# Green Paper "From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation funding"

## Response of the Dutch Government to the questions within the green paper

**With this document, the government of the Netherlands responds to questions of the Green Paper of the Commission entitled "From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation funding".**

**The answers should been seen in the context of the Dutch position on the future financial framework. The Netherlands is in the position that a restrained EU budget is necessary. Within a tighter budgetary framework more emphasis should be on investments in, amongst others, competitiveness and innovation, in order to make the EU budget more future-proof.**

## Questions: Working together to deliver on Europe 2020

1. **How should the Common strategic Framework make EU research and innovation funding more attractive and easy to access for participants? What is needed in addition to a single entry point with common IT tools, a one stop shop for support, a streamlined set of funding instruments covering the full innovation chain and further steps towards administrative simplification?**

   The Netherlands supports the Commission in its goal to make EU research and innovation funding more attractive and easy to access for participants. A first good step is to present the different funding programmes within one 'Common Strategic Framework'. However, this measure should be more than a cosmetic one. We should harmonize and streamline the agenda setting, the programmatic research and innovation instruments, and the rules of participation as much as possible in order to reach a real common framework which goes beyond polishing of existing things. A single entry point, a one stop shop for support, a streamlined set of funding instruments and further steps towards administrative simplification will definitely help in this regard.

   Other measures might include:
   - Agenda setting should be as transparent as possible. In order for stakeholders to plan research and innovation activities in a strategic way, they should be well informed of the European agenda. Therefore it should be possible for relevant stakeholders to discuss the yearly working programmes at an earlier stage with the members of the programme committees. The Commission should have a more transparent attitude towards this.
   - National Contact Points (NCPs), such as EG-Liaison in the Netherlands, play a crucial role in supporting participants with their applications in FP and CIP. Mutual learning between NCPs is a good way to improve the functioning of NCPs. Actions for training NCPs in their advisory and supporting role, which are now being funded through various funds, should be streamlined to become more effective.

2. **How should EU research and innovation funding best cover the full innovation cycle from research to market uptake?**

   The Framework Programme (FP) and the Competitiveness and Innovation Programme (CIP) should be developed on the basis of a common strategic framework for research and innovation: from fundamental research, to applied research, to demonstration activities and measures to enhance innovative entrepreneurship. The activities of the European Institute of Innovation and Technology (EIT) should logically be aligned with these main core activities.

The EIT is a rather new instrument. The added value of EIT will become clearer in the coming years. Then a better alignment of EIT with CIP and FP will be possible.

Fundamental research, applied research, demonstration projects and policy measures to increase innovation all interact in various stages of development, and all require a different and balanced mix of bottom-up and top-down agenda setting and programming by different stakeholders. The mix of instruments should be designed in such a way that all stages of the research and innovation process can take place and interact, and bottlenecks are addressed at the right level. All sub programmes should be developed with this integrated approach in mind. For example, promising findings of an ERC grantee could result in the decision to develop a cooperation project which is more devoted to application.

European Innovation Partnerships should contribute to achieving this kind of synergy. By working on the basis of one single agenda on tackling societal challenges, a mixture of instruments can be picked or developed in parallel that best fits the bottlenecks in relation to this challenge. Also this gives the opportunity to create a fluent chain from defining and enhancing demand, to knowledge creation and introducing new products, processes and services to the market.

Where possible, instruments from FP and CIP could be really integrated within one common strategic framework for research and innovation. For example, integrating the FP-programme 'research for the benefit of SME's' with CIP-measures might result in a more powerful instrument aimed at improving research and innovation in, and competitiveness of, SMEs.

**3. What are the characteristics of EU funding that maximise the benefit of acting at the EU level? Should there be a strong emphasis on leveraging other sources of funding?**

EU research and innovation funding has added value in order to bundle resources, to reduce fragmentation and to stimulate cross border cooperation. It should stimulate competitiveness between researchers in order to stimulate excellence and it should help in diminishing cross border bottlenecks for research and innovation.

In this regard, EU funding should have strong emphasis on leveraging other sources of funding. EU-funding should achieve this through the mechanism of co-financing. By doing so, EU-financing stimulates national governments, research programming organizations, businesses, universities and knowledge institutes to align their activities more strategically towards a common goal. This will reduce fragmentation, will empower our common strengths for example when tackling societal challenges, and will stimulate smart specialisation within the European research and innovation landscape.

Co-financing should be primarily aimed at leveraging sources of funding from universities, knowledge institutes and businesses in order to stimulate cross border cooperation. In addition, co-financing of national programmes should be possible, but only when Member States combine efforts and successfully link their national programmes (for example through joint programming) or in those cases where a successful national instrument is opened up for participation from other Member States. In general, co-financing schemes which involve a mixture of cash flows from both the EU-budget as well as national budgets and funding from industry, knowledge institutes and/or universities (for example in JTI ENIAC and JTI ARTEMIS) are not preferred. Combining funding from three different levels has proven to provide an excessive administrative burden, which is not attractive for participants. The conditions under which co-financing schemes are set up in the future programmes for research and innovation should be further investigated.

4. **How should EU research and innovation funding best be used to pool Member State resources? How should Joint Programming Initiatives between groups of Member States be supported?**

EU research and innovation funding should be primarily aimed at cross border cooperation between universities, knowledge institutes and/or companies.

Pooling of member state resources should be done bottom-up and on a voluntary basis. This process can be supported by providing additional EU funding. EU funding should however only be provided if Member States successfully set up a research programme, combine resources and minimize cross border obstacles for joint programming. Also, the EU funding should only support measures that have added value at EU-level and that Member States do not already support themselves, like for example cooperation projects, common databases and facilitating in the implementation of research infrastructures.

The European Metrological Research programme (EMRP) can be taken as an example. This programme integrates the national metrology research programmes of 22 European states into one collective European research programme. In doing so it achieves a critical mass of resources to meet large scale metrological challenges in the area of for instance environment, energy and health which exceed the capacity and interest of the individual Member States.

5. **What should be the balance between smaller, targeted projects and larger strategic ones?**

Larger strategic projects provide the opportunity to have long term commitment from stakeholders to work together on the basis of a common approach on tackling societal challenges and on strengthening competitiveness. This for instance applies for the Knowledge and Innovation Communities (KICs) of the EIT and the Joint Technology Initiatives, in which participants work together in a consortium on basis of long term commitment.

However, larger strategic projects also make it difficult for newcomers to get actively involved. Especially SMEs face difficulties in participating in long term strategic research and innovation programmes. The research and innovation activities of SMEs are mostly aimed at a 2 to 3 year horizon. In general there should be more opportunities in the future research and innovation programmes for short (2 to 3 years) and small scale public-private and private-private cooperation. Also within the larger strategic research projects flexibility should be increased so that companies, universities and knowledge institutes can in a later stage join the consortium of a project.

These disadvantages of large strategic projects not only effect SMEs but they also apply for other new players, for instance from Member States in central and Eastern Europe, which are currently developing excellence in research and should have enough chances to apply for participation in EU projects. Also in this case, flexibility for others to join should be a prerequisite.

6. **How could the Commission ensure balance between a unique set of rules allowing for radical simplification and the necessity to keep a certain degree of flexibility and diversity to achieve objectives of different instruments, and respond to the need of different beneficiaries, in particular SMEs?**

Due to new instruments, each with their own specific rules and regulations, that keep being introduced the administrative burden caused by the FP rules is still jeopardizing the attractiveness of the Framework Programme. In view of FP8, there could be a one-to-one-principle by which a new measure can be launched only if an equivalent one is removed from the portfolio.

EC officers who are connected to FP7 projects have a high degree of personal responsibility. This has a high impact on the way officers deal with legal and financial aspects of a project:

their approach is based on 'zero risk'. Due to this approach the project officers demand a level of detail that is higher than the official reporting guidelines prescribe. Furthermore the criteria for eligibility of costs in projects are ambiguous and complex. This causes long negotiations, and risk-free behaviour with the project coordinator and the partners with regard to the amount of project partners, geographical spreading and SME participation. As a result, coordinators spend more time on administrative issues rather than necessary. A more 'high trust approach' is necessary and would heighten the attractiveness of the FP for potential beneficiaries. The personal liability of European Commission officers for the correct execution of projects should be reconsidered.

Although important improvements have already been made within FP7 simplification of the Framework Programme is still strongly needed. Regarding various simplification-measures the following have priority for the Netherlands:

- General acceptance of usual accounting practices. This should be introduced during FP7.
- The European Commission should vary more between available forms of grants in the FP. This can be done by introducing financing by lump sums as a choice for participants resulting in grants being better adapted to the accounting systems of specific organisations like SMEs and universities.
- Another important aspect of simplification is to avoid the introduction of new instruments and to reduce the complexity by setting up a uniform set of rules and definitions across instruments and programmes (FP7, CIP, relevant parts of Structural funds).
- Too many projects take too much time to start; time to grant and time to pay should be shortened.
- Trust-based approach: beneficiaries should not be subject to EU monitoring and control beyond the minimum necessary to safeguard public funds.
- The Small Business Act can serve as a good example for reducing the administrative burden for SME's.
- In order to quantify the effective or potential administrative burden caused by the FP rules there should for a baseline scenario on the basis of which the advancement of reducing the administrative burden can be monitored.

The Netherlands has doubts on the benefits of moving towards more flexibility via result-based funding. This approach suggests results of research are always predictable and could disadvantage research with uncertainty of possible outcomes. It also could lead to shift of the workload from managers and controllers to the researchers who have to determine in peer reviews whether the project led to the expected results. The Netherlands are of the opinion that the (dis)advantages of this funding-principle should be further examined, before further steps are taken.

**7. What should be the measures of success for EU research and innovation funding? Which performance indicators could be used?**

The measure of success of EU research and innovation funding can be deducted from the legal basis which is determined in the Lisbon Treaty and can be deducted from the level of contribution to the Europe 2020 strategy. Although these are very broad goals and therefore very difficult to measure the Netherlands is not in favour of creating new indicators and targets for EU research and innovation funding. General evaluation methods as are currently being used provide sufficient information on the effective operation of EU research and innovation funding.

**8. How should EU research and innovation funding relate to regional and national funding? How should this funding complement funds from future Cohesion policy, designed to help less developed regions of the EU, and the rural development programmes?**

The Netherlands supports the aim to achieve synergy between EU research and innovation funding and regional and national funding. Within the Common Agricultural Policy and Cohesion Policy funds should be more targeted towards the Europa 2020-goals. Specific goals of the

different programmes should however always be maintained and not be mixed. Cohesion policy is designed for capacity building in regions where this is necessary. FP and CIP are aimed at stimulating research and innovation to bring forward science and technology, to develop innovative solutions for the large societal challenges of the EU and for the benefit of European competitiveness. This is best done by maintaing the principle of excellence as one of the evaluation criteria for EU research funding. For applied research aimed at societal impact and competitiveness impact should be a criterium as well for EU research funding.

Synergies between EU research and innovation funding and regional and national funding can best be achieved through co-financing schemes, for example by co-financing Joint Programming Initiatives. Co financing stimulates that stakeholders make strategic choices regarding their research and innovation activities.

Also, synergy can be achieved by streamlining governance and administrative rules between EU funding for research and innovation and cohesion policies.

## Questions: Tackling societal challenges

**9. How should a stronger focus on societal challenges affect the balance between curiosity-driven research and agenda-driven activities?**

With a stronger focus on societal challenges the careful balance between curiosity-driven and agenda-driven activities should be maintained. In order to contribute to finding solutions for societal challenges, we need action from the entire research and innovation system, from curiosity-driven research towards measures to improve market introduction of products and services. An interdisciplinary approach is needed, involving both the natural sciences and technology, as well as the social sciences, humanities, public innovation, creative industry and services. In general, all science and technology efforts should increasingly contribute to generating new products, services and processes in order to tackle societal challenges and to strengthen competitiveness. Each part of the research and innovation system needs to be addressed with the appropriate instrument. Agenda-driven activities offer the opportunity to create a fluent movement from defining needs by and enhancing demand of stakeholders, to knowledge creation and introducing new products, processes and services to the market. Curiosity-driven research forms the base for innovation and is therefore an essential part of this integrated approach.

Both curiosity driven research (ERC) and agenda-driven activities (themes with large impact on society and economy) are important and thus need to be strengthened. The latter should remain the largest component of the future research and innovation programmes. Agenda driven activities should include large societal challenges and key enabling technologies. Ageing, energy, climate change and scarcity of vital natural resources are amongst those grand societal challenges that can not be effectively resolved by Member States individually. Societal challenges and competitiveness go hand in hand. Therefore, agenda driven activities should match future oriented renewal of the European and national economies. For the Netherlands the Dutch economical top sectors are central in this approach.

**10. Should there be more room for bottom-up activities?**

Top-down approaches and bottom-up activities should be combined in the right manner. For the top-down approaches, the Competitiveness Council, the European Parliament and the European Commission should together decide upon the grand societal challenges and upon the themes that enhance competitiveness. This decision should be based on a broad consultation. Within these challenges, EU funding instruments should stimulate that industry, universities and knowledge institutes join forces in a bottom-up manner. In the mean time, the value of already existing bottom-up activities should be acknowledged, and promising results that stem from these approaches should also be incorporated in top-down approaches if relevant.

The budget for the Seventh Framework Programme also provides for the administration and coordination activities of European Coordination in Science and Technology (COST). We think that this intergovernmental structure is a good practice of bringing together national research funds for research projects which consist of excellent research and which are aimed at innovation. It can serve as an example for national and international programmatic cooperation. Cost is an example of coordination over and exchange between nationally funded research, which has been proven highly useful, efficient and effective for increasing capacity building, the impact of research on policy for societal challenges and defragmentation of funding efforts. COST is valued by researchers for its balanced bottom-up approach. Based on this conclusion, we think that COST should get a similar position in the new research funding landscape.

**11. How should EU research and innovation funding best support policy making and forward looking activities?**

The EU can best support policy making and forward looking activities by developing a policy learning research agenda to which the Member States can contribute their ideas.

Currently there is a wealth of analytical and policy learning tools available such as Innobarometer, Inno Policy Trendchart, Inno Grips, Innovation Union scoreboard as well as the work done by many expert groups (for example see http://www.proinno-europe.eu/, http://ec.europa.eu/invest-in-research/monitoring/knowledge_en.htm, and http://iri.jrc.ec.europa.eu/papers.htm). No additional measures are needed. The abundance of information would however benefit from better governance (e.g. managing the quantity and quality of studies), more focus on priority setting, better alignment and more transparency.

Also, the Netherlands believes that the JRC scientific work should be used more for policy making at EU level. This can can be obtained to some extend by stimulating policy-relevant research also within the framework programme. When it comes to science and innovation policy making, it is useful that EU funding programmes contain some actions devoted to forward looking activities. This research should be as open as possible and based on excellence and competition.

**12. How should the role of the Commission's Joint Research Centre be improved in supporting policy making and addressing societal challenges?**

The Netherlands wants to emphasize that the JRCs mission must remain to provide customer-driven scientific and technological support in close cooperation with the 'customer dg's, acting as an in-house think tank. The main objective of the Joint Research Centre (JRC) for the coming years is to place itself at the heart of European policy priorities - in particular the EU 2020 Strategy, the Citizens Agenda en Europe in the World. This involves the alignment of all thematic areas of the JRC with the goals associated with the European policy priorities, including the EU 2020 Flagship Initiatives. In the near future this will mean a reinforcement of its forward looking capacity, which includes foresight, forecasting, technology assessment and modelling.

JRC has to continue working in close cooperation with research organizations and industry in Member States and associated Member States, exchanging information and accommodating visiting scientist and students. In order to benchmark its scientific achievements the JRC should keep focussing on an open structure, be stimulated to engage in competition with other researchers, and make choices on basis of proven strengths. Hereby JRC should focus on its European added value.

**13. How could EU research and innovation activities attract greater interest and involvement of citizens and civil society?**

Innovative technologies such as nanotechnology, molecular biology, the neurosciences and information technology can have large implications for society. Developments in these technologies and many other fields of science and technology are so rapid that society has difficulties in keeping up. Nevertheless, it is important that politicians, policy-makers, industry, societal organizations and the general public do indeed follow the developments and are able to offer a timely response. This can be done by underlining the responsibility of universities, research institutes and industry for communication and outreach, and to stimulate technology and science system assessment. We also think that the focus for European research on societal challenges will improve the interest and involvement of citizens and civil society. Especially when technological research is being accompanied by social scientific research about if, how and under which conditions technology is taken up by the society.

## Questions: Strengthening Competitiveness

**14. How should EU funding best take account of the broad nature of innovation including non technological innovation, eco-innovation and social innovation?**

The Netherlands welcomes the increased attention within the EU for non-technological innovation, such as organisational or workplace innovation, service innovation, design, creativity and marketing. Care should be taken in determining how and if a European approach could complement national policies. An EU role can be envisaged in developing common understanding of the needs of the European economy and sustainability, joint development of new effective policies, coordination of activities and facilitating the exchange of best practices. The EU also plays an important role in improving framework conditions for innovation (access to finance, EU patent etc.) and supporting so-called soft measures to stimulate innovation, such as the creation of an environment favourable to SME (cross-border) cooperation.

Eco-innovation is important in addressing grand societal challenges. EU funding can build on experiences with the newly chosen bottom-up approach in FP and the eco innovation programme that is currently part of CIP. Furthermore, it is vital for successful development of eco-innovative approaches that new developments are promoted for market uptake.

Regarding social innovation an EU role should only be envisaged if this social innovation is related to sustainability and life style, labour and economic growth. However, the implementation of social innovation, for example regarding sustainability, is primarily the responsibility of Member States.

Though the definition of organisational innovation is still under development, the OECDs Oslo Manual refers to various elements of organisational innovation. The Oslo Manual also sees a role for government in facilitating linkages between national, regional and international innovation systems and should be taken into account when developing new EU innovation policies.

**15. How should industrial participation in EU research and innovation programmes be strengthened? How should Joint Technology Initiatives (such as those launched in the current Framework Programme) or different forms of public-private partnerships be supported? What should be the role of the European Technology platforms?**

The percentage of industrial participation has been declining steadily since FP4. This trend should be reversed in order for the research and innovation programmes to better contribute to innovation and European competitiveness. To strengthen the industrial participation in the European research and innovation programmes, amongst others, the following measures can be taken:

- Programmes for cross border research projects with consortia formed of public-public and public-private partners (currently cooperation part of FP7) should be strenghtened financially. Cross border public private cooperation should remain the largest component of the Framework Programme.

- More investments within the EU research and innovation funding for demonstration projects and the development of prototypes

- Industry should be better involved in the agenda setting of the research and innovation programmes. The European Technology Platforms (ETPs) provide a good forum for industry to identify research agendas and to develop a strategy to implement these agendas through the European framework programme, national programmes and private research budgets. The continuation of ETPs should be encouraged but also be challenged to address the large societal challenges and key enabling technologies by priority. However ETPs should be able to finance their own activities after the start up phase that is supported with the help of EU-funds. ETPs that can't survive without EU-funding could be clustered or merged with well functioning ETPs. The ETPs should be transparent about their policy making and open for interested parties to join.

- More non-academic peers should be involved in project evaluations in order to put more emphasis on innovation and economic impact of research activities.

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- Increase flexibility in the duration and the size of the consortium and the scope of projects. Within long term research projects it should be stimulated that budget is reserved for applied research so other parties can join consortia at a later stage. Offer more opportunities for short term (maximum of two to three years) and small scale public-private and private-private cooperation.

- Attention should be given to inter operability and standardisation already in an early stage of research and development. Where possible consortia should be asked to develop a plan on how knowledge and prototypes, possibly by using CIP measures, can be brought to the market.

- The evaluation of project proposals in the framework programme that are aimed at adressing grand societal challenges and increasing European competitiveness, should continue to be based on the three criteria: Excellence, impact and quality of implementation of the project proposal. To be able to properly evaluate the proposals it could be suggested to assign a different weighting to each of the criteria, for every instrument and every phase of research. For example, when evaluating a proposal for fundamental research, a heavier weighting could be given to excellence. When evaluating a proposal for research that is more application-oriented (possibly including demonstration projects) a heavier weighting could be given given to impact. Quality of implementation of the project proposal could always be of equal importance. Instead of changing the weighting the treshold could also be adjusted to give more emphasis on a specific criterium.

**Joint Technology Initiatives (JTI's)**

The following issues should be adressed when setting up future public private arrangements.

- Joint Undertaking as a Community/EU body (art 171). A JTI has to be based on a Joint Undertaking (JU). As Community/EU funding was involved it was concluded that JU's had to have the status of Community/EU body. This implies that all EC/EU-rules on financial issues (the Financial Regulation), accounting and appointment of personnel (the Staff Regulation) have to be followed. This resulted in complex and time-consuming procedures. Therefore the Financial Regulation should allow the set up of public-private partnerships in which all the participants have a position equal to their commitment and which leaves room for a flexible, efficient approach with low managerial burdens.

- Delay in the set-up of the JU and the execution of calls. All JTIs were confronted with problems while setting up the new structure. These regarded staffing of the JU, the operational costs of the JU and the question who has to bear these costs. In some of the JTI's changing rules for participation, differences in interpretations and changing grant percentages also played a role. For future JTIs it might be worthwhile to have a template for the structure to start the negotiations. Such a template should build upon the efforts made and the lessons learned during the set-up of the current JTIs. It should adapt and not reinvent, taking into account that each JTI may need specific features. Also in some cases consistency in cost calculation methods between FP7 and JTIs should be ensured. At the same time JU's should have the flexibility to apply for loans / instruments e.g. from EIB to improve their efficiency further.

- Matching EU and national funding. Project participants in the two ICT JTIs (Eniac and Artemis) are also funded by their national governments. This national funding is based on national rules. Thereby there is a difference between subscription levels of Member States. This leads to differences in funding levels for participants. While part of the funding comes from national budgets, independent experts are responsible for the selection of projects. Sometimes projects are selected that do not optimally match with the policy aims of

participating member states. These aspects, lead to another problem, i.e. the generally low budget allocations from member states for the ICT JTI's so far.

- New public private partnerships and JTIs: In light of the experiences with setting up the current JTIs, the Netherlands prefers using the bipartite industry-EU model for new PPP's where possible.

**16. How and what types of Small and Medium-sized enterprises (SME) should be supported at EU level; how should this complement national and regional level schemes? What kind of measures should be taken to decisively facilitate the participation of SMEs in EU research and innovation programmes?**

Framework conditions
For stimulating the innovative culture of SMEs the overall entrepreneurial climate should be fostered and the basic framework conditions should be facilitated. For instance through intellectual property policy, quality systems and education. The Netherlands sees added value in a European approach for improving SMEs' access to risk capital for investment in innovation through the creation of a real internal European venture capital / business angels market, where investors are able to invest freely across borders. We also see added value in ensuring SMEs' access to ideas and information throughout Member States.

SME participation in EU programmes
SME participation is essential to increase dissemination and exploitation of research results. The future programmes should take into account the Small Business Act and make sure SMEs can more easily participate in and make use of the results of the programmes. This can be stimulated by the following measures:

- Simplification (see question 6).

- The current effort in some of the programme committees for the Cooperation themes to adjust specific calls to meet SME needs should be continued and broadened to all themes. Some measures that were mentioned in the SME impact study of FP5 and FP6 by Avedas should also be exploited to increase SME participation. These are: SME dedicated calls and SME relevant topics, more opportunities for SMEs to join on-going projects and pre-allocated budget for take-up measures by SMEs. Smaller projects with a shorter time span are more interesting for SMEs and should be part of future research and innovation programmes.

- Besides doing research and development, high, low and mid tech SMEs should be involved as a stakeholder in agenda setting since these companies should also be able to use the knowledge that is being developed by other researchers.

- Increase flexibility in the duration and the size of the consortium and the scope of projects. This will be beneficial for industry as a whole, especially SME's. Within long term research projects it should be stimulated that budget is reserved for applied research so other parties can join consortia at a later stage. Offer more opportunities for short term (maximum of two to three years) and small scale public-private and private-private cooperation. Facilitate that SME's are better involved in the preparation of project proposals.

- The Think Small first principle of the Small Bussiness Act should be leading to improve the accessibility of SMEs to EU research and innovation programmes.

- Instruments aimed at stimulating R&D-activities for and by SME's could be combined into one bigger and more efficient instrument for high tech, mid tech and low tech SME. The Eurostars programme could be used as an example. It's procedures are faster and the program has a low administrative burden.

- Finally, the new programmes should take into account that the linear model of innovation is no longer adequate and policies should be designed accordingly.

**17. How should open, light and fast implementation schemes (e.g. building on the current FET actions and CIP eco-innovation market replication projects) be designed to allow flexible exploration and commercialization of novel ideas, in particular by SMEs?**

Open, light and fast schemes require transparency, accessibility and short decision-making periods. For accessibility we refer to questions 1 and 6. The period from call to contract for eco-innovation projects is still a considerable amount of time; a two-step approach – whereby a first selection is made based on a summary sheet of information before launching into a more extensive proposal phase – can be considered. In this way, proposals that are not suitable or eligible are filtered out at an early stage, so that fewer full blown proposals are submitted and the evaluation process takes less time.

**18. How should EU level financial instruments (equity a debt based) be used more extensively?**

A well functioning capital market is essential for a competitive economy. In particular for the development and market introduction of new and improved products and services there is a great need for (risk) capital. The European capital market is, in particular for venture capital, underdeveloped compared for example to competitive markets such as the US. This puts fast growing SMEs in the EU at a disadvantage. The Netherlands supports further growth and a more competitive capital market through two measures.

First of all the capital market in Europe needs to be improved to benefit from economies of scale and expertise. Bottlenecks that hinder a properly functioning capital market should be removed.

Secondly the European financial instruments should be better focused and increased in volume. Existing instruments in FP and CIP for loans and risk capital such as the Risk Sharing Finance Facility (RSFF) and the High Growth and Innovative SME Facility (GIF) address existing market failures and could even more than currently be aimed at innovative enterprises.

The Netherlands acknowledges the potential advantages of European (innovative) financial instruments. They can form an efficient use of public money, since they will give a faster leverage on private investments. The Netherlands is in favour of an additional European approach to improve the functioning of the European financial market through policies aimed at upscaling the market as well as through better targetting and intensifying existing instruments in FP and CIP.

However, financial instruments should not displace the market by competing with the financial sector. EU level financial instruments should meet strict criteria: limited size, European added value, no overlap with existing instruments, no market disruption, strict requirements for the financial administration, transparence, no replacement of national cofinancing schemes and restricted administrative burdens..

**19. Should new approaches to supporting research and innovation be introduced, in particular through public procurement, including through rules on pre-commercial procurement, and/or inducement prizes?**

The Netherlands is in favour of further applying demand-side measures in the future programmes where relevant to address societal challenges and to achieve Europe-wide acceleration of innovative solutions to reach the market. Demand-side measures should complement research and development measures forming an integrated approach.
Such measures can include standardisation, assessment of needs; market consultation; specification development; setting up cooperation; public procurement of innovation and addressing the risks of public procurement of innovation. Public procurement can contribute to research and innovation and government, as potential user of innovative products, processes and services, can play an active role. An EU approach can have added value for cross-border

challenges (air quality, transport systems) or those that are common to most or all Member States (sustainable energy, mitigation and adaptation measures to climate change, dealing with an ageing population). In these cases Europe can stimulate the joint search for a shared solution, whereby a European approach results in lower development and purchasing costs for Member States. Using the EU research and innovation, Europe can itself also stimulate market-oriented solutions through precommercial procurement. The precommercial procurement approach currently piloted in FP ICT and CIP could be explored for wider application in other areas.

**20. How should intellectual property rules governing EU funding strike the right balance between competitiveness aspects and the need for access to and dissemination of scientific results?**

In general, access to and dissemination of scientific results should be stimulated as much as possible. This should however not hinder the cooperation between research institutes and businesses. When businesses and research institutes cooperate it should be up to the partners in the consortium to find agreement on how to deal with the question of open access of scientific results.

Open access of peer reviewed articles in international journals can only be welcomed and should be the general principle for projects funded under the framework programme. In general, open access business models should be sustainable and viable models, and continuity and quality should be guaranteed.

## Questions: Strenghtening Europe's science base and the European Research Area

**21. How should the role of the European Research Council be strengthened in supporting world class excellence?**

The ERC promotes excellent independent research. Its competition attracts the best and brightest from across the EU. The ERC should be strengthened financially. The number of rejected proposals due to a lack of budget, but scored "above threshold", indicate ample absorbing capacity within the existing research community. Proposals that are scored above threshold by the ERC-standards indicate excellent research.

The screening of the researchers applying for an ERC grant is prominently based on past results. In order to create a level playing field, researchers that work in part-time should be given a balanced screening. The proof of concept scheme could be valuable in linking fundamental research to commercial success. It should however not be limited to the ERC, but applied everywhere where it is possible within the Framework Programme. It should not be financed from the ERC-budget.

**22. How should EU support assist Member States in building up excellence?**

For building excellence within the EU we need talented researchers throughout the Union. For a strong European science base we need to educate, keep and attract top class researchers and we need excellent research facilities.

The following elements are essential for building up excellence:

- Within the evaluation process of research projects excellence of research should remain one of the criteria. By funding world-class research, researchers are stimulated to perform at their best effort and the results will have a higher impact on society and competitiveness. The current core of the Framework Programme is the cooperation sub programme. Through this sub programme, the EU directly funds excellent projects with high impact.

- Besides funding excellent research projects, excellent research facilities are also needed to educate, keep and attract top-class researchers to build up excellence and for increasing Europe's innovation potential and competitiveness.

- Mobility programmes such as COST, the Marie Curie programme and the ERC enable researchers by offering international experience, the ability to cooperate with other talented researchers and working with high level facilities. This is especially important for education of young researchers. An important advantage to distribute a part of the research funding as grants for the mobility of individual researchers is the opportunity for the researcher to choose an employer. Researchers will in majority choose supervisors and institutions that provide the best research environment. In this way, knowledge institutes and companies throughout the EU are being stimulated to create a world class research environment to be able to attract the best researchers.

- Building up excellence benefits from openness. Broad dissemination of findings and publications increases the scientific discourse and thus quality and excellence. For the stance of the Netherlands regarding open access, please consult the answer on question 20.

**23. How should the role of Marie Curie Actions be strengthened in promoting researcher mobility and developing attractive careers?**

In general we favour to continue the Marie Curie Actions in the future. The rationale for the Actions is systematic investment in people. The focus of the Programme should continue to be research-based training and should be part of the research and innovation programmes.

We would prefer a flexible approach to have less restrictive, 'one-size-fits-all' rules, and more flexibility to implement the actions, as long as the general goals are respected. In this respect, we stress the importance of intersectoral mobility. Here not only the relation between research

and industry is relevant, but also the relation between research and government and the non-profit sector. The low success rate of applications especially in the Initial Training Networks (for PhD's) could justify raising the proportional budget for this scheme by reallocating budgets within the Mobility Programme.

We stress the importance of simplification and more stability of the Marie Curie programme and streamlining of mobility efforts. The time to contract should be speed up. Also, we favour the development into one PhD-programme instead of the two separate programmes of Erasmus Mundus and the Marie Curie-programmes. If these separate programmes could merge, the new programme should have the same conditions for financial contribution as is being implemented under the Marie Curie scheme.

**24. What actions should be taken at EU level to further strengthen the role of women in science and innovation?**

We strongly believe that the quality of research benefits from an increased diversity of human resources. Therefore, it is desirable that all projects should have a balanced participation of women and men. We should fight against gender prejudices while maintaining the principle of excellence. At an EU-level, the Helsinki Group remains an important expert working group in developing EU-policies on gender-issues.

It is important that in the future statistical information about the beneficiaries of research funding continues to note gender differences. Analysis of the Framework Programme, notably the ERC, still shows an underrepresentation of women. In peer review it is important to brief the peers that the gender dimension has to be taken into account in order to avoid that female researchers receive lower grades from the referees and that female researchers score lower on past performance indicators.

Next to gender balance, the gender dimension of the research content is an important aspect to be taken into account. Sex and gender methodology potentially open up new fields of research and brings innovation by asking new questions.

**25. How should research infrastructures (including EU-wide e-Infrastructures) be supported at EU level?**

Most economic benefits of research infrastructures are regional or national. Therefore, construction of research infrastructures should be done by Member States or regions. Structural funds could be used if research infrastructures indeed lead to regional economical strengthening and if they can be used by industry. Facilitating access to research infrastructures and transition phase of a research infrastructure from the design to construction of the projects on the roadmap of the European Strategy Forum on Research Infrastructures (ESFRI) should be part of the European research and innovation programmes. In the future European research and innovation programmes the following instruments should be incorporated:

- Instruments for funding of the Design Phase and the Preparatory Phase of research infrastructures of the ESFRI roadmap are part of FP7. These instruments are very useful in the phase before the construction of a research infrastructure and should be maintained.
- To facilitate the construction of research infrastructures that have been prioritized on the ESFRI roadmap an extra instrument should be considered. This instrument should fund projects in the transition phase of a research infrastructure from the design to construction. These could also be projects concerning several research infrastructures developing answers to problems these infrastructure may have in common. This instrument could be funded by reallocating budget within the research infrastructures programme.
- The Risk Sharing Finance Facility (RSFF) to support the construction of research infrastructure is not functioning as well as was foreseen This instrument should therefore only be maintained after developing a clear strategy how to separate the RSFF into two parts (where the infrastructure part is only used for infrastructures), and only when there is more certainty that their is more real interest to make use of the RSFF for the construction of research infrastructures.
- The needs of companies as exploiters and users of research infrastructures should be better observed even early on, in the planning stages. A role for the Commission could be to bring industry and science together not only to discuss the early stages of planning, but

also to stimulate companies to look for opportunities to get involved in building and collaborating with research infrastructures to incorporate experience and advanced technologies in their portfolio that can be developed through their experience with research infrastructures and that can be used in other sectors.

- Concerning global infrastructural research projects European cooperation is of added value. However, in global infrastructural research project the allocated budget are often exceeded. When this is the case, the additional needed budget should in principle be found within the expenditure category in which these projects are budgeted. The Netherlands believes that in the context of the multiannual financial framework from 2014 measures should be examined to adequately manage these cost overruns within the EU budget.

**26. How should international cooperation with non-EU countries be supported e.g. in terms of priority areas of strategic interest, instruments, reciprocity (including on IPR aspects) or cooperation with Member States?**

The following elements should be considered for the support of international cooperation with non-EU countries in the future EU research and innovation programmes:

- Better coordination and cooperation between the various EU activities is needed. For example for India an INCO-NET, international ERA-net and an SFIC initiative have been set up. Overlap should be avoided and cooperation is needed for example concerning the mapping activities. Besides better coordination en cooperation, a reduction of the number of international cooperation instruments in the INCO programme is needed, in which too many small instruments have been set up. This is not transparent for participants, brings with it unnecessarily high administrative costs and the budget of the calls might become too small to be effective.

- The principle of reciprocity should rule the funding of cooperation with non-EU partners. This principle may in special cases be handled flexibly, e.g. in development relationships.

- However, also in development relationships reciprocity remains an important condition for cooperation. Research and innovation cooperation with non-EU countries with the objective of capacity building in the partner country should be financed from Development budget of the EU.

- Especially in the case of global societal challenges and/or economic fields for which cooperation with non-EU countries is important coordination between Member States, associated countries and the European Commission can have an added value, for example for obtaining the EU2020 objectives. This coordination should however always be on a voluntary base, for example through an ERA-net instrument. It is important to note that international cooperation on EU-level and worldwide is for a large part taking place on researchers' level, bottom-up. EU programmes should take such developmental stages into account by taking a modest yet facilitating approach where initiatives already start to come up.

**27. Which key issues and obstacles concerning the ERA should EU funding instruments seek to overcome, and which should be addressed by other (e.g. legislative) measures?**

To reach to goal set by the European Council for the European Research Area an action plan should be set up by the Council and the Commission. The ERAC should take the necessary steps for preparing this action plan.

In principle, key issues and obstacles concerning the ERA should be dealt with within the EU funding instruments themselves by optimal specification of the instruments to contribute to the ERA. Should any obstacles persist, they should be solved as much as possible at the national level by other measures including legislative measures in accordance with the principle of subsidiarity. Legislative measures at the EU level should only be considered if there is clear added value at the EU level and on the condition that these measures do not lead to extra administrative burden for the participants.