

Resilience and efficiency of sustainability in research:

the politics of dealing with feedback loops



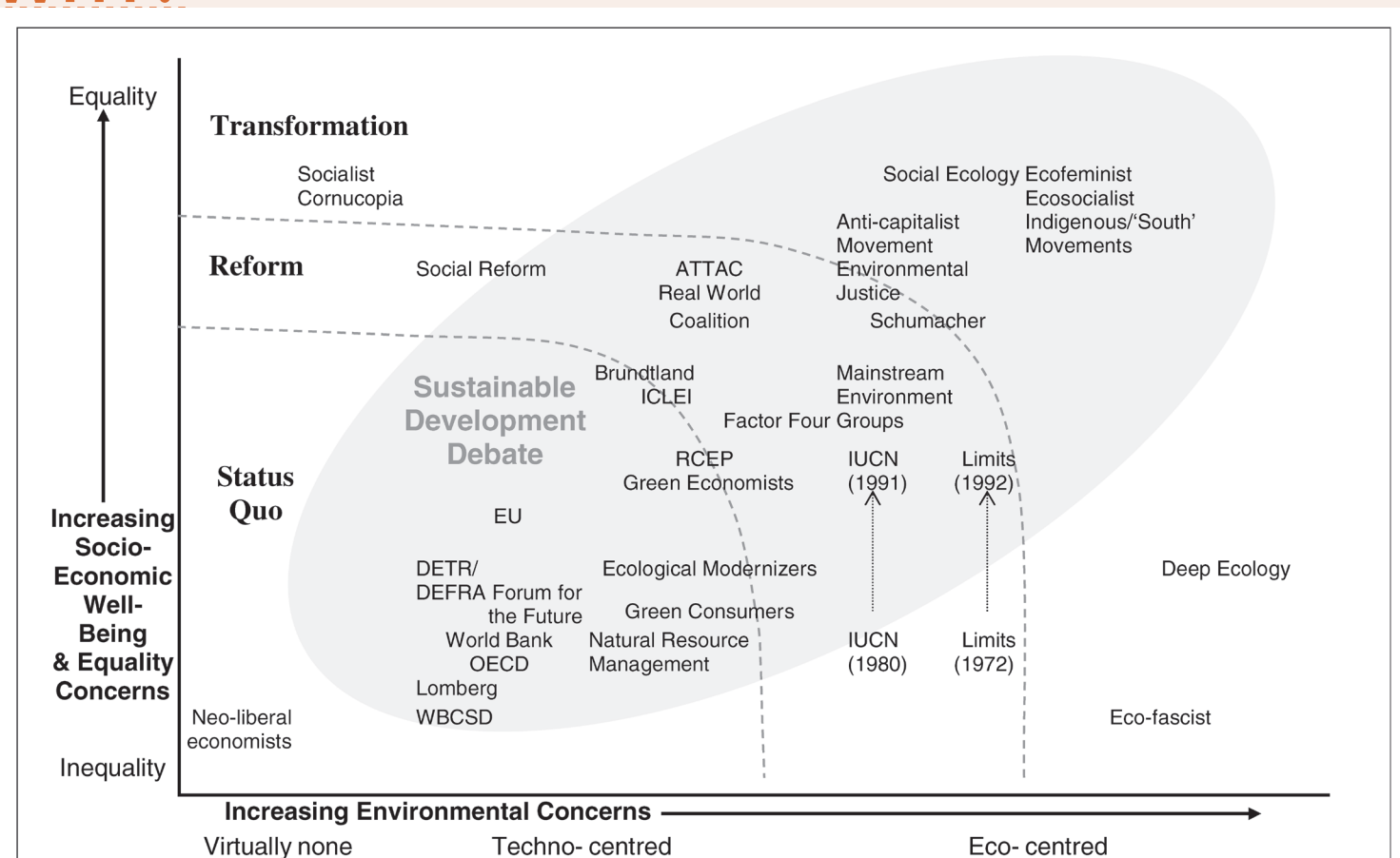
Flanders
State of the Art

What can we learn from experiments in structural policy changes for sustainability in the higher education research landscape of Flanders, Belgium?
How should we translate sustainability into tangible and realistic research actions for higher education institutions?

What you need to know

(about how we do things in Flanders, Belgium)

WHY?



This figure illustrates different trends of thought on sustainable development, their political and policy frameworks and their attitudes towards change and means of change. Hopwood et al. (2005)

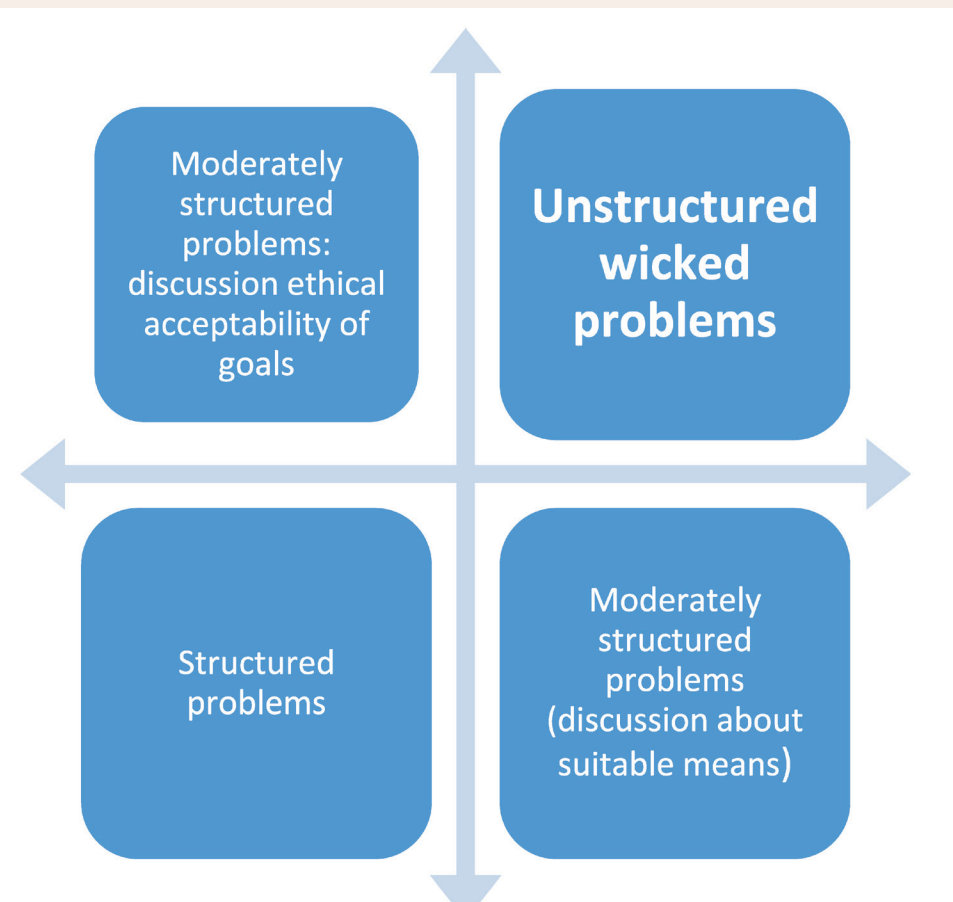
“ Culture eats process for breakfast.

Peter Drucker, www.drucker.institute

HOW?

Type of action	Objective	Actions
Research funding	Financial support for research for sustainability;	• Valorizing a sustainability focus in project proposals (e.g. by allocating extra funds); • Funding interdisciplinary research platforms/hubs; • Funding interdisciplinary pilot studies (e.g. scenarios w.r.t. specific societal challenges); • Funding interdisciplinary PhD scholarships; • Funding full-time tenure track professors in sustainability science; • Adjustment of allocation criteria of the higher education institution's research fund; • (Inter-)faculty financial incentives (e.g. in support of inter-disciplinary project proposals);
Research & career evaluation	Integration of aspects of research for sustainability when evaluating researchers and research teams; Enhance accountability of researchers and research teams;	• Modification of career evaluation criteria by including inter- and trans-disciplinary initiatives; • Develop criteria for evaluation and reporting of inter- and trans-disciplinary elements in project proposals; • Sustainability commission replaces/complements ethical commission; • Development of common output indicators for sustainability relevance; • Awards in support of 'research for sustainability'
Research organization	Operationalize trans-disciplinary;	• Engagement of non-academic actors in the assessment of research activities; • Support the establishment and activities of inter-disciplinary research platforms/hubs; • Organize common interdisciplinary events/project calls with (in) such platforms; • Set up a sustainability science chair/professorship; • Development of an action plan for engaging non-academic actors (businesses, cities, ...) in research for sustainability; • Development of inter-institutional centers of excellence in research for sustainability; • Stimulate inter-disciplinary master theses (joint problem statement; thesis award); • Taking stock of 'research for sustainability' activities within the institution; • Appointment of research coordinator(s) for drafting and managing inter- and trans-disciplinary project proposals.
Capacity building	Strengthen capacity w.r.t. (inter- and trans-disciplinary) research for sustainability	• Exchange of good practices by way of regular inter-institutional consultation; • Focus on problem-driven education in preparation of future (research) career (e.g. Masterclass sustainability science for PhD students & postdoctoral researchers); • Operationalization of sustainability for different researchers and research teams by way of listing possible research actions; • Promotion & recognition of academic leadership w.r.t. inter- and trans-disciplinary approach of 'wicked' societal challenges;
Policy	Anchoring research for sustainability in the institution; Increase visibility of research for sustainability	• Integration of a commitment towards research for sustainability in mission and vision statements; • Integration of 'research for sustainability' commitment in a code of conduct for researchers; • Granting recognition (e.g. doctor honoris causa titles) to sustainability scientists; • Adjusting communication: reframing press releases towards challenge-driven communication; • Adjusting the core business of higher education institutions to the changed pattern of expectations from society; • Enhancing the linkages between 'research for sustainability' actions and actions for sustainability integration in campus operations and in curricula; • Inclusion of sustainability as a criterion in calls for tender; • Support for organizational and cultural change towards trans- and interdisciplinary action-driven research;

Table 1: List of possible 'research for sustainability'-actions (based on a workshop with research managers in Flanders, Belgium). Hugé et al. (2016)



Typology of problems based on the degree of certainty of knowledge and the degree of agreement on values. The X axis represents a continuum of increasing uncertainty on the required knowledge (uncertainty highest on the right end). The Y axis represents a continuum of agreement on norms and values (agreement highest at the bottom). Hugé et al. (2016)

Such pilot projects are currently underway at four institutions, with HoGent University College pioneering in 2015-2016:

- PXL University College
- Artevelde University College Ghent
- University College Leuven-Limburg
- Howest, University College West Flanders

WHAT DO WE LEARN?

The top leverage points:

- Think (wicked) problem driven instead of discipline driven
- Enthuse people by a shared understanding of what an unsustainable future looks like
- Create a long term perspective (in funding, HR, ... and the research question itself)
- Develop a shared language/jargon between disciplines to put sustainability central in your research
- Tell a story
- Educate, teach and communicate about your research in a more transdisciplinary and systemic way
- Reorganize funding based on (wicked) problems (cf. H2020)
- Be transparent in your research, eg. about the values and motivation behind choices made
- Compose multidisciplinary teams to rate research (grants)
- Share results to advance
- Show your (learning) process
- Hire an external process manager
- Reflect on and clearly identify the societal return of your research (not to be reduced to its economic component)
- Link insights of fundamental research to applied research, and vice versa
- Attract a diverse group of stakeholders and clearly identify roles and responsibilities of everybody involved
- Improve mobility between university (college), society, and companies
- Create an urban academy on sustainability themes that involves your town and its citizens
- Create multidisciplinary institutes and research groups at university (college) level
- Experiment freely at a small scale, in a safe space

What you need to do

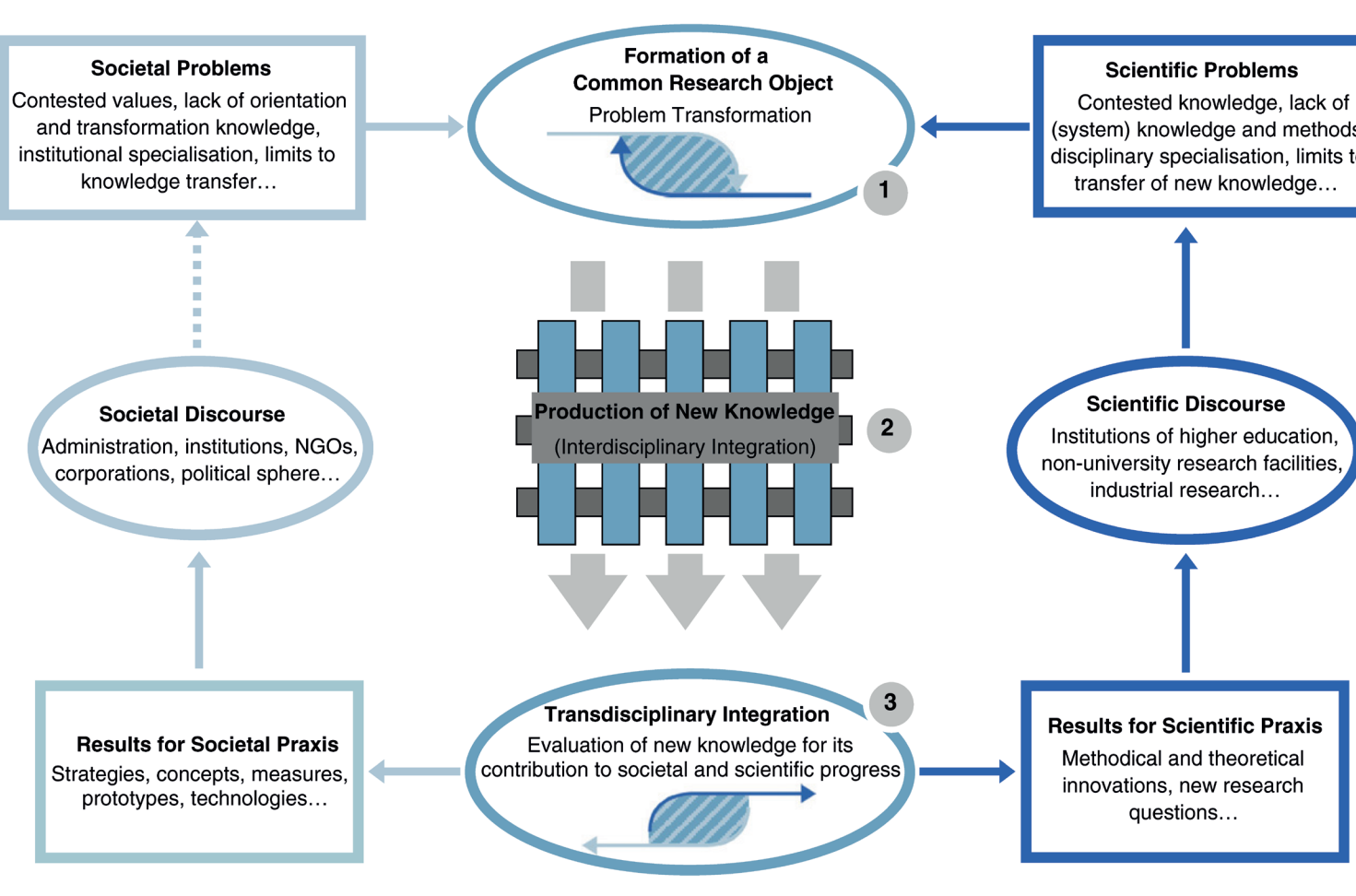
(if you want to get involved)

- Contact us! filip.colson@vlaanderen.be, leen.audenaert@vlaanderen.be, ecocampus@vlaanderen.be
- Become a buddy to one of our pilot projects: get first hand experience and exchange ideas on where to go next
- Join us in Brussels 17-19 October 2018 for FUTURE FORWARD, our SUMMIT ON SUSTAINABLE HIGHER EDUCATION www.futureforwardsummit.com/ (If you are really really good... maybe you can hold a talk there yourself!)
- Visit us! www.lne.be/ecocampus
- Send us an email to ask for more info or regular updates on the progress of sustainability research in Flanders, Belgium

Ecocampus is a programme of the Department of Environment & Spatial Development, Government of Flanders, Belgium. Flanders is a region of 6.5m inhabitants with a diverse higher education landscape that consists of 5 universities and 13 university colleges with a total of 235k students. With Ecocampus, we aim to promote a debate on Sustainable Higher Education and to work towards structural policy changes that enable the long-term viability of Sustainable Higher Education.

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- Responsible Research & Innovation (RRI): <https://www.rri-tools.eu/about-rri>



A conceptual model of transdisciplinarity. The numbers indicate the three phases of the ideal transdisciplinary research process. Jahn et al. (2012)

“ They've been called 'wicked problems' (by Horst Rittel).

They've been called 'ill-structured problems' (by Ian Mitroff).

I call them 'social messes' (after Russell Ackoff, who simply refers to them as 'messes').

What they are not is merely problems. Problems have solutions. Messes do not have straightforward solutions.

Robert Horn, 2001

WHAT?

We regularly call for, set up and support pilot projects on sustainability in research at different HE institutions, in which we focus on different types of actions, in (1) research funding, (2) research & career evaluation, (3) research organization, (4) capacity building, and (5) policy (Table 1). Together with these HE institutions we aim at creating the much-needed space for both resilience and efficiency, when working towards the 2030 Agenda.

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