EICTA

European Industry Association | Information Systems Communication Technologies Consumer Electronics

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EICTA position on guidelines for future European Union policy to support research

Introduction

EICTA is pleased to present its proposal for FP7 and more generally for the future of Information Society Technologies Research & Development (IST R&D) within the European Research Area. This position paper provides clear positions and recommendations in response to the *Communication from the Commission. Science and technology, the key to Europe's future – Guidelines for future European Union policy to support research*[1].

EICTA fully endorses the political priority of the new Commission, as highlighted by President-designate Barroso[2], to strengthen the implementation of the Lisbon strategy and make the European Union the most competitive and dynamic knowledge based society in the world by 2010. Increasing the European research spending to 3% GDP as decided in the Barcelona European Council is one of the means to achieve this objective. However we find harmful that most of the recommendations from the *Guidelines for future European Union policy to support research* are focusing on promoting basic and academic research. This is particularly highlighted by the constant use of the term "research", while Lisbon refers explicitly to "R&D and innovation", and the Treaty as well as the new Constitution consistently mention "research and technological development".

From basic research to successful products, solutions and services: the European paradox

§11 rightly mentions that "Europe does not have sufficient capacity to transform knowledge into products and services", but none of the proposed recommendations actually tackle this problem. EICTA recommends to take concrete actions to deal with the "European paradox", in order to succeed rapidly in **successfully translating science and technology into innovation, competitiveness and growth**. We believe that this is the **primary key to achieving Lisbon objectives**, and we suggest tangible measures in each of the proposed recommendation to address this issue.

One of the main policy issues to be tackled as soon as possible shall be to "better regulate". In such a context, "better" should mean "less". In order to safeguard and promote Europe's position as a location for investing in R&D and increase the development of human resources as well as foster innovation, it

[1] Commission of the European Communities, *Communication from the Commission. Science and technology, the key to Europe's future – Guidelines for future European Union policy to support research.* COM(2004) 353, 16.06.2004.
[2] *President-designate Barroso unveils his team.* IP/04/1029, 12 August 2004.

is important to have a more open policy with regard to the transfer of knowledge in FP7. As already highlighted in the Marimon report[3], there is a discrepancy between interests of science and the interests of industry, and the current situation regarding IPR is becoming an increasingly important issue. From an industry perspective, the current restrictions on IP transfer to affiliates in FP6 can act as an obstacle to participation by global industry players in EC funded research activities in Europe. These are certainly the most important barriers to overcome in order to fight the ever declining industry participation into the Framework Programme, not to mention the cost of building up proposals and of administrative management linked to FP6 projects and especially the Integrated Projects, or the (too) long-lasting period between the submission of a proposal and the signature of the contract. The regulations of the Commission should not reinforce the discrepancies between the various players but should be of such a nature that bridges can be built, whereby each of the players may find that its particular interests are taken care of. This will facilitate the negotiations within the consortia, including on the legal and IPR aspects, which have sometimes been long and burdensome for FP6 projects.

The appropriate budget for R&D

EICTA agrees that growth-oriented activities such as R&D should be increased significantly. **Doubling the budget of the next Framework Programme is a pre-requisite to achieving Lisbon objectives**. In particular in the area of ICT, where non-European government's funding is much more strongly supporting R&D and innovation programmes for industries than in Europe, efforts must be made to close the gap and create fair conditions of competition for EU-based R&D programmes. EICTA would like to stress that two out of the four "key areas of growth" highlighted in §5 of the Communication belongs to the IST area, i.e. microelectronics and telecommunications, and the two others depend highly on ICT technologies, i.e. biotechnologies and aeronautics. Therefore **the budget dedicated to IST in FP7 should also be at least doubled with respect to FP6**. In addition, considering the time frame which has been set up, a major effort should be made right at the beginning of FP7 in 2007 to ensure that long-reaching projects may be launched, with a chance to have a real impact by 2010.

EICTA also supports the specific measures proposed in the areas of space and security. IST is the backbone for the whole security issue, and vice-versa IST vitally needs security. It is key to areas such as eGovernment and eCommerce. These issues cannot be separated.

In the IST area, European companies are still doing most of their R&D investment in Europe. Although we understand the need to have other industrial sectors coming back to R&D in Europe[4], **it is of utmost importance that measures are readily taken to support the companies that are (still) investing for R&D in the EU**. The measures that are proposed, i.e. the establishment of a framework for major technological projects, increasing human resources, and creation of "centres of excellence"[5], could be helpful but only if they eventually **support European industrial competitiveness in the IST domain, key criteria for growth and employment**.

Improving the implementation of the Framework Programme and of the European Research Area

[3] Report of a High-level Expert Panel chaired by Professor Ramon Marimon, *Evaluation of the effectiveness of the New Instruments of the Framework Programme VI*. 21 June 2004. Annex 3, IV.
[4] Pharmaceutical companies are explicitly mentioned in the Communication, note 7 page 3.
[5] Cf. Communication p. 3, §1.2, topic 9.

EICTA agrees that the European Commission shall continue to play a key role in supporting IST R&D, but at the same time the implementation of the Framework Programme should be as efficient as possible. We believe that to achieve this, **the management structure cannot be the same all over the Framework Programme, but shall rather be customized according to the needs**. This is why we are suggesting **management structures adapted to each of the proposed recommendations** in the following paragraphs. As we already highlighted several times, **the administration of projects should be facilitated, and autonomy and flexibility should be the key words**. In FP6, expenditure (public + private) on preventing abuse in the FP is getting out of proportion. The intention from Commission Project Officers and Commission Services to manage knowledge relating to projects and prevent transfer of knowledge to the detriment of European competitiveness through the process of pre-notification, as described in the FP6 contract, is an additional administrative burden and cost on projects. Market forces are in a better position to know how knowledge should be shared between partners. The financial regulations are applied all the way through to all types of projects in the same way, while we should on the opposite decrease the administrative burden and the micro-management by Commission Project Officers, so that they could focus on the strategic and technical content of the projects, and have a real added value to guarantee the success of the projects.

Management in partnership and externalised management will be difficult to realise in an efficient way if at the same time the Commission remains politically and financially fully responsible and especially if the Financial Regulation fully applies. Management and responsibilities must be shared in an appropriate way depending on the objectives that are agreed upon. To play its full role, **the Commission should be in charge of defining the overall strategic objectives of the programmes according to priorities that will have been defined beforehand (especially through the technology platforms with the strategic research agendas), and then to audit and verify the way that the intended results are achieved, but not manage and be responsible for everything**. R&D success strongly depends upon the involvement of the technical knowledge of companies, whose activities have to deal also with the uncertainties of the day to day competition in the market. The operational management and organisation of big projects must be left to the consortia in charge of the projects, and cannot be dealt with following political or administrative timing standards.

More details are provided in the following sections concerning proposed management structures, especially in relation with centres of excellence (I.), technological initiatives (II.), and basic research (III.).

In the IST area, all six objectives should be coordinated and should not lead to segregating Europe's R&D effort. Even if there are separate management structures, it is the role of the Commission, and of all stakeholders involved, to ensure that such a coordination rightly happens.

Finally EICTA members would like to stress that R&D collaborative projects in the Framework Programme are for them mainly dedicated to medium and long term activities, aiming at strengthening European position in some areas of IST e.g. through standardisation activities that could not be achieved without cooperation, and for sharing risks in the search for new and innovative products and solutions. **Support in the form of reimbursable loans, as currently proposed e.g. by the European Investment Bank, may be suited for some innovation-related activities very close to the market, but not for collaborative pre-competitive R&D**.

The following paragraphs provide more detailed comments on each of the six proposed initiatives.

I. Creating European centres of excellence through collaboration between laboratories

The notion of European centres of excellence addressed in the Communication is somewhat unclear. We assume here that this axis is meant to be a continuation of the collaborative R&D as we know it from FP7, in the form of IPs, NoEs and STREPs, with some improvements. If this is the case, then a very substantial budget should still be dedicated to this in FP7/IST. Efforts shall be made more particularly on the following topics, already highlighted in our previous position paper on FP6[6]:

- Focus more to reduce oversubscription. Select only a limited number of priorities within each strategic objective so that the available budget is sufficient for the retained projects dealing with these priorities.
- Reconsider the budget dedicated to NoEs. EICTA already stressed the general lack of interest of its members in participating into Networks of Excellence as they are designed today, in line with the doubts expressed by the Marimon report, which recommends to address industry participation but with no further suggestion[7].
- Keep sufficient room for STREPs.

II. Launching European technological initiatives

As already highlighted by EICTA in its position paper on FP6, "*there are still strong expectations to having at the latest in FP7 the programme-oriented approach originally foreseen for the Integrated Projects in FP6, i.e. having the possibility to coordinate several large projects in the same domain under a common umbrella. […] hope is now that the European Technology Platforms could help achieving this objective, by supporting a programme structured in large pillars based on industrial sectors, rather than topics that seem of interest*". European technological initiatives may be the right instrument, provided that the budget allocated to such initiatives corresponds to the ambitious goals defined in the "strategic research agenda". The challenge to be addressed must be major and long term in nature. If the outcome of technology platforms were not to be used in the right way, they will fail. There are potentially very complex issues with lots of players involved, industry, research community, financial institutions, users and public authorities, all with very different political and financial motivation, interest and time frame. An efficient outcome needs efficient preparation, strong political support, and commitment from all stakeholders. It therefore seems realistic only from the point of "developing a common strategic agenda". **EICTA supports the existing technology platforms that have been initiated within the IST domain, i.e. Mobile Communications, Embedded Systems, Nanoelectronics, and the newly created Networked & Electronic Media**. EICTA members believe that these platforms cover the key areas that need to be addressed at European level by all the stakeholders in the timeframe of FP7, and also that too much proliferation of platforms should be avoided. We would like to stress that there are **three conditions for success**:

1. **The budget granted to each of these key areas within FP7/IST should allow to reach critical mass and strategic impact**. As a preliminary indication, which needs to be refined by each technology platform, **an overall budget in the range of at least 1 B€ over four years will be required**.

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[6] *EICTA position on the first two IST Calls for proposals of the 6th Framework Programme for R&D of the European Union*. 23rd March 2004.

[7] Recommendation 5, p. 21.

2. The strategic research agenda implementation should not be necessarily limited to using only Integrated Projects on the one hand, and "joint technology initiatives" using a joint undertaking based on Article 171 of the Treaty on the other hand. EICTA believes that **each technology platform should be able to come up with the most efficient organisation and instruments for implementing their research agenda**. There is no "one fits all" approach. It is highly probable that in addition to Integrated Projects, the other instruments could be used as well to build up a coherent "programme" within a given area in some cases. For example, the most efficient implementation that were to come out of a given technology platform could be a structure encompassing Integrated Projects, STREPs and Specific Support Actions under an umbrella managed by a Coordination Action, including an interaction with a Eureka cluster project and some national programmes, but without joint undertaking. At the same time, another platform could decide to go for a joint technology initiative, merging effort from the Commission and some Member States on the basis of Article 171. **What is important is that both outcomes are recognized as European technological initiatives within FP7 and that the appropriate budget is dedicated to each of them**.
3. Participation modalities should be greatly improved, in line with our recommendations (cf. introduction).

III. Stimulating the creativity of basic research through competition between teams at European level

EICTA welcomes the idea to support the best research teams at European level. Such an initiative is likely to boost the excellent research teams to maintain or reach worldwide expertise. It will provide peer recognition at European level, improve career perspectives for researchers, and help prevent further brain drain. We suggest that it includes Pasteur's Quadrant, i.e. use-inspired basic research, as already done e.g. in the National Science Foundation in the US. The "competition" should be open to all research teams willing to apply, either academic or industrial.

One of the main challenges of such a proposal is the evaluation of the proposed projects. Although scientific excellence should be the main criteria, we believe that industry should have its say in the selection of the projects, to avoid further deterioration of the European Paradox. Indeed, industrial companies are permanently working with academic labs and will often be willing to help the real excellent ones get more support from FP7. In addition, segregation must be prevented and the link between science and industry fostered.

EICTA understands the desire to coordinate the basic research effort in the European Union. However, we would like to point out that there are some differences in the need for basic research according to the domain which is tackled. Although basic research in the ICT area is definitely required for the advancement of society, the urgency and critical mass needed to eliminate a technological barrier may not be similar as e.g. in the medical or pharmaceutical area for fighting a disease. Similarly, the time frame for advanced research in physics or in biology differs from ICT research. Therefore, if there is an agreement to set up a coordinating organization, EICTA would rather support to have research councils dedicated to a specific domain or sector rather than a unique global council. Although the creation of a European Research Council is promoted by some prominent research associations, as shown in the

letter published in *Science* magazine early in the summer of 2004[8], when one looks at the list of associations and institutes endorsing the letter, none of them is specifically dedicated to the ICT area. We believe that ICT domain deserves a specific discussion as to how most efficiently coordinate research.

If one or several European Research Council(s) were to be set up, EICTA sees three important aspects worth mentioning, which are critical at least to the ICT area:

- **The ERC(s) should be funded in addition to existing FP activities, not at their expenses**. Most of the research funding in FP6 already supports academic institutions. Only 30% of the EC budget is invested in industry at the moment[9], and the participation from industry has been and is still decreasing. This trend shall be reversed.
- **Co-financing the ERC(s) jointly with Member States should be considered** to achieve structuring effect on national programmes for basic research within the ERA.
- **The European paradox needs to be addressed, to ensure transfer and valorisation of knowledge**. To achieve this, EICTA suggests to create a **"Steering Board"**, where the main interested parties, i.e. the research teams, the industrial companies, the Commission and the Member State(s) involved could work together to make the most out of the research projects. To help be more efficient in each area, "Thematic Steering Boards" could be created domain per domain, e.g. in conjunction with the management structure coming out of the technology platforms. Whatever the final structure of the ERC(s), **one such "Steering Board" should be dedicated to IST**.
- Sound national policy requires both private and public sector investment in new technology. The virtuous cycle of government-funded and university-developed basic IT research laid the foundation for much of today's Internet. Continued government funding of basic research enables long-range exploration of areas that are beyond the private sector's collective reach and helps develop the workforce we need. As important, **government policy should continue to assure that resulting innovations can be further developed and commercialized by all who want to advance the state-of-the-art beyond what government researchers achieve**.

IV. Making Europe attractive to the best researchers

EICTA supports the proposal to strengthen "Marie Curie" actions, and would like to emphasize two aspects: mobility of researchers between public and private sectors, and international dimension. In particular, the withdrawal of all administrative barriers for such types of mobility should be encouraged:

- Exchanging researchers between public and private laboratories and their coming back to their original lab shall be promoted as a skills-enhancing experience both ways.
- Re-instating Marie Curie industrial Host Fellowships of FP5 is required.

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[8] "Creating a European Research Council". *Science* (305), 6 August 2004. See also the "Initiative for Science in Europe" web site at http://www.initiative-science-europe.org/.

[9] Cf. e.g. p. 53 of http://europa.eu.int/comm/research/reports/2003/pdf/report-working-doc-2004_en.pdf.

- Sending on the one hand European students to other countries, in the EU or beyond, and then recognize their expertise when they come back, or hosting on the other hand students from all over the world in European research laboratories, whether academic or industrial, should be made as easy as possible.

V. Developing research infrastructure of European interest

The activities devoted to the development of a research infrastructure in the IST area have so far been dedicated only to the academic research community. EICTA would like to highlight that **access to such infrastructures could** in some cases **prove very beneficial to the European industry** as well, e.g. to test innovative solutions and products that could then be put on the market. This is a clear example of one concrete action that could be taken to **address the European paradox** already mentioned. In addition, research infrastructure could be **a clear case for public procurement supporting the European industry**, both large companies and SMEs, as it is being done successfully in the US.

VI. Improving the coordination of national research programmes

EICTA supports an enhanced coordination in the IST area between FP7, intergovernmental programs and especially the Eureka "cluster" projects, and national R&D initiatives. All efforts should be made so that all key areas are addressed by the appropriate European players in the most effective way. The common vision and the strategic research agenda being worked out in the technology platforms can help align the R&D efforts that are currently split between EC, intergovernmental, national and regional levels, building up the ERA.

Article 169 being quite heavy to set up and administrate, EICTA would rather favour a **case-by-case approach, e.g. based on the outcome from each technology platform, to find out what is the most efficient solution for each key domain**. EICTA members are already promoting this trend as the main Eureka clusters, CELTIC, ITEA and MEDEA+ are currently participating in the existing technology platforms: MEDEA+ in the Nanoelectronics platform, ITEA and MEDEA+ in Embedded Systems, and CELTIC in Mobile Communications and Networked & Electronic Media. As Member States involved will soon join the platforms if not already done, coordination with national initiatives will also be included.

However EICTA would like to emphasize the various focuses of these different programs and the **importance of keeping these diverse approaches**. National programmes are often used to strengthen local ties between industry, large and small, and academia, on specific topics of interest at national or regional level. In addition, academic institutions are usually mainly funded by local public authorities. Eureka cluster projects are aimed at strengthening the European industrial competitiveness, based on the initiatives and strengths of the existing European players. The Framework Programme emphasizes many other aspects, especially medium and long term projects in key areas of importance to European industry and to European academic research. Therefore **if a better complementarity has to be achieved to help building up a more efficient ERA, the specificities of each programme must absolutely be kept**.