Guidance note

# Working together for better outcomes: good practice for interdisciplinary researchers

## Aim and audience

This guide aims to help researchers at any stage of their careers to work more effectively with researchers from other diverse disciplines and/or non-research partners. Interdisciplinary research that involves non-research partners is often called transdisciplinary research.

## Why work with other disciplines and non-research partners?

- Ability to address complex societal challenges by bringing to bear different perspectives and skillsets.
- Usefulness of integrating robust science for social good.
- Possibility of generating more impact and applied outcomes by working together.
- Ability to meet demands by funders for co-produced research which incorporates non-research perspectives throughout the project.
- Potential for intellectual excitement and satisfaction through exploring and learning together.

## What is interdisciplinary research, when is it needed and how is it conducted?

1. We use 'interdisciplinary research' to describe when researchers from different disciplinary backgrounds work together, and when the perspectives and objectives of non-research stakeholders are included.
2. Interdisciplinary approaches are required when the challenge being addressed requires input from different researchers and/or stakeholders with diverse expertise to progress understanding towards resolution of that challenge.
3. There are different types and definitions of interdisciplinary research, including researchers working on their own and when researchers work with non-research stakeholders. Research teams can be small or large, and involve closely aligned or distant disciplines.

## Attributes and support required

Different attributes and support are required at individual, team and research environment levels.

**Individual level:** Useful attributes include respect for different perspectives, humility, empathy, treating everyone as equal, willingness to learn from others, curiosity, flexibility, openness, good communication skills combined with expert knowledge of discipline or practice area, and experience of collaboration.

**Team level:** Team work is easier and group chemistry stronger, when personalities, values, beliefs and motives are - or become - compatible. Teams require disciplinary experts and stakeholders, along with interdisciplinarians who provide the 'glue', helping the team achieve compatibility and manage the process of interaction throughout the effort. Teams need leaders who encourage collaboration; either these leaders or additional individuals must pro-actively facilitate constructive interactions.

**Research environment level:** A supportive environment and organisational culture enables people to work to their strengths, provides necessary training, develops and applies appropriate rewards and recognition for teams as well as individuals, allows time and space for creative ideas, and recognises that interdisciplinary research takes longer and, by nature, involves sharing of credit.

## Challenges and barriers

**Individual and team levels:**

- Increased time needed, which may reduce perceived productivity.
- No established methods to balance disciplinary and interdisciplinary expertise.
- Non-research partners have limited time.
- Limited number of researchers skilled in interacting with non-research partners.
- Respect for funding processes that take into account factors from other disciplines.
- Few interdisciplinary journals, often low status and frequently not valued by researchers' discipline/reward structure.

**Research environment level:**

- Departmental boundaries and other structures can inhibit interactions. Promotions and other awards are not well-aligned with interdisciplinarity. Time allocation may be an issue. Different departments or units may disagree over who gets 'credit' for any interdisciplinary wins.
- Funders can serve as obstacles, perhaps particularly when multiple funders support the same interdisciplinary programme. Critical to grants (and to publications), peer review bodies may be inexperienced, conservative, mono-disciplinary in orientation, and reluctant to support interdisciplinary research, especially if there is no proof of concept, thus, a 'catch 22'.

## Factors for success

**Individual and team levels:**

- Appreciate and understand other team members' differences, priorities and needs.
- Relish being outside a disciplinary comfort zone.
- Build relationships and trust, being aware of power relations.
- Put effort into good communication and proper engagement.
- Be active in discussions with funders and non-research partners.
- Allocate the necessary time.
- Evaluate and reflect on progress.
- Be adaptive and keep funders involved as research evolves.
- Be open to learning and gaining experience for: working in teams, sharing and compromising, communicating and leading.

**Research environment level:**

- Be open to innovative approaches and adaptable to the needs of interdisciplinary researchers.
- Encourage dialogue across leaders of different interdisciplinary programmes, and try to address any common institutional issues that emerge.
- Build on lessons from successful projects, as well as learning from failures.
- Reward and recognise 'excellent' interdisciplinary teams, as well as individuals.

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

**WT4BO workshop website**
**bit.ly/WT4BO**

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

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