

Research collaboration between universities and industry: Five practical principles to make it work.

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Increasingly, academics and practitioners in the UK are urged to work together in collaborative research. [Ana Isabel Canhoto](#) and [Sarah Quinton](#) discuss how social features, material characteristics, and the attributes of the individuals engaged in research collaboration can support the success of a collaborative research project.



Research collaboration is deemed to accelerate the transfer of knowledge between experts and the translation of world-class research into practical applications, which has important commercial, economic and social benefits. Collaboration between academics and practitioners can also produce new knowledge, by bringing together researchers with complementary perspectives, interests, skills and knowledge bases.



For instance, in the digital arena – which encompasses multiple streams of inquiry, from computer science and sociology to marketing and information systems – research collaboration has supported industry innovation, as well as the development of new techniques and protocols to collect, manage, analyze, and distribute digital data. The value that can be derived from research collaboration, and the potential to accelerate the discovery process, are such that the UK government, funding bodies and others have been actively encouraging the formation of such partnerships; sometimes making university-research partnerships a condition for funding awards.



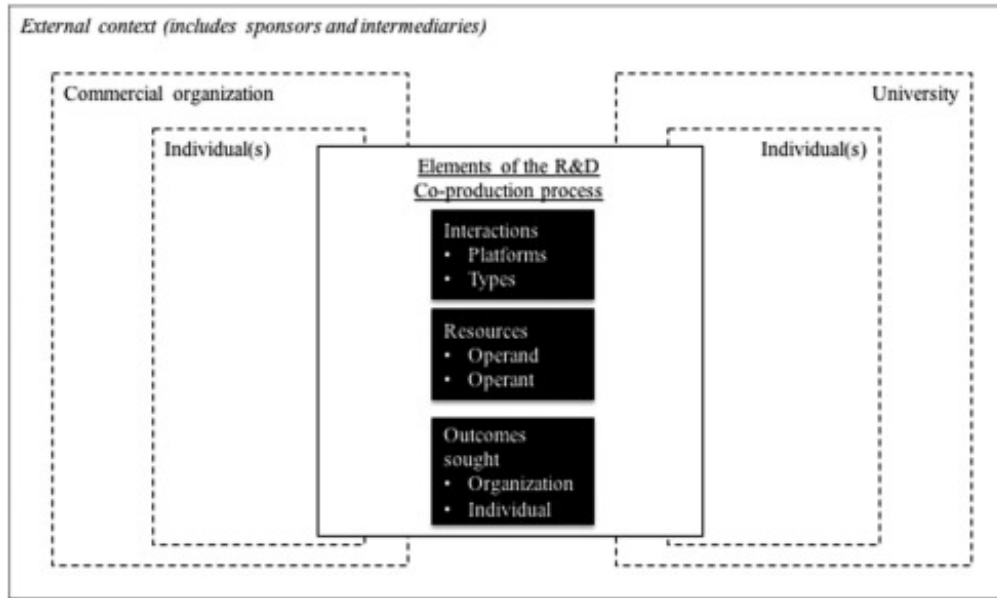
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Against this potential, and the push for collaboration, there is evidence that clashes between the academic and the managerial logic undermine the success of collaboration attempts. Moreover, academics and managers are likely to have different goals, capabilities and epistemological stances, and the negative impact of these differences on the

creation and running of collaborative projects should not be underestimated.

Together with Dr. Paul Jackson at Oxford Brookes University and Professor Sally Dibb at The Open University Business School, we investigated the experiences of academic researchers and industry practitioners who had participated in successful R&D collaborative projects in the digital arena, to identify the factors that support or hinder research collaboration. The full research is reported [here](#).



Figure 1 Framework of co-production in university–industry R&D collaboration.



We examined the interactions, resources, and outcomes sought that characterize the co-production process in R&D projects and considered the effects of the individual, organization, and external contexts on project success (Figure 1). Thirty-six participants were drawn from a heterogeneous group of UK professionals, including academics from established and new universities, computer scientists, owners of small and medium-sized businesses, senior-level managers from large firms, managers from public sector organizations, and managers of technology transfer and business development functions within universities. We collected data through group interviews; each of the six groups comprised roughly equal numbers of industry and university participants.

Our findings shed light on the interactions and resources that characterize successful R&D collaboration, and which are summarized in Table 1. Four types emerged. Some of these factors are essential for the success of university-industry R&D collaboration and, thus, we call them enablers. Others support or undermine the functioning of those projects and, so, we called them facilitators and hurdles, respectively. Still other factors can actually prevent the coming together of academic and industry researchers, or the ability to work with each other and, therefore, become blocks.

Table 1. Effect of contextual elements on university–industry R&D collaboration

	Determining factors	Influencing factors	
Positive effect 	ENABLERS Shared purpose and understanding; Complementary skills; Interest in innovation; Open minded; Realistic expectations.	FACILITATORS Regular (face to face) interaction; Experience of working together; Long-term view; Individual preferences; Offering different perspectives; Seeking complementary approaches;	Individual layer
	Offer space and time to think; Risk taking environment.	N/A	Organization layer
	Key source of funding	Development of networks; Push for cross-discipline research.	External layer
Negative effect 	BLOCKS N/A	HURDLES N/A	Individual layer
	Conflict with other goals; Different timescales; Poor awareness of, and accessibility to, each other's work; Ways of working.	Role of legal departments; Conflicting demands on time; Interaction with other activities in the organization.	Organization layer
	N/A	Administrative burdens; Focus on functional outcomes.	External layer

From these findings, we propose five practical principles for the development of R&D projects between universities and industry.

Principle 1. Share information in ways that are accessible and relevant to the other party.

For universities, this includes sharing research-based information through open, non-paid channels (e.g., open access publishing), establishing a strong Internet presence, and being visible on social media channels, to enable industry to locate relevant material and expertise. For industry, it means creating a culture of sharing knowledge, maybe via the publication of white-papers or case studies, which go beyond purely promotional business efforts.

Principle 2. Identify discrepancies in modes of operation and invest in establishing a common language.

Each organization, discipline, or department has its own terminology and ways of working. Given the implicit nature of these features, individuals may struggle to articulate or even identify them, particularly in innovative projects. Project managers should encourage activities that identify these discrepancies, for example, by producing and sharing a simple “terms of reference” early in a project. Project participants also need to be encouraged to let go of their discipline-specific theories and methods and instead should embrace the opportunity to expand their perspectives and experiences.

Principle 3. Leverage third-party brokers

Third-party brokers can assist in linking potential partners and in identifying potential research foci that would benefit from integrating academic and practitioner perspectives. Research collaboration should make use of intermediary organizations as facilitators or translators between industry- and university-based researchers. The profiles of third-party brokers could be raised by professional institutes, as many commercial organizations belong to these bodies. Third party brokers include UK government initiatives such as www.connect.innovateuk.org.

Principle 4. Develop trust through small wins and regular interaction

Trust is essential for the success of collaborative projects. So, collaborative projects need platforms and mechanisms that support joint learning and the exploration, rather than exploitation, of resources. The development of trust can be supported by engineering small wins, through staged projects, ensuring that teams meet regularly both formally and informally, and giving careful consideration to the form of IP protection.

Principle 5. Assemble teams with common attitudes and complementary skills

Individuals are the cornerstone of successful co-production. The teams that are assembled should include individuals with a common and positive attitude toward collaboration and innovation, strong social and communication skills, and complementary technical expertise to create a balanced team. Smaller teams make for better interaction and information sharing. Given the value that individuals contribute to R&D collaboration, consideration of how best to incentivize participation, whether through practical means, such as the provision of sabbaticals and financial incentives, or by highlighting the symbolic and emotional benefits, is necessary.

This blogpost is based on a journal article (2016) "The co-production of value in digital, university–industry R&D collaborative projects" in [Industrial Marketing Management](https://doi.org/10.1016/j.indmarman.2016.03.010). doi:10.1016/j.indmarman.2016.03.010

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About the Authors

Ana Isabel Canhoto is Senior Lecturer in Marketing at Oxford Brookes University. Her main areas of research are customer profiling, algorithmic decision making, and the role of social media in customer service. She co-chairs the Academy of Marketing's special interest group on Services Marketing and Customer Relationship Management.

Sarah Quinton is Senior Lecturer in Marketing at Oxford Brookes University. She is also the current Chair of Oxford Brookes University's Research Ethics Committee. Her research focuses on strategic digital and social media issues, the digitalization of businesses and qualitative digital research methods.

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