

Online questionnaire for the Green Paper on a common strategic framework for EU research and innovation funding.

This European Commission **Green Paper** proposes major changes to EU research and innovation funding to make participation easier, increase scientific and economic impact and provide better value for money. The questions are the same as those set out in the Green Paper. To facilitate responding, you are asked to rate the relative importance of the aspects covered in each of the questions. Text responses are limited to 1500 characters. If you wish to provide detailed written comments you are encouraged to use the written response submission form.

Information about the respondent

- I am answering as:
An Association.
- Country of location: United Kingdom
- My/ my organisations' main activity: research
- The name of my organisation is: The UK Computing Research Committee (UKCRC).

The UKCRC was formed in November 2002 and is an Expert Panel of the British Computer Society, the Council of Professors and Heads of Computing and the Institution of Engineering & Technology [free text (optional)]

- I/ my organisation has received funding from: FP7 (and previous FPs); other EC programme (Interreg; Content Plus; Marie Curie; Erasmus); research/innovation support programme in my country (UK Research Councils; Knowledge Transfer;]
- Have you or do you intend to submit a separate written response to this consultation?
[No]

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The questions in this section correspond to Section 4.1 of the Green Paper.

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 report recognises many of the aspects of current systems that have been found most problematic by participants. The aspects listed are certainly important. The emphasis on innovation from research would encourage the view that spin-off companies from research activity would receive support. However for this to happen will require the accommodation of companies with no great record of trading, which has historically proved difficult for EU instruments and processes. It also emphasises

the need for prompt payments (including final payments as well as advances) and efficient accountability/reporting for these companies who seem to have had the most difficulty in the past in securing agreement to eligible costs. The acceptance that there should be more “general acceptance of beneficiaries’ own accounting practices” would also help. There have been occasions in which simplifications introduced in principle have not worked through into the individual practice of particular parts of the Commission. For example reduction in frequency of reporting periods which was agreed in principle for FP7 but not uniformly implemented.

How important are the aspects covered in this question? [Very important, Important, Of some importance, Unimportant, Don't know]

a) single entry point with common IT tools: **Of some importance**

b) a one stop shop for support: **Important**

c) a streamlined set of funding instruments covering the full innovation chain: **Very important**

d) further steps towards administrative simplification: **Very important**

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

Although attitudes have improved over the years, there is still a culture in EU programmes which appears to expect exploitation of results within or shortly after the funded period of research projects. This assumes that innovations are accepted into the marketplace rather sooner than has been true historically, or that the research is a lot closer to market in the first place. The reduced contribution to demonstration activities within research projects also implies that engaging in demonstrators has more value for the organisations than engaging in the underpinning research. The cost recovery for the commission in these cases must represent a very small part of the overall costs of research projects. This resource might well be better spent in encouraging co-development of research prototypes between potential users (domain specialists) and technology suppliers, which would be more likely to enhance the speed of adoption through research into usability issues for the technologies supplied.

How important are the aspects covered in this question?

Cover the full innovation cycle: **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?

Different benefits appear to have been anticipated from EU level action over time:

- a. Encouraging the sharing of knowledge, practice and experience – cross-fertilisation between strengths in different areas of Europe
- b. Increasingly a belief that the greater European good is best-served by concentration of expertise (“regional level” “smart specialisation” – for example the EIT ICT Labs concentrations in Berlin, Eindhoven, Helsinki, Paris and Stockholm). Concentration in this way may produce world-class centres but requires buy-in and co-working across the EU to be effective for the EU as a whole. The danger had to be that national aspirations and interests will require duplication of European initiatives at national levels.

Leveraging national/regional investments in research to co-operate with EU smart specialisation and concentration might require incentives to the national research programs to engage. Whilst this may be easy to achieve where capital-intensive research means that shared costs are effective, where skilled people are the main resource these benefits are less obvious. It may be possible in some fields to adopt virtual concentrations that never the less recognise and encourage the development of national centres of excellence. Governments typically leverage private investment through tax breaks, but the EU does not appear to have equivalent leverage. Multinationals may operate concentrations of expertise but this is not necessarily of benefit to Europe.

How important are the aspects covered in this question?

Benefit of acting at the EU level: Very important

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

As noted above national governments leverage engagement of private companies by offering tax breaks for research investment. However in the absence of a tax regime at European level this is not an option, but the nearest equivalent might be the national contributions to EC budgets, so perhaps the encouragement should be phrased in terms of leveraging co-investment by national programs and might be achieved via credits towards EU contributions.

Bilateral joint inter-national initiatives can only work if they offer mutual advantage to national objectives, which may need to be through inducement for the approach to have widespread application.

How important are the aspects covered in this question?

Pool Member States' research and innovation resources: **Very important**

Bilateral joint inter-national initiatives: **Don't know**

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

There is a relationship between the size of projects; the complexity of reporting requirements (particularly during the project) and; the overhead of engaging in the project for each partner. Small projects involve less coordination effort between the participating organisations. Lowering the burden of detailed reporting during a large project would lower the overhead on all partners, but also lower the obligation of all partners to engage jointly and reduce commitment of their contribution to the project's collaborative objectives. Detailed reporting requirements during the period do enforce the collaborative approach at regular intervals during a large project.

The Commission would also need to balance the risks of individual project failure and the input required from the Commission to program coordination.

Some rule variations arise from large projects spanning many activities. E.g. Current large scale FP7 engage in demonstration activities which are considered closer to market and therefore only funded at 50% of eligible costs, whereas some activities are funded at 100%

even within a single project. Demonstrations are still a long way from exploitation and research organisations may consider these activities as a distraction from their primary mission even without being penalised in cost recovery terms. In addition, mixed rates of return of funding of eligible costs within a single project further complicate implementation and monitoring.

How important are the aspects covered in this question?

Balance of projects: **Of some importance**

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?

Reducing the sets of rules would help reduce the learning curve for engaging in projects. However even a single set of rules can have a whole variety of detailed rules as can be seen in the individual current programmes (e.g. FP7). It is at least as important that there is a clear rationale to variations to reduce the difficulty for new participants to understand the rules that apply to their proposal and to find the best instrument to achieve their objectives.

Having a clear mapping into stages in the innovation cycle and clearer understanding of the social objectives (see Q8) would help prospective researchers identify the rules and evaluation criteria that apply to them. Currently information days appear to only apply to particular calls, not to the full range of potential instruments and programmes, and the lack of transparent integration across the instruments/programmes means that call cycles frequently make it difficult to choose objectively between them. This is particularly important for steering agile, innovative, start-ups that tend to be suspicious of overweight bureaucracy and need to be opportunistic in seeking support.

How important are the aspects covered in this question?

Unique set of rules: **Important**

Radical simplification: **Very important**

Flexibility: **Unimportant**

Diversity: **Important**

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

This is a very broad question that needs detailed answers not achievable here. There are many different objectives listed and a range of measures will be required to evaluate the overall programme. For example evaluating the degree of integration and leverage between EU and national programmes, requires an evaluation on the baseline and movement of national programmes cooperating in European objectives.

Measures must relate to objectives and currently there appears to be a degree of tension between the objectives of helping “the less developed regions of the EU” and “smart specialisation” resulting in concentration into European-level centres of excellence. Definitions of success will rely on setting targets for measures of each

Evaluation will also be needed at many levels from the overall R&I funding stream to the individual instruments/programmes. The numbers of applicants to different calls should not be a measure of performance as it may signify either a successful programme or confusion about its objectives leading to unworkable proposals. Success might be a small number of appropriate and high quality proposals.

Finally the timescales for evaluating the impact of the funding stream needs to continue with longitudinal studies well beyond the immediate schemes. Hence it would probably still be informative to conduct impact evaluations of the FP4/FP5 programmes now

Measures of success: **Important**

Performance indicators: **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 funds?

An important factor in getting widespread national buy-in to the strategy of “smart specialisation” must be to address national concerns of potential exclusion from the halo effect of centres of excellence, concentrated elsewhere in Europe. At one level this will involve persuading national governments to engage – as commented upon above in Q4.

From the individual research project level a clearer view of the potential relationship between research funded through national schemes and the contribution that it can make to European projects. At present although the rules on chargeable eligible expenses preclude co-funding the same research from national and European sources, little prevents research on very ideas being funded from each source. At the consortium formation stage it would also be extremely helpful to have clarity as to the social objectives. For example, the requirement to have three member states involved in collaborative projects springs from the need to spread the influence of the research across member states, but would be less obviously required if “smart specialisation” and researcher mobility have been effective and concentrated the top European expertise in particularly fields in a small number of locations.

How important are the aspects covered in this question?

Relating research and innovation funding to regional and national funding: **Very important**

Tackling Societal Challenges

The questions in this section correspond to Section 4.2 of the Green Paper.

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

Curiosity-driven research is entirely appropriate to receive some support and can be addressed through the mechanisms of the European Research Council. Remaining programs can be supported through other instruments. This would allow the balance between curiosity-driven research and agenda-driven activities to be drawn through policy decisions and controlled through budgets. This balance may also be impacted by policy about the balance between national and European projects. It would also clarify the responsibilities of projects approved

in either area, as well as clarifying the obligations of projects to address different criteria at both proposal and accountability stages.

Curiosity driven research which may underpin research to address a societal challenge, but cannot be phrased in that way, may well still be appropriate through the ERC, and encouraged to proceed that way.

Balance between curiosity-driven research and agenda-driven activities: **Very important**

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

Bottom-up activities should be addressable through a combination of early-career routes within ERC activities and appropriately consultative agenda setting for agenda-driven research. The ERC activities are still at a relatively early stage of maturity, but it is likely that a more formal linkage to consult award holders through the ERC in advising on research agendas for other programs would be useful. It may be more challenging to attempt to link this with national programs of bottom-up activities.

How important are the aspects covered in this question?

Bottom-up activities: **Important**

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

At the macro level it seems likely that there would need to be research undertaken as support actions on longitudinal impacts and sectoral trends resulting from sector-specific research and innovation funding. However this should not imply additional reporting requirements on individual projects.

In some cases it may be appropriate for research to be undertaken into the mechanisms of encouraging adoption and successful deployment of research results into the market, which could be informed by usability and collaborative deployment experiments with user organisations.

How important are the aspects covered in this question? **Important**

12. How should the role of the Commission's Joint Research Centre be improved in supporting policy-making and forward-looking activities?

The Joint Research Centre has specific areas of activity and in some areas conducts related policy research. These results should be augmented by specific projects commissioned on relevant areas of policy to draw together conclusions from consultations of ERC and other European grant holders and other evidence. This work could be undertaken within the framework of the European Innovation Partnerships.

How important are the aspects covered in this question? **Of Some Importance**

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

Some mechanisms already exist – for example the association with the EuroNews TV channel, which carries occasional documentaries on individual research projects. However more systematic raising of public awareness and interest is a long term undertaking given the relative lack of interest in research and innovation activities in popular culture.

How important are the aspects covered in this question? **Of Some Importance**

Strengthening competitiveness

The questions in this section correspond to Section 4.3 of the Green Paper.

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

These aspects target more broadly the challenge of innovation in business and are particularly in SMEs. It would be appropriate for the EU to engage in cluster based empowering of SME development, similar to parts of the activities of SME development through learning networks.

How important are the aspects covered in this question? **Of some importance**

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 Programmes) or different forms of 'public private partnership' be supported? What should be the role of European Technology Platforms?

The UKCRC does not have an agreed position on this question

How important are the aspects covered in this question? **Don't know**

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?

The UKCRC does not have an agreed position on this question

How important are the aspects covered in this question? **Don't know**

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?

The UK's Engineering and Physical Sciences Research Council's Follow On Fund has been quite successful as a mechanism for making sure that results are exploited. Short-term fellowships, whereby researchers spend time with an industry partner, are also a reasonably successful way of ensuring knowledge transfer. Even in sectors where SMEs may not have the resources to allow transfers into academia/projects, the reverse flow might be possible.

One potential variation to the UK EPSRC scheme would be to allow Follow-On funds to be used with any research results involving high quality research, rather than limiting it to research results stemming from European funded programs. This could also include projects where the initial research had been undertaken entirely in an academic environment or where the proposed SME had not been involved in a collaborative project, subject of course to any restrictions on IPR that had been imposed in the consortium agreement.

The situation where the main target beneficiaries for the research were user communities or third sector organisations might also suggest that a Follow-On scheme should target assistance in assimilation of results into public or third sector organisations. For example the recent publication of the “New Renaissance” report on the digitisation of European Tangible Cultural Heritage might signal a need for encouragement for cultural institutions to be more aware of, and to adopt, the latest technologies and business processes within their normal operations. This could be encouraged by Follow-On funding.

Similar conditions where research into social challenges, such as ageing and well-being, sustainability and climate change require these types of organisations to adopt research results and change behaviour.

How important are the aspects covered in this question? **Very important**

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

The UKCRC does not have an agreed position on this question

How important are the aspects covered in this question? **Don't know**

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?

Inducement prizes may be a good way of achieving progress in an accelerated fashion towards specific targets, but the targets need to be well chosen to avoid diverting energy towards short-term and incremental work where more fundamental results need to be pursued, but progress may not easily measurable or appropriate targets identified.

It seems unlikely that the results of blue-skies research would be sufficiently robust for incorporation in products to be included in public-procurement requirements without additional development. Equally they are unlikely to be ready to form the basis of standards that could inform public-procurement.

Awarding Follow-On funds as inducement prizes for uptake of the most promising research results might provide a way of bridging this gap between the blue-skies research and the suitability for public procurement.

How important are the aspects covered in this question? **Very 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?

Pre-competitive research contributed to by public finance should result in openly available publication, even if the intellectual property is protected in some way. The mechanisms by which protection is achieved should not require extensive lead times for investigating potential to exploit. Further development of the results can never the less be protected and research will typically require extensive additional work to exploit. Projects which delay publication in order to protect results risk losing intellectual leadership of the area as other approaches emerge and attract attention.

How important are the aspects covered in this question? **Very important**

Strengthening Europe's science base and the European Research Area

The questions in this section correspond to Section 4.4 of the Green Paper.

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

The projects and investigators supported by the ERC should provide a resource for extending the pool of opinion, expertise and expert review to help sustain other European programs

How important are the aspects covered in this question? **Of some importance**

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

The EU can insist through the ERC and other peer review mechanisms on the application of rigorous standards. It can also provide mechanisms for sharing good practice between member states and the peer review and feedback mechanisms of the ERC should help inform researchers throughout Europe of the required standards associated with international excellence.

“Raising standards” should not be equated with a requirement for burdensome form-filing within proposals or of reporting the ways in which early stage research has the potential to be exploited. EU schemes need to find better mechanisms to evaluate the degree of innovation that are the basis of proposals rather than targeting research for which future applications are most eloquently described.

How important are the aspects covered in this question? **Very important**

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

Marie Curie actions have been effective in allowing the interchange of researchers. However the funding rules are complex and not well suited to all national practices. In addition the very low cost recovery on hosting visiting researchers (and reporting practices which incur significant costs) make the schemes much less attractive for relatively low cost savings. It would be highly desirable for the funding rules in this area to also be reviewed and simplified.

In addition the take up of the program might be improved by enhanced publicity and greater efforts to engage with those in receipt of other EU funds for research and Innovation. For example the potential to link Marie Curie exchanges to augment other funded research projects should be considered.

How important are the aspects covered in this question? **Of some importance**

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

The EU could provide mechanisms for sharing good practices through national programs, but other than laying down expectations and monitoring performance, it is difficult to imagine where a specific European dimension would add value to national programs.

How important are the aspects covered in this question? **Of some importance**

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

The most important research infrastructure is the network of excellent researchers at the human level. The EU could encourage interaction between researchers by providing opportunities for peer groups to come together at a European level to formulate research agendas. Currently the norm appears to be to require researchers to fund such opportunities from research funds already awarded and hence this places competition within research groups to prioritise between direct work on the project and contribution to the wider research culture. A system of funded sandpits and high-level research meetings to formulate research challenges and agendas would help in this. Underpinning established research events could also be more proactively pursued, rather than establishing new events “owned” by the Commission.

How important are the aspects covered in this question? **Of some importance**

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?

There need to be clear statements about the motivation for the international cooperation which may range from: collaboration with international researchers with unique, world-leading strengths to; (potentially collaborative) exploitation of co-developed IPR in wider markets to; spreading the awareness of European strengths to other regions in order to establish a leading place and reputation in prospective future markets for results. These overlapping motivations might produce different approaches to supporting such activities. If the “New Renaissance” report is adopted then there also needs to be consideration of where international cooperation can leverage access to unique cultural assets that may well be physically located outside Europe, but have significant importance to European Heritage.

How important are the aspects covered in this question? **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 UKCRC does not have an agreed position on this question

How important are the aspects covered in this question? **Don't know**

Closing questions

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?

The UKCRC does not have an agreed position on other ideas