

# Submission to the Lambert Review of Business - University Collaboration

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This submission is presented by  
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## 1. Introduction

Oxford Innovation Ltd ([www.oxin.co.uk](http://www.oxin.co.uk)) is a medium-sized company that provides services to innovative start-up companies and undertakes projects and consultancy in the fields of technology transfer and economic development. We are the UK's leading operator of innovation centres and we manage Europe's most successful technology business angel network.

We often act to encourage collaboration between universities and business.

## 2. Examples of best practice and excellence in business-university collaboration

I am pleased to present some examples of our work in Business - University collaboration. We believe that our work is pioneering in many respects. This is partly due to our origins as a spinout from The Oxford Trust, a charitable foundation that set out in 1985 to encourage the application of science and technology

### 2.1 *BioCity Nottingham*

BioCity Nottingham is a major new Bioscience Innovation Centre (business incubator) managed during its crucial start-up phase by Oxford Innovation Ltd.

BioCity Nottingham was made possible by the donation of over 100,000 sq ft of pharmaceutical R&D laboratories by BASF to Nottingham Trent University. The gift is believed to be the largest-ever corporate donation to a new university and is remarkable in its own right as an example of Business - University collaboration.

The Nottingham Trent University wisely decided that it needed to work with partners in order to ensure the success of BioCity Nottingham. The crucial partners in addition to BASF were University of Nottingham with its strong Bioscience and Healthcare research base and East Midlands Development Agency (EMDA), which had already identified Bioscience and Healthcare as a sector of particular importance to the region.

A careful process has been undertaken to ensure that the four organisations involved could all share common goals in the development of BioCity and the way in which it would seek to achieve maximum regional economic development effect in the area of Bioscience and Healthcare.

The result is an initiative that has already attracted 7 Bioscience and Healthcare companies employing about 50 people to establish themselves in BioCity Nottingham (since opening in November 2002), with another 12 companies expressing serious interest in taking space in BioCity over the next few months. Many more Bioscience and Healthcare companies will be assisted by BioCity Nottingham over the next few years.

BioCity provides an ideal environment for the establishment and growth of spinout companies. One of the companies currently located in BioCity is a spinout from Nottingham Trent University, another is a spinout from Imperial College, while two spinouts from University of Nottingham are expected to move into BioCity shortly.

It is vital that location specific initiatives such as BioCity Nottingham should be able to collaborate closely with regional cluster promotion activities such as Medilink East Midlands, backed by EMDA, to ensure that economic benefits can be spread throughout a region. This is an issue of importance in all regions because of the danger that locations without a nearby university may otherwise miss out on the huge economic potential of the knowledge-based economy.

In the future, BioCity intends to provide laboratories and facilities for a wide range of Business-University collaborative projects.

The vital ingredients in the success of BioCity Nottingham are:

- i. Early management by Oxford Innovation, a company experienced in providing business support services to innovative start-ups and in building lasting partnerships to promote Business – University Collaboration.
- ii. A world-class Bioscience and Healthcare research base in Nottingham
- iii. A policy from EMDA that supports the Bioscience and Healthcare cluster
- iv. The donation from BASF, where enlightened private sector decision makers placed the benefits of encouraging Business – University Collaboration above making a quick return from a property disposal

## **2.2 SEEDA Enterprise Hubs**

SEEDA's Enterprise Hub initiative is a particularly good example of a mechanism designed to build on University research and expertise in order to stimulate employment, wealth creation and improved skill levels. It is modelled in part on seventeen years experience of The Oxford Trust in encouraging the process of economic development based on research strengths in Oxfordshire. In some locations (e.g. Portsmouth) it can have a vital regeneration component. While Enterprise Hubs are primarily designed to build on University research and expertise through supporting entrepreneurs and the business incubation process, they also have a potential role to play in developing and strengthening the University research base in the region.

I will give two examples supported by SEEDA under the Enterprise Hub banner.

The first, North Oxfordshire Enterprise Hub, is a well-established Enterprise Hub that, through working in partnership with Oxford Innovation, has been able to build on many years experience of economic development based on exploitation of strengths in Science and Technology.

The second, Solent Enterprise Hub, based at Portsmouth Technopole is a much newer initiative, which is steadily assembling the means necessary to derive maximum economic development advantage from regional strengths in Science and Technology.

North Oxfordshire Enterprise Hub has been able to make extensive use of linkages to the two Universities in Oxford, although some of the activity predates recognition as an Enterprise Hub by SEEDA and is dependent on the personal knowledge and expertise of the Hub Director, Dr Treve Willis. The intention to create a more innovative local economy based on local strengths in Science and Technology has been under development by Oxford Innovation Ltd and Cherwell District Council since 1995.

North Oxfordshire Enterprise Hub now comprises four business incubation (innovation) centres in Cherwell District, North Oxfordshire. These have been established over the last six years through a mixture of public and private investment. SEEDA funding has enabled the network to be further strengthened over the last two years to the point that 70 companies currently occupy the Innovation Centres. The focus of North Oxfordshire Enterprise Hub is at the University of Oxford's Begbroke Science Park.

North Oxfordshire Enterprise Hub supports two cluster groups, one serving the media industry and the other in the area of Advanced Materials and Nanotechnology. The Advanced Materials cluster includes many motor sport industry companies and many companies in the Automotive and Aerospace business. Oxford Innovation has helped to establish the Faraday Advance Project in which Oxford, Oxford Brookes and Cranfield Universities are partners and to support a successful application by the University of Oxford for a Higher Education Innovation Fund Grant aimed at further improving the business incubation and technology transfer facilities at Begbroke Science Park.

Solent Enterprise Hub is a much newer initiative that aims to support innovation and entrepreneurship in Portsmouth, Gosport, Fareham and Havant. The Enterprise Hub is supported by SEEDA, local Government, the University of Portsmouth and private sector business.

The Enterprise Hub Director is based at Portsmouth Technopole, a spectacular new innovation centre at the entrance to the City of Portsmouth that is the result of collaboration between Oxford Innovation, Portsmouth City Council and the University of Portsmouth. Portsmouth Technopole opened in April 2003 and is now home to over 25 innovative start-up companies including University spinouts.

Solent Enterprise Hub serves a further 50 companies in three other Innovation Centres located in Havant, Fareham and Gosport.

In the future, Solent Enterprise Hub intends to develop closer working relationships with both public and privately funded science, engineering and technology-based organisations and facilitate private sector (business angel) funding of innovative science, engineering and technology-based companies.

The opportunity of further collaborative programmes with University of Portsmouth is constantly being explored.

Solent Enterprise Hub is just one year old. It will need long-term sustained support from SEEDA in order to be optimally effective.

### **2.3 London BioScience Innovation Centre**

This superb facility for new Bioscience companies at the Royal Veterinary College in Camden is managed by Oxford Innovation. The Centre has been championed by Professor Colin Howard, Vice-Principal of the Royal Veterinary College and has been strongly supported by the London Development Agency.

The Centre now houses growing companies in fields ranging from diagnostics to biopharmaceuticals. Several companies in the Centre are spinouts from different parts of the University of London.

This is a unique facility for bioscience companies in the heart of London and is vitally important as some 40% of the nation's Bioscience, Medical and Veterinary R&D takes place in London.

### **2.4 DIAGNOX – a Biotechnology Exploitation Platform**

DIAGNOX is a DTI supported Biotechnology Exploitation Platform that aims to link Universities with Business to stimulate commercialisation of diagnostic technologies, primarily *in-vitro* diagnostics for healthcare.

The key features of the Diagnox project are:

- i. The objective is to build a community of different organisations interested in the commercialisation of a particular area of technology.
- ii. The project is not driven simply by a need to exploit potentially valuable technology on behalf of one party, but is prepared to consider exploitation of technologies accumulated from various sources.
- iii. The project has lots of ways of "winning", i.e. lots of different ways in which it can do deals and generate income including: licensing, equity stakes in spinout companies, membership fees, consultancy income, etc. This is

important for long term success as the optimum ways of funding new technology development may vary significantly over just a few years.

## **2.5 Oxfordshire Investment Opportunity Network**

Oxfordshire Investment Opportunity Network (OION, [www.oion.co.uk](http://www.oion.co.uk)) has helped over 40 new science and technology based businesses to raise investment totalling over £12M over the last 3 years. This makes it the leading technology business angel network in Europe.

OION has helped spinouts from many of the universities in London and the South East plus Cambridge, Bristol and Warwick. Many of these spinouts have received University Challenge Seed Funds, but are still far too early stage to attract Venture Capital.

The OION Network encourages many types of Business – University Collaboration. As well as encouraging equity investment crucial to many spinouts, it provides a network of professionals (banks, accountants, solicitors, patent agents, entrepreneurial managers) who can collaborate with University technology transfer offices in many ways.

## **3. Barriers to Strengthening Business - University Collaboration**

One of the barriers to Business - University Collaboration is that there is currently too much emphasis on "technology push" rather than "market pull". This is mainly because universities have new dedicated resources to encourage technology transfer and they quite understandably and properly use these resources to "push" their technology and the wider interests of their university. It is vital that this increased emphasis on technology push is at least matched by mechanisms to encourage market pull.

A very important mechanism for encouraging market pull is a vibrant business cluster, a grouping of companies that has common areas of interest and is amenable to adopting new ideas, new technology and working with universities. We believe that it is vitally important that clusters are supported, managed and facilitated for the benefit of the business members and not simply to allow an individual university to promote its services.

The cluster manager/facilitator must spend far more time listening to the needs of companies within the cluster (and then harnessing resources to meet those needs) rather than trying to push technology and ideas at companies that may or may not be interested. We would advocate that individual universities should not attempt to manage or facilitate clusters unless they can be absolutely sure that such clusters will remain focussed on the needs of business rather than on the needs of their university.

Our view could be described as a concern that “supply side” self-interest is hindering Business - University Collaboration. Oxford Innovation is focussed on the needs of innovative start-up companies and other innovative businesses, i.e. on the “demand-side”.

Biotechnology Exploitation Platforms in general, and the Diagnox Biotechnology Exploitation Platform in particular, are an excellent model for encouraging “market pull”. Similar exploitation platforms could be viable to encourage Business-University Collaboration in many other areas of science and technology.

#### **4. How can business attract the best graduates and postgraduates with the skills they require, especially in technology?**

We are strong advocates of working with business clusters to identify their recruitment needs for graduates and postgraduates and to translate those needs into a demand for new courses that universities can respond to.

The best example of this is the degree course in Automotive Engineering for Motor Sport at Oxford Brookes University, which was developed in direct response to a study we undertook for the Heart of England Training and Enterprise Council of the need to promote the motor sport industry in and around Oxfordshire - a study which also led on to the formation of a highly successful Motor Sport Industry Forum, to a Schools Motor Sport competition and to a Modern Apprenticeship programme for Motor Sport companies. This project was successful because Dr Treve Willis, who undertook the study was prepared to listen and then respond to the needs of the industry. We did not set out with any predetermined view of what the industry might need, nor of which university, if any, might supply the requirements.

Vibrant business clusters can provide attractive career opportunities for science and technology graduates and postgraduates. It is important for vibrant business clusters to be suitably well promoted and to be recognised for the intellectual and commercial challenges that companies within the cluster are addressing as well as for the wider benefits they can bring consumers.

BioCity Nottingham and London BioScience Innovation Centre have the potential to work in this way as a magnet for bioscience graduates and postgraduates.

One of the objectives of Solent Enterprise hub is to increase graduate employment opportunities within the Solent area and hence to encourage retention of University of Portsmouth graduates and post graduates in the local economy.

#### **5. Financial Considerations**

Many of the new streams of funding available to universities (HEROBAC, HEFCE, University Challenge Seed Fund, Science Enterprise Challenge) are important and highly effective. However, as stated earlier, these are largely "supply side"

technology push mechanisms and they are not currently well balanced by "demand side" mechanisms.

On the demand side, SMART Awards are effective mechanisms and R&D Tax Credits certainly provide a useful financial stimulus.

Meanwhile TCS and Link Programmes work to encourage effective collaboration.

However, for the small and medium size companies that wish to work with universities on research and technological development there is currently a very substantial difficulty in raising equity finance. New Government schemes such as Regional Venture Funds are coming on stream, but they are very small scale compared to recent reductions in the level of early stage venture capital investment.

We believe that much more could be done to stimulate business angel investment in new technology-based companies. The Government could encourage this by supporting the expansion of existing business angel networks with proven track records and by improvements to EIS (Enterprise Investment Scheme). Support for business angel networks is a highly leveraged way of getting investment into early stage companies.

## **6. Conclusion**

Business – University collaboration is maturing in the UK and the involvement of the private sector as a matchmaker is increasingly becoming important.

Government needs to consider how to encourage stronger private sector involvement in encouraging Business - University Collaboration.

Business Angel Networks, Exploitation Platforms and Innovation Centres can be highly effective means to encourage strong Business - University Collaboration.

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