An introductory guide to research / industry collaborations

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USING THIS GUIDE

This guide has been written by and for researchers at the University of Bath. It draws on the experiences and perspectives of individuals from across the faculties and School of Management. The experiences are those of industry-university research collaborations, based on examples of individuals working across organisational boundaries in pursuit of shared research goals. We see these collaborations as distinct from consultancy work. In the former, researchers work with an industry partner whilst in the latter, they work for the partner.

The guide should be of use to those researchers new to engaging with industry. However we hope that those with more experience of industry collaborations might find some use in the insights that follow.

We will look to evolve this guide over time so if you have any comments / suggestions / additions, please email public-engagement@bath.ac.uk.
BACKGROUND

This guide has been produced as part of the work of the Public Engagement Unit, which aims to embed a culture of public engagement with research across the University, and Research & Innovation Services (RIS), which supports academics in establishing collaborations. The Public Engagement Unit runs events, delivers training and provides funds to facilitate engaged research work. Its remit is broad and in part has included addressing engaged research collaborations with industry. This guide summarises University of Bath researchers’ experiences in this area.

The University possesses strong and distinctive links with industry through research collaborations, undergraduate placement programmes and knowledge transfer activities and this is well understood. To explore the dynamics of university-industry research, the benefits and challenges of such collaborations from the viewpoint of researchers at the University, Dr Richard Fairchild (School of Management) and Dr Kate Woodthorpe (Department of Social & Policy Sciences) were selected as Public Engagement Advocates. They have reflected on their own experiences of engaged research with industry that have informed both this guide and two separate case studies.

To expand on their practice and to describe wider University of Bath experiences of research collaborations with industry, Kate and Richard joined other researchers at one of our Public Engagement Conversations. The panel of researchers, drawn from across all faculties and the School of Management, shared their experiences with attendees before fielding Q&As.

Participants then addressed the following questions in groups before feeding back in plenary:

- What are the benefits and risks for all parties involved in industry-academic research collaborations?
- What practical challenges might arise for researchers working with industrial partners and how might they be overcome?
- What impact, if any, do industry-academic collaborations have on notions of academic freedom?

The experiences gathered at this event alongside Kate and Richard’s own reflections are those that have been used to inform this guide.
GETTING STARTED

Before engaging with an industry partner for the first time, ask yourself:

- Is this the right thing for me and my research? Collaborating with industry is not for everyone.

- What will collaboration with an industry partner achieve?

- How much control (or otherwise) will you have / would you like over the research design and process? Never over promise – doing so, may be classed as ‘misrepresentation’.

- How does the public perceive the industry partner? Do they make broadly positive or negative associations and how might these shape how your research is perceived / received?

- What will an effective collaborative process between you and your industry partner look like? How will the collaboration operate – e.g. how will you manage the project to maintain a positive relationship?

- Who will own what in terms of the outputs from the collaboration? Some industrial partners will try to restrict your ability to publish and / or prevent you working with other partners.

- Are there any reputational risks to you or the institution of engaging with a particular partner?

The way in which you position yourself in response to such questions will depend in part on how you determine your own academic identity and what you are willing to compromise on. Is research income very important to you, or making a difference? Would you find it very difficult to compromise your integrity if you felt you were being steered in a particular direction by your industry partner?

Alongside academic identity lies the value of academic freedom. As a consultant, you may cede a level of autonomy over research design, strategy and analysis whilst in research collaborations you should typically be regarded as being more objective. This objectivity should add credit and value to the work you produce.

There are over 20 mechanisms you could use to collaborate with industry. Contact Research & Innovation Services to find the right support.

Finally, you may wish to consider the ‘bigger picture’ in terms of any potential collaboration. For example, a productive research relationship could lead to future projects involving PhD students and / or student placements.
BENEFITS OF ENGAGING WITH INDUSTRY

For perspectives beyond those of University of Bath researchers, see ‘read more’ at the end of this section.

Motivation derived from application

You may be motivated to engage with industry as a means to ensure that your research has relevance and interest beyond a community of scholars, and to have practical implications and benefits in the ‘real-world’. Benefits of such an approach include:

- A greater understanding of the needs of the particular industry partner / sector that you are engaging with;
- Personal and professional motivation from seeing your research making a difference and from exposure to a different working environment;
- A virtuous circle wherein research informs practice and practice informs your research.

Research benefitting from knowledge exchange

By becoming open to relevant knowledge outside of the Academy, the quality and relevance of your research can be improved in a variety of ways. For example:

- Industry partners may prove a valuable source of research questions, providing a useful frame for problems that you can solve. Equally, they may provide a useful challenge to your existing research questions helping you to refine them;
- Collaboration reduces the likelihood of you making (unfounded) assumptions, ensuring that your research is grounded. It also provides opportunities to apply and evaluate your existing research;
- Knowledge exchange is not just about the knowledge that each partner brings but also the different perspectives that arise when collaborating. These may lead you to develop new research horizons and / or strengthened, robust research arguments.

Securing funding for research

Data from the Office for National Statistics show that private sector investment in UK Research & Development (R&D) stands at 1.1% GDP with an increasing inward flow of R&D investment from foreign companies. Much of this investment funds collaborative research, bringing together university researchers and those from the private sector. Opportunities exist for you to take advantage of this funding – see Research & Innovation Services’ Funding Opportunities site.
Enhanced dissemination

The University has its own Press Office but, through engagement with your industry partner, you will also be able to draw on their own press and PR functions. This could help extend the visibility of your research, opening up other avenues of research promotion and dissemination that might otherwise have been closed.

The link to impact

A key factor in contemporary UK higher education policy is the emphasis placed on the impact of research conducted within universities. The Research Excellence Framework (REF) 2014 exercise describes impact as:

An effect on, change of benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia.

Linked to the impact agenda, government policy on higher education research has also placed increased emphasis on knowledge exchange and transfer in order to develop a thriving knowledge economy. An effective collaboration with industry enhances the likelihood that the resultant research will have some form of impact beyond academia. For example, the industry partner might become more receptive to the conclusions of the research or might act as an advocate, promoting the research around practitioner networks and influencing others to adopt or adapt their practices in light of the findings.

Liaise with Research and Innovation Services to explore what types of impact you might expect and how best to capture the impact from your work – see the Research Impact Gateway and our Planning for Impact Toolkit.

Read more

For insight from researchers outside of the University of Bath, see:

- Catherine Johnson’s (Associate Professor, University of Nottingham) blog The Mutual Benefits of Engaging with Industry
- ESRC’s Impact toolkit, which includes information on developing an impact strategy, promoting knowledge exchange, public engagement and communicating effectively with your key stakeholders.

For an academic article on motivations and benefits of engaging with industry, see:


For an overview of the general benefits of engagement, see:

- The National Coordinating Centre for Public Engagement’s website at: www.publicengagement.ac.uk/explore-it/why-it-important/benefits-engagement
CHALLENGES OF ENGAGING WITH INDUSTRY

For perspectives beyond those of University of Bath researchers, see ‘read more’ at the end of this section.

The ‘Top Tips’ section that forms the penultimate section of this guide gives ideas on how to address the challenges raised below as well as how to maximise the benefits outlined in the previous section.

Timescales for research

Often, business wants ‘off-the-shelf’ answers ‘yesterday’, not understanding that the academic research process can take time. This can be a price of undertaking responsive research where answers are demanded now. Ensuring the production of high quality data and analysis under such conditions will require you to have a strong research team and a highly organised approach to project management.

Inform yourself about the different forms of collaboration and choose the right one with the help of Research & Innovation Services.

Managing the research collaboration

Ideally, research collaborations should involve a balance of power between partners with all contributions equal and valued. This is easier said than done and you may have to address unexpected shifts in power dynamics. The following unhelpful behaviours may indicate such shifts:

- Micro-management which can be joint and come from either side
- Restricting previously agreed access to data
- Interfering in the research process in a way that has not been agreed
- No one person having oversight of the entire research project

Intellectual Property Rights (IPR)

A key, early sticking point for you could be the understanding common misconceptions with regards to IPR. Knowledge is Intellectual Property, such as what you have discovered to date and what you will discover in the future. Intellectual Property Rights arise when your knowledge can be protected – e.g. Copyright (written word or software code) and Patents (for novel technology) are the most common.

A good place to start is being clear on who owns what (such as data and research analysis) at the start (i.e. what is being ‘introduced’ into a project), and what you and the industrial partner think will be the outputs of the work – e.g. publication, reports, new process or new technologies, or even improvements to current technologies. Then you can discuss what the benefits are to yourself and partnering industry.
Don’t be tempted to negotiate your contract alone – please approach Research & Innovation Services. Negotiating a contract can take time so factor this in to your planning. However, the time can be reduced if both sides are clear (and agree) on the inputs, outputs and benefits.

You may find that in certain sectors a potential industry partner will refuse to work with you if you have undertaken collaborative research in the past with one of their competitors. An existing industry partner may also veto any attempt by you to forge new research collaborations with one of their competitors. It is best to have an upfront conversation before embarking on any collaboration to ensure that there are no barriers or limitations to future research collaborations that you could not accept.

**The format of outputs**

As a researcher, you will be used to academic writing but your industry partner is unlikely to want research outputs presented in this way. Instead you will have to learn the art of report writing, emphasising results and recommendations over methodology, context and theorisation in clear and succinct prose. You will need to ‘talk in your partner’s language,’ converting academic articles into ‘business-speak.’ You may wish to work with your partner to co-write any outputs.

**Challenges of dissemination**

When disseminating your research outputs, you may find that the media mistakes you for a ‘spokesperson’ for your industry partner. It is important that you are very clear with journalists that you are there to comment purely on the research findings rather than to provide any specific product or brand endorsement. The University’s Press Office can support you in this.

**Read more**

For lessons from successful collaborations including how challenges have been overcome, see::


In addition, the University Industry Demonstration Partnership in the United States has produced an informative Guide for Successful Institutional-Industrial Collaborations that addresses the challenges of engaging with industry. It can be accessed at: [www.industry.gatech.edu/files/UIDP-Researcher-Guidebook.pdf](http://www.industry.gatech.edu/files/UIDP-Researcher-Guidebook.pdf)
TOP TIPS

The Top Tips are divided into three broad areas:

1. Securing an industry partner
2. Creating a sound (legal) setting for your project
3. Conducting and concluding an effective research collaboration

1) Securing an industry partner:

Network, network, network: It is vital to put yourself out there and to promote your work where you can. This can include conference attendance and papers, reports in trade journals, having a profile on LinkedIn and so on. This is about advertising what you do, being seen in the right places, and making yourself visible. If you are going to a conference, check the participant list beforehand, make contact with the industry partner and arrange to meet with them for coffee to brief them about your work and discuss how you might work together. Also – participate in networking events run from the University’s Innovation Centre.

Talk in their language: Just because you have published ten academic articles on a specific area does not mean that a potential industry partner will be interested in you and what you have to say. Do a little research on the company’s mission statement and objectives and then articulate how your research might contribute to these. Make sure you have a good elevator pitch that articulates your research and potential benefits to the industry partner. Even seemingly innocuous terms can cause problems: does “large scale” mean the same thing to you and your industry partner?

It’s not all about you: Yes, you will have extensive research knowledge and expertise that will be of great value to a potential industry partner but do not forget to recognise that they also bring their own knowledge and experience crucial to your research. Balance humility with prestige; the fact that you work for a major UK university might be of interest to your potential partner.

Be responsive to industry demands: Being flexible and responding to commercial interests / demands should not necessarily mean that you are compromising your research agenda. Rather, view this as an opportunity to focus your research in an area for a period of time, with the goal of creating research data / outputs that can be ‘applied’ in the world beyond academia. Any collaboration with industry will involve agreeing to certain outputs by certain dates. You have to stick to these.

Be clear on the distinction between consultancy and research: The University’s Research & Innovation Services team can provide support on how to manage this distinction and can advise whether a potential piece of work is consultancy or research.

Be selective about who you collaborate with: Do not just collaborate for the sake of collaborating. Effective collaborations will involve all partners gaining mutual benefit from working together. Do not be afraid to decline an invitation if you cannot see the advantage to your research or if you have concerns as to whether the project will be a truly collaborative exercise.

It takes time: Building up successful working relationships takes time. Manage your meetings well and ensure that everyone is clear about agreed actions to ensure that your working
Relationship is healthy from the start.

2) Creating a sound (legal) setting for your project:

Talk with Research & Innovation Services: they will be able to help you with relationship building and finding the right collaboration mechanisms for the work you and your partner wish to undertake.

Agree on the inputs, desired products / outputs and benefits of the research: These can include traditional research outputs (e.g. academic articles, reports, products etc.) but you may also be expected to deliver less traditional outputs (e.g. industry reports or media work). It is important that at the stage that research is agreed and the contract is created that these are included and clearly specified.

Clarifying Intellectual Property Rights (IPR): Associated with the above, the intended use of any IPRs needs to be specified in the contract. Research & Innovation Services can advise and support you.

Confidential data: If confidentiality clauses are built into the contract about what you can and cannot share publicly, you must adhere to these at all times. Ensure that you are definite about what you are permitted to use for academic purposes and what you are not.

Think about publishing early: At the outset of the research have in mind what publications you would like to generate from the project. Stick to these goals throughout – as long as you comply with what was agreed with the industrial partner.

Think about impact: Can the outputs and outcomes arising from the research you are doing with the industry partner be used in the next REF? Keep this in mind and speak to your industrial partner and your department’s Director of Research about the research areas that they are thinking of prioritising. Keep attuned to contractual issues. For example, you might wish to use the research as an impact case study but confidentiality clauses may prevent you from doing so.

Establish clear boundaries: Be clear at the outset of the project as to what input the industry partner will have into the project as it progresses. Establish a clear work schedule that includes update / progress report meetings if needed, and clarify expectations about how autonomously you will work. Ideally, get all this in writing as part of the contract. Careful management of expectations on all sides through an upfront, open and honest discussion of expectations and processes is crucial. And do not forget to think about contingency plans for if things change.

Secure a mentor: Learning from someone who has worked with industry successfully in the past is an ideal way of understanding potential opportunities and pitfalls. Identify someone within your department / discipline / from the University who may be able to help you, and invite them for a coffee to pick their brains. If you are struggling to find someone, contact the University’s Public Engagement Unit, or Research & Innovation Services, who should be able to help or pass you on to the appropriate person.

Be clear on the time commitment: As an academic you are likely to have teaching or administrative responsibilities beyond your research. Your industry partner may not appreciate this and may see you as working solely on the collaboration. You need to be up-front with them about how much time you are devoting to the project and when – make sure that any likely
periods of down-time (e.g. because of teaching or marking) are accounted for in the agreed deliverables. Similarly, you may need to discuss with your Head of Department how much time you are able to allocate to the project.

3) **Conducting and concluding an effective research collaboration:**

**Be aware of differing speeds of research:** It is important early on to recognise that different sectors have very different working practices; the speed in which they work may complement or conflict with yours. An industry partner may work at a faster pace than the University, owing to a different organisational structure (for example, specialist teams who focus on a specific part of the development process), commercial pressures, and/or different conventions with regard to (peer) reviewing products and outcomes. When you agree to work with industry, you also agree to working at their pace.

**Be open-minded:** Being exposed to a different work culture can be both intellectually stimulating and challenging. Go in with an open mind and try to maintain this throughout the course of the project; see working with industry as an opportunity to expand your horizons and to learn. You never know what may come of it!

**Be attuned to the consultancy issue:** You may sign up to conduct research and find yourself being regarded as a consultant. If this happens it is important to remind your industry partner about the research remit that you have undertaken and your need to uphold the research standards specific to your discipline. Consultancy is a good way to build relationships and visibility but will involve strict deadlines and deliverables.

**Disseminate carefully:** If you contribute towards the dissemination of the research to public audiences via the media, be clear in your contributions as to your role in the project and the University’s identity. Avoid being regarded as a spokesperson for the industry partner. Seek advice from the University’s Press Office if concerned, and make sure that they have sight of press releases before they are released by the industry partner. Inform the industry partner that the press office has to ‘sign off’ press releases.
FURTHER READING


