

COMMUNICATION FROM THE COMMISSION
CONSULTATION DOCUMENT ON STATE AID FOR INNOVATION

Association for Competitive Technology Comments

INTRODUCTION

The Association for Competitive Technology ('ACT') is an international education and advocacy group for the technology industry. ACT represents nearly 3,000 software developers, systems integrators, IT consulting and training firms and e-businesses from around the world. Focusing in particular on the interests of small and medium-sized enterprises ('SMEs') such as entrepreneurial technology companies, ACT seeks to establish a healthy business environment for the technology sector that promotes innovation, competition and investment.

ACT welcomes this opportunity to respond to the European Commission's consultation document on *State Aid for Innovation*. Many of the problems identified by the Commission in the consultation document have been listed by ACT members as key barriers preventing ICT (information and communication technology) entrepreneurs from benefiting from a healthier tech environment in Europe. Among other initiatives, ACT organized a SME focus group on 7-8 November to identify such key problems, and ACT is in the process of organizing another focus group for SMEs in CEE countries.

In general, ACT welcomes the Commission's approach, in particular the establishment of more flexible *ex ante* rules targeted at SMEs to promote innovative activities while avoiding unnecessary "red tape" and costly bureaucracy (red-tape/bureaucracy was one of the key barriers identified by the SME focus group).

ACT notes the following with respect to the promotion of innovation in the ICT sector:

- A knowledge-based economy and business innovation are key to sustainable growth. Innovation relates to a process connecting knowledge and technology with the exploitation of market opportunities for new or improved products, services and business processes compared to the existing ones and encompassing a certain degree of risk. Intrinsically, innovation constitutes a significant vehicle to untap Europe's growth potential to achieve the Lisbon Agenda.

- The European Union is one of the largest markets for ICT worldwide, representing 30.1% of the world market, followed by the U.S. which represents 29.3% and Japan which represents 14.5%.¹ According to the latest EITO figures, the European ICT market is expected to grow at a rate of 2.8% in 2006, as compared to 2.9% and 3.4% in 2005 and 2004, respectively.

Despite these declining growth figures, the ICT sector represents a very significant part of the EU economy. With an annual turnover of about EUR 1,000 billion worldwide, one fifth of which is in the EU, the ICT sector is one of the main industry-drivers of the European economy.

- ACT strongly believes that European leadership in the ICT sector can only be achieved and maintained with active support from decision-makers, in particular for SMEs.
- The EU and its institutions play a key role in ensuring the smooth functioning of the single market, in overseeing fair competition, and in encouraging European competitiveness. The Commission has rightly identified a number of problems, some of which cannot be addressed only by means of state aid. A comprehensive policy and sector-specific approach is necessary to boost SME competitiveness and innovation.
- ACT considers general “systemic” inefficiencies, unsatisfactory IP protection, lack of private funding and underdeveloped venture capital markets, as well as insufficient policy coordination as key barriers to SME innovation in European ICT markets.
- Innovation in the ICT sector is related to both goods and services and is often based on delivering compound innovations composed of products and services. This is intrinsically linked to the specific features and characteristics of the ICT sector. Therefore, ACT invites the Commission to reconsider its position and to adopt a wider definition of innovation, including services, as well as other innovation models, *e.g.*, organisational, presentational, value-added and business model innovation.
- ACT advocates that regional bonuses in the context of the state aid for innovation initiative must be assessed in light of quality criteria linked to the specific industry sectors.

¹ See European Information Technology (‘EITO’) 2005, October 2005.

- In the ICT sector, SMEs have specific concerns focused on intellectual property issues and high-risk activities. ACT proposes certain measures to address market failures in these areas.
- ACT considers that the proposed definition of an “innovative start-up” by the Commission is overly restrictive and unclear.
- ACT invites the Commission to develop concrete proposals for specific measures for risk capital funding of post-seed phases that would complement the state aid support provided in the early phase of the innovation process.
- ACT welcomes the Commission’s proposals concerning “innovation intermediaries” and mobility of researchers and engineers.
- Innovation flourishes if the emphasis is placed on the synergies that are likely to arise from converging technologies and markets, rather than on regional factors. ACT therefore suggests that the Commission considers quality criteria linked to the specific industry sectors to define cluster/clustering activities for the purposes of state aid support.
- ACT notes that public support is likely most effective when applied to existing, or even embryonic, hi-tech zones rather than trying to establish them from scratch.

Question 1) Do you think that it is appropriate not to create a separate Framework for Innovation and that the new possibilities for State aid target selected innovation-related activities?

ACT supports the Commission's approach to integrate the new rules into frameworks, guidelines and block exemptions for, *e.g.*, SMEs, R&D, regional aid, employment, and risk capital. As the Commission notes, for the purpose of developing a new separate framework for state aid for innovation it is difficult to agree on a single definition of the term 'innovation',² and ACT believes that a primary aim of the reform should be to simplify the legal framework as far as possible and to ensure a consistent approach embracing the initiatives undertaken (*e.g.*, the Competitiveness and Innovation Programme ('CIP')).

Although many factors affecting innovation are common to all industrial sectors, some sectors, such as information and communication technologies ('ICT'), biotechnology, *etc.*, have highly specific characteristics and therefore face specific issues that may require a policy response.

ACT supports a sector-specific approach to select innovation-related activities. Each sector is unique, in terms of the degree of market openness, infrastructure, R&D cycle, as well as regulatory framework.

In general, ACT agrees with the two groups of innovation-related activities identified and addressed by the Commission, namely (i) activities that support risk-taking and experimentation, and (ii) activities which improve the general business environment. ACT's SME focus groups have identified problems with the general business environment, such as for example a lack of marketing knowledge and business skills (engineers and business people/investors do not speak the same language), risk aversion and fear of failure, as among the main barriers to innovation.

Question 2) Do you think that the problems presented in Annex and the market failures identified by the Commission as hampering the innovation process are accurate? If so, why? If not, why not?

ACT members consider many of the problems identified by the Commission in the Annex under point 5 *general "systemic" inefficiencies* (poor industry-academia interaction; excessive bureaucracy in government funding; no entrepreneurship "culture"; negative attitude towards failure; and risk aversion) as well as

² See Commission Staff Working Document, Community rules on state aid for innovation, SEC(2004)1453, dated 15.11.2004.

unsatisfactory IP protection (point 3), lack of private funding and underdeveloped venture capital markets (point 2), and insufficient policy coordination (point 4) as key barriers to SME innovation in European ICT markets.

In particular:

- A strong, efficient and effective regulatory framework for intellectual property protection lies at the very heart of the innovation process. This is all the more true for the small- and medium-sized innovators, which have fewer ancillary advantages in a competitive market.

Indeed, it is easier for SMEs to protect their innovations through patents than through commercial channels. Having patented their innovations, they can license their use and exploitation. The licensing revenues provide immediate funding for further innovation, as resources are not tied up in marketing processes. In addition, intellectual property rights can constitute a guarantee for SMEs, often required by banks and investors, that demonstrates the current and/or future profitability of the business.

- The EU has fallen short of putting together major resources, infrastructure, and funding to attract investments for innovation. As a result, European SMEs in the ICT sector are increasingly facing fierce international competition in terms of investment, production, and R&D expenditure.
- There is no escaping the fact that the absence of an “entrepreneurship culture”, the poor industry-academia interaction, the negative attitude of SMEs towards failure as well as general risk aversion also pose significant hurdles to the innovation process.
- The relatively high uncertainty related to innovation projects and the inability of entrepreneurs to “speak” the language of investors aggregate the effect of market failures in the SME sector. As a result, venture capital is not a widely used form of financing for the majority of SMEs. According to a recent survey, only 2% of the SMEs surveyed from different sectors sought funding from venture capital companies.³
- Product markets in the ICT sector are generally characterized by low entry barriers for start-ups and SMEs. However, it is the struggle to remain competitive and continue the business growth that stifles innovation, especially in light of the short life cycles of innovative products/services.

³ See SME Access to Finance, Eurobarometer, October 2005, p. 17.

- Another hurdle that inhibits SMEs' growth and innovation potential is the over-regulation at national and EU level. Reducing red-tape and the simplification of rules and legislation, *e.g.* employment legislation, standardization, *etc.*, would give new impetus in the ICT sector.
- Finally, in order to be a practical possibility for SMEs, Government funding must be based on a quick and uncomplicated administrative process. Complicated and costly application procedures in combination with certain difficulties to access information have been identified by ACT members as a major barrier to SMEs obtaining State funding for innovative projects. The Commission's proposal to avoid the need to define "eligible costs" is welcome in this context.

Question 3) The measures described in this Communication provide ex-ante criteria on the basis of which State aid for innovation would be approved. Do you think that such an approach is adequate?

ACT agrees that establishing *ex ante* criteria on the basis of which state aid for innovation would be approved would provide the most simple, user-friendly and predictable regulatory framework to boost innovation and the growth of entrepreneurial SMEs.

However, ACT would like to underscore that restricting the *ex-ante* rules for State aid for innovation to those activities that relate to "*technological innovation*", *i.e.* innovation that is limited to product innovation, may not yield the desired result.

For all enterprises, innovation is a crucial means to create competitive advantage and superior customer value. Apart for technology-based enterprises, the focus of entrepreneurs is not on technological aspects of new product development, but on innovative ways to improve their position in the marketplace.

Innovation in the ICT sector is also related to both goods and services and is often based on delivering compound innovations composed of products and services. This is intrinsically linked to the specific features and characteristics of the ICT sector. The ICT sector includes all manufacturing and services industries that produce equipment and software used for the capture, storage, transmission and presentation of information in electronic form, *i.e.*, computer and telecommunications equipment,

industrial process equipment, consumer electronic goods, IT and telecommunications services, and packaged software.⁴

According to 2003 European statistics for the EU's ICT sector, ICT services accounted for 75% of ICT employment and valued added (see table below).

KEY FIGURES FOR THE ICT SECTOR IN EUROPE (EUROSTAT 2003)					
	Number of enterprises	Turnover (EUR billion)	Value added at factor cost (EUR billion)	Number of persons employed	Apparent labor productivity (kEUR per head)
<i>ICT manufacturing</i>	45,000	429	108	1,531,000	70,3
<i>ICT services</i>	503,000	1,108	325	4,494,000	72,4
<i>ICT total</i>	<i>548,000</i>	<i>1,537</i>	<i>433</i>	<i>6,024,000</i>	<i>71,9</i>

Therefore, limiting state aid only to product innovation would result in market failures in this industry, *e.g.*, inefficient dissemination of information, inability to absorb the positive spill-over effects of innovation (externalities) to the services sector, mismatches on the labor market, and so on.

Furthermore, it would run counter to the objective of boosting European competitiveness in the international arena. A recent study has demonstrated that the EU's performance is better than that of the U.S. in only one sector, that of ICT services.⁵ This finding has already been underscored in a recent report prepared for

⁴ See Benchmarking national and regional policies in support of the competitiveness of the ICT sector in the EU, Final Report, Fraunhofer Institute Systems and Innovation Research, prepared for European Commission, DG Enterprise, November 2004, p. 14.

⁵ See EU Productivity and Competitiveness: An Industry Perspective – Can European Resume the Catching-up Process?, (2003), Luxembourg: Office for Official publications of the European Communities.

the Directorate-General for Enterprise in 2004, where there was a call on the Commission for a further analysis of the potential for the EU ICT sector.⁶

In light of the above considerations, ACT invites the Commission to reconsider its position and to adopt a wider definition of innovation, including services, as well as other innovation models, such as organizational, presentational, value-added and business model innovation.

As already recognized by the Commission in 2003:

*"...weaknesses in organizational, presentational, value-added and business model innovation are as relevant to the slow pace of progress toward the Lisbon goals as is the evidently low level of R&D spending. [...] The Union must recognize the full scope of the innovation phenomenon and develop a better knowledge of how it works in the European environment in order to put a public policy on a firm foundation."*⁷

ACT would therefore support a definition of innovation, along the following lines:

*"innovation is the renewal and enlargement of the range of products and services and the associated markets; the establishment of new methods of production, supply and distribution; the introduction of changes in management, work organization, and the working conditions and skills of the workforce".*⁸

ACT believes that this definition continues to be a valid basis for the EU approach to innovation policy in the context of the Lisbon agenda.

⁶ See Benchmarking national and regional policies in support of the competitiveness of the ICT sector in the EU, Final Report, Fraunhofer Institute Systems and Innovation Research, prepared for European Commission, DG Enterprise, November 2004, p. 8.

⁷ See Communication Communication, Innovation policy: updating the Union's approach in the context of the Lisbon strategy, COM(2003)112final, 11.3.2003, pp. 7-8.

⁸ See Green Paper on Innovation, COM(1995)688.

Question 4) Stakeholders are invited to provide empirical evidence about the appropriateness of authorizing State aid to large companies, in particular in connection with the objective of developing clusters around poles of excellence in the EU. Do you think that the Commission should develop ex-ante rules allowing State aid for Innovation to the benefit of large companies, or that such type of aid should always be subject to a case-by-case stricter analysis on the basis of a notification to the Commission? As far as support to innovation (or other state aid) is concerned, would it be appropriate to distinguish between different categories of large companies? If so, on the basis of which criteria? And for which purpose?

The small- and medium-sized innovators that ACT represents often develop within an eco-system or cluster that forms around a strong ICT producer or ICT use-intensive industry. In this context, SMEs often interact with large platform companies and benefit from a close collaboration with such large companies.

However, state aid may result in considerable distortions in the market place if it is not properly allocated, in particular when it is given to large companies to the detriment of small- and medium-sized innovators. Therefore, ACT advocates a strict economic approach to determining what type of large companies should benefit from state aid, in which context, and which type of state aid would be appropriate for dealing with the specific innovation activity.

Subject to these comments, ACT is not opposed to state aid for large companies, but we will not comment further on such aid, given that ACT's constituency is SMEs and that the views put forward here are those of ACT's SME member companies.

Question 5) Stakeholders are invited to provide empirical evidence about the appropriateness of authorizing State aid to non-technological innovation, notably in services sectors.

As noted above, ACT supports a broader definition of innovation. See answer to question (3) above.

Question 6) Should the rules on State aid for innovation include regional bonuses for cohesion purposes? Should they differ according to the geographical situation of the region, irrespective of cohesion issues?

A recent study has demonstrated that different countries and regions can have fundamentally different structural relationships with the ICT sector. In this respect, three basic groups of EU Member States were identified:

- a) “independents”, *i.e.*, States in which there is a strong and well-established ICT producer sector with global players;
- b) “intermediates”, *i.e.*, States that are mainly importers of ICT goods and services but that otherwise are substantial recipients of ICT sector inward investment with high levels of domestic value-added and that have significant independent production and export capabilities; and,
- c) “dependents”, *i.e.*, States that are mostly importers of ICT goods and services that receive mainly lower value-added ICT sector inward investment.⁹

Similar categorizations are common also in other innovative sectors.

ACT believes that regional bonuses in the context of the state aid for innovation initiative must be assessed in light of quality criteria linked to the specific industry sectors. The different levels of regional development in each specific sector must be taken into account in order to stimulate growth and innovation. Such a sector-specific proportional approach, rather than the traditional “one-size-fits-all” regional cohesion bonuses, would promote synergies among the different groups of countries and stimulate EU-wide development of the ICT industry.

Question 7) Are some types of aid more suited to specific situations and specific innovation activities (ex: tax rebates, secured loans, repayable advances)?

As the Community already recognizes, improving the access to sufficient and adequate financing and identifying the appropriate financing means for small- and medium-sized enterprises is vital in fostering innovation and entrepreneurship.¹⁰ ACT supports the Commission’s approach that state aid should be used cautiously and

⁹ See Benchmarking national and regional policies in support of the competitiveness of the ICT sector in the EU, Final Report, Fraunhofer Institute Systems and Innovation Research, prepared for European Commission, DG Enterprise, November 2004, p. 20.

¹⁰ See SME Access to Finance, Eurobarometer, October 2005.

only to the extent necessary to bring about development that the market would not otherwise have generated and that produces net economic benefits.

In general, ACT members consider that cash grants and different forms of tax benefits and relief (*e.g.*, reductions in tax rates, sales tax exemptions on machinery and equipment, and income tax rebates) are the most appropriate means of financing for innovative projects.

Given the underdeveloped state of venture capital markets, many SMEs rely on bank loans for financing. In that context, reduced interest rates or State guarantees which would alleviate the burden on SMEs to provide costly and often complicated bank guarantees would be welcome.

In the ICT sector, SMEs have specific concerns focused on intellectual property issues and high-risk activities. In particular:

- Intellectual property protection constitutes a cornerstone of the innovation process for SMEs in the ICT sector. However, the costs of securing intellectual property rights are excessive for SMEs. ACT believes that the provision of loans that are reimbursable in case of success or commercialization of results to finance intellectual property protection (*e.g.*, patent applications) may be an appropriate tool addressing market failures.
- SMEs in the ICT sector invest considerable amounts of money in R&D. It is widely accepted that market failures in R&D have a direct negative impact on private investment in R&D. To address such market failures, ACT's members would welcome soft loans, loans that are reimbursable in case of success of their research activity, as well as tax credits for R&D expenditure.
- SMEs need access to finance not only in the start-up phase, but also in later stages in order to keep developing and innovating. However, SME financing is considered by many financial providers as a high-risk activity that generates high transaction costs and/or low returns on investment.¹¹ Therefore, ACT's members would welcome public funding of risk capital measures, such as the creation of a venture capital fund intended to provide capital (especially small-scale venture capital) to innovative SMEs.

Finally, innovation is largely dependent on the enterprise's ability to spot market opportunities, to respond quickly to new challenges and to exploit its knowledge base. Thus, a special highly-developed form of entrepreneurial drive should be

¹¹ *Id.* p. 2.

promoted. ACT encourages the Commission to consider allowing state aid for the promotion of entrepreneurial behavior, e.g., by offering specific forms of training.

Question 8) Do you agree with the proposed criteria to define innovative start-ups, with the approach of not defining eligible costs, with the amounts of aid and cumulation rules? Do you think that different eligibility criteria should be established for high-tech sectors like biotech and pharmaceuticals which have long time-to-market and product development cycles?

The Commission proposes a definition of an “innovative start-up” which consists of a two-limp test: (a) the start-up criterion and (b) the innovativeness criterion (which consists of two alternative tests: either (i) proof that the beneficiary will produce products and processes which are technologically new or substantially improved and which carry a risk of technological or industrial failure, or (ii) R&D expenses representing a minimum of 15% of the beneficiary’s overall expenditure). ACT considers this test overly restrictive and unclear for the following reasons:

Start-up criterion

The start-up criterion should not be limited to “small” enterprises, as defined in the *Commission Recommendation of 6 May 2003, i.e.*, enterprises that employ fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million.¹² Depending on the sector of activity and on the regional basis, a start-up enterprise may employ more than 50 employees and still constitute a start-up.

ACT would therefore support a wider definition of a “start-up” that would cover all enterprises that employ fewer than 250 persons and that have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million (*i.e.*, a SME according to the Commission’s definition).

Furthermore, limiting the start-up criterion to five years of existence would exclude from the scope of the proposed state aid rules for innovation a large number of innovative sectors, such as the biotechnology and pharmaceuticals sectors. These sectors usually have long product development cycles of up to 10 years. ACT therefore advocates a time period longer than five years to identify start-ups.

Innovativeness criterion

¹² See Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (2003/361/EC), OJ L 124, 20.5.2003, p. 36.

The proposed innovativeness criterion is also problematic. The Commission should define precisely what constitutes a “proof” of technologically new or substantially improved products or processes and how this might apply to services. Also, how can a potential aid beneficiary show at the time of the aid application that its innovative products/processes carry a risk of technological or industrial failure? As it is now formulated the test seems difficult to apply in practice and could give rise to significant legal uncertainty and burdensome procedures (in particular if applied at a regional/local level without notification to the Commission).

Eligible costs, amounts of aid and cumulation rules

The Commission proposes to exempt aid for 50% of social contributions and other local/regional taxes (not linked to profits) until five years after establishment of the innovative start-up and for up to five years, provided the benefits are reinvested in the company or take the form of repayable advances.

The Commission further proposes the possibility of a state aid grant of up to EUR 1 million over a three-year period to an innovative start-up without specific restrictions on eligible costs, and provided that, *inter alia*, the aid is not cumulated with any other state aid. While ACT welcomes these proposals, we question whether the absolute rule against cumulative aid is necessary and appropriate. For example, a start-up receiving training aid should maybe also qualify for the aid grant to finance the development of innovative products or applications for patents.

Question 9) Beyond the proposed rules, empirical arguments are welcomed that demonstrate the need for State aid: i) for start-ups independently of the innovativeness criterion, and ii) for innovative SMEs established for more than [5 years].

As above, the need for state aid outside the scope of the innovativeness criterion will depend on the exact definition and practical application of that criterion.

For many industry sectors with long product development and R&D cycles, the five year post-establishment rule seems unduly restrictive. ACT therefore supports a more sector-specific approach, without jeopardising the synergies that potentially arise from the interaction of converging sectors and markets, *e.g.*, of the ICT sector with the biotechnology sector.

Question 10) Do you think that other types of State aid apart from those currently granted in respect of risk capital are required in order to help European SMEs grow beyond the start-up phase? If so, which ones?

ACT welcomes the Commission's proposal to introduce more flexibility for assessing aid provided in the form of risk capital.

Innovation is a continuous process. Innovative enterprises need to continue innovating, in order to remain competitive. An enterprise that allows itself to lag behind in the race to generate new or improved goods and services is endangering its future viability.

SMEs in the ICT sector often face difficulties in the post-seed stages, *i.e.* at the end of the early establishment phase and at the beginning of the expansion phase, when new rounds of financing are often required. Limiting state aid to the very early phase of the lifecycle of a micro, small or medium enterprise cannot guarantee the necessary continued flow of innovation and development.

ACT invites the Commission to develop concrete proposals for specific measures for risk capital funding of post-seed phases, *e.g.*, the creation of venture capital funds for innovative firms other than start-ups, soft loans, *etc.*, that would complement the state aid support provided in the early phase of the innovation process.

Finally, ACT supports measures that would assist the financial community to acquire better intelligence about emerging areas of innovation, *e.g.*, the time required to reach profitability, as well as specific skills needed to assess and manage investments in innovative enterprises in new technological fields.

Question 11) Do you think that these provisions would produce the expected effects in terms of encouraging SMEs to launch innovative products in the market? If not, what changes should be made to these rules?

In order to support technological experimentation and risk-taking, the Commission is proposing to allow aid for a number of activities in the last R&D stage, the pre-competitive so-called "experimental development stage", such as development of commercially usable prototypes (under the current R&D framework it is not possible to grant state aid to activities that go beyond the first prototype), technical evaluations and feasibility studies, expenses for adapting technologies, certain marketing costs, and management and marketing training. The aid would take the form of grants, subsidized or guaranteed loans or subsidized repayable advances covering up to 15%

of eligible costs, provided that the aid is linked to a specific R&D project and subject to an innovativeness criterion.

ACT recognizes that small- and medium-sized innovators can be affected by market failures related to activities that go beyond the first prototype. The proposed measures are in the right direction to stimulate innovation. However, ACT believes that the proposed aid intensity of 15% is too low to make an impact and deliver the desirable results. ACT thus advocates an aid intensity of at least 35% based on the current R&D framework, which allows a gross aid intensity of 25% plus a 10% SME bonus for pre-competitive development activities.

Question 12) Is there evidence that these provisions should be extended to large companies? Do you think that notification should be required for measures granting substantial amounts of aid to individual firms or individual sectors? If yes, above what amount? What empirical evidence should then be requested by the Commission?

See answer to question (4) above.

Question 13) How would you regard specific support for innovation intermediaries which merge or develop a joint venture to reach critical mass in a technological field of specialization? Should investment aid be permitted in this context? If so, on what conditions? What other measures could be envisaged?

The combination of several technologies within a single innovative product or service and the often short product/service life thereof, mean that an entrepreneur may depend on external inputs, including business advice, provision of facilities, certification services, etc. Such services can be offered by “innovation intermediaries”. ACT welcomes the Commission’s proposal for establishing “innovation services vouchers” for all SMEs in order to buy services from innovation intermediaries up to a maximum of EUR 200,000 over a three-year period.

Question 14) Is there evidence that the recruitment by SMEs of other types of highly skilled personnel should be also aided?

To encourage training and mobility, the Commission proposes to exempt aid to SMEs to cover 35% of the costs for highly qualified researchers and engineers on the condition that the personnel recruited is not replacing other personnel. It is further

propose to exempt aid to SMEs to cover 35% of project-related training costs of staff for a maximum of three years to allow the training of employees in, e.g. entrepreneurship. Furthermore, to encourage the temporary loan and exchange of personnel between universities or large companies and SMEs, the Commission proposes to exempt aid covering the personnel costs incurred in the home university or enterprise in the past two years and the costs linked to the loan of personnel for a maximum of three years, provided that large companies exchanging personnel with SMEs do not belong to the same group as the SME.

ACT welcomes these proposals. Against the background that ACT SME focus groups have identified as a barrier to innovation a skills shortage not only for researchers and engineers but also, and in particular, for marketing and management/business experts, we would welcome an expansion of the rules to cover aid also for the recruitment of such personnel.

Knowledge and skills stimulate innovation. Especially in the ICT sector, a skilled workforce determines the innovation drive of the enterprise in question. However, SMEs often experience skills shortages. This is largely due to individual immobility, difficulties to maintain high-skilled personnel and the often poor cooperation, if not absence thereof, between universities and industry to recruit skilled personnel.

ACT believes that the Commission's proposals may provide the necessary framework to promote training and mobility of highly skilled labor towards SMEs. The skilled workforce that may mobilize from universities or other enterprises to SMEs on a loan basis, as proposed, may improve the potential of SMEs to contribute to competitiveness and growth, while maximize synergies between the stakeholders involved.

Question 15) Should the Commission adopt specific rules for cases where a researcher chooses not to return to his/her home university or where the university no longer intends to hire him/her back?

Question 16) What definition of cluster/clustering activities should be followed and what criteria should be used to distinguish clusters from the broader category of innovation intermediaries?

To support the development of poles of excellence through collaboration and clustering, the Commission proposes to amend the current rule that where there is

cooperation between industry and public institutes, industry has to pay the full cost of the project or give all IP rights to the public institute so that the payments are not classified as state aid. Instead, the rights would be allocated between partners on a pro rata basis according to each partners' contribution.

It is also proposed to allow state aid (*e.g.*, in the form of tax exemptions or repayable advances) for the setting-up of a research center, private university, or equivalent to support a cluster and to authorize (cumulative) state aid for certain infrastructure, *e.g.*, access to broadband in areas where the market offers insufficient coverage.

In the ICT market, a strong clustered sector structure is emerging that builds upon traditional strengths in specific ICT producer goods and/or on ICT use-intensive industries. In this context, innovation flourishes if the emphasis is placed on the synergies that are likely to arise from converging technologies and markets, rather than on regional factors. ACT therefore suggests that the Commission considers quality criteria linked to the specific industry sectors to define cluster/clustering activities for the purposes of state aid support.

Question 17) Do you think that State aid should be allowed to promote European centers of excellence? If so, what type of State aid, for what reasons, and subject to what conditions? What other, possibly better, measures could be envisaged?

To respond to worldwide competition and future challenges, there is an emerging need for sector-specific large hi-tech zones, where micro, small and medium enterprises may benefit from the direct contact and relationship with larger companies, innovation intermediaries, and research institutions. Such large hi-tech zones have the potential to become European centers of excellence.

Although such centers of excellence may provide the necessary vehicle to promote innovation, ACT questions whether they should be created based on public intervention and support. Successful hi-tech zones need to be market-driven and built upon collaborative R&D and innovative projects. Such collaboration cannot be forced on the basis of regional considerations. Public support is likely most effective when applied to existing, or even embryonic, hi-tech zones rather than trying to establish them from scratch.

Question 18) Are additional criteria needed to avoid State aid being fragmented and to encourage the concentration of resources in a limited number of poles of excellence?

Question 19) What are your views more generally about the need for additional provisions for infrastructure that supports innovation (e.g. in the field of energy, transport etc.)?

Question 20) Do you think that large firms should be entitled to State aid, e.g. to establish research facilities in a European pole of excellence? Should the Commission try and develop specific criteria to control such State aid? What type of economic evidence should be requested to analyze the necessity of such State aid?

See answer to question (4) above.