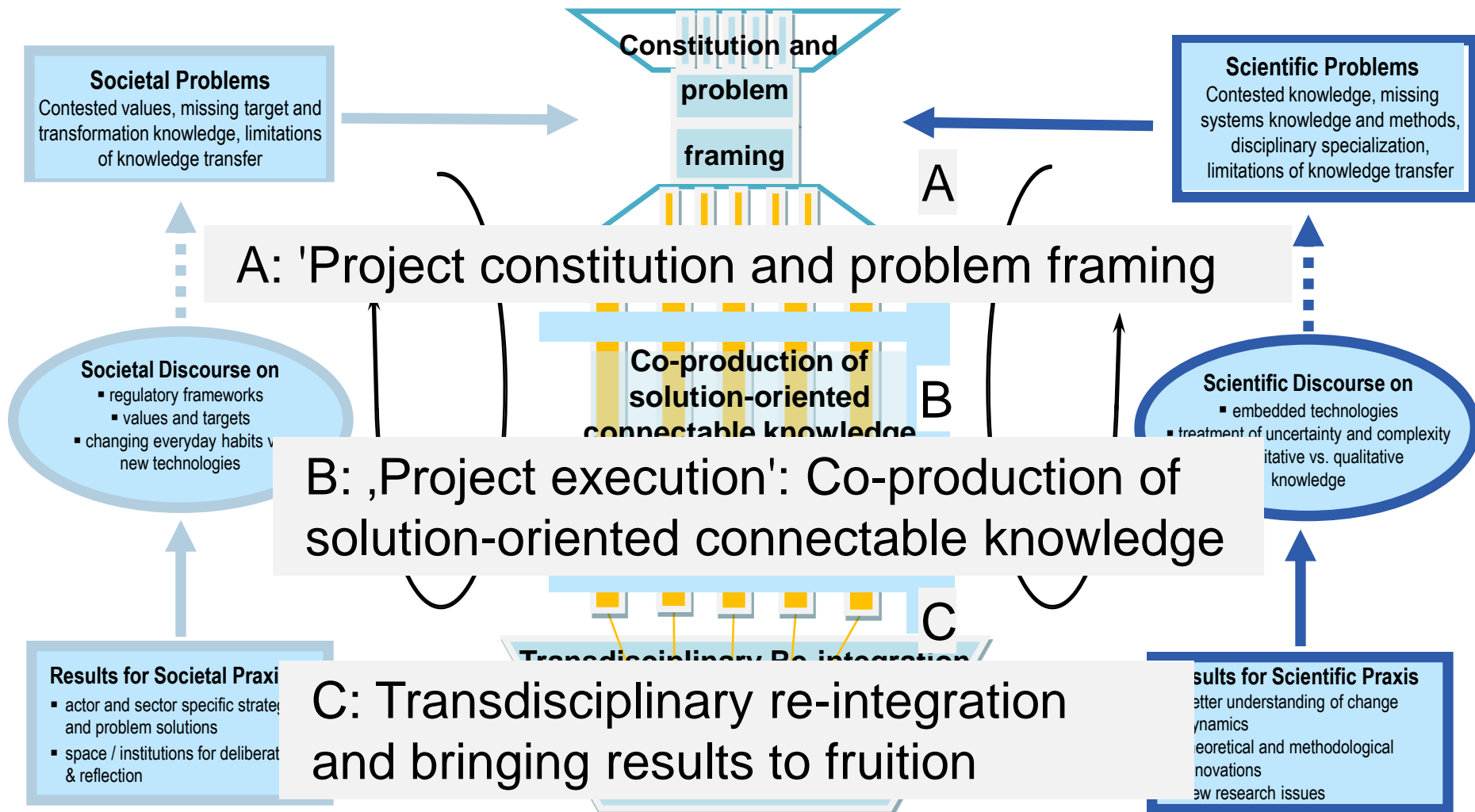
**»The criteria used for the evaluation shall only be of a kind that is inherent in the individual and in the collective praxis of research. That implies that the practical realities of scientific knowledge production should be the point of departure.«**

**Robert Salais, 2008**

(Own translation)



## The reflexive transdisciplinary research process – a model





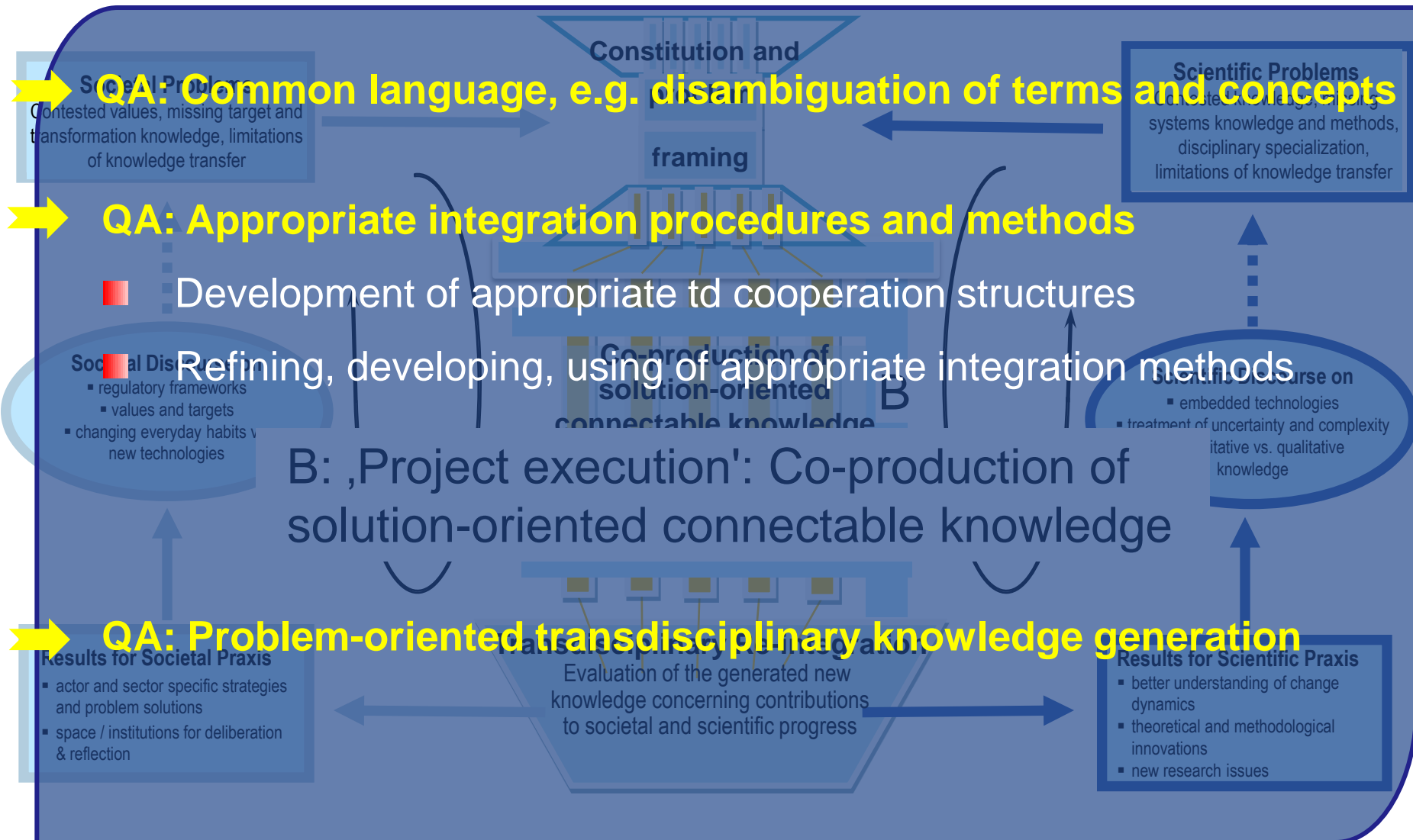
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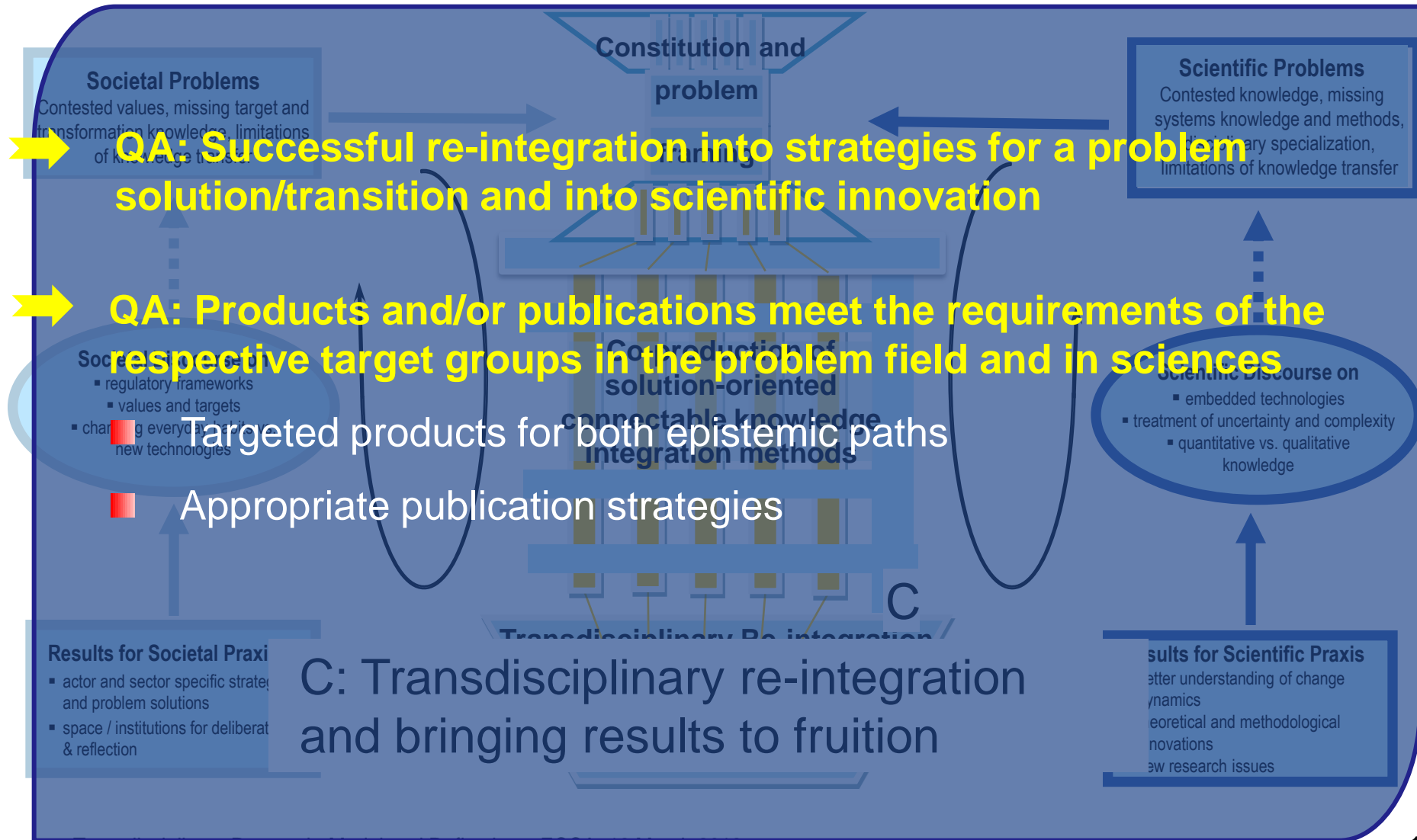


## The reflexive transdisciplinary research process – a model





## The reflexive transdisciplinary research process – a model





Matthias Bergmann, Bettina Brohmann,  
Esther Hoffmann, M. Céline Loibl,  
Regine Rehaag, Engelbert Schramm,  
and Jan-Peter Voß



## Quality Criteria of Transdisciplinary Research



A Guide for the Formative  
Evaluation of Research Projects

With a Foreword by Thomas Jahn

Öko-Institut e.V.



**KATALYSE**  
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## Overview

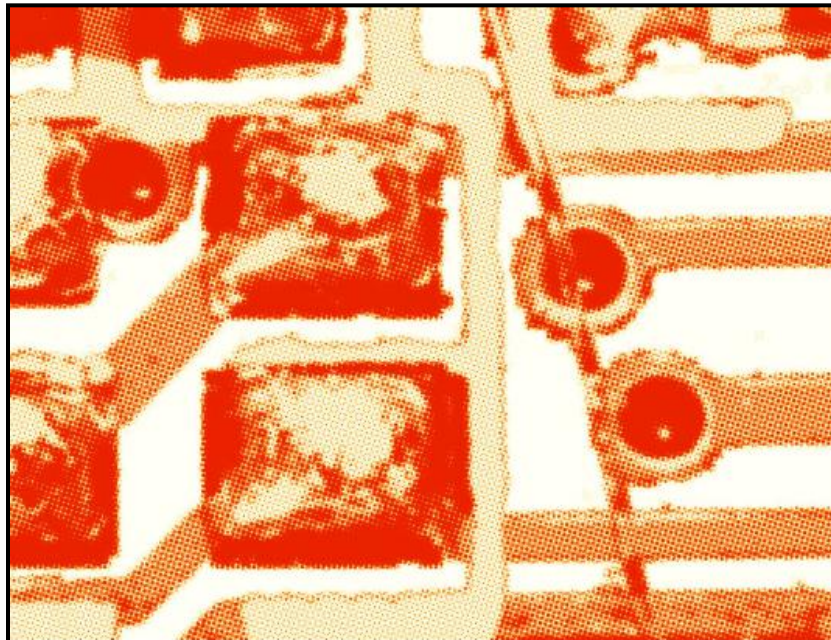
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## Tasks of Integration in Transdisciplinary Research

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- **Cognitive-epistemic dimension:** differentiation and linkage of expert/disciplinary knowledge bases, as well of scientific and practical real-world knowledge ↩ understanding the methods and terms of other disciplines; clarifying the limits of one's own knowledge; and developing methods and building theories together
- **Social and organizational dimension:** differentiating and correlating the participating researchers'/experts' different interests and activities, as well as of the sub-projects or organizational units; also includes the conscious leadership of (not only scientific) teams, mutual understanding and the willingness to learn
- **Communicative dimension:** differentiating and linking of different linguistic expressions and communicative practices, with the aim of developing something like a common discursive practice in which mutual understanding and communication is possible, as well as clarifying common terms and constructing new ones

(Bergmann et al. 2012: 45)

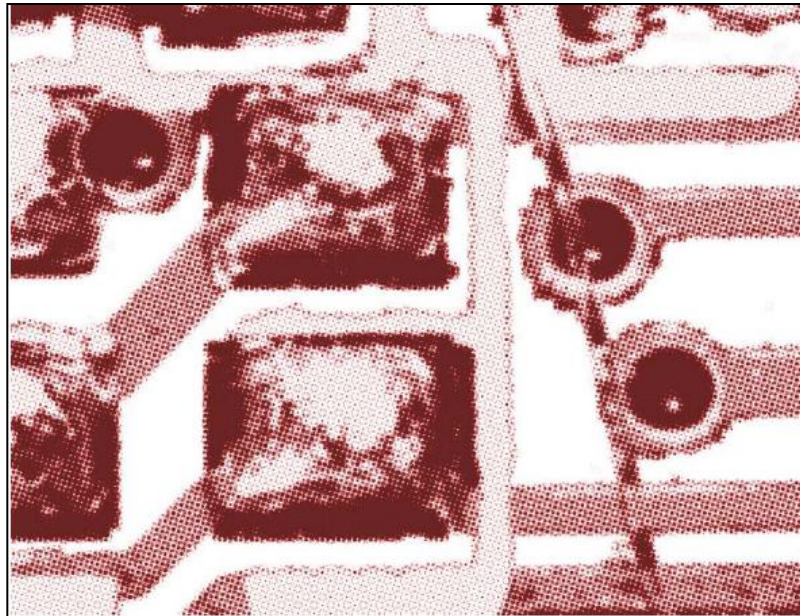


Matthias Bergmann, Thomas Jahn,  
Tobias Knobloch, Wolfgang Krohn,  
Christian Pohl, Engelbert Schramm  
with a preface by Julie Thompson Klein

## METHODS FOR TRANSDISCIPLINARY RESEARCH

A Primer for Practice





Matthias Bergmann, Thomas Jahn,  
Tobias Knobloch, Wolfgang Krohn,  
Christian Pohl, Engelbert Schramm

## **METHODEN TRANSDISZIPLINÄRER FORSCHUNG**

Ein Überblick mit Anwendungsbeispielen

**campus**

**A Collection of Methods and Examples  
for Knowledge Integration in Transdisciplinary Research**

**"Methods for Transdisciplinary Research"**

**Knowledge/social/communicative integration by means of ...**

- a. Disambiguation of Notions / Concepts and Theoretical Framing
- b. Research Questions and Hypotheses
- c. Analysing, Using, (re)Developing of Integrative Scholarly Methods
- d. Integrative Assessment Methods
- e. Developing and Use of Models
- f. Artefacts, Products and Concepts as *Boundary Objects*
- g. Procedures and Techniques of Integrative Research Organisation



## Literatur (1)

Bergmann/Jahn/Knobloch/Krohn/Pohl/Schramm (2010): *Methoden transdisziplinärer Forschung. Ein Überblick mit Anwendungsbeispielen.* Frankfurt/New York: Campus (2012 auch in Englisch erschienen unter dem Titel "Methods for Transdisciplinary Research . A Primer for Practice" bei Campus und The University of Chicago Press)

Bergmann/Schramm (Hg.) (2008): *Transdisziplinäre Forschung. Integrative Forschungsprozesse verstehen und bewerten.* Frankfurt/New York: Campus

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Jahn/Bergmann/Keil (2012): *Transdisciplinarity: Between mainstreaming and marginalization.* Ecological Economics, Vol. 79, July 2012, 1–10

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In: M. Bergmann/E. Schramm (Hg.): *Transdisziplinäre Forschung. Integrative Forschungsprozesse verstehen und bewerten.* Frankfurt am Main/New York, 39–68

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Pohl/Hirsch Hadorn (2006): *Gestaltungsprinzipien für die transdisziplinäre Forschung*. München: ökom