

Economic Development & Transport Committee

EDT2 09-05 (p3)

Date: 29 June 2005

Time: 9.00 am to 12:30 pm

Venue: National Assembly for Wales, Cardiff Bay

Title: Review of Science Policy in Wales – Terms of Reference

Background

1. On 9 March 2005 the Committee agreed that following the appointment of an expert adviser they would invite a small number of representatives to a Reference Group meeting. The group would assist in advising on possible Terms of Reference and identifying some key organisations and individuals that the Committee might start to take evidence from while the consultation was in progress. The Committee agreed to hold a consultation over the summer and to start taking evidence in the Autumn term.

Purpose of Paper

2. A meeting of the Reference Group was held on 16 June (A list of those who attended is attached at Annex A) and the purpose of this paper is to summarise the broad conclusions from that meeting and for the Committee now to agree:

Terms of Reference

- Programme/Timetable for the Review
 - Possible visits
 - Scope of the Review/Terms of Reference
3. The Reference Group identified the following areas as issues in relation to a science policy for Wales:
- The need to establish the current position in Wales. Some initial baseline data would show the current position and would also provide benchmarks against which to measure progress in the future. If Wales lags behind the rest of the UK in some specific areas then these might be the areas the Committee would wish to explore further. It was also suggested that at the start of the Review the Committee commission a paper from the Minister outlining what work has gone on/is planned since the previous Committee considered the initial papers in 2002. MRS could also carry out some independent work.
 - The need to understand what Wales is good at. It was suggested that there was a need for an objective assessment of what Wales excels at – although there was some concern that it could be a high-risk strategy to only support certain sectors. This should be considered in terms of ‘what the world wants’. It was noted that there were some areas such as Micro and Nanotechnology that could not be ignored.
 - The need to build up the science base in Wales and develop university spin-outs. Given Wales’ low base on R&D there is a need for pump priming of pure research and basic science, often without a view to

application, to build capacity and skills. Wales cannot have a knowledge led economy without world class expertise in science.

- The need for better collaboration between all the organisations working in the field. HE/Industry/Schools/Public sector (e.g. Health Service) need to collaborate on a horizontal as well as vertical basis. Reference was also made to the need for increased multidisciplinary work.
- Funding. While the group acknowledged that it was not the Committee's role to examine HE funding per se, there were some areas that had an obvious relevance to the review:
- EU funding – concerns about the HE capacity to win EU funding and the increasing cost of doing so.

Support and funding for R&D from WAG

- The need to consider issues for both effective business R&D investment and public funding for science.
- UK Govt funding for R&D is dominated by England because of the tendency to build on past successes. The need for critical mass was recognised.
- The effectiveness of R&D tax credits
- Science awareness. The role of initiatives such as Techniquest and Wrexham science festival in improving public awareness and getting children involved from an early age. It is important to recognise the distinction between entertainment and education.
- The 'fast second' effect. Capitalising on lessons learned from the frontrunner in innovation in order to develop a competitive product or service. Building the capability to be a fast follower requires the commitment to be proactive in forecasting future developments - even in areas outside current competencies - together with action in bringing in the required technologies from outside.
- The need to examine where Wales needs to be in 5-10 years time. The need to consider objectives and actions for Wales within a wider UK and EU context. This might encompass policy instruments and relative competitiveness of those areas of research and its applications chosen by Wales. The need to create a climate where cutting edge technologies can thrive.

4. It is suggested therefore that the terms of reference might be:

- to consider a science policy in Wales which more effectively supports the development of a knowledge based economy. In particular:
- the current range of research and development carried out in Wales in both public and private sectors.
- ways in which it can be strengthened and made more effective.
- covering likely priorities for science awareness, skills provision, HE excellence, technology transfer and innovation.
- and to make recommendations for the development of policy in this area.

Suggested Programme/Timetable for the Review Consultation

5. The Committee has previously agreed to hold a consultation over the summer months and we propose starting this once the Terms of Reference

have been agreed. The consultation will run for 8 weeks and the Committee will consider an analysis of the consultation responses later in the Autumn Term.

It would seem logical to split the evidence into two parts:

First Oral evidence

6. While the consultation responses are being analysed the Committee could take the following evidence:

- A paper from the Minister on the current position.
- A paper from MRS in conjunction with expert adviser outlining baseline data
- Oral evidence from key representatives from the sector.

7. The Committee might at this stage ask the witnesses:

- what do they think about the analysis - do the figures agree with their own assessment of the situation?
- what do they see as the causes/factors behind the poor performance and what do they think we should do to remedy the position? (This would bring in things like tax credits, ability to attract FP monies, failure to retain good staff, collaboration etc)
- what do they think Wales is good at and bad at. This could give us views on key sectors or on types of research

8. The Committee might then go on and ask for their views on the areas we should focus on for the future (indeed should we focus on specific areas at all.)

Second Oral Evidence

9. At the end of the Autumn term the Committee can consider the evidence received so far as well as the consultation responses and agree a further programme of oral evidence for the Spring term.

Possible visits

10. The Reference Group suggested that there was value in the Committee considering the work in other regions of the UK as well as abroad that has led to the development of distinct science policies. Attached at Annex B is a summary of some comparator regions that the Committee might wish to visit or consider requesting evidence from.

The Committee might also wish to agree suitable slots or dates for visits now and consider more detailed proposals once they have identified where they might take evidence.

Christine Gwyther
Chair

Annex A

Membership of Reference Group:

Chris Gwyther, AM	Chair, EDT
Alun Cairns, AM	EDT Member
Elin Jones AM	EDT Member
Kirsty Williams AM	EDT Member
Professor Michael Scott, Principal and Chief Executive	NEWI
Professor Richard Davies, Vice Chancellor	Swansea University
Professor Haydn Ellis, Pro Vice-Chancellor	Cardiff University
Dr Grahame Guildford, Director of Site Operations - at the meeting on 16 June Dr Martin James substituted for Dr Grahame Guildford	GE Healthcare
Steve Sloan, Regional Officer	Amicus
Ron Loveland, Chief Technology Officer	Welsh Assembly Government
Virginia Chambers, Development Director	Welsh Development Agency

Annex B Science Policy – Comparator Regions

UK RDAs

There are Regional Development Agencies for East, North West, South West, North East, South East, Yorkshire, West Midlands, East Midlands plus a Development Agency for London. Broadly they all have major interests in Innovation and Business Enterprise and they now all have some form of Science and Innovation Advisory Council.

While they should all be informed of the EDT Committee Inquiry and there is a need for us to identify the common themes and actions that underpin their strategies, there might also be opportunities for selected Committee visits to explore issues in more detail (or to invite oral evidence). A choice from the North West, North East, Yorkshire, East of England RDAs might be considered in the first instance.

Scotland, Northern Ireland, Eire

These are considered together in order to update the material provided in the EDT Committee "Review of Science Policy – Position Paper", November 2004.

Scotland – in addition to the Scottish Executive research and innovation initiatives ("The Science Strategy for Scotland") there is also now a very interesting current Inquiry by the Enterprise and Culture Committee of the Scottish Parliament. This Inquiry, on Business Growth, is asking some pertinent questions: "How will Scotland increase its R&D base and how to stimulate greater innovation and commercialisation within this? How to boost

level of business start-ups and encourage firms to grow into world-leaders? How to improve productivity and investment levels? How to respond to changing demographics and overcome peripherality from export markets? What role for public and private sectors in tackling these challenges? This Inquiry is in middle of taking evidence and one of their background papers, "Effective Business Growth Support – Benchmarking UK and International Enterprise Agencies" compared the situation in Wales, NE England, Ireland, Estonia, Nordrhein Westfalia, Emilia Romagna, Nova Scotia, Pittsburgh. Thus, this Scottish Parliament Inquiry might itself be a useful source of information (not least on comparator regions) which, together with potential to explore further the Scottish Executive initiatives, could merit a EDT Committee visit to Edinburgh.

Northern Ireland – The NI Department of Enterprise, Trade and Investment has recently (24 March 2005) published its Research and Evaluation Agenda to cover: competitiveness, R&D and innovation, enterprise, skills and labour market, infrastructure and investment. This is likely to be highly relevant, meriting further contact or desk research (www.detini.gov.uk/researchagenda05-08) .

Eire – In beginning to implement the 2004 Report "Building Ireland's Knowledge Economy – The Irish Action Plan for Promoting Investment in R&D to 2010", the Minister for Enterprise, Trade and Employment very recently (18 May 2005) announced the appointment of a new Science Advisory Council as part of the desired coordination and governance of science and technology and innovation. Eire could be an interesting comparator in several respects – including the significant efforts to invest EU Structural Funds in support of research and development.

Other EU

The UK Government Report on the "Science and Innovation Investment Framework 2004-14" notes recent innovation policies (their Box 9.2) in France, Germany and the Netherlands. What might be particularly interesting is to study regional policy within one of the larger Member States (and Italy would be another good example, where specific regions are taking an initiative for innovation and competitiveness) (see comparators in Scottish Parliament Enterprise Committee study). A significant amount of desk research could first be done via the UK Government (www.globalwatchservice.com) and European Commission (<http://trendcharts.cordis.lu>) comparator intelligence websites.

North America

A recent EU "Trend Chart" report concludes that the US "offers a wide range of lessons on innovation performance for high-income EU countries" and study of State-level initiatives is particularly valuable. Canada, meanwhile "offers a clear example for smaller EU countries of a competitive economy with its own robust innovative system that is able to compete with its large neighbour". If Canada were to be selected as a comparator, individual regions, relatively remote geographically (e.g. Nova Scotia, British Columbia), could furnish useful examples of regional innovation initiatives.

For the US, if a Committee visit were to be considered then combining intelligence-gathering at the State level with a consideration of Federal policy

issues could be rewarding. For those individual States, pursuing a regeneration-through-innovation strategy, Pennsylvania, N Carolina might be considered although there are many others (e.g. Kentucky, W Virginia). Wisconsin was selected for the desk research by the ELL Committee Report "Policy Review of HE", but there is probably no particular reason to chose Wisconsin for science and innovation. If a US regional leader in innovation were wanted for comparative purposes then the Boston area or San Francisco area would be obvious choices. The experience in individual States could then be usefully considered in the context of Federal policy initiatives on competitiveness and enterprise (e.g. from Department of Commerce) and a visit to Washington DC might be valuable to discuss key areas such as the Small Business Research Initiative.

Other countries

Russia is a good example in terms of focussing regeneration policy on science and innovation. Moreover, Siberia within Russia is an interesting example of regional initiatives (and Siberia looks east rather than west for its mentors and comparators).

South Korea is a well-established example of the political will to place science and innovation centrally in competitiveness efforts. The Ministry of Science and Technology has established S&T policy aimed at making the country a R&D hub of the Asia-Pacific region as well as a world leader in selected research areas, e.g. biotechnology, IT, telecommunications, environmental technology, nanotechnology. The Korean S&T long term strategy covers: promoting basic research, developing a creative S&T base and people, globalising R&D networks, promoting regional innovation systems, expanding R&D investment and improving its efficiency, supporting R&D in private sectors, promoting S&T culture and education.

Taiwan has similar aspirations. The National Science Council of Taiwan also aims to make Taiwan an elite centre of academic research and knowledge innovation in the Asia-Pacific region with recognised strengths in biotechnology, nanotechnology, IT, telecommunications, environment/green industries and life sciences.

Singapore has had considerable success in building world-class scientific research although may have focussed relatively narrowly on biosciences and, perhaps, has yet to see equivalent achievement in business-end activities.

India and China also, of course, provide some very interesting points for comparison but, arguably, are sufficiently dissimilar (to Wales) not to serve as key comparators in the first instance.