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7 Steps to:
Managing (Inter)National Research

Overview

The Plymouth University's Research and Innovation Strategy 2020 states that it will support researchers to: 'seek out research relationships with organisations and business regionally, nationally and internationally, making links and networks wherever opportunities are present' (Plymouth University, 2016, p8). To achieve this aim, research projects are launched with world-class research institutes/centres and partnerships are created with other universities to achieve international excellence in research.

International research collaboration has been recognised as an exciting development within many countries (Leydesdorff and Wagner, 2008). The main drivers for increased research collaboration are related to improving national competitiveness, supporting developing countries, addressing global societal issues, and building good diplomatic relationships (Boekholt et al., 2009). Collaboration in research is stimulated at various levels, from political and strategic university levels to bottom-up approaches from individual researchers. Researchers benefit from collaborative work that enables them to join networks and create novel ideas. Gaining new knowledge of other research systems and building strategic partnership are positive factors when joining a collaborative research project (Boekholt et al., 2009).

The UK plays a significant role in international collaborative research. A study of research collaboration across nine countries identified that those with a UK institute as a partner had an increase in research quality and impact (Adams at al., 2007). The study included all research disciplines, although the impact was highest in bio-medical sciences.

1. Network with peers

Engaging in networks is crucial for sharing ideas and knowledge. These networks contribute to the development of excellent research teams with a collective understanding and shared vision to work collaboratively on new ideas, technology and innovation. More challenging is the ability to network with researchers from different disciplines. The increasing complexity of research questions forces researchers to collaborate with teams in different fields and share commitment and knowledge in finding solutions (Pennington et al., 2013). These connections should be sought and networks need to be created to obtain successful funding. Becoming a member of a professional international society, publishing in international journals, inviting colleagues to visit your department and attending external events are all useful ways to connect with peers (Puljak and Vari, 2014).

2. Define the scope of research

Defining the scope of an international research project, including the research approaches, methods, and level of involvement of all partners, should be performed collaboratively. Strong leadership is required in this process, particularly when several research groups are involved, to help members work together towards a shared goal (Adams at al., 2007). The scope of research should also be relevant to your specialty/department, funders and the public. It is advisable to include relevant stakeholders in this process in assessing the feasibility of the international project in terms of research policies, funding, risks and opportunities. If a research network is already established, some partners might have performed existing work that has led to new insights and it is important to exchange ideas. If the scope of research needs to be defined from a larger group of experts, a Delphi study to identify research priorities in a specific area can be conducted (Wielenga et al., 2015) to understand the international needs and differences in research issues.

3. Build trust and accountability

Successful international research teams are built on trust and accountability. The relationship with the research partners is an ongoing challenge and requires strong leadership of the team coordinator and a shared responsibility to develop trust (Barret at el., 2011). Trust can be fragile and transient if the research team or networks are not meeting face-to-face regularly (Stokols et al., 2008) and cultural differences can challenge the team if members do not share common values or expectations (Jarvenpaa and Leidner, 1999). Thus, accountability and liability should be established and agreed early on. Ideally a governance document including the responsibilities of the team members should be created (Stokols et al., 2008). Sharing agreed values will contribute to shared responsibilities and motivate team members in achieving collaborative goals thereby enhancing the prospects of success.

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4. Define information processes

Information management is crucial for the success, with a well-established communication system inspiring trust, as researchers are able to manage the compatibility and cohesion of the project work (Stokols et al., 2008). Various collaborative communication strategies need to be considered from the initial contact to completion. Email, phone or video conferences are easy to organise and are cost-effective. However, regular face-to-face meetings are important to develop collegial relationships and secure progress in complex multi-national studies (Lida et al., 2005). Information systems can help share data and analysis among project members. However, it is important to consider that intellectual property rights vary around the world and team members might have different attitudes towards ownership (Freshwater et al., 2006). Information management can be supported by a project website with information for colleagues and the public, a discussion forum for project members and using tools such as Dropbox to share documents.

5. Share data and results

Publicly funded international projects, 'should be openly available to the maximum extent' (Arzberger et al., 2004, p136) and therefore sharing data and results is important. Indeed, an ethical obligation to share data that advance knowledge also contributes to the respect and engagement of the team members. This should be done using databases that are relevant and useful to other researchers and the public. However, before making data available, it is advisable to draw up a code of conduct of international data sharing. Such a code should include principles and procedures concerning data quality, accessibility, responsibility, security, transparency, accountability, and integrity (Knoppers et al., 2011). Large funding institutions often have policy statements on data sharing and this can be a requirement of a funded project.

6. Disseminate and apply the outcomes

The aim of a research project is to generate new knowledge. Whether this needs to inform policymakers, be applied to potential users or influence daily life, "knowledge transfer" is increasingly recognised as a necessary step in any research project. It is also important in terms of impact for the Research Exercise Framework (REF) which includes, 'all kinds of social, economic and cultural benefits and impacts beyond academia, arising from excellent research...'' (Research Excellence Framework 2011, p4). In the international context this might be a challenge. Partners in the dissemination and implementation phase should include all participating institutions of an international project, but also the end-users and ideally international professional societies. If the project results in recommendations, it is advisable to include representatives from the political arena. It can be helpful to organise public and professional events to share the new knowledge, promote the role of facilitators in all participating countries/regions to assist in the implementation of the results, and use online platforms like Twitter to inform the public or stakeholders.

7. Evaluate the project and collaboration

An evaluation of an international project seeks to examine the processes of research collaboration. Klein (2008) described seven principles of evaluating interdisciplinary and transdisciplinary research projects: 1) variability of goals; 2) variability of criteria and indicators; 3) leveraging of integration; 4) interactions of social and cognitive factors in collaboration; 5) management, leadership, and coaching; 6) iteration in a comprehensive and transparent system; and 7) effectiveness and impact. Ideally such an evaluation should be performed during a face-to-face meeting with the input of all participating researchers.