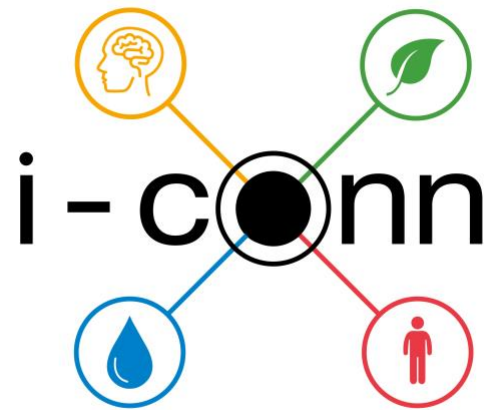


i-CONN Network



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Deliverable D6.3

Report on the Transdisciplinary Management Group

i-CONN: Report on the Transdisciplinary Management Group

Context

In the i-CONN proposal we emphasised that transdisciplinarity was central to our network and we underlined the value in generating transdisciplinary capacity as fundamental to both our substantive research and the translation of our research into practice. We also acknowledged that our transdisciplinary approach requires an ongoing process of collective learning and capacity-building between the research and practitioner teams. Oversight and management of our approach was to be governed by a Protocol on Transdisciplinary Practice and a Transdisciplinary Management Group.

The Transdisciplinary Protocol and Management Group

i-CONN developed a Transdisciplinary Protocol to support the i-CONN team to create the capacity required to effectively deliver our transdisciplinary approach (Appendix 1). The Protocol enabled us to develop a common understanding of the aspiration and ways of working that were likely to contribute to delivering transdisciplinarity. It was crucial that all those involved in the project collaborated to develop and learn from our transdisciplinary practices iteratively to improve our work and ensure we delivered the outcomes stated in our project proposal.

The Transdisciplinary Management Group (TMG) was established to manage and oversee the Transdisciplinary Protocol. The objectives of the TMG were to:

- i) Ensure that the activities and data collection outlined in the Transdisciplinary Protocol were coordinated and undertaken.
- ii) Provide a written annual report to the i-CONN Management Board.
- iii) Provide an oral Report to the network at each Annual Meeting.
- iv) Design a session on transdisciplinarity at each Annual Meeting.
- v) Analyse and publish the findings from the data collection outlined in the Transdisciplinary Protocol. The TMG will aim to write at least one paper on transdisciplinarity of the i-CONN network.

The membership of the TMG was drawn from ESRs, project partners, principal investigators and the project manager. Members included Louise Bracken, Shubham Tiwari, Marcel Mallow, Damian Crilly, Christina Prell, Jenny King and Laura Turnbull-Lloyd.

Meetings

The TMG has met on five occasions as follows.

June 17th, 2021

This was the first meeting of the TMG. We discussed the role of the group, explored data collection that we wished to undertake to be able to evaluate transdisciplinarity and the role of this way of working within the project. We decided that we should collect feedback from training events, challenge ESRs to reflect on

transdisciplinarity in the blogs that they were expected to write, collect feedback from each secondment and request feedback on our approach during sessions within each annual meeting. We also discussed the nature of potential publications.

September 16th, 2021

In this meeting the TMG evaluated the feedback questions that were used following training and secondments to ensure we were collecting necessary information to evaluate the transdisciplinary ways of working being undertaken. The TMG also discussed the proposal for the session at the Annual Meeting. We agreed to hold a panel discussion on the different understandings and approaches to transdisciplinarity being undertaken in the project. The TMG felt that this should be interactive and dynamic and include disparate viewpoints. We agreed to brief the panel for questions which were invited in advance.

March 15th, 2022

The focus of this meeting was to discuss the transdisciplinary session at the forthcoming annual meeting to be held on Monday 20th – Wednesday 22nd June in Bremen. We explored the opportunity of having an audio-visual technician from Durham University in attendance at the meeting to film the session. We agreed that each ESR would be asked to produce a short (3-5 minute) presentation to explain an aspect of their research to a general audience, including why their work should matter to non-academics. We requested that presentations should not include PowerPoint-type presentations and that they would be recorded. ESRs were given the opportunity to have their talk re-recorded if they were not pleased with their first attempt. ESRs were asked to prepare their talks in advance including recording themselves and watching that recording to reflect on content and style. Talks were to be accompanied by an informal poster session where ESRs had the option to present posters about their transdisciplinary activities e.g., secondment projects. These should be produced in conjunction with their supervisory team and secondment host. We planned to also have a discussion about secondments.

February 6th, 2023

Once again, this meeting was used to plan the transdisciplinary session at the annual workshop, March 2023. The proposal this time was to request ESRs to produce posters on the transdisciplinary projects that have emerged from activities such as the Datathon and secondments that might not be captured within their PhD. During the poster session a survey would be undertaken to understand what activities had led to the research, what had inspired the work, how it related to their PhD and supervisory team and plans for developing the research (either as part of their PhD or as a stand-alone project). The transdisciplinary deliverables were discussed and we explored the focus and content of D6.3 Project Report on the Transdisciplinary Management Group and D6.4 Transdisciplinary Practice for Connectivity Science. A possible publication was also discussed.

May 19th, 2023

This meeting focused on the deliverables associated with this work package. A draft of this report was discussed, a plan for D6.4 and an associated journal article and ideas for two policy briefings. We agreed that we would request a delay to D6.4 so the journal article could be completed and submitted as the deliverable. It was agreed to develop templates to support the delivery of policy briefs.

Reflection on the effectiveness of the Transdisciplinary Management Group (TMG)

The TMG has been a vital part of the management structure of i-CONN. Whilst the group has not met frequently, the ability to bring a group together with representatives from ESRs, Co-Is and non-academic partners to plan activities to encourage discussion of transdisciplinarity and ways to collect information to evaluate this aspect of the network has been incredibly valuable. The meetings ensured we made time to come together to focus on transdisciplinarity. Discussions during the meeting were lively and we ensured that the group reflected on

progress of the network, where transdisciplinarity was emerging and working well and the most suitable ways to collect information to assess our progress.

An important outcome from each TMG was a detailed plan for the transdisciplinary session at the annual meeting. The design of the TMG and its Terms of Reference ensured that a session on transdisciplinarity was included as a core element of each annual meeting. Without such proactive support for inclusion of reflection about this way of working, time and focus for it may have been eroded. The description of each meeting above illustrates how the transdisciplinary sessions were carefully planned and evolved over the duration of the project to enable us to champion, reflect and capture this way of working.

Designing the project to include a deliverable on the TMG itself ensured that we took care to hold, plan and record meetings and ensured we reflected on this group. The success of the TMG means we would recommend such a group in future projects where interdisciplinary and transdisciplinary ways of working are important. The value of the group far outweighed the relatively small amount of time required to hold TMG meetings.

The TMG has also had oversight of the range of activities used to encourage transdisciplinarity. Secondments have worked especially well to support the network building our capabilities to embrace and embed transdisciplinarity. Table 1 outlines how a selection of secondments has supported this aspect of our network.

Table 1: How secondments have led to growing capabilities to undertake transdisciplinary research

	New discipline?	Were new ideas developed?	Was there non-academic input?	Contribution to PhD?	Contribution to article?	What was gained?
1	✓	✗	✗	✗	✗	Analytical skills
2	✓	✓	✓	✓	✗	Analytical skills
3	✗	✗	✗	✓	✓	Data, reflexive view of PhD
4	✓	✓	✗	✓	✓	Analytical skills, Software
5	✗	✗	✗	✓	✓	Theory, methodological
6	✓	✓	✗	✓	✗	Analytical skills, Software
7	✓	✗	✗	✓	✗	Finessing research
8	✗	✗	✗	✓	✗	Models

Crosscutting themes emerged from the secondments. Key aspects that emerged are that the secondments enabled ESRs to test and refine their research and the visits enabled them to develop new framings on their research, especially in terms of different perspectives on connectivity. The secondments also helped make being part of the network more enjoyable, helped develop deeper relationships and allowed ESRs and supervisors to explore ideas in greater detail and depth than would otherwise have been possible.

The work of the TMG relates closely to the research undertaken by ESR14. An analysis of transdisciplinarity within the project and how it has evolved during the course of the network will form the basis of an ESR-authored paper. This paper will be submitted as D6.4.

On reflection, the work of the TMG could have been improved by meeting more regularly and including action learning as part of the meeting. This would have helped to grow the expertise of the TMG together as a collective which would have enabled members to act as more effective champions of transdisciplinarity. In a project with

less transdisciplinary experience and/or with limited support for transdisciplinary ways of working, growing transdisciplinary expertise would be more important. Also, to encourage more discussion it might be useful to have a greater number of TMG members, as well as including people who might be more sceptical/less willing to embrace transdisciplinarity.

In Summary

- We have designed in transdisciplinary ways of working and these have been embedded and encouraged this way of working where appropriate.
- These ways of working have worked well, evidenced in the way that the TMG has worked smoothly and efficiently, only needing to meet infrequently to drive transdisciplinary activities.
- We have encouraged and celebrated knowledge exchange in the widest possible sense between academic disciplines and selected non academic organisations.
- Training has built the capacity to deliver research and knowledge exchange.
- Secondments have worked well, especially when they were between disciplines.
- These transdisciplinary activities have helped us deliver our aim *'to train a new cohort of researchers specialized in the developing field of connectivity science who will be capable of developing interdisciplinary approaches to connectivity across a range of disciplines and real-life applications.'*

Appendix 1 – i-CONN Protocol on Transdisciplinary Practice (November 2020)

1. Project Summary

i-CONN is a Marie Skłodowska-Curie Innovative Training Network (ITN) project funded by the European Commission, under their H2020 programme. The network consists of 10 Universities and three partner organisations across Europe, and brings together scientists from Astrophysics, Computer Science, Ecology, Geomorphology, Hydrology, Neuroscience, Systems Biology and Social Science. The goal of i-CONN is to train a new cohort of researchers specialized in the developing field of Connectivity Science who will be capable of developing interdisciplinary approaches to connectivity across a range of disciplines and real-life applications in the next five to 10 years.

2. Context on Transdisciplinarity

There has been a growing emphasis on transdisciplinary research, in which the boundaries between disciplines are crossed, as well as those between the academy and other social and political spheres, to enable a wide range of actors to be involved in the design, development and delivery of research (Wesselink 2009; Lang et al., 2012; Renner et al. 2013; Bracken et al., 2014). Such approaches are increasingly encouraged due to two related rationales: firstly, they are likely to make research more useful to academics, policy makers and the wider public; secondly, they enable the research that is undertaken to be more salient. In this way the involvement of public and non-academic experts in the research process increases the relevance of the research to them, widens the range of knowledge upon which the research draws (e.g. local and professional) and explores the perspectives of non-academics.

The emphasis placed on bringing non-academics into the research process is symptomatic of the recognition that relevant knowledge is not only contained within the academy. For example, there are many equally legitimate sources of knowledge and evidence that need to be drawn upon to inform management of environmental problems (Wynne 2003; Petts 2007; Lidskog 2008; Collins and Weinel 2011). This understanding is linked to an increasing expectation that policy makers should be using the best available evidence when making decisions (Campbell et al. 2011; Jolibert and Wesselink 2012), which includes a variety of perspectives, recognising that evidence, ideas, arguments and framings all matter in the governance of problems (Jasanoff 2003; Owens 2010; Macnaghten and Chilvers 2012). Recognising knowledge as a social process means acknowledging that expertise is conferred upon individuals in different and multiple circumstances (Jasanoff 2003; Wynne 2003; Irwin 2006). Such forms of research are, therefore, part of complex struggles over “what” counts as relevant knowledge and subsequently “who” then possesses such knowledge to inform policy debates within the public arena (Jasanoff 2003; Eden et al., 2006; Bracken and Oughton, 2013).

Transdisciplinary research is at the heart of the i-CONN network, which brings together varied academic perspectives with non-academic expertise to further Connectivity Science, build the capacity of Early Stage Researchers (ESRs) and more experienced researchers alike and apply developments in Connectivity Science to real life applications. Our Transdisciplinary Protocol outlines the procedures and processes to ensure this approach is fully embraced throughout the project.

3. Objectives of the Transdisciplinary Protocol

The objective of the Transdisciplinary Protocol is to support the i-CONN network to create the capacity required to effectively deliver our transdisciplinary approach. It is crucial that all those involved in the project collaborate to develop and learn from our transdisciplinary practices and ensure we deliver the outcomes stated in our project proposal.

The protocol identifies the stages of dialogue, the meeting schedule, required inputs and the expected outputs of the transdisciplinary activities undertaken in the research.

There are many transdisciplinary activities outlined in the original proposal, such as secondments to partners which are not repeated in this Protocol. The purpose of this protocol is not to draw out all of the transdisciplinary activities throughout the whole of the i-CONN project, but to specify how to use meetings, workshops and training events to build transdisciplinary capacity of the project team, learn from our experiences and share best practice beyond the project.

4. Events and data collection

The following suite of activities will be used to collect data and reflect on our transdisciplinary activities.

4.1 Training events

We have a suite of training events at the heart of the i-CONN network where ESRs and network members are building transdisciplinary capacity and capabilities. Following each event, we will collect feedback on the event including reflection on transdisciplinarity.

4.2 ESR Blogs

ESRs will write two blogs per year reflecting on their growing transdisciplinary capacity. These blogs will focus on different aspects of transdisciplinarity depending on the topic and interests of the ESR. A schedule of blogs will be compiled that maps onto the communications strategy. Blogs will be disseminated via the i-CONN website.

4.3 Secondments

Secondments are built into i-CONN for ESRs, supervisors and partners to co-learn and co-develop research and applications. These secondments will be important opportunities for knowledge exchange and translation. Both ESRs and hosts will be interviewed by Louise Bracken (Chair of the Transdisciplinary Management Group (TMG)) at the end of each secondment to reflect on transdisciplinarity.

4.4 Annual Meetings

Annual meetings provide an important opportunity where all members of the network will come together to share our research, update each other on ESR projects and explore future opportunities. The Annual Meetings will host a session on transdisciplinarity to reflect on our existing capabilities, but also explore future opportunities. The sessions will be designed by the TMG and will include activities to chart research findings and capture learning and solutions.

5. Management and reporting

Durham University will oversee the Transdisciplinary Protocol and Chair the TMG. The TMG will ensure that the activities and data collection are coordinated and undertaken¹.

The TMG will provide an annual report to the i-CONN Management Board and report to the consortium at the Annual Meeting.

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