

# Submission to the Lambert Review

## Introduction

This submission is made by The Generics Group. Our comments concern the part of the Review that concerns the commercialisation of ideas generated within the university system. Generics has been practically involved in the exploitation of intellectual property for over seventeen years and has worked for and with many universities in the UK and abroad.

In respect of the remit of the Lambert Review, we would like to raise three issues:

- the tendency to overestimate the economic importance of university spin-outs;
- the complexity of the technology transfer process;
- the dangers of addressing major global technologies through regional perspectives.

## The Tendency to Overestimate the Economic Importance of University Spin-outs

There has been much emphasis recently on the increasing propensity of universities to spin-out new companies. It is a matter of pride in some quarters that there were 199 spin-off firms in 1999/2000, compared to 338 in the previous five years.

Our own view is that spin-outs do have a role in the commercialisation of certain types of technology. However, spin-outs are just one form of commercialisation. In Generics we use spin-outs, joint ventures, direct investments, licences and services as ways of achieving revenue from our skills base. We would encourage Government to reduce its emphasis on spin-outs in university technology transfer and put equal effort into licensing and consulting services. The more successful university technology transfer offices are doing this but some, we believe, are misplacing their energies in response to the priorities of central government and the devolved administrations.

We also believe that biotechnology accounts for a large proportion of all university spin-outs. We believe that the preponderance of spin-outs in biotech is a consequence of the current structure of the biotech and pharmaceutical industry. We warn against assuming that the commercialisation mechanism in biotech is appropriate in other sectors. We refer the Lambert Review to a paper by Jane Bower of Glasgow Caledonian University (R&D Management **33**(2) pp 97–106) which argues that academic spin-outs are a fashion unsupported by evidence of economic success. We believe that there is a need for further primary research in the area of UK university spin-outs and technology transfer generally.

## **The Complexity of the Technology Transfer Process**

There is a tendency in government pronouncements to assume that technology transfer is a form of brokerage, in which nuggets of knowledge in the form of intellectual property can be taken out of a university and then found a home in the commercial world. The recent White Paper sees a role for RDAs in performing this brokerage function.

Our experience is that technology commercialisation is not like this at all. Firstly, the process is not at all linear and the difference between a science and technology is often confused.

We define a technology as:

- science capable of optimisation (all variables controlled);
- science capable of taking part in a management process;
- a complex combination of several areas of science and technology;
- science capable of commercial exploitation;

and the translation process is complex and interdisciplinary:

- the translation from science to technology to market is not a linear process;
- exploitable technology draws together many streams of knowledge, skill and expertise;
- these streams include other disciplines of science and technology as well as sophisticated investment, market and manufacturing knowledge;
- most university TTO's adopt a linear model!

There is thus a constant interplay between science, technology, markets and business models. We put a great deal of effort into each idea we have, establishing, through a careful process of feasibility and incubation, which ideas are commercially viable. We often find that the commercial potential for an innovation is far different from the original innovators' concept. While it is useful to have a process model for technology transfer, our experience is that a range of expertise needs to be involved, and this expertise is unlikely to be present in many universities and RDAs.

## **The Dangers of Addressing Major Global Technologies Through Regional Perspectives**

Current policy is predicated on the development of regional technology clusters in which RDAs have a central role. Our own experience of technology commercialisation is that most issues need to be considered at a global level. When we look at technologies, we consider the global dynamics and rarely look at commercialisation in

regional terms. Investors in our ideas are drawn from across the world – the USA and Japan in particular.

We have been concerned to see national initiatives in optical electronics and biotechnology get implemented in a fragmentary way through sub-critical mass regional exercises. The recent co-operation of RDAs and devolved administrations in respect of the National Microsystems Centre is a welcome development. We think that it is important to find a way in which national and regional perspectives can co-exist in science and technology exploitation. We would warn against too much regionalisation in the knowledge-intensive industries.

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