**Lambert Review of Business-University Collaboration**

**Questions for Consultation**

1) We would like to identify best practice and examples of excellence in business-university collaboration in the UK and abroad. Some examples of the types of collaboration that we would be interested in hearing about include:

- Industry's use of the information contained in academic publications, and academia's use of industry patents and prototypes or vice versa.

The application of University knowledge in business is increasing but performance across the university sector is patchy. The greatest barriers to further adoption of university-based innovation by industry are practical rather than legal/licensing arrangements – much of the university know-how resides with scientists and engineers, rather than in papers and patents.

- Joint ventures between universities and business, for example, personnel exchange or collaborative research and development projects.

Personnel exchange between university and business is critical. There has been a gradual increase in this type of activity funded by TCS, the Royal Exhibition of 1851 Fellowships, EPSRC's research assistant secondment scheme, etc. Adoption of these and other schemes by both industry and academia is increasing. Funding for these schemes must be maintained or enhanced.

- Informal contacts, for example, meetings and conferences, use of science parks, business-university liaison, industry sponsored university posts or studentships, work experience for students, business contributions to curriculum development, academic secondments in industry and provision of continuing professional development training by universities for business.

Meaningful links with business are best realized by universities where these links reflect a diverse range of activities spanning teaching, research and technology transfer, and where a critical mass of collaboration has been achieved. In my experience, *brokerage* of academia-industry relationships rarely leads to substantial benefit for either party, and more sustained effort focused on tangible projects and collaborations is much more worthwhile. Faraday Partnerships are critical and different in this respect.

- Formal contracts, for example, the use of licensing, research contracts, consulting projects, establishment of spinout companies, product testing, or business support.

National trends in the activities mentioned above are increasing.

Further comments:

There has been a noticeable increase in the enthusiasm and resources made available by the RDAs to foster university-industry links. This is welcome.

We would also be interested to learn how the relationship came about. Were your local Regional Development Agency or Sector Skills Council involved? What more could be done to facilitate successful partnerships?

2) If you do not have, or would like to strengthen such relationships, what are the main barriers to doing so?

These might include:

- Management and organisational issues. How can businesses and universities best organise themselves in order to benefit from each other's resources? Do the present mechanisms for priority setting, decision-making and funding in the university sector help or hinder business-university collaboration? What changes might encourage collaboration?

The main barriers to academic-industry relationships are:

i. restriction of academic time to establish and manage new relationships in advance of delivery of meaningful teaching or research links;
ii. management of expectations on both sides regarding time scales and core competencies;
iii. the tension between university needs to demonstrate achievement in the RAE and basic research versus industry's need for applied solutions and shorter timescales;
iv. unreconstructed view in industry about the role of a university where the university is often regarded as a cost free and under utilized resource; and
v. some academics in applied sciences have yet to fully engage with business needs.

- Technology transfer. What are the barriers? How can it be made more effective?

Technology transfer can be made more effective by deconstructing the view of technology transfer as a process in which universities pass intellectual property over a fence, to be picked up by industry. In my experience this does not work. The best practice for technology transfer is to define jointly projects at the outset, along with routes for exploitation, and to jointly manage a collaborative idea/project from its genesis to implementation.

- Intellectual property. Are the present arrangements understood and appropriate?

Industry often has unrealistic expectations regarding the availability of university generated intellectual property. Typically, this problem arises when industry has supplied in-kind or cash contributions to a collaborative project, which also benefits more substantially from some research council or other government funds. Industry expects unrestricted rights to arising intellectual property that fails to recognise that industry have not paid the full costs associated with the generation of the intellectual property. In such cases, universities expect increasingly to retain some exploitation rights so they may generate revenue in recognition of the public funded intellectual contribution.

3) A third set of questions relates to how business can attract the best graduates and postgraduates with the skills that they require, especially in technology. Questions include:

- Is the quality of graduate recruits satisfactory? Are there any obvious gaps in terms of skills and disciplines?

The skill most lacking in graduates is the ability to work in teams and soft skills in management, communication, etc.

- How do businesses, individually or collectively, communicate their needs for specific scientific or technical skills and for the development of relevant courses in universities?

Businesses typically communicate with universities via industrial advisory panels. However, universities must balance industry needs with maintaining scientific excellence and international standing.

- How could more attractive career paths for science and technology graduates and postgraduates be developed?
- What plans does business have to attract the best talent in the future and are the universities made aware of them? If not, what more could be done to facilitate such a dialogue?

4) The review team will also want to understand whether financial considerations currently help or hinder the relationships between business and universities. Questions include:

- Are there ways in which the present financing arrangements could be made more effective?
- Has the introduction of R&D tax credits influenced business demand for research and skills, and if so, how? Are there other means to the same end?

The review team welcomes written submissions by e-mail to lambert.review@hm-treasury.gov.uk or by post to The Lambert Review of Business-University Collaboration, 1 Horse Guards Road, London, SW1A 2HQ, UK by 17th April 2003. **Unless submissions are specifically marked as confidential, they may be posted on the review website** at www.lambertreview.org.uk (from mid February.) Please include the name and contact numbers of the person to contact for any follow-up discussions.

**Lambert Review Project Timeline**

The project timeline below outlines the proposed phases of the project. We anticipate that we will be in close touch with business, university and other key stakeholders during the main research phase from now until Easter, and again during the summer, when we will want to test our emerging findings and develop the final recommendations. The final report will be submitted to the Government in Autumn 2003.

| **Phase** | **Activity** | **Timing - 2003** |
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| 1. Research and Consultation | Consultation with business, universities and regional and national administrations. | Now until Easter<br><br>Deadline for submissions 17 April 2003 |
| 2. Analysis & Emerging | Analysis of consultation | Easter to late June/July |

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| Findings | responses and web publish short emerging findings paper | |
| 3. Re-consultation and development of final recommendations | Re-consult key stakeholders to test emerging findings and develop recommendations. | July/August/September |
| 4. Submission of Final Report to the Government | Submit final report to the Government (HM Treasury, DTI and DFES) | September/October 2003 |