Collaborating with the EU

A more self-reliant approach to research collaboration with Europe is the best bet, writes Dr Mark Matthews.

The Forum for European-Australian Science and Technology cooperation (FEAST) has been examining researchers' experiences in collaborating with Europe, starting with those teams which have participated in Sixth Framework Program (FP6) projects.

We have been asking questions about what works well and what doesn't, as well as the benefits obtained and any challenges encountered. Our consultations have covered 47 FP6 projects, which amounts to nearly half of the formal Australian participation in FP6. Significantly, Australian researchers have, in the main, welcomed this initiative because they fully appreciate the importance of providing the European and Australian science and innovation policy communities with better information on how best to intensify research collaboration.

Our conclusion is that a new paradigm in international research collaboration involving Europe may be emerging. The established wisdom for many researchers has been to view international research collaboration as a complementary but auxiliary activity to core research. That approach lent itself to searching for dedicated funding to support international research collaboration. But it is extremely difficult to find enough targeted funding to match demand.

There is also a tendency for some researchers to view international cooperation as a means of supporting research projects that they have been unable to fund via domestic sources. Proposal submission synchronisation can be an additional problem faced when targeted funding for international engagement is relied upon.

In this established perspective, the risks can be rather high. Considerable time, and resources, can be consumed in attempting to secure special funding for international collaboration, yet the probability of success is low compared with efforts to secure purely domestic research funding. This risk reduces the attraction of international collaboration and, arguably, is a matter of concern given the importance of bringing together complementary research capabilities that reside in different nations.

But the emerging paradigm is significantly different. It reflects growing awareness of the fact that the most highly-cited research work tends to be associated with international research teams and therefore treats international collaboration as part of the core business of doing cutting-edge research. Those teams with sufficient critical mass, as can be found for example in a centre of excellence, build sustainable collaborative relationships as a key part of their core projects – not as an optional extra. This approach involves doing things like exchanging post-docs and PhD students and arranging regular networking of researchers to pool their insights and jointly interpret findings. Travel costs are born by a centre, or smaller team, as part of its core business.

The risks faced in working in this way are far lower because the challenge of trying to secure (limited) additional funding for international collaboration is greatly reduced. Indeed, the reciprocity involved in exchanging staff and students means that there can be a very high level of collaborative activity relative to any international flows of funding. Provided that the transaction costs involved in international research cooperation (ie, travel funding) are covered, teams can swap people with relative ease. Of course, it can be very difficult for the policy community to track this endogenous international research collaboration precisely because it is central to core research efforts.

This is why so little data is available on the real nature and extent of research collaboration between Australia and Europe. It is easiest to track the collaboration linked to targeted funding, which represents only the tip of the iceberg.

It is not hard to see that adopting this more self-reliant approach allows the size of the international research collaboration deal-flow to grow in response to the demand for such collaboration without the constraint imposed by the limited availability of targeted funding. Of course, any tendency for national funding bodies and research councils to cut requested travel funding when awarding research grants does tend to limit the effectiveness of this self-reliant approach – particularly if it is hard to raise funds for travel from other sources.

The researchers we consulted stressed the following 10 factors in building collaboration with Europe in this more self-reliant manner.

1. Improve how we articulate project-specific value propositions. We need to get much better at appraising the benefits relative to the costs and in acting on these appraisals. In practice, this means paying far more attention to the range of benefits likely to be obtained. These benefits tend to take the form of gaining access to data that are costly to generate and doing this several years before publication, plus tacit knowledge on how to interpret these data. Sometimes these data are generated by very expensive post-R&D demonstration projects. If accessing such data is useful, and valuable in terms of research outcomes, then it is easier to work out whether or not it is worth bearing the transaction costs of international engagement as part of core business. We can do our own informal benefit-cost assessments – but not necessarily financial ones.
2. Be very clear about what we have to offer our European counterparts. This will usually be data that they don't have, proprietary analytical methods and the associated tacit knowledge. In some cases our geographical circumstances are key – we are in the southern hemisphere, we have deserts and different flora and fauna and are surrounded by different oceanographic and atmospheric conditions. Our geology is older and more fragmented. What strikes us as the tyranny of distance can be an asset not a liability
3. A good strategic fit with the institution's mission can be critical. This will allow funding for international travel to be obtained internally. This is usually a far faster and more flexible source of support than seeking external funding.
4. Recognise that some of the key outcomes from your collaboration will arise in the impact/relevance domain – not just in terms of academic publications. If relevance and impact do not feature strongly in your institution's current mission then the EU FP (in particular) may not be that attractive an option for you in those areas where the work has a strong impact focus.
5. Bilateral research co-operation with researchers in individual member states tend to complement multi-lateral EU FP collaboration, not substitute for it. Often Australian partners are brought into FP consortia by an existing European research partner who acts as your champion.
6. Be clear and realistic about the value propositions presented to business. Some leading global companies have, in reality, little interest in the IP that may be generated from international collaborative projects. Rather, they want to know internationally engaged researchers who will be able to alert them to rumours and intelligence on major breakthroughs – potentially disruptive technologies that pose risks to corporate net worth. Getting bogged down in negotiations over IP simply undermines this type of industry-academic engagement. Realism is essential.
7. Where possible commit to using and exploiting research capability that you currently have, or will have in the future – irrespective of whether you secure any additional external funding. This makes you a low risk partner in European eyes. This can be critical because they will have to make a special case for including Australians in the consortium.
8. Build your collaborative networks with Europe as part of a long-term strategy, avoid opportunistic searches for partners in Europe once a framework program call has been published.
9. Senior researchers and research managers should not underestimate the importance of face-to-face contacts with EU officials. This is seen as a legitimate means of engaging with Brussels and obtaining intelligence on forthcoming initiatives and announcements.
10. If you are a senior researcher with an established track record put yourself forward as an expert evaluator for the FP. This is best done by registering via the online mechanism and then alerting your contacts in Brussels to the fact that you have registered.

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