



University of Antwerp
| Urban Studies Institute

A first aid starter's guide to interdisciplinary research

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Interdisciplinarity

- **Why interdisciplinary research?**
- **What is interdisciplinarity?**
- **How to start with your interdisciplinary research?**
- **Tools for interdisciplinarity**
- **IDR support @Uantwerp**

Stand up if the answer is yes!

- **Who has a background in two or more scientific disciplines?**

Stand up if the answer is yes!

- **Do you want to do interdisciplinary research** (even if it's only a tiny bit)?

Stand up if the answer is yes!

- **Who has already worked in an interdisciplinary way in education or work?**

Stand up if the answer is yes!

- **Who has heard of or has experience with systems thinking?**

Stand up if the answer is yes!

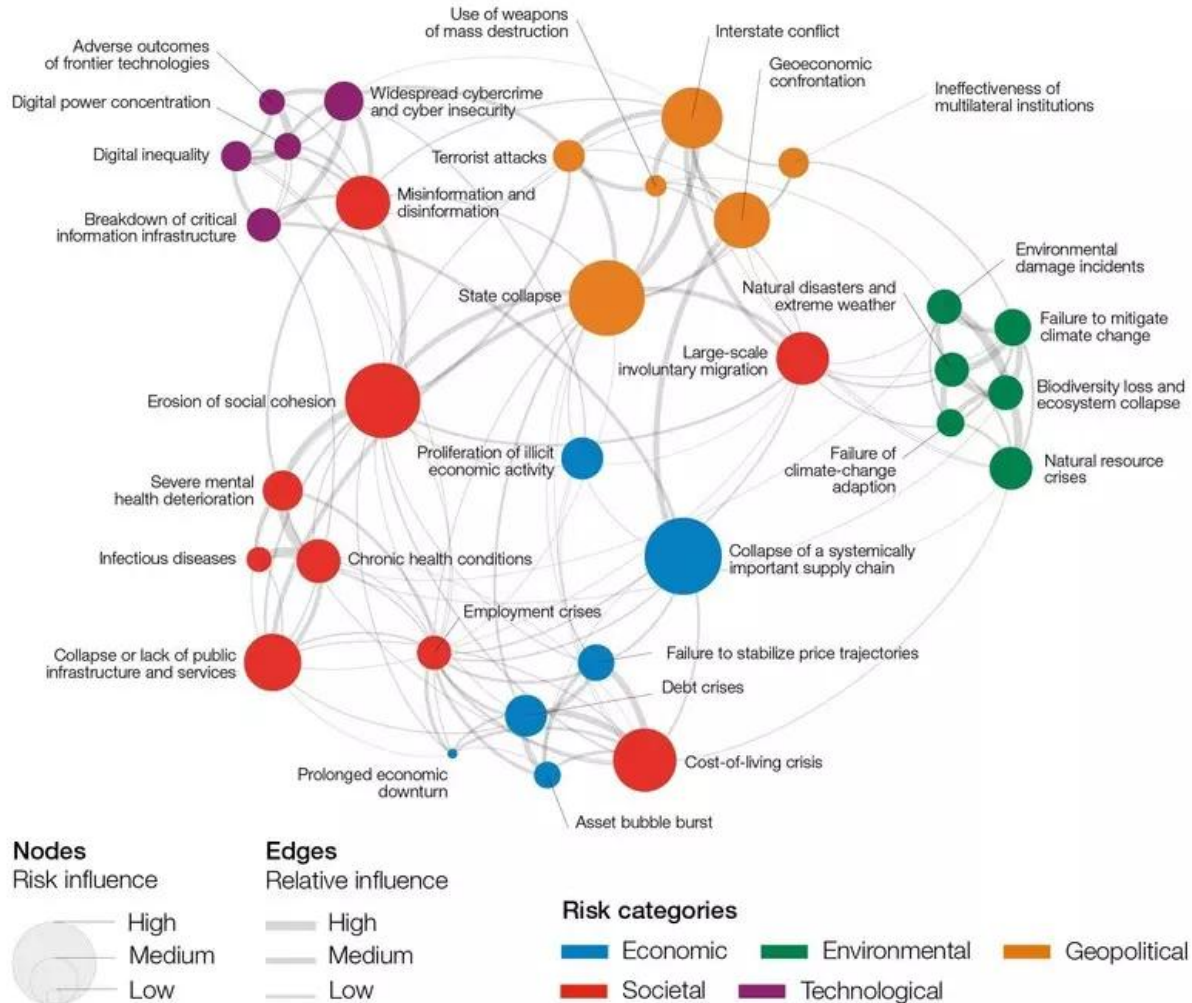
- **Whose brains are already cooked by all the previous sessions?**

Why engage in interdisciplinary research?

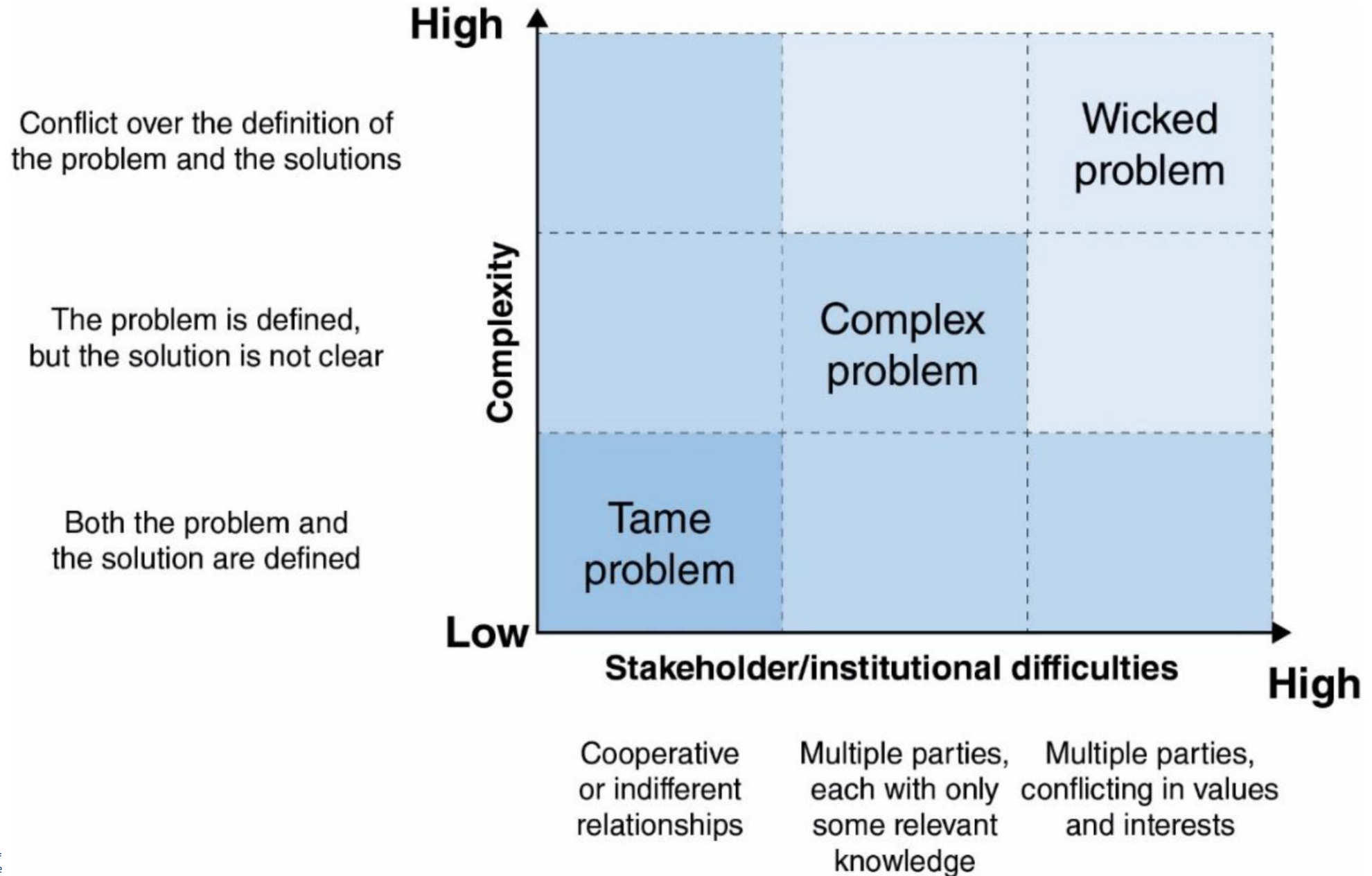
World Economic Forum – Global Risks

Global Risks Report 2023

Global risks landscape: an interconnections map



Source: World Economic Forum, Global Risks Perception Survey 2022-2023



When to start with interdisciplinary research?

Five common criteria used by interdisciplinarians:

- The problem is complex
- Important insights into the problem is offered by two or more disciplines
- No single discipline has been able to address the problem comprehensively
- The problem is at the interfaces of disciplines or ((potential) disciplines share a point of common interest in the problem)
- The problem is an unresolved societal need or issue

When to start with interdisciplinary research?



What is interdisciplinarity?

Definition?

“Interdisciplinary research is defined as a cooperative effort by a team of investigators from different disciplines who integrate their methods and concepts to address specific research challenges collaboratively.”

Problem Difficulty

Research Approaches

Complex



Transdisciplinary

Complicated



Interdisciplinary



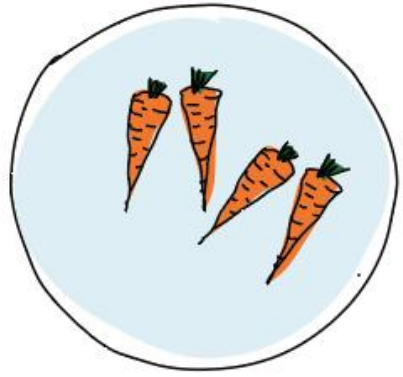
Multidisciplinary

Simple



Disciplinary

Intradisciplinary



within one
discipline

A single ingredient
(aka, discipline)
— no mixing

Cross disciplinary



viewing one discipline
from the perspective
of another

a load of
ingredients on
their own...
[a pretty dull meal!]

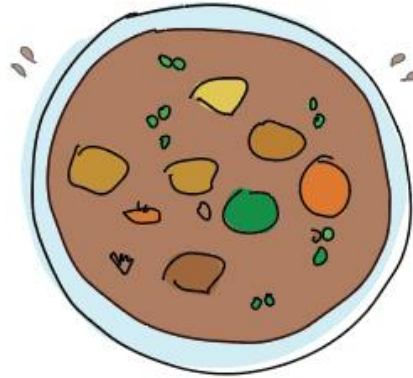
Multidisciplinary



several different
disciplines, each
providing different
perspectives...

... a salad bowl —
ingredients remain
intact and distinguishable

Interdisciplinary



Integration of
disciplinary contributions
is required...

.. a stew!
ingredients mush
into each other
and are only partially
distinguishable

Transdisciplinary



a unity of intellectual
frameworks beyond
disciplinary boundaries

... a CAKE!
the ingredients are
no longer distinguishable
and the final 'product'
is of a different kind

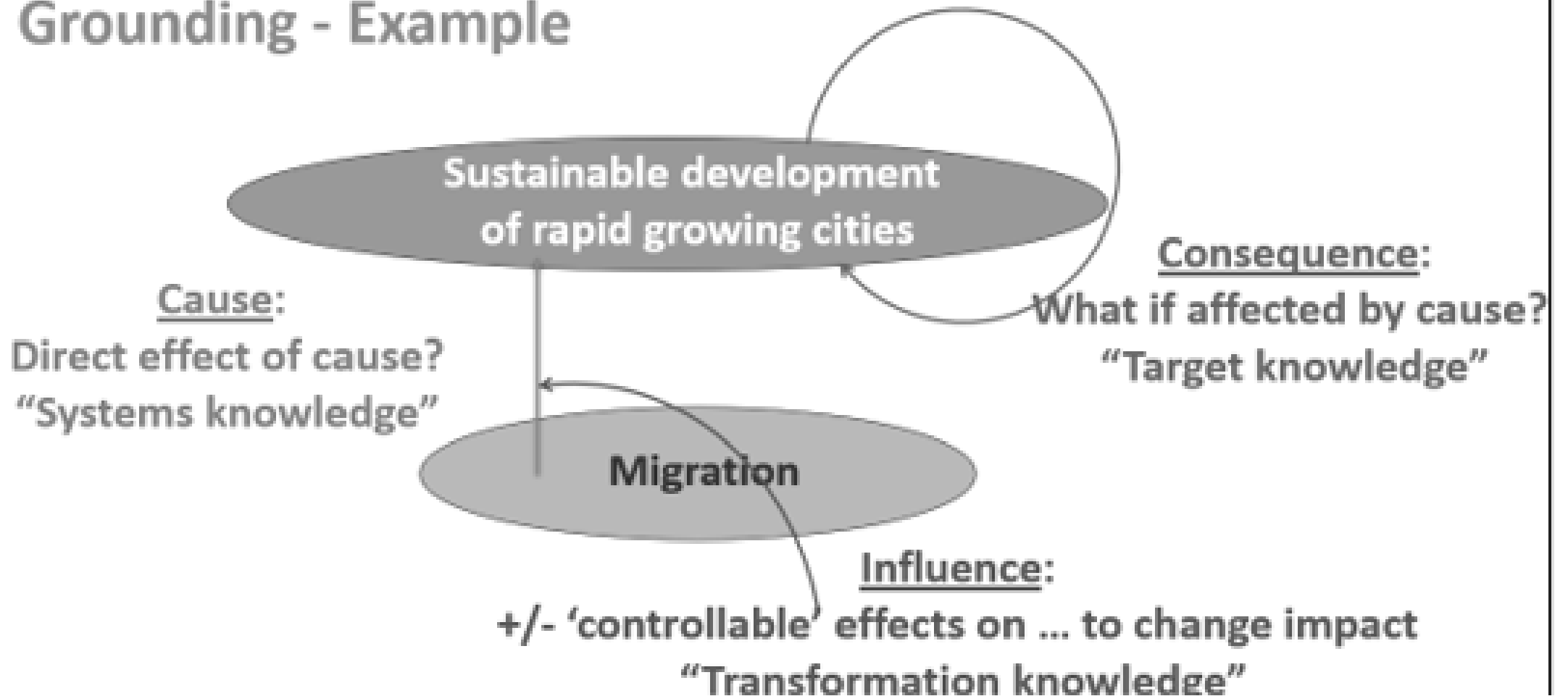
How to start your interdisciplinary research?

Concept	Who involved?	Disciplinary boundaries?	Aim
Multidisciplinarity	Researchers from several disciplines	Disciplines remain separate; they contribute in parallel.	A broader view of one topic (different perspectives)
Interdisciplinarity (integrates disciplines)	Researchers from two or more disciplines	Disciplines interact and are integrated.	A <i>shared</i> understanding, method, concept, ... (enabling links between disciplines and new knowledge for each discipline)
Transdisciplinarity (integrates disciplines <i>and</i> society)	Researchers and non-academic actors	Interdisciplinary research that engages with societal questions.	Knowledge co-production aimed at societal relevance to solve a (wicked) problem

Sometimes definitions are used differently. To avoid confusion, **define the concepts applied to your own project**, rather than assuming a shared definition. Use them consistently and be aware of the differences and overlap when using this terminology.

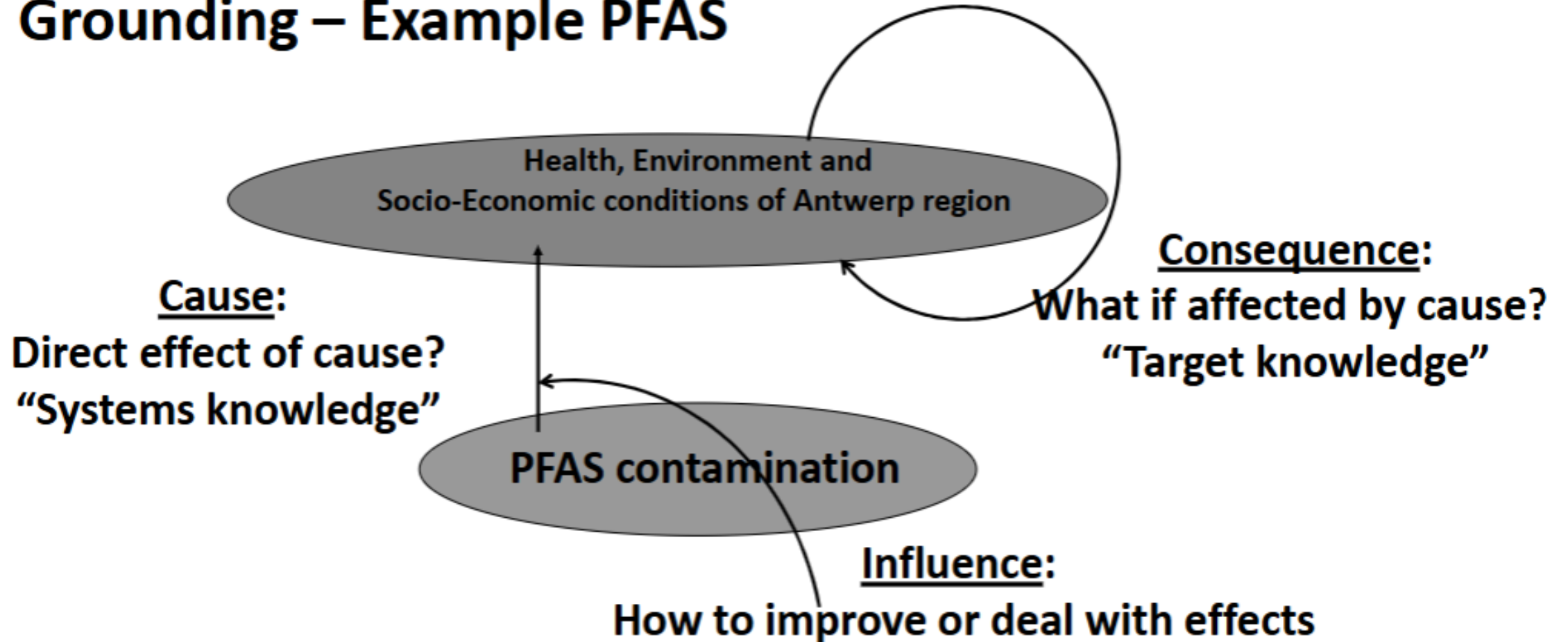
3 types of knowledge

Grounding - Example



3 types of knowledge

Grounding – Example PFAS



How to start an IDR project/proposal?

How to start your interdisciplinary research?

- De verschillende stappen van Bruno, maar met nadruk op:
 - Research question => What is the challenge? Is it a wicked problem?
 - Framing, grounding and perspective taking of “disciplinary insights” => frame different disciplinary perspectives (multidisciplinary)
 - Integrating disciplinary insights
 - Create common ground
 - Integrating perspectives

Gebaseerd op Bruno's slides (uit REPKO) kan ik een voorbeeld presenteren toegepast op het crafting futures project van USI.

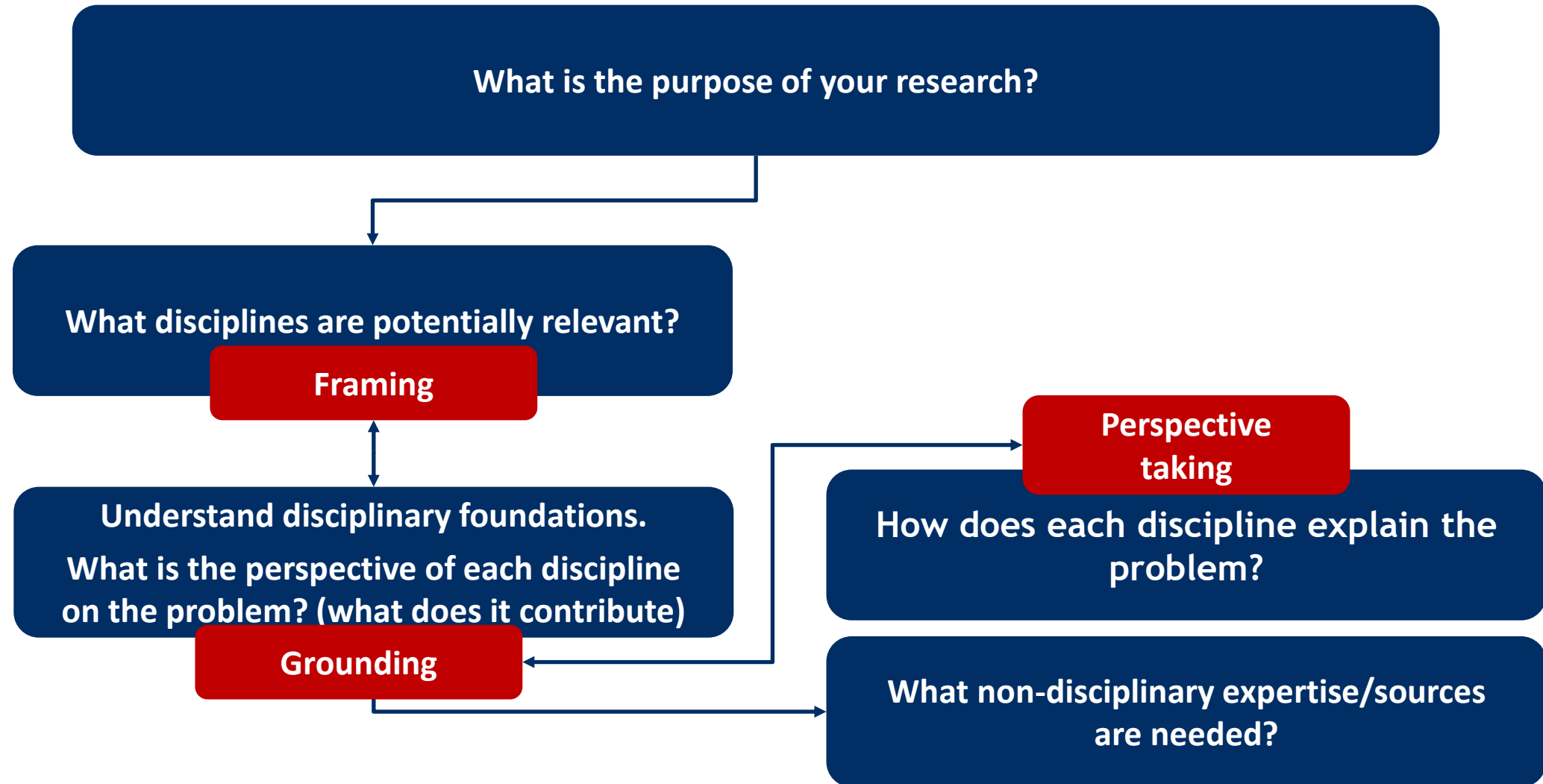
The IDR Process

- Step 1: Framing
 - Step 2: Grounding
 - Step 3: Perspective taking
 - Step 4: Creating Common Ground
 - Step 5: Integrating perspectives
- Multidisciplinary**
- Interdisciplinary & Transdisciplinary**
- 
- A diagram showing the IDR process steps. Steps 1, 2, and 3 are grouped under the label 'Multidisciplinary' by a large right-facing curly bracket. Steps 4 and 5 are grouped under the label 'Interdisciplinary & Transdisciplinary' by another large right-facing curly bracket.

The IDR Process

- Step1: Framing
- Step 2: Grounding
- Step 3: Perspective taking
- Step 4: Creating Common Ground
- Step 5: Integrating perspectives

Step 1-3: Multidisciplinary part (make a research map)



Step 1: Framing = comparing disciplines (multidisciplinary work)

- Define the problem

Why is craft knowledge undervalued and how can we transform this?

- Justify why interdisciplinarity is needed

This is a wicked problem, that if approached by one discipline, would miss important dimensions.

- Map potential disciplines to approach this problem (+ find relevant expertise/stakeholders)

Step 1: Framing => make a research map

AIM/PROBLEM: Why is craft knowledge undervalued and how can we transform this?

Framing

HISTORY
EDUCATIONAL SCIENCES
DESIGN & TECHNOLOGY
BUSINESS & ECONOMICS
LAW

Grounding

What is the perspective of each discipline on the problem?
What does it contribute?

Perspective taking

How does each discipline explain the problem?

Step 1: Framing

= Frames problem into multidisciplinary research question:

“Craft Knowledge is systematically undervalued because existing **educational, legal and cultural evaluation systems** privilege some forms of knowledge over others.

The project wants to transform these evaluation systems”

The IDR Process

- Step1: Framing
- Step 2: Grounding
- Step 3: Perspective taking
- Step 4: Creating Common Ground
- Step 5: Integrating perspectives

Step 2: Grounding

- **Goal: Understanding disciplines and their methods**
 - What **assumptions** does each discipline make about craft knowledge?
 - What **concepts, methods, and sources** does each discipline contribute? (and where are the gaps?)

Step 2: Grounding

HISTORY: *How did we come to value theory over embodied (craft) practice?*

- Historical understanding of how crafts lost status

BUSINESS & ECONOMICS: *How can crafts create economic value?*

- Business models, entrepreneurship and market positioning

LAW: *What legal mechanisms can support crafts?*

- IP, trademarks, geographical indications and governance frameworks

Step 2: Grounding

AIM/PROBLEM: Why is craft knowledge undervalued and how can we transform this?

Framing

HISTORY
EDUCATIONAL SCIENCES
DESIGN & TECHNOLOGY
BUSINESS & ECONOMICS
LAW

Grounding

How Contribute:

HIST: Hist. understand how crafts lost status
EDU: expertise on learning environments & evaluating competences
DESIGN: Connecting making, designing to Em.Tech
B&E: business models for crafters to help them
LAW: legal tools to protect craft knowledge

Perspective
taking

How does each discipline explain the problem?

The IDR Process

- Step1: Framing
- Step 2: Grounding
- Step 3: Perspective taking
- Step 4: Creating Common Ground
- Step 5: Integrating perspectives

Step 3: perspective taking

- Explore how different disciplines interpret the same issue
 - How does each discipline define and explain the problem?
 - Where do perspectives converge, complement, or conflict?

Step 3: perspective taking

- 1 discipline can have **conflicting insights** and methods on a topic
 - Make sure to correctly reference the perspective you choose to integrate
- In a **large project** like *Crafting Futures*, we used a form with a set of core questions for each partner/discipline to answer; e.g. how their discipline could/would approach the overarching research question
- For **individual projects**: sustained dialogue and exchange with peers from other disciplines (e.g. through platforms like USI & IMDO)

Step 3: Perspective taking

AIM/PROBLEM: Why is craft knowledge undervalued and how can we transform this?

Framing

HISTORY
EDUCATIONAL SCIENCES
DESIGN & TECHNOLOGY
BUSINESS & ECONOMICS
LAW

Grounding

HIST: how craft value systems emerged
EDU: new certification methods for expertise
DESIGN: connection to digital futures/tech (3D
B&E: business models for crafters to help them
LAW: legal tools to protect craft knowledge

Perspective taking

HIST: Why has crafts knowledge lost status?
EDU: How can embodied knowledge be certified and learned?
DESIGN: Why is crafts knowledge essential to innovating design & technology?
B&E: How do crafts create economic value? How to capture this?
LAW: What forms of recognition and protection are possible?

The IDR Process

- Step1: Framing
 - Step 2: Grounding
 - Step 3: Perspective taking
 - Step 4: **Creating Common Ground**
 - Step 5: Integrating perspectives
- Diagram illustrating the IDR Process steps and their associated approaches:
- Steps 1-3 (Framing, Grounding, Perspective taking) are associated with **Multidisciplinary**.
 - Steps 4-5 (**Creating Common Ground**, Integrating perspectives) are associated with **Interdisciplinary & Transdisciplinary**.

Step 4: Creating Common Ground

- = shared understanding
- Develop a shared language and conceptual framework
 - What concepts and assumptions can all disciplines agree upon?
 - How can disciplinary differences be translated into a shared framework?

Step 4: Creating Common Ground

- Develop a shared language and conceptual framework

Most difficult (and important) step!

- **CraftingFutures** proposed a methodology linking all disciplines:
 - *Convention theory*
 - *Actor-Network theory*
- This methodology = enabling interdisciplinarity, it facilitated a **shared set of concepts to exchange and integrate** disciplinary insights.

The IDR Process

- Step1: Framing
- Step 2: Grounding
- Step 3: Perspective taking
- Step 4: Creating Common Ground
- Step 5: Integrating perspectives

Step 5: Integrating perspectives

“This involves generating a new understanding that would not have been possible using a single discipline. It includes being able to use integration techniques (e.g. models, metaphors) to find new holistic understanding.”

Step 5: Integrating perspectives

- What new, *integrated* understandings emerge?
- **What new integrated insights emerge when disciplinary perspectives are combined?:**
 - Craft knowledge is simultaneously *historical, cultural, educational, technological, economic, legal*. Its (under)evaluation results from the interaction from **multiple evaluation systems**.

Step 5: Integrating perspectives

- What new, *integrated* understandings emerge?
- **How does this integrated understanding lead to new solutions and interventions?**
- Develop new repertoires of craft evaluation through:
 - New assessment methods
 - Certification mechanisms
 - Policy instruments
 - Business models
 - Legal frameworks
 - Educational practices

Tools

Tools

- **Research mapping**
- **System mapping**
- **Stakeholder mapping**
- **RACI distribution of roles and responsibilities**

IDR support @ UAntwerp

Interdisciplinarity @UAntwerp

- **Platforms**
- **Courses**
- **Networking**

Interdisciplinarity @UAntwerp

Interdisciplinary platforms and IDR facilitators (examples)

Keep an eye on research days, inspiration days, ...

University scale

IMDO (Instituut voor Milieu en Duurzame ontwikkeling)

USI (Urban Studies Institute)

ARIA (Antwerp Research Institute for the Arts)

...

Smaller scale

MIGLOBA & IOB (migration studies, global mobility and development policy)

Centres of Excellence (AIPRIL (Antwerp Interdisciplinary Platform for Research into Inequality), ACTORE, GOVTRUST, ...)

ATA (Antwerp Taks Academy)

METRODORA

METROPOLITAN LEGAL LAB

Interdisciplinarity @UAntwerp

Courses

- Interdisciplinary Thinking (30/11/2026; 18/01/2027; 8/02/2027)
- Summer schools: <https://www.uantwerpen.be/en/summer-winter-schools/inter-and-transdisciplinary-research/>

Networking

- 17/03/2027: Interdisciplinary Project Day
- Workshop 23/03/2027: Building an interdisciplinary career in urban research
- Lunch seminars of other research groups, platforms, ...

