

*League of European Research Universities*

# **Purpose, structure and functions of a European Institute of Technology**

**Commentary - May 2006**



## Summary

- Societal evolution and the processes of globalisation are placing an increasing premium on widely available, excellent higher education, world-leading research, and innovation processes that efficiently translate new knowledge into application.
- In partial response to these challenges, the European Commission has proposed the creation of a European Institute of Technology (EIT), which may be adopted as a priority by the European Council during 2006.
- Although LERU has opposed early versions of the EIT proposal, and assuming that the project will go ahead in some form, it offers its expertise and advice about the objectives, structure and processes of an EIT that are most likely to deliver utility.
- There are two issues that should form vital context for any EIT proposal:
  - Policies of member states have neither funded universities and research at a high enough levels, nor exerted strong enough selectivity, to produce institutions well enough funded to compete with their US counterparts, and, potentially, with emerging systems in Asia.
  - Innovation systems in Europe are relatively weak, such that industry in general has a low absorptive and exploitative capacity for research and the people who embody it.
- **The purpose** of an EIT therefore should have the twin, but complementary objectives of enhancing world-leading excellence in the best research groups in Europe in specific areas, and stimulating innovation processes in these areas. The EIT is about innovation, not technology.
- **The structure** of an EIT should be of up to 10 areas of research, within each of which is a network of 3-5 of the best groups in Europe in a specified field. There should be a partnership relation with the parent bodies of the groups that are members of the EIT, facilitating interaction in research, postgraduate teaching and innovation between the EIT and parent bodies. Most groups will be in research-intensive universities, but some may be in research institutes where these have leading-edge specialist skills relevant to the network. Industry association is vital, and might best be achieved through "Knowledge Integration Communities". EIT groups should not be legally separated from their parent institutions. Individuals should have joint memberships and not be "seconded" to the EIT.
- **The functions** of an EIT should be to drive fundamental research in each of its chosen areas, to develop postgraduate programmes in association with the host university, to have major commitment to young researchers programmes who will be key agents of interaction between partners and with industry, and to develop market directed innovation processes through Knowledge Integration Communities. As the commercial value of research is often realised nationally or regionally, and as regions increasingly have their own innovation strategies, the EIT components would seek links and financial leverage from their regions.
- If these objectives are to be attained, the funding of an EIT would need to be at least at the level of €1 billion per year, and the networks would need to demonstrate the capacity to win major additional resources competitively from national, EU and industrial sources.
- Mechanisms are suggested whereby the EIT could also help to build capacity in member states where the level of research excellence needs to be enhanced.
- It is important to recognise that the EIT would only be part of an increasingly congested and complex European Research and Higher Education area. The time is now overdue when a fundamental review is needed of both, including the structure, purpose and effectiveness of the Framework Programmes.

## **PURPOSE, STRUCTURE AND FUNCTIONS OF A EUROPEAN INSTITUTE OF TECHNOLOGY: COMMENTARY - MAY 2006**

### **Background – rationale**

1. Realisation of the European Union's aspiration to be "the world's most dynamic and competitive knowledge-based economy"<sup>1</sup> as a basis for its social and cultural cohesion and vitality, will, in part, depend on:

- widespread access to excellent higher education;
- world-leading fundamental research;
- innovation processes that efficiently translate new knowledge into application.

The objectives of these processes, and the ultimate sources of social and economic dynamism, are the nurturing of knowledgeable, creative citizens within an environment of opportunity and responsibility, and where Europe acts as a global attractor for the best talents.

2. Although most of the processes through which these objectives will be achieved lie in the hands of national governments, common aspirations for them are frequently expressed at European level<sup>2</sup>, and European-level action can be appropriate, such as in the creation of the European Research Council (ERC), set up to stimulate a more competitive European environment to offset the perceived deficit in fundamental research.

3. The European Council has recently asked the Commission to submit a proposal to it, by June 2006, to create a European Institute of Technology (EIT)<sup>3</sup>.

The Commission's objectives for the EIT are "to act as a pole of attraction for the very best minds, ideas and companies around the world"<sup>4</sup> by enhancing interaction in what it calls the "knowledge triangle" of education, research and innovation.

4. Globalisation forms the context for these initiatives. It has stimulated the movement of industrial capacity to low-wage economies, and the recognition that continued economic progress in advanced economies depends upon the exploitation of new knowledge in high value products. Major companies have responded, not by enlarging their own research departments, but by outsourcing their research and seeking the best research capabilities no matter where they are to be found. As a consequence, advanced economies increasingly regard an internationally competitive research base as an economic priority. Small and medium enterprises (SMEs), which should be key engines of growth, have a more difficult problem. Their need for research is equally pressing, but most have slight capacity for in-house research and lack the resources to source their research from elsewhere. More effective processes of innovation which draw on and exploit internationally excellent research is crucial in maintaining Europe as a home for major companies and a cradle for fast growing SMEs. In Europe, only 7% of SMEs are involved in innovative cooperation with the research base.

<sup>1</sup> The so-called Lisbon Strategy was set out by the European Council in Lisbon in March 2000.

<sup>2</sup> The EU heads of state and government at their informal meeting in Hampton Court on 27 October 2005 singled out the strengthening of Europe's universities as a key priority. <http://www.pm.gov.uk/output/Page8393.asp>

<sup>3</sup> Conclusions of the European Council of 23-24 March 2006, Brussels. <http://www.consilium.europa.eu/ueDocs/newsWord/en/ec/89013.doc>

<sup>4</sup> *Working together for growth and jobs: a new start for the Lisbon Strategy*. European Commission. COM(2005) 24 of 02.02.2005.

## The Commission's concept

5. The initial concept for an EIT was inspired by the example of the Massachusetts Institute of Technology (MIT)<sup>5</sup> and its combination of world class research and deep engagement in effective innovation processes. The Commission suggested<sup>6</sup> that in Europe, low R&D spending coupled with the large number of universities bidding for limited research funds has failed to create adequate "critical mass" of well-funded activity, such that our international standing has diminished and "EU talents are drained by US or other international competitors"<sup>7</sup>.

6. After public consultation during late 2005, the Commission proposed a model of a "networked knowledge community". This would consist of teams or whole departments from universities, research institutes or industry to be seconded to the EIT for 10-15 years, becoming legally but not physically separate from their parent organisations. They would be selected on a competitive basis, in up to ten areas of "transdisciplinary research" such as "biotechnology, nanotechnology and green energy". The EIT would also offer its own degrees. A governing body would be the core of the EIT, defining strategy, selecting, monitoring and evaluating the knowledge communities and managing the budget. Substantial funding would be required from the EU and member states, with an increasing input from other member state public funding sources and industry.

7. The League of European Research Universities (LERU) opposed the EIT concept<sup>8</sup> as a diversion that would not deliver significant benefit across Europe and that a networked EIT would lack the attribute that makes a university such as

MIT so powerful, the capacity to reconfigure to respond to the changing research agenda. We argued that the proposals militated against competition, would be unable to deliver the short and medium term benefits sought, were narrow in scope and of doubtful sustainability. We further argued it is perverse to contemplate a new institution of doubtful utility when Europe already has a spectrum of powerful research-intensive institutions, from which, with appropriate competitive funding, there is the potential to create the cohort of internationally leading research-intensive universities that Europe needs.

8. At a stakeholder meeting in late April 2006, the Commission asserted its determination to proceed with the EIT notwithstanding widespread criticism. It appeared however to relax its desire for a legally separate EIT, and to compromise with a "win-win" model of partnership with host institutions. Subsequent discussions with the Director General of Education and Culture suggest that the Commission has retreated from this position, re-asserting its intention to create a legally separate entity that would in effect be the Commission's own University, though directed through a proxy Board.

<sup>5</sup> www.mit.edu

<sup>6</sup> *Implementing the renewed partnership for growth and jobs – Developing a knowledge flagship: the European Institute of Technology*. European Commission. COM(2006) 77 of 22.02.2006.

<sup>7</sup> *Key Figures 2005 - Towards a European Research Area - Science, technology and innovation*. European Commission. 2005.

<sup>8</sup> *Competitiveness, Research and the Concept of a European Institute of Technology*. League of European Research Universities. November 2005.

## Critique of the Commission's current proposals

9. We are sceptical that the Commission understands either the operation or the achievements of Europe's universities<sup>9</sup>, and believe that its desire to create its own "flagship" university in the terms currently proposed is both misconceived and doomed to failure.

10. The Commission must face reality. Europe has world-class research-intensive universities, and within them, outstanding areas of scientific and technological expertise. They have undergone a transdisciplinary revolution, are committed to innovation processes, have strong industry links, entrepreneurship is increasingly embedded in their programmes and they are a magnet for talented students and researchers. The **only** way to create a successful EIT is not to ignore these strengths, but to understand how to make use of them, seek synergy through partnership, and support world-class groups in pursuit of the innovation agenda<sup>10</sup>.

11. World-class scientists and engineers are driven by curiosity, competition, reputation and financial incentive. They are attracted to work in European institutions where there are clusters of scholarly achievement and people whose work they respect. The only rational approach to the creation of an EIT is to add value to existing world-class groups, not by poaching them from their universities which provides part of the intellectual hinterland that strengthens and inspires their efforts.

12. It is the diverse intellectual hinterland of a powerful research-intensive university that permits excellent groups to exploit unexpected transdisciplinary opportunities. It provides a broad and flexible educational resource. And it permits the university to reconfigure its efforts so that it is able rapidly to adapt to the changing research agenda. In the fast moving world of modern research, this "critical diversity" is as important as "critical mass".

13. A ring-fenced EIT would have great disadvantages that would undermine its potential:

- It would be cut-off from the university's capacity to evolve as the research agenda changes and from the intellectual "gene flow" across the university/EIT interface and inhibit the latter's evolutionary potential.
- There would be very strong resistance from parent institutions to EIT attempts to poach their best groups to become components of an EIT.
- The limited intellectual space occupied by any one of the areas of the EIT, and the conceptual and spatial distances between them would make satisfactory undergraduate programmes difficult to develop, limit the flexibility and adaptability to the market of masters programmes and subject the programmes to strong criticism from national quality assurance bodies.
- It is highly unlikely that EIT degrees would be attractive to students.<sup>11</sup>

<sup>9</sup> As an example of the impact of universities, it is estimated that they contributed about £45 billion to the UK economy in 2003/04; larger than the contribution from the pharmaceuticals or aerospace industries. *The economic impact of higher education institutions*. University of Strathclyde, 2006.

<sup>10</sup> The key issue innovation that creates new products or services that are delivered into use, not specifically the development of technology. It must be noted that European economies are now predominantly service and not manufacturing economies.

<sup>11</sup> The European Molecular Biology Laboratory (EMBL), a world renowned institution, has the power to award its own degrees. However, of the many hundreds of students that have studied there, all have chosen to receive their degrees from the associated universities and not from EMBL.

14. These lethal drawbacks could be avoided, and an EIT's potential maximised, if the following conditions were observed:

- The EIT should be based on partnerships with powerful research-intensive universities and involve only their very best groups. Legal arrangements which permit such relationships are commonly used between universities and external partners, and there should be no problems of principle in creating them. It should not be legally separated from the university.
- It should not involve staff secondments.
- The EIT should be a strategic funding body not an operational management body.
- It should stimulate post-graduate, but not undergraduate education, leading to degrees from the parent universities, not from the EIT.

15. Such arrangements would maximise the benefits from an EIT by:

- permitting the parent institution to benefit through the added research capacity arising from one of its group's membership of an EIT and the research funding associated with it;
- permitting the EIT to benefit from "genetic interchange" with the parent institution, thereby enhancing its adaptability, flexibility and potential for the development of novelty in research;
- permitting both to benefit through collaborative educational programmes that exploit the depth of the local EIT focus, and the breadth and more secure framework of the university.

16. A further stakeholder meeting is to be held on 18<sup>th</sup> May, after which, the Commission hopes to make specific proposals to the European Council in June 2006. Given that the decision has now been made to create an EIT, LERU is contributing strongly to the stakeholder debate, in the hope that the experience of its membership in internationally competitive research, education and innovation can contribute to an optimal outcome. We therefore make proposals below about the objectives, structure and functioning of an EIT.

## LERU proposals for an EIT

### ***Objectives – Excellence and Innovation***

17. The Commission proposes an essentially supply-side mechanism to deliver both the highest levels of international excellence in research and the exploitation of that excellence in innovation processes. Supply and demand however require different mechanisms to stimulate them. Although an excellent supply side will help to stimulate demand, particularly from major research-intensive firms, the creation of new, high growth rate companies on which the success of the European economy will be based, depends much more on demand side processes that will increase the absorptive capacity for research of European industry and enhance interaction between industry and the research base.

18. On the demand side, we have suggested<sup>8</sup> that Europe should harness the power of public procurement to stimulate the development and growth in research-intensive sectors<sup>12</sup>. Such processes have been highly successful in the USA, for example through investment by the US Department of Defence in new technologies, stimulated by the Defence Advanced Research Projects Agency (DARPA), and through the Small Business Innovation Development Act. These offer incentive for SMEs to develop new technological solutions rather than offer last year's technologies, and have proved to be great drivers of innovation and the development of fast growing companies such as are relatively rare in Europe.

We recognize that such developments, to be effective, may require changes in European procurement regulations, but such is the importance of stimulating the demand side, that change must be explored.

19. Notwithstanding the demand for research, we believe that a supply side initiative such as that of the EIT should have a dual purpose of:

- enhancing excellence in key areas of research;
- developing mechanisms that will link the research base more effectively to the innovation process.

### ***Funding excellence***

20. Many international indices of research excellence demonstrate the dominance of US universities<sup>13</sup>. There are few European universities in the top 50 places of the international league tables published in recent years, and many national governments (e.g. China, Taiwan, Singapore) are investing strongly to enhance the competitiveness of their institutions as attractors for inward investment. The additional general investment required to give European universities similar levels of recurrent funding is currently not conceivable (for example, the funding gap between the top 50 Universities in Europe and the USA is about €20-40 billion *per annum*), and member states have been reluctant to impose the extreme selectivity required to match these levels for a small number of institutions by reducing funding to others. There is however a model that would deliver such levels of funding in specific research areas provided that the levels of funding being suggested by the Commission for the EIT were available (order €1 billion).

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<sup>12</sup> For an example of the powerful impact of high technology procurement by the CERN laboratory at Geneva, see: Autio, Bianchi-Streit & Hameri. *Technology transfer and technological learning through CERN's procurement activity*. CERN-2003-005.

<sup>13</sup> For example, *the Academic Ranking of World Universities* by Jiao Tong University (<http://ed.sjtu.edu.cn/ranking.htm>) and *the World University Rankings* by the Times Higher Education Supplement (<http://www.thes.co.uk/worldrankings/>).

If this were sustained for the *circa* 15 years envisaged by the Commission, it could create major attractors for the best international talents. We suggest the following:

- a. The EIT should consist of a series of networked research areas (the Commission has suggested up to 10).
- b. To establish an individual network, bids should be sought from consortia of 3-5 of the very best groups for a specific area of research.
- c. These should mostly be from research intensive universities because of the associated power and breadth of cognate research, see 11-12, the intimate interaction between research and education and their support mechanisms for degree programmes and degree awarding powers, but could include research institute groups where these have special capabilities (see 27) and industry associates (see 28).
- d. It is vital that these groups should be of the very highest standards of international excellence. The standards that have often characterised the 6<sup>th</sup> Framework's "Networks of Excellence" would in general not be high enough.
- e. The level of funding required for an EIT with the purpose, structure and functions that we suggest should be of the order of €1 billion, similar the funding level we understand being considered by the Commission. Such funding would deliver about €20 million *per annum* to individual groups in an EIT with 8-10 research areas and 3-5 groups per area. This is the magnitude of funding realistically required if the necessary impact is to be achieved.
- f. The Board of the EIT should not specify the research areas. This should depend upon the creativity of the bidders. The Board would however choose the winners.
- g. The choice of consortia should be based on the track record for excellence of the members, the scientific and innovative potential of the proposed area, the long-term durability of the research area, and an acceptable management structure.
- h. A detailed plan of deliverables should not be a criterion. An obsession with deliverables, an excessively bureaucratic contracting system and institutionally disadvantageous costing has deterred many of the best groups in Europe from engaging with the Framework Programmes. That must be avoided.
- i. Each networked area should have a coordination committee responsible for planning within the network, reporting to the EIT Board and negotiating its budget.

### ***Role of the EIT Board***

21. The Board should be, as suggested by the Commission, independent of the Commission and composed of researchers, industrialists and academics. Its responsibilities should be: to agree the basis of a bidding process and to select networks, to determine the minimum ground-rules required for the effective operation of the EIT and its network, to receive and give feedbacks on reports from its networks, to evaluate the progress of networks, to negotiate network budgets and to bid for funding in consultation with the Commission.

### ***Evaluation process***

22. The progress of individual networks should be reviewed at 4-5 year intervals. Review criteria should be the excellence of the research, the capacity to win further funding, the capacity to attract excellent researchers, the development of young researchers programmes, and the effectiveness of innovation mechanisms in the particular regional economic setting of the network components.



A medium term process whereby unsuccessful networks or components can either be helped to improve or foreclosed will need to be established

23. It will be important to compare processes between networks and learn from good practice. It is for this reason that the Board should not be prescriptive about processes. There is much to learn about effective innovation practices in Europe and between the different economies and regions of the Union. Diversity of creative effort is more likely to reveal effective processes than prescribed uniformity.

### ***Relations to partners***

24. Maximum value will be gained from the EIT through a legal relationship that permits members of an EIT to retain membership of their home institution. Intellectual property rights (IPR) should be vested in the home institution or the consortium if the maximum economic value is to be realised from them and if major legal impediments are to be avoided. Much of the work of the EIT will be funded externally, by research councils and others, and some of this funding will carry specific existing processes for IPR.

### ***Universities***

25. The key relationships with universities are:

- those which facilitate research interactions between university departments and the EIT component;
- those which facilitate researcher movement between the EIT and the University;
- those which facilitate collaboration in the development and delivery of new Masters programmes and joint supervision of research degrees.

Agreements between the EIT and University should be designed to support these processes.

26. The educational role of the EIT will primarily be at postgraduate level. It will have a significant role in developing new masters programmes and supervising PhDs. Although it may contribute to undergraduate degrees, these will be largely the responsibility of the parent university, for the reasons given in sections 13-14. Degrees will be awarded and quality assurance processes managed by the partner university, or partner universities if they offer joint degrees or jointly supervised programmes.

### ***Research institutes***

27. Research institutes cannot be primary nodes of an EIT network, but can complement it and provide highly focussed research or technology capacity in specialised areas.

### ***Industry***

28. The role of industry partners will be to provide market awareness and “market pull” on the operations of a network, assisting in transition to practical application, supporting and advising on industry interaction with young researchers and providing practical experience, placements and projects for Masters and PhD students. Any one network could have relatively large numbers of industry associates, possibly working through “Knowledge Integration Communities”.

### ***The role of young researchers in interaction and innovation***

29. Mobility of members between the components of a network, including industry associates, will be crucial in ensuring that the impact of the network is greater than the sum of its parts. The most effective links are generally those generated and maintained through the mobility of young researchers. They are also the most important route by which knowledge is exchanged between universities and the world beyond, rather than through publication, licensing, new company formation, or even industrially sponsored research.

It is the production of qualified researchers who have been exposed both to specific research ideas and research methods that is the universities' greatest potential contribution to innovation. This movement of young people should be the principle means whereby interaction between the nodes of an EIT network is maintained. Each network should have a mobility programme which provides opportunities for young researchers to innovate by interacting across traditional academic boundaries.

30. Postgraduate programmes should include opportunities such as:

- Jointly supervised PhD studies, either between different academic institutions, or between a university and non-university institution. There would be no requirement to have jointly awarded degrees; this would be a matter between the two institutions.
- Funding to allow post-doctoral workers to work at the different collaborating organisations; particular attention should be given to cases where the researcher is exposed to the innovation process by acting on different sides of a knowledge transaction.
- Masters programmes in which application of knowledge is a key component of the course, including a problem-oriented placement in industry. (The Cambridge MIT Institute created a number of such Masters programmes, including Bioscience Enterprise. Some companies have been created and students have joined new businesses created by others).

- Internships for PhD students, e.g. for three to four months, in industry. This would not be part of the PhD programme, rather an intermission. The internship need not be restricted to Europe.

31. Although interaction between different nodes of a network is important, and will be enhanced by postgraduate mobility, the emphasis should not be on geographic mobility, but rather mobility between different spheres of activity, most significantly academia and industry. Indeed innovation more often results from local rather than global interactions.

32. Within the universities, young academic staff can be under intense pressure to produce research results. These are the very people who are best placed to change the culture of universities to be more open to innovation through interaction outside academia, yet they are the least incentivised to do so. The EIT might fund medium timescale posts, for example 10 years rather than 3-5, with a requirement that a significant part of the post holder's responsibilities would be to participate in knowledge exchange with industry. This would counteract early career pressures, and would provide the host institution with a significant incremental resource. The national contexts for such placements should determine the way in which posts are set up. For example, in the UK, it would be necessary to ensure that posts were adapted to the rules of the four-yearly Research Assessment Exercise to avoid conflicts of incentive. Criteria for the EIT should be whether a post enhanced the environment for innovation in and around the host institution.

33. We are particularly concerned to enhance relationships between PhD students and industry. One of the most telling US/Europe contrasts<sup>14</sup> is that of the much larger proportion of PhD graduates per head of population in the USA that find employment in industry. Such graduates are more aware of the current research activities likely to be relevant to their company, have good contacts in academic laboratories and are often sensitive intermediaries for the stimulation of mutually beneficial interactions.

### ***Stimulating Innovation***

34. Ideally an innovation concept should be associated with proposals for network consortia. A concept that might be of broad utility is that of the Knowledge Integration Community (KIC), developed by the Cambridge-MIT Institute (CMI). A KIC combines *education, research and knowledge exchange* through the formation of a collection of participants including academics, industry, government and not for profit organisations. The two fundamental premises are that these three activities are synergistic and second that sector or problem-based communities challenge universities to deploy their intellectual resources in new ways. The latter can be characterised as “industry has problems, universities have departments”. A KIC can provide an incentive, often via funding, for academics to cross traditional discipline boundaries. This in itself can give rise to innovation, with seemingly disparate ideas combining to provide solutions, and makes the institution better able to interact externally.

35. In education, a KIC might be the source of a Masters programme with direct industrial relevance and direct industrial participation. This is not conceived as training for an established career path.

Because the KIC is created around emerging knowledge linked to a perceived sector problem, the Masters programme is highly likely to produce students who are innovation aware, entrepreneurial in outlook and with skills that are highly relevant to an emerging commercial activity.

36 KICs also exploit universities as conveners. Industrial competitors are more likely to meet on the neutral territory of a university, a common process in US universities such as MIT. This creates fertile ground for new consensus, new agreements to tackle shared problems collaboratively, and risk sharing. It provides a precursor to innovation interaction.

37. KICs, by combining education, problem oriented research and knowledge exchange provide exactly the integument required to connect academia and industry. This is a vital process to improve the innovation environment in Europe, with the potential to reform the way in which both universities and companies relate to innovation processes.

### ***Links to Regional Innovation Systems***

38. Although the research base in an EIT must be globally competitive, effective processes to promote innovation will, in most cases, need to be well-adapted to the character of the regional or national economy. Increasing regionalisation in Europe has led to the creation of regional economic development bodies that are concerned both to maximise excellence in the regional research base as an attractor for multinational research-based companies, and to exploit it to the benefit of regional SMEs. This creates the potential for strong collaboration between the EIT and regional bodies, which may be in the form of leveraged funding or local funding for innovation processes.

<sup>14</sup> *Basic science and technology statistics*. Organisation for Economic Co-operation and Development. 2001.

### ***Stimulating capability in some member states***

39. It is vital that EITs are built on pre-existing groups that are excellent by the highest international standards. This criterion may entirely exclude some states, and possibly most new acquisition states, from participation. The possibility should be considered however of including no more than one “associate” partner institution from a new member state in each network, with the responsibility on the network to create a programme to help build capability through the associate, possibly together with a contribution from EU structural funds.

### **Broader evolution of European universities and research**

40. The EIT as conceived in this paper is both a capacity-building mechanism for world-leading research and a means of exploiting its innovative potential. The European Research Council is a means of stimulating basic research. The latter, and possibly the former, have the potential to have a major influence on European research within the coming decade. However, both are only part of the spectrum of higher education and research in Europe, and it is important that their role is seen as part of that spectrum and not as separate from it. If the European Higher Education and Research Areas are to develop in a rational fashion, the broader context for these two initiatives must be considered, and the way in which the diversity of relevant functions are supported.

41. Not only will it be important to review the development of an EIT, but also to review its progress in relation to processes in the existing Framework Programme. Indeed, if some of the processes suggested in this document were to prove successful and worthy of wider application, the very rationale for the Framework programmes as currently deployed would come into question. To commence this process of review, we advocate that a study such as that carried out recently in the UK (the “Lambert Review”)<sup>15</sup>, relating the activities of universities to the needs of industry and innovation, should be carried out, as a benchmark against which the future evolution of an EIT, the European Technology Platforms and the Framework Programmes in general can be evaluated.

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<sup>15</sup> *Lambert review of business-university collaboration*. [www.lambertreview.org.uk](http://www.lambertreview.org.uk). December 2003.

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The **League of European Research Universities (LERU)** was founded in 2002 as an association of research-intensive universities sharing the values of high-quality teaching within an environment of internationally competitive research.

It is committed to:

- education through an awareness of the frontiers of human understanding;
- the creation of new knowledge through basic research, which is the ultimate source of innovation in society;
- the promotion of research across a broad front, which creates a unique capacity to reconfigure activities in response to new opportunities and problems.

The purpose of the League is to advocate these values, to influence policy in Europe and to develop best practice through mutual exchange of experience.

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