

## **RSC Response to the Lambert Review**

The RSC welcomes the opportunity to comment on the Lambert Review of Business-University Collaboration.

### **Key points**

- The RSC believes that there should be a national strategy which provides a framework for setting a coherent and consistent set of policies to be adopted by the Regional Development Agencies in facilitating knowledge transfer.
- The RSC shares the Review's concern that further concentration of quality-related (QR) funding may jeopardise university-business collaborations and the development of business-relevant research within the regions.
- The RSC fully supports the creation of a 'significant new stream of business-relevant research funding' as well as increasing and improving third stream funding for knowledge transfer.
- The RSC supports the view that Government should look at ways to rebalance university commercialisation activities towards licensing. The RSC also endorses the view that public funding should be concentrated on high-quality spinouts which are likely to be sustainable. These companies will eventually contribute to the economy and create jobs.
- The RSC welcomes the recommendation that a protocol for the ownership of IP in research collaborations should be developed to speed-up negotiations, but doubts if this will be practicable to implement.
- The RSC endorses the proposals to encourage new forms of networks between business and universities.
- The RSC welcomes the suggestion that the Higher Education Funding Council for England, as well as the other funding councils, should consider if the UK university system is producing the right balance of graduates in the disciplines the economy needs.

There follows specific comments on the recommendations made in the Lambert Review.

### **Follow up to this response:**

*The RSC is the largest organisation in Europe for advancing the chemical sciences. Supported by a network of 45,000 members worldwide and an internationally acclaimed publishing business, our activities span education and training, conferences and science policy, and the promotion of the chemical sciences to the public.*

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## **Specific responses to the Lambert Review Recommendations**

### **CHAPTER 2 – DEMAND FOR RESEARCH FROM BUSINESS**

#### **Recommendation 2.1**

**The Review recommends that UK business should establish a high-level forum to enhance the effectiveness of technical innovation in business in the UK.**

**Chief executives of R&D-intensive businesses in the UK should agree its remit: it should be business-led and focused on the key issues for retaining and expanding high value-added business in the UK.**

The RSC recognises that multinational companies have a global outlook and are tending to focus increasingly on locating their R&D where their major markets are and also where it makes good financial sense.

Any forum set up to enhance the effectiveness of technical innovation in business in the UK should ensure that any resulting activity is capable of enabling the UK to compete on a global playing field.

#### **Recommendation 2.2**

**Government should seek ways of directing a higher proportion of its support for business R&D towards SMEs.**

The RSC fully supports the Government directing more support for business R&D towards SMEs but support has to be appropriate and sensibly controlled. The emerging sector of chemical science related small companies such as those in the biopharma, and “smart materials” sectors will benefit from this approach and we believe this sector will have the potential to benefit the UK economy.

#### **Recommendation 2.3**

**The Review recommends an enhanced role for the development agencies in facilitating business-university links. A priority should be to identify non-collaborating SMEs that have the potential to gain significant benefits from working with universities.**

The RSC endorses the recommendation that the development agencies should do more to enhance collaboration between non-collaborating SMEs and universities. The development agencies should use a similar approach to that of the Faraday Partnerships and use ‘Technology Translators’ who understand both the businesses and the technologies available within the region and are fully conversant with the aspect of technology they are attempting to translate.

## **Recommendation 2.4**

**The Review recommends that the Government should continue to support Knowledge Transfer Partnerships (formerly TCS) but that the programme should be better marketed to businesses. Increasing the regional focus of the scheme would allow it to be tailored more closely to the needs of local businesses.**

The RSC applauds the successes of the Knowledge Transfer Partnerships in terms of creating jobs and economic benefits but recognises that the take up within the chemical science related industries is low. We welcome the approach taken to better market this scheme to meet business needs.

## **Recommendation 2.5**

**The Government should market the R&D tax credits better in order to increase their take-up by business.**

The UK needs to increase the proportion of its GDP spent on research both in the public and private sectors, particularly as the EU has set a goal of 3% by 2010. The RSC applauded research tax credits when they were introduced by Government and endorses the recommendation to market these better.

## **CHAPTER 3 – KNOWLEDGE TRANSFER**

### **Recommendation 3.1**

**Universities UK and the Standing Conference of Principals should establish a list of academics with relevant qualifications who are interested in becoming non-executive directors on company boards, and should arrange training for them in this role.**

The RSC agrees with this recommendation.

### **Recommendation 3.2**

**The Department for Education and Skills should exempt business people from the requirement to undertake training to lecture in universities.**

It is unreasonable to expect business people giving a single lecture course to undertake the same training a full-time university lecturer.

### **Recommendation 3.3**

**Universities, departments and faculties should develop their alumni networks in order to build closer relationships with their graduates working in the business community.**

The RSC welcomes the approach taken to increase networking and interactions between business and universities. Professional bodies like the RSC are best placed to facilitate these

interactions within specific subject areas and the RSC already has a number of forums and networks in place which can be used to do this.

#### **Recommendation 3.4**

**Where they do not exist, clear codes of conduct to avoid conflicts of interest in carrying out research with business should be developed by universities.**

The RSC agrees with this recommendation.

#### **Recommendation 3.5**

**The Association for University Research & Industry Links (AURIL), the Confederation of British Industry (CBI) and the Small Business Service (SBS) should produce a small set of model research collaboration contracts, for voluntary use by industry and universities.**

- **A range of model agreements should be developed, setting out various approaches to IP ownership, management and exploitation rights including, but not limited to, ownership of the IP by the university with non-exclusive licensing or exclusive licensing to industry.**
- **The model contracts should be agreed by the main representative bodies. They could be distributed through the same means: to universities through AURIL and Universities UK and to industry through the CBI and the SBS.**

The RSC agrees that model contracts should be developed and would emphasise that these contracts should, as proposed, be voluntary.

#### **Recommendation 3.6**

**The Review recommends that the Government should continue to invest in a permanent and substantial third stream of funding, while simultaneously monitoring and evaluating the outputs from its investment.**

**The Review agrees with Sir Gareth Roberts and the CBI that third stream funding should be increased to around £150m per annum in England in the future, in order to increase the flow of knowledge and ideas from the science base into business and the wider community.**

The RSC endorses the recommendation to increase third stream funding but would welcome further details. Any mechanisms put in place to fund knowledge transfer will help UK business to compete globally.

### **Recommendation 3.7**

**The Review recommends that third stream funding should be allocated for three years on the basis of universities' business plans for their third stream activities. Universities that meet their third stream benchmarks in year one would automatically receive their second and third year allocations.**

**Simultaneously work should be undertaken by the Funding Councils to develop a basket of metrics that might in the future provide the basis for a predictable way of allocating funds on a formulaic basis.**

**In summary, if knowledge transfer is to achieve its full potential in the UK, the Review recommends that third stream funding should be substantial, permanent and allocated in a way that enables universities to make long-term plans for these activities.**

The RSC agrees with this recommendation.

## **CHAPTER 4 – INTELLECTUAL PROPERTY AND TECHNOLOGY TRANSFER**

### **Recommendation 4.1**

**The Funding Councils and Research Councils, in consultation with universities, the CBI and other industry groups, should agree a protocol for the ownership of IP in research collaborations.**

**IP protocol main features:**

- **The common starting point for negotiations on research collaboration terms should be that universities own any resulting IP, with industry free to negotiate licence terms to exploit it.**
- **But if industry makes a significant contribution it could own the IP.**
- **Whoever owns the IP, the following conditions need to be met:**
  1. **The university is not restricted in its future research capability.**
  2. **All applications of the IP are developed by the company in a timely manner.**
  3. **The substantive results of the research are published within an agreed period.**
- **On all other terms the protocol should recommend flexibility where possible to help ensure that the deal is completed.**
- **The Funding Councils and Research Councils should require universities to apply the protocol in research collaborations involving funding from any of the Councils.**

The RSC welcomes this approach and agrees with the view that any deals on IP by the university and the company involved should not unduly constrain the individual university researcher from further developing their research. The RSC has doubts that the IP protocol will be practicable to implement.

#### **Recommendation 4.2**

**The Government should use third stream funding to support regional shared services in technology transfer.**

**Shared services main features:**

- **Non-prescriptive – universities in each region should agree themselves how to set up and shape the services, and the role that each institution should play.**
- **Third stream funding should provide financial incentives to create shared services in technology transfer. Funding available to less research-intensive universities to provide specialist expertise in-house should be reduced.**
- **The most research-intensive universities should be involved where possible to build on existing expertise.**
- **Most knowledge transfer services should be kept in the university, including contract negotiation for consultancy and collaborative research and reach-out to business. Some technology transfer staff should remain on-site to act as contact points for university researchers on technology transfer and IP issues.**
- **Development agencies should support the universities in delivering the shared services.**

The RSC believes that any regional shared services should focus on the particular industry specific and science and technology strengths of the region. Where appropriate the regional services should work with RDAs.

#### **Recommendation 4.3**

**The Government should increase the level of funding for technology transfer and knowledge transfer training to stimulate the development of new training courses.**

The RSC agrees with this recommendation.

#### **Recommendation 4.4**

**As third stream funding increases, university technology transfer offices should actively seek to attract individuals with industry background and experience.**

The RSC agrees with this recommendation.

#### **Recommendation 4.5**

**UK organisations representing technology transfer should look to the US Association of University Technology Managers to see what lessons can be learnt in terms of providing quality training, increasing industry involvement and sharing best practice.**

The RSC agrees with this recommendation.

#### **Recommendation 4.6**

**The Government should set clear guidelines for third stream funding to rebalance commercialisation activities towards licensing. In particular, it should:**

- 1. Increase the availability of proof of concept funding. Proof of concept funding is used to establish whether a new technology is commercially viable or not. It is the first stage in transferring IP to the market, and is needed for both licensing and spinning out. The level of investment is normally up to £50,000 per invention.**
- 2. Reduce the availability of seed funding, and use public seed funds to draw in private finance wherever possible.**

**Third stream seed funding is used to provide early stage investment in spinouts. The level of investment is normally up to £250,000 per invention. Private finance should be brought in alongside such funding wherever possible, so that the spinouts can be tested in the marketplace. But some spinouts in some regions may find it more difficult to attract private funding early on, since the venture capital and angel networks in the region are less well developed than in others. The best spinouts from these regions should receive seed funding.**

The RSC supports the view that Government should look at ways to rebalance university commercialisation activities towards licensing. The RSC also endorses the view that public funding should be concentrated on high-quality spinouts which are likely to be sustainable. These companies will eventually contribute to the economy and create jobs.

### **CHAPTER 5 – REGIONAL ISSUES**

#### **Recommendation 5.1**

**Regional Development Agencies should have targets that promote building business-university collaboration.**

- Their core outcome target for innovation should reflect the long time lag between R&D and economic impact.**
- All RDAs should set a specific milestone for building business-university links.**

**The Scottish, Welsh and Northern Irish development agencies should also consider whether their targets adequately promote building business-university collaboration.**

The RSC agrees that RDAs should have targets that promote building business-university collaboration. This activity should be benchmarked with high performing regions in the rest of Europe.

#### **Recommendation 5.2**

**The Government should change Regional Selective Assistance so that it can support more knowledge-intensive clusters and businesses, and be used to help build a region's infrastructure for collaborative R&D projects with universities.**

The RSC fully endorses more support for knowledge-intensive clusters and businesses. The RSC is also of the opinion that knowledge-intensive clusters will attract and develop the management personnel needed to run R&D intensive businesses.

## **CHAPTER 6 – FUNDING UNIVERSITY RESEARCH**

#### **Recommendation 6.1**

**The Government should now take stock of the proposals in the review of research assessment and in the review of the sustainability of university research. It should consider the conclusions of these two reviews together when deciding on the future direction of research funding and policy in the UK.**

**From a business perspective, there are some principles that the Government should take into account in assessing the proposals contained in these reviews.**

- **World-class excellence across all types of research should be recognised and rewarded by the Research Assessment Exercise and Research Council peer review processes. Excellent research undertaken with industry or other users should be recognised as being of equal value to excellent academic research.**
- **There should be significantly more business input into the priority setting, decision-making and assessment panels of both of the peer review processes.**
- **The processes should be flexible and dynamic, capable of supporting new ideas and talent wherever they are found.**
- **Funding should be allocated in a way that actively supports multi-disciplinary research.**
- **The processes should be as simple and unbureaucratic as possible and should support the long-term sustainability of the research base.**

- **Greater weight should be attached to the importance of disseminating research to a wider audience outside academia in an accessible format.**

**The Government should consider the relative size of the Funding Council and Research Council funding streams and whether the present system provides the appropriate balance between giving institutions stable research funding and promoting a dynamic and competitive research base.**

The RSC believes that any assessment of research should be based on measuring the quality of research irrespective of its funding source.

The RSC agrees that business should have some input into research prioritisation processes and should be fully engaged in peer review.

The RSC does support recommendations that the relative size of QR funding and Research Council funding should be examined. The size of the Research Council funding has risen without a concomitant increase in QR funding.

### **Recommendation 6.2**

**The Government should create a significant new stream of business-relevant research funding, which would be available to support university departments that can demonstrate strong support from business.**

**Demand for the funding from business would need to be assessed but funding in the region of £100m-£200m could be an appropriate starting point.**

The RSC shares the Review's concern that further concentration of quality-related (QR) funding may jeopardise university-business collaborations and the development of business-relevant research within the regions.

The RSC fully supports the creation of the new funding stream for business-relevant research and believes research supported should be of high quality.

The RSC believes that the practicalities of setting up this new funding stream need to be considered in detail with respect to the impact it may have on the time, resource and cost for academics to engage in the process.

### **Recommendation 6.3**

**There are a number of possible ways to allocate the new business-relevant research funding stream including an expansion in the scope of Higher Education Innovation Fund, an expansion of existing schemes such as LINK, or allocation through the Regional Development Agencies and their equivalent bodies in Scotland, Wales and Northern Ireland.**

**The Review's preferred approach is to allocate the new funding stream to the RDAs through their single pot allocation, and to provide them with targets on promoting business-university collaboration.**

- **RDAs would match fund the contribution by business to collaborative research projects on a sliding scale. For basic and strategic research, RDAs would match the business contribution: for near-market research, the support would be lower.**
- **RDAs would prioritise the applications from university departments by considering the likely economic impact of the research and the fit with their regional economic strategies. They might prioritise applications involving previously non-collaborating SMEs.**
- **If the Government invests less than the proposed £100m-£200m in England, the priority should be to support university departments which are doing work of value to business, but which do not receive significant quality related funding through dual support.**

**Any new increase in the budgets of the English RDAs would lead to a consequential increase in the budgets of the devolved administrations. It would be for the devolved administrations to decide how to allocate any such increase in their budget. However, the Review hopes that they would consider the recommendations in this report in deciding how to allocate any such increase.**

The RSC agrees with the approach to allocate any new business relevant research funding stream through the RDAs as long as there was significant input from senior executives of the local businesses. Furthermore, the RDAs should take into account any national industry sector specific strategies to make the UK more competitive on a global level. The Chemistry Leadership Council is developing such a strategy for the chemicals industry and there needs to be a coherent and collaborative approach taken here with the regions.

#### **Recommendation 6.4**

**The Russell Group of universities should encourage the development of a league table of the world's best research-intensive universities. This could well be produced by the private sector: the Sutton Trust is one group which is already considering the possibility.**

This is too complex an issue to reduce to simple metrics. Whilst the RSC agrees that international benchmarking is important, especially in the context of a global economy, the RSC would caution against too many conclusions being drawn from comparisons between individual universities. The RSC is not convinced that much value will be added by undertaking this activity. Metrics like citations are unlikely to enable the detailed comparisons between particular disciplines to be made properly. Organising peer review of individual institutions will be difficult to organise and costly.

The RSC notes that some international benchmarking of disciplines does already occur such as the EPSRC's International Reviews. The panels engaged to carry out these exercises include industrial researchers from overseas.

## **CHAPTER 7 – MANAGEMENT, GOVERNANCE AND LEADERSHIP**

### **Recommendation 7.1**

**The Review recommends that the Committee of University Chairmen, in consultation with the sector and Government, develops a concise code of governance representing best practice across the sector. The draft, attached as Appendix II to this report, should be seen as the starting point for drawing up the code.**

**While the code should remain voluntary, all institutions should disclose in their annual report when their governance arrangements do not conform to the code, and explain why their particular governance arrangements are more effective.**

The RSC agrees that an example code of governance representing best practice is a good idea, but notes that individual universities are independent institutions.

### **Recommendation 7.2**

**Each governing body should systematically review its effectiveness in carrying out its obligations to all stakeholders every two or three years.**

**These reviews should take into account the stated objectives of the governing body, the performance of the institution against key performance indicators, evaluations of senior management and the results of effectiveness reviews of senate and committees.**

**To ensure transparency, the methodology and results should be published in the university's annual report and on the internet.**

The RSC agrees that it is good practice for universities to review their performance in respect of their missions and service to their stakeholders.

### **Recommendation 7.3**

**The Review supports the Leadership Foundation as an initiative to address the sector's need for high-quality leadership and senior management.**

- **The Foundation should focus its efforts as much on future vice-chancellors as current ones.**
- **Development programmes and training should be implemented with third parties rather than created and supplied internally.**
- **The Foundation should develop programmes to support council chairs in their increasingly challenging roles.**

The RSC believes that any support for Higher Education leaders is to be welcomed.

#### **Recommendation 7.4**

**The Review recommends that the Government and all funders should minimise the use of hypothecated funding streams.**

- **Funders should continue to consolidate individual funding into larger streams, more proportionate to the necessary level of bureaucracy and regulation.**
- **Smaller hypothecated funding streams should, where possible, be allocated on a metrics or formulaic basis, rather than by bidding.**
- **Funders should minimise audit requirements on hypothecated funding streams.**
- **“Top-sliced” funding streams should have a limited life of no more than three years, after which they should be rolled back into core funding, unless policy is explicitly renewed.**

The RSC agrees in general terms with this recommendation but would note that sometimes specific hypothecated funding streams are vitally important in pushing forward national strategic needs.

#### **Recommendation 7.5**

**The Review recommends that funders and agencies should apply a significantly lighter-touch regulatory and accountability regime to well-run universities.**

**One agency should be responsible for risk assessments on behalf of all funders and regulators. In time, assessments should be published. Risk should be assessed on:**

- **Adherence to the sector’s code of governance (see Appendix II).**
- **Quality of management.**
- **Financial soundness.**
- **Institutional performance measured against key performance indicators (such as teaching, research, third stream and so on) set by the governing body, as well as other broad policy goals (as set by Government).**

**In the longer-term, well-run universities should receive greater financial freedoms, such as the freedom to move funding across budget lines and longer, multi-year funding cycles.**

The RSC agrees with moves to reduce the level of bureaucracy to which universities are subjected.

## **Recommendation 7.6**

**In three years' time, the vice-chancellors of Oxford and Cambridge should take stock of the progress of reform, and agree with the Government what further steps will be necessary for the two universities to sustain their global position.**

No comment.

## **CHAPTER 8 – SKILLS AND PEOPLE**

### **Recommendation 8.1**

**Funding Councils should require universities to publish information in their prospectuses on graduate and postgraduate employability for each department (or faculty, if datasets are too small) by 2006.**

**This information should include:**

- **Employability statistics and first destination data – to allow students to see whether particular courses are likely to be useful for specific careers.**
- **Starting salary data – to give students an indication of the value that employers place on graduates from particular courses.**
- **Other information relevant to specific disciplines.**

The RSC notes that at present universities are obliged to provide detailed data on the destinations of their graduates about 6 months after graduation. The RSC also notes that whilst the 6 months metric gives a good indication of employability perhaps better measures of relevance of courses to specific careers would record employment after a longer time period. However, the feasibility of tracking students for long periods is low.

The RSC would also caution against using salary data especially only 6 months after graduation. A better metric would be to publish industrial sector data for mid-career staff.

### **Recommendation 8.2**

**The Government should ensure that Sector Skills Councils have real influence over university courses and curricula. Otherwise, they will fail to have an impact on addressing employers' needs for undergraduates and postgraduates.**

Many university (chemistry) departments have industrial advisers to guide them. However, the RSC would emphasise that industry is not the only customer for university graduates. In addition the RSC believes that the Sector Skill Councils' research and data collection should be used to influence university syllabuses.

### **Recommendation 8.3**

**The Higher Education Funding Council for England should ensure that its forthcoming review of the teaching funding method for universities:**

- **Takes account of the views of employer-led bodies and representatives from the public and voluntary sector rather than funding courses solely on the basis of historical cost.**
- **Considers whether the UK university system is producing the right balance of graduates in the disciplines that the economy needs.**

**The other funding councils should also consider these issues.**

The RSC believes that for strategically important subjects, there should be a national strategy to ensure provision of well educated graduates. Employers should have a role in defining what the strategically important subjects are.

The RSC welcomes the suggestion that the Higher Education Funding Council for England, as well as other funding councils, should consider if the UK university system is producing the right balance of graduates in the disciplines the economy needs.