



Marie Curie Fellows Association (MCFA) written contribution in response to the Green Paper “From challenges to opportunities: towards a common strategic framework for EU research and innovation funding”

Information about the respondent

The Marie Curie Fellows Association (MCFA) is the Association of scientists who have once been awarded a Marie Curie fellowship or any other European Commission (EC) research training grant. It aims to bring together the experience, opinions and innovative ideas of mobile researchers, help them to cope with mobility-related problems and country-specific issues, be the link between them and the EC, and participate in EU science-policy panels. For more information, please visit our website: www.mcfa.eu

This position paper has been compiled by the Science Policy Group of the MCFA after internal consultation of all MCFA members, its administrative board and its advisory board.

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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?

How important are the aspects covered in this question?	Very important
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The MCFA has identified some suggestions to make EU research and innovation funding more attractive:

- **Simplification of administrative issues.** According to our members, EU funding is very attractive. However, one major concern is the bureaucracy required to apply for European Funds. Despite attempts are underway to improve this point, further simplification could encourage more scientists to apply. From the scientist point of view, more simplicity would be required at all the stages of the application. For instance, a simpler set of guidelines, prefilled templates whenever possible, a straightforward terminology, and easier application procedures are required. Clear aims of the single calls and shorter review process would also help the researcher



in his way of getting EU funds. Also, a coaching strategy could be envisaged.

The creation of an open database hosting information on project abstracts and previous successful MC proposals would be a good tool for individual young researchers to contact potential research partners and put together a successful MC fellowship proposal.

Administrative issues are a challenge even when the project has successfully passed the evaluation stage. At this stage, the researcher has to deal with the hosting institution and, most of the time administrative tasks are not clear and easy to tackle. More support is needed.

More attention on researchers' rights is also claimed. Our attention has been drawn towards cases in which researchers' rights have not been protected. Firm actions are needed in those cases in order to discourage misbehaviours.

- **A labour market for researchers.** An increased number of positions should be envisaged. MCFA believes that two calls per year for MC fellowship applications instead of just one would better serve the needs of young researchers.

Also, there should be room for funding longer scientific careers. A scientific career is very indeterminate, therefore many scientists stop their career because low probabilities to find a permanent job. More funding for permanent or junior professor positions should be available.

In order to promote ethnic equality, the creation of permanent positions in academia for minorities could be taken into account.

There could be some funds also for open proposal submission for "immediate" projects: scientists could submit projects to quickly respond to study environmental catastrophes in the same way as proposed by the NSF Rapid program.

- **Evaluation of proposals.** The evaluation of proposals should be based on the scientific value of the proposed hypothesis and the scientist' merits. There should be less room for policy issues in the proposal and more focus on scientific good ideas. Equal funding opportunities for both basic and applied research are beneficial. Multidisciplinarity should be also promoted.
- **Coordination of projects.** EU centralized project management giving specifics on use and management of funds would be advisable. All execution stages of the grant should be coordinated in a common way. This refers to the way how direct and indirect costs can or cannot be spent in legal terms, the administration and legal procedures to contract the fellows, and the social services (social security, retirement, taxes, possibilities of research continuity, career structures, etc.), which should be equal for each of the MC fellows.



- **Participations of SMEs.** The participation of economical successful small SMEs and freelancers should be possible. A lot of new and innovative ideas are coming from this group and the direct participation in some programs could be the right way to give these small SMEs the possibility to grow based on these ideas.

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

How important are the aspects covered in this question?	Important
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In order to cover the full innovation cycle from research to market uptake, some support at different stages should be envisaged. Feasibility studies at the initial stage and dedicated research to assess the impact of innovations on society and economy may complement dedicated investments to the commercialisation of results.

- A specific programme dedicated to the exploitation of research results should be implemented. In some cases, a project near to its end may need some more support to fully develop its results. Thus, it could be better to promote some continuity rather than let the results vanish at the end of project.
- Creation of spin-offs could be promoted after the end of fellowships.
- Specific support and funds to apply for patents should be envisaged. Specific programmes dedicated to the exploitation of research results should be implemented.

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?

How important are the aspects covered in this question?	Important
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EU funding promotes multidisciplinary, cross-border collaborations, collaborations between different countries and different institutions, and mobility of researchers.

It is important to recognize that international collaborations and researchers' mobility may help the cultural growth of the European Research Area. Unfortunately, there is a lack of a common European cultural identity, but the Europeanization of research can foster the sense of European identity among the ERA members, promote the dialogue between Science-Society, create a high interdisciplinary network of scientists (not only young but also experienced researchers), and finally set a social network for mobile scientists in Europe. Mobility can also be seen as a great opportunity for researchers to boost their careers.



Furthermore, EU funding offers the possibility of overcoming national mechanisms. Project evaluation done at European levels with reviewers assigned by the Commission allows bypassing local networks which may be unfavourable. More promotion for collaboration beyond European borders may help European science to reach higher levels. An important advantage we should highlight is that EU funding may support less developed countries.

While international collaborations are vital to science, it has been underlined by different scientists that very large consortia may not be as effective as one could expect. In fact, the actual synergy between groups in big consortia seems to be limited and financial management become more difficult under these circumstances. Thus, it may be true that small groups working on the same subject but following different research lines could facilitate finding solutions.

Promotion and the dissemination of project results at European level is a very positive outcome of being involved in a European project. Further promotion of the dissemination of projects at EU level should be encouraged.

The main tool used by the EU to stimulate research is the fact that the EU funding is greater than the national funding. However, the “European Research Competitiveness and Excellence” debate, probably trying to align the EU to the USA research has an important handicap, which is the lack of private investment. In the USA, there is unimaginable quantity of money coming from the private sector for supporting research (applied but also basic).

However, private economical resources have their own disadvantage, which is that research results are normally exploited at a private level without apparent social benefit (e.g. pharmaceuticals). Nevertheless, promoting economic co-participation of the private sector in the EU research funding at national level can result in a healthy competition between private and public sector and could lead to interesting and efficient collaborations. The EU should ensure that the benefit of such co-participation is both public and private. The EU should:

- promote industry-academia pathways by more intense collaboration, exchange of researchers and knowledge. Currently, the flow is mainly in one direction in most of the countries, being extremely difficult to access or go back to Academia after an employment period in Industry;
- facilitate joint protection of new, useful and original ideas and products;
- promote the filling of patents and commercialisation of new technologies, especially in the academic environment;
- lower taxation/allowing incentives for SMEs investments in R&D.



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?

How important are the aspects covered in this question?	Important
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According to most of the MCFA members, scientific collaborations within Europe are spontaneous. They usually arise from scientific networking and are very effective. Moreover, collaborations should always be open to all member countries.

On the other hand, one must recognize that Joint Programming Initiatives (JPI) contributes to boost the sharing of knowledge within-Europe. Another goal that can be reached by JPI is promoting industry-academia pathways by more intense pool of resources and collaboration, exchange of researchers and knowledge.

Moreover, JPI should promote the Europeanization of research through mobility which, as already said above, is vital for enhancing Europe's competitiveness and to create a European identity.

Nevertheless, one of the pitfalls of JTI is that they could lead to situations where the recruitment and selection activities are far from the founders. Non-transparent practices of allocating work packages to 'friends and trusted collaborators' can remain undetected.

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

How important are the aspects covered in this question?	Very important
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MCFA thinks that the two types of projects should be funded, as they have both advantages, and their own value and impact on society. They may be addressed in different calls, but the same overall budget should be dedicated to smaller and larger projects. Both are very important on two different time horizons: smaller ones have a more immediate impact on the market and the economy and could be more attractive for SMEs, but there cannot be real innovation without larger and strategic projects which need to be founded at an EU level.

Promoting smaller targeted projects lead to widen the variety of topics being funded. This is of key importance to foster good research and scientific innovation. Moreover, smaller projects may be more accessible to young researchers. Thus, funding of small projects will result in the promotion of young independent leaders who will boost their scientific career while developing important skills in management of time, people, finance and projects.

Large strategic projects are of key importance in those fields in which research actions demand collaborations between many countries and universities or when large sets of data have to be



collected and interpreted. Larger projects might better serve ITN: those provide the recipient of the scholarship with higher educational standards and networking possibilities. As the access of young researchers to large strategic projects is very difficult, maybe this type of projects should get a bonus if they include young scientists.

6. How could the Commission ensure the balance between an 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?

How important are the aspects covered in this question?	Of some importance
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- Reducing and simplifying bureaucracy as much as possible. The Commission should define a better unique set of rules taking into account the flexibility required by SMEs. A simplified application procedure would encourage SMEs’ participation in EU projects. In fact, the main challenge for SMEs is the time to prepare the application and not the money needed for it.
- Interviewing past beneficiaries in order to identify the most cumbersome rules and instruments according to their experiences.

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

How important are the aspects covered in this question?	Important
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Defining performance indicator is not an easy question, but the MCFA would like to pinpoint some critical points:

1. Different areas or research require different measures. It is quite impossible to compare the results of an environmental project to those of a sociology project. Moreover, it is crucial to recognise the differences between basic and applied research: they will require quite different indicators of success. Just for certain areas of research, a good indicator would be the application of results in the European market. Thus, defining global measures of success is not very helpful. Instead, it is possible to compare the results of projects under the environment theme, for example. The emphasis should be on smaller committees within sub-fields which are able to identify, support and evaluate proposals and funding needs.
2. Increasing the knowledge on unexploited fields of research. If a project brings new results or simply allows a deeper knowledge in a specific unexploited research field, this can be certainly considered a step towards innovation.



3. The evaluation of possible impact of results in the long term may be an indicator to be taken into account.

4. Number of publications is generally considered the best indicator to measure success. But, again, this may not apply to every case. Furthermore, using 'prestigious journals' as a metric for research quality may correspond to outsourcing the decision power to editors who might be following private interests rather than evaluating the scientific achievements. Therefore, with a public owned repository, a new less-biased index could be used to determine the real impact of a paper. As all publications get equivalent exposure at first, the most cited will be the one with the largest impact. In addition, the repository is public, so it will minimise the costs for the scientific community, who currently pays to publish in private journals three times (when undertaken, when published, and when read). Years ago journals with editorial boards were useful because a digest was required to fasten the process, but recently the situation has evolved thanks to the fast access to online databases.

Summing up, the MCFA thinks that defining metrics for good research might lead to exploitation of those metrics. The "game" could change to maximise that metric by doing the littlest work. This has already led to grade inflation and other metric inflation phenomenon in the past. By forcing these measures, EU may drive the researchers to produce the necessary outcomes to look good rather than to bring up real innovation and discovery.

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?

How important are the aspects covered in this question?	Important
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The MCFA has prepared a list of suggestions and recommendations regarding this question:

- The EU should probably invest more on publicity, since many countries/regions are poorly aware of EU funding initiatives.
- EU should not only participate in national funding money-wise but should also set certain deliverables at industrial, social, economic, and even cultural/ecologic levels. These deliverables would lead to the standardisation of the competitiveness of all EU countries. EU should also increase the local/regional financing with specific strategies depending on the targeted sectors (e.g. agro-tourism, eco-tourism, geo-tourism, cultural-tourism), as this can result in a positive socio-cultural grow of some countries.
- The FESR schema proved successful to complement funds for less developed regions of the EU



and should continue to exist. EU research and innovation funding can complement the regional and national funding by adding to them the European dimension, especially on mobility projects. But, the commission should avoid subsidising research in less developed regions.

- Less developed regions can be helped by implementing high standards, as the ones applied in highly developed regions.

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?

How important are the aspects covered in this question?	Very important
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- **Scope of the question:** The MCFA believes that this question should be addressed in specific ways for different panels and areas of research. For instance, mathematics, philosophy, and engineering may require a different balance between curiosity-driven and agenda-driven activities. In addition, the experience of researchers should also be taken into account to answer this question. For instance, working in agenda-driven projects could facilitate the training of early stage researchers.
- **Funding balance:** Currently, it seems that agenda-driven research is more easily funded than curiosity-driven research. Many people easily see the applicability (to society) of agenda-driven research, but most of the people disregard that serving the society is also the long-term goal of many curiosity-driven research works (fundamental research). The MCFA judges necessary to find a balance between both of the actions and activities. The Marie Curie Postdoctoral Fellowships (individual fellowships) are good examples where a balance of funds for curiosity and agenda-driven research has been achieved. These actions are seen as the only way of funding research out of the agenda. However, the results of such projects are hardly disseminated and stay hidden behind the "career development" objective of the Marie Curie actions. One problem associated to these fellowships, which is barely addressed, are the present cuts in research funding, which is causing the loss of a great human potential as researchers cannot find funding once they have completed a first or a second post-doc. These researchers live on national and regional funds that are being cut, and definitely the Ideas programme is not enough to counteract this trend.



- **Agenda making:** Even though agenda-driven activities may have a slightly higher priority over curiosity-driven research in some cases, it is unacceptable that politicians are the only ones who decide the agenda for research. Only politicians with a research background should take part in the decision-making process. In addition, the MCFA considers that participation of scientists on the definition of the agenda is extremely important, as they are more concerned by societal challenges than by politics.
- **Challenges:** One of the main challenges could be to create an environment where the scientists can deviate from their agenda-driven research during the projects to elaborate some basic science aspects in their own field. The EU research proposals already include a research impact statement that represents a percentage of the marks in the research proposal and therefore, the societal challenges are directly evaluated in the requirements for a successful grant.

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

How important are the aspects covered in this question?	Important
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The answer from the MCFA is a clear yes. A large share of MCFA members agree that a) bottom-up approaches are the most appropriate for real innovation in science and technology, and b) bottom-up activities should be given a larger share of attention than top-down, as they are the ones with a higher potential for groundbreaking advances. Members also believe that top-down approaches rarely work, especially in such a complex environment such as Europe.

In this context, some MCFA members also want to note that a virtue of European funding strategies is to compel local organizations to comply with equal rules across European countries. National funding agencies are supposed to take care of the bottom-up activities. Even though more room for bottom-up is sought, some members argue that both approaches are appropriate and relevant for innovation, and thus there should be room for both bottom-up and top-down activities with similar weights.

Finally, it is worth to note that at the top of the list of most over-subscribed calls in FP7 was the call(s) to the European Research Council for bottom-up research activities. It is obvious that the disproportionate number of researchers with new ideas with respect to the funding available for bottom-up research should be addressed.



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

How important are the aspects covered in this question?	Important
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The main concerns here are continuity of support and quality assurance monitoring. The MCFA proposes the following approaches, ordered by decreasing priority:

- By continuous funding of hypothesis-driven research based on excellence of scientists and research projects.
- By setting up appropriate quality assurance and monitoring mechanisms to make sure that funding is not wasted in supporting poor research.
- By ensuring a fair balance between alternative (and potentially contradictory) activities. This is especially relevant to avoid biased policy making and mainstream research and innovation.
- By promotion and dissemination of project results at European level.

Some members would like to note that EU is doing very well in choosing sectors to privilege, which yields an intrinsic benefit for the future. Also, as the first calls of ERC have shown that there is a demand of funds for basic and curiosity-driven research.

Finally, to stress the quality monitoring aspect, we are also concerned with the fact that some partners seem very good at securing funds, talking to the reviewers, etc. but actually never deliver anything. It is surprising that these partners continue to be funded. Mechanisms for assessing the quality and commitment of individual partners are needed, and conditions on the funding they receive should be defined.

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

How important are the aspects covered in this question?	Of some importance
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Current and past Marie Curie fellows are unfamiliar with the JRC to a large extent. We believe this is symptomatic of a worrying lack of awareness of the role and importance of the JRC. There is a large consensus within the MCFA on two ways of addressing this question:

- Better cooperation links with related institutions should be established.
- Awareness of the role and activities of the JRC within the ERA should be increased.



The JRC should have a central role in doing and coordinating research for policy-making. However, much research for policy-making is still funded through collaborative projects, preventing to fund projects that can lead to groundbreaking advances. This needs to be tackled in the future in order to maximise the impact of EC RD&I funding.

Finally, we must say that for some the role of the JRC is unclear and they argue that the university-based research or university research cooperation is more important. Some MCFA members are even concerned that the JRC has increasingly become irrelevant, maybe due to the fact that the JRC is only active in some disciplines.

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

How important are the aspects covered in this question?	Important
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Increasing the interest in science in the public opinion is obviously very important for all members in the association. However, the MCFA believes that this should be done outside the science-funding policy. More specifically, these activities directed to increase public awareness should not use EC research and innovation funding. Apart from this, the MCFA strongly believes that the involvement of scientists in activities directed to boost public awareness and to disseminate results/output of research activities should be fully recognized as a merit in a researcher CV.

The MCFA has compiled a list of ideas to attract the interest and involvement of citizens and civil society in EU research and innovation activities. The EU could:

- Create platforms that allow citizens to ask questions to scientists in charge. Give the opportunity to students and high school teachers to get more information on specific topics and contribute with ideas/suggestions. Interaction should be the basis for the future dissemination activities.
- Fund summer schools in interesting topics for students at different levels (primary school, high school, and bachelor) to attract them to pursue a scientific career, from which the EU could benefit in the future. This initiative could help to counteract the current shortage of young people willing to pursue technical careers.
- Create workshops and magazines directed to the general audience explaining the results obtained from research/innovation funded by EU along with its impact on society. Create a online database of research funded by EU (videos, results, summaries)
- Create specific programmes to promote activities with direct impact in citizens. Activities such as periodic magazines, press releases, radio and TV interviews, steady PR programmes, cooperation with primary and high schools, organised visits of students, etc. should be



encouraged.

- Create a online platform that allow citizens to be part of specific researches that uses data from large crowds or to encourage them to design experiments in certain fields
- Create a job “EU public relation officer” to deal with public dissemination of research results.

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?

How important are the aspects covered in this question?	Important
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Research should be done to improve the quality of life of the paying population. Economic impact should be seen as a mean (and not the only mean even if it is a very important one) to achieve this goal. There are solutions and improvements on societal issues that are of no use for commercial exploitation. However these innovations can be of importance to society and should be supported. It is certain that is hard for decision makers on research grants to bear in mind the impact of a research proposal on quality of life and not only on economics. It does not mean, however, that one should stop himself of trying to achieve such measurement. In fact one should use all available means to achieve this and it will be only natural that the market factor happens to represent a heavy weight. It just cannot be the only weight.

To help knowing the importance of a research proposal to the society, the decision maker can consult the society itself. Not all, but many research proposals can be made public in a way that allows this community to express itself over that proposal, even if the decision maker is not committed to accept the proposal that gets more attention. This process, having natural limitations also has important advantages: the involvement from the community, their comments and their follow up brings a bigger audience closer to the responsible scientist and to the decision making process.

It is generally accepted by the scientific community that the current process of rating a scientist responsible for a certain proposal is highly biased and needs to be reformulated urgently. Not only the quality of research has a low correlation with number of publications, even if it is published in journals of higher prestige, it also forces the scientist to spend a bigger amount of time preparing articles of microscopic interest. Although these kinds of articles are not generally cited by others



they are evaluated the same way by the decision maker. Also, some important articles might only be published on specific journals that are rated lower by the decision maker penalizing the scientist working on areas that the most important journals do not cover. The number of citations might be a better judging factor to evaluate the quality of an article but, regardless of which method is applied, the EU needs to establish a platform where applying researchers are followed during their career. In this platform the scientist and his or her relationship with the scientific community can be evaluated in a more controlled way and by more relevant factors.

These two components, involvement of the community and a better judgment over quality of research, can certainly help the EU support research that has a greater impact on the quality of life of its citizens. Research oriented to improve the quality of life includes all important fields may they be technological or not.

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?

How important are the aspects covered in this question?	Of some importance
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There are two ways where EU research can support the industry. One by allowing the exploitation of research results therefore creating innovation, the other allowing the industry to participate in research programmes where it can acquire crucial knowledge even if not producing innovation immediately. In the latter it makes more sense that the priority falls on SME's as larger companies will have their own means to achieve this. In the former, it should be open to all kinds of companies bearing in mind that this exploitation will be a source of income to the authors of the research (e.g. patents, know how transfer). There will still be situations where the cooperation with large companies is important as they are also on the forefront on certain fields and can help academic research. Accepting this exception, the SME's should have priority. In some cases, if there are not SME's involved and if the research results show enough commercial potential, the creation of the company should be stimulated. An EU platform that has inside information about researchers' intentions, about periodic research orientation and results and about market information has enough tools to stimulate and quickly put the resources together for a spin off. Business proposals can be set up using all this information from this EU platform that can catch the interest of investors and scientists that normally do not have access to a complete set of data that allows them to think on market opportunities. One should not expect that just the announcement of research results means that they will be commercially exploited. This exploitation should and can be stimulated. In other cases, the business set up should start before research results are even announced as speed is normally key in market penetration. Another possibility is to allow grants for the realization of start-



up or spin-off companies that are open to individual scientists working either in the public or in the public sectors or to consortia of scientists

In all public-private partnerships transparency is of the utmost importance.

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?

How important are the aspects covered in this question?	Important
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The EU should favour the interaction of the academic research and the private companies (in particular the SMEs, that are often not properly taken into account) to facilitate public research and the transfer of basic innovation into industrial exploitation. To do this through the creation of academic/industrial platforms can be a possible way, allowing SME to pose problems that can be of interest to academics and allow academics to hire services from participating companies. The communication among both “worlds” should be easier to do and more confidently.

European funding should specifically target very small and SMEs as generators of competitive economic benefits. Short fund programmes can be very helpful to start to work on this way, because SME’s have fewer free work capacities as big industries. The application should be easy to fulfil, the necessity of more than one country involved should not be a requirement.

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?

How important are the aspects covered in this question?	Important
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SMEs can be gained for European projects if the required applying time and work is kept minimal. Therefore a simplification of application procedures on existing calls and actions should be done. It is also important to get a system that allows a short response time after application, if the project is accepted (less than 6 months) Fast track intellectual property right procedures regarding EU research and Innovation can motivate SMEs to participate. A broaden support across the entire innovation cycle will be necessary to get transparency in the innovation that is already taking place.



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

How important are the aspects covered in this question?	Important
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Expanding the area of investment for the EU financial instrument is an important topic. Economical reasons would argue in favour of focusing financial support towards economically challenged countries to counteract local crises. However while the local environment stimulates progress, the researcher himself drives innovation and progress, and therefore we support a view where ideas are primarily funded. Country-based crises should have little weight in the overall decision to fund research projects. Having an objective to stimulate partnership with the private sector in order to spur commercialization of research results surely would promote research influence into EU knowledge-based economy. This will only be profitable if the freedom inherent to academic research is not compromised. Commercialization should be a potential added-value, not an aim, and should be presented as such in future grant application procedure should the EU decide it is appropriate.

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?

How important are the aspects covered in this question?	Of some importance
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We find new approaches of support interesting. New approaches should involve the public and the end users at an earlier stage and engage them more closely in the innovation process. Where ever possible, public procurement rules in place should be modified in order to promote innovation.

A good example is the research on electro-mobility. The demand on electro cars is there, the prices still being too high. The automobile industry has avoided for a long time to research in this area. Storage of electricity is one of the highest challenges that we have in the near future.

It is recognized that the use of prizes can be an incentive for innovators to excel, and must be focussed on the demand rather than the prize.

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?

How important are the aspects covered in this question?	Important
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A novel scheme that only allows public funded research to be submitted for intellectual property



rights protection could be envisaged, without the costly procedure of involving patent agents and lawyers. The submitted documents could be a journal manuscript or other documents. The entire description is immediately disclosed, for instance as with arXiv servers. The right to apply for a patent based solely on the disclosed documents expires within 2-5 years after disclosure.

More education of public researchers regarding the potential application / commercialisation of their results and the IP rules that arise is necessary, either during their formal education or through workshops. Another way is to form public-private research partnerships where IP rules are effectively managed. It is necessary to start dialogues with patenting offices earlier in the research and innovation cycle in order to improve the protection versus access to scientific results.

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?

How important are the aspects covered in this question?	Very important
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This is a question of high importance for the MCFA as an organisation and in particular for mobile researchers in early and slightly advanced stages of their careers. The MCFA is aware that increasing the amount of money spent for research cannot be the only mean to achieve excellence. The MCFA has therefore compiled and ranked a number of ideas and suggestions to strengthen the role of the ERC by strengthening perspectives, opportunities and roles of (young) researchers:

- Create a new starting grant for really young researcher (until 8 years after the PhD) together with a consolidating grant aimed at researchers from 8 to 12 years after their PhD;
- Create grants dedicated to small research institutions, based on excellent research;
- Offer more transparency in the criteria used to qualify a researcher and his project as "best of the best";
- Increase the resources of ERC grants at the expense of network programmes;
- Introduce mobility programmes that incorporate a visit to a non-European country and a period within Europe afterwards to allow transfer of knowledge and to prevent brain-drain;
- Promote industry-academia pathways by more intense collaboration, exchange of researchers



and knowledge;

- Allow fairer competition among young researchers by creating an ERC Award grant for already well established researchers who in turn will not be eligible to compete in the other categories;
- Fund entry positions as (junior) professor (in addition to PhD and postdoc programmes).
- Introduce smaller single PI grants (up to 3 years, perhaps renewable after evaluation) to support excellent projects run by PIs with very good (but not necessarily excellent) CVs. It should be kept in mind that lack of funding leads to lack of scientific results, particularly in countries with limited national funding. These grants will enable more scientists with excellent ideas to perform excellent research, thus further improving their CVs. There is currently no instrument in EU funding promoting single PI research, except the ERC Ideas grants which are however designed for scientists with an exceptional CV. These are just a small fraction of really good European researchers, who could excel given enough funding.

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

How important are the aspects covered in this question?	Important
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The MCFA believes that there is a need of clearly defining the meaning of “excellence”, which at the same time requires defining criteria for achieving excellence at a European level. These criteria need to be measurable, transparent, achievable, and comparable among the European countries (i.e. excellence in country A should mean the same as in country B). As a consequence, this also requires that all member states are transparently monitored among these criteria and that they favour researchers' mobility. However, the MCFA is not fully satisfied with the increase of control and administration. MCFA researchers have plenty of ideas to improve research excellence, but the main requirement to achieve this is increase the flexibility of the grants.

In order bring “less developed” countries over certain (to be defined) threshold of excellence, the MCFA considers the introduction of an ERC grant programme specifically devoted to these countries as important. This initiative could be supported by promoting the mentorship of universities with good track records for the universities in “less developed” countries in order to optimise and improve the research output of mentee universities. However, doing research in less developed countries could be risky for the career development of a researcher, as pointed out by one of the MCFA members - “The danger of grants devoted to less favoured/competitive countries is that the fellow is forced to work in a sub-optimal environment. Working in a less-favoured country where the research institutes may face financial difficulties (e.g. delays or absence of promised payments from the national funding organizations) severely inhibited research. Block in ordering supplies and non-execution of maintenance on equipment are other consequences of such financial



shortage”.

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

How important are the aspects covered in this question?	Important
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The members of the MCFA agreed that the following propositions could effectively strengthen the Marie Curie Actions in promoting researcher mobility and developing attractive careers:

- **Marie Curie Tenure Track (MCTT)**: The introduction of MCTT would mean a 5 years contract with additional 100k Euros (60k in the first year and 10k in the remaining four years). To obtain a MCTT, the hosting institution must sign a contract that it will hire permanently the researcher if an EU committee (not a local committee) gives a favourable feedback on the candidate at the end of the fourth year.
- **Better cater for stability and long-term perspectives of the researchers**
- **Highlight the excellence/competencies of the Marie Curie Fellows** not only of the MC actions. By promoting not only the mobility but highlight the excellence/competencies of the Marie Curie Fellows who underwent this mobility period, so that when they come back to their country of origin they have some recognition as not only mobile researchers but "good" researchers.
- **Marie Curie Endowed Professorship or Chair**: replacing the current MC Reintegration grants with more effective solutions, like Marie Curie Endowed Professorship or Chair.
- **Stays abroad must be recognized as a real asset**: other means to develop attractive careers should be proposed to make sure that a stay abroad really is an asset in an European academic career.
- **Integration phase of the fellow in the host institution**: The host institution should sign a clear agreement that there will be an integration phase of the fellow in the host institution where the fellow will receive help on administrative issues and on logistical issues so that her/his project really starts in less than 3 months.
- **Better supervision and training of the PhD candidates**: should receive an appropriate training and should get supervision by minimum 2 experienced researchers. A moral agreement should be sign at the beginning of the training period.



- **More freedom and involvement in the project coordination.** Actually, a MC researcher does not appear as project coordinator and cannot decide the direction her/his project takes without the agreement of the coordinator.
- **Simpler and fairer entry mechanisms to academic/research institutions:** more efforts should be made to ensure that academic/research institutions have simpler and fairer entry mechanisms, based on merits, not on complicated national exams or based on blood-related connections.
- **Marie Curie Fellow Alumni:** form a stronger fellow’s spirit similar to EMBO fellows. More networking of MC fellows to discuss science & career (instead of policies). Implement this as continuous instrument for all former and present MC fellows.
- **Implement some of the qualities of the Marie Curie Actions at the national level:** the focus should be on porting some of the qualities of these Actions on national sponsored programmes, through equivalent Reintegration Grants and the introduction of family allowance as well as maternity leave.
- **Stopping the brain-drain by implementing a meritocracy:** considering the current European research landscape, Marie Curie Actions are very helpful in developing attractive careers, but rather in the USA than in Europe, at least when talking about careers in Academia. It seems to me that the academic setting in Europe largely lacks meritocracy. Things like personal connections, obedience, nepotism, etc., are way more important than scientific merit, particularly in the East European countries. Language barriers and various forms of chauvinism narrow down options even more. In these conditions, a stay abroad is rather detrimental than an asset for pursuing a scientific career, as pointed out in the MCFA Position paper. Therefore, the USA look more attractive in terms of opportunities to someone willing to achieve excellence in research.

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

How important are the aspects covered in this question?	Very important
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The members of the MCFA have agreed that the following propositions could effectively strengthen the role of women in science and innovation:

- **Day care facilities:** support the implementation of day care facilities in every host institution.
- **Dual career opportunities:** this must be really improved.
- **Better schooling system services:** Support a more homogeneous (and affordable) schooling system for researchers' children across Europe. US scientists take great care of this. In EU



institutions, this is not even talked about.

- **Special grants only for women scientists:** create fellowships only for women in the fields of research where they are not enough represented. Allow funding for maternity leave and extension of the project to cover the months of absence.
- **Quota in EU teams:** Introduce a quota of women in each research team funded by an EU grant. The introduction of "50/50" rule would be fine, and maybe the only way, since the training of the researcher is a very long process.
- **Gender equality scores:** introduce moderate quotas and gender equality scores for institutions. Reward institutions with the best practices.
- **Better support for families:** Provide support for families that move from one country to another, especially related to housing, health-care, education and insurances. Information on these issues is usually difficult to get and there is not a single agency one can go and ask for. This would improve the possibility of moving families across Europe.
- **Visible role models:** women are under-represented in research teams; the present really good women scientists must get visibility to encourage women to follow their path. Dedicated grants are a first good step, but in the long run the merit should be the unique criteria to be taken into account. That's why to reach a gender-balanced ERA we need more women to engage in a research career and be encouraged by special measures to pursue their career to a high level of excellence.
- **Promote no-standard careers:** break the archaic vision of the successful career path. No limits in age and time in the different applications should be input.

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

How important are the aspects covered in this question?	Important
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Research infrastructures should be supported by special grants to renovate the research infrastructures of the institutions that do have research merit but no money to acquire good instruments or to offer an attractive working environment for researchers. Grants to renovate labs and maintain instruments are important.

This could be done by promoting the exchange/donation of instruments used for a MC project between research teams or less favored country institutions. At some research institutes equipment is acquired and then left unused when the (senior) researcher retires or changes his/her job. To



evaluate the use of this equipment after the fellowships can also increase the use afterwards (as a requirement in the grant). The Capacities programme has a dedicated instrument for research infrastructures, and structural and cohesion funds could be used for these purposes in less favored countries. It is not efficient to spend large quantities of money in instruments that are just used for a single project.

Maybe the EU could provide a standard operation procedure for EU e-infrastructures and continuous evaluation schemes for such e-infrastructures to guarantee their high quality. In particular this could mean creation of the e-databases (not conceptual) on research results, software and equipments available to the MC fellows. Publication of the MC research results in these open databases.

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?

How important are the aspects covered in this question?	Of some importance
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International cooperation with non-EU countries should be supported for instance in terms of priority areas of strategic interest, instruments, reciprocity (including on IPR aspects) or cooperation with Member States, by defining clear rules for the implementation of shared Intellectual Property Rights (IPR) between EU and non-EU countries. This could be done by encouraging the participation of international partners in EU projects with a small budget.

Cooperation should be favoured based on the development of real scientific collaborations

Many countries in Europe are just outside the EC. However, these countries share international excellence in research in many disciplines (e.g. Russia and Ukraine), have research polygons in domains, but have problems associated with scientific instrumentation. Direct inclusion of the scientists from these countries in the strategic, especially long-term projects sponsored by the EU will obviously benefit the EU.

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?

How important are the aspects covered in this question?	Very Important
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The members of the MCFA have identified the following potential key issues and obstacles:



- **Better implementation of the Scientific Visa:** EU should turn the scientific visa a reality not only a good idea.
- **Unique taxation rules for MC fellows:** the EU should try to implement unique taxation rules for MC fellows.
- **Better information on taxation and pension rights:** Current web portals and national offices for mobile researchers do not know enough (actually very little about situations) on how the MC fellowships have to be taxed at the national level.
- **Better distribution of the project budget:** the mechanisms involved in the distribution of the project budget must be simplified. For example, for the projects where there is an outgoing phase, don't send everything to the host institute, but send the money that corresponds to the outgoing phase to the outgoing institute. Otherwise the host institution tends to keep the money for its phase of the project or takes ages to decide what to give to the outgoing institution.
- **Better recognition of EU diplomas:** EU diplomas should be automatically recognized in every member state, without any delay and without any exceptions.
- **Creation of a “special fund” for MC Fellows:** A "special fund" should be created under direct EU legislation to allocate salaries, pensions and other benefits of the MC fellow. Only this will allow mobile international fellows, on temporal positions, to escape from the domestic bureaucracy of the host/region/national level: such measure will increase the confidence of the fellows and local MC project administration will not be seen as a barrier.
- **EU wide pension scheme for mobile researchers:** There should be an EU wide pension scheme for researchers who are mobile. Also make easier the management of retirement pension for career with time spend abroad
- **Creation of a central agency for EU mobile researchers:** this agency will handle the following, visas, salaries, taxation, health and pensions of the EU mobile researchers.
- **Transparency on the real monthly salary:** often MC fellows get disappointed when they receive their first salary, as depending on the taxation rules of the country they moved in, their salary can be reduced to almost 50%. The host institution must provide a realistic estimation of the net monthly salary the fellow will receive. And this must be done before the signature of the contract.



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 members of the MCFA believe that the following ideas are of importance:

- **More effective network structure:** EU research and innovation funding should try to develop more effective network structure for researcher/researcher communication and researcher/research units, researcher/granting bodies.
- **Simplify EU documents:** Green paper is not straightforward to read. It is as complicated as the other EU documents to read. There is a real need to simplify all this. Make EU documentation more comprehensible and much shorter.
- **Simplify the administrative work:** The administration should understand they are not an end but a mean to make more efficient research and should therefore make the life of the researcher easier: pre fill all the forms whenever possible, adapt its timeline to research timeline (i.e. speed up the fund transfer etc...).
- **New edition mechanisms / EU public repository:** Since the goal of the research is to increase general knowledge, there should be also an output provided by the EU, which should progressively disregard so called 'prestigious' journals with an editorial board. Using 'prestigious journals' as a metric for research quality basically equals outsourcing the decisional power to editors with private interests in mind, not the improvement of science, since editors will never favour anything but sure bets. Therefore with a public owned repository, a new index with lesser bias could be used to determine the real impact of the paper: if all publications get equivalent exposure at first (unlike now where the same paper has more chances to be cited when published in Science than in Neuroreport), the most cited will be the one with the largest impact, and since the repository is public, it will cost less to the community : right now, private journals get paid by the authors to publish the paper, by the reader to read the paper, without paying for the research or the peer reviewing. This insane makes the scientific community pay for the research 3 times (when undertaken, when published, and when read) without any added value from the journal. While journals with editorial boards were useful when a digest needed to be made because of the lack of fast databases, the situation has evolved and this system has to disappear, as it is more of a hindrance than a tool for research.
- **More Feedback from EU experts on the progresses of the project:** Researcher should not only be given a grant, but the progresses should be much more followed.



- **More flexibility in the use of the project funds:** for example when there is extra money left, it should be possible to give some to a partner of the EU project which involvement contributes really in the achievement of the goals of the project. This will help support the activities of the third partner which joined the project after the grant agreement. These supported activities will be, of course, exclusively related to the EU project.
- **Fair treatment for EU mobile researchers:** ensure that mobile researchers are treated fairly, since they start the game in the role of outsiders. The envy from colleagues due to the high EU stipend received by the EU mobile researchers has the effect of worsening human relationships. Often they just remain the “rich” outsider in the host institution.
- **Development of a common strategy in the research and innovation:** A clear problem of Europe, not only for research and innovation, is the fact that power is still in the hands of national governments. This fact prevents European integration and is the biggest obstacle for the future of Europe. In this context, the development of a common strategy in the research and innovation is important as it is the path for developing common strategies on other fundamental issues.