



## SHAPE-ID: Shaping Interdisciplinary Practices in Europe

# Deliverable 2.4 Final Report on Understanding of Interdisciplinary and Transdisciplinary Research – Policy Brief

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# **EUROPEAN**

# POLICYBRIEF



IMPROVING PATHWAYS TO INTERDISCIPLINARY AND TRANSDISCIPLINARY RESEARCH FOR THE ARTS, HUMANITIES AND SOCIAL SCIENCES: FIRST LESSONS FROM THE SHAPE-ID PROJECT

This policy brief presents key issues and challenges for fostering interdisciplinary and transdisciplinary research in Europe, focusing on the participation of the Arts, Humanities and Social Sciences in such research. It provides concrete guidance to policy makers and funding organisations on how to tackle those issues and maximise the participation of the Arts, Humanities and Social Sciences.

31 MARCH 2020

#### Introduction

The challenge of including the Arts, Humanities and Social Sciences (AHSS) in a more meaningful way in research and innovation policy and funding initiatives is not new, yet it has surely acquired more urgency in these crisis-ridden times. Coping with the shock to global society wrought by the coronavirus pandemic and finding sustainable solutions to the social, cultural, political, economic, and health cataclysms that Covid-19 has unleashed demands that we do things differently, that we work collaboratively and that we embrace interdisciplinary and transdisciplinary research (IDR and TDR) – across and between all disciplines – like never before. Of course, this is a current and extreme example. Others include terrorism and war; migration and multi-culturalism; security, privacy and freedom; environmental and digital issues; the future of work; and mental and physical well-being. The AHSS have important things to say about every aspect of human existence: they put human lives, identities, society, culture and economy at the centre of research; they emphasise the importance of ethics and experiences, past and present; and they recognise emotion as a motivating factor.

In 2013, the authors of the Vilnius Declaration argued that **innovation is "driven not only by technological advances but also by societal expectations, values and demands"** (Nowotny et al., 2013). The European Commission (EC) stepped up efforts to encourage participation from the

<sup>&</sup>lt;sup>1</sup> Nowotny, H., Petrauskaitė, R., Viliūnas, G., Allmendinger, J., Boyle, P., Calhoun, C., Cardoso, G., Feldhay, R., Holm, P., Kabat, P., Peyraube, A., Reggiani, A., Tindemans, P., Van Den Doel, W., Wieviorka, M. & Wittrock, B. 2013. Vilnius Declaration – Horizons for Social Sciences and Humanities. <a href="https://erc.europa.eu/sites/default/files/content/pages/pdf/Vilnius SSH declaration 2013.pdf">https://erc.europa.eu/sites/default/files/content/pages/pdf/Vilnius SSH declaration 2013.pdf</a> [Accessed 25 Mar 2020].

AHSS in Horizon 2020, with many funding calls identifying social and economic sciences as a crosscutting priority in addressing a societal challenge. Reports monitoring participation in these calls have shown an overall increase in the budget going to partners from the AHSS, yet also reveal that integration is heavily weighted towards some Social Sciences disciplines, particularly Economics, Political Science/Public Administration and Business/Marketing, with little substantial engagement from the Arts or Humanities.<sup>2</sup>

With a plethora of academic literature, reports and recommendations on how universities, funders and policy makers can support inter- and transdisciplinarity and a widespread acknowledgement that the challenges we face cannot be met by scientific and technological means alone, **why are we still struggling to meet this challenge and what needs to change?** 

The SHAPE-ID project<sup>3</sup> approaches this problem from the perspective of **how IDR and TDR are understood and the factors that support or hinder such research, with a focus on research involving the AHSS** – whether collaborating with other AHSS disciplines or with Science, Technology, Engineering, Mathematics and Medicine (STEMM) disciplines.

In this brief we present the key policy-relevant findings from a systematic review of academic and policy literature and a survey of researchers engaged in IDR and TDR. We synthesise some of the most urgent practical recommendations from the literature but also highlight the need for a more thoroughgoing culture change to encourage greater AHSS, and particularly Arts and Humanities, participation. Our research supports recent claims from All European Academies (ALLEA, 2019) that a technocratic and instrumental attitude towards societal challenges on the part of the EC, reflected in the language of Horizon 2020 funding calls, discourages greater involvement from AHSS researchers.<sup>4</sup>

We present evidence supporting the following policy implications and discuss in more detail below:

#### **Policy Implications and Recommendations**

- Inter- and transdisciplinary research takes place for a wide range of reasons and with partners
  playing a variety of roles. To encourage greater AHSS participation in funding programmes,
  funders and policy makers need to engage more substantively with AHSS communities
  across the spectrum of disciplines and with IDR/TDR experts when defining, designing
  and evaluating IDR/TDR calls.
- Inter- and transdisciplinary research is often more time-consuming than mono-disciplinary research as researchers need to navigate disciplinary differences to align goals and approaches. Funding programmes should allow for additional resources to enable IDR/TDR development, for instance to fund additional meetings, facilitators within projects and time to build mutual understanding and trust.
- 3. Inter- and transdisciplinary careers are still seen as risky for researchers. Policy makers should support and incentivise universities to build capacity in IDR and TDR by taking steps to derisk inter- and transdisciplinary career paths and integrate IDR/TDR into education and training at an early stage.
- 4. Uptake of knowledge and recommendations on inter- and transdisciplinary research does not appear to be widespread. A validated online toolkit of IDR/TDR methods, materials and best practice examples is urgently needed to provide a common point of reference for European stakeholders to facilitate the above recommendations. SHAPE-ID will produce a

<sup>&</sup>lt;sup>2</sup> For the most recent report see Kania, K., Lemaire, C. & Swinnen, L. (2019). Integration of social sciences and humanities in Horizon 2020. Participants, budget and disciplines: 4th monitoring report on SSH flagged projects funded in 2017 under the societal challenges and industrial leadership priorities. Directorate-General for Research and Innovation – European Commission. <a href="https://op.europa.eu/en/publication-detail/-/publication/f094a641-30dd-11e9-8d04-01aa75ed71a1/language-en/format-PDF/source-86826299">https://op.europa.eu/en/publication-detail/-/publication/f094a641-30dd-11e9-8d04-01aa75ed71a1/language-en/format-PDF/source-86826299</a> [Accessed 25 Mar 2020].

<sup>&</sup>lt;sup>3</sup> Shaping Interdisciplinary Practices in Europe (SHAPE-ID). See <a href="https://www.shapeid.eu">https://www.shapeid.eu</a>

<sup>&</sup>lt;sup>4</sup> ALLEA. 2019. European Academies call for Excellence, Fairness and Openness in the Implementation of Horizon Europe. Available: <a href="https://allea.org/delivering-horizon-europe/">https://allea.org/delivering-horizon-europe/</a> [Accessed 31 Mar 2019].

toolkit of this kind but investment will be needed by the European Commission to maintain and develop a sustainable resource for the research and policy community in the longer term.

#### **EVIDENCE AND ANALYSIS**

In this section we present evidence and analysis from our academic and policy literature reviews, survey of researchers on inter- and transdisciplinary projects and interviews with policy stakeholders, in support of each of our broad recommendations.

Inter- and transdisciplinary research takes place for a wide range of reasons and with partners playing a variety of roles. To encourage greater AHSS participation in funding programmes, funders and policy makers need to engage more substantively with AHSS communities across the spectrum of disciplines and with IDR/TDR experts when defining, designing and evaluating IDR/TDR calls.

#### **Understandings of Inter- and Transdisciplinary Research**

Understandings of IDR/TDR are often implicit rather than explicit in policy literature yet presuppose a problem-solving motivation. A wider perspective on how IDR/TDR are defined can shed light on the diversity of potential contributions AHSS research can make in IDR/TDR projects.

The most commonly cited **definition of interdisciplinary research** in the academic and policy literature we reviewed is from the US National Academy of Sciences:

Interdisciplinary research is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline.<sup>5</sup>

This captures the complexity of IDR, in terms of the many aspects of disciplinary expertise that may be shared and some of the motives for doing so.

However, the academic literature shows considerable variation in how IDR is defined, and the boundaries between understandings of IDR and TDR are contested. For example, **the term transdisciplinarity** is often used in German-speaking countries, the Netherlands and some Nordic countries<sup>6</sup> to refer to research involving non-academic stakeholders, yet is rarely used in the United Kingdom, where the understanding of interdisciplinarity may include non-academic stakeholders. While the academic literature reveals plural and heterogeneous definitions of IDR and TDR, we found little effort in much of the policy literature to explain or define what is meant by either term when using them. Nevertheless, there is frequently an underlying assumption that they are carried out in order to solve problems. Problem-solving appears to be the primary motivation for advocating and supporting IDR and TDR.

IDR or TDR can be conducted for a wider range of reasons and understanding these can help expand the sphere of possible engagement for AHSS disciplines. In addition to advancing

<sup>&</sup>lt;sup>5</sup> National Academy of Sciences, N. A. o. E., Institute of Medicine. (2005). *Facilitating Interdisciplinary Research*. Washington, DC: The National Academies Press, p.2.

<sup>&</sup>lt;sup>6</sup> Pohl, C. (2008). From science to policy through transdisciplinary research. Environmental Science & Policy, 11(1) 46-53.

<sup>&</sup>lt;sup>7</sup> Lyall, C., Meagher, L., & Bruce, A. (2015). A rose by any other name? *Futures*, 65, 150-162.

<sup>&</sup>lt;sup>8</sup> Vienni Baptista, B., Maryl, M., Wciślik, P., Fletcher, I., Buchner, A., Wallace, D. and Pohl, C. (2019) Preliminary Report of Literature Review on Understandings of Interdisciplinary and Transdisciplinary Research. H2020 Project "Shaping interdisciplinary practices in Europe". www.shapeid.eu

understanding, the literature identifies philosophical approaches (aiming to transcend the narrowness of disciplinary worldviews), more instrumental approaches focused on solving problems and critical approaches that challenge current systems of knowledge production.<sup>9</sup> Reasons for carrying out IDR/TDR can include efforts to provide accountability (e.g. ethical oversight within science or technology projects), improve innovation capacity by better understanding societal needs and more thoroughgoing efforts to transform research practice, problems and relationships.<sup>10</sup>

Furthermore, **relationships between partners or disciplines** in a collaboration can take a variety of forms, from unequal partnerships where one partner occupies a subordinate role, to symmetrical collaborations, to mutually challenging relationships committed to more radical shifts in knowledge production practices through the collaboration.<sup>11</sup>

#### Why is this relevant to efforts to improve AHSS integration in IDR/TDR?

While some AHSS disciplines and research may fit comfortably within the problem-solving mode, others may understand their research in terms of critical or transgressive approaches and motives, such as challenging current narratives or bringing historical or contextual perspectives to bear on a situation to enhance understanding. The dominant emphasis on IDR/TDR for problem-solving in the policy literature does little to encourage AHSS involvement, particularly participation from Arts and Humanities researchers. This does not mean that these disciplines do not contribute to solving problems, but that explicitly opening up challenges to a range of approaches, such that problems can also be interrogated, critiqued and approached from new angles, has the potential to invite wider participation from AHSS disciplines.

Our survey and interviews confirmed that one of the biggest challenges for AHSS disciplines is to fight prejudice and misconceptions, among both researchers and policy makers. Despite acknowledgment that major problems in society demand input from AHSS research when defining challenges, it remains typical in research policy to look to STEMM fields first and then (perhaps) to include AHSS researchers later to address issues such as ethical or legal considerations. Our findings show that the subordinate roles and functions often assigned to AHSS disciplines in collaborations – which are reinforced by the dominant problem-solving approach – discourage their greater involvement and bridging role with STEMM disciplines in IDR/TDR.

Changing this necessitates on the one hand more capacity building led by research institutions to enhance AHSS researchers' ability and willingness to collaborate with other disciplines, and, on the other, more pro-active efforts on the part of funders and policy makers to welcome a wider range of understandings and practices of IDR/TDR when shaping funding policy and designing and evaluating funding calls.<sup>13</sup>

<sup>&</sup>lt;sup>9</sup> Based on Klein, J.T. (in press) Beyond Interdisciplinarity: Boundary Work, Communication, and Collaboration in the 21st Century, manuscript.

<sup>&</sup>lt;sup>10</sup> Barry, A., Born, G., & Weszkalnys, G. (2008). Logics of interdisciplinarity. *Economy and Society, 37*(1), 20-49. doi:10.1080/03085140701760841

<sup>&</sup>lt;sup>11</sup> Barry, A., & Born, G. (2013). *Interdisciplinarity: Reconfigurations of the social and natural sciences*: Abingdon, Oxon, New York, N.Y: Routledge.

<sup>&</sup>lt;sup>12</sup> Spaapen, J., Vienni Baptista, B., Buchner, A. and Pohl, C. (2020). Report on Survey among interdisciplinary and transdisciplinary researchers and post-survey interviews with policy stakeholders. H2020 Project "Shaping interdisciplinary practices in Europe". <a href="https://www.shapeid.eu">www.shapeid.eu</a>

<sup>&</sup>lt;sup>13</sup> As the League of European Research Universities (LERU) highlight, both challenge-driven and understanding-driven interdisciplinary should be encouraged. Wernli, D. and Darbellay, F. (2016). Interdisciplinarity and the 21st century research-intensive university. League of European Research Universities (LERU) position paper. <a href="https://www.leru.org/files/Interdisciplinarity-and-the-21st-Century-Research-Intensive-University-Full-paper.pdf">https://www.leru.org/files/Interdisciplinarity-and-the-21st-Century-Research-Intensive-University-Full-paper.pdf</a> [Accessed 25 Mar 2020].

#### **Specific Recommendations**

#### Consult AHSS researchers in programme design

To attract proposals in which AHSS disciplines can be equal partners, appropriate participation of AHSS researchers at programme design stage is critical: on advisory panels, strategic programming committees and call and topic drafting teams. This can help ensure call texts are framed in a less purely technological manner and that the issues AHSS researchers can address are presented as an integral part of approaching the challenge rather than as tokenistic add-ons. Some funding agencies do this well, but it needs to become standard practice in designing IDR/TDR programmes. Importantly, the internal heterogeneity of the "AHSS" grouping must be acknowledged when selecting experts to contribute to both programme development and evaluation. We know from the EC's SSH monitoring reports that many Social Sciences disciplines have a greater presence in IDR/TDR projects funded by the EC. Our analysis of journals featuring discussion of IDR/TDR also confirmed that Social Sciences disciplines form more numerous and more diverse connections with non-AHSS disciplines than do Arts and Humanities disciplines. It is critical that contributions are encouraged from a wide range of disciplines, with particular efforts needed to include perspectives from currently underrepresented disciplines.

#### Include a range of AHSS and IDR/TDR expertise in proposal evaluation

Proposal evaluation is also a challenge for IDR/TDR projects. Key recommendations from the policy literature include:

- Evaluate how applicants explain and plan to operationalise IDR/TDR approaches to the challenge;
- Brief evaluators on international good practice in assessing IDR/TDR, giving them the means to address potential biases, weigh the importance of different disciplinary contributions and assess effective methodologies;
- Include experts in IDR/TDR and, for IDR/TDR involving AHSS in particular, select experts with a broad understanding of AHSS research beyond their own discipline.
  - Inter- and transdisciplinary research is often more time-consuming than mono-disciplinary research. Funding programmes should allow for additional resources to enable IDR/TDR development, for instance to fund additional meetings, facilitators within projects and time to build mutual understanding and trust.

Inter- and transdisciplinary research is often very ambitious in addressing complex issues from multiple perspectives. This raises distinct challenges. We identified in our review of the academic literature a wide range of factors that can contribute to the success or failure of IDR/TDR projects in practice. Some relate to background issues such as career path challenges, institutional structures and the policy landscape. However, a great many relate to the difficulties associated with overcoming the assumptions, values and world views embedded in different disciplinary cultures and embodied by individuals and learning to navigate relationships within a collaboration. These include academic tribalism, communication skills, division of scientific labour, dynamics of power, how researchers handle change, mutual ignorance about collaboration and motivations for doing IDR/TDR.<sup>14</sup>

We found that the same factors can often act as either a hindrance or an enabler. What can make the difference is being able to identify, acknowledge and address challenges at the right time. This highlights the need for time, tools, resources and expertise in facilitation during IDR/TDR projects to help establish and maintain shared understanding and purpose.

<sup>&</sup>lt;sup>14</sup> Vienni Baptista et al. (2019). op. cit.

The length of time required to conduct good quality IDR/TDR was an important topic within the policy literature. Incompatibilities and assumptions (even mutual ignorance) across different disciplinary cultures and modes of knowledge production emerged as one significant obstacle to collaboration, and time is needed to overcome these gaps and build trust. This was reinforced by our survey, where we found that successful funded IDR/TDR projects frequently took a significant amount of time (2 years was not uncommon) to build partnerships and develop a common research agenda before applying for European framework programme funding.

There are several ways to address this. One is through more diverse funding instruments that can enable researchers to build collaborations. Better shared knowledge resources and facilitation expertise within projects is also essential, particularly acknowledging the work involved in developing IDR/TDR collaboration and allowing funding to be used for meetings and workshops intended to develop collaborative approaches within a project. It must be recognised that networking and communication are essential tools of IDR/TDR and allocating funds for such work is equivalent to allocating funds for core equipment in a natural sciences laboratory.<sup>15</sup>

Finally, the development of IDR/TDR training and education across disciplines and career stages within universities are needed to address this (see below).

Inter- and transdisciplinary careers are still seen as risky for researchers. Policy makers should support universities to build capacity in IDR and TDR by taking steps to de-risk inter- and transdisciplinary career paths and integrating IDR/TDR into education and training at an early stage.

Career path issues were highlighted across the academic and grey literatures as well as our survey and interviews. Due to current institutional structures and the publication and funding system derived from long-established disciplinary cultures, doing IDR/TDR is frequently experienced as a risky career path – particularly for Early Career Researchers facing a precarious employment market and short-term contracts. Our survey results indicated that it is considered more difficult for interand transdisciplinary researchers to publish in high impact journals, to gain funding and to progress in traditional academic careers. The academic and policy literatures on IDR/TDR also flagged academic career structures as a problem, expressing strong concern about the effects of rigid, discipline-based structures of recruitment, evaluation and promotion for inter- and transdisciplinary researchers.

Capacity building within universities was recommended in much of the policy literature to address these challenges, focusing on improving interdisciplinary training and education across all disciplines (AHSS and STEMM). Such training should link interdisciplinary research and education at all levels (undergraduate, graduate and postdoctoral) and support training for faculty in managing IDR/TDR projects, designing and reviewing proposals for funding and evaluating the impact of IDR/TDR. Other recommendations for capacity building in universities include supporting AHSS leadership of large interdisciplinary projects and developing Graduate School structures that can more easily span traditional disciplinary divisions in research training. The LERU report Interdisciplinarity in the 21<sup>st</sup> Century Research University already provides a comprehensive set of recommendations for embedding IDR/TDR in universities.<sup>16</sup>

While research policy makers and funders do not directly determine university policy, they can contribute to this necessary cultural change by providing appropriate incentive systems at both national and EU level. Supporting IDR/TDR capacity building through grants, stipends, mobility funds, prizes and brokerage events were recommended by a number of reports and the academic literature we reviewed.

<sup>&</sup>lt;sup>15</sup> The analogy between resources for laboratories and for collaborative research is made in Bammer, G. (2008). Enhancing research collaborations: Three key management challenges. *Research Policy* 37(5): 875-887.

<sup>&</sup>lt;sup>16</sup> Wernli & Darbellay, op. cit.

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Uptake of knowledge and recommendations on IDR and TDR does not appear to be widespread. A validated online toolkit of IDR/TDR methods, materials and best practice examples is urgently needed to provide a common point of reference for European stakeholders to facilitate the above recommendations.

The fact that recommendations in the academic and grey literatures have been made repeatedly points to a lack of policy learning about how to facilitate IDR/TDR, resulting from the weak links between academic and policy literature. There are important gaps in the policy literature on AHSS and IDR/TDR, particularly between the literature on IDR/TDR and the literature on the integration of AHSS. The integration literature does not often refer to academic research on IDR/TDR and often contains an implicit assumption that such integration equates to interdisciplinarity. Secondly, until recently, literature on IDR/TDR has rarely discussed AHSS.

While there is a wealth of knowledge available across the academic and policy literatures, its uptake does not appear to be widespread. This may be because it is difficult to access literature because of the breadth of topics, contexts and sectors, and the lack of connection between different literatures.

To build bridges across these divides, an online toolkit gathering the available resources and recommendations in one place is an important step in establishing a common reference point for guiding research and policy processes. Greater sharing of toolkits and good practice examples is recommended across the literature reviewed and reinforced by our survey and interview findings.

#### POLICY IMPLICATIONS AND RECOMMENDATIONS

Based on the evidence from our literature review, survey and interviews, we make the following recommendations for policy makers, funders and university decision-makers.

1. Engage substantively with AHSS communities across the spectrum of disciplines and with IDR/TDR experts when defining, designing and evaluating IDR/TDR calls.

Inter- and Transdisciplinary research takes place for a wide range of reasons and with partners playing a variety of roles. To encourage greater AHSS participation in funding programmes, funders and policy makers need to engage directly and substantively with AHSS communities across the spectrum of disciplines, as well as IDR/TDR experts, when defining, designing and evaluating IDR/TDR calls. Here we reiterate the call by the European Alliance for Social Sciences and Humanities (EASSH) for Horizon Europe programme design to consider contributions from all disciplines, particularly those that have not featured strongly in funded projects to date. To Given the heterogeneity of the AHSS disciplines, specific effort should be made to represent a variety of AHSS disciplinary perspectives rather than appointing a single expert from one discipline to represent this broad community. Evaluators of IDR/TDR projects should be briefed on international good practice in evaluating IDR/TDR and advised on how to weigh the importance of different disciplinary contributions and assess effective methodologies.

2. Allow for additional resources to enable IDR/TDR development in funded projects, for instance to fund additional meetings, facilitators within projects and time to build mutual understanding and trust.

Inter- and transdisciplinary research is often more time-consuming than mono-disciplinary research as it seeks to integrate diverse approaches to address complex issues. Funding programmes need to acknowledge this in how they allocate resources. We found that many of the factors that can

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<sup>&</sup>lt;sup>17</sup> EASSH (2019). Interdisciplinary perspectives for Horizon Europe: Lessons from the 4th SSH Integration Monitor Report. http://www.eassh.eu/sites/default/files/fichiers/positionpapers/easshsshintegration4threportfnl.pdf

hinder IDR/TDR come down to a lack of shared understanding of other disciplines' world views, values and modes of knowledge production. These factors are complex, intertwined and dynamic, and require effort to be transformed from obstacles to enablers within the research process. Given adequate time and facilitation resources, this challenge can be turned into a productive experience, improving the quality of the collaboration while simultaneously building IDR/TDR capacity for partners involved and hence within the European research system more widely.

3. Support universities to build capacity in IDR and TDR by taking steps to de-risk inter- and transdisciplinary career paths and integrate IDR/TDR into education and training at an early stage.

Funders and policy makers can promote changes to institutional practices and structures within universities that lead to increased interest in IDR/TDR by providing appropriate incentive systems at both national and EU level through grants, stipends, mobility funds, prizes and brokerage events, as well as through research programmes fostering increased links between IDR/TDR educational and research endeavours. Appropriate funding to build critical mass and mainstream IDR/TDR practices can foster structural change within research institutions.

4. Develop a validated online toolkit of IDR/TDR methods, materials and best practice examples to provide a common point of reference for European stakeholders to facilitate the above recommendations.

SHAPE-ID is working towards producing such a toolkit and our findings – from the heterogeneity of understandings to the disconnections between academic and policy literatures – support the need for such a resource. Further support and funding will be needed to continue to maintain and develop this resource into the future.

#### RESEARCH PARAMETERS

SHAPE-ID addresses the challenge of improving inter- and transdisciplinary research between Arts, Humanities and Social Sciences (AHSS) disciplines and other scientific disciplines. The current brief is based on results from Work Package 2, which adopted a mixed methodology comprising literature reviews drawing on both academic and policy sources, interviews with policy stakeholders and a survey of researchers on funded inter- and transdisciplinary projects in Europe.

After identifying and collating a robust sample of literature, we aligned qualitative (meta-ethnography, content-analysis, Grounded Theory, semi-structured interviews, qualitative survey) and quantitative (analysis of subject tags and disciplinary affiliations, concept mining, topic modelling) methods to map state-of-the-art understandings and factors for success and failure in IDR/TDR. Datasets were created by querying scientific citation databases, complemented by bibliographies prepared during a preliminary scoping analysis of IDR/TDR literature. We complemented these findings with insights coming from a qualitative survey of European researchers with experience in IDR/TDR and interviews with a sample of policy makers and funders. Full results of these studies are presented in a separate report.<sup>18</sup>

Findings from this phase of the project will be integrated with outcomes from a series of learning case workshops organised across Europe. A framework synthesising the results of these activities will be validated in consultation with the SHAPE-ID Expert Panel and the project will ultimately deliver a set of recommendations, including a toolkit and associated policy brief to guide policy makers, funders, researchers and other stakeholders in achieving successful pathways to inter- and transdisciplinary integration between AHSS and STEMM, as well as within AHSS disciplines.

<sup>&</sup>lt;sup>18</sup> Vienni Baptista, B., Fletcher, I., Maryl, M., Wciślik, P., Buchner, A., Lyall, C., Spaapen, J. and Pohl, C. (2020) Final Report on Understandings of Interdisciplinary and Transdisciplinary Research and Factors of Success and Failure. H2020 Project "Shaping interdisciplinary practices in Europe". <a href="https://www.shapeid.eu">www.shapeid.eu</a>

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FURTHER READING Spaapen, J., Vienni Baptista, B., Buchner, A. and Pohl, C. (2020). Report on Survey among interdisciplinary and transdisciplinary researchers and post-survey interviews with policy stakeholders. H2020 Project "Shaping interdisciplinary

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