

The Innovation Policy Network

SIX COUNTRIES PROGRAMME

Procurement and Innovation

**Report of a workshop organised by the UK Department of Trade and Industry
and the Six Countries Programme**

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**16 November 2005
Manchester, United Kingdom**

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Six Countries Programme

INNOVATION AND PROCUREMENT WORKSHOP

Wednesday, 16 November 2005

Introduction

Demanding customers are often the most important source of innovation, and large demanding customers such as governments can have dramatic effects on whole economies if they pursue procurement strategies designed to stimulate business to develop new products and processes capable of providing better value for money and improved levels of public service.

By acting as intelligent customers, and by being more open to new approaches from the outset, governments can stimulate the market for innovative products and encourage the growth of innovative and dynamic businesses. They can also provide a means of demonstrating new products, processes and services, and help to justify investment in new skills, equipment and R&D.

There are a number of barriers, however, to capturing more innovation through public procurement. These include:

- A perception that procurement decisions are always made on the basis of lowest initial cost and that whole-life costs are not considered;
- Lack of encouragement for public procurers to adopt innovation and innovative products and services, including a perceived aversion to risk;
- Lack of communication of long-term procurement plans to the market – as the start of a formal tender process is often the first indication a supplier receives of a complex requirement, the timescales can be too short for innovative solutions and capacity to be developed;
- Inflexible public procurement practices that are not able to handle unsolicited ideas offering more efficient solutions;
- Lack of information about current public procurement exercises and the significant cost and bureaucracy associated with the bidding process can deter innovative businesses – particularly small firms – from bidding.

In order to discuss these issues, the UK Department of Trade and Industry (DTI) and the Six Countries Programme (6CP) – an international innovation network which regularly offers a forum for such discussions – together organised a workshop on ‘Procurement and Innovation’ in Manchester, UK, on Wednesday 16 November 2005. In particular, the workshop examined how barriers to innovation-friendly procurement could be overcome and how innovative solutions could improve the quality of public service and support innovation in business.

The day opened with a short welcome by **Paul Zeeuwts**, President of the Institute for the Promotion of Innovation by Science and Technology in Flanders (IWT) and the Chairman of the Six Countries Programme. The agenda for the day was then set by **Ken Guy**, Director of Wise Guys Ltd. (UK) and facilitator of the workshop. He described how the workshop would be split into an initial plenary session, featuring presentations by four guest speakers, and two subsequent breakout sessions. The aim of the initial presentations was to provide an overview of current developments relevant to the use of procurement as a tool to stimulate innovation. Many of these, particularly recent changes in public procurement directives, present new opportunities for public bodies to create lead markets and encourage firms to realise their innovative potential. Before such opportunities can be grasped, however, critical barriers to the effective use of procurement as a tool to stimulate innovation have to be identified and strategies capable of overcoming them formulated. The aim of the parallel breakout sessions, therefore, was to discuss these barriers and to suggest effective means of overcoming them.

Initial Plenary Session

The first speaker of the day was **Jakob Edler** from the Fraunhofer Institute for Systems and Innovation Research (Fhg-ISI) in Karlsruhe, Germany. He set the stage by locating procurement within the broader context of demand-oriented innovation policy instruments, i.e. instruments that stimulate the demand for innovations. He argued that such instruments had been relatively neglected in national innovation policy mixes, with emphasis instead on supply-side measures aimed at the production of new knowledge, its embodiment in technology and its subsequent transfer to users. Some countries had latterly begun to re-evaluate the use of public procurement as a means of stimulating innovation, and examples of its use could be found in specific industry sectors, but few countries other than the UK, he suggested, were attempting to locate innovation-friendly procurement within comprehensive and broad-based innovation policy strategies.

Edler argued cogently that risk aversion and short-term efficiency considerations within public sector bodies were major barriers to the introduction of specific innovation-friendly public procurement initiatives. He also noted that attempts by public bodies to stimulate demand in particular sectors, whether via procurement initiatives or other routes, were often driven by sector-specific needs other than the need for innovation in these spheres. In such situations, horizontal initiatives were needed to coordinate sectoral policies and ensure that due emphasis was placed on the broad innovation needs of the economy.

The current renewal of interest in innovation-friendly procurement signalled by Edler was exemplified in the next talk by **José-Ramón Tiscar** from the Directorate General for Research and Technology Development (DG Research) of the European Commission, who spoke about Commission actions to stimulate research and innovation using public procurement. He began by emphasising the gap in R&D expenditure as a percentage of GDP between the EU and economic competitors such as the US and Japan, noting also the existence of a similar ‘innovation gap’ measured in terms of indicators such as patents, ICT expenditures, broadband penetration and high-tech exports. The Commission’s response to these challenges had been for DG Research and DG Enterprise to adopt a common approach to the formulation of R&D

and innovation policy, building on past initiatives (by DG Research) to increase public and private expenditure on R&D and parallel efforts (by DG Enterprise) to foster innovation.

Concerted efforts to promote innovation-friendly public procurement were also being made. Procurement accounts for 16% of GDP in the EU and represents an under-utilised opportunity for public sector purchasers both to procure technology and innovation-intensive goods and services and to establish strong 'lead markets' for new technologies in fields as diverse as transport, health, education and environment. One of the problems is lack of awareness of the opportunities provided by the EU Public Procurement Directives of 2004, so efforts were being stepped up to rectify this via the production in 2006 of a 'Handbook on Public Procurement and Research and Innovation'. As noted in a recent Commission Communication¹, the Commission hopes that this will also raise awareness of the benefits of re-orienting public procurement towards stimulating research and innovation. A number of concrete actions to develop procurement practices favourable to R&D and innovation were also made in September 2005 by an Expert Group set up by DG Research.²

Leif Hommen of Lund University, the third speaker of the day, argued that innovative collaboration between firms and public agencies was tolerated rather than fostered prior to the revision of the Procurement Directives in 2004. EU procurement policy during the 1990s had focused strongly on regulatory issues and neglected the strategic use of public technology procurement as an instrument of innovation policy. The new EU Procurement Directives, however, had made public procurement simpler and more flexible, incorporating new procedures aimed at promoting user-producer interaction and facilitating innovation. A number of studies launched by the Commission around this time also explored best practices and new opportunities.

Hommen focused in his talk on the results of one of these studies³, supplementing its findings with other evidence from the report of the Expert Group. Both sources suggested that few, if any, legislative changes were required to make the new EU Procurement Directives more conducive to innovation. Rather, the main barriers to their effective implementation were:

- Institutional barriers, e.g. problems related to the governance of 'co-operative procurement' projects aiming to satisfy the needs of multiple users and often involving poor relations between the different ministries involved or weak

¹ Implementing the Community Lisbon Programme: Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions. "More Research and Innovation - Investing for Growth and Employment: A Common Approach. {SEC(2005) 1253} {SEC(2005) 1289}. Brussels, 12.10.2005, COM(2005) 488 final
http://europa.eu.int/comm/secretariat_general/impact/docs/ia_2005_3/COMM_PDF_COM_2005_0488_F_EN_ACTE.pdf

² Public Procurement for Research and Innovation: Developing Procurement Practices Favourable to R&D and Innovation, Expert Group Report, September 2005, European Commission, Directorate-General for Research, EUR 21793 EN2005
http://www.eurosfair.prd.fr/7pc/doc/1137764453_edited_final_epp.pdf

³ See www.inno-utilities.org/ for details of the INNO-UTILITIES project.

industrial relations;

- Inter-Organisational barriers, e.g. contractual and IPR issues between organisations concerning the management of financial and, especially, technological risk. Again this is primarily a feature of ‘cooperative procurement’ projects;
- Intra-organisational barriers, e.g. weak articulation of demand by procuring bodies, often related to a lack of internal managerial or technical competence. This was a feature of both ‘cooperative procurement’ projects and ‘catalytic procurement’ projects, i.e. projects based on the needs of external users rather than the procuring organisation itself. Demand articulation was less of a problem for more straightforward ‘direct procurement’ projects, i.e. those solely based on the needs of the procuring body.

Many of the barriers related to the conduct of innovation-friendly procurement projects are associated with the complexity of large projects involving multiple stakeholders on either the ‘supply’ or ‘demand’ side. Overcoming these obstacles thus involves greater efforts to improve communication and conflict resolution competences via clearly articulated and mutually agreed strategies, well-defined managerial roles and responsibilities and efficient and effective communication channels between all partners.

To conclude the first plenary session, **Margaret Horton**, Head of Research and Innovation at the UK National Health Service Purchasing and Supply Agency (NHS-PASA), talked about the general UK approach to procurement and innovation and some of the particular issues affecting the UK health service. In doing so, she touched upon many of the concerns raised by the other speakers and focused on constructive approaches to their resolution.

The UK Government had identified improved public procurement as a key element of an effective innovation policy mix. In 2004 it also issued a set of guidelines⁴ to help public procurers to overcome problems related to risk aversion, competence concerns and the inadequate communication of long-term technological needs to suppliers. In this climate, the NHS also reviewed its procurement practices via the setting up of a Healthcare Industries Task Force, which also reported in 2004.⁵ This concluded that innovation-friendly procurement was hampered in the health sector by:

- The confusing multiplicity of ‘entry points’ to the National Health System for its 20,000 suppliers, and the parallel existence of multiple, non-standard and often conflicting selection criteria for procured technical items;
- Purchasing decisions driven primarily by cost considerations and budgetary silos preventing clinical- and cost-effective purchasing decisions that cut across organisational boundaries;
- Over-adherence to the old EU Procurement Directives, which over-emphasised

⁴ Capturing Innovation: Nurturing Suppliers’ Ideas in the Public Sector, OGC 2004. See http://www.ogc.gov.uk/embedded_object.asp?docid=1001717

⁵ Better Health Through Partnership: A Programme for Action, Healthcare Industries Task Force, Department of Health, 2004. See <http://www.dh.gov.uk/assetRoot/04/09/52/23/04095223.pdf>

the importance of cost competition and placed little emphasis on the merits of innovation;

- Organisational cultures reflecting the fact that public procurers have little interest in innovation because they do not rely on it to survive or compete.

The changes suggested by the Task Force tackled these problems head-on. They involved:

- The development of a new device evaluation service, based in PASA, to speed up the evaluation of devices and ensure a 'once only' approach, with the prompt sharing of outputs with stakeholders throughout the health/social care system and industry;
- A series of initiatives to stimulate more innovation and encourage a more entrepreneurial culture in industry and the NHS. These included plans to set up a new Innovation Centre charged with coordinating and developing the activity of an existing network of regional NHS 'Innovation Hubs'; greater efforts to improve interaction and knowledge exchange between industry, financiers, and other stakeholders; and the introduction of an 'innovation fund' to promote the development and exploitation by the NHS of innovative products and procedures;
- The adoption of modern approaches to procurement in the NHS involving the early communication of work plans and technical needs to potential suppliers and a determined effort to ensure that the role of procurement in supporting the timely uptake of new technologies providing benefits to patients is firmly embraced.

Parallel Breakout Sessions

The focus of the parallel breakout sessions was 'Making Procurement Work'. Their aim was to discuss barriers to innovation-friendly procurement and suggest effective means of overcoming them. During the earlier presentations, all speakers concluded their talks with one or two slides outlining – in their opinion – the most important barriers and the most effective ways of overcoming them. In turn, these separate suggestions were used as a starting point for a collective discussion of barriers and the practical steps needed at EU and national levels to ensure that innovation-friendly procurement practices are implemented as speedily as possible.

In order to maximise the potential for all participants in the workshop to contribute to the discussion, the audience was divided into two separate breakout groups, each confronted with the same set of tasks. Specifically, these were to:

- Identify the most important obstacles to the effective use of procurement as a tool to stimulate innovation;
- Articulate the most important steps that need to be taken at EU, national and institutional levels to overcome these barriers;

The first breakout session was chaired by **Luke Georghiou** of PREST at the University of Manchester, with **Richard Winson** of the DTI acting as rapporteur. The second session was chaired by **Ken Guy** of Wise Guys Ltd., with **Tim Goodship** of the DTI acting as rapporteur. Points of overlap in the two discussion groups were

manifold. Key barriers identified by both groups were the persistence of cost as the basis of procurement decisions and the continued prevalence of risk averse attitudes amongst procurers. There is no pressure to innovate in such circumstances, unless of course innovation is seen to reduce up-front costs. Long-term views of the effect of innovation on whole life-cycle costs are rarely taken into consideration. The true value of innovation and the benefits associated with it are also neglected. These are often visible to the users of the products, processes and services that innovation produces, but much less tangible to procuring agencies and certainly difficult for them to quantify in cost terms.

Adequate mechanisms to assess and manage risk are often not in place. Public procurers often lack the technical competence to assess the risks involved in the innovation process. Risk sharing and transfer processes are often inadequate, and bitter experiences, where too much of the risk has been transferred to the private sector by asking them to deliver on time and to budget, have made industry wary. There is thus often a reluctance to respond to invitations to tender, exacerbated in many instances by the short-time scales industry is given to respond to these, and by the lack of information generally available about the long-term needs and associated technological requirements of procurers. That said, procurers also often lack the technical competence to assess the ability of different technologies to satisfy their needs, or even to be aware of the technological opportunities that exist.

Concerns about risk sharing may be one of the reasons underpinning the relatively minor involvement of SMEs in procurement contracts. Fear of non-delivery often dissuades procurers from giving mission critical contracts to SMEs, while fears of carrying all the risks deter SMEs from applying. Since SMEs are often vanguard innovators, however, this situation needs to be rectified.

When the discussions moved to solutions rather than problems, a range of suggestions emerged. These included:

- A truly integrated national innovation strategy in which innovation-friendly procurement plays a vital part;
- Actions on the part of national governments to produce and share long-term problem- and/or technology-based roadmaps in order to make both governmental procurers and potential suppliers aware of the broad thrust of future developments;
- Concerted efforts to increase technical competence levels within procurement agencies via training initiatives, thus facilitating the better specification of technological requirements and a keener understanding of the risks involved and the benefits likely to accrue from innovation;
- A more realistic approach to risk sharing on the part of public procurers;
- Support for the creation of a pre-specification phase in which there is scope to perform research, launch small-scale validation projects and operate technology platforms capable of testing ideas prior to the launch of full-scale procurement projects.

Annex 1

Agenda

Six Countries Programme

INNOVATION AND PROCUREMENT WORKSHOP

Wednesday, 16 November 2005

**PREST, Harold Hankins Building,
The University of Manchester, Oxford Road**

Main Session: Room 10.04

Lunch and Coffee: Room 10.05

Parallel Sessions: Rooms 10.05 and 4.02 (Ground Floor)

09:30 – 12:30 Six Countries Programme Steering Committee, Room 10.05

12:30 – 13:30 Buffet Lunch, Room 10.04

Innovation and Procurement Workshop, Room 10.05

13:30 – 13:40 Opening presentation by Paul Zeeuwts, IWT (Chairman of the Six Countries Programme)

13:40 – 13:50 Introduction by Ken Guy, Wise Guys Ltd., (Facilitator)

13:50 – 14:10 Jakob Edler, Fraunhofer Institute for Systems and Innovation Research – Demand Oriented Innovation Policy

14:15 – 14:35 José-Ramón Tiscar, European Commission: DG RTD – Commission Action to Stimulate Research and Innovation using Public Procurement

14:40 – 15:00 Leif Hommen, Lund University – Innovative Public Technology Procurement

15:05 – 15:25 Margaret Horton, UK National Health Service – The UK Approach to Procurement and Innovation

15:30 – 15:50 Coffee/Tea Break, Room 10.04

15:50 – 17:00 Parallel Breakout Sessions: Making Procurement Work

Group 1 – Chaired by Luke Georghiou, PREST, Room 10.05
Rapporteur: Richard Winson, DTI

Group 2 – Chaired by Ken Guy, Wise Guys Ltd., Room 4.02
Rapporteur: Tim Goodship, DTI

17:00 – 17:45 Round up and Conclusions

17:45 Close and Tea

Annex 2

Participants

Six Countries Programme

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The University of Manchester, Oxford Road**

Main Session: Room 10.04

Lunch and Coffee: Room 10.05

Parallel Sessions: Rooms 10.05 and 4.02 (Ground Floor)

Speakers, Chairs and Rapporteurs

Mr. Jakob Edler	Fraunhofer Institute for Systems and Innovation Research
Mr. Luke Georghiou	PREST
Mr. Tim Goodship	DTI
Mr. Ken Guy	Wise Guys Ltd., UK
Mr. Leif Hommen	Lund University
Ms. Margaret Horton	Purchasing and Supply Agency, National Health Service
Mr. José-Ramón Tiscar	European Commission – DG Research
Mr. Richard Winson	DTI
Mr. Paul Zeeuwts	IWT, Belgium and Six Countries Programme Chairman

Delegates

Dr Jacqueline Allan	Forfás, Ireland
Mr. Neville Arendse	Department of Science and Technology, South Africa
Mr. Stephan Corvers	Corvers Procurement Services BV
Dr Paul Cunningham	PREST
Mr. A. Duff Mitchell	Manufacturing Industries Branch, Industry Canada
Dr Kieron Flanagan	PREST
Mr. Dirk Fransaer	VITO - Flemish Institute for Technological Research

Ms. Annelieke Van der Giessen	Six Countries Programme Secretariat
Ms. Susanne Giesecke	ARC Systems Research GmbH
Mrs. Lisa Gledhill	PREST
Ms. Jennie Granat Thorslund	VINNOVA
Mr. Attila Havas	Institute of Economics, Hungarian Academy of Sciences
Miss Caroline Jacobs	DTI
Mr. Andrew James	PREST
Mr. Martin Kedro	SARC
Mr. Paul Lagasse	University of Ghent
Mr. Jos Leijten	TNO
Ms. Sandra Leitner	Joanneum Research, Austria
Mr. Damien McDonnell	DDA
Ms. Mandi Mzima	Department of Science and Technology, South African Embassy
Ms. Jo Mylan	CRIC
Dr Wendy Philips	Centre for Research in Strategic Purchasing (CRiSPS) and Supply, University of Bath
Mr. Klaus Puchbauer-Schnabel	Austrian Federal Ministry of Education, Science and Culture
Mr. John Rigby	PREST
Mr. Max Rolfstram	Lund University, Sweden
Mr. Claude Van Rooten	Belgian Road Research Centre (OCW/CRR)
Mr. Ruben Schellingerhout	European Commission – DG Enterprise and Industry
Mr. Sander van Sluis	PIANOo (Professional and Innovative Procurement, Network for Public procurers)
Dr Remoe Svend	Prokontra AS/OECD
Mr. Lauri Tammiste	Ministry of Economic Affairs and Communications
Mr. Peter Thevissen	IWT, Belgium
Ms. Igone Ugalde	LABEIN-TECNALIA
Ms. Elvira Uyarra	PREST
Mr. Guido Wouters	VITO - Flemish Institute for Technological Research
Ms. Paola Zappa	CRIC