COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 13.3.2006
SEC(2006) 368

**COMMISSION STAFF WORKING DOCUMENT**

***Annex to the***

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN COUNCIL**

**Implementing the renewed partnership for growth and jobs**

**Developing a knowledge flagship: the European Institute of Technology**

**{COM(2006) 77 final}**

# RESULTS OF THE PUBLIC CONSULTATION ON A CONCEPT OF A EUROPEAN INSTITUTE OF TECHNOLOGY

# TABLE OF CONTENTS

**COMMISSION STAFF WORKING DOCUMENT**

**RESULTS OF THE PUBLIC CONSULTATION ON THE CONCEPT OF A EUROPEAN INSTITUTE OF TECHNOLOGY**

## 1. EXECUTIVE SUMMARY

The idea of establishing a European Institute of Technology (EIT) was put forward by the Commission in its Mid-Term Review of the Lisbon Strategy. Subsequently, the March 2005 European Council asked the Commission to explore the idea further. To support this process, a public consultation was held from 15 September to 15 November 2005. The questionnaire, which did not directly address the relevance of an EIT, comprised four questions on what the mission, added value, structure and priorities of the EIT should be.

The goal of this document is to present the outcome of this consultation, highlighting the results that emerged from both a quantitative analysis of the predefined options selected by respondents and a qualitative analysis of the free-text responses.

## Quantitative analysis based on answers to multiple-choice questions

**741 responses** were submitted via a web-based questionnaire designed for the public consultation. The analysis in this section is based on the replies to the multiple-choice questions in the questionnaire.

### Profiles

- Regarding the profile of respondents, individuals are more represented than organisations, even if the latter represent a significant proportion (28%). Southern European countries (in particular France, Spain and Italy) are the most represented (37%), especially where replies from individuals are concerned (with Italian respondents accounting for 17% of total individual replies and 12% of total replies). It is worth noting the **high share of responses from eastern European countries** (26%), in particular Poland (where individuals alone account for 25% total individual replies and 18% of total replies). Central Europe comes after with 17%, followed by Northern Europe (10%, half of which from the UK) — where individual replies were particularly scarce compared to other regions.

- The research and education sector is the most represented (63% of total replies). However, its weight is less important among organisations (51% of organisation replies) than at individual level (68% of individual replies). Both the **business and public sectors** (excluding research and university institutions) **are equally well represented** (on average, 18% and 15% respectively).

- **Within the RE sector**, respondents from public organisations account for the great majority of replies from this sector (80%, 3/4 of which from higher education institutions). Respondents from the private RE sector and students account for 6% and 11% of replies, respectively. The most represented scientific domain is life and natural sciences (30%), followed by engineering and social sciences (20% and 19% respectively).

- **Within the business sector, small businesses are more represented than large ones** (41% compared with 35% of replies), and services are much more represented than manufacturing (52% as against 19%). Management consultancy is more represented among the organisations while computer-related services is the main field among individuals.

- **Within the public sector (**excluding research and university institutions), education and research-related respondents account for 19% and 17%, respectively, of the organisations, while EU cooperation ranks first among individuals, with 16% of responses.

**Mission: what should be the main objective of the EIT?**

*Multiple-choice options: Knowledge triangle, focus on research and research training, focus on education, focus on commercial exploitation of research, other.*

- Regarding the **mission** of the EIT, **the great majority of respondents stress the need for a knowledge triangle** (63%). Research and research training comes second (16%), followed by commercial exploitation of results (12%), while education alone is the last choice (4%).

- While Northern countries also clearly prefer the knowledge triangle for the EIT mission, compared to other regions, they place relatively more emphasis on the commercial exploitation of research results (17%) and relatively less on the knowledge triangle (48%).

- **There are some differences in attitude between the business and RE sectors with respect to the type of mission that the EIT should pursue.** In fact, both sectors agree that the most important mission is the knowledge triangle (56% and 66%, respectively). However, a closer look reveals differences: on the one hand, the RE expects more than the business sector that the EIT should also pursue a research mission (20% and 10%, respectively); on the other hand, the business sector expects much more than the RE sector that the EIT should pursue the commercial exploitation of research (26% and 7%, respectively).

- **As regards the EIT mission, individuals and organisations express different views.** While both clearly prefer the knowledge triangle as the EIT's mission (62% and 67%, respectively), the former place particular emphasis on research (21%), while the latter rank the research mission very low (6%) compared with commercial exploitation (14%).

- This difference cannot be explained only by the fact that respondents from the RE sectors, who may have a preference for research, are more represented among individuals (68%) than among organisations (51%). In fact, organisations from the research sector are considerably less favourable to a research focus than the respondents overall (6% versus 20%) and relatively more to the triangle (75% versus 66%). This signals that **individual respondents in the RE sector favour the research mission more than the organisations that host them.**

- A similar difference between organisations and individual preferences is noticeable, from a regional perspective, in the Eastern countries and, even if less marked, in the business sector as well (particularly in large organisations).

- Finally, it may be noted that **private researchers put much more stress on the importance of research than public research bodies** (44% of private researchers versus 17% of public researchers) and relatively less on the knowledge triangle.

**Added value: How can the EIT contribute above and beyond the current provision in this area?**

*Multiple-choice options: networking higher education institutions, facilitating intra-EU mobility, attracting top talent, creating economies of scale in research, building synergies with the EU Research FP, promoting innovation and knowledge transfer, best-practice dissemination, encouraging collaboration between research and industry, developing commercial opportunities for research products, supporting SMEs and local and regional development, other*

- The **largest** share of respondents expect the EIT to bring **added value** above and beyond the current provision **in terms of industrial impact, more so than in terms of academic (RE) impact** (49% and 36% respectively). Regarding the added value in terms of industrial impact, the options most often chosen were "encouraging collaboration between the academic/research world and large-scale industry and employers", followed by "promoting innovation and knowledge transfer throughout the EU". As for the added value expected from the EIT in terms of academic impact, "attracting top international talent" and "networking between higher education institutions" are the most popular options. "Building synergies with the EU Research FP" and "creating economies of scale in research" are the areas where fewer respondents expect the EIT to bring added value over and above the current provision.

- **There are different expectations in the business and RE sectors regarding the type of added value that the EIT will bring.** Both sectors agree that the major added value expected from the EIT is in terms of industrial impact. However, a closer look reveals differences: on the one hand, the RE sector expects more than the business sector that the EIT will also have an academic impact (39% and 29%, respectively); on the other, the business sector expects much more than the RE sector that the EIT will have an industrial impact (60% and 45%, respectively).

- **Individuals and organisations also have different views on added value.** A larger share of individuals expect the EIT to bring added value in terms of academic impact than do organisations (40% and 27%, respectively — with notable differences regarding the added value expected in terms of attracting talent and in networking between HEIs). This difference between individuals and organisations is most evident in the business sector, followed by the RE sector.

- For the RE sector in particular, the difference between individual and organisational expectations is not just due to the over-representation of researchers at individual level. In fact, **organisations in the research sector expect less added value from the EIT in terms of academic excellence than respondents as a whole in this sector (individuals + organisations score 40% while organisations alone score 32%)**.

- A similar difference between organisational and individual preferences is noticeable as regards Northern countries, where organisations attach less weight to academic impact than respondents overall .

**Structure: Which type of institutional format would best allow the EIT to achieve these goals?**

*Multiple-choice options: single institution, small network (4-6 institutions), large network (15-25 institutions), label (without a formal requirement for networking), other.*

- This question regarding the **structure of the EIT is the one where there seems to be most disagreement**. In fact, no clear preferences are discernible here. The first choice is a small network (29%), the second is a single institution (26%), the third is a large network (24%), and last is just a label (12%). In general, **it seems that integration is the relatively preferred solution** (single + small network scores 55%) compared to the less integrated solution (large network + label, with 36%).

- While **individuals seem to prefer a more integrated structure** (59% opt for a single institution or a small network), **organisations do not have a clear preference** (44% choose one of the more integrated structures, 41% pick one of the less integrated structures, and 14% prefer some other structure). Organisations from the business sector have a greater preference for more integrated structures, followed by the public sector, with the RE sector having a preference for less integrated structures. Similarly, more integration is preferred by private research compared to public research, and by large companies compared to SMEs.

**Identifying priorities: How should the EIT organise its teaching/research/transfer activities?**

*(Multiple-choice options: issue-driven, discipline-oriented, thematically organised, industrial or economic sector-oriented, other)*

- Regarding **priorities, thematic orientation is the option most chosen** (37%), followed by the issue-driven approach (24%). It may be noted that the two approaches focusing on traditional science (disciplinary focus) and on just business issues (industry focus) come last (both at 15%).

- **There are some differences in attitudes between the business and RE sectors with respect to the type of priorities that should drive EIT activities.** Both sectors agree that activities should be organised around interdisciplinary themes (66% and 56%, respectively). However, a closer look reveals differences: on the one hand, the RE sector prefers more than the business sector for the EIT to organise its activities around traditional disciplines (18% and 7%, respectively); on the other, the business sector expects much more than the RE sector that the EIT should organise its activities around industrial issues (29% and 10%, respectively).

- **While those RE respondents active in social sciences attach the highest importance to interdisciplinary themes and less to disciplinary orientation, those from the natural and life sciences** or **engineering** have a less clear-cut preference for any of the particular options offered and express a relative preference for a traditional disciplinary orientation.

## Qualitative analysis based on free-text responses

For each question, following the multiple-choice options, the 741 respondents to the online questionnaire were also invited to write open-ended replies. Furthermore, 22 position papers were submitted outside the online public consultation. The analysis in this section is based on both types of comment.

*EU gaps and needs*

- There is a general agreement that the main gap in the EU's ability to cope with the global challenge is the **weak link between science and society, including the economy**.

- For some respondents, the science-society gap is mainly rooted on the **supply side**, i.e. the EU knowledge production system (in particular RE) is unable to deliver or market the knowledge products needed. For some, **EU science is not excellent enough**: although the average quality and quantity of research products is good, few are able to compete in the highest segment. Others state that **Europe is not failing in doing first-class science but rather in the transfer of knowledge** from academia to society.

- From another perspective, the gap is seen on the **demand side**, i.e. in the capacity of knowledge consumers (e.g. companies, public bodies, workers) to absorb and exploit knowledge in ways that increase productivity and innovativeness. From this perspective, increasing the quantity or quality of knowledge produced would not have any impact as long as EU social and economic actors are unable or unwilling to "buy" and "transform" such products into development assets. These gaps are both **soft** (lack of skills, aptitudes and attitudes), and **hard** (lack of infrastructure, lack of size).

- Others underline that the problem lies at the **boundary between science and society**: science is unable to understand or converse with society, just as the latter is unable to understand or converse with the former. Different reasons for this are put forward, such as linguistic and cognitive barriers that prevent scientists and social actors from crossing the boundary that divide them. As a consequence, **new boundary-spanning skills must be provided** in order to train and support those individuals that could play the role of boundary spanners.

- Related to these structural gaps, but cutting across both demand and supply, is the lack of **critical mass**. The lack of size and concentration of resources is seen as a weak point. From the business perspective, companies (in particular SMEs) do not have the size needed to perform R&D activities properly. In the RE sector, resources are too dispersed across a wide range of small organisations.

*Role and mission of an EIT*

- As shown by the quantitative analysis, the great majority of respondents consider that the mission of the EIT should be the **knowledge triangle**, i.e. the integration of research, education and innovation.

- Within this general standpoint, however, some important distinctions need to be made. In general, it seems that **three major positions** can be identified here:

– For some, in particular for individual researchers, assuming an EU gap in terms of scientific excellence, the EIT should be **the cornerstone of a "science-based knowledge triangle"**. That is to say, the EIT should strengthen EU research and research training capacities in order to have a wider impact on society and the economy.

– From another perspective, assuming that the gap relates to the applicability of research results, the EIT should be **the cornerstone of a "business-based knowledge triangle"**. In other words, the weak corner is the capacity to transform science into commercial results, and the EIT should contribute in this area.

– The last position is a sort of combination of the previous two. Basically, while it assumes that the gap is in the research corner of the EU knowledge triangle (lack of excellence), it does not automatically see the EIT as playing a role in this regard, since there are already other organisations in place for this and they should be supported to fulfil that role. As a consequence, an EIT may not be needed or, if it is to be created, it should **focus on supporting networking capacities or technology transfer between existing institutions**.

- Regarding education**, it is identified as an important mission when connected to other activities.** In fact, education should be considered in conjunction with other goals, ranging from excellence in research (including training of researchers) to innovation, providing, for example, new complementary and boundary-spanning skills (educating researchers to be entrepreneurs or entrepreneurs to understand research). The focus should be more on postgraduate and even post-doctoral training.

- As regards the commercial exploitation of knowledge, special attention is given to the role and importance of **SMEs**.

*The EIT structure*

- This question is one where there seems to be a great **variety of alternatives**. Nonetheless, some guiding principles may be identified.

- As to whether there should be a distributed or centralised structure, there seems to be some **convergence towards the idea of a centred network**: a distributed organisation that has some centre or strong coordinating mechanisms. Such a nucleus should have a certain size and, moreover, perform its own education, research, and innovation activities besides coordination, in order to be recognised as not just an administrative overhead.

- Given the novelty of the structure**, innovative governance models are proposed**. The EIT should be strongly **autonomous**, resisting the temptation to address just the interests of different external stakeholders. Among other things, mechanisms based on competitive excellence for the selection and evaluation of human resources will be an important element in its autonomy.

- On the other hand, such selectivity should not lead to elitism: the EIT should be characterised by an **open structure** able to attract individuals and teams from all over Europe and beyond.

- Among the guiding principles, the majority of respondents highlight the need for a strong **European identity**, where the EIT is recognised as a "single player" rather than a loose association of existing players. The EIT should have a clear and visible European brand and spirit. As a necessary condition to ensure a strong identity, some underline that resources should be seconded or leased to the EIT on a full-time or permanent basis.

- It is commonly argued that the EIT should organise its activities around **interdisciplinary issues,** whatever the criteria for bringing together different disciplines (issues, industry, etc.). In order to manage interdisciplinarity, a new way of working and pooling diverse resources should be identified. This could lead to the creation of knowledge systems in which new issues are approached in a holistic and systemic way. This requires capacities and contexts to be established with the focus more on the borders than on the cores of traditional disciplines.

## 2. CONTEXT OF THE PUBLIC CONSULTATION: AIMS AND TOOLS

The idea of establishing a European Institute of Technology was put forward by the Commission in its Mid-Term Review of the Lisbon Strategy. Subsequently, the March 2005 European Council asked the Commission to explore the idea further. To do so, an inter-service steering committee was established in April 2005 to deepen the analysis, also by consulting European stakeholders. Three meetings with representative stakeholders were organised by the Directorates-General for Education and Culture (EAC), Enterprise (ENTR) and Research (RTD), respectively, in order to obtain relevant knowledge and experience in the fields likely to be touched upon by the EIT and to help the Commission to refine its concept before launching the public consultation.

The consultation document that emerged from these meetings was released to the public on 16 September 2005. It set out the background to the EIT proposal, the objectives that the Commission envisaged and the areas in which further consultation was sought. On the basis of this document, an online questionnaire was prepared and made available to the wider European public on the Europa website. The EIT public consultation concluded on 15 November 2005.

In particular, four questions were posed regarding the mission, added value, structure and priorities of the EIT (for details, see Annex 3 - Questionnaire). For each question, multiple-choice options were provided (including "other") and respondents were also asked to give reasons for and comment on their responses. This latter possibility yielded a wide range of written material providing a rich and heterogeneous source of information.

The goal of this document is to present the outcome of this consultation, highlighting the results emerging from both a quantitative analysis of the predefined options selected by respondents and a qualitative analysis of the free-text responses. Moreover, given the wide and heterogeneous set of ideas and opinions on innovation in Europe provided in particular by the free-text responses, this report can also contribute to other discussions and initiatives.

## 3. DISCLAIMERS

For the following analysis, the correct interpretation of results requires some disclaimers, in particular as regards the representativeness of the respondents and the relevance of the questionnaire.

### 3.1. Representativeness of respondents

The group of respondents is a self-selected sample, which is not intended to be representative of European stakeholders in the field of education, research and innovation. Therefore, no evaluation of the representativeness of the respondents has been carried out. It is difficult to identify what is the appropriate reference population for such an initiative, since the EIT could be considered relevant mainly to those working in the RE sector, or indeed also to those active in the broader innovation sector. To some extent, the identification of a reference population depends on the definition of the EIT, which was one of the goals of this exercise. Further, in order to broaden this self-selected sample, the Commission did make substantial efforts to advertise this open consultation among European stakeholders in education, research and innovation and to invite them to reply. Accordingly, it would be fair to consider that European stakeholders in education, research and innovation were indeed engaged in the exercise and provided highly valuable material.

For the same reason, it has been decided not to assign different weights to different groups of respondents (such as individual versus organisational responses), since the weight of each group cannot be assessed *a priori*. As a consequence, it was decided to weight all answers equally, regardless of whether they came from individuals, local, national or international organisations, or even public administrations. No sensitivity analysis was performed to assess the robustness of the conclusions using different weighting schemes.

Indeed, this exercise was intended as an open public consultation, to gather opinions and ideas from a broader European public, and does not aim to represent EU stakeholders in the field of education, research and innovation in any sense, but rather to collect and present ad hoc opinions, ideas and insights from those who were interested in responding. This consultation is therefore not a substitute for a wider political debate.

### 3.2. Relevance of the questionnaire

Another important point concerns the structure and content of the questionnaire. First of all, one major disclaimer that needs to be made is that no direct question was put as to whether or not an EIT should be set up and whether it is relevant or not. Respondents were asked to respond to questions on the mission, added value, structure and priorities that the EIT should have, assuming that an EIT would be put in place.

Other disclaimers, and related corrective actions taken, are given below:

- The interpretation of the first two questions by respondents (mission and added value) understandably overlapped to some extent. Respondents could have seen the mission of the EIT and its added value as two sides of the same coin (i.e. the mission of the EIT should be to realise the anticipated added value). As a consequence, especially in the qualitative analysis, the responses to these two questions are often considered together.

- The first question (the mission) has an option (the knowledge triangle) that also includes the others (research, education and innovation). This was meant to allow respondents who think the EIT should focus more on the integration of these fields - rather than on just a single field — to register their opinion. However, the concept of a "triangle" encompasses several ideas and may not directly define the missions and activities of the EIT. Further, it is possible that some chose the "triangle" option even if they thought the EIT should be focusing on one particular activity. The qualitative analysis presented below is based on the interpretation of what respondents intended when opting for the triangle.

### 3.3. Homogeneity of profiling categories

The profiling categories are not always homogeneous for both individuals and organisations. In order to have a global view of all responses by profiling category, therefore, some adjustments have been made. The most relevant are listed below.

- Individuals were asked to state whether their main field of activity was research or education, while organisations could only select "RE" as a single option. Accordingly, all the analyses covering both individuals and organisations do not distinguish between the research and the education sectors.

- Another problem concerns the status of respondents from the research sector, both individual researchers and research organisations (i.e. private research, public research, students or student organisations). In particular, individual researchers could say they operated in a private organisation, while organisations could not select both the private sector and a research mission. Consequently, only responses from individuals and not those from organisations are included in the category "private research".

### 3.4. Other disclaimers

The consultation received 22 position papers through channels outside the web questionnaire on the Europa site. Since these contributions were structured in a way different from the one proposed in the questionnaire, they are considered in the free-text qualitative analysis and not in the quantitative analysis. Accordingly, the number of responses considered in the following quantitative analysis (741) is different from the total number of contributions received (763).

For technical reasons, two questionnaires provided incomplete information (not all profiling questions were replied to). In consequence, the total number of respondents may vary by +- 2 in the profiling analysis. It should be noted that this small variation does not affect the results of the analysis.

In some cases, the option "Other" was often chosen (e.g. for the EIT structure). In these cases, respondents could specify in the free-text part of the questionnaire what alternative option they envisioned. These free-text responses are analysed in the qualitative analysis, which takes into account all the free-text contributions.

## 4. PROFILES OF RESPONDENTS TO THE ONLINE QUESTIONNAIRE

In total, the consultation received 741 responses to the online questionnaire, 72% from individuals. The list of organisations that responded is given in Annex 2.

**Table 1 –** Distribution of respondents between individuals and organisations

| **Individuals** | **Organisations** | **Total** |
|---|---|---|
| 532 | 209 | 741 |
| 71.8% | 28.2% | 100.0% |

Data are generally presented in one of the following formats:

- aggregated: the original options in the questionnaire are merged into more general categories (e.g. countries are merged by region);
- disaggregated: data are presented according to the original options in the questionnaire;
- individuals/organisations: data are split in order to highlight the different attitudes of individuals compared to organisations;
- general: responses from individuals and organisations are presented together.

Where not otherwise specified, the data are disaggregated (using the original options available) and general (including both individuals and organisations).

### 4.1. Geographical distribution

Countries are grouped together in the following main regions:

| **Regions** | **Countries** |
|---|---|
| **Southern Europe** | FR – France, ES – Spain, IT – Italy, EL – Greece, PT – Portugal, CY – Cyprus, MT – Malta |
| **Central Europe** | BE – Belgium, DE – Germany, AT – Austria, NL – The Netherlands, LU – Luxembourg |
| **Northern Europe** | SE – Sweden, IE – Ireland, UK - United Kingdom, FI – Finland, DK – Denmark |
| **Eastern Europe** | PL – Poland, HU – Hungary, CZ - Czech Republic, SK - Slovak Republic, LT – Lithuania, LV – Latvia, SI – Slovenia, EE – Estonia |
| **Candidate and other countries** | TR – Turkey, RO – Romania, BG – Bulgaria, NO – Norway, CH – Switzerland, IS – Iceland, LI – Liechtenstein, HZ – Croatia, RU – Russia |

Geographically, most replies came from Southern Europe (especially individual responses, with individuals from the South accounting for 27% of total replies and Italians alone for 12%), while the fewest came from Northern Europe. Worth noting is the second place for Eastern Europe in the number of responses, and also the significant participation of candidate and other countries.

**Table 2 -** Distribution of respondents by geographical region:

| **Southern** | **Central** | **Northern** | **Eastern** | **Candidate and other countries** | **Total** |
|---|---|---|---|---|---|
| 271 | 125 | 71 | 193 | 81 | 741 |
| 396.6% | 16.9% | 9.6% | 26.0% | 10.9% | 100.0% |

A breakdown by country of the organisations and individuals that responded to the public consultation is given below. The high response rate of Poland may be noted.

**Table 3 -** Organisations that responded to the public consultation by country where the organisation is located:

| **Country** | **No of responses** | **% of responses** |
|---|---|---|
| FR - France | 21 | 10.0% |
| ES - Spain | 20 | 9.6% |
| IT - Italy | 20 | 9.6% |
| PL - Poland | 19 | 9.1% |
| BE - Belgium | 17 | 8.1% |
| UK - United Kingdom | 15 | 7.2% |
| DE - Germany | 10 | 4.8% |
| AT - Austria | 9 | 4.3% |
| HU - Hungary | 9 | 4.3% |
| NL - Netherlands | 9 | 4.3% |
| SE - Sweden | 8 | 3.8% |
| FI - Finland | 7 | 3.3% |
| CZ - Czech Republic | 6 | 2.9% |
| TR - Turkey | 5 | 2.4% |
| RO - Romania | 5 | 2.4% |
| EL - Greece | 4 | 1.9% |
| PT - Portugal | 4 | 1.9% |
| SK - Slovak Republic | 4 | 1.9% |
| BG - Bulgaria | 4 | 1.9% |
| CY - Cyprus | 2 | 1.0% |
| DK - Denmark | 2 | 1.0% |
| Other | 2 | 1.0% |
| IE - Ireland | 1 | 0.5% |
| LT - Lithuania | 1 | 0.5% |
| LV - Latvia | 1 | 0.5% |
| MT - Malta | 1 | 0.5% |
| SI - Slovenia | 1 | 0.5% |

| | | |
|---|---|---|
| NO - Norway | 1 | 0.5% |
| CH - Switzerland | 1 | 0.5% |
| EE - Estonia | 0 | 0.0% |
| LU - Luxembourg | 0 | 0.0% |
| IS - Iceland | 0 | 0.0% |
| LI - Liechtenstein | 0 | 0.0% |
| HZ - Croatia | 0 | 0.0% |
| RU - Russia | 0 | 0.0% |
| Total | 209 | 100.0% |

**Table 4 -** Individuals who responded to the public consultation by country of residence:

| **Country** | **No of responses** | **% of responses** |
|---|---|---|
| PL - Poland | 134 | 25.2% |
| IT - Italy | 89 | 16.7% |
| FR - France | 40 | 7.5% |
| DE - Germany | 39 | 7.3% |
| ES - Spain | 37 | 7.0% |
| BE - Belgium | 25 | 4.7% |
| UK - United Kingdom | 20 | 3.8% |
| EL - Greece | 16 | 3.0% |
| HU - Hungary | 16 | 3.0% |
| PT - Portugal | 13 | 2.4% |
| RO - Romania | 13 | 2.4% |
| Other | 12 | 2.3% |
| TR - Turkey | 10 | 1.9% |
| NL - Netherlands | 8 | 1.5% |
| FI - Finland | 7 | 1.3% |
| IE - Ireland | 6 | 1.1% |
| SI - Slovenia | 6 | 1.1% |
| CZ - Czech Republic | 5 | 0.9% |
| AT - Austria | 4 | 0.8% |
| LU - Luxembourg | 4 | 0.8% |
| SE - Sweden | 4 | 0.8% |
| NO - Norway | 4 | 0.8% |
| SK - Slovak Republic | 3 | 0.6% |
| CH - Switzerland | 3 | 0.6% |
| BG - Bulgaria | 3 | 0.6% |
| CY - Cyprus | 2 | 0.4% |
| LT - Lithuania | 2 | 0.4% |

| | | |
|---|---|---|
| MT - Malta | 2 | 0.4% |
| IS - Iceland | 2 | 0.4% |
| DK - Denmark | 1 | 0.2% |
| EE - Estonia | 1 | 0.2% |
| HR - Croatia | 1 | 0.2% |
| LV - Latvia | 0 | 0.0% |
| LI - Liechtenstein | 0 | 0.0% |
| RU - Russia | 0 | 0.0% |
| Total | 532 | 100.0% |

## 4.2. Main sectors of activity

The research and higher education sector is the most represented. Nonetheless, participation levels among the public and business sectors are good.

**Table 5 -** Distribution of respondents by main sector of activity:

| **Research and higher education** | **Public*** | **Business** | **Other** | **Total** |
|---|---|---|---|---|
| 470 | 110 | 133 | 28 | 741 |
| 63.4% | 14.8% | 18.0% | 3.8% | 100.0% |

* For a definition, see footnote 3.

The distribution of organisations is presented below[1]. The research sector is less dominant among organisations than for individuals.

**Table 6 -** Distribution of organisations by main sector of activity:

| **Main Sector** | **No of responses** | **% of responses** |
|---|---|---|
| Research or Education Institution | 106 | 50.7% |
| Public sector or not-for-profit organisation | 59 | 28.2% |
| Industry and Business Sector | 44 | 21.1% |
| Total | 209 | 100.0% |

[1] Note that while for organisations, research and education are considered as one single sector, the two are separated for individuals.

**Table 7 -** Distribution of individuals by main sector of activity:

| Main Sector | No of responses | % of responses |
|---|---|---|
| Research | 200 | 37.6% |
| Education and training | 164 | 30.8% |
| Business sector (outside research or education) | 89 | 16.7% |
| Public sector (outside research or education) | 51 | 9.6% |
| Other | 28 | 5.3% |
| Total | 532 | 100.0% |

## 4.3. Research and education sector

Within the research and education sector, public researchers dominate, although students and private researchers contributed as well.

**Table 8 -** Distribution of respondents in the research and education sector, by type of occupation:

| Private research and education | Public research and education | Students and student organisations | Others | Total |
|---|---|---|---|---|
| 27 | 374 | 52 | 15 | 468 |
| 5.8% | 79.9% | 11.1% | 3.2% | 100.0% |

The research and education sector is more represented at individual than at organisational level.

**Table 9 -** Distribution of respondents in the research and education sector, by individuals and organisations:

| Individuals from the RE sector / % of total individual respondents | Organisations from the RE sector / % of total organisations | Total |
|---|---|---|
| 364 | 106 | 470 |
| 68.4% | 50.7% | 63.4% |

Further details are given below for the research and education sector, by organisations and individuals.

**Table 10 -** Type of organisation in the research and education sector:

| **Research and Education Sector organisations** | **No of responses** | **% of responses** |
|---|---|---|
| Higher education institution | 61 | 57.5% |
| Research centre or institute | 17 | 16.0% |
| Higher education network or association | 9 | 8.5% |
| Other type of research or education institution | 7 | 6.6% |
| Training organisation | 5 | 4.7% |
| Research network or association | 3 | 2.8% |
| Promoting industry-science links | 2 | 1.9% |
| Adult education institution | 1 | 0.9% |
| School | 1 | 0.9% |
| Student organisation | 0 | 0.0% |
| Total | 106 | 100.0% |

**Table 11 -** Distribution of individuals who operate in research, by type of employer:

| **Type of research** | **No of responses** | **% of responses** |
|---|---|---|
| Higher education institution (including universities) | 120 | 60.6% |
| Public research centre or institute | 43 | 21.7% |
| Business company | 14 | 7.1% |
| Private research centre or institute | 13 | 6.6% |
| Independent researcher | 3 | 1.5% |
| Other | 5 | 2.5% |
| Total | 198 | 100.0% |

**Table 12 -** Distribution of individuals who operate in education, by type of occupation:

| **Occupation in education** | **No of responses** | **% of responses** |
|---|---|---|
| Lecturer / Researcher | 54 | 32.9% |
| Student | 52 | 31.7% |
| Teacher/Trainer | 30 | 18.3% |
| Administrator/Manager | 21 | 12.8% |
| Other | 7 | 4.3% |
| Total | 164 | 100.0% |

**Table 13 -** Distribution of individuals by type of education activity and employer:

| Type of education or training activity in education | No of responses | % of responses |
|---|---|---|
| University | 127 | 77.4% |
| Specialist professional training | 10 | 6.1% |
| Non-university higher education | 9 | 5.5% |
| Non-compulsory secondary education | 6 | 3.7% |
| Vocational training | 6 | 3.7% |
| Compulsory education | 3 | 1.8% |
| Other | 3 | 1.8% |
| Total | 164 | 100.0% |

The main research fields are fairly equally covered, although life and natural sciences are more represented.

**Table 14 -** Research fields covered by respondents in the research and education sector (multiple choices possible — data categorised by respondent so that the total equals the number of respondents — 470)[2]:

| Social sciences | Engineering | Life and natural sciences | Others | Technical sciences (life and natural sciences + engineering) | Widest scope (nearly all disciplines covered) | Total |
|---|---|---|---|---|---|---|
| 90 | 92 | 141 | 67 | 45 | 35 | 470 |
| 19.15% | 19.6% | 30.0% | 14.3% | 9.6% | 7.4% | 100.0% |

[2] As there could be multiple responses, the categories are defined as follows: Social sciences (respondents that chose "Economic Sciences", "Other Social Sciences", "Humanities" and, possibly, "Other"), Engineering (respondents that chose "Engineering and Information Sciences" and, possibly, "Other"), Life and natural sciences (respondents that chose "Environment and Geosciences", "Mathematics", "Physics", "Life Sciences", "Chemistry" and, possibly, "Other"), Others (respondents that chose only "Other, including trans/multi/inter-disciplinary fields"), Technical sciences (respondents that chose at least one discipline that falls under "Engineering", at least one that comes under "Life and natural sciences", and, possibly, "Other"), Widest scope (respondents that chose at least one discipline that falls in each of the identified categories and, possibly, "Other"). Under this method, each respondent represents one response (even though multiple choices were available). In the following tables, the data are disaggregated, so the number of responses is higher than the number of respondents.

**Table 15 -** Field of activity of research and education organisations (multiple choices possible — data not categorised by respondent, so the total number of responses is higher than the number of respondent organisations — 106):

| **Research field** | **No of responses** | **% of responses** |
|---|---|---|
| Engineering and Information Sciences | 54 | 16.3% |
| Environment and Geosciences | 39 | 11.8% |
| Economic Sciences | 39 | 11.8% |
| Other, including trans/multi/inter-disciplinary fields | 34 | 10.3% |
| Life Sciences | 32 | 9.7% |
| Other Social Sciences | 31 | 9.4% |
| Chemistry | 28 | 8.5% |
| Mathematics | 27 | 8.2% |
| Humanities | 24 | 7.3% |
| Physics | 23 | 6.9% |
| Total | 331 | 100.0% |

**Table 16 -** Field of activity of individuals who operate in the research sector (multiple choices possible — data not categorised by respondent, so the total number of responses is higher than the number of individual respondents from the research sector — 200):

| **Research field** | **No of responses** | **% of responses** |
|---|---|---|
| Engineering and Information Sciences | 76 | 25.6% |
| Life Sciences | 48 | 16.2% |
| Physics | 37 | 12.5% |
| Other, including trans/multi/inter-disciplinary fields | 34 | 11.4% |
| Mathematics | 31 | 10.4% |
| Chemistry | 19 | 6.4% |
| Economic Sciences | 17 | 5.7% |
| Environment and Geosciences | 15 | 5.1% |
| Other Social Sciences | 12 | 4.0% |
| Humanities | 8 | 2.7% |
| Total | 297 | 100.0% |

**Table 17 -** Field of activity of individuals who operate in the education sector (multiple choices possible — data not categorised by respondent, so the total number of responses is higher than the number of individual respondents from the education sector — 470):

| **Education and training field** | **No of responses** | **% of responses** |
|---|---|---|
| Engineering and Information Sciences | 57 | 23.9% |
| Other Social Sciences | 39 | 16.4% |
| Economic Sciences | 28 | 11.8% |
| Mathematics | 25 | 10.5% |
| Other, including trans/multi/inter-disciplinary fields | 21 | 8.8% |
| Humanities | 19 | 8.0% |
| Physics | 16 | 6.7% |
| Life Sciences | 13 | 5.5% |
| Chemistry | 12 | 5.0% |
| Environment and Geosciences | 8 | 3.4% |
| Total | 238 | 100.0% |

## 4.4. Business sector

Within the business sector, both small and large companies are fairly equally represented.

**Table 18 -** Distribution of respondents within the business sector, by type of company:

| Small | Large | Others | Total |
|---|---|---|---|
| 55 | 46 | 32 | 133 |
| 41.4% | 34.6% | 24.0% | 100.0% |

Further breakdowns are given below for organisations and individuals.

**Table 19 -** Business organisations by type:

| Type of organisation | No of responses | % of responses |
|---|---|---|
| Small and medium-sized enterprise | 17 | 38.6% |
| Large enterprise | 11 | 25.0% |
| Professional organisation or federation | 4 | 9.1% |
| Promotion of industry-science links | 4 | 9.1% |
| Other type of business or business-sector organisation | 4 | 9.1% |
| Trade union organisation | 2 | 4.5% |
| Sectoral organisation | 2 | 4.5% |
| Employee organisation | 0 | 0.0% |
| Total | 44 | 100.0% |

**Table 20 -** Distribution of individuals who operate in the business sector, by type of organisation:

| Type of organisation | No of responses | % of responses |
|---|---|---|
| Small and medium-sized enterprise | 38 | 42.7% |
| Large enterprise | 35 | 39.3% |
| Other type of business or business-sector organisation | 9 | 10.1% |
| Trade union or employee organisation | 2 | 2.2% |
| Sectoral organisation | 2 | 2.2% |
| Professional organisation or federation | 2 | 2.2% |
| Promotion of industry-science links | 1 | 1.1% |
| Total | 89 | 100.0% |

In terms of activity, the majority of business sector respondents are active in the field of services.

**Table 21 -** Distribution of responses from the business sector, by field of activity:

| **Services** | **Manufacturing** | **Mixed (both Services and Manufacturing)** | **Other** | **Total** |
|---|---|---|---|---|
| 69 | 25 | 30 | 8 | 132 |
| 52.3% | 18.9% | 22.7% | 6.1% | 100.0% |

Further breakdowns are given below for organisations and individuals.

**Table 22 -** Respondent organisations by field of activity within the business sector (more than one field could be chosen; the list contains only fields providing at least one response):

| **Field of activity** | **No of responses** | **% of responses** |
|---|---|---|
| Management consultancy | 13 | 13.7% |
| Other area of activities | 12 | 12.6% |
| Electrical and electronic equipment | 9 | 9.5% |
| Computer-related services | 9 | 9.5% |
| Other business services | 8 | 8.4% |
| Chemicals, rubber and plastics/cements/synthetic fibres | 4 | 4.2% |
| Post and telecommunication | 4 | 4.2% |
| Personal services / other service sectors | 4 | 4.2% |
| Other transport equipment / other manufacturing | 3 | 3.2% |
| Recycling and waste management | 3 | 3.2% |
| Advertising | 3 | 3.2% |
| Health, social work | 3 | 3.2% |
| Agriculture, fisheries, forestry | 2 | 2.1% |
| Food industry | 2 | 2.1% |
| Metal manufacturing/steel | 2 | 2.1% |
| Machinery and equipment | 2 | 2.1% |
| Electricity, gas, water | 2 | 2.1% |
| Retail trade | 2 | 2.1% |
| Transport | 2 | 2.1% |
| Architectural and engineering services | 2 | 2.1% |
| Financial services | 1 | 1.1% |
| Accounting | 1 | 1.1% |
| Labour recruitment and provision of personnel | 1 | 1.1% |
| Recreation, culture, sport, media and entertainment | 1 | 1.1% |
| Total | 95 | 100.0% |

**Table 23 -** Individual respondents by field of activity within the business sector (more than one field could be chosen; the list contains only fields where at least one response has been provided):

| **Field of activity** | **No of responses** | **% of responses** |
|---|---|---|
| Computer related services | 36 | 23.2% |
| Electrical and electronic equipment | 12 | 7.7% |
| Management consultancy | 8 | 5.2% |
| Wood, paper, publishing and printing | 7 | 4.5% |
| Electricity, gas, water | 7 | 4.5% |
| Post and telecommunication | 7 | 4.5% |
| Architectural and engineering services | 7 | 4.5% |
| Other business services | 7 | 4.5% |
| Financial services | 6 | 3.9% |
| Metal manufacturing/steel | 5 | 3.2% |
| Machinery and equipment | 5 | 3.2% |
| Food industry | 4 | 2.6% |
| Legal activities | 4 | 2.6% |
| Other area of activities | 4 | 2.6% |
| Chemicals, rubber and plastics/cements /synthetics | 3 | 1.9% |
| Motor vehicles (production and distribution) | 3 | 1.9% |
| Other transport equipment / other manufacturing | 3 | 1.9% |
| Recycling and waste management | 3 | 1.9% |
| Construction | 3 | 1.9% |
| Transport | 3 | 1.9% |
| Advertising | 3 | 1.9% |
| Textiles. Clothing and leather | 2 | 1.3% |
| Real estate and rentals | 2 | 1.3% |
| Accounting | 2 | 1.3% |
| Recreation, culture, sport, media and entertainment | 2 | 1.3% |
| Personal services / other service sectors | 2 | 1.3% |
| Agriculture, fisheries, forestry | 1 | 0.6% |
| Pharmaceutical industry | 1 | 0.6% |

| | | |
|---|---|---|
| Wholesale | 1 | 0.6% |
| Hotels, restaurants, tourism and travel agencies | 1 | 0.6% |
| Health, social work | 1 | 0.6% |
| Total | 155 | 100.0% |

## 4.5. Public sector

Within the public sector, “other type of public” is the most cited field of activity.

**Table 24 -** Responses from the public sector, by field of activity:

| **Education / Research** | **EU cooperation** | **Research, diverse (education and research + other sectors)** | **Research and EU cooperation** | **EU cooperation, diverse (EU cooperation + other sectors)** | **Other** | **Total** |
|---|---|---|---|---|---|---|
| 12 | 3 | 28 | 20 | 13 | 34 | 110 |
| 10.9% | 2.7% | 25.5% | 18.2% | 11.8% | 30.9% | 100.0% |

Further details are given below for the public sector, by organisations and individuals.

**Table 25 -** Public sector organisations by field of activity (more than one field could be chosen; the list contains only fields where at least one response has been provided):

| **Field of activity** | **No of responses** | **% of responses** |
|---|---|---|
| Education | 34 | 19.1% |
| Research | 31 | 17.4% |
| European cooperation | 22 | 12.4% |
| Other | 18 | 10.1% |
| National, regional, local or municipal governance | 13 | 7.3% |
| Health | 7 | 3.9% |
| Environment | 7 | 3.9% |
| Employment | 7 | 3.9% |
| Culture / sport | 5 | 2.8% |
| Trade / consumer protection | 5 | 2.8% |
| Telecommunications / broadcasting | 5 | 2.8% |
| Transport / energy | 5 | 2.8% |
| International affairs | 5 | 2.8% |
| Security / defence | 4 | 2.2% |
| Construction / manufacturing | 3 | 1.7% |
| Statistics | 3 | 1.7% |
| Agriculture / forestry / fisheries | 1 | 0.6% |
| Family / welfare | 1 | 0.6% |
| Tourism | 1 | 0.6% |
| Immigration | 1 | 0.6% |
| Total | 178 | 100.0% |

**Table 26 -** Individual respondents by field of activity within the public sector (more than one field could be chosen; the list contains only fields where at least one response has been provided):

| **Field of activity** | **No of responses** | **% of responses** |
|---|---|---|
| European cooperation | 17 | 15.7% |
| Research | 12 | 11.1% |
| National, regional, local or municipal governance | 12 | 11.1% |
| Telecommunications / broadcasting | 10 | 9.3% |
| Other | 10 | 9.3% |
| Environment | 8 | 7.4% |
| International affairs | 8 | 7.4% |
| Education | 7 | 6.5% |
| Transport / energy | 6 | 5.6% |
| Health | 4 | 3.7% |
| Agriculture / forestry / fisheries | 4 | 3.7% |
| Total | 98 | 100.0% |

## 5. QUANTITATIVE ANALYSIS

In this chapter, the main results for each question in the EIT public consultation are presented. The focus here is on the multiple-choice options. The free-text responses are analysed in Chapter 6. The questionnaire is attached in Annex 3.

For each question, the results are presented by main profile category (e.g. by geographical area, by sector, etc.). In each table, the rows refer to the options available for each question (e.g. for structure: single institution, small network, large network, label) and the columns refer to the profile categories (e.g. for countries: southern, central, northern, etc.). The tables are of two types:

**I - Frequency tables:** these tables give the percentage breakdown of responses for each question and profile category (e.g. 22.5% from northern countries prefer the single institution). The results are to be read vertically, since percentages are calculated on the total number of responses for each profile category. For each column, at least three results are highlighted: the highest score (black), the second-highest (dark grey), and the lowest (light grey).. Particular highlights are shown in bold.

**Example***: The table below presents the breakdown of responses regarding the EIT's mission. Vertically, it shows the various options that could be chosen by respondents (education, research, etc.). Horizontally, it presents the profile categories, in this case individuals versus organisations. In each cell, the percentage of responses provided by respondents in a given profile category (column) in favour of a particular option (row) is presented. For example, 20.49% of individuals (as distinct from organisations) prefer research as the mission for the EIT. Likewise, we see that 6.2% of organisations prefer research as the mission for the EIT. These percentages* ***do not*** *relate to the overall percentage of respondents (both individuals and organisations) that prefer research as a mission for the EIT. The latter figure will be somewhere between the percentages for individuals and organisations, in proportion to each group's participation in the consultation.*

**Table 27** - Example of a frequency table

| **EIT Mission** | **Individuals** | **Organisations** |
|---|---|---|
| **Education** | 3.2% | 6.7% |
| **Research** | **20.5%** | **6.2%** |
| **Commercial** | 10.5% | 13.9% |
| **Triangle** | 62.2% | 66.5% |
| **Other** | 3.6% | 6.7% |
| **Total** | 100.0%<br>(N=532) | 100.0%<br>(N=209) |

**II – Relative preferences of organisations:** These tables show the extent to which organisations differ in their choices from respondents as a whole. The higher the absolute values in each cell, the more organisations have preferences that differ from those of respondents as a whole. Negative values indicate a lesser preference and positive values show

a greater preference. The greatest negative preferences are highlighted in black, while the greatest positive preferences are highlighted in light grey.

**Example:** *In the table below, each cell presents the difference between two values: the percentage of total respondents in a profile category that chose a particular option and the percentage of organisations in the same category that chose the same option. For example, 20.4% of respondents (both individuals and organisations) in the research and education sector chose the research mission, while only 5.7% of the organisations in the same sector chose this option. The difference between these two percentages — 14.8 percentage points — is shown in the table below, indicating that organisations are less interested in research as the mission of the EIT than the overall respondents in the same sector*.

**Table 28-** Example of a table showing the relative preferences of organisations

| EIT Mission | Research and Education. | Public | Business |
|---|---|---|---|
| **Education** | 2.0 | 2.0 | 2.3 |
| **Research** | -15.0 | 0.2 | -8.2 |
| **Commercial** | 0.0 | 1.6 | 4.0 |
| **Triangle** | 9.7 | -2.5 | -1.9 |
| **Other** | 3.0 | -1.3 | 3.8 |

## 5.1. Mission

The respondents were asked "*What should be the main objective of the EIT?*" Five multiple-choice options were offered: a) primary focus on education (including undergraduate teaching); b) primary focus on research and research training; c) primary focus on improving the commercial exploitation of research; d) integrated approach combining teaching, research and technology transfer – the knowledge triangle; e) other.

Regarding the mission of the EIT, **the triangle is the most popular option**, followed by research.

**Table 29 -** Distribution of total responses regarding the mission of the EIT:

| EIT Mission | No of responses | % of responses |
|---|---|---|
| **Education** | 30 | 4.0% |
| **Research and research training** | 122 | 16.5% |
| **Commercial exploitation of research results** | 86 | 11.6% |
| **Knowledge triangle** | 470 | 63.4% |
| **Other** | 33 | 4.5% |
| **Total** | 741 | 100.0% |

It may be noted that the northern and to some extent the central European countries, unlike the others, place relatively less emphasis on the triangle and relatively more on the commercialisation of research results. Research and research training, in general, comes in second place for all countries, but is particularly popular in Southern Europe. Education alone is the last choice, although northern countries give it a slightly higher rating.

**Table 30 -** Distribution of responses regarding the EIT mission by geographical region:

| EIT mission | Southern | Central | Northern | Eastern | Candidate and other countries |
|---|---|---|---|---|---|
| **Education** | 3.8% | 3.0% | 5.6% | 4.3% | 6.1% |
| **Research and research training** | 18.2% | 16.0% | 16.9% | 16.8% | 7.6% |
| **Commercial exploitation of research results** | 10.1% | 14.0% | 16.9% | 10.1% | 12.1% |
| **Knowledge triangle** | 65.5% | 57.0% | 47.9% | 66.4% | 71.2% |
| **Other** | 2.4% | 10.0% | 12.7% | 2.40% | 3.0% |
| **Total** | 100.0% (N=296) | 100.0% (N=100) | 100.0% | 100.0% (N=208) | 100.0% (N=66) |

There is a significant difference between individuals and organisations regarding the importance of research. In fact, while both individuals and organisations attach far more importance to the knowledge triangle, the second choice of individuals is research and research training, whereas the second choice among organisations is the commercial exploitation of research results.

**Table 31 -** Distribution of responses regarding the EIT mission by individuals versus organisations:

| EIT mission | Individuals | Organisations |
|---|---|---|
| **Education** | 3.2% | 6.7% |
| **Research and research training** | **20.5%** | **6.2%** |
| **Commercial exploitation of research results** | 10.5% | 13.9% |
| **Knowledge triangle** | 62.2% | 66.5% |
| **Other** | 3.6% | 6.7% |
| **Total** | 100.0% (N=532) | 100.0% (N=209) |

Looking at the replies by main sectors of activity, we can distinguish two different perspectives. The research and education sector leans more towards a research mission, while the business sector is more in favour of a commercial mission.

**Table 32 -** Distribution of responses regarding the EIT mission by main sector of activity:

| EIT mission | Research and Education | Public | Business | Other |
|---|---|---|---|---|
| **Education** | 3.6% | 8.2% | 2.3% | 7.1% |
| **Research and research training** | **20.4%** | 10.00% | 10.5% | 3.6% |
| **Commercial exploitation** | 6.6% | 13.6% | **25.6%** | 17.9% |
| **Knowledge triangle** | 65.8% | 61.8% | 56.4% | 64.3% |
| **Other** | 3.6% | 6.4% | 5.2% | 7.1% |
| **Total** | 100.0% (N=470) | 100.0% (N=110) | 100.0% (N=133) | 100.0% (N=28) |

One could argue that the preference of individuals for the research mission is due to the fact that individuals coming from the research and education sectors are a larger proportion of individual respondents than the proportion of respondent organisations coming from those sectors, and that these individuals would be more favourable to research than those from the business sector (see table 32 above). But it is also interesting to note that, in relative terms, organisations that belong to the research sector are less favourable to a research focus (and more to the triangle) than individuals who belong to research organisations. That is, **research organisations find it less important that the EIT take-on exclusively a research mission, than do individuals who belong to research organisations**. Furthermore, business organisations are less favourable to research than individuals involved in the business sector. Below, these differences are highlighted.

**Table 33 -** Distribution of organisations responses regarding EIT's mission by main sector of activity:

| EIT mission | Research and education | Public | Business |
|---|---|---|---|
| **Education** | 5.7% | 8.5% | 4.5% |
| **Research and research training** | 5.7% | 10.2% | 2.3% |
| **Commercial exploitation** | 6.6% | 16.9% | 29.5% |
| **Knowledge triangle** | 75.5% | 59.3% | 54.5% |
| **Other** | 6.6% | 5.1% | 9.1% |
| **Total** | 100.0% (N=106) | 100.0% (N=59) | 100.0% (N=44) |

In the table below, the difference between the distribution of responses from organisations and the distribution for all respondents is presented:

**Table 34 -** Relative preferences of organisations regarding the EIT's mission, by main sector of activity (compared to all respondents):

| EIT mission | Research and Education | Public | Business |
|---|---|---|---|
| **Education** | 2.0 | 2.0 | 2.3 |
| **Research and research training** | -14.8 | 0.2 | -8.3 |
| **Commercial exploitation** | 0.1 | 1.6 | 4.0 |
| **Knowledge triangle** | 9.7 | -2.5 | -1.8 |
| **Other** | 3.0 | -1.3 | 3.8 |

Compared to all respondents in the research and education sector, organisations from this sector rate the research mission lower (5.7% as against 20.4% for all respondents).

Moreover, this difference between the preferences of organisations and overall respondents is a common trend for each European region and in particular for Eastern European organisations. It may be noted that both Southern and Northern European organisations emphasise more the need for education, while other countries stress more the commercial mission.

**Table 35 -** Relative preferences of organisations regarding the EIT's mission, by geographical region (compared to all respondents):

| EIT mission | Southern | Central | Northern | Eastern | Candidate and other countries |
|---|---|---|---|---|---|
| **Education** | 6.0 | 1.4 | 6.5 | -4.3 | -0.5 |
| **Research and research training** | -7.1 | -9.4 | -10.8 | -16.8 | -7.6 |
| **Commercial exploitation** | -1.8 | 1.6 | 4.3 | -2.8 | 21.2 |
| **Knowledge triangle** | 3.9 | 0.8 | -2.4 | 23.9 | -10.1 |
| **Other** | -1.0 | 5.6 | 2.5 | 0.0 | -3.0 |

Private researchers stress much more the importance of the research mission than public researchers and research organisations. Conversely, none of them consider that education by itself should be the mission of the EIT.

**Table 36 -** Distribution of responses from individuals and organisations in the research and education sector regarding the EIT's mission, by type of occupation:

| EIT mission | Private research and education | Public research and education | Students and student organisations | Others |
|---|---|---|---|---|
| **Education** | **0.0%** | 3.5% | 5.8% | 6.7% |
| **Research and research training** | **44.4%** | 16.8% | 28.8% | 26.7% |
| **Commercial exploitation** | 7.4% | 5.8% | 9.6% | 13.3% |
| **Knowledge triangle** | 48.2% | 69.3% | 55.8% | 53.3% |
| **Other** | 0.00% | 4.6% | 0.00% | 0.00% |
| **Total** | 100.0% (N=27) | 100.0% (N=374) | 100.0% (N=52) | 100.0% (N=15) |

In comparison with SMEs, large businesses are more like private researchers. They attach more importance to the research and research training mission.

**Table 37 -** Distribution of business sector responses regarding the EIT's mission, by type of business company:

| EIT mission | Small | Large | Others |
|---|---|---|---|
| **Education** | 3.6% | 0.0% | 3.1% |
| **Research and research training** | **3.6%** | **13.0%** | 18.7% |
| **Commercial exploitation** | 29.1% | 23.9% | 21.9% |
| **Knowledge triangle** | 60.0% | 58.7% | 46.9% |
| **Other** | 3.7% | 4.4% | 9.4% |
| **Total** | 100.0% | 100.0% (N=46) | 100.0% (N=32) |

It is interesting to note that when the responses from business sector organisations are considered, the same effect observed for the research sector is found: a purely research mission for the EIT is much less favoured by organisations than by business sector respondents as a whole, with preference given to the knowledge triangle mission (as noted above, the negative preference is -8.25 points). This difference is particularly marked among large business organisations, where the research mission is rated 13 points lower than among the entire set of respondents from large companies. It seems that **individuals who operate either as private researchers or as members of large organisations focus more on research than the organisations that host them**.

**Table 38 -** Relative preferences of business sector organisations regarding the EIT's mission, by type of business company (compared to all respondents ):

| EIT mission | Small | Large | Others |
|---|---|---|---|
| **Education** | 2.3 | 0.00 | 3.1 |
| **Research and research training** | -3.6 | -13.0 | -12.5 |
| **Commercial exploitation** | 6.2 | -14.8 | 15.6 |
| **Knowledge triangle** | -7.2 | 14.0 | -3.1 |
| **Other** | 2.3 | 13.8 | -3.1 |

Regarding the preferences for the EIT's mission, there do not seem to be great differences between disciplinary fields of research. The life and natural sciences stress the research mission relatively more.

**Table 39 -** Distribution of responses from individuals and organisations in the research and education sector regarding the EIT's mission, by field of research:

| EIT mission | Social sciences | Engineering | Life and natural sciences | Technical sciences (life and natural sciences + engineering) | Widest scope (nearly all disciplines are covered) | Others |
|---|---|---|---|---|---|---|
| **Education** | 4.4% | 3.2% | 3.5% | 4.4% | 0.0% | 4.5% |
| **Research and research training** | 21.1% | 19.6% | **28.4%** | 15.6% | 5.7% | 14.9% |
| **Commercial exploitation** | 6.7% | 8.7% | 7.8% | 4.4% | 2.9% | 4.5% |
| **Knowledge triangle** | 64.4% | 68.5% | 58.2% | 68.9% | 77.1% | 71.6% |
| **Other** | 3.3% | 0.0% | 2.1% | 6.7% | 14.3% | 4.5% |
| **Total** | 100.0% (N=90) | 100.0% (N=92) | 100.0% (N=141) | 100.0% (N=45) | 100.0% (N=35) | 100.0% (N=67) |

Again, looking at the differences between the preferences of organisations and those of respondents as a whole in the research and education sector, the **research mission loses out to the triangle in almost every disciplinary field**.

**Table 40 -** Relative preferences of research and education organisations regarding the EIT's mission, by field of research (compared to all respondents):

| EIT mission | Social sciences | Engineering | Life and natural sciences | Technical sciences (life and natural sciences + engineering) | Widest scope (Nearly all disciplines are covered) | Others |
|---|---|---|---|---|---|---|
| **Education** | 2.2 | -3.3 | 8.2 | 3.9 | 0.00 | 3.52 |
| **Research and research training** | -21.1 | -11.2 | -16.6 | -15.6 | -1.71 | -6.93 |
| **Commercial exploitation** | 0.00 | 8.0 | -1.9 | -4.4 | 1.14 | 3.52 |
| **Knowledge triangle** | 22.2 | 6.5 | 6.5 | 14.4 | -5.14 | 4.36 |
| **Other** | -3.3 | 0.00 | 3.8 | 1.7 | 5.71 | -4.48 |

## 5.2. Added value

The respondents were asked "*How can the EIT best contribute above and beyond current provision in this area?*". Eleven multiple-choice options were offered (and each respondent could select two alternatives):

- networking between higher education institutions and facilitating the cross-fertilisation of knowledge;
- facilitating intra-European mobility of staff and students;
- attracting top international students or researchers;
- creating economies of scale in research production;
- building synergies with EU Research Framework Programme instruments;
- promoting innovation and knowledge transfer throughout the territory of the EU;
- providing a model of excellence to disseminate best practice;
- encouraging collaboration between the academic/research world and large-scale industry and employers;
- developing commercial opportunities for research products and processes;
- supporting SMEs and local and regional development;
- other.

Regarding the question of potential added value, two types of data were derived from the responses. One, "disaggregated", shows the distribution of added-value preferences broken down by all the options in the questionnaire (11 options). Another, "aggregated", aggregates the results into 5 categories. Options more focused on industrial impact and knowledge transfer are aggregated into a single category "industrial impact"[3], while options more focused on research and education are aggregated into a single category "academic impact"[4]. The remaining categories are represented by three original options that cannot be easily linked to either industrial impact or academic impact: "Dissemination of Best Practices", "Synergies with the EU research FP", and "Other". Finally, since respondents could enter up to two options, percentages are not calculated on the basis of the number of respondents but rather on the basis of the number of responses. The sum of percentages for each column is thus always 100%.

**"Industrial impact" is seen as a relatively more important added value for the EIT than "academic impact",** though both have similar scores. Given that respondents were asked to select two options, it can be argued that, in general, each respondent tended to choose one option in each main category.

---

[3] "Industrial impact" covers the following options: promoting innovation and knowledge transfer throughout the territory of the EU, encouraging collaboration between the academic/research world and large-scale industry and employers, developing commercial opportunities for research products and processes, supporting SMEs and local and regional development.

[4] "Academic impact" covers the following options: networking between higher education institutions and facilitating the cross-fertilisation of knowledge, facilitating intra-European mobility of staff and students, attracting top international students or researchers, creating economies of scale in research production.

**Table 41-** Distribution of responses regarding the EIT's added value (aggregated):

| Added value | % of responses |
|---|---|
| **Academic impact** | 35.9% |
| **Industrial impact** | 49.2% |
| **EU FP synergies** | 4.7% |
| **Best practice** | 7.4% |
| **Other** | 2.9% |
| **Total** | 100.0%<br>(N=1336) |

Within the "industrial impact" category, the main options selected are "collaboration between research and large industry", followed by "promoting industrial impact and knowledge transfer in the EU". Within the "academic impact" category, the highest rated options are "attracting talent" and "networking between HEIs". "Building synergies with the EU Research FP" was considered as the area where the EIT would bring the least added value, together with "creating economies of scale in research production".

**Table 42 -** Distribution of responses regarding the EIT's added value (disaggregated):

| Added value | % of responses |
|---|---|
| **Networking HEIs** | 11.1% |
| **Promoting intra-EU mobility** | 6.9% |
| **Attracting talent** | 14.3% |
| **Creating economies of scale in research** | 3.6% |
| **Building synergies with the EU Research FP** | 4.7% |
| **Promoting innovation and knowledge transfer** | 17.8% |
| **Best-practice dissemination** | 7.4% |
| **Encouraging collaboration between research and industry** | 18.6% |
| **Developing commercial opportunities for research products** | 6.9% |
| **Supporting SMEs and local and regional development** | 5.9% |
| **Other** | 2.9% |
| **Total** | 100.0%<br>(N=1336) |

As shown above, creating economies of scale in research and building synergies with the EU Research FP are, in general, seen as areas where the EIT will not bring added value, while attracting talent, promoting innovation and knowledge transfer, and encouraging collaboration between research and large industry are the areas where the EIT is most seen as potentially bringing added value.

The most expected types of added value are presented below, for individuals and organisations. It may noted that **individuals see the EIT has potentially bringing considerably more academic added value than organisations do. In contrast, they expect relatively less potential industrial impact than organisations (although industrial impact is for both the area where the EIT can potentially bring the greatest added value).**

**Table 43 -** Distribution of responses regarding the EIT's added value, by individuals versus organisations (aggregated):

| Added value | Individuals | Organisations |
|---|---|---|
| **Academic impact** | **39.8%** | **27.3%** |
| **Industrial impact** | 46.7% | 54.1% |
| **EU FP synergies** | 4.2% | 5.9% |
| **Best practice** | 7.1% | 8.0% |
| **Other** | 2.2% | 4.7% |
| **Total** | 100.0%<br>(N=952) | 100.0%<br>(N=386) |

As shown in the table below, the attraction of talent is the third option for both groups, although individuals stress this more.

**Table 44 -** Distribution of responses regarding the EIT's added value, by individuals versus organisations (aggregated):

| Added value | Individuals | Organisations |
|---|---|---|
| **Networking HEIs** | 12.3% | 8.3% |
| **Promoting intra-EU mobility** | 7.8% | 4.7% |
| **Attracting talent** | 16.0% | 10.4% |
| **Creating economies of scale in research** | 3.7% | 3.9% |
| **Building synergies with the EU Research FP** | 4.2% | 5.9% |
| **Promoting innovation and knowledge transfer** | 16.6% | 20.7% |
| **Best-practice dissemination** | 7.1% | 8.0% |
| **Encouraging collaboration between research and industry** | 18.9% | 17.6% |
| **Commercial opportunities for research products** | 6.7% | 7.2% |
| **Supporting SMEs and local and regional development** | 4.5% | 8.6% |
| **Other** | 2.2% | 4.7% |
| **Total** | 100.0% (N=952) | 100.0% (N=386) |

From a geographical point of view, other countries see a relatively lesser role for the EIT in bringing an academic added value while Eastern countries see a greater role.

**Table 45 -** Distribution of responses regarding the EIT's added value by region (aggregated):

| Added value | Southern | Central | Northern | Eastern | Candidate and other countries |
|---|---|---|---|---|---|
| **Academic impact** | 35.4% | 35.6% | 33.8% | 39.8% | 30.6% |
| **Industrial impact** | 48.9% | 45.0% | 48.5% | 50.4% | 50.5% |
| **EU FP synergies** | 4.5% | 4.4% | 4.6% | 4.0% | 9.0% |
| **Best practice** | 9.5% | 7.8% | 8.5% | 3.4% | 8.1% |
| **Other** | 1.7% | 7.2% | 4.6% | 2.4% | 1.8% |
| **Total** | 100.0% (N=459) | 100.0% (N=150) | 100.0% (N=107) | 100.0% (N=316) | 100.0% (N=100) |

Below, the disaggregated table by region is presented.

**Table 46 -** Distribution of responses regarding the EIT's added value by region (disaggregated):

| Added value | Southern | Central | Northern | Eastern | Candidate and other countries |
|---|---|---|---|---|---|
| **Networking HEIs** | 12.5% | 8.9% | 10.0% | 11.6% | 8.2% |
| **Promoting intra-EU mobility** | 7.6% | 6.7% | 7.7% | 6.1% | 5.4% |
| **Attracting talent** | 11.4% | 13.3% | 13.8% | 19.5% | 13.2% |
| **Creating economies of scale in research** | 3.9% | 6.7% | 2.3% | 2.6% | 3.7% |
| **Building synergies with the EU Research FP** | 4.5% | 4.4% | 4.6% | 4.0% | 9.0% |
| **Promoting innovation and knowledge transfer** | 18.5% | 16.1% | 18.0% | 18.2% | 15.4% |
| **Best-practice dissemination** | 9.5% | 7.8% | 8.5% | 3.4% | 8.1% |
| **Encouraging collaboration between research and industry** | 19.2% | 12.2% | 13.1% | 21.7% | 21.7% |
| **Commercial opportunities for research products.** | 6.2% | 6.7% | 11.5% | 7.1% | 4.5% |
| **Supporting SMEs and local and regional development** | 5.0% | 10.0% | 6.1% | 3.4% | 9.0% |
| **Other** | 1.7% | 7.2% | 4.6% | 2.4% | 1.8% |
| **Total** | 100.0% (N=536) | 100.0% (N=180) | 100.0% (N=130) | 100.0% (N=379) | 100.0% (N=111) |

It can also be seen below that, while all main sectors of activity see the main added value of the EIT in its industrial impact, they do have alternative expectations regarding other potential added values: the research and education sector expects relatively more academic added value than the business sector, while the public sector lies in between. Accordingly, while both the research and education sector and the business sector agree that a major industrial impact is needed, such agreement is less clear at a deeper level. In fact, the disaggregated figures for the expected added value show that the business sector also sees a relatively large role for supporting SMEs and local and regional development while the research and education sector attaches more importance to networking between higher education institutions, attracting talent and mobility.

Further breakdowns for added value are presented below in both aggregated and disaggregated form.

**Table 47 -** Distribution of responses regarding the EIT's added value by main sector of activity (aggregated):

| Added value | Research and Education | Public | Business | Others |
|---|---|---|---|---|
| **Academic impact** | **39.5%** | 32.8% | **28.7%** | 28.0% |
| **Industrial impact** | **45.1%** | 49.2% | **59.8%** | 58.0% |
| **EU FP synergies** | 4.8% | 5.6% | 4.1% | 2.0% |
| **Best practice** | 8.2% | 6.2% | 5.3% | 8.0% |
| **Other** | 2.4% | 6.2% | 2.0% | 4.0% |
| **Total** | 100.0% (N=849) | 100.0% (N=195) | 100.0% (N=244) | 100.0% (N=50) |

**Table 48 -** Distribution of responses regarding the EIT's added value by main sector of activity (disaggregated):

| Added value | Research and Education | Public | Business | Others |
|---|---|---|---|---|
| **Networking HEIs** | 11.1% | 15.4% | 8.6% | 8.0% |
| **Promoting intra-EU mobility** | 8.8% | 3.6% | 2.9% | 6.0% |
| **Attracting talent** | 16.7% | 11.8% | 9.8% | 6.0% |
| **Creating economies of scale in research** | 2.8% | 2.0% | 7.4% | 8.0% |
| **Building synergies with the EU Research FP** | 4.8% | 5.6% | 4.1% | 2.0% |
| **Promoting innovation and knowledge transfer** | 17.0% | 20.0% | 18.9% | 18.0% |
| **Best-practice dissemination** | 8.2% | 6.2% | 5.3% | 8.0% |
| **Encouraging collaboration between research and industry** | 18.7% | 16.9% | 19.3% | 18.0% |
| **Developing commercial opportunities for research products** | 5.6% | 4.6% | 12.3% | 12.0% |
| **Supporting SMEs and local and regional development** | 3.9% | 7.7% | 9.4% | 10.0% |
| **Other** | 2.4% | 6.2% | 2.0% | 4.0% |
| **Total** | 100.0% (N=849) | 100.0% (N=195) | 100.0% (N=244) | 100.0% (N=50) |

The differences are smaller when only organisations are considered, i.e. perceptions regarding added value are more homogeneous among organisations than among individuals.

**Table 49 -** Distribution of responses regarding the EIT's added value by main sector of activity (aggregated — organisations only):

| Added value | Research and Education | Public | Business |
|---|---|---|---|
| **Academic impact** | 31.8% | 27.0% | 16.3% |
| **Industrial impact** | 49.7% | 52.3% | 67.5% |
| **EU FP synergies** | 6.7% | 4.5% | 6.3% |
| **Best practice** | 8.2% | 8.1% | 7.5% |
| **Other** | 3.6% | 8.1% | 2.5% |
| **Total** | 100.0% (N=195) | 100.0% (N=111) | 100.0% (N=80) |

As noted for the mission of the EIT, one would argue that the differences between organisations and the overall population are due to the overrepresentation of researchers at individual level. As noted above, however, organisations in the research and education sector attach less importance to the role of the EIT in terms of academic impact than the overall population. An even greater difference, in the same direction, is found in the business sector, where business organisations expect the EIT to play a less important role in terms of academic impact than individuals in the private sector. Again, **this confirms, as a general trend, that individuals see a greater role for the EIT in terms of academic impact than those organisations that host them.**

The table below presents the relative differences between the distribution of responses from organisations and the distribution for all respondents in each of the main sectors of activity:

**Table 50 -** Relative preferences of organisations regarding the EIT's added value by main sector of activity (compared to all respondents — aggregated):

| Added value | Research and Education | Public | Business |
|---|---|---|---|
| **Academic impact** | -7.7 | -5.8 | -12.4 |
| **Industrial impact** | 4.6 | 3.0 | 7.7 |
| **EU FP synergies** | 1.8 | -1.1 | 2.2 |
| **Best practice** | 0.0 | 2.0 | 2.2 |
| **Other** | 1.2 | 2.0 | 0.5 |

The difference noted between organisations and all respondents is true for every region, in particular the northern countries.

**Table 51 -** Relative preferences of organisations regarding the EIT's added value by region (compared to all respondents — aggregated):

| Added value | Southern | Central | Northern | Eastern | Candidate and other countries |
|---|---|---|---|---|---|
| **Academic impact** | -8.6 | -5.4 | -11.8 | -8.7 | -8.8 |
| **Industrial impact** | 4.8 | 4.4 | 9.2 | 5.4 | 5.8 |
| **EU FP synergies** | 4.5 | -2.0 | 0.5 | -0.1 | 0.4 |
| **Best practice** | 0.2 | -1.7 | 0.0 | 1.8 | 4.4 |
| **Other** | -1.0 | 4.8 | 2.2 | 1.5 | -1.8 |

Again, more private researchers and students expect the EIT to bring academic added value than public researchers, who expect more an industrial impact.

Further breakdowns are presented below in both aggregated and disaggregated form for individuals and organisations in the research and education sector by type of occupation.

**Table 52 -** Distribution of responses from individuals and organisations in the research and education sector regarding the EIT's added value, by type of occupation (aggregated):

| Added value | Private research and education | Public research and education | Students and student organisations | Others |
|---|---|---|---|---|
| **Academic impact** | 40.4% | 38.3% | 45.4% | 41.7% |
| **Industrial impact** | 42.6% | 45.3% | 47.4% | 41.7% |
| **EU FP synergies** | **2.1%** | 5.3% | **2.1%** | 8.3% |
| **Best practice** | 14.9% | 8.3% | 5.2% | 4.2% |
| **Other** | 0.0% | 2.8% | 0.0% | 4.2% |
| **Total** | 100.0% (N=47) | 100.0% (N=677) | 100.0% (N=97) | 100.0% (N=24) |

It may be noted that a high share of both private researchers and students expect the EIT to bring added value in attracting top talent. Very few expect it to contribute in supporting SMEs and local and regional development.

**Table 53 -** Distribution of responses from individuals and organisations in the research and education sector regarding the EIT's added value, by type of occupation (disaggregated):

| Added value | Private research and education | Public research and education | Students and student organisations | Others |
|---|---|---|---|---|
| **Networking HEIs** | 8.5% | 11.2% | 10.3% | 12.5% |
| **Promoting intra-EU mobility** | 6.4% | 8.4% | 13.4% | 4.2% |
| **Attracting talent** | 21.3% | 15.7% | 19.6% | 25.0% |
| **Creating economies of scale in research** | 4.3% | 3.0% | 2.1% | 0.0% |
| **Building synergies with the EU Research FP** | 2.1% | 5.3% | 2.1% | 8.3% |
| **Promoting innovation and knowledge transfer** | 17.0% | 16.8% | 16.5% | 25.0% |
| **Best-practice dissemination** | 14.9% | 8.3% | 5.1% | 4.2% |
| **Encouraging collaboration between research and industry** | 17.0% | 18.8% | 22.7% | 8.3% |
| **Developing commercial opportunities for research products** | 6.4% | 5.3% | 7.2% | 4.2% |
| **Supporting SMEs and local and regional development** | 2.1% | 4.4% | 1.0% | 4.2% |
| **Other** | 0.0% | 2.8% | 0.0% | 4.1% |
| **Total** | 100.0% (N=47) | 100.0% (N=677) | 100.0% (N=97) | 100.0% (N=24) |

The size of the business organisation seems to make no particular difference to expectations regarding the added value of the EIT.

Breakdowns are presented below in both aggregated and disaggregated form with regard to the added value expected by both individuals and organisations in the business sector.

**Table 54 -** Distribution of responses from the business sector regarding the EIT's added value, by type of business company (aggregated):

| Added value | Small | Large | Others |
|---|---|---|---|
| **Academic impact** | 29.4% | **31.8%** | 22.8% |
| **Industrial impact** | **59.8%** | 54.1% | 68.4% |
| **EU FP synergies** | 3.9% | 4.7% | 3.5% |
| **Best practice** | 4.9% | 8.2% | 1.8% |
| **Other** | 2.0% | 1.2% | 3.5% |
| **Total** | 100.0% (N=102) | 100.0% (N=85) | 100.0% (N=57) |

While it can be seen that a large proportion of business respondents from all types of companies expect the EIT to bring added value in the commercial exploitation of research results, only a low proportion of respondents from SMEs expect it to bring added value in supporting SMEs and local and regional development.

**Table 55 -** Distribution of responses from the business sector regarding the EIT's added value, by type of business company (disaggregated):

| Added value | Small | Large | Others |
|---|---|---|---|
| **Networking HEIs** | 9.8% | 9.4% | 5.3% |
| **Promoting intra-EU mobility** | 4.9% | 2.4% | 0.0% |
| **Attracting talent** | 9.8% | 11.8% | 7.0% |
| **Creating economies of scale in research** | 4.9% | 8.2% | 10.5% |
| **Building synergies with the EU Research FP** | 3.9% | 4.7% | 3.5% |
| **Promoting innovation and knowledge transfer** | 20.6% | 12.9% | 24.6% |
| **Best-practice dissemination** | 4.9% | 8.2% | 1.8% |
| **Encouraging collaboration between research and industry** | 15.7% | 25.9% | 15.8% |
| **Developing commercial opportunities for research products** | 12.7% | 11.8% | 12.3% |
| **Supporting SMEs and local and regional development** | 10.8% | 3.5% | 15.8% |
| **Other** | 2.0% | 1.2% | 3.5% |
| **Total** | 100.0% (N=102) | 100.0% (N=85) | 100.0% (N=57) |

Comparing organisations and the population as a whole (in the business sector), again a lower share of both small and large organisations expect the EIT to bring academic added value. It can also be seen that, compared with all respondents, a larger share of companies expect the EIT to bring added value in terms of industrial impact (in particular SMEs) or best-practice dissemination (in particular large companies).

**Table 56 -** Relative preferences of business sector organisations regarding the EIT's added value, by type of company (compared to all respondents — aggregated):

| Added value | Small | Large | Others |
|---|---|---|---|
| **Academic impact** | -19.7 | -16.8 | 1.3 |
| **Industrial impact** | 14.4 | 5.9 | -2.9 |
| **EU FP synergies** | 2.5 | 0.3 | 3.4 |
| **Best practice** | 1.5 | 11.8 | -1.8 |
| **Other** | 1.3 | -1.2 | -0.1 |

## 5.3. Structure

The respondents were asked "*Which type of institutional format would best allow the EIT to achieve these goals?"*. Five multiple-choice options were offered:

- single institution
- small network (4-6 institutions)
- large network (15-25 institutions)
- label (without a formal requirement for networking)
- other.

This question is one where there seems to most disagreement. In fact, no clear preferences are discernible from the replies.

In general, assuming that the first two options favour a more integrated structure, while the others tend more to a less integrated structure, **it seems that more integration is relatively preferred**.

**Table 57 -** Distribution of responses regarding the EIT's structure:

| Structure | % of responses |
|---|---|
| **Single institution** | 26.0% |
| **Small network** | 29.2% |
| **Large network** | 24.0% |
| **Label** | 12.0% |
| **Other** | 8.8% |
| **Total** | 100.0%<br>(N=741) |

Geographical location seems to make no particular difference, except for the high preference given to a small network by Eastern countries and the preference for a single institution in the countries of Central Europe. It should also be noted that a noticeable proportion of Central and Northern European respondents favour "other" structures, i.e. none of the first four options offered.

**Table 58 -** Distribution of responses regarding the EIT's structure by geographical region:

| Structure | Southern | Central | Northern | Eastern | Candidate and other countries |
|---|---|---|---|---|---|
| **Single institution** | 28.7% | 30.0% | 22.5% | 23.6% | 20.0% |
| **Small network** | 23.7% | 22.0% | 25.4% | 44.2% | 21.5% |
| **Large network** | 26.3% | 17.0% | 21.1% | 21.2% | 36.9% |
| **Label** | 14.5% | 12.0% | 14.1% | 7.2% | 13.9% |
| **Other** | 6.8% | 19.0% | 16.9% | 3.8% | 7.7% |
| **Total** | 100.0% (N=296) | 100.0% (N=100) | 100.0% (N=71) | 100.0% (N=208) | 100.0% (N=66) |

While individuals seem to prefer a more integrated structure (59% chose a single institution or a small network), organisations do not have a clearcut preference (44% prefer one of the more integrated structures, 41% prefer one of the less integrated structures, and 14% prefer some other structure).

**Table 59 -** Distribution of responses regarding the EIT's structure by individuals versus organisations:

| Structure | Individuals | Organisations |
|---|---|---|
| **Single institution** | 29.70% | 16.7% |
| **Small network** | 29.70% | 27.8% |
| **Large network** | 22.93% | 26.8% |
| **Label** | 10.90% | 14.8% |
| **Other** | 6.77% | 13.9% |
| **Total** | 100.0% (N=532) | 100.0% (N=209) |

The following table shows that organisations, whatever their region, prefer the most integrated structures much less than individuals: they have a relative preference for "other" structures (Central Europe), the small network (Eastern countries), the large network (candidate and other countries) or the label option (Northern countries).

**Table 60 -** Relative preferences of organisations regarding the EIT's structure, by geographical region (compared to all respondents):

| Structure | Southern | Central | Northern | Eastern | Candidate and other countries |
|---|---|---|---|---|---|
| **Single institution** | -3.7 | -16.7 | -7.4 | -13.8 | -8.89 |
| **Small network** | -1.4 | 0.2 | -4.1 | 11.9 | -10.43 |
| **Large network** | 2.8 | 3.0 | 3.1 | 0.8 | 13.08 |
| **Label** | 3.5 | -0.9 | 7.1 | 0.1 | 2.82 |
| **Other** | -1.2 | 14.4 | 1.3 | 1.0 | 3.42 |

The business sector is much more interested in a more integrated structure than the public sector. The research and education sector lies somewhere in the middle.

**Table 61 -** Distribution of responses regarding the EIT's structure by main sector of activity:

| Structure | Research and Education | Public | Business | Others |
|---|---|---|---|---|
| **Single institution** | 26.6% | 23.6% | 27.8% | 17.9% |
| **Small network** | 28.3% | 27.4% | 36.1% | 17.9% |
| **Large network** | 25.5% | 21.8% | 18.8% | 32.1% |
| **Label** | 12.5% | 13.6% | 9.0% | 10.7% |
| **Other** | 7.0% | 13.6% | 8.3% | 21.4% |
| **Total** | 100.0% (N=470) | 100.0% (N=110) | 100.0% (N=133) | 100.0% (N=28) |

Organisations, especially those from the business sector, support more integrated structures, followed, in decreasing order of preference, by those from the public sector and the research and education sector. Very few research organisations favour a single institution, while a significant proportion of organisations in the business and the public sectors prefer "other" structures.

**Table 62 -** Distribution of responses from organisations regarding the EIT's structure by main sector of activity:

| Structure | Research and Education | Public | Business |
|---|---|---|---|
| **Single institution** | 11.3% | 22.0% | 22.7% |
| **Small network** | 31.1% | 20.3% | 29.5% |
| **Large network** | 31.1% | 25.4% | 18.2% |
| **Label** | 16.1% | 15.4% | 11.4% |
| **Other** | 10.4% | 16.9% | 18.2% |
| **Total** | 100.0%<br>(N=106) | 100.0%<br>(N=59) | 100.0%<br>(N=44) |

The table below presents the differences between the distribution of responses from organisations and the distribution for the overall population.

**Table 63 -** Relative preferences of organisations regarding the EIT's structure by main sector of activity (compared to all respondents):

| Structure | Research and Education | Public | Business |
|---|---|---|---|
| **Single institution** | -15.3 | -1.6 | -5.1 |
| **Small network** | 2.8 | -6.9 | -6.5 |
| **Large network** | 5.6% | 3.6 | -0.6 |
| **Label** | 3.5 | 1.6 | 2.3 |
| **Other** | 3.4 | 3.3 | 9.9 |

Individuals from the research and education sector have a strong relative preference for a single institution compared to individuals from other sectors. Along with students and student organisations, they in general favour more integrated structures than individuals from the public sector.

**Table 64 -** Distribution of research and education sector responses (individuals and organisations) regarding the EIT's structure, by type of occupation:

| Structure | Private research and education | Public research and education | Students and student organisations | Others |
|---|---|---|---|---|
| **Single institution** | 33.3% | 25.9% | 28.9% | 26.7% |
| **Small network** | 33.3% | 27.0% | 38.5% | 20.0% |
| **Large network** | 18.6% | 25.7% | 25.0% | 26.7% |
| **Label** | 11.1% | 13.9% | **3.8%** | 13.3% |
| **Other** | 3.7% | 7.5% | 3.8% | 13.3% |
| **Total** | 100.0% (N=27) | 100.0% (N=374) | 100.0% (N=52) | 100.0% (N=15) |

Among businesses, a larger share of large companies prefer more integrated structures than SMEs.

**Table 65 -** Distribution of responses regarding the EIT's structure, by type of business organisation:

| Structure | Small | Large | Others |
|---|---|---|---|
| **Single institution** | 21.8% | 37.0% | 25.0% |
| **Small network** | 34.9% | 41.3% | 31.2% |
| **Large network** | 23.6% | 10.9% | 21.9% |
| **Label** | 12.7% | 6.5% | 6.2% |
| **Other** | 7.3% | 4.3% | 15.7% |
| **Total** | 100.0% (N=55) | 100.0% (N=46) | 100.0% (N=32) |

## 5.4. Identifying Priorities

The respondents were asked "*How should the EIT organise its teaching/research/transfer activities?"* Five multiple-choice options were offered:

- issue-driven (problem-oriented, investigating for example: wind power generation, avian influenza, low-fuel vehicles, urban rejuvenation projects);
- discipline-oriented (academic fields such as: physical sciences, biochemistry, engineering, architecture and planning, etc.);
- thematically organised (trans-/interdisciplinary fields such as 'green energy', 'environment and health', 'sustainable transport', 'sustainable communities', etc);
- industrial or economic sector-oriented (such as energy providers, medical research and pharmaceuticals, automobile and aviation manufacturing, building and construction),
- other.

**Thematic (trans-/interdisciplinary) orientation is the most popular option**, followed by issue-driven and then discipline- and industry-oriented.

**Table 66 -** Distribution of responses regarding the EIT's priorities:

| Priority | % of responses |
|---|---|
| **Issue-driven** | 24.1% |
| **Discipline-oriented** | 14.8% |
| **Thematically organised** | 37.1% |
| **Industry-oriented** | 14.9% |
| **Other** | 9.1% |
| **Total** | 100.0% (N=741) |

There is no relevant difference here between regions or between individuals and organisations.

While thematic orientation is the option most frequently chosen by all sectors, it is much more popular among respondents from the public sector than in other sectors. While both the research and education sector and the business sector emphasise the issue-driven approach, the former also stresses disciplinary orientation while the later stresses industrial orientation. **Again, it can be seen that business and science do not fully agree in their preferences**.

**Table 67 -** Distribution of responses regarding the EIT's priorities by main sector of activity:

| Priority | Research and Education | Public | Business | Others |
|---|---|---|---|---|
| **Issue-driven** | 24.7% | 17.3% | 28.6% | 17.9% |
| **Discipline-oriented** | 17.7% | 10.0% | 7.5% | 21.4% |
| **Thematically organised** | 38.1% | 44.5% | 30.1% | 25.0% |
| **Industry-oriented** | 10.4% | 16.4% | 28.6% | 21.4% |
| **Other** | 9.1% | 11.8% | 5.2% | 14.3% |
| **Total** | 100.0% (N=470) | 100.0% (N=110) | 100.0% (N=133) | 100.0% (N=28) |

The table below gives the distribution of responses from organisations by main sector of activity:

**Table 68 -** Distribution of responses from organisations regarding the EIT's priorities, by main sector of activity:

| Priorities | Research and Education | Public | Business |
|---|---|---|---|
| **Issue-driven** | 20.8% | 22.0% | 34.1% |
| **Discipline-oriented** | 17.0% | 8.5% | 6.8% |
| **Thematically organised** | 39.5% | 45.8% | 27.3% |
| **Industry-oriented** | 8.5% | 10.2% | 25.0% |
| **Other** | 14.2% | 13.5% | 6.8% |
| **Total** | 100.0% (N=106) | 100.0% (N=59) | 100.0% (N=44) |

The private research and education sector attaches higher importance to themes and less to disciplines. Students and student organisations as well as the public research and education sector stress disciplinary orientation. Here, the views of the public research and education sector are more conservative than those of the private sector.

**Table 69 -** Distribution of responses from individuals and organisations in the research and education sector regarding the EIT's priorities, by type of occupation:

| Priority | Private research | Public research | Students | Others |
|---|---|---|---|---|
| **Issue-driven** | 33,3% | 23.3% | 30.8% | 26.7% |
| **Discipline-oriented** | **7.4%** | **18.7%** | **19.1%** | 6.7% |
| **Thematically organised** | 40.7% | 38.2% | 30.8% | 46.7% |
| **Industry-oriented** | 7.4% | 9.6% | 17.4% | 13.3% |
| **Other** | 11.2% | 10.2% | 1.9% | 6.6% |
| **Total** | 100.0% (N=27) | 100.0% (N=374) | 100.0% (N=52) | 100.0% (N=15) |

While research and education sector respondents active in the social sciences attach much higher importance to themes than to disciplinary orientation, those active in the technical sciences have a less clearcut preference for any particular priority and put more emphasis on "other" options.

**Table 70 -** Distribution of responses from individuals and organisations in the research and education sector regarding the EIT's priorities, by research field:

| Priority | Social sciences | Engineering | Life and natural sciences | Technical sciences (life and natural sciences + engineering) | Widest scope (nearly all disciplines are covered) | Others |
|---|---|---|---|---|---|---|
| **Issue-driven** | 23.3% | 29.4% | 26.2% | 20.0% | 17.1% | 23.9% |
| **Discipline-oriented** | **6.7%** | 17.4% | 29.1% | 24.4% | 11.4% | 7.5% |
| **Thematically organised** | **48.9%** | 31.5% | 31.9% | 26.8% | 48.6% | 47.8% |
| **Industry-oriented** | 12.2% | 15.2% | 8.5% | 4.4% | 2.9% | 13.4% |
| **Other** | 8.9% | 6.5% | 4.3% | 24.4% | 20.00% | 7.4% |
| **Total** | 100.0% (N=90) | 100.0% (N=92) | 100.0% (N=141) | 100.0% (N=45) | 100.0% (N=35) | 100.0% (N=67) |

The public sector in general gives a very low priority to disciplines. EU cooperation bodies strongly emphasise themes, while research bodies emphasise issues.

**Table 71 -** Distribution of public sector responses regarding the EIT's priorities, by type of activity:

| Priority | Education / Research | EU cooperation | Research, diverse | Research and EU cooperation | EU cooperation, diverse | Others |
|---|---|---|---|---|---|---|
| **Issue-driven** | 25.0% | 0.0% | 7.1% | 30.0% | 15.4% | 17.6% |
| **Discipline-oriented** | **0.0%** | **0.0%** | 17.9% | 5.0% | 30.8% | **2.9%** |
| **Thematically organised** | 33.3% | 66.7% | 57.1% | 30.0% | 30.8% | 50.0% |
| **Industry-oriented** | 16.7% | 33.3% | 14.3% | 10.0% | **23.2%** | 17.7% |
| **Other** | 25.0% | 0.0% | 3.6% | 25.0% | 0.00% | 11.8% |
| **Total** | 100.0% (N=12) | 100.0% (N=3) | 100.0% (N=28) | 100.0% (N=20) | 100.0% (N=13) | 100.0% (N=34) |

## 6. QUALITATIVE ANALYSIS

### 6.1. Goal: to complement and integrate the quantitative data

This chapter analyses the free-text responses received in the public consultation, both directly through the 741 on-line questionnaires and indirectly through 22 position papers sent outside the on-line consultation. The goal of this analysis is two-fold. On the one hand, it aims to complement the quantitative analysis by providing additional, in-depth information on the reasons and motivations behind the trends highlighted in the previous section. Second, it aims to capitalise on the wealth of insights and ideas provided by respondents on the nature and causes of EU gaps and on the mission and objectives of the EIT and how these should be accomplished. These views do not necessarily represent the Commission's analyses of EU challenges, which are presented in other Commission papers.

### 6.2. Method

The free-text analysis was performed using the following method. A first reading was made of the responses to the questionnaire. For each questionnaire, the main profile categories were determined (e.g. small business), and recurring concepts identified in a bottom-up fashion (no predetermined concept list). The list of concepts obtained was then divided into main categories or themes. Since most respondents commented on the knowledge gaps in the EU, the first theme thus concerns the EU gaps. Regarding the EIT itself, since the responses concerning the desired mission and expected added value, on the one hand, and those concerning the structure and priorities, on the other, are each closely connected, the EIT concepts are divided into two main themes: the role and mission of the EIT and the configuration of the EIT.

Based on these concepts and themes, a second reading was performed for each answer (e.g. mission of the EIT) and the results were compiled.

For each identified theme, examples of responses are given. There are a large number of examples so that readers can form their own opinions about emerging themes and concepts. Texts are cited as they are. Only misspellings and grammatical errors have been corrected.

### 6.3. Analysis: emerging concepts and themes

The large majority of responses seem positive towards the idea of an EIT. At first glance, the EIT brand and image (resembling the Massachusetts Institute of Technology — MIT concept) seems to attract attention and capture the imagination. Moreover, only a few questionnaire responses and position papers were explicitly negative. As said in the disclaimers section, however, the positive attitude may be due to the fact that the questionnaire does not explicitly ask if an EIT is needed. For this reason, the present analysis does not pass any direct or quantifiable judgment on positive versus negative attitudes. Rather, it confines itself to determining that a general positive attitude exists, regardless of how this came about. Further, as said above, its main goal is to present the wealth and variety of ideas and opinions provided through the consultation. Thus, the following sections will attempt to provide a review of these. Annex 1 contains a review of the negative arguments, together with examples of explicitly positive responses.

The language used in responses is always English, apart from a few questionnaires completed in French, German or Italian.

### *6.3.1. European gaps and needs*

There is a general agreement that the main gap as regards the EU's ability to compete on the global stage is in the **weak link and integration between science and society**, including the economy

*What is lacking in society is the transfer of knowledge from research to industry and economy.*

On the other hand, the origin of such a gap can be identified in different places. As in the following statement, the gap can be seen on both the **supply** and **demand** side.

*Europe is not lacking creative minds or ideas, nor good education and research, but rather a rapid and effective flow of knowledge from basic research, via applied R&D, to practice, and a counterflow of experience, expertise and demand for further knowledge.*

#### 6.3.1.1. Supply side

For some, the science-society gap is mainly rooted on the supply side, i.e. the EU's knowledge production system (in particular research and education) is unable to deliver or market proper **knowledge products**.

*In my opinion Europe is failing to market the results of research, particularly research funded by the public sector. Unless we change the path, the scheme is not sustainable in the long term.*

From this perspective, two main positions emerge as regards the type of knowledge production gaps that need to be addressed.

*1. Lack of fundamental research*

Some respondents question the so-called EU paradox (EU performs excellent science, but lacks transfer capacity), stating that **science is not excellent enough**: according to them, although the average quality and quantity of research products is good (publications, researchers, universities), few are able to compete in the highest segment.

*Higher education policy in EU Member States has often focussed on and successfully achieved affordability and accessibility of higher education. Yet its (broad) policy goals may have come at the expense of Europe's global competitiveness in research and education at the absolute top of the scientific ladder.*

The underlying idea is that scientific excellence produces **knowledge spillover effects** basically through the attraction of talent.

*Top universities are made out of a culture of excellence, working environment, working methods, own identity, commitment of the members of the community, enthusiasm and striving for continuous development. These centres of excellence could attract the "best brains" all over the world to Europe, which would speed up and cultivate innovation processes, ... boosting the economic development of Europe.*

This in turn will have an impact on the economy by generating new products and businesses.

*Excellence in research and education is a key issue in achieving sustained economic growth, competitiveness and innovation…. The economic benefits of science are very real. For an average firm, 5 articles co-authored by an academic star and the firm's scientists result in about 5 more products in development, 3.5 more products on the market, and 860 additional employees. And this talent need not only come from within the EU.*

In fact, **people** are the real carriers of knowledge, rather than formal technology transfer processes.

*Technological transfers need a carrier (usually students and staff) and students and staff are, if mobile, the only chance to avoid duplication of research.*

As a consequence, science must be less concerned with narrowly focused societal issues that may quickly change, but rather be more **investigator-driven**.

*With a good and solid know-how base, engineers and scientists can tackle any problem, as problem solving and finding innovative solutions is domain independent (but not technology independent).*

Moreover, science must be **autonomous**, in the sense that the criteria for selecting and evaluating priorities and membership should be based solely on scientific excellence.

*The quality of the student and scholar population at the world's top institutions is ensured by a rigorous and highly selective admission process. …. The selectiveness of programmes, apart from ensuring the quality of the student and scholar population, also generates prestige, brand name and credibility for the institution.*

*Free research is the optimal "playground" for junior scientists to develop a format of the highest international quality.*

For these respondents, the **US is leading** since it pays much more attention to research and the education of researchers.

*As shown by the best practice of successful universities in the US, the best research atmosphere is created where a large number of gifted students - who deliberately choose a renowned university in the speciality they are going to study - are integrated at various stages of their studies (undergraduate, master, PhD) in the research.*

Accordingly, some underline that the lack of excellence lies in the inappropriate **institutional format** that governs universities or the research sector in general.

*European universities have large student populations, are rarely selective in student admission, receive significantly less funding for research and education, are subject to significant state regulation, pay much lower salaries to their staff, are generally not permitted to charge tuition fees, and largely serve a national student population.*

*2. Lack of applicability*

From another viewpoint, some do believe in the **EU paradox**, stating that Europe is not failing in doing first-class science but rather falls down in transferring knowledge from the academic environment to society.

*The excellent results in European research and teaching are not being transferred effectively beyond the walls of universities and research institutes, and cooperation with industry is not sufficiently developed.*

The main responsibility here lies on the academic side. Science is too self-absorbed, and should start to confront societal demands.

*… in Europe … the focus is still too much on pure research and academic achievements, not on entrepreneurship and future commercial developments of innovation.*

Research must understand that it must be **accountable** for the use of public money.

*It is fundamental that European higher education and research systems open up to society, providing returns to those who invest in them.*

Thus, research must be measured in terms of the market and social impact.

T*here isn't any other more efficient instrument than market value confirmation of research results.*

*…the purpose should remain the advantages to society.*

In fact, unlike for those who advocate more scientific excellence, the **US system** is superior precisely because it has a better link between science and society.

*One of the weak aspects of the academic research in Europe is the lack of contact with the industrial world. The example of Stanford University shows that the knowledge triangle is a key to developing value innovation.*

According to this view, knowledge can and should be exported from universities and re-used.

*Research is important but commerce and marketing have to take over in order to implement and use the research for economic purposes.*

6.3.1.2. Demand side

For others, the gap is not located in the quality or quantity of knowledge outputs, but rather in **the capacity of knowledge consumers** (e.g. companies, public bodies, workers) **to absorb and exploit knowledge** in ways that increase productivity and innovativeness. As a consequence, increasing the quantity or quality of knowledge will not produce any impact if EU social and economic actors are unable or unwilling to "buy" knowledge and "transform" it into development assets. On the contrary, it may help EU competitors, who may directly benefit from these developments. There are in fact a number of gaps located at different levels. In general, a distinction can be made depending on whether these gaps are seen as **soft or hard**. From the first perspective, the weak capacity of EU knowledge consumers to absorb knowledge is rooted in a lack of values, dispositions, attitudes, skills and competences. For example, the lack of an **entrepreneurial culture** and skills prevents researchers from becoming users of their own knowledge and hence active stimulators of demand.

*Training should prepare students to be professionals and entrepreneurs. The 'valorisation' of research through spin off or technology transfer should be addressed in the whole curriculum.*

Moreover, the lack of **risk propensity** prevents entrepreneurs from starting highly innovative businesses, which usually rely on fundamentally new scientific discoveries.

*Innovation is not a matter of just providing more funding. It is essentially the result of a culture that is stimulating individuals to take risks (intellectual as well as economic). Hence, more R&D institutes will not necessarily mean more growth if the innovation finds no fertile grounds afterwards. Hence, we also need an entrepreneurial culture (and that's why e.g. Silicon Valley was such a success).*

Taking a different view, other respondents argue that demand side gaps are rooted in much more **structural issues**.

*Europe's problem is not yet that we don't have enough R&D or education, but that we have stifling bureaucrats and pay up to 200% tax on our labour. With 50% of the economy being in the hands of governments, we have a situation whereby Europe as a whole is economically inefficient. This comes down to an economic loss of about 25% of the combined GNP and results in less long term investment, emigration of talent, outsourcing of labour and production, etc. The counter-example is Ireland.*

Some, as above, underline that **overregulation** leads to a bureaucratic or less open system. In contrast, others stress a **lack of regulations** (such as an EU patent) to support and protect the use of new knowledge.

*One of the strengths giving USA markets an advantage over the EU is the intra-American mobility of staff and students; one country - one goal and the absence of bureaucratic issues like employment barriers or communication and language issues.*

#### 6.3.1.3. The boundary between science and society

Many underline that the problem lies at the **boundary between science and society**. That is to say, science is unable to understand or speak to society just as the latter is unable to understand or speak to the former.

*Our industry suffers from lack of transfers from laboratories, research institutions to industrial developments. This is due to the mental barriers and historic separation between academia (sponsored by government) and industries that are traditionally risk adverse and not used to practicing R&D.*

Such a gap between science and society takes concrete form in the frequently reported **linguistic and cognitive barriers** that prevent scientists and social actors from crossing the boundaries that divide them. In the first case, science and society speak two different languages.

*The Universities are not able to transfer their innovations to SME - they speak a "different language".*

In the second, science and society are unable to understand what the other is about.

*The main challenge is to bring together investors / industrialists / entrepreneurs and researchers and make them understand one another.*

As a consequence, new skills must be provided in order to train those who could play the role of **boundary spanners**.

*Our experience is that most researchers and academics are not well suited to be successful in commercial management and exploitation. Needs: more entrepreneurial drive and opportunity management skills … the challenge is to bridge the 2 cultures.*

#### 6.3.1.4. Lack of critical mass and fragmentation

Related to the structural gaps, but cutting across both demand and supply, is the lack of **critical mass**. The lack of size and concentration of resources is the weak point.

*Current technology transfer practice in Europe is so fragmented and fragile that it lacks critical mass to accomplish its transfer goals or to be attractive for industry. As a result, even research and even education functions suffer in their own mission as they are too much disconnected.*

Critical mass issues are two-fold. On the one hand, it is a problem of **size and specialisation**: the EU lacks concentrated specialised resources in some core areas of development. That is to say, science has not enough mass in some investigation areas.

*The world's top universities have achieved this by meeting four essential requirements, namely access to world-class research facilities, concentration of faculty talent, concentration of student talent, and concentration of financial resources.*

However, such a concentration also requires **financial resources**, because the best resources come at a premium price.

*Since Louis XIV and his Observatoire Royal, through the Manhattan Project, to Kennedy's space race, the historic lesson should be learnt by now: Europe must concentrate scientific excellence and hire the best professionals at premium price.*

From the business perspective, companies (in particular **SMEs**) do not have the size to perform R&D activities properly.

*The need to support SMEs is imperative because even though SMEs constitute the vast majority of European enterprises, they are lagging behind (compared to large enterprises) in engaging in research but also in commercially exploiting the results of research for a variety of reasons, such as lack of information, lack of funding, lack of support and assistance, etc.*

The issue of scale leads to the issue of **funding gaps**. Resources for R&D are not sufficiently concentrated, either by topic or by organisation, in either the research or the business sector. By contrast, in the US, the majority of funding goes to a fairly small number of research institutions.

*Top universities in the US receive significantly more funding than those in Europe. First, the EU only spends 1.2% of GDP on higher education as against 2.6% in the USA. Second, whereas Europe's 4000 universities receive fairly evenly distributed research funding, in the US 95% of federal university research funding (representing 60% of total US university research) is spent in no more than 200 universities (out of the US total of 3300). This has resulted in research excellence in a number of knowledge "gravity centres"….. Caltech and MIT have significant resources with operating revenues of $0.4 and $1.7 billion and assets and endowed funds of $2.0 and $5.2 billion dollars, respectively. The interest on such funds alone is already more than the budget of many European universities.*

In the EU, **private funding** of research is too low, as are tuition fees, thus prompting the need to heavily subsidise research by means of public spending.

*For example, apart from research funding and public financial support, US institutions generate substantial revenue through private donations (9% of total revenue) and student enrolment (33% of total revenue) with tuition fees of around $20-30 000 per annum at top universities.*

For some, the lack of critical mass is due to the geographical, institutional, organisational and political diversity of the EU landscape, leading to **fragmentation**. Geographical diversity poses issues of physical proximity, which is important for performing complex tasks (such as those related to R&D).

*The physical proximity of top universities, companies and public R&D centres is likely to promote innovativeness (Castells 1996).*

**Institutional diversity** implies diverse rules and selection/evaluation criteria applied by different organisations. Given the typical resistance to change associated with institutionalised practices, the goal of improving or at least harmonising the work of people belonging to different institutional settings seems quite difficult. **Organisational diversity** leads to problems in matching the interests of different organisations that may have different or even conflicting goals.

*If we continue to fragment resources of higher education and research in Europe by only aiming to share the cake equally among all institutions, in the long run, the cake diminishes or even disappears.*

Therefore, EU needs more **coordination** as far as research and education policy-making is concerned.

*Long term research needs one leader to decide in which general direction we should go. Now there is a lack of direction because Europe is like that: there is more than one leader. Let's make an independent Community Research Institute. There is one body in charge of money, the European Central Bank, why not for science?*

### *6.3.2. Role and mission of the EIT*

As confirmed by the quantitative analysis, the great majority of respondents indicate that the mission of the EIT should be the **knowledge triangle**, i.e. integrating research, education and innovation.

*An EIT can have a role in linking research, teaching and technology transfer, involving all players and contributors to innovation including universities, non-university research centres and small and large companies. Only the combination of*

*research, teaching and technology transfer can have a long-lasting influence since they are complementary and all of them together have the opportunity to multiply the effort by influencing each other.*

Within this general approach, a series of important distinctions need to be made. A first reading suggests that the triangle underlines the need, expressed by the majority of respondents, to focus not on "corners" but rather on **boundaries or connections**; that is to say, the real issue is the capacity to establish new forms of dialogue and connection between these traditionally separated worlds. Accordingly, the mission of the EIT should be one of creating bridges between them.

*Innovation is all about crossing borderlines. So we should avoid traditional frames and categories. Challenging crossborder subjects will help.*

However, the additional comments often indicate that behind the triangle there are a range of **alternative interpretations** as to which is the "weak corner" and how the EIT could add value in strengthening it. In these cases, the knowledge triangle is chosen even when another option would seem more suitable in the light of the free-text response. In the following example, although the triangle is selected, commercial exploitation seems to be the more appropriate choice.

*The knowledge triangle would be a way of promoting an interaction through which teaching could incorporate access to and participation in state of the art research, together with technology transfer specialists trying to ensure the development of a culture in which research results are commercialised with a higher volume and quality through the routes of licensing and spinning out of companies. In teaching, curricula could be designed to involve modules in technology transfer and entrepreneurship, with a view to graduates and post-graduates across all disciplines being prepared for effective work in the European market.*

In general, it seems that three major positions can be singled out.

6.3.2.1. The science-based triangle

For some, in particular for individual researchers, the EIT should be the cornerstone of a **science-based triangle**. Thus, assuming an EU gap in terms of scientific excellence, the EIT should strengthen EU research and research training capacities in order to produce a wider impact.

*Specific conditions must be provided to develop the "best brains" and to produce top quality research…. The Mission of the EIT should therefore rest on two strategic elements: a) a strong focus on Doctoral and Postdoctoral Programmes with the aim of a dynamic Human Resource Development and by establishing liaison structures with appropriate existing institutions b) to prioritise Free Research in fields which are intrinsically related to the priority areas of the 7th Framework and subsequent Programme(s) and beyond… Resource Development will not fail to create a strong impact on applied R&D and on the creation of a generation of forceful researchers.*

From this perspective, **science cannot be managed as a business**, as universities are universities: the gap is a perfectly normal difference between two different things.

*Let the universities be the universities (training included). EIT must be focused on research, looking at innovation, but also basic research (mathematics for example).*

In this view, **education** should be a fundamental EIT activity since it is an intrinsic part of research (in particular postgraduate study, but not only this).

*The ability to attract the highest quality of undergraduate students, graduate students, and postdoctoral scholars is an essential defining feature shared by the world's top universities. Top student talent is the backbone of the institution's research activities.*

Where this does not happen, research suffers greatly.

*XXX is a public research institute with very few contacts at university level. This is a disaster for the research level because you need young and brilliant minds to improve the quality of research.*

In fact, through education, new young researchers bring new ideas to established researchers and, in turn, learn from scientists the practice of science.

*We cannot separate research from higher education in technical sciences, so students and academic staff should also be in close contact with the highest quality research and applications (technology transfer).*

Moreover, as said above, students will one day become either the new generation of scientists….

*The teaching of young people helps research to understand and solve the problems of the world, at the same time growing a new generation of "technicians".*

… or innovators who disseminate knowledge in society.

*Without interaction of research and teaching new knowledge and innovations are not disseminated and cultivated further in society.*

Moreover, this exchange becomes particularly relevant where talented students and researchers are concerned. Here, some respondents underline a **virtuous circle** whereby talented students attract talented researchers, who in turn attract talented students.

*Top students attract top professors, and on the other hand, top researchers attract top students. This is a reinforcing positive cycle….*

From a different perspective, the virtuous circle of excellence is envisaged at institutional or organisational level. The EIT as a **reference model** may encourage the revision and renewal of existing governance rules (such as recruitment, funding policies, etc.).

*The success of the EIT could even boost the willingness of EU member states and companies to increase funding of higher education and research in general.*

From this organisational perspective, there is an expectation that other organisations, such as universities and research centres, will try to imitate the EIT, thus renewing their strategies, structures and processes.

*The EIT could be developed around these key concepts and serve as a model for an in-depth reform of European academic institutions.*

In general, this model role will be also facilitated by **mobility**, since EIT talent moving to other organisations will take with them their knowledge of the EIT model.

Regarding **transfer**, as noted above, this will follow naturally from excellence.

*We believe that commercial exploitation will follow naturally for good ideas, and does not need a specially crafted institute to flourish. That is why we do not think that "commercial exploitation" and "technology transfer" should be declared primary objectives of the EIT, but should come as consequences of a well-implemented EIT.*

Such an impact will be exerted not just on companies but on the research system itself, which, through the circulation (mobility) of talent, will learn new scientific practices.

*Having a top-level research institution in Europe is beneficial to all the universities and research centres in all countries, because it provides an opportunity for promising young researchers to develop their potential and then fertilise the local institutions where they are called to hold subsequent positions.*

If there is a **bidirectional movement of talent** between science and industry, transfer will occur since each part of the chain will have people able to communicate with one other. Companies will be more able to understand and influence the direction of research, while research institutions will be able to view business as a source of valuable research opportunities.

*The best students and researchers, if they continue their career in the profit-oriented sectors of the economy, will become decision-makers at their employers, and naturally will signal back to their universities, which they know, what are the current needs of industry, thus constituting a living link between the academic and industrial spheres.*

In this case, transfer happens at the beginning of investigation, not after as in traditional technology transfer approaches. The EIT will thus promote and strengthen a new class of **innovation professionals**.

6.3.2.2. The business-based triangle

For another group of respondents, the EIT should be the cornerstone of a **business-based triangle**. In other words, the weak corner is the capacity to transform science into commercial results and this is where the EIT should contribute.

*With a European Commission geared to the best research in the world, we need exploitation to ensure the funding is not wasted and with so many SMEs this can be an obtainable target. The knowledge triangle with a commercial focus on exploiting research would also work.*

This position seems to be taken by those respondents who believe that the main problem lies in the so-called European paradox (excellent research but weak transfer). Thus, if the EIT focuses on science it would only **duplicate** existing capacities.

*Because even though much of Europe's research is first class, the majority of European researchers, institutions and companies have not been as effective as their competitors in using the results of this work to develop commercially viable products and services. We believe that the focus on education / teaching/ training is provided by an abundance of other institutions in the EU (including universities / academic institutions) and focusing the EIT on these areas would only duplicate things.*

This position assumes a gap on the supply side in terms of the application of research results (more diffused). As a consequence, the EIT would be an **applied research centre**, where private companies, and in particular SMEs, can "outsource" R&D activities. Moreover, **education** here plays a minor role.

*I think that education is already provided by universities and there is no need to fund specific teaching programmes at European level. Training on the job is given by exchange programmes but they are organised on purpose.*

For others, it would be a sort of **marketing structure** focused on commercialising research results.

*EIT would focus on making business out of research, which is one of the European weaknesses.*

As seen above, others assume that the gap is on the demand side, stating that companies lack the culture, size, etc, to make good use of knowledge products. Here, the EIT would be a capacity builder contributing to societal change through, for example, advanced forms of **training** targeted to companies and businesses.

*This Institute should direct its first efforts to the specific training requested by companies in order to be able to improve their production systems.*

Of course, EIT training activities should also target researchers, but not as a means to improve their research. Rather, training is where they acquire those **complementary skills**, such as project management, risk management, or intellectual property management, that are needed to have a better understanding of how to apply science. Through these skills, they will be able to orient their research agendas towards more concrete results and, moreover, to become owners of their own developments. That is to say, they can become entrepreneurs.

*The EIT should help in allowing technology transfer to companies, also funding temporary company positions for academic researchers willing to contribute in person to technology transfer.*

In general, the idea is for education to focus on creating a class of "entrepreneurial researchers".

*Curricula could be designed to include modules in technology transfer and entrepreneurship, with a view to preparing graduates and post-graduates across all disciplines for effective work in the European market.*

In both cases, **technology transfer** is meant literally: a process by which technological knowledge is codified so that it is understandable and applicable in a business context. Consequently, the EIT should establish processes and dedicated structures in order to improve the direct transfer of knowledge to society.

6.3.2.3. A complement to the research-based triangle

This position is a kind of combination of the previous two. Basically, it assumes the gap in the research-based triangle (lack of excellence), but does not automatically call for the EIT to play a role in filling it. In fact, it argues that excellence should be pursued by **strengthening existing institutions**, while the EIT should play a complementary role in **bridging the "last mile"** that connects science to society. This position seems to be particularly represented by those who express more doubts about the need for such an initiative.

*Education and research training does not need the EIT - these activities happen in existing institutions and cross-border mobility is well-supported.*

From this perspective, the EIT should focus neither on research nor on research training, but can play a "last mile" role in supporting **networking** and collaboration between research institutions.

*A key contribution for the EIT would be to help identify such challenges and help research networks to get together in order to focus on specific themes. At the same time, the EIT should keep a watching brief for the progress of science itself, identifying areas where progress can be accelerated and technologies whose time is approaching ripeness*

On the other hand, it could also play a role in complementary **training** and, more importantly, in **technology transfer**. In this regard, however, its role seems quite limited, since it is portrayed as providing a service to help businesses and universities to improve processes such as patenting or managing research projects. In these cases, the "last mile" is the one that connects a good research result to the business context in order to start the process of its exploitation.

*It could provide scientific and technical services and expertise to industry. I also believe that it's essential to educate new scientists and engineers using up-to-date education methods, who would possess a complete applied technical knowledge.*

6.3.2.4. Other perspectives for the role of the EIT

Additional aspects are mentioned regarding education, commercial exploitation and the link with existing programmes.

Education

As highlighted by the quantitative analysis, **education alone** is not identified as a mission or added value in itself.

*Teaching and knowledge is important, but there is a lot happening in this area already, including the learning & skills councils, and we run the risk of overload & confusion.*

But this does not mean that education is perceived as not relevant. Rather, it is underlined that it should not be addressed as an issue per se, but in conjunction with other goals ranging from excellence in research (training of researchers) to imparting, as noted above, new complementary and boundary-spanning skills (educating researchers to be entrepreneurs or entrepreneurs to understand research). In the first case, as already noted, the focus is more on **postgraduate** and even post-doctoral studies.

*About the possibility of training master's students and doctoral candidates, I think that there are many programmes with this objective in Europe so the European Institute of Technology must be one way for all the post-doctoral researchers to continue their choice, in order to increase the level of knowledge that the EIT will have.*

Nonetheless, some underline the need to focus on undergraduate studies as well.

*We strongly believe that teaching of master's and indeed undergraduate students in higher education institutions should not be undermined as it is also essential that world class research can be effectively disseminated and used in teaching students who may pursue research careers.*

In addition, as already noted, the focus of the EIT would be on fostering boundary-spanning roles and skills by means of **new methods and contents**. In this regard, many underline that education for researchers should be inspired by new philosophies: issue-driven, based on success stories or cases, and participatory.

*I feel that technological development will continue to stress innovative, creative problem-solving skills in education (with decreasing importance of traditional "tool-training" education)*

*Educational research is important for improving the quality of teaching but should not be divorced from the delivery process and should involve the experiences & ideas of practising 'classroom' teachers.*

Similarly, education should focus on **new topics** such as intellectual property management, project management, financing or technology management.

*Teaching shall focus on important issues such as intellectual property protection, the innovation process, financing issues*

Commercial exploitation and the role of SMEs

With **commercial exploitation**, as noted above, the focus is on technology transfer processes and structures. Moreover, particular mention is made of SMEs.

*The short answer could be: this need for getting more focus on SMEs and Regions is printed in LARGE characters in the Kok report on the mid-term Lisbon strategy analysis.*

Companies, and in particular **SMEs**, are often quoted as being the missing link in the R&D value chain, although they are fundamental contributors to the EU's economic and social system.

*Lisbon cannot be reached with the big players and they go to low-cost-countries.. - SME are stable and pay the greatest part of the taxes...*

In particular, two main motivations for the involvement of SMEs can be highlighted. On the one hand, SMEs are seen as a field in which innovation and new knowledge may flourish through an intense collaboration with the academic environment. In this sense, SMEs, given their flexibility and creative attitude, can represent a valuable **experimental laboratory** for research (small is good).

*It is SMEs who are the future lifeblood of our economy. They tend to have the drive and vision of new markets and products, and the sales capability and culture to succeed. They are the bridge from pure research to commercial exploitation on a large EU scale.*

On the other hand, SMEs should be supported since their small size makes R&D too risky for them. This is why the EIT would become a kind of **R&D facilitator or provider** for SMEs.

*…provide support structures which assist (including financial assistance) the costs of small firms applying for patents (and protecting patents).*

In this sense, size is a constraint rather than an opportunity, and the final goal would be to help SMEs to **grow both physically** and culturally.

*The focus on SMEs is obvious - only by helping them grow will the European economy grow.*

The same line of thought (SMEs lack critical size) leads others to the opposite conclusions: **large-scale industries** should be involved in the EIT because they have the critical capacity to allow them to engage in risky endeavours.

*Mostly large-scale companies have the resources and infrastructure for research and its synergy with education (practice, experiments, equipment, etc.). The Latvian experience with Academic Park projects proves the benefits of academic / research and large-scale industry collaboration (e.g. in the Transport and Telecommunication Institute).*

<u>Complementarity with the EU Framework Research Programme (EU FP)</u>

As highlighted by the quantitative analysis, few respondents see complementarities with the EU FP as a key issue for the EIT. Nonetheless, some regard this as an important opportunity.

*I think that the EIT as a very special small network will complement the EU Network of Excellence (NoE) as well as the European Technologies Platform (ETP) by providing a unique and innovative type of partnership.*

In more detail, some underline that the EIT could occupy the empty space left by the fragmentation and **non-exploitation of FP results**.

*The EIT should help in creating synergies and added value from the output of existing ... research projects, issuing specific calls relating to the "composition" of the research results of previous projects. The EIT should include a high-level technical board capable of "engineering" further research objectives, given the outcome of research projects from European calls.*

As presented in more detail in Annex 1 dealing with negative comments, the relationship between the EIT and the EU FP is seen as particularly delicate since the EIT is perceived as **potentially overlapping** with or distracting attention from some important initiatives (in particular the ERC – European Research Council).

*If an EIT is established alongside an ERC, the boundaries between these two instruments have to be drawn carefully.*

### *6.3.3. The EIT structure*

This question is where there seems to be less agreement. This can be due to the variety of structural solutions that can be matched with each strategic priority and/or also to some confusion as regards the meaning of each proposed option. Moreover, it seems that the boundary between a label and a network, or even a single institution, is unclear, since some of those that want a label see it as a device to create strong connections among diverse entities around a coordinating nucleus.

*It has to be an individual institution that will be linked with the brand.*

*The label must be given by an independent body.*

On the other hand, some opting for a network underline the "labelling" value of being a node. For others, a network as such is not needed since the EU already has plenty of them. The EIT could thus be a sort of network of networks.

*Actually there are different nets and organisations related with universities and technological centres devoted to improving relationships between R+D and industry, and to promoting technology transfer: IRC, CENEMES, etc. Perhaps the EIT must work to integrate and network all the different organisations devoted to this activity and not be another institution trying to do the same*

#### 6.3.3.1. Guiding principles

From the responses to the public consultation, some guiding principles may be identified for the design of the EIT.

*1. The distribution-coordination trade-off leads to a centred network*

The majority of respondents agree that the EU landscape is characterised by **diversity** at different levels: geographical, institutional, organisational and political. Therefore, the majority tend to agree that some form of **networked structure** is the most appropriate. Given different opinions on the value of diversity, there is considerable variation in the way in which this conclusion is reached and how this structure should be implemented.

***Diversity as an opportunity: exploit local added value***

For some, diversity is an **opportunity** upon which EU could build its own differentiating factor. The diversity of languages, cultures and experiences forms the basis of an EU identity that we should strengthen.

*We so much want cultures and languages to maintain a high degree of independence while at the same time being able to interoperate across borders. That is one of the strengths of the Union.*

As a consequence, the EIT should have a structure able to exploit **local value**.

*Europe is large and diverse, and the structure should be adapted to that; we do have existing infrastructures, but not enough mobility, competition and exchange of best practice between these.*

Moreover, the network approach must ensure that the EIT is also able to involve small but promising teams that are developing in **less favoured regions**.

*EIT needs to network the networks, and should not close its doors to small but fine research and economic institutions.*

In particular, the potential of the new East European members should be tapped.

In consequence, the EIT would be:

- **Geographically distributed**: it should not reside in one single location, but rather in several in order to exploit the value of local experiences.

*(Respondent advocating a large network) Wide representation of higher education institutions throughout Europe; the universities in the network should be invited so as to represent different regions (geographical balance) and different institutions in terms of structures and scientific areas (classical-type, specialised, technologically-oriented, medical, etc.)*

- **Based on existing successful institutional formats**: it should not reinvent the wheel but rather build upon already existing models of excellence.

*This is probably best achieved by concentrating on partnerships that already exist and building on these with additional support.*

- **Based on collaboration**: it should support EU R&D actors in collaborating to achieve critical mass and synergies.

*Collaboration enables parties to be better placed to face shared challenges and to make the best use of available expertise and resources. By working in partnership the spread of effective practice can be accelerated and deepened and problem solving shared.*

- **Based on ICTs**: it should use ICTs to sustain rich forms of communication and collaboration among distributed researchers.

*A virtual institute linking existing strong research centres is the only possible way forward for the EIT. In particular, we explicitly object to the idea of a physical research institute.*

***Diversity as a constraint: overcome local fragmentation.***

For others, diversity is a **constraint** that the EU needs to overcome in order to be competitive with other countries such as the USA. The diversity of organisations, rules, languages, and interests is a **barrier** to creating synergies and achieving scale. If Europe learns to overcome these barriers, it could generate the critical mass needed to be globally competitive.

*Working at a European level helps overcome longstanding hurdles in the national knowledge infrastructures. In almost every field of technology, Europe as a whole is able to generate the critical mass needed to achieve innovation over a broad area.*

For some, these arguments clearly lead to the conclusion that a **single institution** is needed, since EU constraints mean that network structures are not viable for these kind of goals. But again due to diversity, centralisation would be very difficult. As a consequence, although the single institution would be preferable, the **network is a pragmatic option**. In order to minimise the lack of coordination, it should be fairly small.

*One single institution would, by nature, be (or be felt as) a top-down initiative. A large network is what logic would dictate, but would probably collapse from its own (bureaucratic) weight. My favourite model would be a small network, acting like a Network of Excellence, with a geographical spread across Europe, capable of branding other institutions, for specific (and limited in time) mandates, setting goals and budgets, and performing yearly evaluations.*

In the latter case, arrangements should be put in place to prevent fragmentation.

As a consequence, the EIT should be:

- **Geographically centred**: the EIT should look to physical proximity as a crucial factor in sustaining the kind of environment that fosters excellence and innovation (the campus metaphor is dominant). This should be done by creating an EIT either in a single location or in just a few areas, although the need for a central physical reference point is underlined.

*…a lot of talent can be under one roof and visitors from all EU countries can be provided for. The most important thing is to get the right persons to communicate face-to-face frequently. After acquiring their own personal experiences, these persons can act as ambassadors in their own countries*.

- **Based on new institutional formats**: since existing rules represent a constraint in achieving the kind of working environments needed to foster innovation (e.g. low salaries), an environment with new rules is essential. This need is even more critical considering the difficulty in changing existing rules. In this sense, the EIT can act as a reference model in pushing existing institutions to change.

*However, it will be difficult for the EIT to begin as a selection of existing top European institutions. These universities are of the traditional European format and have vested interests, which will make change slow and unlikely to succeed. Any drastic departure from the existing model is more likely to succeed when built from scratch, i.e. as a greenfield institution.*

*A single institution will create a momentum hardly to be achieved by existing establishments that operate under given conditions and carry an historical legacy sometimes prohibitive to change.*

- **Built on individuals and teams**: existing organisations, such as universities, may be excellent in some fields but not others. Excellence is to be found at a lower level, at that of the team or even individual. Moreover, existing organisations are locked into existing institutional formats, thus finding it difficult to change and adapt to new working methods.

*I could see EIT as a place where researchers, PhD students, industrial developers, etc, would get together on a project for, say, a year or two, even if that would not be the primary and the only place for education for the PhD thesis of a student, for example. Compared to the current EU projects, networks, etc, the difference would be that a research or R&D team would work on a specific project on a day-to-day basis like at a traditional university, for example, but with the project members drawn from all EU institutions on a temporary basis. They would be 'freed' from their other activities, temporarily sent to EIT as some sort of fellow, so to say. A bit like CERN?*

- **Focused on discontinuity**: rather than exploiting and improving existing experiences, the EIT should emphasise discontinuity, i.e. the need for a new paradigm in research, education and innovation.

*If an EIT is created it must be a signal that Europe wants change (see 1st response). It should start a new area of "enlightenment". This means seeking knowledge in an open way away from "political correctness", away from social conformism. People must be challenged, not pampered.*

### Diversity: matching the trade-off

From the above, it emerges that there is a clear **trade-off** between the need for local involvement and the need for integration.

*This model does not fit at all with the economic and cultural diversity of the EU member states. The network of excellence seems to be the only possible option. However, it needs to be realised that by making this decision we lose the innovation boosting benefits of physical proximity. This drawback needs to be overcome through developing distance working methods and new ways of working and learning together which will promote active and regular knowledge sharing and creation. This drawback must be turned to an advantage by using the cultural diversity of Europe to its full extent.*

In fact, those that advocate a distributed approach also stress the need to have some **centre** or strong coordinating mechanisms.

*Networking is critical to the success of technology and knowledge transfer approaches. There is, however, a need to have a central coordinating function.*

This could lead to a **composite structure** combining the single institution and the label or network.

*A composite structure seems the most desirable and realistic: that is to create a concrete institutional nucleus with the power to award the EIT label/brand to existing institutions of the highest quality. The label/brand policy must be based on a clear institutional mission/philosophy…*

On the other hand, those in favour of centralisation recognise the need to have at least some **local representation** (such as local branches).

*Single institution with physical bases in each country, perhaps physically located within a higher education establishment but not managed by it. Will allow EU wide strategies and initiatives to be implemented and coordinated and also allow local country to tailor them to unique characteristics and strengths within a country*

This trade-off leads both types of respondents, those who favour the distributed approach and those who support centralisation, to **converge on the idea of a star-like network**, in which a central node plays a major role in coordinating, integrating and guiding the activities of the outlying nodes.

*The EIT must have a single management unit with a single interface with industry in charge of technology transfer.*

*A single central institution with a very large network (2-4 per EU country) of existing institutions with the EIT label seems the most powerful way to achieve the goals of EIT.*

*I think the organisational structure should be as follows: 1. small network supporting the R&D issues 2. Large network supporting different business areas. 3 Single institution supporting the financial issues.*

For some, such a nucleus should have a certain size and, moreover, should perform its own activities besides coordination in order to be recognised **not just as an administrative overhead.**

*The new institutional nucleus need not be large. It should, however, be given the perspective to develop in size and scope. In a first step it is recommended to install research groups of a critical size in each of the identified research areas. Supported by a suitable organisational background, the tasks of these groups should be to: a) perform excellent research b) attract excellent students (postgraduate)/researchers c) identify top European institutions as candidates for collaboration and exchange of students/staff, thereby creating networks, d) establish liaison and, in a further step, programmes with other network participants*

In this way, **while the nucleus ensures the pursuit of the EIT's goals, the network ensures that existing assets are capitalised upon and reused**.

*A single leading institution (new = specific targets of the EIT) in combination with a small network (already existing institutions = cross linking / developing already existing activities)*

*2. Innovative models of governance*

**Autonomy and selectivity**

The preceding reflections lead to the idea that the EIT should be characterised by an innovative governance structure with a high level of **autonomy**.

*If we allow pressure groups and hence politicians to decide what is important, then the ETI will miss the boat and will always be working on issues after the facts.*

In particular, the EIT should set its own scientific agenda, avoiding any sort of political pressure.

*A remaining question is who will select the issues. As previously stated the EIT needs to be autonomous and the agenda should not be politically motivated but based on scientific excellence only.*

Moreover, the EIT should resist the temptation to address the interests of different political lobbies as well as those in universities who would push for a traditional style of organisation.

*The European Commission should resist the temptation to appease different political lobby groups with vested interests, which are insisting that the EIT should rely on existing European structures. It will be insufficient to merely increase Europe's research funding or to build a networked constellation of (selected) existing institutions. Instead, as we have argued, a radically different university model is required, which is unlikely to be achieved with existing universities or by greater cooperation.*

In fact, respondents tend to agree that similar initiatives by the EU in the past have placed too much emphasis on selection and evaluation criteria that are not directly linked to the goal at stake. The EIT should **select and evaluate** members and partners strictly on the basis of their capacity to achieve goals.

*The only driving criteria should be excellence. Other dimensions should be avoided.*

The criteria can vary. From a content perspective, however, academic excellence would be the yardstick for selecting and evaluating students and researchers, assuming the virtuous circle mentioned above. In any case, the conclusion is that autonomy is a necessary precondition for a successful EIT.

*The temptation must be resisted to exercise tight control on the way the work is carried out, or to impose additional structures or constraints on participating institutions.*

**Openness**

Moreover, the EIT should avoid elitism, i.e. involving only those that are already excellent while excluding those that need more support.

*A distributed implementation… would be the only way to support an homogeneous impact in the EU overall, avoiding the undesirable effect of being an elite site for already rich and developed countries, with people able to relocate to a specific location.*

Accordingly, some look more to **individuals and teams**, rather than to organisations as such.

*Right now across Europe, there are multiple groups that are producing excellent research. The US model is based on a large network of excellent groups, highly motivated, better paid than the Europeans and a very effective framework for attracting highly qualified investigators, good students, and financial support.*

In fact, excellence should not be pursued as a form of elitism, but rather as a culture permeated by values such as openness and humbleness.

*In order for creativity to flourish it is essential that the atmosphere and working culture of the EIT promotes open communication and trust. It is important to emphasise the importance of a certain humbleness and openness to the world outside of the network since the EIT would be a community of exceptionally talented people.*

**Identity**

Among the guiding principles, the majority of respondents highlight the need for **a strong European identity**: the EIT should be recognised as "one European player" rather than a loose agreement between existing institutions. The EIT should have a visible brand and spirit.

*EIT should be a unique centre in Europe, a sort of cathedral of 21st century European knowledge and science.*

*EIT has to be a STRONG BRAND - but it cannot be developed as a LABEL ONLY!*

Moreover, there is agreement on the idea that the EIT identity should be based on some form of **excellence** (be it academic or more commercial).

*Only by attracting top-class specialists or potential future specialists will the EIT manage to become a competitive alternative to the already existing national or regional centres of excellence in Europe*.

Often, respondents underline that the EIT must be **different from existing initiatives**, and be less bureaucratic or corporatist. In general, the EU identity is underlined, in that the EIT should not be partisan, national, or a mere aggregate, but rather a **European** entity to which Europeans feel that they belong.

*In my opinion the European Union needs more than a French or British analogue of MIT. It needs a truly innovative European institute to gather and make the most of Europe's strength in research.*

*It will be a EUROPEAN institute, so its principal area of working must be Europe*

For some, talented research managers should have a permanent position in the EIT.

*People should be highly talented research managers, with a full-time position in the institution*.

To ensure transparency and competitiveness, members should thus be selected on the basis of mechanisms such as **open calls for tender**.

*They could be chosen by a call for tenders for a five/six year period, for instance (the same period of the EU R&D Framework programme seems ideal). …. an alternative could be to launch a tender on an issue-driven basis and to reach an EIT composed of 5-6 institutions by issue.*

### Pooling of resources

It is underlined that the EIT should rely on **existing resources**, whether infrastructure (such as laboratories, equipments, facilities) or organisations, in order to create synergies.

*Europe has very many good research centres, but few of them are in the top five or so in the world. Thus, rather than creating new ones, it seems convenient to strengthen and empower those we have.*

In order to ensure the use of existing resources while maintaining autonomy, others stress the need to pool resources at individual/team level rather than at organisational level. The EIT will have to borrow such staff, who will be **seconded** or "leased" from existing institutions and formally / temporarily appointed to the EIT.

*Easy "transfer" or "leasing" of the best innovative research groups on the base of 1- 3 year contracts from the existing universities, laboratories, research centres without them losing their affiliations or permanent positions.*

Moreover, the leasing of such structures or individuals should be subject to renewal, with an **expiry date**.

*It should be seriously considered to decide which positions/structures are to be kept temporary. Likewise, the EIT label/brand should be connected with an expiry date. A renewal policy should include a thorough evaluation.*

### Partnership with companies

Another guiding principle is that **companies and the private sector** in general should be involved.

*Companies ... make countries prosper and generate employment, so there should be close collaboration between the European Institute and industries*

But different views emerge on the nature of such involvement. For some, private companies should be involved **as funders**, representing the demand side of the EIT.

*The funding of the EIT should come substantially from industry especially when a technology transfer function is to be in place.*

Other stress that private companies should be involved **as partners**, underlying that science and knowledge should emerge from a mutual learning process and not just from a mere transfer of results on demand.

*The EIT can add enormous value to academic and research centres at local and regional level by encouraging collaboration of these centres with large industry and the dynamic SMEs able and willing to exploit the technology in innovative products or services*

Finally, some underline that the governing board should fully represent the EU knowledge triangle; as a consequence, companies should be **involved within the guiding and evaluation** bodies of the EIT in order to ensure that the results are relevant in economic terms.

*In order to have a real technology transfer some companies should be affiliated and for short-medium term research the evaluation panel should include company representatives.*

*3.Interdisciplinarity*

It is commonly argued that the EIT should organise its activities **around interdisciplinary issues**.

*We strongly believe that inter-disciplinarity should be emphasised. There is so much to be learned among the various disciplines, and the collaboration of a variety of fields is more likely to lead to innovations and knowledge creation that are relevant and serve the needs of the EU and its people.*

In order to manage interdisciplinarity, a new way of working and pulling together diverse resources should be identified to foster the creation of knowledge systems in which new issues are approached in a holistic and systemic way. This requires establishing capacities and contexts in which the **focus is more on the borders** than on the cores of existing disciplines.

*More and more the production of knowledge and innovation result from the crossing of various fields of knowledge. New problems arising from the growing complexity of present-day societies need new answers, which have to take into account the results of research in the different areas of knowledge by adopting a holistic perspective that can effectively encourage the development of a "knowledge ecosystem" , linking research, innovation and the dissemination of knowledge.*

Of course, this will have an important impact on organisational structures, which need to change accordingly by moving away from **traditional "silo" approaches**.

*Innovation must have a transversal dimension, preferably dealt with at institutional level (i.e. the institution in charge of representing the EIT). Silo approaches have shown their limitations*

Nonetheless, there are different views as to how such interdisciplinarity would emerge. For some, it would be **internally driven by science**: interdisciplinarity emerges from the spontaneous meeting of existing disciplines, driven by the curiosity of investigators. In this case, the EIT should be built upon a solid disciplinary base. It should able to determine its research agenda as well as its researchers.

*To maximise flexibility, any EIT model should be able to decide for itself how to organise its activities. Flexibility is essential if the research is to be genuinely innovative and cutting-edge and the stimulus should come from business itself.*

Others stress that interdisciplinarity should be **externally driven by society**: interdisciplinarity is brought about by societal needs that force existing knowledge fields to communicate and find new ways to approach a problem. In this case, the EIT should be driven by issues or sectors important to society.

*Could we use GI mapping on the human body to identify all points of reference and through a CAT scan be able to predict illnesses in the future? ... But if we are not issue driven we will never see the cross-sector needs and may well end up re-inventing the wheel.*

Moreover, it is underlined that interdisciplinarity must **not involve just technological fields**, since technology is nowadays increasingly bound up with non-technological issues.

*Technology is just a tool. We need to focus our efforts on how technology (both as hardware and software) can serve the needs of EU citizens.*

Thus, the **social sciences**, alongside the other, technical sciences, would be considered for inclusion among the EIT's fields of investigation.

*In Europe we have many excellent schools of technology, but only too few are teaching technology integration and technology management. This is why we are better in developing technology then in drawing from technology all its potential benefits — these specific subjects could become the core focus of the future EIT.*

*The interdisciplinary approach will facilitate the inclusion of the social sciences and the humanities.*

## 7. GENERAL CONCLUSION

Bearing in mind the major disclaimers regarding the absence of a direct question addressing the relevance of an EIT and the self-selected nature of the sample, the public consultation still reveals a **positive attitude** to the establishment of an EIT. In particular, considering the free-text responses, most respondents believe that some kind of initiative is needed in order to improve Europe's capacity to be a knowledge-based society. Moreover, whatever their attitudes, the MIT metaphor has stimulated the imagination of respondents, who have provided, through free-text responses and position papers, a wide and heterogeneous set of ideas, critiques, and contributions. These contributions often go beyond the EIT issue *per se*, providing diagnoses and analyses of the more general **situation of knowledge in Europe**. Thus, this report can also be seen as a useful contribution to the series of current debates about Europe as a knowledge-based society.

Regarding the EIT, there seems to be general agreement that its main mission would be to integrate the three aspects of the **knowledge triangle** (research, education, and innovation). This is based on a general agreement that one of the main causes of the EU's lack of competitiveness is its relative inability to derive social and economic benefits from its scientific knowledge base. Given this common diagnosis, two main approaches to the cure emerge.

The first, here named the **science-based triangle**, starts from the assumption that the pursuit of scientific excellence *per se* can generate social and economic benefits through a series of mechanisms. These include the virtuous circle of excellence, whereby talented people attract other talented people, and mobility, whereby these people, as they move to and from the business world, can stimulate and spread both innovation and innovative capacity. Moreover, they would help resolve demand-side issues (the capacity of society to absorb and exploit knowledge products) since they could provide knowledgeable business counterparts for those that decide to remain in the research and education sector. Consequently, the EIT should focus on doing excellent research and, moreover, must provide education at least at postgraduate level, since this is viewed as an intrinsic part of research. Lastly, innovation should be pursued, through the involvement of companies of course, but also through strong inter-sectoral mobility programmes. According to this view, the EIT is a **performer**, an organisation that performs research, awards degrees, and generates innovation.

A second approach to the knowledge triangle comprises two different positions that, while agreeing on the role of the EIT, reach this conclusion for different reasons. In particular, both agree that the EIT should focus more on **facilitating the application of knowledge** rather than on its production. This should be achieved either by explicit technology transfer processes (e.g. technology transfer offices), or through the development of skills able to bridge the cultural and cognitive gaps that still divide science from society. In this regard, education plays an important role in providing both researchers and practitioners with skills (such as intellectual property, research or risk management, etc.) that enable them to understand and communicate with each other. In fact, the EIT is seen as a place where boundary crossing is facilitated and new **boundary spanning** competences are formed. Here, the EIT is an **enabler** rather than a direct performer, in that it supports other actors in performing research, education and innovation. This position is advocated by two distinct groups: those who believe in the EU paradox (excellent research, but not enough transfer) and others who believe that scientific excellence should be improved, but the EIT is not the right

instrument to do this. From the latter perspective, the EU would support existing institutions and organisations rather than create new ones, although the EIT could play a role in supporting networking and collaboration among these bodies. Negative responses mainly fall into this category.

Regarding how these missions should be achieved, here too there are both common and distinct views.

- First, respondents highlight the need for a **European identity**, namely that the EIT should somehow be a 'supra-local' entity able to overcome existing national, political, and organisational barriers.

- Second, there is a need to **pool resources** instead of reinventing the wheel, given that while the EU already has plenty of excellent individuals, teams, and resources in general, they need a new context in order to exploit potential synergies and achieve critical mass.

- Third, the EIT should be **autonomous**, in that it should not be subject to political pressures exerted by various types of lobbies or stakeholders. Fourth, it should on the other hand be **accountable** to those that provide its resources; in particular, assuming that these will come from both the public and the private sectors, the EIT should respond to both societal and economic priorities.

- Fifth, **businesses** should be involved both as funders and as partners. In particular, the role of **SMEs** should be emphasised, given their importance for the EU economy, their lack of size needed to perform R&D activities and, moreover, their potential to provide a flexible laboratory to explore and exploit innovative ideas.

- Last, the EIT should organise its activities in an **interdisciplinary** fashion, either internally driven through the spontaneous meeting of researchers (themes) or externally driven by social or economic (industry) concerns. In any event, it is stressed that the potential for innovation lies more at the boundaries than at the cores of existing disciplines or sectors.

Differences in opinion focus mainly on the **structure** that the EIT should have in order to achieve its missions. These can be categorised by the attitude to diversity. For some, the diversity that characterises the EU landscape is an opportunity that must be exploited. As a consequence, the EIT should be a **large and loosely coupled structure** able to involve the widest number of stakeholders. The network, possibly a large one, is here the preferred structure. In contrast, others see diversity as a constraint that produces fragmentation, lack of mass, and localism. As a consequence, the EIT should be **a fairly integrated structure**, able to resist and overcome local pressures. The single institution, possibly built from scratch, is here the preferred option.

Both positions seem to converge on a similar configuration, although for opposite reasons. Those in favour of a wide network recognise the need for coordination to avoid a lack of synergy; consequently, a central coordinating node is proposed. On the other hand, those in favour of a single institution admit that this strategy is either too difficult or unreasonable in the EU context, which is intrinsically characterised by diversity. As a consequence, some form of network is offered as a pragmatic alternative, provided it comes with a central governing body invested with real power. The trade-off between centralisation and distribution is thus addressed by proposing a '**centred network'**, namely an organisation

based on the collaboration of the network's nodes but coordinated by some central governing body.

Lastly, each of the two main positions has a series of ideas for preserving the value of diversity, in the one case, or the value of coordination, in the other. For example, those in favour of diversity underline that excellence often does not reside at organisational level (university, company, etc.) but rather at **individual, team or unit level**. Thus, an organisation-based network runs the risk of including non-excellent teams because they are part of excellent organisations while excluding excellent teams because they are not part of excellent organisations. Regarding those who see diversity as a constraint, they point out that a network can run the risk of not having a real voice over its resources, given that they are still "owned" by the contributing partners. As a consequence, a series of measures are suggested, such as the idea that resources should be "leased", "appointed" or "seconded" to the EIT on a full-time basis, although this could be for a limited period. In addition, all emphasise that the EIT's **resources should be "owned" by the EIT**, i.e. they should be in a position to act exclusively in the interest of the EIT.

# Annex 1: Some positive and negative comments expressed by organisations

## Positive perceptions / expectations regarding the EIT

**1) The EIT as a reference model**

*The EIT should be recognised as an example and a core cell for the promotion of innovation that others could follow. It can set benchmarks in order to stimulate and motivate other networks and it can encourage the collaboration between the academic/research world and large-scale industry and employers.*

**2) The EIT as an initiator of a fresh dialogue between research/education and industry**

*We welcome the European Commission's initiative to establish a European Institute of Technology. The establishment of an EIT is crucial to Europe's goal to regain its pre-eminent international position. In order to compete in the 21st century Europe will need a fresh dialogue of research- and education-driven institutions with industry to create novel and progressive applications within a sustainable environment.*

**3) The EIT to be based on excellent individuals and teams of students, researchers and professors**

XXX *warmly welcomes the initiative establishing a European Institute of Technology (EIT).*

*It has to be realised that if EIT is to succeed, membership criteria in the network need to be very selective. These centres of excellence could attract "best brains" all over the world to Europe. Top students attract top professors, and on the other hand, top researchers attract top students. This is a reinforcing positive cycle. They are able to do world-class research because every member of the community has the capacity to contribute to the process in a significant way. The selection for membership in the EIT network needs to be based on very demanding requirements, subject to continuous verification, striving for no more than, say, 15 to 20 Universities/Institutions/Research Centres/Labs. The success of the EIT network could benefit also other universities, not directly part of the network. The success of the EIT network will boost the economy of the whole European Union through innovations, patents etc.*

**4) The EIT to be based on excellent research groups and not institutions.**

*The main objective of the EIT should be research and research training. It is in this area that the EIT can strongly enhance the competitiveness of Europe. The best way to achieve the objectives of the EIT is the establishment of a networking organisation. The focus should be on structural cooperation between excellent research groups. The EIT-network should not consist of a small number of institutions: this would limit the possibility of a large number of excellent research groups to participate in the EIT.*

**5) The EIT to coordinate existing structures to give a European dimension to technology transfer**

*La question de l'intégration entre l'enseignement, la recherche et les transferts de technologies correspond à la principale faiblesse identifiée pour la recherche européenne ; -*

*Un EIT présenterait l'intérêt de donner une dimension européenne à de tels transferts ; - Les missions de l'EIT devraient consister à coordonner et organiser de manière flexible des structures déjà existantes.*

**6) The EIT as an establishment for joint research activities**

*Europe now needs a joint effort in increasing high quality research; An EIT would help Europe to benefit from the application of the results of such research in business and markets. Therefore, the coordination of good joint research (universities, companies, all stakeholders implied) would result in building Europe's capacity for competition with other countries in the world.*

**7) The EIT as a European leader in technology management research and education**

*The EIT will have a global and integrative vision of the European scientific and technological framework, ranging from industrial demand to science supply. This would allow and ease research, training and technology transfer between enterprises and science supply at a European level. EIT would combine this with experience in technology management and the possibility of becoming a reference for postgraduate education in technology management.*

**8) The EIT as a pole of attraction for top international students and researchers**

*EIT, as the main scientific institution in Europe, will be identified by all other countries worldwide and, therefore, will be attractive for top international students and researchers. Such an attractivity will enhance European scientific capacity and recognition worldwide. In addition, the synergistic interactions between academic and industrial areas will produce scientific progress at both fundamental and applied levels.*

**9) The EIT to contribute to quality higher education and the concentration of research fields and resources**

*Enhancing Europe's research, development and knowledge exploitation can only be realised by providing high quality and accessible higher education and, more importantly, by concentration of research (both concentration of fields of research and concentration of research locations). EIT could provide these two conditions*

**10) The EIT as an institution with a strong European identity**

*We strongly support the introduction of an EIT into the European Research & Technology Development landscape. This new idea should have a positive growth effect by integrating teaching, research and technology transfer. Europe needs more than a British or French analogue of MIT. We need a truly innovative European institute to gather and make the most of Europe's strength in research.*

**11) Bold and high expectations vested in the EIT**

*The European Commission has formulated a bold vision. The EIT should become the most prestigious institute of technology in the world with access to world-class research facilities, hosting top scientists from across the world, and training the researchers of tomorrow.*

*If Europe is to achieve scientific excellence and reap the associated economic and social benefits, a bold initiative will have to be taken. The European Institute of Technology has the potential to be that initiative and give a boost to the renewal of the European scientific base.*

## Negative reactions to some ideas about the EIT

**1) Support for existing research centres instead of creating a new one**

*Europe has very many good research centres, but few of them are in the top five or so in the world. Thus, rather than creating new ones, it seems convenient to strengthen and empower those we have.*

**2) Doubts as to the effectiveness of the EIT project and its overall impact**

*We have some fundamental questions about whether this project is workable and whether it would meet the objective of ensuring that there are more European institutions of the highest quality.*

**3) Yes to the analysis, No to the solution**

*We agree completely with the Commission's analysis of the knowledge and innovation challenges facing Europe. We are not, however, convinced that the creation of an EIT would be the most appropriate, or effective, means of addressing the above challenges.*

**4) The EIT as a threat to the ERC**

*The appearance of an EIT on the political agenda surprises in a way, as an EIT seems to put the project of an ERC at high risk,*

**5) Simple solution for a complex problem**

*This shortcut and kind of ad hoc suggestion of an EIT seems to offer a short-term remedy ...; however, it is too simple and easy a solution for the structural problems Europe really has in the field of innovation. Top-down bureaucracy managed by the Commission.*

**6) The EIT as an elitist institution**

*The problem of the EIT ... is that it will be an elitist institution, therefore even if all the above mentioned points were realised, it would benefit only a small elite of students/ researchers/ professors/ SMEs / universities in Europe.*

**7) An incomplete diagnosis underpins the proposal for the EIT**

*The Commission's proposal for an EIT is the wrong prescription resulting from an incomplete diagnosis of the failure of Europe relative to its global competitors to translate first-class research into commercially viable products and processes*

**8) The EIT will not have a pan-European impact**

*We do not need this institution... we need a pan-European focus on excellent research and skills.*

**9) The EIT is doomed from the beginning**

*XXX Research strongly doubts the need for and feasibility of an EIT: its charter is not clear; adequate funding is unlikely, and most of all, Europe already has many very good institutes in place*

**10) An EIT cannot impact on existing university structures**

*We welcome the policy of trying to establish a more tolerant atmosphere for public-private research partnerships throughout the EU, and in order to bring out more of the commercial value in the research currently done within the EU, there needs to be an integrated approach to research and technology transfer, but we are cautious as to whether the designation of an EIT would add benefit to existing university structures.*

# Annex 2: List of organisations that responded to the Public Consultation

| List of organisations that responded to the EIT public consultation (including position papers sent outside the online questionnaire) | | |
|---|---|---|
| | | |
| **Name of organisation (in alphatical order)** | **Acronym of organisation** | **Country** |
| "1 Decembrie 1918" University Of Alba Iulia | UAB-RO | RO - Romania |
| 3 TU overleg | | NL – The Netherlands |
| AbilityNet | | UK - United Kingdom |
| AFYONKARAHISAR TECHNICAL-VOCATIONAL HIGH SCHOOL | | TR - Turkey |
| Agencia de Innovación de Andalucía | IDEA | ES - Spain |
| AGRICULTURAL UNIVERSITY - PLOVDIV, BULGARIA | AU | BG - Bulgaria |
| Akademinoor | | SE- Sweden |
| Åland Polytechnic | | FI - Finland |
| Allweb Solutions SA | ALLWEB | EL - Greece |
| Aquitaine Europe Communication | AEC | FR - France |
| Association Europeenne des Conservatoires, Academies de Musique et Musikhochschulen | AEC | NL - The Netherlands |
| Association of Swedish Higher Education | SUHF | SE - Sweden |
| Association of Universities in The Netherlands | VSNU | NL – The Netherlands |
| Association pour l'achat dans les services publics | APASP | FR - France |
| Athens University of Economics and Business | AUEB | EL - Greece |
| Austrian Rector's Conference | ÖRK | AT - Austria |
| BARRICALLA SPA | | IT - Italy |
| BBK Gazte Lanbidean Foundation | BBK | ES - Spain |
| BBK-Unternehmensberatungsges.m.b.H. | BBK | AT - Austria |
| Bulgarian Welding Society | BWS | BG - Bulgaria |
| Bundesministerium für Bildung, Wissenschaft und Kultur | BMBWK | AT - Austria |
| Canakkale Onsekiz Mart University | COMU | TR - Turkey |

| | | |
|---|---|---|
| Center for the Advancement of Research and Development in Educational Technology | CARDET | CY - Cyprus |
| Centre de recherche de strategies innovatives pour la jeunesse et le sport dans la societe informatique | CRSIJSSI | BG - Bulgaria |
| Centre de robotique d'ile de france | CRIIF | FR - France |
| Centre of Innovation and Entreprise Development | CIDEM | ES - Spain |
| Chamber of Commerce and Industry in Nógrád County (Salgótarján, EIC HU728 | NKIK | HU - Hungary |
| Chamber of Commerce of Ireland (member of Eurochambres) | Chambers Ireland (CCI) | IE - Ireland |
| Chambre de commerce et d'industrie de Paris | CCIP | FR - France |
| Coimbra Group | | BE - Belgium |
| CollBiz International AS | CBI | NO - Norway |
| Commissariat à l'Energie Atomique | CEA | FR - France |
| Competence centre for energetic materials in Sweden | KCEM | SE - Sweden |
| Computer Vision Centre | CVC | ES - Spain |
| Comunicació per a la cooperació - pangea | pangea | ES - Spain |
| Conference of European Schools for Advanced Engineering Education and Research | CESAER | BE - Belgium |
| Conference of Rectors of Academic Schools in Poland | CRASP (or KRASP, in Polish) | PL - Poland |
| Consejo General de Colegios Oficiales de Peritos e Ingenieros Técnicos Industriales | COGITI | BE - Belgium |
| Conselleria de Empresa, Universidad y Ciencia | Generalidad Valenciana | ES - Spain |
| Conservatorio "Cesare Pollini" di Padova | CCPPD | IT - Italy |
| CREA, Centre of Research in Theories and Practices that Overcome Inequalities from the University of Barcelona) | CREA-UB | ES - Spain |
| CYPRUS CHAMBER OF COMMERCE AND INDUSTRY | CCCI | CY - Cyprus |
| Cyprus Institute + Cyprus Research and Educational Foundation | CyI / CREF | CY – Cyprus |
| Czech Technical University in Prague | CTU | CZ - Czech Republic |
| Danish centre for Studies in Research and Research Policy | cfa | DK - Denmark |
| Danish Society of Engineers | IDA | DK - Denmark |
| Delft Hydraulics | WL | NL – The Netherlands |
| Department of Geography and Regional Development University of Wroclaw | | PL - Poland |

| | | |
|---|---|---|
| Deutsche Forschungsgemeinschaft | | DE - Germany |
| Deutsches Zentrum für Luft- und Raumfahrt, e.V. | DLR | DE - Germany |
| Dipartimento di Architettura e Urbanistica | DAU | IT - Italy |
| DIvision M3-BIORES Katholieke Universiteit Leuven | M3-BIORES KU Leuven | BE - Belgium |
| Division of Service Management, Chalmers University of Technology | CHALMERS SERVMAN | SE - Sweden |
| DUNAFERR Co. Innovation Management | DUNAFERR | HU - Hungary |
| DynMed Alentejo - Associação de Estudos e Projectos de Desenvolvimento Regional | DynMed Alentejo | PT - Portugal |
| Ecole des Mines de Paris | ENSMP | FR - France |
| Ecole Polytechnique Fédérale de Lausanne | EPFL | CH - Switzerland |
| Ecole Supérieure du Bois | ESB | FR - France |
| Effective Financial Entering cz, Ltd. | EFE cz, s.r.o. | CZ - Czech Republic |
| EMMEFFEnet s.n.c. | EMMEFFEnet | IT - Italy |
| Epson Foundation-Institute of Technoethics | EFIT | ES - Spain |
| Ericsson Microwave Systems | | SE - Sweden |
| ESCP-EAP | ESCP-EAP | FR - France |
| Escuela Universitaria de Ingeniería Técnica Industrial | EUETIT | ES - Spain |
| ESIB-the National Unions of Students | ESIB | BE - Belgium |
| ETS de Ingenieros Industriales, Universidad Politecnica de Madrid | ETSII-UPM | ES - Spain |
| Eurochambres | | BE - Belgium |
| EURODOC, the European council for PhD candidates and junior researchers | EURODOC | BE - Belgium |
| EuroMotor Project, University of Birmingham | AutoTrain | UK - United Kingdom |
| Europe Unlimited SA | | BE - Belgium |
| European Academy of Sciences and Arts | EASA | AT - Austria |
| European Aeronautics Defence and Space company | EADS | FR - France |
| European Aluminium Association | EAA | BE – Belgium |
| European Association for Creativity and Innovation | EACI | SK - Slovak Republic |
| European Centre for the Development of Vocational Training | Cedefop | EL - Greece |
| European Chemical Industry Council | CEFIC | BE – Belgium |
| European Consortium of Innovative Universities | ECIU | UK - United Kingdom |

| | | |
|---|---|---|
| European Council for Applied Sxciences and Engineering | Euro-Case | FR- France |
| European Institute for Management Studies - Office in Warsaw | EIMS | PL - Poland |
| European Medical Technology Association | Eucomed | BE - Belgium |
| European Molecular Biology Organisation | | DE - Germany |
| European Universities Association | EUA | BE - Belgium |
| External Advisory Group (EAG) of the Marie Curie Instruments. | | LU –Luxemburg |
| Faculty of Agriculture, The Agricultural University of Wrocław, Poland | | PL - Poland |
| Faculty of Chemistry, University of Wroclaw | Chemistry UWr | PL - Poland |
| Faculty of Science, Göteborg University, Sweden | | SE - Sweden |
| Federazione delle Associazioni Scientifiche e Tecniche | FAST | IT - Italy |
| Finnish Association of Graduate Engineers TEK | TEK | FI - Finland |
| Finnish Institute of Fisheries and Environment | SKYI | FI - Finland |
| Fondazione Cesar | Cesar | IT - Italy |
| Forte Chance Piemonte | FC_P | IT - Italy |
| Fraunhofer-Gesellschaft | FhG | DE - Germany |
| Fraunhofer-Institute for Structural Durability and System Reliability LBF | FhG-LBF | DE - Germany |
| Free Art,s.r.o.Ostrava,Czech Republic | FAR | CZ - Czech Republic |
| Fundacion FATRONIK | FATRONIK | ES - Spain |
| FUNDACIÓN INSTITUTO PORTUARIO DE ESTUDIOS Y COOPERACIÓN DE LA COMUNIDAD VALENCIANA | FEPORTS | ES - Spain |
| Future Technology Devision of VDI TZ GmbH | FTD | DE - Germany |
| GAIA, Association of IT and Electronic sector of the Basque Country, spain | GAIA | ES - Spain |
| German Institutes of Technology | TU9 | DE - Germany |
| Hanzehogeschool Groningen, The Netherlands | | NL - The Netherlands |
| HARTING KGaA | | DE - Germany |
| Haute Ecole Robert Schuman | HERS | BE - Belgium |
| Helsingin liiketalouden ammattikorkeakoulu | Helia | FI - Finland |
| Histopathology Ltd. | | HU - Hungary |
| Hugo Steinhaus Center | HSC | PL - Poland |
| HuygensXC, expertise centre on incubation & entrepreneurship | HuygensXC | NL - The Netherlands |
| HYDRA International Project and Consulting C.O. | HYDRA | TR - Turkey |

| | | |
|---|---|---|
| Iberica Branch - IEE/UK | Iberica Branch - IEE/UH | ES - Spain |
| IDEA League, alliance of technical universities, consisting of Imperial College London, Delft University of Technology, ETH Zurich, Aachen University and ParisTech will join in 2006. | IDEA League | NL - The Netherlands |
| IDEWE - external service for prevention and protection at work | | BE - Belgium |
| Incdmmr | incdmrr | SI - Slovenia |
| Informal reaction of the Ministery of Education, Culture and Science and the Ministery of Ecocomic Affairs | | NL - The Netherlands |
| INHOLLAND University | | NL - The Netherlands |
| Insitute of Chemical Technology | ICTP | CZ - Czech Republic |
| Institut des techniques informatiques | ITIN | FR - France |
| Institut d'Etudes Politiques de Toulouse | IEP | FR - France |
| Institut National des Sciences Appliquées de Lyon - France | INSA de Lyon - France | FR - France |
| Institut Superieur d'Agriculture de Beauvais | ISAB | FR - France |
| Institute for Future Studies | IFS | AT - Austria |
| Institute of Computer Science Wroclaw University, Wroclaw, Poland | II UWr | PL - Poland |
| Institute of Genetics and Microbiology, University of Wroclaw Institute of Plant Biology, Institute of Zoology, University of Wroclaw | IGiUWr, IBRUWr, IZUWr | PL - Poland |
| Institute of Materials Research of SAS | IMR SAS | SK - Slovak Republic |
| Institute of Mathematics of the Polish Academy of Sciences | PAN | PL - Poland |
| Institute of Power System Automation | IASE | PL - Poland |
| Institute of Theoretical Physics, Wroclaw University | IFT | PL - Poland |
| Instituto de Restauración y Medio Ambiente | IRMA | ES - Spain |
| INSTITUTO NACIONAL DE TÉCNICA AEROESPACIAL | INTA | ES - Spain |
| Instituto Nazionale di Fisica Nucleare | INFN | IT-Italy |
| Instituto Politécnico de Beja | IPBeja | PT - Portugal |
| Instytut Matematyki i Informatyki, Politechnika Wroclawska, Poland | | PL - Poland |
| Interuniversity Consortium for Agricultural and Related Sciences in Europe | ICA | BE - Belgium |
| IUT of Tarbes, University of Toulouse Paul Sabatier | IUT | FR - France |
| Janáček Academy of Music and Performing Arts Brno, CZ | JAMU | CZ - Czech Republic |
| Järfälla Gymnasieskolor | NT, YTC | SE – Sweden |

| | | |
|---|---|---|
| Jönköping University Foundation | | SE - Sweden |
| Jouni Seppänen Oy (Runebergin Kukka Dan Ward) | | FI - Finland |
| Katholieke Hogeschool Zuid-West-Vlaanderen | KATHO | BE - Belgium |
| League of European Research Universities | LERU | BE - Belgium |
| Learning Community SRL | | IT - Italy |
| Liverpool Hope University | | UK - United Kingdom |
| Liverpool John Moores University | LJMU | UK - United Kingdom |
| Lycée jeanne perrimond | | FR - France |
| Madeira Tecnopolo | Madeira Tecnopolo | PT - Portugal |
| Magyar Telekom | MT | HU - Hungary |
| Malta Enterprise | ME | MT - Malta |
| MARIE CURIE ASSOCIATION | MCA | BG - Bulgaria |
| Marinetech South Ltd | MTS | UK - United Kingdom |
| Metatree Ltd | Metatree | UK - United Kingdom |
| Micro Technology Association | VDMA-FV Micro | DE - Germany |
| Montanuniversitaet Leoben | | AT - Austria |
| Municipality of Wroclaw | | PL - Poland |
| MyKnowledgeMap Limited | MKM | UK - United Kingdom |
| Mykolas Romeris University | MRU | LT - Lithuania |
| Nanotechnology Department Research Institute for Technical Physics and Materials Science Hungarian Academy od Sciences | ND-MFA-MTA | HU - Hungary |
| National University of Music Bucharest | UNMB | RO - Romania |
| Navreme knowledge development KEG | navreme | AT - Austria |
| Nokia | Nokia | FI - Finland |
| Office for European Affairs | OEA | HU - Hungary |
| Office International de l'Eau | OIEau | FR - France |
| OKTÁV Vocational Education Institute, Esztergom-kertváros, Hungary | OKTÁV Co. | HU - Hungary |
| Open License Society | OLS | BE - Belgium |
| Ortadogu Teknopark AS | METUTECH | TR - Turkey |
| Oulu Innovation Ltd | | FI - Finland |

| | | |
|---|---|---|
| Personas gestion proyectos S.L | PgP_consultasnt | ES - Spain |
| Philips Research | | NL – The Netherlands |
| Pirelli & C. SpA | | IT - Italy |
| PLEON CM&O | PLEON CM&O | FR - France |
| Politechnika Opolska Opole University of Technology | TUO | PL - Poland |
| Politecnico di Bari | Poliba | IT - Italy |
| PRES (Pôle de Recherche et d'Enseignement Supérieur) Universudparis | Universudparis | FR - France |
| PRIME MINISTER'S OFFICE | | EL - Greece |
| Prime Minister's Office - Office for European Affairs | PMO - OEA | HU - Hungary |
| PROCEMA GEOLOGI Ltd - Geological Research and Design and Testing Laboratory for building materials | PROCEMA GEOLOGI | RO - Romania |
| PROGETTO DONNA | | IT - Italy |
| Ramboll Management | | BE - Belgium |
| RAND Europe | | NL - The Netherlands |
| Rhodia | Rhodia R&T | FR - France |
| Royal Society of Edinburgh | RSE | UK - United Kingdom |
| Royal Society of London | | UK -United Kingdom |
| Rybnickie Centrum Edukacji Zawodowej - Centrum Kształcenia Ustawicznego oraz Praktycznego | RCEZ-CKUoP | PL - Poland |
| SAP AG | SAP | DE - Germany |
| Science and Technology Policy Research Center | METU-TEKPOL | TR - Turkey |
| Scuola Superiore Insegnamento Secondario | SSIS | IT - Italy |
| Scuola Superiore Sant'Anna di Studi Universitari e Perfezionamento | SSSUP | IT - Italy |
| Sky Express | | Serbia & Montenegro |
| Société Européenne pour la Formation des Ingénieurs | SEFI | BE - Belgium |
| South-East regional Development Agency | ADRSE | RO - Romania |
| SPECTRA Centre of Excellence, FA STU Bratislava, Slovakia | SPECTRA FA STU | SK - Slovak Republic |
| SRFG | | AT - Austria |
| Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning | FORMAS | SE - Sweden |
| Technology Foundation STW | STW | NL – The Netherlands |

| | | |
|---|---|---|
| Technology Information Center - CENTIREM | CIT CENTIREM | RO - Romania |
| Telecom INT | Telecom INT | FR - France |
| The Board of the Council for Sciences of the Academy of Sciences of the Czech Republic | | CZ - Czech Republic |
| The National Business-to-Business Centre, University of Warwick, UK | NB2BC | UK - United Kingdom |
| Tissue Engineering Lab, Plastic Surgery Unit, DICMI, Universitu of Genoa | TE Lab - DICMI | IT - Italy |
| Toy Technological Institute | AIJU | ES - Spain |
| TRANSFERTS LR | TRANSFERTS LR | FR - France |
| Transport and Telecommunication Institute | TSI | LV - Latvia |
| UK Computing Research Committee | UKCRC | UK - United Kingdom |
| UK Government | | UK - United Kingdom |
| Unión de Asociaciones de Ingenieros Técnicos Industriales de España | UAITIE | ES - Spain |
| UNITEC Foundation | UNITEC | ES - Spain |
| Università Bocconi di Milano | CERTeT | IT - Italy |
| Università degli Studi di Perugia (Italia) | | IT - Italy |
| UNIVERSITA' TELEMATICA GUGLIELMO MARCONI | UTGM | IT - Italy |
| Universität Bayreuth | | DE- Germany |
| Universität Duisburg-Essen, Zentrum für Halbleitertechnik und Optoelektronik FG Optoelektronik | UDE | DE - Germany |
| Universities Scotland | | UK - United Kingdom |
| Universities UK | UUK | UK - United Kingdom |
| University of Bergamo | UNIBG | IT - Italy |
| University of Cambridge | | UK - United Kingdom |
| University of Lincoln | | UK - United Kingdom |
| University of Milano | UNIMI | IT - Italy |
| University of Piemonte Orientale. Faculty of Politica Sciences Dept. of Public Policy and public choice | Polis | IT - Italy |
| University of Strathclyde | USTRAT | UK - United Kingdom |
| University of the Algarve | | PT - Portugal |
| University of Wroclaw Institute of Biochemistry and Molecular Biology | IBBM UWr | PL - Poland |
| UP ZRS Koper | | SI - Slovenia |

| | | |
|---|---|---|
| Vertretung des Deutschen Industrie- und Handelskammertages bei der Europäischen Union | DIHK | DE - Germany |
| Vienna University of Technology | TU Wien | AT - Austria |
| W. Birkle & K. Westermann GbR | wb Learning Services | DE - Germany |
| WELDING RESEARCH INSTITUTE - INDUSTRIAL INSTITUTE SR | VUZ-PI SR | SK - Slovak Republic |
| Wroclaw University of Economics | WUE | PL - Poland |
| Wroclaw University of Technology | WUT | PL - Poland |
| www.ne-mac.com | nemac. | BE - Belgium |
| Wyzsza Szkola Informatyki Stosowanej i Zarzadzania | WIT | PL - Poland |
| Zentralverband des Deutschen Handwerks /German Confederation of Skilled Crafts and Small Businesses | (ZDH) | DE - Germany |

# Annex 3: Questionnaire

## Question 1: Mission of the EIT

The answer to this first question will provide a framework for your answers in the rest of this consultation exercise. We are interested in your opinions about the main focus of a possible European Institute of Technology.

### 1.1 What should be the main objective of the EIT?

Please select one of these options. In the next question you will be asked to provide us with the reasons for your choice.

• primary focus on education (including undergraduate teaching)

• primary focus on research and research training

• primary focus on improving the commercial exploitation of research

• integrated approach of teaching, research and technology transfer – the knowledge triangle

• other / none [please specify briefly]

**1.2 Please provide detailed reasons for your choice in 1.1** (including, if desired, your comments on the possible training of Masters students, doctoral candidates and postdoctoral researchers). It will help our analysis if you can structure your answers in terms of the benefits ('pros') and problems ('cons') of this kind of focus.

## Question 2: Added Value of the EIT

Whether focusing on teaching, research, technology transfer or a combination of all three, the EIT needs to bring added value at European level to existing activities in these areas.

### 2.1 How can the EIT best contribute above and beyond current provision in this area?

Please identify the main potential contribution you see the EIT as offering. You may select up to two options. In the next question you will be asked to further explain your views on the kind of added value brought by the EIT.

• networking between higher education institutions and facilitating the cross-fertilisation of knowledge

• facilitating intra-European mobility of staff and students

• attracting top international students or researchers

• creating economies of scale in research production

• building synergies with EU Research Framework Programme instruments

• promoting innovation and knowledge transfer throughout the territory of the EU

• providing a model of excellence to disseminate best practice

• encouraging collaboration between the academic/research world and large-scale industry and employers

• developing commercial opportunities for research products and processes

• supporting SMEs and local and regional development

• other / none [please specify briefly]

**2.2 Please explain your views on the benefits and challenges of creating the kind of added value you identified in question 2.1 to supplement existing provision at EU, national and regional levels.**

## Question 3: Structure of the EIT

We would like your opinion about the desirability and workability of some possible models for the EIT.

**3.1 Which type of institutional format would best allow the EIT to achieve these goals?**

Please select the most suitable option. In the next question you will be asked to describe in detail how you think such an organisational structure would support the EIT to achieve its mission and offer added value.

• single institution

• small network (4-6 institutions)

• large network (15-25 institutions)

• EIT label/brand (awarded to existing institutions or to individual departments/faculties without a formal requirement for networking)

• other / none [please specify briefly]

**3.2 Please describe in detail how you think the organisational structure chosen in question 3.1 would support the EIT to achieve its mission and offer added value.** You may wish to comment on the extent or nature of cooperation between participating institutions (which could include universities, other higher education institutions, research institutes, companies etc.), or on the degree of the EIT's autonomy. We are also interested in your assessment of the possible difficulties and problems in establishing your selected structure for the EIT.

## Question 4: Research Priorities of the EIT

The creation, dissemination and application of knowledge at the EIT could be organised along traditional lines of enquiry or in more innovative ways.

**4.1 How should the EIT organise its teaching/research/transfer activities?**

Please select your preferred option. In the next question you will be asked to discuss the benefits and problems of the approach chosen. (Please note, the examples provided are not intended to exclude or include any specific subject options, but are given to illustrate the different ways the EIT's activities could be organised).

• issue-driven (problem-oriented, investigating for example: wind power generation, avian influenza, low-fuel vehicles, urban rejuvenation projects)

• discipline-oriented (academic fields such as: physical sciences, biochemistry, engineering, architecture and planning etc.)

• thematically organised (trans-/interdisciplinary fields such as 'green energy', 'environment and health', 'sustainable transport', 'sustainable communities' etc.)

• industrial or economic sector-oriented (such as energy providers, medical research and pharmaceuticals, automobile and aviation manufacturing, building and construction)

• other / none [please specify briefly]

**4.2 Please discuss the benefits and problems of the approach chosen in question 4.1.** If desired, include specific fields or areas of potential activity (such as whether the humanities or social sciences should be integrated, and in which way).