

Postdoc Day 2025

“Synergy in Science: Advancing Research Through Interdisciplinary Approaches”

June 11th 2025

Dr. Bruno Hoste - Grants Office, RIVA - UAntwerp



“If I had asked people what they wanted, they would have said faster horses.”

Henry Ford

Interdisciplinary Research

“Why?”

Interdisciplinary Research

“A SENSE OF URGENCY”

Remember COVID-19?



***“Never let a good crisis
go to waste”***

Winston Churchill

Interdisciplinary Research

- Starting point?



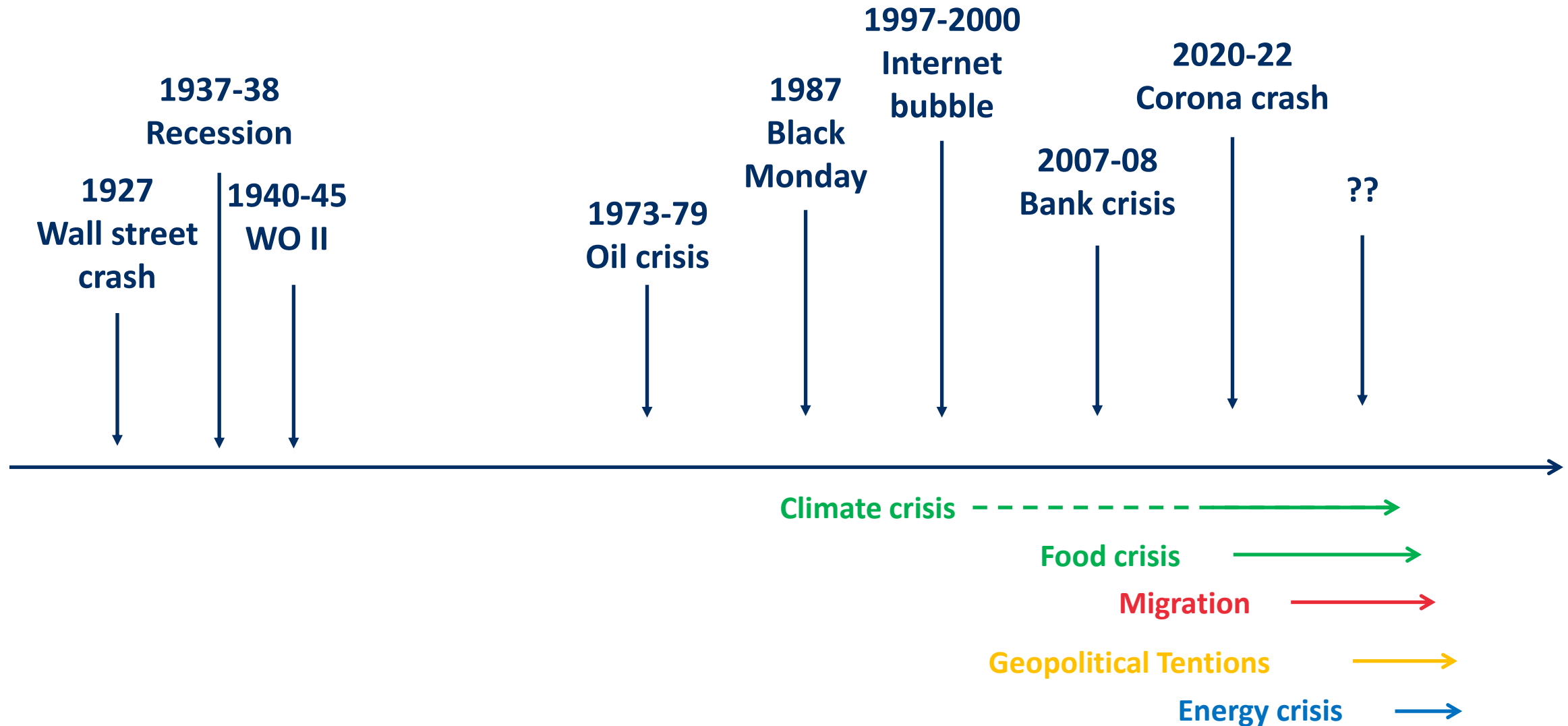
Crisis → ‘Challenges’

Scale?

Solution?

Approach?

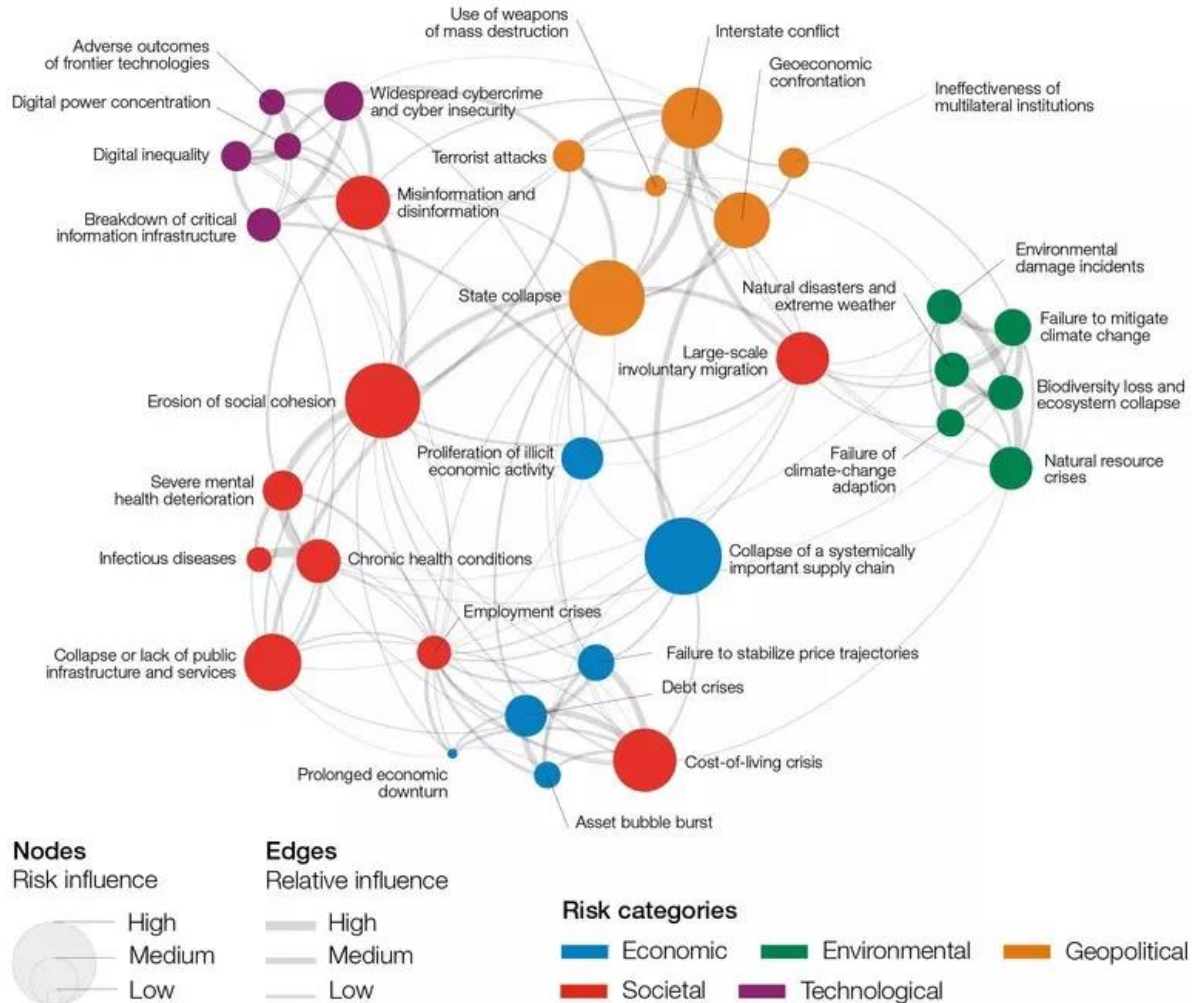
Crisises through time



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

Interdisciplinary Research

- Starting point?
- What is it?

Interdisciplinary Research

“Definition”

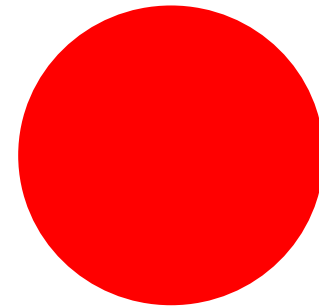
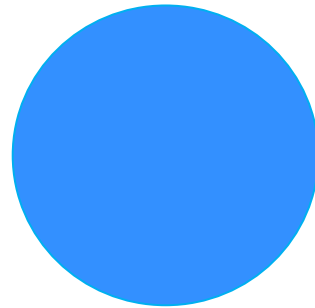
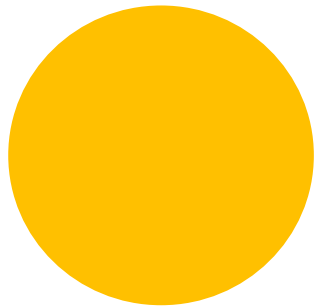
Interdisciplinary Research

“Discipline”

*“Disciplines represent **fields** of deep and detailed content knowledge,
communities of professional practice,
forms of discourse (of fine and precise semantic distinction and technicality),
areas of work (types of organization or divisions within organizations such as academic departments or research organizations),
domains of publication and public communication,
sites of common learning, shared experiences of apprenticeship into disciplinary community,
methods of reading and analyzing the world,
ways of thinking or epistemic frames, even ways of acting and types of person.”*

Interdisciplinary Research

“Scientific Discipline”



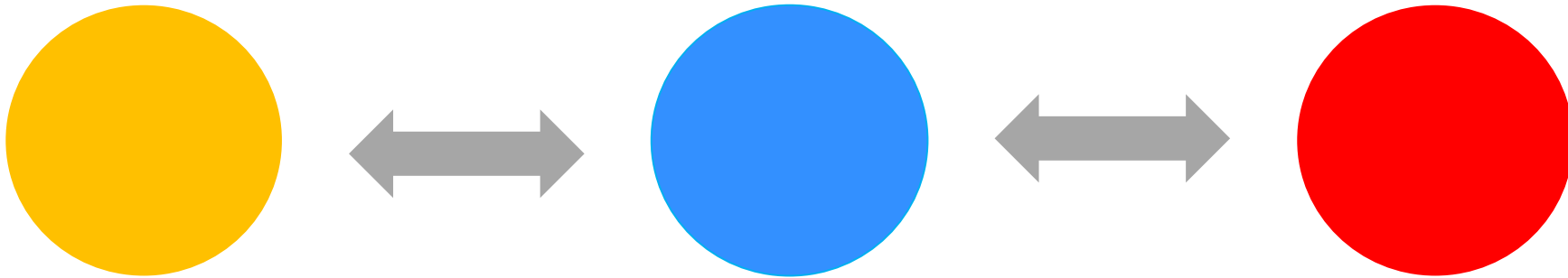
“Theories, Axioma's, Insights, Principles, Laws,
Technicities, Terminologies, Methodologies, Definitions,”

Biology – Mathematics - Sociology

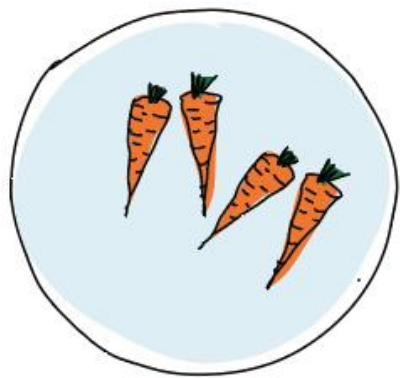
Interdisciplinary Research

“Disciplinarity”

“Forms of intense collaboration between existing disciplines, inside and outside academic world.”



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!]

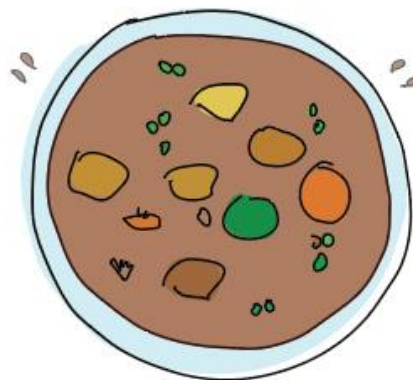
Multidisciplinary



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

Problem Difficulty

Research Approaches

Complex



Transdisciplinary

Complicated



Interdisciplinary



Multidisciplinary

Simple

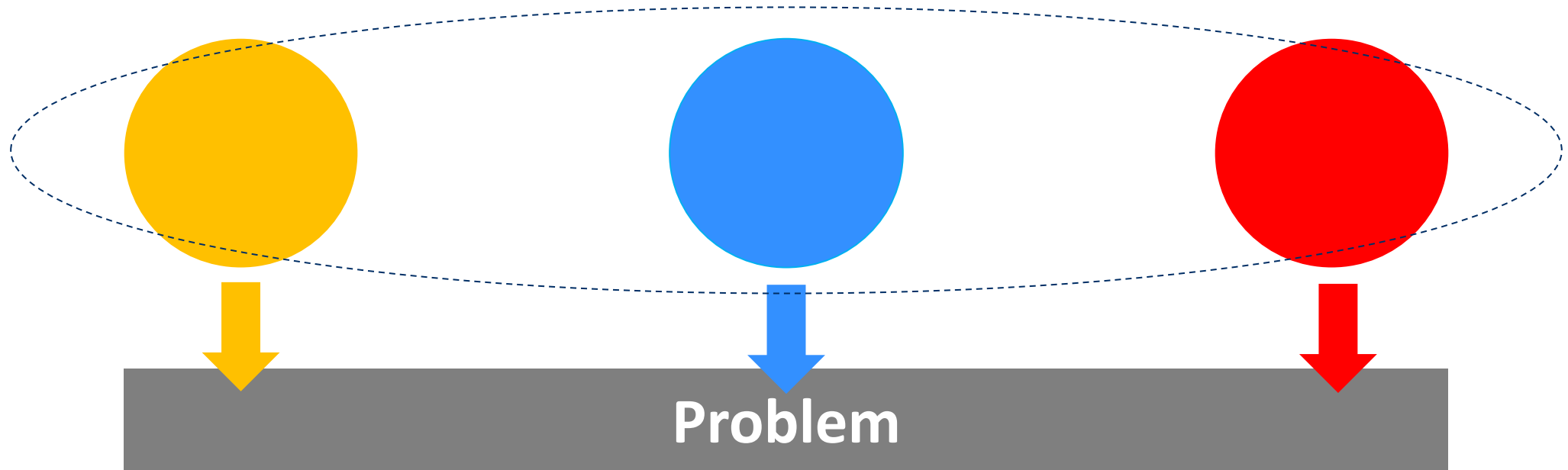


Disciplinary

Interdisciplinary Research

“Multidisciplinary”

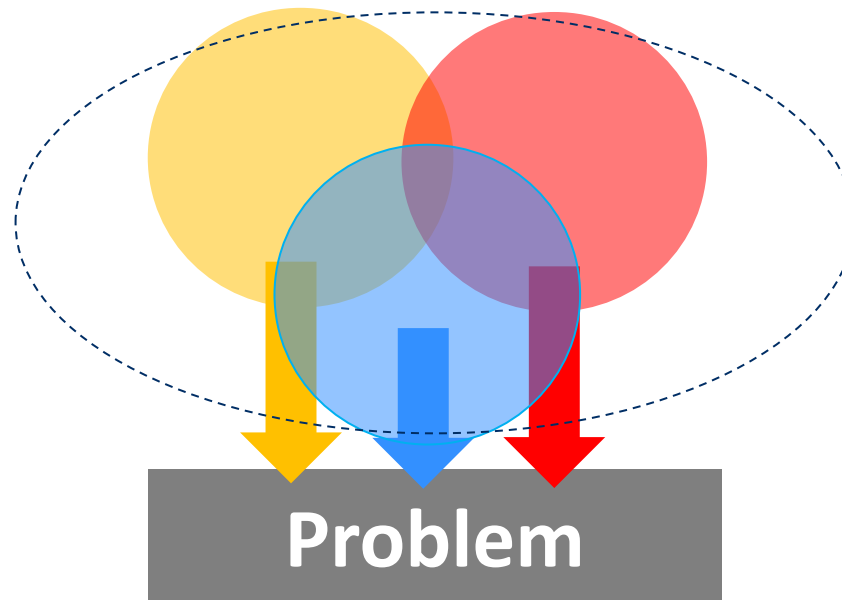
Collaboration on common initiative(s) without cross-border influence or changes of insight within each discipline due to another discipline



Interdisciplinary Research

“Interdisciplinary”

Collaboration between disciplines which leads to progress within each discipline due to cross-fertilisation on methodological, conceptual or theoretical level



Interdisciplinary Research

“Interdisciplinary studies”

“Interdisciplinary studies is a cognitive process by which individuals or groups draw on disciplinary perspectives and integrate their insights and modes of thinking to advance their understanding of a complex problem with the goal of applying it.”

Interdisciplinary Research

“Interdisciplinary studies”

“Interdisciplinary studies is a cognitive **process** by which individuals or groups draw on disciplinary **perspectives** and **integrate** their insights and modes of thinking to advance their **understanding** of a **complex problem** with the goal of **applying** it.”



Interdisciplinary Research

“Interdisciplinary studies”

- Interdisciplinary studies draws on **two or more** disciplinary perspectives.
- Complex events or processes and behaviors have **facets or parts that cohere**.
- Each facet is typically the **focus** of a particular discipline.
- When the same facet is studied by more than one discipline, there are often **conflicting insights** generated.
- Understanding each facet involves **drawing on the insights** of the corresponding discipline(s).
- Understanding the complex phenomenon or behavior as a whole involves **integrating insights** from the relevant disciplines.

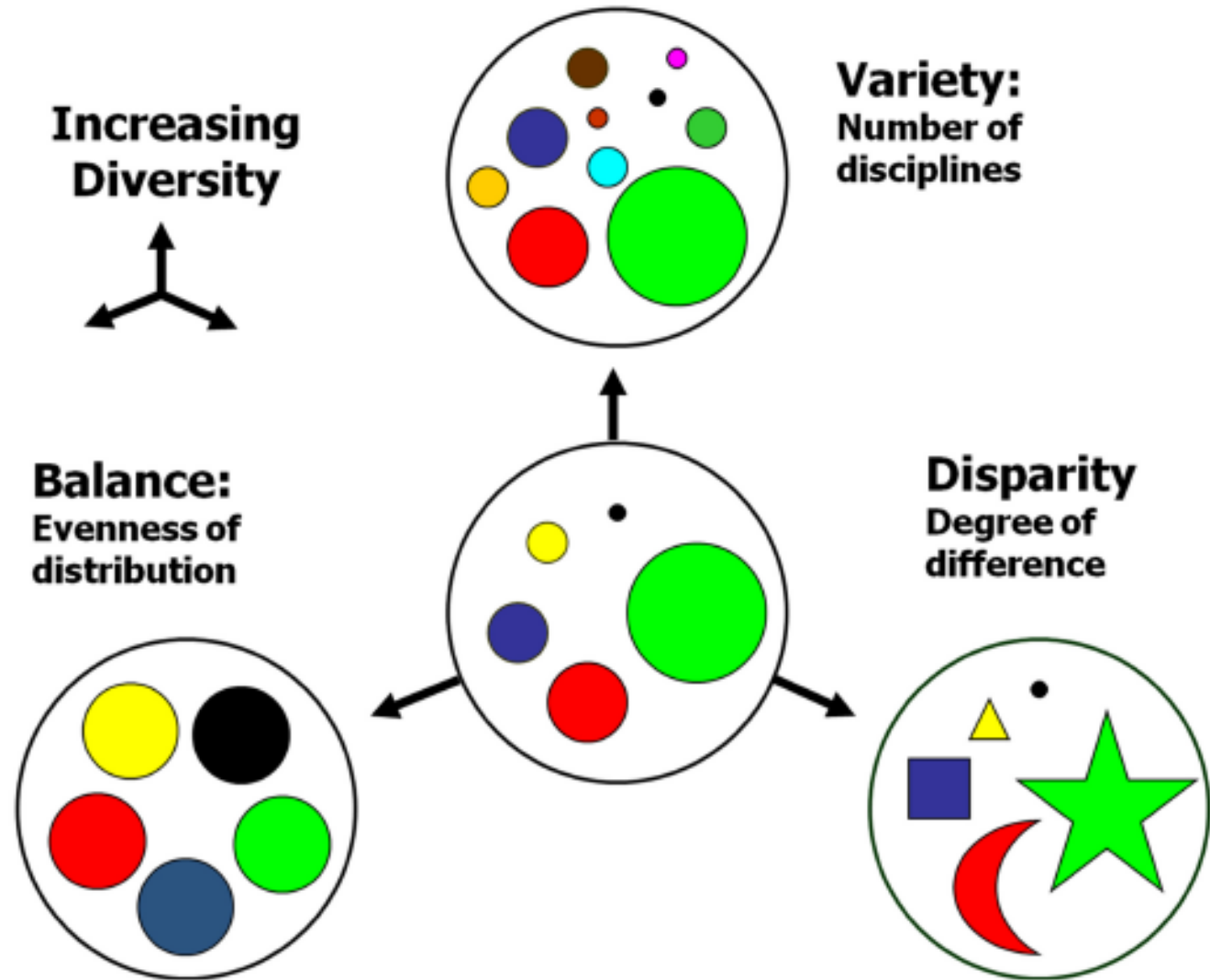
Interdisciplinary Research

“Interdisciplinary studies”

- What’s your challenge/problem? Does it need IDR approach?
- What disciplines are involved / needed to solve your challenge?
- Do (and if so, how do) our disciplines cohere?
- What’s the focus in each of your disciplines?
- What are insights you have made from each discipline and are there conflicts between these insights?
- How would you integrate insights from your relevant disciplines?

Interdisciplinary Research

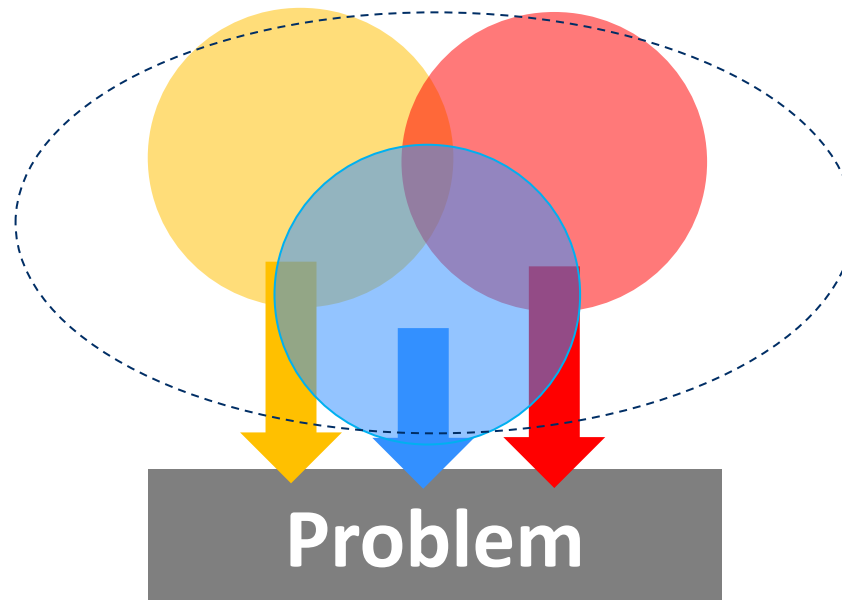
Attributes



Interdisciplinary Research

“Interdisciplinary”

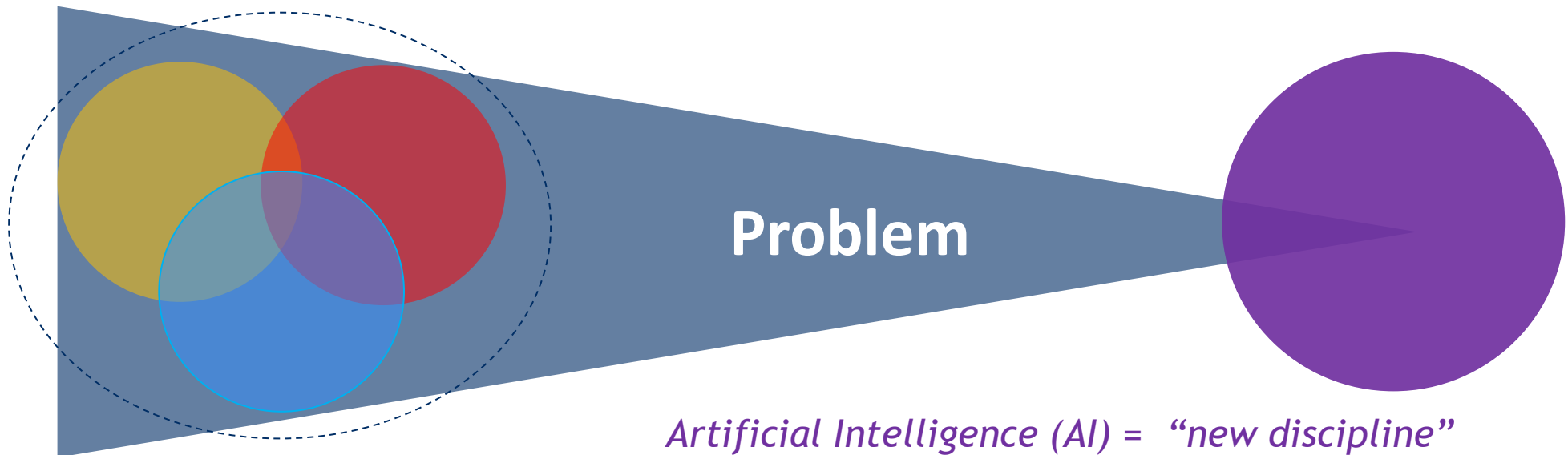
Collaboration between disciplines which leads to progress within each discipline due to cross-fertilisation on methodological, conceptual or theoretical level



Interdisciplinary Research

“IDR outcome?”

Creation of a new (independent) discipline based on successful interdisciplinary collaboration”



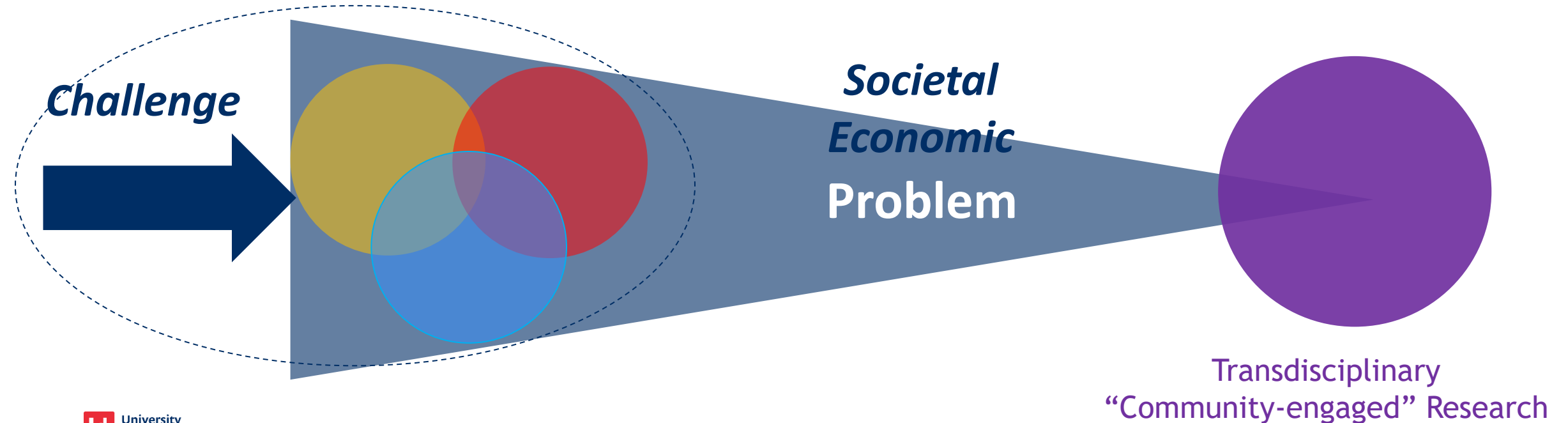
Artificial Intelligence (AI) = “new discipline”

From mathematics - IT in combination with pattern recognition and imaging, cognitive psychology, logic, statistics, linguistics, ...

Interdisciplinary Research

“Transdisciplinary”

Gradients in intensity of collaboration (involvement)
and envisioned end result



Interdisciplinary Research

“How?”

Interdisciplinary Research

“TRUST”



Trust

- Being open for the unknown
- Allow experimentation, play
- Experience with complexity (chaos to focus)
- Interpersonal and team building skills
- Engagement – Commitment – Provide oxygen
- Ways of support and interaction

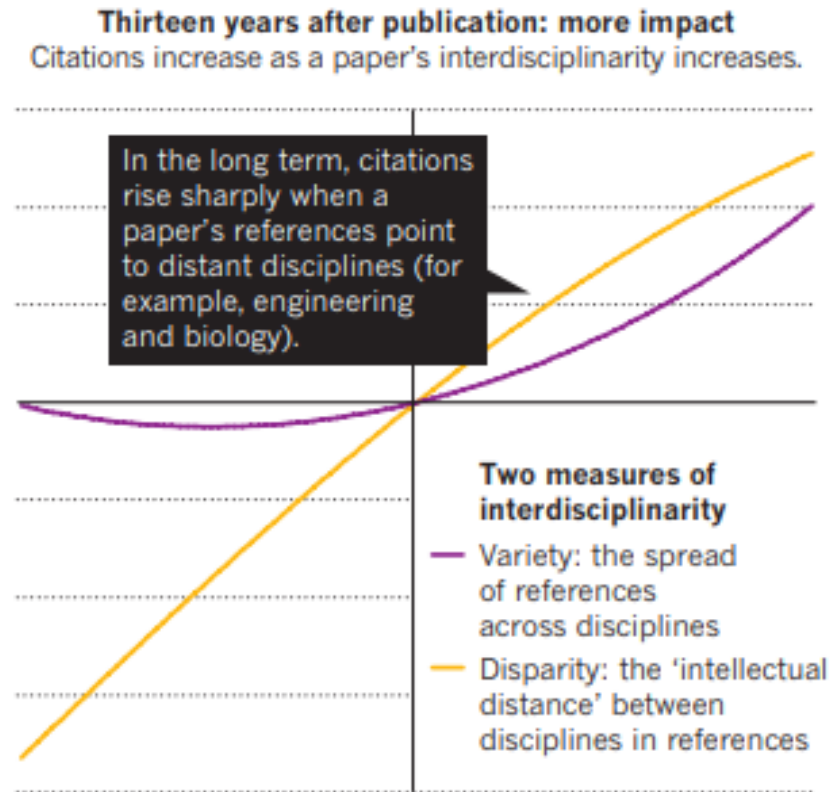
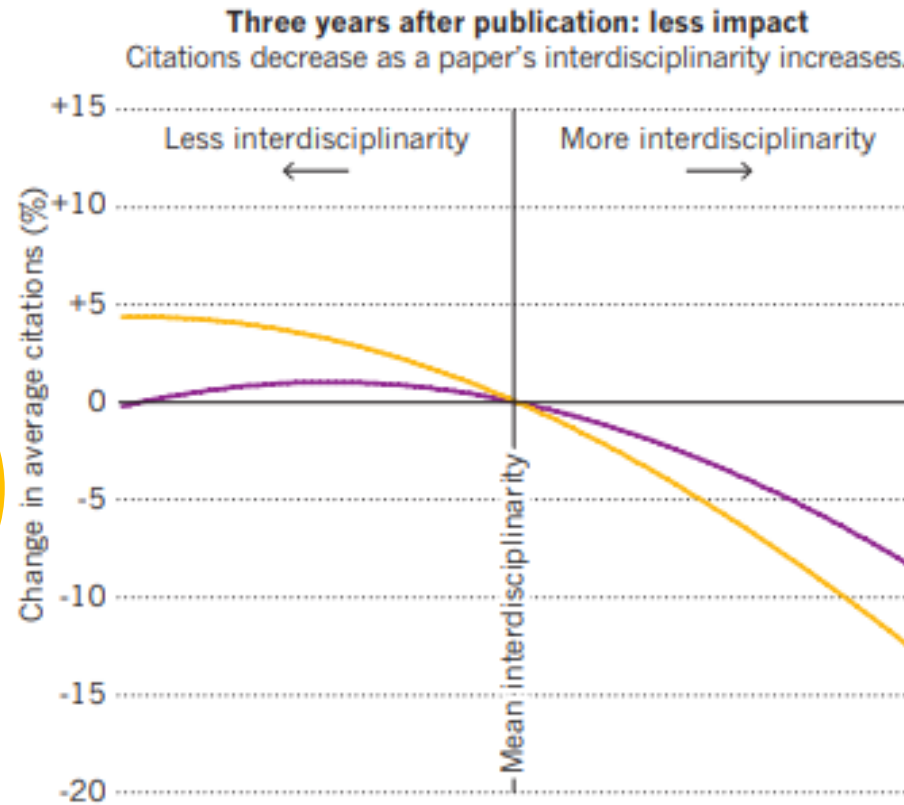
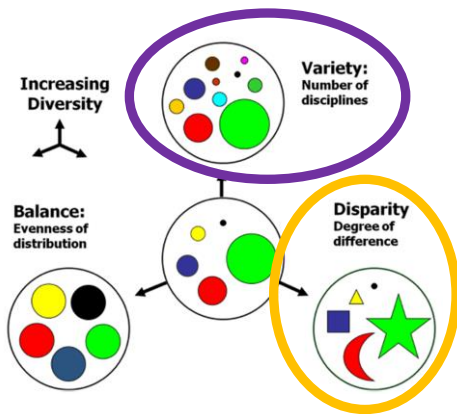
Interdisciplinary Research

“PERSPECTIVE - BENEFIT”

Perspective

- Evolution
 - Increase interest in and emphasis on Interdisciplinary Research (publications)
 - Increasing attention for funding for this type of research
 - More Interdisciplinary evaluation panels
 - Evaluation criteria are being adapted for IDR
 - Explicit attention for IDR in calls
- Revolution?

Evolution of citations in function of interdisciplinarity



Perspective

- Evolution
- Cost / Benefits
 - Much effort with initially limited 'advantage'
 - Time needed for scientific impact, effect on the long term
 - New research niches or even new disciplines are created

Perspective

- Evolution
- Costs / Benefits
- Future options on how?
 - Elective courses, Interdisciplinary projects and support?
 - Additional courses in other disciplines?
 - Immersion into another research culture?
 - Interdisciplinary seminars?
 - IDR characteristics in CV? New job perspectives of specialisation?
 - IDR input / output recognition and promotion?
 - Expertise cel or specialization / facilitation?

Interdisciplinary Research

- Starting point?
- What is it?
- Environment?
- Incentives?

Interdisciplinary Research “Incentives”



“I believe a majority of researchers want to engage in interdisciplinary research.

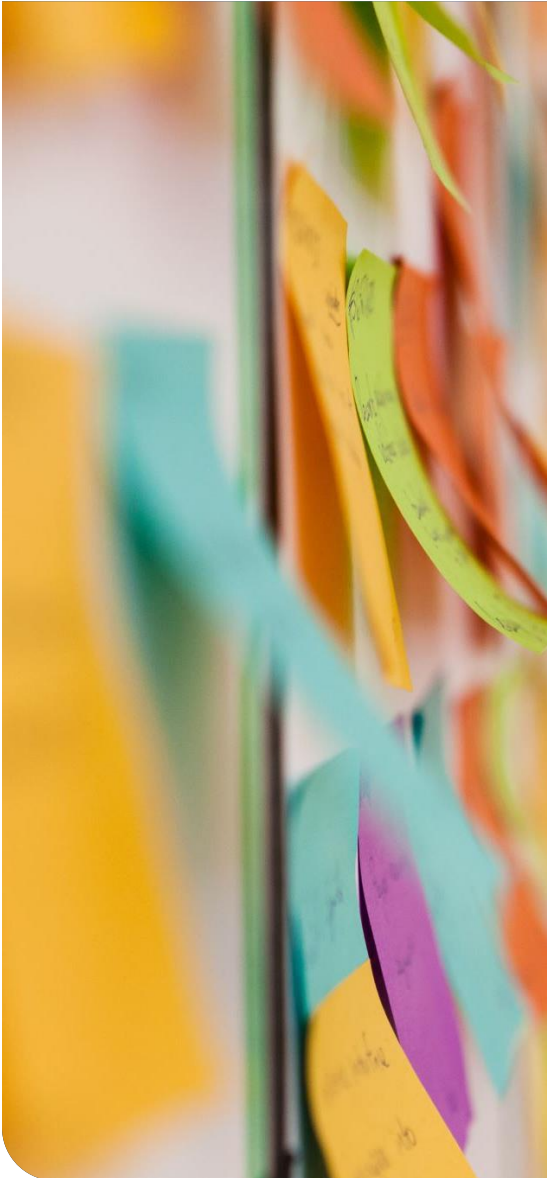
Therefore, I think it's rather an issue of removing hurdles rather than incentivizing.”

Incentives

Incentives?

- Funding?
- Funding?
- Funding?
- Funding?
- Funding?
- Support?

Incentives – Support?



Interdisciplinary Research Support

- Good practices?
- Existing support?
- Needs?
- Contribute?

Support – Good practices

- IMDO & USI, CoE at UAntwerp as facilitating ‘entities’
- Some Horizon Europe projects, also personal grants
- Limited known education initiatives (opportunity)

Use?:

- Examples of good practices and or cases (possible per domain)
- “Discovery” phase of the IDR support trajectory
- Willingness to testimony on process in setting up and execution

Support – What exist?

- Clearly very limited or no examples of courses or support systems
- Need for project writing experience
- Need for understanding the IDR process (Shape-ID)

Use?:

- Inquiry confirms the need for support

Support – Needs?

- Experience: Setting up IDR projects, process and how to facilitate it
- Knowledge: discipline 'culture', bottom-up, helicopter-view, funding requirements, project formulation, team dynamics
- Skills: Facilitation, integration, time management, project writing, stakeholder involvement process, networking, people skills, 'verbindende' communicator

Use?:

- Provide a course for IDR facilitators
- Provide additional courses

Support – Needs?

Hands-on facilitation

- Identifying potential partners (Databases, Networking)
- Online resources (Literatuur, Best practices, Definitions)
- Trainings (Methods, Facilitate)
- People (IDR facilitator profiles)
- Assistance IDR proposal development
- Coordination cross-discipline proposal development
- Supporting young researchers

Support – Needs?

Supporting policy framework

- Academic credits for IDR projects?
- Allocated time for exploring IDR potential
- University funding (pilots, seeding money, ...)
- Double affiliations?
- Promotors from different faculties?
- Map IDR experts in universities
- Interdisciplinary project bonus?
- IDR Curriculum?
- Teaching across faculties

Support – Who can contribute?

- Ideas on how to take away hurdles, share experiences, provide guidance
- Exchange ideas and experiences
- Roles of research coordinators

Use?:

- Provide input and examples
- Setting-up IDR Facilitators 'like-minded group'
- Sharing best practices
- Faculty research coordinators can suggest 'challenges'

Interdisciplinary Research – Need for support?

- Importance of and interest in IDR ↑
- There was no support (trajectory) available @ university
- Initiative at institutional level?
- Access for all researchers and support staff to participate
- Form of 'coordination' and 'structure' is needed (complex process (!))
- Requires specific support, expertise and skills

Interdisciplinary Research

- Starting point?
- What is it?
- Environment?
- Incentives?
- Barriers & Opportunities?

Barriers

- Career path issues – hiring, promoting & evaluation
- Academic tribalism & misunderstanding – speaking different languages
- Power differences between participants
- Lack of experience in collaboration
- Dealing with complex relationships
- Personal qualities - collaborative attitudes
- Time to overcome these barriers

Opportunities (for universities & support)

- Culture change
- Career pathways for I/TDR researchers
- Enabling knowledge sharing & ITD networking
- Training & building awareness
- Skills & leadership capacity, promoting ITD research
- Researcher networking, stakeholder networking, facilitation
- Mapping & connecting ITD expertise
- ITD proposal development
- Translating knowledge for practice/policy

“Interdisciplinary Research Support” @ RIVA - UAntwerp

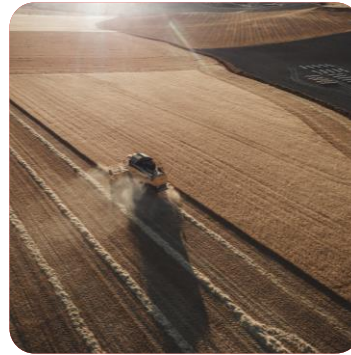
IDR Support concept



IDR Basics

- Short Introduction sessions
- IDR support & training options
- Introducing Masterclass & Facilitators

Multiple intro's (2-3 x year)
Can be offered 'on request'



IDR Masterclass

- The IDR proces
- Theory & practice
- IDR Cases
- IDR Teams & Stakeholders

In depth course (2 x year)
Masterclasses or summerschool
Focused on IDR projects & fellowships



IDR Facilitators

- IDR support experts
- Roles & responsibilities
- Profile & extra courses

Expert course
PhD & Postdoc community
Focused on training IDR facilitators



Benefits of IDR Masterclass

- Structured information and course material
- In depth knowledge on IDR process
- Excellent examples and testimonies
- Exercises, tools, templates
- Unique approaches and work formats
- Cases and (practice) use/apply in practice
- Guidelines for IDR Teams & team dynamics
- Checklists



Antwerp
Summer
University

Inter- and Transdisciplinary Research

18-22
AUG 2025



Impact of IDR Masterclass

- Faster / more efficient IDR or TDR approach
- Better 'constructed' IDR or TDR projects
- Improved IDR project execution (R&R)
- Create positive mindset for IDR
- Future IDR Facilitators potential
- IDR F community? - platform of and for equals, sharing experience, insights
- Setting up tailor made IDR Masterclasses

Opportunities for Postdocs

- Discover novel research routes or opportunities
- No 'pressure' of PI position, still time to experiment
- New career pathways or options
- Broaden your knowledge sharing & networking
- New or other skill developments & growth in leadership
- Increase knowledge on ITD processes & proposal development
- Allow more focus on research projects with Impact



Thank you!

IDO Team(work)

Bruno Hoste (GO)

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Jasna Loos (FGGW)

Kate Reilly (USI)

Vincent Bellinkx (IMDO)

Olga Beloborodova (ARIA)

Jan Verpooten (ARIA)

Sophie Op De Beeck (GOVTRUST)

Frédéric Huybrechs (IOB)

Interdisciplinary Research “Never waste a good opportunity”

