

Co-design

The first phase in TDR projects is often referred to as co-design, in which researchers and other societal actors create partnerships, jointly develop a research process, and frame the problem and research questions that meet their collective interests and needs. The goal of co-design is to shape a societally relevant TDR project that addresses an agreed upon issue collaboratively with multiple disciplines and diverse societal actors.

What happens during co-design?

Co-design includes team building and setting joint research agendas and questions through the collaborative definition of the problem, goals, research questions, a strategy for collaborative knowledge production, as well as scientifically and societally useful outputs, and maybe even strategies to implement identified solutions in practice. As co-design advances, the goals and questions are gradually shaped and refined. Over time, the research team – including societal partners – can change, as some actors may decide not to be part of the project, while others join.

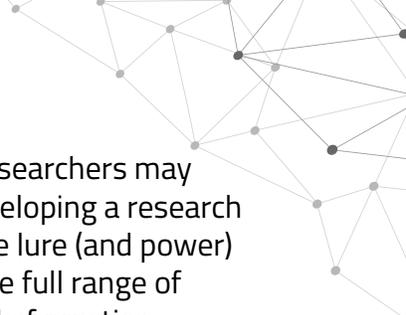
Co-design is critical for the success of TDR projects. It ensures that the research endeavor is academically rigorous, includes the necessary disciplines and types of knowledges, and is relevant and impactful to the societal actors involved and to the broader community.

One challenge of the co-design phase is balancing the necessary openness to the interests and needs of different societal actors and researchers, while navigating institutional and financial constraints. Usually, you need several rounds of interaction to co-design project goals and approach, specific research questions, and a sense of needed outputs. An essential element is a shared understanding of the theory of change: What will be the impact of the project, what pathways is the project envisaging to reach the desired impact, and what are the assumptions about how and why the desired change happens?

What happens even before co-designing a project?

Launching into co-design assumes there is a ready-made team of researchers and societal partners to begin this work. But, in reality, TDR projects have a pre-co-design life, and there are various pathways of how partners come to a collaborative project.

For example, researchers may have worked for a long time in a particular place with a particular set of societal actors on a particular sustainability challenge. In this case, they are deeply familiar with the context, the issue at stake, and the people interested in it. They also have well-established trust and history working together. Maybe the new TDR project is an outgrowth of a prior joint project, building on previous findings, identified needs, and adding in just a few new actors. The collaborative may have worked together in obtaining the necessary funding, and people are ready to jump in the co-design process for the current project.



All too often, however, such ideal conditions for collaboration are not yet met. Researchers may have had no or only preliminary contact with societal actors in the process of developing a research funding proposal. Having been successful in obtaining funding, they now have the lure (and power) that comes with resources, but they now must do the hard work of identifying the full range of necessary collaborators – both in other disciplines/departments and in the world of practice.

Alternatively, one or more societal actors may have a difficult challenge and want to seek help from a local university. However, they may have only one or two contacts there and don't know yet who should be brought in to help solve the problem. Also, they may not yet have funding for the project or fully thought through what is already known about the issue and what really requires fresh research.

In short, different actors may have the idea and funding for the TDR project, but they clearly have different stakes in the project and may come with different levels of background understanding, familiarity with the TDR process, and access to all the necessary expertise and tools to launch into a collaboration. Therefore, preparations are needed before venturing into large group co-design settings. These preparations may involve activities such as scoping exercises, literature reviews, network mapping, and preliminary discussions to identify potential research partners and clarify objectives. By laying the groundwork in the preparation stage, researchers can ensure that the co-design process is focused and productive. While co-design is typically used to describe the first phase of TDR projects, co-design can also be more generally understood to be the collaborative process of shaping all aspects of a TDR project and thus also needs to happen in later phases – e.g., to jointly design interventions, products, and solutions.

Further reading:

- Horcea-Milcu, Andra-Ioana, Julia Leventon, and Daniel J. Lang. 2022. [Making Transdisciplinarity Happen: Phase 0, or before the Beginning](#). *Environmental Science & Policy* 136 (October): 187–97.
- Klein, J. T. 2001. *Transdisciplinarity: Joint Problem Solving among Science, Technology, and Society*.
- Moser, S. C. (2016). [Can science on transformation transform science?](#) Lessons from co-design. *Current Opinion in Environmental Sustainability*, 20, 106–115.