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**Submission to:**

**House of Lords – Select Committee on The European Union: Sub-Committee B, Internal Market, Infrastructure And Employment; Call For Evidence on Effectiveness of EU Research And Innovation Proposals.**

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**From:**

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This response is from AIRTO (The Association of Independent Research and Technology Organisations). AIRTO's members comprise representatives from:

- Public Sector Research Establishments (PSREs)
- Non-profit distributing member and non-member based research and technology organisations (RTOs)
- Privately held research and technology companies (including Contract Research Organisations - CROs)
- Universities (Enterprise/Technology Transfer Departments)
- R&D departments of industrial companies
- Business support (including Access to Finance) and early stage technology-based venture capital companies

AIRTO's members generally operate in the private sector but with varying degrees of interaction and financial involvement from the public sector. All are, to a significant extent, involved in aspects of the translation of ideas, research and technological advances into the commercial arena, for clients in both the private and public sectors.

AIRTO's response to the questions posed follows:

**Q1. What are the essential elements of an effective proposal relating to research and innovation?**

1. To be effective, proposals for research and innovation support should be configured with exploitation of the outcomes as the main driver. This means ensuring that there will be paths for pulling through exploitation in directions that will deliver contributions to achievement of European Union (EU) objectives, currently, and certainly in the near to medium term, growth and jobs. Industry must be considered the main exploitation route for achieving this. To engage industrial interest there must be strong prospects of:
  - Significant market potential for new products and services.
  - Opportunities for securing a competitive edge (based on technology, a novel business model or the equivalent - opportunities for significant cost reduction in non-core areas can also be attractive to some companies and organisations).
  - Securing protectable intellectual property.
  - A perceived match to existing corporate strengths or the opportunity to develop desirable new strengths.
  - Access to sufficient resources, skills and finance to undertake exploitation.
  - Minimal complexity, bureaucracy and restrictions.Trying to achieve the above whilst also seeking to encourage joint working between different entities in different EU states can complicate matters and dilute attractiveness to industry if the drive for collaboration is not handled carefully.
2. In areas where there are clear societal challenges to be tackled or other tangible deliverable objectives that the EU wishes to realise, it would in many instances be helpful to produce roadmaps to guide research and innovation propositions. Space is probably the most obvious example where there are clear strategic agendas and where this approach could be beneficial.
3. Different treatment of proposals would be more appropriate in other areas. Many potentially interested organisations would prefer proposals to be wide-open, flexible, non-prescriptive and not overly determined by strong lobby groups or dominated by a limited number of large multinational companies.

4. An effective proposal framework should facilitate engagement of SMEs, while discouraging a grant dependency culture. Criteria for accepting project proposals should therefore require inclusion of an identified business framework with a potential roadmap to commercialisation. At the same time it must be made easier and more cost effective for high growth SMEs to engage with the EC programmes on a one-off basis without the need to go up a significant learning curve, or to engage in a continuing stream of projects, to make it worthwhile. The single-company 'SBIR (Small Business Innovation Research scheme) lookalike' proposed for Horizon 2020 (H2020) is to be welcomed in this context.
5. The above also implies that intermediate bodies, including RTOs, should be enabled and encouraged to act as proxies for engaging such SMEs with EC programmes. The UK lags behind most of the other main European players in this respect. A combination of the proposed flat rate overhead recovery from H2020 and the absence of complimentary national funding sources in the UK, from which to cover the remaining overhead costs, render the intermediary role largely impractical for most intermediaries. It is the view of many AIRTO members that this will make it even more difficult for intermediate organisations to engage on a viable and sustainable basis, given their limited options for covering the balance of their costs. The consequences could be quite damaging overall as:
  - a. It is clear that, in the rest of Europe, intermediate organisations are instrumental in bringing industrial engagement to the framework programmes and
  - b. The UK is struggling to maintain, let alone increase, industry's engagement with these programmes.
6. In summary, proposal frameworks should:
  - a. Allow a variety of funding intensities, with criteria for selection biased towards collaboration and shared risk.
  - b. Be more conducive to business-driven innovation, striking a balance between allowing the business community to innovate within their strategic directions (bottom-up) and those based on priorities defined at a European Commission (EC) level (top-down), the latter aimed at solving, for instance, grand societal challenges, but which might also create new markets for innovative companies.
7. The balance between heavy financial audit and in-project technical and business level monitoring and support could be improved. There are some moves to simplify the former but not much sign of improving the latter (which could nevertheless incur an extra, but worthwhile, EC overhead).

**Q2. Do you feel that stakeholders at all levels, including academic institutions and small and medium-sized enterprises (SMEs), are properly consulted in the development of EU proposals on research and innovation? How could consultation be improved; and to what extent does consultation affect policy formulation?**

8. EU consultation processes are quite comprehensive. The UK does not always translate the opportunities for consultation into effective national engagement with such processes. There are UK consultations for gathering views but they seem to focus on bureaucracy and mechanics rather than politics and programme content. The UK industry stakeholder communities in particular seem not to be good at understanding how the EC's strategic advice and consultation processes operate, at getting involved, and at making the effort to make a difference. There are exceptions to this in some sectors, such as aerospace. These exceptions are usually based on the large companies getting involved and influencing programme content accordingly.

9. For SMEs it can be difficult to find the time to engage. They are also deterred because the timescales for European projects are felt to be too long, bureaucracy is perceived to be too burdensome and the chances of success are thought to be too low.
10. Improvements could be based on increased levels of resourcing and engagement within BIS and greater communication/transparency of the Commission's processes and workings into the private sector by BIS (but that will cost more in the public sector).
11. Inputs received by the EC are mixed with many other sources of advice and then may or may not survive subsequent high level 'horse trading', which is not generally transparent beyond the public sector policy negotiators.
12. In general, the EC should undertake its own independent research into the needs of the market, remaining objective and mindful at all times that those who are consulted do not represent more than a modest fraction of those who will eventually be affected 5 or even 10 years into the future. Generally, at least a year will elapse between the input from stakeholders and a call for proposals, at least another year between the publication of the call and projects starting and at least another 3 to 4 years between then and the start of commercialisation. Having over-prescriptive calls is therefore a recipe for potential obsolescence of the resulting end-products. Many EC proposals in the past have veered into prescriptiveness, attempting to define how results should be achieved instead on concentrating on defining broad areas in which research could profitably be undertaken.
13. Experience varies from sector to sector but, in some areas, the input of stakeholders can, if anything, have too much weight; this leads to calls for proposals which are too obviously biased towards special interests, too short-sighted and too narrowly defined, not just in terms of what needs to be done but also in terms of how to achieve those aims. The consultation process should not be simply a mechanism to generate the call text by a 'cut-and-paste' process which adds up all received contributions; instead, it needs to start with a principled set of long and medium-term aims and use consultations to clarify those aims, extending them or reformulating them as needed but without succumbing to short-termism and special interests. The EC could therefore usefully make a more determined effort to assess the needs of the market and the lacunae in knowledge independently; it should stay at all times above the potential influence of lobbying activities and ensure that consultation helps steer the process of defining proposals but does not commandeer it.

**Q3. The EU facilitates Member State cooperation on research and innovation through the open method of coordination, the creation of high level groups, associations, networks, and councils? Are these modes of cooperation effective, and could other methods be used?**

14. Yes they are effective, in terms of getting multiple inputs and some degree of consensus from specific communities. It is in many instances the UK networks required to feed into these European open methods of consultation that are lacking - not the consultation processes themselves.

**Q4. Has the EU been successful in securing co-financing and other types of support from big businesses and industries for EU projects with a strong research and innovation dimension? Similarly, has the EU been successful in encouraging small and medium-sized enterprises to participate in EU-funded strategies and projects?**

15. The EU has been successful, but the UK private sector has not. Part of the problem in the UK is poor understanding of the programme and its opportunities together with apprehension over collaboration with potential competitors. The official UK response has been to arrange workshops and meetings where the EU story is told. This is not sufficient and sometimes not adequately or correctly targeted.
16. Exceptions to this are to be found in the engagement of some of the major multinational companies, of which there are not very many in the UK in areas of interest within the EU's programmes. This reflects make up of UK industry.
17. SMEs are harder to engage for reasons given in Q2 above. One concern that smaller organisations have when operating with EU frameworks is the length of time taken to clear invoices. Such cash-flow considerations can be catastrophic for SMEs. A means by which project milestone dependencies can be addressed and partial payments be provided would encourage further engagement by smaller companies undertaking high risk innovative activities.
18. The scoring for selection of projects for funding within current frameworks is perceived as somewhat random by commercial organisations when receiving feedback on submitted proposals. The high cost of preparing proposals therefore tends to favour larger organisations that can take a statistical perspective on the probability of securing funding over a large number of project applications. The implication of this is that true innovation is not the driving factor for success, but rather the skill of a lead organisation in attaining the requisite shape for a consortium, and using the appropriate key words in proposals. A request for clarifications at the early stage of the application process would allow perceived weaknesses in proposals to be quickly addressed by proposers, with reviewers able to consider proposals with an improved degree of parity.
19. The urgent need is to ensure that industry's engagement does not deteriorate substantially with the implementation of H2020 financing rules, which may well have a severe impact in a number of respects on the willingness of the private sector (as opposed to academia) to participate in collaborative research.

**Q5. Does the EU strike the right balance in terms of legislation and regulation in stimulating research and innovation and its use? Are there ways in which this could be improved?**

20. The UK's position seems to be developed and delivered in a rather ad hoc way. The best thing that could be done is to have a more effective UK network feeding into Brussels' institutions. Brussels' approach is fairly comprehensive, although better transparency would be welcome, but that may not always be possible. Simplification would also be welcome, but is perhaps not likely.

**Q6. Do you think the EU can add value with ideas and funding in 'non-traditional' areas of research and innovation, for example, financial services sector, creating new business models, etc?**

21. Yes, particularly through acting as anchor tenant for pulling through new services (using public procurement as the instrument) to try out new business models for instance.

**Q7. The European Commission created an Impact Assessment Board in 2006, while the European Parliament recently created its own impact assessment unit. Do you believe these entities have led to better EU proposals in terms of clearly-stated outputs, outcomes, impact, and 'European added-value'?**

22. It is hard to tell yet whether impact assessment has led to better proposals and outcomes, partly due to the nature of impact in science based programmes, which can take years to become apparent. Nevertheless, it is worthwhile to go through the process; it causes people to think carefully and in detail about what they are trying to achieve.

23. It is not obvious why two bodies are needed to monitor impact.

**Q8. How have the economic crisis and the atmosphere of austerity in many EU Member States impacted on the research and innovation environment at the national and EU levels? Are the proposed levels of spending in EU projects appropriate in the current situation?**

24. In general, the atmosphere of austerity seems to have shifted the balance of emphasis somewhat, at least at high level, from pure to more applied research, while maintaining overall spending. With reductions in national funding in many countries, researchers from those countries see the European programmes as vital to the survival of their research resources.

25. Given the importance of research and development to economic growth and prosperity, the levels proposed for spending on EU research and innovation programmes are therefore appropriate in the current circumstances. But, although the budget for Horizon 2020 remains higher than for Framework 7, it is clear following the recent negotiations that such funding is an easy target in the face of entrenched opposition by some member states to pressure on other EU budgets. This shows that we must be alert to such dangers and exert as much influence as possible in defence of the research and innovation budgets.

### **Declaration of interests**

This submission is made by the Association of Independent Research and Technology Organisations (AIRTO). The organisation represents research organisations and technical consultancies, operating in the space between the academic research of universities and the commercial needs of industry. AIRTO members undertake research and development, and knowledge and technology transfer. This submission does not necessarily represent the views of individual member organisations. AIRTO currently comprises organisations, employing more than 20,000 scientists and engineers, with a combined annual turnover in excess of £2billion (AIRTO Ltd. is a company limited by guarantee registered in England No. 1217006 Register office address: National Physical Laboratory, Hampton Road, Teddington, Middlesex, TW11 0LW. AIRTO is a not-for profit organisation funded by membership subscriptions, and managed under contact by NPL Management Ltd.). The members of AIRTO currently are:

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