

ANNEX – Selected issues on State aid in the field of innovation

Answers from Finland

I Problems with innovation in the EU currently

1. What are in your opinion the reasons for the perceived innovation gap in the EU?

The main reasons are:

- Systemic inefficiencies. Inefficient transfer of ideas, knowledge and skills. Poor industry-academia interaction. Lack of collaboration and networking.
- Slow renewal of industries. Not enough new innovative companies. Lack of entrepreneurship culture. Unattractive risk/reward ratio. Negative attitude towards failure.
- Lack of qualified human resources. Lack of availability and high cost of skilled labour. Science and engineering not attractive to students. Salary levels in science and engineering relatively low compared to alternative professions in Europe, but relatively high compared to emerging and fast developing economies like China and India.
- Underdeveloped capital markets. Unstructured and underdeveloped venture capital markets. Lack of marketplaces, especially for pre-seed and seed investors to sell their investments to next stage investors. Lack of investors specialising in specific stages and specific sectors. Lack of expertise and capabilities to evaluate innovative companies among investors. Asymmetrical information between innovators and sources of private and public capital.
- Underdeveloped common European markets. Small and distributed national markets. Common market objectives have not been realised, e.g. in services and energy.

2. Do you have analyses, reports or any material available to diagnose the perceived innovation gap in the EU?

There are numerous studies looking into market failures and comparing the innovation performance of countries, regions and continents, e.g. international competitiveness studies by WEF, IMD and UN, and studies by OECD and the EU. There are also some Finnish studies related to the subject, e.g.

- Financial systems and firm performance, theoretical and empirical perspectives, editors: Ari Hyytinen and Mika Pajarinen, ETLA B:200, Helsinki 2003

Note! Subscription address: <http://www.etla.fi/eng/index.php>

3. What market failures can be clearly identified, which result in an innovation deficit? How should they best be resolved in your opinion?

The importance of market failures varies from Member State to Member State. The list below presents, at general level, the main categories of market failures existing in EU countries. Some of the failures identified also are such where the public sector alone is not able to intervene effectively without a commitment on the part of the private sector. In addition, some of the failures originate from the public sector (“government failures”).

The main failures are:

- The perceived risk/reward ratio of innovative activities is not attractive enough. Companies do not invest enough in innovative activities. Companies focus too much on short-term development at the cost of more challenging long-term research.
- Inefficient transfer of ideas, knowledge and skills, especially because of poor industry-academia interaction. Low entrepreneurship motivation among scientists. The academic culture does not appreciate commercialisation. Rigid labour market and pension rules and practices, which do not encourage transfer between academia and industry; this applies in both directions. Lack of internal (attitudes, motivation, appreciation) and external (funding, rewards) incentives for collaboration. Lack of co-operation and networking capabilities.
- Lack of sophisticated demand and innovative markets. For example, hindering the development of 3G mobile networks and services by using auctions to sell permits or lack of initiative, motivation and capability to accept risks and enhance innovation through public procurement. Underdeveloped common European markets. Small and distributed national markets. Common market objectives have not been realised, e.g. in services and energy.
- Lack of capital for innovative companies and activities due to underdeveloped capital markets. Unstructured and underdeveloped venture capital markets. Lack of marketplaces, especially for pre-seed and seed investors to sell their investments to next stage investors. Lack of investors specialising in specific stages and specific sectors. Lack of expertise and capabilities to evaluate innovative companies among investors.
- Unattractive regulatory framework. Underdeveloped (e.g. IPR), complex (a large number of EU, national and regional State aid, corporate tax, employment, accounting, etc. regimes and regulations, e.g. challenges in monitoring accumulation of State aids) and relatively strict (e.g. State aid rules as compared to USA and Asian countries, e.g. the US SBIR programme) legal framework.

EU Structural fund and state aid rule aspect: Alongside national efforts, regions play a significant role in the innovation policy of today, but their innovation capabilities have not, so far, sufficiently been harnessed to serve common interests, as the Lisbon agenda underlines. Stronger commitment cannot be made only by formulating common targets, but incentives are also needed to concentrate national and regional resources on these targets. The forthcoming Structural Fund period, and the Commission’s proposal to put more weight than before on the development of expertise and innovation related activities, is therefore important. The Structural Fund and State aid rules (e.g. coming Communication on innovations) should be in line and

complement each others as concerns the creation of prerequisites for innovative environment at regional level.

II Definition of innovation

4. The Vade Mecum on Innovation has concluded that it was extremely difficult to define innovation, and the resulting consultation has confirmed this position. Do you think it would be absolutely necessary for the Commission to come up with a definition of innovation in the Communication on State Aid for Innovation?

A general definition is necessary to communicate what is meant by innovation in the Communication. However, a more detailed overall definition is likely extremely difficult. A more detailed definition could also lead into too restrictive or even ineffective rules and further difficulties in interpretation of the respective rules.

A viable approach would be to have a general definition of innovation combined with more detailed definition of specific innovative activities, services and infrastructures eligible for more favourable State aid based on clearly identified market and systemic failures.

5. What would be the most appropriate and workable definition of innovation for State aid purposes in your opinion?

A general definition, although essential, would not necessarily be workable for State aid purposes as such. Therefore, State aid rules should probably not be based on the definition of innovation as such, but rather more directly on the different types of market failures and avoiding potential market disturbances.

The definition in the Commission Communication on Innovation Policy “*Innovation is the successful production, assimilation and exploitation of novelty in the economic and social spheres*” as referred to in the Vade Mecum on Innovation would be general enough and therefore appropriate (see answers to questions 6 and 7). The purpose of the definition would not be to define solely eligible costs, but rather communicate the meaning of the concept of innovation and define the field covered by the Communication on State aid for Innovation.¹

The best approach for this purpose would be to use the same definitions that are used by the OECD and Eurostat in the Community Innovation Survey. However, the current definitions of innovation for statistical purposes may be too detailed and currently

¹ Alternative general definition for innovation could be something like “*Innovation is a new or significantly improved product, process, service, method, business model, organisation, practice or system, which has been taken into use resulting in considerable (economic, social and/or environmental) benefits to those having developed it and/or those using it*”. This slightly more elaborated formulation would also allow for both technological and non-technological innovations as well as both commercial and non-commercial innovations (e.g. public sector and social innovations).

somewhat limited to technological product and process innovations to be appropriate for State aid purposes as such. Fortunately, the OECD Oslo manual (Guidelines for collecting and interpreting technological innovation data) is currently being revised and is therefore more likely to provide a better basis for the definition of innovation also for State aid purposes in the near future.²

6. If you cannot recommend any such definition, do you think that it would nevertheless be possible to identify: i) innovative activities, ii) services for innovation; or iii) infrastructures for innovation, which should be eligible for State support (bearing in mind the need to avoid significant distortions of competition in the internal market)?

At general level definition of innovative activities could read somewhat as follows: *“Innovative activities are deliberate actions of creating, adopting, using and transferring new knowledge and skills by analysing, developing, piloting, testing and validating new ideas, models, practices, equipment and systems with the purpose of creating innovations”*.

For State aid purposes, however, more important than the definition itself is to define the extent to which innovative activities are eligible for State aid. This should be based on the market failure argumentation and on avoiding market disturbances. The same principles should be applied to services for innovation and infrastructures for innovation.

The most difficult part in defining eligibility is, like in many State aid rules, the grey area between private and public activities. In the case of innovation, this becomes an issue, for instance, in transferring IPR related to a potential innovation, and what is even more important (since IPR is already an issue that has to be resolved in the forthcoming update of the R&D framework item 2.4), how eligibility is defined in various public-private partnerships and during market transitions, where the public sector is first establishing activities to create a market for specific innovation services, for instance, and then withdrawing to allow private service providers take over the markets. Although the relevant market failure can typically be defined, the nature of the failure changes over time, as does the role of State aid.

The basic principle of State aid policy, and also in case of innovation should be to avoid market distortion. This leads into two main considerations. First, State aid should not be given for activities through which single market actors gain unfair advantage over other market actors in the same markets. Second, State aid should be focused effectively to correct verified market failures. The problem involved in these considerations is that, in principle, they can be quite case specific, which makes it difficult to set up State aid guidelines, which would be both clear and easy enough to apply in practice.

An attempt to take the considerations further could result in the following principles:

1. State aid can cause market distortion, if State aid can be used to:
 - produce immediate profits (e.g. selling something produced in a State aid supported project with a profit),
 - gain market share through unfair pricing (made possible because of State aid),

² See http://www.oecd.org/document/1/0,2340,en_2649_201185_33847553_1_1_1_1,00.html

- gain unfair control of markets (e.g. State aid supported project aimed at solving some problems of a large number of customer companies)
- give unfair advantage to State aid supported companies through some other mechanism.

Eligibility to State aid should therefore control immediate profits, unfair pricing, unfair market control and other unfair advantages. In practice, unfair advantages can be eliminated via two mechanisms, either by limiting State aid for individual actors or by ensuring equal State aid for all actors. The first mechanism is appropriate for addressing most market failures. However, the second one can be more effective in dealing with specific market failures, such as attempting to create new and/or innovative markets for innovations or services for innovation.

2. Market failures can be e.g. (see also questions 1 and 3)

- limited availability and/or access to equity and other funding,
- limited availability and/or access to sufficient quality innovation services,
- limited availability and/or access to relevant knowledge and skills,
- limited availability and/or access to environments where potential innovations could be piloted or tested,
- poor perceived risk/reward ratio leading to risk evasiveness and underinvestment in innovative activities,
- limited access to markets or underdeveloped markets (lack of sophisticated demand, regulated or otherwise controlled markets, etc.)

Basically all company activities can be regarded innovative, if they are an integral part of an activity that aims at producing innovations. All R&D can thus be regarded as innovative activity. The real question from State aid perspective is not to define which activities are eligible and which are not, but rather when these activities are too close to market and thus not eligible for State aid.

For example, market studies can be made to identify at an early stage of R&D what the characteristics of a new innovative product or service should be, or to forecast and identify changes in customer behaviour towards current products and services. Whereas the first can be regarded as innovative activity, the latter cannot. Similarly, building international networks to access complementary knowledge and skills can be regarded as innovative activity, whereas building networks for commercial distribution is hardly an innovative activity³.

Basing State aid eligibility entirely on a predefined set of innovative activities would therefore not make sense. One alternative is to define eligibility based on verified market failure. This would be a valid rationale, but only on a general level. Requiring market failure verification separately for each scheme would take up a significant amount of resources and could lead to interpretation problems and, possibly, to unequal treatment. Another approach would be to define eligibility based on potential market disturbance. Similarly, this is sensible to do only on a general level.

Therefore, a valid eligibility definition of innovative activities for State aid purposes could be constructed by combining these two alternative approaches on a general level. This would in practice mean that the eligibility would be based on providing State aid to

³ Unless, of course, the purpose is to build a limited network for piloting a new innovative business model, in which case even that could be regarded as innovative activity.

address general level market failures and the extent of activities would be limited to potential market disturbance.

This would mean that innovative activities eligible for State aid would be e.g.

- attracting equity and other forms of funding,
- identifying and accessing relevant complementary knowledge, skills and services (incl. subcontracting),
- identifying and accessing environments for piloting and testing potential innovations,
- demonstrating the feasibility and characteristics of a potential innovation,
- identifying, analysing and entering markets

These activities would be eligible as long as they are executed

- for the purpose of producing innovations,
- without immediate profit,
- without allowing products or services to be offered at prices below market prices,
- without creating the opportunity to pose unfair control on any markets and
- without allowing other forms of unfair advantage for the recipients of State aid.

The OECD Oslo manual is also a good source for description of activities regarded as innovative. It also contains descriptions of factors hampering innovation, i.e. market failures as they are encountered and experienced by companies in practice.

For State aid purposes, this is only appropriate in general. More detailed descriptions of specific innovative activities with allowed levels of State aid in each case are needed, e.g. to which extent identifying, analysing and/or entering markets can be considered eligible activities for State aid and what can the maximum State aid allowed be. It is also necessary to define the eligibility criteria in more detail, for instance, what can be considered as immediate profit.

7. Have you identified in your past practice clearly defined innovation infrastructures, services and activities? If yes, please list them and provide a clear definition.

Innovation services can include e.g.

- services that encourage companies to engage in innovative activities (promotion, incentives, etc)
- services that help companies improve their capabilities to innovate (training, mentoring, etc)
- services that help companies identify and access complementary resources for innovation (brokering, recruitment of skilled personnel, networking, venture capital and other financial services, etc)
- services that help companies implement innovative activities (R&D, testing, market and other feasibility studies, legal services, financial services, accounting and other business services, etc)

Innovation infrastructures can be e.g.⁴

- facilities and equipment for innovative start-up companies, provided by incubators for example

⁴ Sector specific innovation infrastructure is not listed here.

- facilities and equipment for bringing together innovative companies and public research organisations, e.g. science parks and technology centres
- experimental and pilot environments for testing and getting feedback from potential customers and end-users
- technical testing (quality, safety, usability, etc)
- marketplaces for investors, platforms for matching investors with innovative companies
- information and communication networks and systems
- libraries, databases, internet portals and other collections of information and knowledge

III Innovation infrastructures

There is a need to clarify the situation of technology centres, incubators etc. who play an intermediary role in the innovation process. But in addition, some IT and communication infrastructures – like broadband networks – may contribute greatly to innovation. So far, the Commission has heard mixed views about the effectiveness of technology centres, incubators etc. and it would be useful to have information about how they work, what they provide and what has been successful. We are interested in gathering views about the effectiveness of these intermediaries in sustaining innovation, and to investigate what concrete results have been obtained.

8. How would you define intermediaries in the field of innovation: technology centres, incubators, university campus, poles of innovation, poles of competitiveness, etc...? Could you describe what infrastructures and/or services are currently provided by these intermediaries?

A general definition is difficult to make due to the diverse nature of these organisations, extending from the public to private sector, from university units to privately owned companies and performing tasks equally diverse. Intermediary organisations support innovative activities by offering and transferring services, expert knowledge and consultations in all stages of the innovation process, starting from the idea phase, through planning and performance of the R&D phase, implementation to production and finally utilisation of the innovation as a profitable business in the markets.

The following example describes the nature and tasks of technology centres in Finland:

Technology centres in Finland are independent companies owned by cities, universities, companies, financial institutions, associations, foundations and private investors. Usually main owner is a city or other public sector actor. Centres promote the creation of new technology-based business. They foster the founding, growth and international expansion of innovative hi-tech companies and act as intermediate in collaboration with universities, companies and local authorities. Technology centres provide for client companies training and consultancy services for establishing, managing, marketing and financing a company, business incubator services for start-ups, business expertise for commercialising innovations, domestic and international contacts as well as equipped premises.

Technology centres run different kind of national and regional programmes and networks in which are created overall prerequisites for development of clusters e.g. the Centre of Expertise Programme, the Research into Business – TULI Programme and the Network of Innovation Relay Centres IRC.

The activities of technology centres can be divided into three main areas: 1) development of expertise clusters (typically this includes management of Centres of Expertise, technology programmes and other programmes in the region), 2) business development activity (incubators and venture capital financing related to these) and 3) premises management and services.

The Centre of Expertise Programme, for instance, gathers companies, universities, polytechnics, research institutes, public financiers and providers of business development services in order to launch joint development and R&D projects. The actual projects are then funded separately, for example, by Tekes, EU FP 6 or EU Structural Funds. The National Centre of Expertise Programme consists of 19 regional programmes and 3 networked programmes with each specialising in selected fields of expertise (for example Medical and Welfare Technologies, Digital Media, Material Technology). The potential beneficiaries of actions are the actors of those regional or national clusters (all companies in related sectors, universities, research institutes, polytechnics and other public administration). Technology centres participate in the implementation of these programmes mainly by co-ordination of open development forums and networks and planning of joint projects. As a result there exists a well-organised cooperative structure at regional level, which will catalyse public and private resources to improve innovation environments.

If the public funding of the Programme is granted to business activities of definable company or companies, the state aid has considered as de minimis type of aid.

9. In your opinion, should these intermediaries benefit from state aid? What market failures would then be addressed?

The situation is delicate, because intermediaries can be (and often are) companies themselves which are subject to State aid rules. In the case of public organisations, the possible State aid may distort or replace private competition. Intermediaries may also deal with matters very close to the market place, requiring the consideration of competition rules. In spite of this, the grey areas should be examined for possible market failures. Especially in case of start-up companies, the asymmetry of information may cause a market failure, which justifies an aid to an intermediary organisation. One possible way could be project funding (using authorised State aid) to the customers of intermediaries, as a subcontracting cost.

In principle, intermediaries can be an effective and efficient group of actors in targeting specific market failures, e.g. those related to start-up and small companies and to some extent also venture capital market imperfections and information asymmetries. In this role, they are not recipients of State aid; at best they are a structure through which State aid can be efficiently channelled to a large number of small companies. However, intermediaries are also market actors, since they typically provide some services and infrastructure for companies. State aid for intermediaries should therefore be controlled

to ensure fair market competition also in the provision of these services and infrastructure.

10. What innovation infrastructures and activities should then be aided that are provided by intermediaries?

The viewpoint might be from the industrial innovation process. The R&D phase of the innovation process is a natural avenue of activities as the current notifications allow at least some of the subcontracting costs caused by intermediaries, directly due to the R&D, to be covered. The possibilities and needs to expand this avenue should be examined.

State aid for intermediaries can be provided basically in two ways; it can be directly given to intermediaries or it can be given to companies for buying services and/or infrastructure from intermediaries. Which of these is more effective and efficient depends, for instance, on how well developed the innovation service markets are or how well developed the innovation infrastructure is.

The role of intermediaries increase as the company size decreases, i.e. intermediaries should be most effective and efficient in targeting market failures of start-ups, micro and small companies. State aid for intermediaries should therefore focus on activities, services and infrastructure provided by intermediaries to start-up, micro and small innovative companies.

11. Do you think that the development of IT and communication infrastructures has a positive impact on innovation? If yes, do you have studies or reports showing how they contribute to it? Do you think there are sufficient IT and communication infrastructures in the EU currently to support innovation?

One of the latest studies indicates that ICT has had a great impact on innovation (and vice versa) in Finland. The result was demonstrated in a study by professor Matti Pohjola: *“ICT as a source of output and productivity growth in Finland”*, HECER Discussion Paper No. 52, February 2005 (with Jukka Jalava)⁵. The paper analyzes the impacts of information and communications technology (ICT) on output and labour productivity growth in Finland in 1995–2002. Nearly one-third of GDP growth at the rate of 4.09 per cent stemmed from ICT—both as a component of output and as a factor of total input. ICT also accounted for 1.08 percentage points of the observed labour productivity growth at the average rate of 2.51 per cent. The contribution of ICT capital deepening was 0.60 percentage points. The rest is attributed to multi-factor productivity growth in ICT production.

However, in the course of time, several studies have also shown very clearly, that exploitation of ICT does not necessarily lead into increased productivity and competitiveness. According to those studies, mere exploitation of new ICT technologies and products is not enough. Productivity growth and competitiveness can be achieved

⁵ See: <http://ethesis.helsinki.fi/julkaisut/eri/hecer/disc/52/ictasaso.pdf>

only if the use of ICT is connected with business process innovations leading to new types of work processes, networks, business models, etc.

12. How could one define innovation infrastructures in terms of IT and communication infrastructures? What market failures may be linked to these infrastructures, in terms of hampering sufficient provision of these? How could these market failures be best resolved? Is state aid a viable option?

Ensuring sufficient competition is the most efficient mechanism to ensure affordable access to IT and communication infrastructures⁶. However, at least two types of market failures can be identified.

First, lack of competence among potential IT and communication infrastructure users. This failure can be remedied together with all other competence shortages or through specialised schemes. Whereas this might be a specific problem in some countries or regions, no specific allowances should be necessary.

Second, access to IT and communication infrastructure is not affordable because of insufficient competition or some other reason, such as long distances and/or sparse population. There are two basic approaches to solve this failure: The public sector can either fund the necessary infrastructure or it can provide State aid for building the infrastructure⁷. In both cases, the public sector would also probably control that the possible prices to end-users are comparable to average prices elsewhere. Two, State aid can be provided to the end-users to lower the price to an affordable level.

13. How should one design state aid for the building up of IT and communication infrastructures supporting innovation, while limiting distortion to competition to the greatest extent possible (ex: by using tenders open to non-incumbents? by ensuring open access?)

Ensuring open access is definitely necessary. Open tendering is also advisable. For State aid considerations, see question 12.

IV Partnership large firms-SMEs

14. What role should large companies play to help the innovation process in your opinion?

⁶ Network based commodities that allow for several service providers to operate simultaneously in the same infrastructure, such as IT and communication or energy. It is also important to ensure that the infrastructure is open to all interested service providers on equal conditions.

⁷ The extreme case of this is that the government pays and controls the infrastructure and provides it free or at a very low cost for all public and private organisations. This case is not discussed here, because it is not State aid, since the infrastructure is open for all on equal conditions.

Large companies typically have a significant competence base consisting of the relevant knowledge and skills they need in their current and future businesses. Large companies are therefore important actors both as producers and as users of innovations.

Competencies and innovations produced by large companies can be transferred (or spill over) to SMEs directly through products, collaboration or exchange of personnel or indirectly via public research organisations. The role of large companies is especially important in creating a sophisticated demand for innovations produced by smaller companies, acting as demanding first customers and references, and therefore aiding smaller companies in accessing larger and more demanding international markets. Large companies are effective in commercialising and distributing products and services globally. Large companies can also have an important role between universities and smaller companies in translating results of scientific research into practical product, service and system specifications more accessible by smaller companies. Large companies can also have a very important role in ensuring the economic and social relevance of applied public research.

15. Do you think that large companies should be incentivised through state aid to do more in favour of the innovation process? If yes, what type of measures could be envisaged (bearing in mind harm to competition)?

Large companies should be incentivised to favour innovation. However, to avoid harm to competition, incentives should only focus on collaborative and networked innovation processes, which would ensure that the knowledge, skills and eventual benefits created, would transfer efficiently to smaller companies and academic research. Examples could be to encourage large companies to invest in small innovative start-up companies, to subcontract innovative activities to smaller companies or to establish pilot environments where smaller companies and universities could test the validity and feasibility of their potential innovations.

Limits could also be considered for State aid for large companies. For example, State aid (for innovation) should not exceed a certain percentage of all innovation expenditure of a large company over a certain period of time.⁸ Restricting the relative amounts of State aid for large companies and focusing State aid for large companies on innovative activities with significant spill-over effects to the economy and society are effective means of minimising market disturbances.

16. Do you think that measures in favour of sub-contracting by large firms for innovation activities, corporate venture capital or corporate technology centres are desirable options?

⁸ This limit, if considered, should be different for large companies of different sizes, e.g. companies with less than 500 employees, companies with less than 5000 employees and companies with more than 5000 employees. This would represent an approach similar to that what is currently used in the context of de minimis regulation, which allows lesser amounts of State aid, i.e. 100 000 euro for a SME collectively over any 3 year period.

Yes. Corporate technology centres should be considered eligible for State aid only if they are sufficiently accessible for SMEs and universities and research institutes. The corporate venture capital, on the other hand, should be subject to the principles laid down in the “State aid and risk capital” Communication.

V Innovative start-ups

17. Innovative start-ups constitute a promising growth potential for the EU. What criteria could be used to define innovative start-ups? Do you have a list of these companies?

The criteria might include the following:

- the company has been established for the purpose of producing innovations (commercialisation of novelties)
- the company has ambition and motivation to grow
- the company is a micro enterprise⁹
- key personnel owns the majority of shares (if entrepreneurship is emphasised)

Although there are various lists of innovative start-ups for different purposes, no single comprehensive list has been compiled.

18. Do you agree that innovative start-ups are more prone than large companies to suffer from market failures? If yes, what are the key market failures they suffer from? Do you have studies analysing the problems they are faced with?

Start-ups are more prone to suffer from market failures, especially capital market failures. Because of limited resources, basically all market failures are more severe in the case of start-ups as compared to larger companies.

Studies related to this subject:

- Financial systems and firm performance, theoretical and empirical perspectives, editors Ari Hyytinen and Mika Pajarinen, ETLA B:200, Helsinki 2003
- Business cycle effects on start-up finance in Finland, Andersen, et al., LTT Research Ltd., Helsinki, 2005; (*note! this study will be available in electronic form on June, 2005*)

19. What kind of support should be provided to innovative start-ups in your opinion? To tackle which market failures?

Support for innovative start-ups could include e.g.

- brokering and matching services (including preparation of relevant material and training to make presentations, etc) to attract venture capital and other funding,

⁹ Less than 10 employees with limits on turnover, balance and ownership by large enterprises.

- incubation facilities including innovation, business development and training services,
- information of the availability of relevant knowledge, skills and services at public research organisations and private service providers,
- access to environments where potential innovations could be piloted or tested,
- direct State aid in the form of grants, loans, guarantees and/or equity to encourage entrepreneurship and facilitate innovative activities and growth, and to leverage private investments,
- preferential treatment of innovative start-ups in public procurement,
- support in protecting IPR and aid in defending it
- basic office and laboratory infrastructure and services,
- support to technology and knowledge transfer.

VI Other measures

20. Do you believe that there should be specific provisions in the Communication on State aid and risk capital in favour of funds targeting innovative sectors/companies?

There is a need to revise the Communication on State aid and risk capital. The current guidelines are too vague and leave too much room for interpretations, which has lead into unpredictability in the Commission's decisions. There would, however, not necessarily be need for special provisions. Instead, the rule itself should be revised in the way it would better serve the special needs of companies in their early growth stages. This would be the benefit to the innovative projects and companies.

One of the key problems is too strict interpretation of “anti-cumulation” – principle. If the state aid from other authorised sources must be limited e.g. at the level of 50% of the maximum aid intensities to investee companies as long as they are in the portfolio, this will prevent the willingness to receive this kind of publicly part-financed equity-related financing. The second key problem is the requirement for a private share. Especially in such cases where no state aid exists at the level of investors (“pari passu”), management companies or funds, the requirement of 30%/50% of private share of fund capital is unrealistic. As far as we are talking about market failures, e.g. financial problems of small high-tech companies or generally speaking companies at their early stages (pre-seed, seed, early growth phase), the required 30 to 50% share of private funding is unrealistic without asymmetries in distribution of risk or profits. The higher shares of private contributions (more than e.g. 30%) are realistic only in cases where incentives are allowed to private operators. These two different modes for government (i.e. increase the volume of the fund vs. incentives for private investors) to intervene in venture capital markets should be considered to be eligible based on different assessment criteria. Thirdly, regional aid principles (e.g. eligible areas with higher share of public contribution) are not appropriate in the case of risk or venture capital financing. Finally the concept of market economy investor principle should be defined and explained more clearly in this context. It is slightly confusing that in the case of majority private investment without any incentives for investors, funds or management company, the

Commission will conclude that that there is still State aid involved in the public share (especially in case of minority share) of financing¹⁰.

The updated Communication on State aid and risk capital would most likely solve some of the current problems related to the special needs of innovative companies. A real advantage of this rule is that there exist no difficulties for defining eligible innovations or innovative activities, but instead the financing can be targeted to the identified market failures.

21. What specific support measures should be considered in the area of eco-innovation?

The specific characteristic of the area of eco-innovation is the pricing of benefits such as reduced emissions, because they are a common good and eventually mostly reduce public expenditure. Normal market mechanisms do not therefore function and markets must be created with the help of other, public sector controlled, guided or promoted mechanisms. Multinational actors, such as the Commission in Europe, and international agreements, such as the Kyoto agreement, can also play a major role. It is therefore important to recognise the impact of the regulatory framework on markets. The regulatory framework can be basically designed to favour eco-efficient innovations through imposing specific solutions or through affecting the pricing of various solutions.

The main specific concerns in the area of eco-innovation are two-fold. First, there is a need to provide good references through demonstrations, especially in the case of large complex systems. One way of accomplishing this is through encouraging innovative procurement by both public and private users. Secondly, as most environmental markets rely heavily on regulation or in some cases voluntary action, the regulatory framework and related incentives for users should be designed to create a market characterised by sufficient predictability and sufficient demand for innovations. Without sufficient demand, production volumes remain small and prices high.

One example could be a mix of policy measures consisting of gradually tightening emission regulations, incentives for voluntary early investments in emission reducing technologies, incentives for developing emission reducing solutions and support in setting up pilot environments for testing the feasibility of potential emission reducing innovations.

In case of small and young eco-industry companies, the problems are limited financial resources and markets. It is very difficult to get the first pilot plant customers when the new product or process is radically new and the investment costs of the plant are high. Some kind of flexible funding of first pilot plants would be useful, such as technical guarantee for the client.

These aspects should be considered at the latest in context of revising the current framework for environmental protection.

¹⁰ Finland will provide more detailed comments on the need for revision of Communication on state aid and risk capital” later on.

22. Do you think that procurement by state agencies of innovative products should be used as a means to support innovation? If yes, what should be the modalities of such a state aid?

Public procurement offers a significant potential for encouraging innovation in Europe. The main concern related to public procurement is the willingness of the public sector buyer to allow risks and the ability to control them. Adoption of New Public Management (NPM) principles have unfortunately lead in many instances to practices, which sub-optimize public expenditures, impose strict budget control and do not in practice allow any risks to be taken. The problem is not in the NPM principles; it is in the practical application of them that unfortunately steers into reduced willingness to take risks and therefore also reduced willingness towards innovative procurement.

Measures to enhance innovative public procurement should include setting up new models for innovative procurement in accordance with the existing public procurement regulations, training for public sector organisations and support to reduce the risk involved in innovative procurement. The main procedural characteristics of innovative procurement are that it includes bilateral negotiations (negotiated procedure) with each bidder, typically more than one round where the number of bidders is reduced and potentially rather challenging assessment and comparison of bids that might be offering very different solutions to the procurement. It might also include a pre-selection stage, where a limited number of bidders are selected and funded to prepare the actual bid.

The current directives concerning public procurement seem to provide sufficient legislative framework for designing innovative procurement schemes. There should, however, be practical guidance how these innovative elements should be taken into account in practice.