

SPANISH MINISTRY OF SCIENCE AND INNOVATION (MICINN)

POSITION TO THE EC GREEN PAPER “TOWARDS A COMMON STRATEGIC FRAMEWORK FOR EU RESEARCH AND INNOVATION FUNDING”



GOBIERNO
DE ESPAÑA

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E INNOVACIÓN

SUMMARY OF QUESTIONS BY BLOCK

I. Working together to deliver on Europe 2020

- **Simplification**, both of the European landscape (rationalisation of the range of programmes: exhaustive analysis before launching a new initiative), and of the instruments that support them, based on trust and transparency, a limited set of common regulations, as a general rule, and quick procedures.
- **Alignment of funding instruments**, based on the concepts of Plug-in, Topping-up and Excellence uptake.
- EU funding must specifically encompass **the entire life cycle of innovation**, in order to exploit its results beyond simply disseminating and using them. This could be achieved by systematically ensuring the continuity of any European project, including those financed by the European Research Council (ERC), which are expected to yield promising results.
 - Unifying the Framework Programme (FP) and the Competitiveness and Innovation Programme (CIP).
 - Co-funding by means of **European venture capital** from public and private funds.
 - Making greater use of innovative public procurement.
- Strengthen the **Cooperation Programme**: collaborative projects are a leading tool for European researchers (both public and private), enabling critical mass to be achieved in Europe in a large number of areas. Research for SMEs should be included within the Cooperation Programme.
- Increase the flexibility of priority lines by leaving **more room for bottom-up initiatives**, flexibility of the characteristics of the instruments, ensuring that artificial barriers to participation are not created due to the size of projects.

II. Tackling societal challenges

- R&D&i policies must respond to **socioeconomic priorities**. Public financing of R&D&i activities must be based on previously-established policies in this area, not the other way around, recognising the important role research plays in political decision making.
- Extension of the **social dimension** (as adopted by the Council in its Conclusions of November 2010) as a horizontal aspect of R&D&i.
- The Joint Research Centre (**JRC**) should support decision-making and improve its communication and publicity activities. In particular, there is a need to strengthen the role of the **IPTS** (Institute for Prospective Technological Studies).
- Once the major objectives and priorities have been defined, there should be **greater space** within the calls for proposals for submitting **bottom-up** proposals.

III. Strengthening competitiveness

- Consider all the **forms of innovation**: technological, non-technological, environmental, social and organisational (in accordance with the Innovation Union flagship initiative).
- Promote non-technological (and also technological) innovation activities by using instruments such as innovative public procurement, venture capital and by **improving framework conditions for innovation** in general.
- Maintain the specific framework of activities for **SMEs** with less technological capacity (industrial SMEs, SMEs for profit) with a 15% funding objective. Establish mechanisms to increase SME participation in the Mobility programme.
- Establish **connections** between the future FP and other EU funds.
- Connect venture capital to the FP, stimulating **cross-border national venture capital** with additional contributions from European funds.
- FP projects should explicitly favour **innovative public procurement** actions.
- Prioritise the **Public-Private Partnerships (PPP) scheme** (opening, transparency, clear division on the role of private and public entities) set up within the Recovery Plan, over the JTIs (Joint Technology Initiatives). Ensure better development of the PPP model. Place the PPPs under a shared umbrella of regulations for participation and a governance system that will ensure coherence.
- The **intellectual property** regulations that govern EU funding should ensure that the results of research liable to be published are published under the **Open Access** scheme promoted by the European Commission.

IV. Strengthening Europe's science base and the European Research Area

- Foster **excellence** in and the internationalisation of national and regional programmes through the **use of Top-up and Plug-in** mechanisms.
- **ERC**: Maintain the ERC, focusing fundamentally on the Starting grants.
- **Mobility**: Maintain the Marie Curie actions, extend the COFUND system and work harder to connect the Mobility programme to industry.
- **Infrastructure**: Promote the use of Structural Funds to develop new infrastructures and encourage free access to these (based on excellence criteria). The Spanish model could serve as an example of the best practice, as all the Spanish infrastructures can be accessible by the international scientific and industrial community. Also, it should be envisaged the promotion of associations of ERICs and National Infrastructures in networks offering complementary research capacities for ample thematic areas, e.g. nanotechnology research, biomedicine, environment...
- **International cooperation**: the opening up of the European Research Area (ERA) to the wider world requires a clear strategy with specific priorities for each country and region based upon a new definition of third countries. Need to consider establishing links between regional networks (Europe with Latin America, Mediterranean, Asia...) with thematic similarities.
- Encourage **smart specialisation processes** for the regions in coordination with Structural Funds as an incentive for matching European roadmaps.
- Promote **women participation** focusing on the gender perspective (gender mainstreaming) when designing programmes and calls for proposals, ensuring equal participation on evaluation committees, producing gender-disaggregated statistics and ensuring equality plans are in place in all research institutions at European and national level. Boost pilot initiatives in the area of gender and innovation.

EXTENDED ANSWERS TO EACH QUESTION

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 Common Strategic Framework (CSF) should reduce the current complexity of European programmes and instruments, preventing duplication and ensuring that these are combined in synergy with each other. This simplification is the responsibility of the respective programme managers.

Such simplification should include:

- A trust-based system, in which usual accounting practices of participants would be accepted and where the focus is put on the outputs of research, taking into account its risky nature. Ex-ante evaluation, monitoring and ex-post evaluation should focus on the expected results and the best efforts to obtain them, as well as checking on eligibility and financial aspects.
- As a general rule, the drafting of a limited set of common rules that are easy to interpret, which will be applied to all programmes and instruments providing they represent an improvement.
- Unified information guides, written in a simple and comprehensible way, that are available in good time before the programmes and calls for proposals are published, with any revisions and/or modifications of these guides over the course of the new strategic framework being kept to a minimum.
- A target for the average time-to-contract (six months).
- Streamlining of existing instruments to achieve a simplified landscape.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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

The instruments of the CIP could be a natural continuation of the most successful projects and initiatives. One possibility is to consider joint measures between FP and CIP, or to integrate CIP activities as part of a new “collaborative-type” programme, ensuring continuity for European research and innovation projects.

Effective support should be given to demonstrations and trials and operating plans introduced to harness the results of FP projects that have shown promising results. The technology developed within FP projects could be extended to innovative projects:

- To disseminate their use to different industrial and service sectors.
- To implement additional applications in related or complementary fields.

The proposed approach has the following advantages:

- Encouraging Framework Programmes participants to undertake R&D risk initiatives, ensuring that projects successfully completed will have the opportunity to be close to their social and market objectives. Improving the risk management of R&D projects, both for participants and funding entities by increasing the certainty of the implementation of results.
- Facilitating market uptake research by promoting pilot schemes to accompany the current FP7 calls so that they contemplate the possibility of financing expansion of successful projects with a clear focus on innovation. These “Accompanying calls” would be open to proposals arising from projects underway or already funded in the FP and that would require an extension to address demonstration and innovation activities.

One possible mechanism for effectively managing calls for proposals for innovation projects would be for proposals from successful research **projects under the FP being immediately eligible for further funding**. Additional project funding could come from the FP as well as the current CIP and Structural Funds¹.

Innovative public procurement is a very effective instrument for promoting innovation. The FP could support some of the innovative public procurement activities that have clear European added value.

European venture capital from both public and private funds is also a fundamental tool for co-funding the entire innovation cycle, from research through to market uptake. In this regard, incentives could be given for European venture capital by complementing cross-border venture capital initiatives with EU funds.

¹ The use of the Structural Funds is decided by each Member State, which agrees the Operational Programme with the Commission.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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?

The FP has shown itself to be an effective tool for supporting excellence collaborative research throughout Europe; hence, it is proposed to strengthen the Cooperation programme as a key component for the future Framework Programme, assuring more room for bottom-up proposals in its calls.

Where relevant, EU should encourage participation and cooperation in programmes of variable geometry between the Member States, such as the Joint Programming Initiatives, for example, with a similar top-up as in the funding scheme of the ERA-net+ instrument, which will be explained in greater detail in the following answer.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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

The challenge is how to extend the current limitations on the coordination of research and innovation at European level. The current thinking is that some measures of the ERA instruments are causing fragmentation in national and regional systems.

The future FP could facilitate alignment between the funding instruments, based around the following concepts:

- **Plug-in** of national/regional programmes open to transnational participation and European infrastructures funded at EU level: ERA initiatives based on mobilising national funds, such as the Joint Programming Initiatives, and infrastructures using common management standards and structures (e.g. evaluation processes and facilities) financed at EU level.
- **Topping-up** of national programmes with EU funds: national programmes, including regional) that meet certain Europeanisation and opening-up criteria could receive FP funds, using a similar system to COFUND.
- **Excellence uptake** by national programmes: excellent proposals that cannot be funded by available funds in FP programmes could be supported at National level.

Other ways of optimising means of funding could include:

- Promoting international coordination between national and regional funding agencies to develop a strategic research and innovation agenda agreed at European level.
- Supporting coordination between the Member States participating in the initiatives, both logistically and in terms of human resources, as is the case within the framework of the ERA-nets.
- Supporting the sustainability of national infrastructures, which should be open to shared use at European level.

Lastly, it is necessary to encourage the creation of European standards.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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

It is important to restate that the size of a project is not necessarily correlated to its excellence or impact. With this in mind, artificial barriers to participation should be avoided and more effective and simpler project management facilitated. Therefore, **projects should be judged according to their quality, scope and European added value.**

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

6- How could the Commission ensure the 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 needs of different beneficiaries, in particular SMEs?

Radical simplification requires the development of a limited set of common, clearly interpretable rules, to be applied to all programmes and instruments as a general rule.

These functions should be simplified, for example by:

- Moving towards a trust-based system, in which usual accounting practices of participants would be accepted and where the focus is put on the outputs of research - and the best effort necessary to accomplish them, taking into account its risky nature.
- Defining a limited common set of rules - clearly interpretable -, that would apply to all programmes and instruments.
- Accelerating procedures: Establishing a target for the average time-to-contract (six months).

This set of rules should be based on the principle that public funds must be always managed by public entities and overseen by the European Commission. The rules should also ensure the connection between the R&D&i strategy and its policies, implement the calls for proposals and carry out project evaluation and monitoring.

In relation to the needs of SMEs, specific measures should be used to encourage them to participate in collaboration projects.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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

To implement the lessons learned from the interim evaluation of FP7 and CIP interim evaluation would greatly assist the successful financing of R&D& in Europe.

Specific measures that would contribute to the success of the financing are having well defined objectives, reduce complexity of procedures, increase leverage effect and avoid duplication of instruments.

However, all these measures should be underpinned by three pillars: coherence, scope and harmonisation. However, all these measures should be based on three pillars: coherence, scope and harmonisation:

- Coherence: there is a need for coherence in the funding system, by grouping, redefining or eliminating instruments as a basic measure.
- Scope: the funding system should focus on covering the entire research and innovation cycle.
- Harmonisation: there should be harmonisation between different funding systems.

In order to evaluate the effectiveness of the funding system, a sub-set of previously-developed indicators should be considered, in particular those measuring output, complemented by relevant statistical studies on the instruments underway, giving us a suitable 'control panel' to provide information about the uses and shortfalls of the funding system instruments.

It would be useful to encourage the creation of systems to measure economic and social impact.

Furthermore, it would be positive to consider gender equality aspects as yet another indicator of the success of EU research and innovation funding.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

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

Co-funding and topping up seem to be particularly useful when there is a need to reduce European fragmentation and promote cooperation between national programmes in order to build up critical mass. They could also be of interest, for example, in tackling structural weaknesses or cohesion issues.

European pro-innovation actions could have greater impact if they complement national and regional efforts by adding a European dimension to national and regional programmes. In this case, additional complementary funding could be provided if there is European added value.

We recommend the following with regard to EU research and innovation funding:

- A more strategic approach towards smart specialisation of the regions by linking the FP and Structural Funds more clearly and systematically, e.g. when regional initiatives match European road maps.
- Regional programmes should be designed and implemented according to the principle of smart specialisation. It is important to focus not only on excellence, but also on the relevance and potential impact of the projects selected for funding.
- From a smart growth and specialisation perspective, excellence can be found throughout the entire innovation chain, as long as there is a level playing field.

Cohesion funds should be used by States and regions to build the ERA and achieve the goals of the Innovation Union.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

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

The CSF should address both activities, which are not incompatible as long as the programmes are designed in terms of well-defined goals, without going into how and by what means they are to be achieved.

A balance is required between the number of top-down and bottom-up activities funded by the European Commission, but all projects should meet European needs and have a significant impact on Europe's economic and social arena.

Similarly, the future FP should not overlook basic and frontier research that does not have specific, pre-defined themes.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

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

Yes, for the reasons given in the previous question.

Once the priorities are established in the legislative package, there must be defined (in the work programs) flexible calls, in order to avoid artificial barriers to participation by very narrow topics or very strict requirements in terms of project size or composition of the consortia.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

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

Support for policy design, providing reliable tools for assessment of socio-economic impacts of RTD& Innovation and particularly for prospective studies, is essential in order to ensure proper R&D&i management with clear objectives and indicators of how they are accomplished.

In this regard, we propose to reinforce the JRC IPTS as a European tool dedicated to this purpose.

Similarly, it is necessary to emphasise and maintain support for Human and Social Sciences projects in the area of policy design. The forecasting exercises carried out by the sectoral working groups should also be kept in mind, for example the groups collaborating with the SCAR (Standing Committee on Agricultural Research).

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Fairly important.

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

By strengthening its role as a European tool in the service of Member States and boosting its institutional relationship with them.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Fairly important.

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

The FP will not be able to maximise its impact unless all the stakeholders involved are fully integrated. Therefore, it will be impossible to achieve the objectives of the ERA without including the social dimension of research and innovation and ensuring the involvement of the general public and civil society entities.

Although the relevance of the social dimension of science and innovation has been widely recognised, a clear and realistic strategy for its enhancement has not yet been implemented at programme level. It is necessary to take executive initiatives for its application.

These initiatives should take into account civil society advancement and public participation to develop strategic research programmes and increase the interest of science in relevant social problems, in particular by promoting and consolidating social platforms and creating common areas of interest and channels for discussion.

It is also necessary to ensure simple and clear rules for participation to encourage involvement of citizens and civil society in research and innovation.

In addition, to boost public interest and participation, it is necessary to disseminate the results of EU funded research and innovation, to bring closer these results to the public. Communication through Internet and social networking should be fostered, as it has already proven to be the most used source for scientific information (Spanish Social Perception Survey, 2010).

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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

Today, innovation has become a top political priority for all policy and management areas of action, from energy and the environment to health and transport, and the Framework Programmes must provide the main response to these expectations. However, innovation should also consider aspects that help to improve the functioning of an organisation, environment or society, including non-technological innovation, eco-innovation and management innovation. All these “innovations” increase competitiveness and productivity, as well as ensuring the sustainability of our wellbeing.

Non-technological (and also technological) innovation activities are promoted by means of instruments such as innovative public procurement, venture capital, or in general by improving the framework conditions for innovation (e.g. making intellectual property management easier, providing tax relief for new companies, etc.).

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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 European Technology Platforms?

It is necessary to focus the funding system so that it covers the entire cycle of research, technological development and innovation, with different types of support according to the activity in question.

In relation to the PPPs, it is necessary to establish a common specific framework for all PPPs, with a clear set of conditions and rules and simplified, common and streamlined procedures, clearly separating the role of the private sector (proposal for R&D&i priorities) and the public sector (supervision of the connection between the R&D&i strategy and its policies, implementation of calls for proposals, project evaluation and monitoring), to guarantee trust and credibility between partners and participants. In order for industry to participate more, the themes must be of its interest and the procedures must be simple. Furthermore, to foster its participation we also propose that the Cooperation programme includes selected industrial research actions carried out by means of PPPs under a common umbrella.

The running model established for Factories of the Future (FoF), Energy Efficiency Buildings (EeB), Green Cars (GC) and Future Internet (FI), seems to be satisfactory and could be the right option for the future FP.

The PPP approach should prevail over that of JTIs, i.e. the Commission should manage of the funding attributed to the PPP, using a standard mechanism common to all PPPs, irrespective of the topic. These PPPs could be managed by the Research Executive Agency (REA).

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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?

All kinds of SMEs should be supported, regardless of their technological capacity.

Given that SMEs are essential players in achieving innovation, their participation in research and development programmes should be increased, with an urgent need to reduce the time between research and practical application.

In addition, SME participation should be encouraged through specific measures in collaboration projects covering the entire value chain in order to meet the objective of at least 15% of the Cooperation Programme funding being devoted to profit-oriented SMEs. This 15% of funding for SMEs should be calculated with regard to the amounts devoted to research (excluding the management category).

It is also necessary to extend the Mobility programme to SMEs, in order to improve cooperation between industry, universities and public research organisations, with regard to research training, professional development and knowledge transfer.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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 commercialisation of novel ideas, in particular by SMEs?

SMEs should be supported by means of a standard set of connected work instruments (one-step approach in combination with a single set of rules for projects that can be applied to various programmes). The overarching principle could be to design policies and instruments that match the needs of users and beneficiaries.

FP funds for Innovation and Competitiveness (CIP) should be naturally connected to FP funds, enabling enabling the generalization of technology pilots and market uptake of FP8 projects. These funds should also support innovative public procurement, funding the R&D phase. As mentioned earlier, another effective instrument would be to promote cross-border venture capital for innovative SMEs through similar mechanisms to those of the RSFF.

It would be very useful to analyse the success of the new “proof of concept” scheme, which has been conceived to explore the feasibility of transferring ground-breaking research results to the market, so to assess whether to possibly continue with the schemewithin the ERC with additional funding.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

18- How should EU level financial instruments (equity and debt based) be used more extensively?

European venture capital, from both public and private funds, is also a fundamental tool for co-funding the entire innovation cycle, from research to market uptake, using instruments such as the Risk Sharing Finance Facility (RSFF) and promoting cross-border venture capital with additional contributions from European funds.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

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 new Framework Programme should boost innovative public procurement. Soft law actions are proposed to ensure this is applied correctly.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

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?

The answer to this question covers various aspects:

- Results of fundamental research unlikely to be used by industry.
Access to and communication of these results is done basically by means of scientific publications, as it is of no interest to protect these results through the use of patents.
- Results of research, development and innovation liable to be used by industry.
Access can be provided to these results and they can be communicated by publications, but the results must be protected prior to publication by means of a patent application. On occasions, researchers publish their results before applying for the patent, thereby compromising their value.

The intellectual property regulations that govern EU funding should ensure that research results liable to be published should be published by means of the Open Access scheme promoted by the European Commission.

In addition, results that could be protected by a patent or model of use and published in Open Access format could have a grace period of up to six months from the certified and official date of their publication in this format. The priority date of the patent application would be counted as the date of publication in Open Access format.

Note. The concept of intellectual property used in this question is that of the industrial and intellectual property rights used in Spain.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

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

In order to strengthen the role of the ERC so as to support research of international excellence, it is important to maintain the philosophy of its initial objectives: to fund high-level and frontier research (essentially ground-breaking or revolutionary) and maintain the funding for the IDEAS Programme.

The ERC should focus its activities mainly on the Starting Grants and cross-border collaboration initiatives and industry contacts that are gradually developing. A good connection should be ensured between activities focused on frontier research and the corresponding strategies within the Cooperation Programme, such as the FET flagship initiative.

It would also be appropriate that ERC increases its prestige by clear rules on the regular replacement of members of its Scientific Council.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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

Spain has deployed novel strategies to coordinate regional and national policies by means of mutual agreements that make national funding dependent on compliance with previously agreed R&D and innovation excellence indicators. Excellence, therefore, should act as a driver for cohesion.

In addition to what it is said above and elsewhere in this document, we believe it is necessary to put more effort to foster design of smart specialisation processes for regions. This smart specialisation should not only look for specificities assuring a different competitive niche to regions, but also to seek complementarities with other European clusters where synergies of their respective capacities would provide all partners a higher competitive profile.

The WIRE conference, held under the auspices of the Spanish Presidency in March 2010 and co-organised with the European Commission, has produced very concrete conclusions and findings that should be considered when designing the future FP.

As indicated in the answers to questions 4 and 8, there are two additional possibilities:

- Excellence uptake by national programmes: excellent proposals that cannot be funded by the available funds of EU programmes could be supported at national level.
- Excellence as a driver for cohesion: using Structural and Social Funds to foster excellence by making available these funds to states and regions subject to the achievement of ERA and Innovation Union targets.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

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

The Marie Curie actions have played a crucial role in developing human resources in research in Europe. Their influence has not just been confined to consolidating one of the pillars of European R&D activity, but it has also had a positive effect on structuring the ERA:

- Improving the working conditions of researchers from the very start of their research careers;
- Promoting equal opportunities for both sexes;
- Attempting to improve researchers' employability, by expanding their skills and trying to adapt these to meet the needs of the labour market.

The Marie Curie actions must therefore be maintained as as part of the core investment in European R&D&i, and should be aligned with the principal objectives of the Europe 2020 strategy.

In particular, work must be done to bring the programme closer to the industry needs in terms of research training, development of professional career paths and knowledge sharing with the academic world. In this context, specific actions could be put in place to enable qualified researchers to be recruited by industry. Likewise, inter-sector training should be improved for researchers from the early stages of their research careers, promoting initial training schemes in which industry would play a more prominent role than it does today.

Efforts should also be made to create synergies between funding human resources in research and other budgetary investments focused on other areas, such as project funding, investments in training and research career opportunities in high-priority scientific-technological areas; and investments in research facilities. In addition, in the area of mobility, the COFUND scheme should be extended as far as possible, as an example of a best practice.

Lastly, future Marie Curie actions should have sufficient flexibility to be able to tackle any political needs that may arise in future.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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

The inclusion of gender issues in research is a means of stimulating innovation, creating new knowledge, promoting female participation and creating sustainable wellbeing policies.

Pilot *gender and innovation* initiatives should be promoted to enable structural change to be implemented (modernisation of scientific institutions) in cooperation and coordination with Member States, in order to meet the objectives of the Innovation Union and ensure that the ERA makes equal use of researchers' potential, regardless of whether they are male or female.

These pilot initiatives could carry out the following tasks:

- Mainstreaming and monitoring of gender issues in Research & Innovation funded by the EU.
- Training and train the trainers programs.
- Creation and/or Support of National Focal Points on Gender & Innovation.
- Coordination and support national and regional policy measures and positive actions and exchange good practice.

In addition, steps should be taken to prevent the existence of a stereotyped gender culture and environment, which creates barriers to gender equality as regards learning, employment and career progress in particular in the field of science and technology

According to the Council Conclusions on "Various issues related to the development of the ERA" point 6 "Support Women in European Science and Technology" adopted at the Competitiveness Council of May 2010, the European Commission and Member States should work harder to foster the role of women in science and innovation and to promote gender equality.

In this area, it would be useful to:

- Focus on gender mainstreaming when designing programmes and calls for proposals.
- Promote equality of participation in the evaluation committees.
- Consider gender as a horizontal analysis category in research, at every stage and in all fields.
- Support gender and women's studies.
- Produce gender-disaggregated statistics, including attendance and productivity indicators, beyond the 'She Figures' of the European Commission.
- Have equality plans in place in each European and national research institution.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

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

Research infrastructures, one of the main pillars of the ERA, require multi-billion investment, this funding coming primarily from Member States, while FP7 funds play a catalyst role.

Furthermore, Structural Funds are an important source of funding that can contribute to building research facilities responding to agreed European road maps.

Also, it should be considered fostering the association of ERICs and National Infrastructures in networks offering complementary research capacities for ample thematic areas, e.g. nanotechnology research, biomedicine, environment...

It is also important to promote open, excellence-based access to these infrastructures, strategic instruments to develop the scientific and technological integration of Europe. In this respect, the Spanish model could serve as best practices, as all Spanish infrastructures are open-to-use by the scientific and industrial community, at international level.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

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?

In relation to international cooperation, opening the ERA to the world requires the definition of a clear strategy with specific priorities in order to be applied in a common way for all themes. Its specific actions would be transversally introduced in the specific programmes, ensuring coordination, avoiding duplications and assuring the right coverage of items.

The common term “third countries” should be replaced by a more realistic classification, attending to the different research and innovation needs of each country or region. A new classification will help to establish a coherent strategy in international cooperation.

In addition to this, more efforts are still needed to foster R&D cooperation in key regions for Europe, such as the Mediterranean basin, in order to reduce fragmentation and reinforce strategic potential. Some key issues to be considered are environmental technologies (waste, water, and pollution prevention), marine ecosystems, and agriculture. In this respect, it should be considered establishing links between regional networks (Europe with Latin America, Mediterranean, Asian...) with thematic similarities.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Important.

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?

The main problems identified are the complexity of the instruments and lack of harmonisation between them.

The following would be advisable:

- Simplification through harmonisation of rules and procedures of instruments at EU-level is the most urgent need.
- A maximum degree of harmonisation between the different research and innovation-related funding instruments whether they are at EU level or national/regional level.

Efforts to increase harmonisation between different instruments at all levels will facilitate the alignment of relevant national/regional programmes to each other as well as interaction and synergies between instruments at EU level and national/regional level. The alignment will allow for better conditions for cross-border cooperation.

A more ambitious and pro-active approach for streamlining instruments than a 'simple' moratorium is needed to meet the new objectives of the Innovation Union. Any new instrument/concept should be an exception and linked to new policy objectives. They should be preceded by a thorough ex-ante impact assessment (addressing coherence, added value and complementarities with other instruments) and should be tested at a small scale before full-scale introduction.

How important are the aspects covered by this question? [Very important, Important, Fairly important, Not important, Don't know]

Very important.

EXTRA QUESTION: Are there any other ideas of comments which you believe are important for future EU research and innovation funding and are not covered in the Green Paper?

Two aspects have been identified that are not covered by the questions:

- Efforts should be made to use simple language, which does not leave any room for misunderstanding and which can be understood not only by the interested parties affected in the first instance, but also by the general public and civil society.
- There is no question in the questionnaire about how to promote the culture of innovation, which is one of the biggest concerns today.