



Submission to Science and Technology Select Committee Call for Evidence on Public Procurement as a Tool to Stimulate Innovation

From the Association of Independent Research and Technology Organisations (AIRTO)

Contact:
Prof. Richard Brook
President
AIRTO
Tel.: 01386 858869
Email: airto@campden.co.uk

AIRTO is pleased to have the opportunity to contribute to the work of the Select Committee on 'public procurement as a tool to stimulate innovation within industry'. This submission deals in particular with the impact that public procurement could have on private investment in r&d and on the uptake and wider exploitation of technological research and development. AIRTO believes that this is one of the most powerful levers at Government's disposal for seeding greater private investment in r&d and promoting subsequent commercial exploitation of UK research and development, both at home and in export markets. It involves the Government being an early adopter of new and innovative products and services. It also assumes that the government would seek to encourage and utilise UK based suppliers, including SMEs with significant global growth potential, within the rules of open competition.

There is a further assumption that procuring an innovative solution is more expensive and risky than procuring an established and proven solution. This may not be true in all cases. Innovative solutions can often result in reduced whole-life costs, which are not taken into account in a simple procurement process. The push for lower costs can stimulate innovation.

There will often be a greater risk associated with the implementation of innovative solutions, which the Government should be prepared to share with the supplier, otherwise suppliers will be deterred from offering innovative solutions. Sharing of risk between customer and supplier is a key to incentivising the offering and take up of innovative solutions.

Rationale

1. **What is the rationale for using public procurement as an innovation tool to stimulate innovation within the industries on which government relies? And what evidence is there to support its use as an innovation tool?**

- 1.1 Government relies on most UK industries to a greater or lesser extent, if only to create wealth and to contribute to its tax take. Some of these industries also provide essential services, equipment and infrastructure (eg transport, defence) for which Government ultimately has an overarching responsibility to the citizens of the country.
- 1.2 Encouraging innovation on the part of suppliers to Government can deliver multiple benefits:
 - i) improved infrastructure and services, together with more extensive portfolios of improved products and services for suppliers to exploit overseas. Without such an approach to stimulating domestic innovation it is likely that the Government will, in due course, resort to buying from overseas suppliers whose innovation has been supported elsewhere. This may give lowest immediate cost to the public purse but at the expense of stimulation of the UK industrial supply base.
 - ii) Improved whole-life costs of services, equipment and infra-structure.
 - iii) increased presence in overseas markets for domestic suppliers of these products and services, backed by the credibility of a UK Government customer.
 - iv) where these suppliers are SMEs - greater appeal to potential investors in those companies, who will usually be looking for evidence of customer sales and revenue prior to investment.
 - v) encouragement of a healthy 'customer/contractor' attitude, contrasting with the tendency to 'grant dependency' sometimes seen in the relationships involving government grants to support innovation.
- 1.3 Such measures are not without a measure of increased risk to the Government, but it is our view that with appropriately improved procurement management the benefits above significantly outweigh the downside risk. Improvement in procurement management will also yield major cost savings on over-runs and disputes.

Co-ordination of innovation and procurement policies

2. **To what extent are strategic departmental and cross-government policy objectives meshed with procurement and innovation policies and how might this be improved? What cross-government mechanisms and co-ordination is in place to help to facilitate this?**
 - 2.1 There have been some moves to align the technology priorities supported by the Technology Strategy Board with upcoming procurement initiatives through the interaction between the Government Chief Scientific Advisors and through other inter-departmental dialogues. This co-ordination seems to be increasing and is greatly to be welcomed. It should assist UK suppliers attain competitive positions in open competitions for public sector contracts. This would ideally track back to influence the longer term research agenda of the Research Councils and the academic community, but this is harder to

achieve given the way that research priorities are set, largely within the research community.

- 2.2 This lack of influence on the academic community is of concern because the public support for applied research and development across the spectrum is low by comparison with the funding invested in earlier stage pure and fundamental research in the UK. This is a constraint on the 'muscle' that the UK brings to bear to exploit its research outputs and results in unrealised exploitation potential from the UK research base. The use of public procurement actions, creating a public sector customer base for innovation, will stimulate private sector interest in investing ahead of or in parallel with public sector procurement and should thereby bring more funds to bear on applied r&d, helping to redress this imbalance.
- 2.3 'Joined-up' procurement actions across Government Departments can also assist. An example would be in the procurement and management of scientific equipment, facilities and assets, where greater co-ordination could not only increase utilisation and value but help to spread best practice and customer awareness of procurements requirements and processes.

Mechanisms through which government procurement can stimulate innovation

3. What public procurement mechanisms are currently used to stimulate innovation within industry? How successful are they? How is the success of such measures evaluated?

Aside from some initiatives in the healthcare and defence sectors, and the Small Business Research Initiative operated by the Technology Strategy Board, we believe that there is little being done in this respect at present.

4. How might public procurement more effectively stimulate innovation within industry?

4.1 Through a procurement process designed to encourage innovative solutions. This could involve credit in the tendering process for innovative bids, and more comprehensive economic comparisons involving whole-life costing.

4.2 Through greater co-ordination as outlined in 2 above. However, the setting of Research Council research agendas and the Research Assessment Framework can act to undermine this by exerting an overriding influence that tends to dilute the research focus at the more applied end of the spectrum.

4.3 Procurement of translational support for the outputs from scientific research, through mechanisms proposed for the new Technology and Innovation Centres (TICs), will have a significant multiplier effect on the uptake and implementation of innovative products, processes and services in business and industry. Many of the member organisations within AIRTO are already well placed to undertake similar work but the new TICs with their Government procured backing will significantly increase the available capacity, rate and volume of innovation uptake.

5. What lessons can we learn from successes and failures within the procurement processes of other countries to stimulate innovation within industry?

The USA has a number of useful schemes, including the Small Business Innovation Research scheme, that use a procurement mechanism to stimulate and support innovation within industry. This includes their dual use procurement actions in the defence sector. Using the appropriate features of these in the UK procurement process would have a significant effect on promoting innovative solutions.

The procurement process

6. What incentive do those working within public sector organisations have to use procurement as an approach to stimulating innovation?

As far as we are aware, there is relatively little current incentive. There are far greater pressures to reduce risk, to use existing proven technologies and products, and to maximise value for money in that context.

7. To what extent are those responsible for public procurement of research and development “intelligent customers”?

Again, as far as we can see, those responsible are generally not experienced in complex procurement. Procuring for innovation requires even more ‘intelligence’ on the part of the customer to support the more complex trade-offs involved and to handle the responsibilities involved in taking the associated risk. It will require an auditing regime that is also cognisant of, and allows for, the risks being taken in the procurement in order to achieve a higher level of innovation.

o **Do they have the appropriate expertise to identify innovative solutions to procurement needs?**

They would need additional support.

o **How well do they identify when innovation could provide a solution to a procurement need?**

This is not currently done effectively and, again, they would need additional support.

o **How effective is the identification of and dialogue with appropriate potential suppliers?**

This is currently driven by the short-term, financial, or low-risk factors discussed as above. Again, additional support would be needed for a more sophisticated relationship with innovative suppliers.

8. What obstacles do those responsible for procurement within public sector organisations face in encouraging innovation through their procurement strategies? How might these be tackled?

The main obstacles are:

- a) absence of sanction and authority to take such risks (see above).
- b) absence of the requisite skills to do this unaided (see above also).
- c) absence of incentive to take the additional risk.
- d) Use of short-term, unsophisticated procurement criteria.

The need for additional skills could be tackled through the use of independent 'customer's friends' to assist with procurement actions. The sanctioning of risk and the putting in place of an incentive will require a change in remit, evaluation procedures and audit criteria together with explanations to the public and other parties interested in the effective use of public funds. It will be important to emphasise that the risk is being taken to increase the quality and usefulness to the public of the assets being acquired. The benefit to UK companies has to come through separate but related measures to assist UK companies compete effectively in open public procurements.

9. What obstacles do potential suppliers of innovative solutions face in responding to public procurement requirements? How might these be tackled?

Potential suppliers are competing on immediate price against offers that do not embody the same innovation and functionality and this price tends to be an over-riding consideration, rather than whole-life cost. Procurers find it difficult to justify the value of an innovative product or service unless it is accompanied by a lower price. The response in 9 above suggests how these issues might be tackled.

10. Declaration of interests

This submission is made by the Association of Independent Research and Technology Organisations (AIRTO). The organisation represents research organisations and technical consultants, 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. They are largely funded by industry, but do undertake competitively bid projects supported by UK and European public funding programmes. AIRTO currently comprises 37 independent organisations, employing more than 20,000 scientists and engineers, with a combined annual turnover in excess of £2billion.

The members of AIRTO are:

Aircraft Research Association Limited (ARA).

ARUP.

ATcare.

BMT Group Limited.

BRE Group.

The Building Services Research and Information Association (BSRIA).

Campden BRI,

CERAM Research Ltd.

City University London.

CIRIA.

E-Synergy Ltd

FIRA International Ltd.

Halcrow Group Ltd.

Health and Safety Laboratory (HSL).

HR Wallingford Group Ltd (HRL).
Institute for Sustainability.
ITRI Limited.
Leatherhead Food Research.
LGC.
MIRA Ltd.
The Motor Insurance Repair Research Centre (MIRRC).
National Metals Technology Centre (NAMTEC).
National Physical Laboratory (NPL).
National Nuclear Laboratory (NNL).
The Paint Research Association (PRA).
Pera Group.
QinetiQ.
Quotec.
SATRA Technology Centre.
The Scottish Whisky Research Institute (SWRI).
The Smith Institute.
Smithers Rapra Technology Limited.
The Steel Construction Institute (SCI).
Thames Innovation Centre Ltd (TIC).
TRADA Technology Limited (TTL).
TWI Ltd.
University of Surrey.