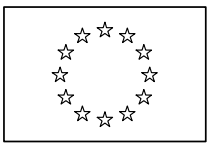

COMMISSION OF THE EUROPEAN COMMUNITIES

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COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN COUNCIL

The European Institute of Technology: further steps towards its creation

Executive Summary

Further to a first Communication on the European Institute of Technology (EIT) adopted on February 22, 2006, the March 2006 European Council recognised that the European Institute of Technology will be an important step to fill the existing gap between higher education, research and innovation, and invited the Commission to submit by mid June 2006 a proposal on further steps to undertake.

Following the European Council, the Commission has reflected further on the concept launching an extensive consultation with member states and European stake holders. During this consultation process, various stakeholders highlighted the possible confusion of the name of the future institute with current organisations and the need to definitively emphasize its innovative character. The Commission has retained EIT as the name for the moment but will return to this issue in its final proposal. Further, general agreement has emerged on the Commission's background analysis of gaps and needs as well as the need for a concerted effort to harness Europe's capacity in the knowledge triangle of education, research and innovation to improve its competitiveness. The EIT should be seen as one part of an integrated strategy to mobilise education, research and innovation towards the Lisbon goals. In this context the EIT should not be merely a new operator in education, research and innovation, but a reference model, embodying the knowledge triangle at the European level.

The consultation brought into focus a number of specific issues that are addressed in this Communication. These relate to the proposed structure and functioning of the EIT; the nature and the role of the Governing Board; the functioning of the Knowledge Communities; the status of EIT staff and their relationship to home institutions; the incentives for partners to participate in the EIT; the role of the business world; the degrees it might issue; its relation to current and future EU initiatives.

This Communication does not provide final solutions. It provides further information about aspects of the proposal and sets out, where appropriate, suggestions for addressing them. By clarifying in this way what can be made clear now while at the same time indicating where the approach must remain open, the Communication aims to support a more focused consultation with Member States and stakeholders in the months ahead. The Commission has begun a full Impact Assessment which will be completed in the autumn.

As a European organization able to promote excellence, to attract talent globally, and to provide a European working environment to students, researchers and innovation managers, the EIT will constitute a European symbol of a renewed effort towards the creation of a competitive, knowledge based society.

1. Introduction

The Commission first drew attention to the need for a European Institute of Technology in its Spring Report 2005[1]. The European Council took note, and the Commission launched a process of reflection and consultation, which resulted in its presenting on 22 February 2006 a first Communication on the European Institute of Technology (EIT)[2].

The conclusions of the March 2006 European Council state that:

"The European Council notes the significance of the Commission's communication on the **European Institute for Technology** and will further examine the ideas in order to enhance together with other actions networking and synergies between excellent research and innovation communities in Europe. The European Council recognises that a European Institute for Technology – based on top-class networks open to all Member States – will be an important step to fill the existing gap between higher education, research and innovation, together with other actions that enhance networking and synergies between excellent research and innovation communities in Europe. The European Research Council should have a guiding role in this context. The European Council invites the Commission to submit a proposal on further steps by mid June 2006."[3]

Following the European Council, the Commission has reflected further on the concept, and in particular on the issues raised by Member States and stakeholders. It has organised a series of consultation meetings[4] to give all parties a chance to discuss the proposal and its rationale, and to hear their feedback. President Barroso met a delegation[5] from the Scientific Council of the ERC which also submitted a position paper.

During this consultation process, general agreement has emerged on the Commission's background analysis of gaps and needs as well as the need for a concerted effort to harness Europe's capacity in the knowledge triangle of education, research and innovation to improve its competitiveness. Various stakeholders raised the question of the name of the future institute, referring to possible confusion with current organisations and the need to definitively emphasise its innovative character. The Commission will reflect upon this and address the issue in its final proposal.

The EIT should be seen as one part of an integrated strategy to mobilise education, research and innovation towards the Lisbon goals. Funding mechanisms such as the 7th Framework Research Programme and the Competitiveness and Innovation Framework Programme will provide **support for research and innovation at the highest levels of excellence**. EU regional policy provides substantial support for expanding research, innovation and education capacities throughout the Union, and will focus even more on this area in the next

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1 COM(2005) 24, "Working Together for Growth and Jobs: a New Start for the Lisbon Strategy", par. 3.3.2.

2 COM(2006) 77, "Implementing the renewed partnership for growth and jobs: Developing a knowledge flagship: the European Institute of Technology".

3 Presidency conclusions, par. 25.

4 Two consultation meetings with representatives of the Member States on 24 April and 17 May 2006; Two consultation meetings with approx. 40 European associations and organisations representing various stakeholders (universities, students, research, business, regions) on 25 April and 18 May.

5 On 3 May 2006.

programming period (2007-2013). The Commission has adopted a Communication calling for the modernisation of universities and university-based research[6], outlining ideas to **address deficits in governance and funding as well as fragmentation of higher education**. Furthermore, the Communication on "Fostering entrepreneurial mindsets through education and learning"[7] stresses that **combining entrepreneurial mindsets and competence with excellence in technological studies** is crucial if students and researchers are to better commercialise their new discoveries. These initiatives help to put the proposal for the EIT into context. The EIT should not be merely a new operator in education, research and innovation, but a reference model, embodying the knowledge triangle at the European level.

The consultation brought into focus a number of specific issues. A first group of issues relates to the proposed structure of the EIT: the nature and the role of the Governing Board; the functioning of the Knowledge Communities; the status of EIT staff and their relationship to home institutions; the incentives for partners to participate in the EIT; the role of the business world, etc. A second group of issues is more related to the establishment of the EIT in the current EU context, its legal base and status, the degrees it might issue, its funding sources and its relation to current and future EU initiatives.

It is vital to address these important issues now in order to pave the way for the further work on the definition and establishment of the EIT which should take place on the basis of a legislative proposal from the Commission before the end of 2006. The Commission will thus continue the consultation process during this period.

The present communication responds to the issues raised during the consultation process. It provides further information about aspects of the proposal and sets out, where appropriate, suggestions for addressing them. By clarifying what can be made clear now while at the same time indicating where the approach must remain open, the Communication aims to support **a more focused consultation with Member States and stakeholders in the months ahead** in order to firmly anchor the vision and rationale for the EIT. This Communication does not provide final solutions. One of the key elements of the proposal is to ensure that the EIT should be an autonomous institution which will be free to determine, in line with its broad objective to be a force for excellent education, research and innovation, its own way of working. Thus the legal instrument establishing it should provide the broad framework of objectives and operational rules, within which the EIT Governing Board should be free to define the detailed organisation and operation.

2. Structure and Governance

The EIT is an institution which identifies strategic scientific challenges of potential economic interests in interdisciplinary areas and selects and funds Knowledge Communities to address them. Its knowledge Communities are integrated partnerships, consisting of teams put together by universities, research organisations and industry to carry out research, education and innovation in these areas in order to meet the objectives laid down by the EIT.

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6 COM(2006)208, "Delivering on the modernisation agenda for universities: education, research and innovation".

7 COM(2006) 33, "Implementing the Community Lisbon Programme: Fostering entrepreneurial mindsets through education and learning".

Its central core, conceived as a light, effective and operational entity, should be provided with a legal personality. It should have a Governing Board with a limited support staff. The tasks - that is to say the research, the innovation, the teaching of postgraduate students - would be carried out by the Knowledge Communities. A Knowledge Community would therefore be much more than a network: a Knowledge Community would be an integrated partnership which has agreed to achieve strategic goals identified by the Governing Board of the EIT.

The EIT would therefore be an autonomous body with an innovative structural and operational model and a strong European identity. It would be an operator: that is, it would be active in the fields of education, research and innovation on the basis of human and physical resources mainly provided by partner organisations. These should be organised within the framework of Knowledge Communities under the strategic direction of the Governing Board. Possible approaches to the establishment of the knowledge communities and the governing body are set out in the following sections.

2.1. The Knowledge Communities

Knowledge Communities represent the operational heart of the EIT. These are envisaged as partnerships of excellent teams and departments from universities and the business and research sectors which will have a medium/long term (10-15 years) education, research and innovation agenda in a wide strategic interdisciplinary field. They should provide the critical mass necessary to have an impact on the global scale and bring together the dispersed excellence to be found in Europe. As outlined in the Communication of 22 February, the first Knowledge Communities should be identified by 2009.

Knowledge Communities should be selected through a process that is both top-down and bottom-up. It should be bottom-up in the sense that teams and departments from the academic, research and business sectors will come together themselves and create potential partnerships in selected fields. The Governing Board would decide the criteria for selection including such elements as an excellent research, education and innovation agenda in the selected field, a combination of first class physical and human resources, mechanisms to ensure the high quality of the education element, as well as effective benefits for the regions and business partners involved (particularly SMEs) including knowledge transfer to the market.

The process should also be top-down, in that the Governing Board would define the strategic interdisciplinary areas of operation in which the Knowledge Communities need to be established. These areas should **represent key technological challenges in a long term perspective**, where there is the potential to generate innovative solutions and commercial advantages with a major impact on Europe's competitiveness. They should be areas with "business relevance" and an agenda between fundamental research and downstream applied research, particularly in new areas of enquiry which require a multi-disciplinary approach[8].

The Governing Board should also set the criteria and procedures for selection, and organise it as a competitive process. Some guidance as to the specific criteria to select the Knowledge

[8] For illustrative purposes, areas such as Nanotechnologies or Green Energy.

Communities may be given in the legal instrument. This could include requirements as to coherence with overall EIT objectives and strategy, and the excellence (or potential for excellence) demonstrated within the proposal, as well as measures of the likely quality and efficiency of the proposal.

After selection each Knowledge Community would establish its own operational structure within an overall framework provided by the Governing Board. The level of autonomy and responsibility of the Knowledge Communities should be defined by the Governing Board, but they should have considerable autonomy and maximum flexibility in their internal organisation and management of their resources (financial, human and physical). Their short and mid-term objectives would be set in a general framework defined by the Governing Board, so that the EIT as a whole retains an appropriate degree of internal consistency.

The intention is to **put innovation at the heart of the knowledge triangle**, rather than the conventional "end of pipe" technology transfer. To achieve this, business expertise should be integrated in all aspects of research and education. Business can directly contribute to research and education with excellent researchers and management methods. Teaching programmes could contain innovation management modules and courses on entrepreneurship. This would help graduates and researchers acquire **an entrepreneurial mindset and the skills necessary for knowledge transfer and start-up activities**, so that they can fully exploit the innovation potential of their research. Furthermore, companies can also contribute to teaching and offer internships.

2.2. The Governing Board

The EIT should be managed by a Governing Board supported by its own administrative services, limited to strictly necessary elements (such as secretariat, legal and financial services, etc.) The Governing Board should define the EIT's overall policy and strategic agenda, identifying the main thematic areas within which it should work, and selecting, establishing, monitoring and evaluating the Knowledge Communities. It should set the EIT's general rules and ensure coordination between the different Knowledge Communities. It should decide upon the overall EIT budget and allocate it to the Knowledge Communities on the basis of the progress demonstrated by monitoring and evaluation.

The composition of the Governing Board must provide:

- excellence and independence for the EIT
- accountability to its funding providers and to Society as a whole
- appropriate scientific and business steering competence
- proper dialogue and feedback mechanisms with the various stakeholders involved

The Governing Board should be limited in number and its members should provide an even balance between scientific and business experience. Members would be nominated *'ad personam'*, with no representative function whatsoever. The Board might be assisted by external advisory committees supporting its decision-making process.

It will also be important that the Governing Board has a structured dialogue with the partner organisations of the Knowledge Communities; these are in one sense "shareholders" in the operation, and will need to be assured that their voices will be heard in major strategic decisions.

The process of selecting the members of the Governing Board should be transparent and based solely on criteria of excellence in science and innovation. The procedure followed in the nomination of the ERC Scientific Council (i.e. an Identification Committee headed by a person of wide acceptability) could provide an appropriate model.

3. Staffing arrangements between the EIT and the Knowledge Communities

Human resources are one of the main challenges for the EIT. It must be able to attract the best people into its Knowledge Communities and be able to draw them into an effective team if it is to fulfil its objectives of excellence.

In the February Communication the Commission suggested that those working within Knowledge Communities – researchers, lecturers, those working on innovation or technology transfer – should be seconded to the EIT and employed by it. This has led to concerns that the EIT would increase the fragmentation of European higher education and even "poach" excellence from where it currently is. This should not be the case and clarification is thus required.

In practice, universities and international scientific organisations (and indeed companies) today use a variety of ways of retaining and rewarding those who work for them. These should be available to the EIT as well, within an appropriate general framework. They range from direct employment, through secondment (a medium term arrangement under which an individual works for a given period at another institution, with a variety of possible employment arrangements and "rights to return"), to loose links such as dual affiliation (where an individual keeps his "home" employment but is technically attached to the affiliating organization as well), or temporary attachments (e.g. sabbaticals). The Commission suggests that **all these options should be open to the EIT and the Knowledge Communities.** However, a sufficient commitment from the staff working within Knowledge Communities to the EIT itself, to its identity and to its ongoing success must be guaranteed at the selection stage, and it will be important to have a common employment framework (covering issues such as remuneration, working conditions, IPR, etc.). Within that framework, Knowledge Communities should have the freedom to organise their human resources as is most appropriate.

4. Degrees

The EIT should be able to award degrees and diplomas. They would constitute a visible manifestation of the EIT brand and an incentive to attract students and researchers to participate in its programmes. The EIT must act as a pole of attraction for the best minds from around the world. Awarding high quality degrees would strengthen its identity and help it to become widely recognized, and thus to act as a model for promoting change across the European Higher Education Area.

The legal instrument should provide for the award of degrees and require the Governing Board to set in place procedures guaranteeing the quality of its degree courses. This could be based on models used within Member States in the context of the Bologna process. Member States should, on this basis, recognize these degrees. Recognition of EIT degrees by Member States will signal that degree barriers, currently still a major obstacle to mobility and the creation of a knowledge Europe, are obsolete. It will also strengthen the status, visibility and attractiveness of the EIT, both inside the EU and outside it, and will facilitate the mobility of students.

5. The benefits of participation

Another major issue within the consultation has been the question of the benefits and advantages of participating in a Knowledge Community – why should a university, research centre or business want to share their intellectual (and indeed human) resources in a Knowledge Community? What would motivate (say) a region to contribute to the work of the EIT, for example by offering campus or research facilities?

Benefits will vary with circumstances. The following examples illustrate the sorts of advantage which might arise:

- for a general, research-intensive university, the chief benefit would be the **additional possibilities to move ahead faster with work which it has already decided is strategically important to it**. The EIT would make financial resources available to Knowledge Communities; participating universities and research centres could thus do more, more rapidly, than would have been possible without these additional resources. Furthermore, the close partnership within a Knowledge Community and the integration of business would enable a **more effective sharing of knowledge and its use through innovation**. The combination of these two elements would give additional scale to the efforts of even the most advanced universities and companies, ensuring that the process provides benefits for all partners.

- for universities whose excellence is more specifically focussed, such as regionally or innovation directed universities, the above benefits would also apply. The EIT might make available complementary financial resources to help build up infrastructural capacity. In addition, the educational activities of the EIT would help increase the attractiveness of the host university.

- for companies and specialised research centres, the attraction might be strongest in **areas of higher risk and uncertainty**. This is where the public interest represented by the EIT and the commercial interest of companies meet. It should encourage companies to invest and be directly involved at an earlier stage of research than they might otherwise do, or to invest in more speculative, long-term fields. At the same time, the education activities of the Knowledge Community would enable companies to **contribute to the education of students and make their knowledge more relevant** for starting their professional career or their own enterprise. The close involvement of business in defining the Knowledge Community agenda would ensure the relevance for them of research outcomes, and support the development of new commercial opportunities.

- Small and medium-sized enterprises in the regions where Knowledge Communities operate will gain from the availability of a **larger human capital pool**, **the ability to use technical services provided by the EIT, start-up and spin-off opportunities, cluster activities and easier access to venture capital**.

- More generally, EIT affiliation and the availability (in due course) of a **critical mass of EIT-managed IPR**, would prove attractive to potential participants in the fields concerned.

6. Other issues

The following issues will be addressed in detail in the coming months during the preparation of the legal proposal.

6.1. Intellectual property rights

A framework of appropriate intellectual property rights arrangements will be necessary if the EIT is to create, over time, a critical mass of EIT-owned and shared knowledge and to promote its exploitation. The Governing Board should define a global framework within which individual Knowledge Communities could address the issue. This framework might include (for example) issues such as a requirement to reserve certain rights to the EIT itself, or to share them between partner organisations and knowledge workers; or it might set out who should negotiate such rights on behalf of the Knowledge Community and the EIT, etc. Appropriate outline provisions will need to be included in the legal instrument.

6.2. Legal basis

The EU Treaty provides a variety of possibilities with regard to the legal basis on which to establish the EIT, through its provisions on education, research and competitiveness. The Commission is currently reflecting on the most appropriate choice of legal basis.

6.3. Finance

An in depth financial analysis will be provided in the framework of the impact assessment next autumn. This analysis will include clarifications on the lines of reporting, financial management and control issues relating to the responsibility of the EIT governing board. Some additional elements should be underlined here:

- An EIT which is to be a flagship for excellent education, research and innovation would need substantial public funding to get it up and running, though as it develops, it should be expected that more private funding will come in. The close long-term relationship with business in all its activities should encourage private sector contributions, but public funding is likely to remain essential to the long-term development of concentrations of intellectual capital.

- The Commission assumes that the EIT would grow progressively. That means that funding requirements would be concentrated at the end of the 2007-2013 period and beyond, and will also grow progressively.

- Private funding is central to the EIT concept. The EIT should therefore be encouraged to set up a channel to attract endowments, such as a Foundation.

- An increasing share of the income of the EIT should come over time from its earnings through contracts for research and education activities.

7. Global Attractiveness

One objective of the EIT is to be attractive to students and researchers worldwide. Only by establishing a global reputation will it attract students and researchers from across Europe and act as a flagship for change. Experience also shows that institutions with a global reputation can attract a significant proportion of students and researchers from outside the EU. This would be both a measure of success and a chance for the EU to benefit from the skills which non-EU citizens bring with them - in much the way that the US has done. However, the EIT should be conscious of the need to avoid triggering a brain drain from less developed countries and aim instead to promote research and innovation in third countries through appropriate links.

Two main issues would drive the global attractiveness of the EIT to non-EU students and researchers at all stages of their careers. The first is the academic credibility of the courses, degrees and research programmes. The way its degrees are recognised internationally, the quality of the research, outcomes and the innovation developed would be major elements to attract students and researchers from abroad. The second is the ease with which it would be possible for foreign Masters or Doctoral candidates and researchers to join the EIT and for the EIT to employ third country citizens in the Knowledge Communities. Accelerated and simplified national admission and visa procedure for non-EU students and researchers have been agreed[9] and should be rapidly transposed. Special visa agreements might also be needed. Providing financial support for non-EU students and researchers would reinforce the global attractiveness of the EIT. The EIT Governing Board should consider the issue of bursaries and research grants to outstanding students and researchers from abroad. The criterion, as always for the EIT, should be the excellence of outcome.

8. An institution to support other institutions and actions: relationship with other EU education, research and innovation activities

As already addressed in the previous communication, the EIT is designed as part of a set of concerted efforts to strengthen the capacities of the research, education and innovation sectors towards the Lisbon goals. It is therefore complementary to other actions aimed at creating a favourable environment for research, education and innovation. The EIT should become a major instrument within this innovation-friendly environment.

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[9] The directive on specific procedures for admitting third country nationals for the purpose of scientific research (Directive 2005/71/CE, 12 October 2005) and the two recommendations on short-stay visas and on admission of researchers from third countries travelling within the community for the purpose of carrying out scientific research (Recommendations 2005/761/CE and 2005/762/CE) were published in OJ L 289 of 3 November 2005.

Unlike other Community initiatives, the EIT is envisaged as **a permanent body, a knowledge operator, not a funding mechanism**. It will integrate the three elements of the knowledge triangle, and will take a hands-on approach, achieving synergies between these elements. In particular, it will support strategic research oriented towards problem-solving, as well as the training of graduates, in areas pertinent to business and industry.

At policy level, the Governing Board should establish a structured dialogue with the European Research Council. The same could be done with other EU initiatives, such as, the European Technology Platforms, the Joint Technology Initiatives or the Networks of Excellence, in order to articulate its own policy and make it compatible and synergetic.

At the operational level, the partnerships should be encouraged at all stages (from the preparation of their application to become a Knowledge Community and the definition of their objectives, to its implementation after being selected) to develop cooperation with existing projects and exploit their outcomes and best practices.

9. Next steps

This paper responds to the request of the Spring European Council. In preparing it, the Commission has taken further advice from stakeholders and Member States.

The next steps involve the completion of an impact assessment, which is under way; and the preparation of a draft legal instrument establishing the EIT, which should be adopted in the autumn of this year. In the meantime, the Commission will seek to clarify the issues which have been discussed here, and the extent to which details should be defined in the legal instrument or left to the future determination of the Governing Board. **The Commission will thus continue to consult widely with Member States and stakeholders over the coming months.**

10. Conclusion

The Commission's background analysis highlights three major gaps. First, the fragmentation of the EU knowledge sectors when compared to the situation in the US and other emerging global competitors; second, the need to provide new reference models based on excellence to inspire and drive long lasting change in existing organizations; and third, the need to integrate the business and innovation dimension into research and education, and to address the innovation gap.

The aim is that the EIT should contribute to addressing these three issues. The EIT joins other EU initiatives which focus on filling the innovation gap, such as: the 7th Framework programme and particularly the ERC, the European Technology Platforms and Joint Technology Initiatives; the Life Long Learning Programme; the Competitiveness and Innovation Programme; the modernization agenda for universities; and the fostering of entrepreneurial mindsets. The EIT will not only be directly active as an excellent operator in education, research and innovation, it will also act as a reference model and a competition-driven organizational form that will stimulate change by showing a living example of a different way of working.

As a European organization able to promote excellence, to attract talent globally, and to provide a European working environment to students, researchers and innovation managers, it will constitute **a European symbol of a renewed effort towards the creation of a competitive, knowledge based society.**