

# Funding interdisciplinary research: improving practices and processes



## Aim and audience

This guide aims to alert national and international funding agencies to specific funding requirements for interdisciplinary research which involves researchers from diverse disciplines and/or non-research partners. Interdisciplinary research that involves non-research partners is often called transdisciplinary research.

## Seven key challenges

1. No agreed criteria defining 'excellence' in interdisciplinary research.
2. Poor agreement of the benefits and costs of interdisciplinary ways of working.
3. No agreement on how much or what kind of additional funding support is required for interdisciplinary research.
4. No consensus on terminology.
5. No clearly delineated college of peers from which to select appropriate reviewers.
6. Limited appropriate interdisciplinary peer review processes.
7. Restrictions within funding organisations concerning budget allocations and support for interdisciplinary research.

## Ways forward for funders

### Pre-call

**Develop relationships** with experienced interdisciplinary research providers to help shape calls for proposals.

**Collaborate** with other national and international funders when the topics of calls cross funding sources.

**Gather intelligence and advice** from researchers and wider partners on 'hot' topics and advances in interdisciplinary methods.

**Consider funding large-scale programmes**, as these rather than projects are more likely to open space for interdisciplinary work.

**Develop a shared understanding** with researchers and research providers of the research approaches required to address the programme's objectives.

**Acknowledge and allow multiple approaches** to interdisciplinarity, reflecting heterogeneity and pluralism.

**Ensure a range of disciplines are included from the start** and are neither token nor bolted on at the end.

**Develop clear guidance about extent of flexibility needed** with researchers and research providers, recognising that the ability to adjust as circumstances change during the research process may be critical, especially where approaches are more exploratory because of the complexity of problems tackled and the involvement of non-research partners.

### Call

**Frame and structure the call clearly** so that researchers know what is required and how the proposal will be assessed, allowing them to design their research appropriately.

**Organise meetings and seedcorn funding for calls requiring new collaborations** so that researchers can 1) find out about relevant colleagues e.g. through open or 'town' meetings, and 2) develop collaborative approaches, along with pilot projects.

**Stipulate acceptable costs** by providing clarity on what costs are acceptable e.g. to enable pathways to impact.

**Recognise and fund interdisciplinary requirements** including the time required to 1) resolve epistemological (beliefs about what knowledge is) and ontological (how to produce knowledge) differences between disciplines, 2) understand and address the problem from different perspectives, and 3) discuss and agree a research design.

**Fund collaborative 'glue' processes** including meetings, travel and time to build the team and to understand each other's languages and objectives, and that will sustain productive interactions throughout the project.

## Ways forward for funders

### Review

**Increase the pool of interdisciplinary reviewers** through targeted recruitment to ensure that there are adequate numbers of reviewers experienced in all the diverse types of interdisciplinary research.

**Improve ability to match interdisciplinary pre-panel reviewers and proposals** by collecting and making visible the interdisciplinary credentials of reviewers and ensuring that proposal forms require specification of the interdisciplinary processes to be used in the research.

**Ensure appropriate composition of review panels** so that they represent a mix of disciplinary expertise and also include individuals who have worked in interdisciplinary research. Panel chairs need to be extremely comfortable with interdisciplinarity and able to tactfully and effectively lead discussions, that elicit multiple perspectives to come to agreements on the excellence of proposals.

**Prepare the review panel** by providing clear guidance materials, as well as briefings and discussion with the members prior to deliberations on proposal selection. The 'mock panel' exercise developed by the UK Ecosystem Services for Poverty Alleviation Secretariat provides an excellent example, and is being adopted by other UK funders.

**Guide the review process** to ensure that 1) proposals are sound in both disciplinary coverage and interdisciplinary processes; 2) discipline-centric reviews do not 'torpedo' innovative interdisciplinary research; 3) the proposal is not disadvantaged if the panel does not consist of an adequate mix of reviewers to adequately judge all aspects of, especially, large interdisciplinary projects; and 4) allow review panels to use their collective judgement, informed but not constrained by what may be an assortment of mono-disciplinary pre-panel reviews.

**Collate reviews transparently** to recognise that each review may cover only part of the proposal. Recording the reviewer's disciplinary and/or interdisciplinary expertise may assist with this.

**Provide clear and detailed feedback** to increase researchers' capability and capacity for producing interdisciplinary proposals, especially those including non-research partners.

### Research contract

**Align contractual terms** to enable data sharing and collaborative working across all research partners.

**Review intellectual property provisions** to ensure that, over time, they are more effectively aligned with the requirements for successful interdisciplinary collaboration.

### Evaluation during and following project

**Ensure post-project/programme review** that is appropriate to interdisciplinary aims and behaviours, and aligned with the original framing of the call.

**Capture lessons** from progress reviews and post-project evaluation, and use these to further enhance funding processes for interdisciplinary projects.

## Suggested reading

Marsden, W.; Lyall, C.; Bruce, A. and Meagher, L. (2011). A Short Guide for Funders of Interdisciplinary Research. ISSTI Briefing Note (Number 8) <http://bit.ly/ISSTI8>

Committee on Facilitating Interdisciplinary Research; Committee on Science, Engineering, and Public Policy; National Academy of Sciences; National Academy of Engineering; and Institute of Medicine of the National Academies (2004). Facilitating Interdisciplinary Research. Washington DC, National Academies Press. <http://bit.ly/NAS2004>

## Working Together for Better Outcomes (WT4BO) workshop outputs and details

**WT4BO workshop website**  
[bit.ly/WT4BO](http://bit.ly/WT4BO)

**Guidance notes for researchers and research partners are available from the workshop website.**

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