

Lambert Review of Business-University Collaboration

Evidence from Pera International

These comments primarily address the needs of companies in terms of support for the innovation of products and services.

The comments build from our experience that most impact comes from stimulating the demand-side, ie assisting companies to articulate confidently what they require from universities. Too many initiatives over recent years have been tinkering with the mechanisms and features of the supply-side.

Our comments are brief but more evidence or a presentation can be provided if any points are of particular interest. The main points are summarised at the end.

Background and Context

1. Pera is a UK-based international group specialising in assisting companies to achieve product, process, and operational innovation. It has a particular, but not exclusive, focus on technological innovation and on companies with manufactured products.

2. Pera has established more cost-sharing consortium projects for product innovation, across Europe, than any other organisation. All these consortia are led by companies but also all have included universities or other similar bodies in the science and technology base, such as the Fraunhofer Institutes or UK research and technology organisations.

3. Pera has additionally been able to create affordable innovation services for SMEs in the UK. These are proving to be of considerable interest to Regional Development Agencies (RDAs), helping them to deliver their agenda for enterprise and innovation. Consequently, we are engaged in innovation programmes for RDAs covering the East Midlands, Yorkshire and the Humber, London, and the West Midlands. Further programmes are currently under discussion.

4. Additionally, Pera provides national services in support of innovation and technology-based global partnering on behalf of the DTI and Invest UK.

Comments to the Lambert Review

5. The UK is able to call on an extensive and complex capability in its science-base institutions, that is, in the universities, independent research and technology organisations, and other commercial providers. Equally, it has an extensive, though usually overly-complex and often confusing, number of organisations engaged in technology transfer, generally associated with the science base and engaged in out-reach to the commercial sectors. Thus we take it as common ground that the UK has a strong **supply side** for science, engineering and technology (SET) but one that is not necessarily geared up effectively to meeting the needs of companies.

6. The missing element is leadership from the **demand side**, both in terms of companies making a policy input but, ultimately more importantly, in terms of companies actively using the capability of the SET base.

7. It is our experience that if companies are better able to state their requirements, many of the supply side institutions will undoubtedly respond positively, re-allocating significant resources and programmes to align with the demand. The large number of government schemes to encourage business-focussed activities act as a lubricant and inducement for this process.

8. Thus a confident and articulate, even more aggressive, demand-side can generate market driven developments in the SET base, which is preferable to expecting companies to respond to top-down planning of technology transfer mechanisms.

9. However a stronger voice from the demand side requires companies to be clear about their requirements and for their analysis to be against a sufficiently long time scale that the SET base can contribute. That is, the companies require an **innovation strategy**. The key to long term and sustainable improvements in business-university collaboration in this area is to help companies establish their innovation strategies.

10. Volumes have been written about the innovation process. However experience and common sense show there are four main points at which innovation fails in a company. If these points are adequately tackled in planning, the company will have a robust innovation and implementation strategy. The points may be illustrated with the following invented, but typical, statements from a company's senior management:

- *We cannot decide what to do.* The markets, trends, technology options, costs etc all need studying properly. We do not have a clear vision and we are very busy firefighting.
- *We cannot do it on our own.* The costs and diverse skills are beyond us. To establish and manage a collaborative programme must be a nightmare.
- *We have a proof of concept but cannot persuade our investors or OEM customers.* At low volumes the cost is too high and there are too many uncertainties about getting to high volume supply.
- *How do we keep this up?* We can progressively move ahead of our competitors if we and our new innovation partners can do it again, and again.

11. Pera has specialised in developing methodologies to deal with these potential failure points, and thus provide companies with a robust and costed innovation strategy. Hence those companies are transformed into enthusiastic and demanding users of the capabilities of the SET base because the solution to each one of the above issues is likely to involve such partners.

12. Judging from the experience we have gained, and observing the successful activities of like-minded organisations across Europe, we believe that the features of best-practice in assisting the development of innovation strategies are:

- interventions are made with individual companies on a one-to-one basis; these are **invasive** in the sense that analysis and support for innovation strategy is carried out with, and in, an individual company. In essence this is about stimulating the company to visualise the possibilities;
- the interventions are carried out by **experts with business experience**, generally not academics;
- each intervention is supported by tailored, up to date, research on markets, competitors, technologies, trends etc. That is, a **facts-not-opinions** approach to remove business uncertainties and generate confidence;
- the analysis is guaranteed to use **global knowledge**. Any organisation purporting to assist a company in today's markets must have demonstrable access to a global knowledge base;
- the assisting organisations have the ability to build **cost-sharing consortia** and partnerships, engaging in **global partnering** where necessary, which enable the company to assemble the critical mass for acquiring new capability;
- the consortia will include the appropriate local capabilities in the SET base but will also have been using the European Commission's Framework Programmes, and currently the plans for the **European Research Area**, to gain major leverage on regional and other domestic budgets.

13. Although many of the examples of carrying out innovation strategy work are commercially sensitive, there are examples of best practice in the public arena for example where an RDA has funded a support scheme for regional SMEs. Examples of which Pera can speak with first-hand experience, are as follows:

- East Midlands - Regional Centre for Business Acceleration which is based on Pera's Innovation Factory methodology. This programme seamlessly joins with the regional delivery of the Manufacturing Advisory Service. It will embed innovation into the business processes of exemplar companies.
- East Midlands - Inter-Regional innovation (Int-Rnet) programme of partnering with Baden-Wurtemberg institutions to allow East Midlands companies to benefit from the European Research Area through Framework Programme 6. (In development).
- East and West - Business partnering between companies in the British

Midlands	Midlands and in Asia-Pacific (specifically in China, Malaysia and Singapore) to generate successful business partnerships, particularly for innovating companies.
Yorkshire and the Humber	- Take4SY programme to stimulate innovative product concepts in SMEs, based on the Innovation Factory methodology.
Yorkshire and the Humber	- Knowledge-rich Portal to deliver business focussed, constantly updated, technological and business information to innovating SMEs in the regional clusters, including university capability.
Yorkshire and the Humber	- Facilitation and in-depth assistance to regional universities to maximise their participation and success, and that of partner companies, in the European Research Area through Framework Programme 6.
London	- Analysis of risk, capability and partnering requirements for new products going into volume production. Based on Pera's Innovation Exponent methodology and a DTI-funded methodology for Into Volume Supply planning. (In development).

Summary of the main points.

14. Business-university collaboration will only be substantially and sustainably improved if companies provide more leadership. Then universities will respond, using the multiplicity of support schemes that are already available.

15. To provide leadership, companies need to be able to articulate a clear set of requirements, on a suitably long time scale. They need an innovation strategy.

16. The strategy must be robust against the real-world problems of business and practical implementation. The capabilities needed to assist development of such a strategy are generally not found in universities.

17. Interventions by specialist and focussed organisations, with those capabilities, can generate huge leverage.

Peter Davies
Chief Executive Pera International
March 2003

Pera Innovation Park
Nottingham Road, Melton Mowbray, Leicestershire, LE13 0PB

Telephone 01664 501514 email peter.davies@pera.com