

Supporting the Development of Inter- and Transdisciplinary Research with the Arts, Humanities & Social Sciences through Effective Evaluation

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Introduction

With growing acknowledgment of the need for interdisciplinary and transdisciplinary approaches involving the Arts, Humanities and Social Sciences (AHSS) alongside STEM (Science, Technology, Engineering and Medicine) disciplines and societal stakeholders to address complex societal challenges, funding programmes like Horizon Europe often call for collaborative, inter- and transdisciplinary approaches.

Disciplines help to organise knowledge for quality assessment purposes and are the cornerstone of academic peer review and recognition. How do we judge what “good” research is if it is outside of our immediate sphere of expertise? This guide presents an overview of some key factors to consider and relevant resources available in the SHAPE-ID toolkit to support research funders and evaluators in their work. The [SHAPE-ID toolkit](#) is designed to provide pathways to IDR/TDR for researchers, research organisations, funders, policymakers and societal partners.

1. Understanding the contributions that the AHSS can make to collaborative research

Evaluators may seek a better understanding of what the Arts, Humanities and Social Sciences (AHSS) can bring to collaborative research especially research conducted in partnership with STEM disciplines. Approaches from the AHSS can: allow us to understand the complexity of behaviour and identities; challenge or disrupt accepted ideas; enable a focus on discourses, narratives and representations; enhance reflexivity; foster intercultural and intergenerational dialogue; provide critical, ethical and historical perspectives; and reframe problems to focus on human experience.

Tools & Resources

- Our [Guide to AHSS contributions to inter- and transdisciplinary research](#) highlights areas where these disciplines can contribute to problem framing and addressing societal challenges, informed by insights from the SHAPE-ID stakeholder workshop series
- Our [Case Studies](#) collection showcases examples of AHSS leadership in inter- and transdisciplinary research, as well as highlighting some innovative funding schemes, institutional initiatives and research infrastructures for the AHSS.
- **More:** SHAPE-ID toolkit: [Understand the roles that AHSS can play](#) and [Read inspiring case studies](#)

K-PLEX – Knowledge Complexity

This H2020-funded project examined how humanities and cultural researchers deal with messy data and the implications of their approaches for big data research. It identified key aspects of data that are at risk of being lost in processes of large-scale data aggregation, and so ignored in subsequent knowledge creation processes.

[VISIT WEBSITE](#)

2. Good Practice in ID/TD Evaluation

Inter- and transdisciplinary (ID/TD) research takes many forms and has different goals leading to different research designs and hence different evaluation criteria (see [Understand ID/TD Research](#))

While it is therefore not possible to offer a single peer review model for ID/TD, the SHAPE-ID toolkit section on [evaluating inter- and transdisciplinary research](#) includes curated resources on good practice in evaluation.

Funders will also wish to consider evaluation when developing a funding programme, including issues such as whether a full spectrum of disciplinary and inter- or transdisciplinary experts were involved in the design of the call, how the call frames societal problems, and what the applicant is asked to explain about their inter- or transdisciplinary approach or understanding. The SHAPE-ID [Reflective Tool for research funders](#) provides a list of reflective questions to consider at this earlier stage.

Tools & Resources

- **Guide:** The SHAPE-ID [Guide on Evaluating Inter- and Transdisciplinary Research](#) provides a concise overview of challenges and good practice, with a further reading list.
- **Top Ten Tips:** SHAPE-ID partners Christian Pohl and Isabel Fletcher provide their [Top Ten Tips](#) for evaluating inter- and transdisciplinary research.
- **Briefing note:** Short guide to [Reviewing Interdisciplinary Research Proposals](#)
- **Blog:** The theme of appropriate research metrics for interdisciplinarity is also explored in this [i2Insights blog](#)
- **More:** SHAPE-ID toolkit: [Find out about good practice in ID/TD evaluation](#)

Elements of Good Practice

Go beyond assessing scientific excellence to ascertain quality of integration

Understand the interaction of social and cognitive factors in such collaborations

Ask additional questions to complement but not replace criteria to assess ID/TD research proposals

Aim for greater partnership between funders and researchers

Balance this greater dialogue and flexibility with parity and cost efficiency

Ensure transparency of any additional requirements

[READ REPORT](#)

3. Appointing ID/TD Evaluators

Funders have several key roles in ensuring the fair and equitable evaluation of ID/TD research. One of the most challenging of these is the recruitment of appropriately qualified evaluators who can act as both remote reviewers and assessment panel members. There is general agreement that interdisciplinary proposals will require a higher number of reviewers and that panels should be a mix of discipline specialists and ID/TD experts. The latter should be able to act as “interpreters” – able to explain a specific approach or method in an easy understandable language to other members of the panel. Further, discipline-based experts should be selected for their breadth of disciplinary understanding rather than expertise; and a significant number of members should themselves have a successful ID/TD track record

Tools & Resources

- **Tool:** SHAPE-ID is developing [a lexicon of process-oriented keywords](#) that go beyond discipline-based competences to assist in the selection of appropriate ID/TD evaluators
- **Policy Briefing:** Based on an [in-depth review](#) of evaluation procedures adopted by a large interdisciplinary global development research programme, [this short note](#) summarises some key actions for funders
- **Reading:** This [Open Access chapter](#) deals with evaluating interdisciplinary proposals, programmes and publications and provides several Key Advice summaries such as Key Advice 7.3 Tips for effective interdisciplinary review panels.

Roles for Funders

Establish quality criteria when designing the application process

Select qualified peer reviewers

Support and train reviewers

Consider broader institutional issues, such as impact on early stage researchers and equality, diversity and inclusion

4. Briefing Evaluators

Evaluators need to be confident in assessing the feasibility and impact of an ID/TD approach in research proposals. A mock panel exercise for assessors and detailed briefing for peer reviewers (possibly using anonymised past proposals) can provide evaluators with a common experience base in working through the sorts of discussions that might arise, prior to the assessment itself.

Integration should be a feature throughout the lifetime of a successful ID/TD project and this should be evidenced in the funding proposal. Is it clear how expertise and methods from different disciplines will be brought together and integrated in pursuit of the objectives? The SHAPE-ID toolkit provides resources to help evaluators understand what a well-integrated proposal should address.

Tools & Resources

- **Guide:** [Top Ten Tips on evaluating inter- or transdisciplinary research](#) highlights important points for evaluators, such as the need to be conscious of their own biases and open to a range of quality criteria, and the need to consider the validity of arguments that an ID approach is needed, and the feasibility of the ID approaches described, including familiarity with ID methods.
- **Tool:** This [Reflective Tool for reviewers of inter- and transdisciplinary research](#) can be used in conjunction with our Top Ten Tips. It provides questions reviewers can ask themselves about how the problem was formulated, the diversity and suitability of the disciplinary mix, the inclusion of a stakeholder engagement plan, and more.
- **Blog post :** These two linked blog posts (Klein, 2016) explore [what integration is](#) and [how it works in practice](#). Both emphasise that integration is at the heart of IDR/TDR.
- **Guide:** [Building and Managing Interdisciplinary Research Teams](#) (Lyall & Meagher, 2007) highlights important points for project implementation, including the need to dedicate more time to balancing contributions and roles, even where methods and data differ, and to build reflection points into project design to ensure flexibility as the project evolves.

SHAPE-ID Reflective Tool: Beginning Collaboration

This SHAPE-ID reflective tool can be used when beginning collaborative research, but is also useful for evaluators to ensure that the research proposal builds in opportunities for ongoing mutual learning, integration, knowledge sharing and agreement about outputs.

[OPEN PDF](#)



- **Methods:** [Methods for integration in transdisciplinary research](#) (Bergman, 2017) present 43 methods collected from transdisciplinary research projects on different topics.
- **Webinar:** some complex projects require integration expertise to manage the integration process. In this [SHAPE-ID webinar](#), panellists discuss the role of the integration expert.
- **Article:** The concept of integration and its role in transdisciplinary research is developed in the recent article [Conceptualising transdisciplinary integration as a multidimensional interactive process](#) (Pohl et al., 2021).

Checklist for Reviewers

1. Does the proposal describe clear goals, adequate preparation, appropriate method, significant results, effective presentation, reflective critique?
2. How was the problem formulated?
3. How diverse are the disciplines, methods and researchers and how suitable is the combination of disciplines?
4. Is there a clear justification for the choice of disciplines based on the needs of the research questions?
5. Is the study sufficiently anchored in relevant literature?
6. What is the relationship with the methodology?
7. How will communication be tackled?
8. Does it describe how the disciplines involved will be integrated (in the design and conduct of the research as well as in subsequent publications) and how this relates to the type of interdisciplinarity involved; does it demonstrate how the quality of integration will be assured?
9. How is the collaboration organised – is there an understanding of the challenges of interdisciplinary integration, including methodological integration, and the ‘human’ side of fostering interactions and communication, and an effective strategy to achieve this?
10. Is the leadership role and management strategy to deliver the desired outcomes clearly articulated?
11. Do the researchers involved have demonstrable interdisciplinary skills and experience?
12. In particular, is there evidence of interdisciplinary leadership?
13. Is there an appropriate plan for stakeholder/user engagement from the outset of the project?
14. Does the proposal budget for, and justify, the additional resources needed?
15. Is it clear how interdisciplinarity will be reflected in the project outputs and outcomes?

Source: Lyall and King 2013 (OPEN PDF)

Further Reading from SHAPE-ID

SHAPE-ID partners Maureen Burgess and Doireann Wallace have produced this [quick guide for pre-award research managers and administrators](#) to aid in supporting inter- and transdisciplinary research development and proposals.

SHAPE-ID partner Dr Bianca Vienni Baptista has produced an [annotated bibliography](#) of the key readings in the academic literature on inter- and transdisciplinary research which includes a selection of references on the assessment and evaluation of ID/TD.

[SHAPE-ID Reports](#)

[SHAPE-ID Policy Briefs](#)

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