

17 April 2003

Richard Lambert,
Lambert Review of Business-University Collaboration
1 Horse Guards Road
London
SW1A 2HQ

Subject: SEEDA's initial response to the Lambert Review of Business-University Collaboration

Dear Mr Lambert,

Thank you for your interest in SEEDA's comments on how Business-University collaboration could be improved in the UK, and recognition of the significant role RDAs play in shaping regional economic development. In the recent review of business support in the UK, government recognised that RDAs have an especially close relationship with companies, and valuable in-depth knowledge of their behaviour, views, and challenges they face in their local and regional contexts. SEEDA is actively developing Business-University collaboration with a view to enhancing the performance of the regional economy through a range of policy and programme activities, yet we also recognise that considerable further progress needs to be made.

Our initial response to the questions raised by your consultation letter are addressed by the document in annex, and we hope that this will be helpful in allowing you to identify what are the key issues on which you wish to 'drill down' through re-consultation, between now and July.

From your conversation with our Business Planning and Policy Manager, Patrick Keen, at the CBI Innovation Review meeting in Bracknell (31 March 2003) we are also pleased to note your interest in visiting the RDAs in order to learn from our special regional perspective, knowledge and experience. As the RDA with the lead responsibility for Science and for Innovation, SEEDA would be pleased to pull together a joint RDA response to the review and to help arrange a programme of visits that would support your assessment process.



I would like to invite you, therefore, to visit SEEDA in May/June in order to establish a closer dialogue on the subject, and perhaps visit some projects in the region that could help illustrate key issues and opportunities.

Yours sincerely,

Jeff Alexander, Director
Business & International

SEEDA's Initial Response to the Lambert Review of Business-University Collaboration

SEEDA is responsible for developing and implementing economic strategy for the UK's strongest manufacturing region - a region in which the strength of its HEI and private science, engineering and technology base has helped put it among the most competitive regions in the world. However, as recognised by the Lambert Review, the sustainability of this performance depends upon the ability of the businesses to continually improve in efficiency, global reach and value-added, as well as the continual development of new competitive businesses and new technologies. HEIs play a crucial part in delivering against this need, as the recently published South East Regional Economic Strategy recognises.

In our rapidly changing knowledge economy, there has never been a stronger need for Business-University collaboration. HEIs have the ability to develop and promote skills to meet new high-level challenges, provide advice and support to existing and new businesses, and above all develop the basic research on which the knowledge economy is based. The pressures of the RAE exercises have encouraged priority to be given to the latter, and while the indications of a culture shift are apparent, it is recognised that more needs to be done. Rewards for university staff working closely with business need to be encouraged to enable a healthy balance needs to be struck between basic long-term research and what is termed applied work. This balance does not need to involve all or even the majority of staff working with business, but ways of giving recognition or higher status are needed (and also, in passing, for work done on promoting science and technology in the public domain).

In addition, however, businesses also need to be able to draw more readily on knowledge generated in HEIs, and to ensure that HEIs deliver the skills they need. Many businesses also need to be made aware of the significance of the gains they could get from greater involvement with HEIs. On both sides, even where there is a desire for and recognition of the value of collaboration and access, frustration is often expressed at the difficulties of making it work.

Good examples of business-university collaboration do exist, and these can be transferred. It is one of the Regional Development Agency's functions to identify and promote best national and international practice in the various aspects of knowledge transfer. SEEDA gives high priority to promoting this through its activities and programmes, for example, using its global regions partnering strategy to identify and then disseminate best practice in promoting business-university interactions. Some key examples are given below.

1. Good international examples include:

- University of Maryland. At the Dingman School of Entrepreneurship (funded by an alumnus) high performing students in science, engineering and business are encouraged to live in the same “dorm” and attend additional courses in enterprise. Although this programme is only a couple of years old, these graduates are expected to be both well equipped to start their own enterprises and highly sought after by major companies. The Clark School of Engineering has been running a successful Technology Extension Service for 18 years, with 5 engineering staff based in offices around the region as a visible and accessible face of the University. Practice such as this will be shared with HEIs in the SEEDA region through visiting professorial exchanges.
- The Universities of Twente in the Netherlands and Louvain-le-Neuve in Belgium have successfully been recruiting graduates through enterprise loans to start up companies on the University campus. This idea has been developed in the SEEDA region through the Hatcheries programme, which involves collaboration between three universities (Surrey, Kent and Brighton) to develop and promote best practice; and through the HEIF funded SET² project which also involves Surrey, Southampton, Bath and Bristol Universities. Grants, space and mentoring will be provided to graduates encouraged to develop their ideas to the next stage of investment when they will be ready to move into a business incubator such as an Enterprise Hub. The project will last 2 ½ years, cost £975K and support up to 90 graduates ideas. It should generate a significant fraction of these into businesses, and should become self-sustaining.
- SINTEF in Trondheim is an excellent example of a University and a large contract research organisation co-located on the same campus. Through close academic collaboration including secondments, this raises the status of industrial research to academia, and makes the University more accessible through a business-oriented contract research organisation.

2. Drawing on international examples more generally, SEEDA's Enterprise Hub concept won European recognition in 2002 as a best practice example of support for new business in Europe through the European Association of Development Agencies Benchmarking Project. Enterprise Hubs have been developed and pioneered by SEEDA as one of its initiatives to increase the start-up survival and growth rate of young companies, with a particular focus on links into universities.

Enterprise Hubs' mission is business incubation for fast growing technology companies and the facilitation of the transfer of technology and know-how from the region's universities and research institutes, with several of them based on science campuses or science parks. They are a focus for cluster development in leading edge products and technologies, and are increasingly attracting investment by high tech companies into the

region. Enterprise Hubs provide new and established firms with better access to knowledge/technology, investment, workspace and mutual support. Each is business-led by a Hub Champion, employs a Hub director, contains an "incubator" unit of flexible workspace, including specialist facilities such as wet labs as appropriate, and is affiliated to a university or research institution.

Specific examples of Enterprise Hub development include Hubs in high technology corridors, such as North Oxfordshire (based on the Oxford University Begbroke Science Park which includes world-class materials research facilities and a nanotechnology collaborative research and training centre for industry), and Southampton (based on the Southampton University Chilworth Science Park specialising in photonics, electronics, telecommunications, computing, Marine Technologies and Media and Creative Industries); and in regeneration areas such as Sittingbourne (PharmaBio, Life Sciences and ICT) and the Isle of Wight (Composite materials).

3. **Enterprise skills** need to be developed at all levels, many of which involve HEIs. The Table in **Annex 1** summarises these skills and identifies how barriers to progress are being tackled.

Although HEIs are generally aware of the **skills needs of industry** there is little direct pressure to respond to these needs, since there is little direct linkage between students choice of undergraduate courses of study and the needs of employers. For example good employment prospects for certain course does not necessarily mean that the graduate skills are appropriate. **Sector Skills Councils can have a key role in identifying these needs, and RDAs can broker relationships between SSCs and HEIs.** For example SEEDA is working with e-Skills UK (representing top industries such as IBM, Dell and Microsoft) to develop a novel type of BSc Information Technology Management course, designed to produce graduates who can "hit the ground running", through a strong focus on developing project management and other work-related skills in collaboration with a number of Universities.

4. **Business employers can better communicate their requirements to a responsive university sector, through Clusters and Partnerships.** Specific clusters emerge within and across sector and geographical boundaries, and are driven by business trends such as specialisation, outsourcing and strategic alliances. Fully functioning clusters achieve competitive advantage through collaborative interaction, both between businesses and with sources of skills, technologies and expertise, including universities. SEEDA supported programmes such as the Manufacturing Advisory Service, Lean Manufacturing and the Cluster Fund promote such networks and can enable business university interaction, though they are at an early stage and can be expected to take several years before their benefits become fully apparent. Our estimate is that at

least 20,000/30,000 of the 300,000 companies in the SE would benefit from such networking, and of these we are currently accessing around 7,000 companies

5. **HEI – business interaction is also being addressed through SEEDA's Sector Groups** led and driven by industry leaders who have been attracted because there is clear value to be gained by coming together at the regional level. They drive strategic actions that are best undertaken or co-ordinated at a regional level, such as the identification and provision of specialist skills requirements or facilities. Currently there are eight Groups (Aerospace and Defence, Environmental technologies, Pharmaceutical, Biotechnology and Healthcare technologies, Marine Industries, Media and Telecoms, Property and Construction, Logistics and Transport, and Tourism). Examples of sector driven projects involving universities in the region include:

(a) the Rapid Product Development Group, a new public/private partnership initiative that brings together Buckinghamshire and Chilterns University College, Portsmouth University and an innovative company 3T RPD Ltd. This unique group is able to provide a comprehensive range of skills equipment and technologies which increase competitiveness by reducing times to market by up to 70%, and by reducing errors, ensure manufactured parts reach the market more efficiently. The RPDG promotes the techniques of superfast product development through specialist skills training, bespoke short training courses and advice on RPD processes and applications. The group also promotes RPD as a career and as a taught subject in schools (including "taster days"), colleges and universities. SEEDA has invested £900,000 over 3 years into establishing and developing the group, resulting in the delivery of over 1500 learning opportunities, 750 high level skills qualifications and 550 businesses receiving specialist advice.

(b) South East England Composites (SEECOM): This project is addressing an increasingly serious shortage of skilled composites staff especially at technician level. This capacity building project will help create a pool of skilled trainers and technicians with the skills to develop and manufacture high value composite materials in the South East region. The partnership brings together three further education colleges, universities and three SEEDA funded Enterprise Hubs. The skills provision being developed covers composite skills needs across a range of industries including motor sport, aerospace and marine.

(c) South East England Opto– Electronics Skills (SEOS) Delivery Plan: This project is aimed at improving skills supply for high technology engineering and electronics sectors (opto – electronics, communications, photonics and advanced materials). Through a group of partners including universities, further education colleges, South East Photonics Network

(SEPNET), Microsystems Manufacturing and Bookham Technology, the project has developed a comprehensive package of skills and support for businesses in the industries. Bespoke industry endorsed high-level training modules, “training trainer” courses for intermediate level skills, an employer learning network, and a schools programme have all been developed.

6. **Other barriers:** SEEDA is working to improve funding arrangements to encourage greater interaction from a number of perspectives. It is worth noting that SE companies have recently voiced their concern in the context of DTi Innovation Review Consultation events in the SE about the limits and constraints of certain mechanisms, such as that many small firms would benefit more from cash than tax credits as enablers of risky R&D projects. Actions in the SE to help improve the situation include:

- Close partnership working between SBS, the Business Links and other organisations including Enterprise Hubs to achieve a 90% success rate in SE business bids for SMART grants.
- Direction of firms towards appropriate HEI knowledge and services e.g. working with current or potential foreign investors in the region to help them identify the specialist support they will need for operations, and the necessary recruitment base.
- Action by the RDAs collectively to ensure that HEIF 3rd leg funding is as far as possible guided by and integrated in regional economic strategy, so that projects can benefit from available complementarity and additional support activity.
- Current and ongoing engagement in the government’s policy review to see what actions could be taken to improve support of innovation and business-university collaboration, e.g. DTi Innovation Review, House of Lords Science Review, Lambert Review, Business Support Review.

7. The RDAs have embedded the creation of an innovation culture at the core of their regional economic strategies. Networking is recognised as fundamental to an innovation culture, and while much more needs to be done RDAs are uniquely placed to catalyse and coordinate the necessary collaboration between the many partners and players - major industries and SMEs, universities and research organisations, the NHS, the Small Business Service, regional HE consortia, government offices, LSCs and professional enterprise support partners (venture capitalists, patent advisors, angels etc.). Collectively, the RDAs have made the case that they can act as enablers for these networks, and the RDA Science and Innovation Strategy recommendations are given in **Annex 2**.

Annex 1: Progressive Skills Development Support for Entrepreneurship and Innovation

(taken from RDA Science and Innovation Strategy 2002)

Level	Location	Skills	Barriers	Facilitators
1	Schools	Priming for entrepreneurship. Develop awareness and appreciation of entrepreneurship and the need for innovation	Staff development for teachers. Not in core curriculum.	National and regional centres of excellence for teacher development. Student mentors. Flexibility of curriculum for skills development.
2	Further Education Institutions	Development of entrepreneurship, trade and technology support skills (e.g. lab technician, business skills etc)	Course development and culture shift needed.	Centres of regional excellence. Distance learning modules. Mentoring.
3	University undergraduate programmes	Higher skills development, including entrepreneurship through courses and projects.	Course development needed, and HEI culture shift needed	International and regional academic exchanges for best practice. Enterprise clubs, sponsored Enterprise challenge competitions.
4	Hatcheries (supporting graduate ideas)	Concept development of graduate ideas	Funding, laboratory and office space academic and general support.	RDA Hatchery grants, HEI business development offices, exchange programmes. Co-location with academic departments.
5	Enterprise Hubs, Gateways and Innovation Centres	Develop commercialisation. Grow team to small company (typically 2-6 staff). Staff development, particularly for multi-skilling.	Laboratory and offices. Technician and research support. Economies of scale. Management, IPR advice, and Seed Funding	Dedicated and managed buildings for co-location of small firms with strong academic links and supporting instrumentation. Mentoring, business boffins and on-line learning. IP and commercialisation task force. Venture capital, business angels and government grants (e.g. SMART), University Challenge funds.
6	Science and Technology	Implement manufacturing.	Funding, location, services Technician and	Venture Funding, (including RDA Venture

	Parks	Company becomes self-reliant, but benefits from adjacent HE facilities.	<p>research support. Attracting critical mass of expertise.</p> <p>Opportunities for expansion to other locations.</p>	<p>Funds). Strong academic consultancy and technical links. Sector specialisation.</p> <p>Accelerators within and across RDA regions in UK and in partner global regions.</p>
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Annex 2: RDA Science and Innovation Strategy Recommendations

The RDAs should coordinate the implementation of regional aspects of innovation policy including:

A) Direction of Regional Strategies for Investing in Innovation (developing a strategic view and co-ordinated action oriented programmes and initiatives)

- i. Maintaining a strategic view to developments in science, future technologies and their application and evolving delivery channels are an essential prerequisite to global competitiveness. RDAs recognise the importance of, and will co-ordinate foresight review exercises to accelerate new technologies, through action plans which can be reviewed and monitored annually.
- ii. Coordinating and facilitating the development of effective responses to government and DTI strategy, by establishing and working through new regional science and technology advisory councils. Such bodies will bring together industry, universities and others to catalyse developments at a regional level, and work with other RDAs, research councils and international partner regions to establish international best practice in innovation and entrepreneurship.
- iii. Coordinating and Advise on all Third Leg Funding, as this becomes a consolidated funding stream. There is the need for taking a long term strategic view, recognising the contributions that each HEI can make, at regional and sub-regional levels to promote the most effective use of resources, particularly through collaborative ventures to develop international centres of excellence to underpin the key science and technology sectors in each region.

B) Promoting and Motivating New Businesses (commercialising the knowledge base)

- iv. Supporting and enhancing communication links between industry and the knowledge base (including HEIs, NHS, public research institutes and private R & D), particularly for SMEs, the knowledge rich sectors and new entrepreneurial businesses.
- v. Working with Universities and Further Education Institutions to provide research, technical and advisory support for existing businesses.
- vi. Attracting Inward Investment in key sectors within each region, focussing on enabling the supply chain and developing and maintaining the global competitiveness of the regional clusters.

C) Facilitating the Development of the Knowledge Base and Provision of the Skills to Underpin the Innovation Culture

- vii. Monitoring and focussing skills needs and provision through the FRESA and responding (with FRESA partners) to maintain a healthy labour market underpinning science and technology industries.
- viii. Promoting widely through showcase examples, developing and facilitating best practice, the development of science, technology and entrepreneurial skills and support mechanisms at all levels.
- ix. Working with the key public, private and academic sector partners (including the Wellcome Trust, LSCs, Sector Skills Councils, HEIs, FEIs etc.) to coordinate strategies at a regional level for the establishment of National Centres for Excellence in Science teaching and for delivering enhanced laboratories for schools and universities.
- x. Working with Universities, research institutions and large private sector investors to develop international science and research linkages to support the research and development activities within key regional sectors.