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European Commission Green Paper
**From Challenges to Opportunities: Towards a Common Strategic
Framework for EU Research and Innovation Funding**
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A response from the Academia Europaea

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Academia Europaea Principal Recommendations

The Academia Europaea welcomes the concept of 'Common Strategic Frameworks for EU Research and Innovation Funding' (CSF). We would however encourage the Commission to go even further, by amalgamating part (at least 20%) of the cohesion policy instrument into the CSF. This would, in our view, strengthen and consolidate the Research, Education and Innovation European Space, and create a balanced and integrated portfolio, devoid of the compartmentalisation currently seen, but with the following aspects taken into account:

1. Excellence must always be a priority. Equally important, is a recognition and unequivocal commitment from member states to the principle of excellence. Appropriate benchmarking and applicable and relevant statistical measures (indicators) should be adopted and receive appropriate priority.
2. Excellence can only be guaranteed if advice and assessment comes from recognised authorities not only in their respective fields of interest, but also having well documented experience in the policy area, especially for the highest level advisory bodies to the European Commission.
3. The 'First pillar' of the new CSF should address 'Grand Challenges', defined through and with a larger involvement of science and business community, so as to avoid bias in favour of sectoral and member states interests.
4. "Great Ideas, moving frontiers", should become a flagship second pillar of the future Framework Programme, with quality and originality being the guiding criteria, but extended to team work and to networking.
5. The 'Third pillar' of a future Framework Programme, should be assistance to the member states in stimulating joint undertakings (goal-oriented networking, joint research infrastructure and dedicated mobility actions).
6. Future framework programmes should play much more significant roles in opening the European Research Area to the wider world.
7. Greater flexibility and 'responsivity' of FP are needed to capture changing demands.
8. To stimulate entrepreneurship and creativity through innovation, a European High Risk Innovation Council should be created by the consolidation of most competitive elements of FP programs that target individuals, small groups and high-risk innovative SMEs into one flagship programme. This would create a counterpart to the ERC, but in pre-normative and applied research targeted at products and technologies that could revolutionise future European industry.
9. The prestigious award system at the EU level should be restored and developed.
10. To respond to the unpredictable and unforeseen: a vigorous and broadly based scholarship capacity across Europe must be maintained, with strong EU budget support.
11. Research in the arts and the humanities is as essential for the future cultural and technological development of Europe and its citizens, as that of the sciences and should find a clear and strong place in the CSF.
12. A dedicated subprogram should be created, to preserve unique faculties and subject capacities that safeguard the continuity and unique character of the European knowledge and scholarly tradition.

The CSF concept and EUROPE 2020 strategy

The Academia Europaea very much welcome the concept of Common Strategic Frameworks (CSF) for EU Research and Innovation Funding published by the European Commission¹. The document, being the first step towards construction of the future CSF, is in our opinion a constructive proposal, that would help to deliver some key goals of the Europe 2020 strategy² published last year, and to which our Academy responded shortly after its release.³

Emphasis on 'smart growth', based on knowledge and innovation and specific endorsement of the notion of strengthening of research and education, provide a promising frame for the future development and continuing prosperity of the European Community of member countries. We strongly endorse the direction that this strategic thinking is taking and it is our opinion that in these very difficult economic times, it is essential not to retrench, but to look ahead of the immediate and to assess what needs to be done to position the Union at the forefront of future global developments.

In our response to the EUROPE 2020 strategy document, we already emphasised the need to mobilise all of the intellectual and material resources of the 27 member states, plus enhance the cooperation with and engagement of, the wider 'neighbourhood'. Hence, we wish to stress the need for a balanced approach, where knowledge and innovation are parts of an overall approach that sees investment in 'scholarship' and education as much a cultural (or societal) good as an economic good.

The Academia Europaea sees that a genuine and sustainable 'knowledge and innovation economy' must be supported by practical commitments. **A clear and realistic proportion of the EU budget must be earmarked to support Research, Education and Innovation (an REI European Space) through a balanced and integrated portfolio free of unhelpful compartmentalisation.** It is with great satisfaction, that we observe the practical realisation of this approach through the introduction of the Common Strategic Framework, which intends to take under one, hopefully coherent and operational umbrella, several strands of the EU budget that up to now have been treated separately.

We encourage the Commission to go even further, and amalgamate a part of the cohesion policy instrument into the CSF. This will necessitate detailed negotiations with the Member States, especially those being main beneficiaries of the current cohesion policy, but we feel that there is no better way to minimise existing differences in wealth and make best use of talents across Europe, than through the long-term investment into education, research and innovation. This can be achieved by a dedicated use of at least 20% of the Structural Funds in building modern infrastructure and in providing high quality training in the regions of Europe. The same applies to pro-innovative business and industry (especially SMEs) that are linked to regional specialisations and capture local human

¹ **From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation Funding**, COM(2011) 48, 4 02 2011

² **EUROPE 2020. A strategy for smart, sustainable and inclusive growth** COM(2010) 2020, 3.3.2010

³ **"Europe 2020, a strategy for smart, sustainable and inclusive growth", A Commentary from the Academia Europaea.** May 2010, <http://www.acadeuro.org/index.php?id=174>

resources. In this context, we reiterate our position on this issue set out in our response to the EUROPE 2020 strategy³

*“Europe is right to be concerned with the continuing outflow of young talented Europeans overseas. We cannot, however ignore similar process that are occurring within Europe from the less infrastructure developed but intellectually resourceful regions to the better resourced regions. The resulting divide has the potential to be a major obstacle in solving serious economic problems of Europe in some regions and de facto create tensions within the EU-27. The Academia Europaea would not wish to see any future research funding programmes resources diverted away from research support towards re-dress of interregional and regional structural and cohesion issues. **These should constitute a significant portion of the structural funds system^{4,5,6}, and both Framework Program and Structural Funds should form a coherent system of building knowledge-intensive Europe.** “*

From Framework Programme to the CSF

Over the years the ‘Framework Programme’ has become one of the largest budgetary resources in Europe committed to funding research, and especially its co-operation component. We consider that the evolution of its instruments has not followed its growth and potential to deliver a decisive leadership and enabling role. A tendency towards conservative thinking, for compromise and political correctness and a desire for clerically-risk-free perfection has perhaps dominated over true excellence, risky, and far-reaching goals. In too many cases, the result has been mediocre outcomes and a lack of recognition of the Framework Program among Europeans, especially by the young. We see the key systemic concerns of the past Framework Programs in summary as:

- A lack of a convincing ‘broad vision’ and goals (the needs of the ERA development is much too vague and too ill defined indirect target)
- Ambitions have not matched financial scale, especially in the last decade
- A low and in some areas a decreasing participation of the EU industry (<20%)
- A lack of instruments addressing the ‘two-speed Europe’ phenomenon
- An unsatisfactory mobilisation of member states resources
- Lack of real coherence with other Actions, especially with the innovation programmes, with education and with cohesion.

We are however pleased to acknowledge the several brave and highly successful initiatives. Firstly, for the academic community, which is the natural environment of Academia Europaea: the creation and first outcomes of the European Research Council is the most prominent signal that dreams may become reality and can be successfully realised under the umbrella of the European Commission;

Secondly, another clear success is the Marie-Curie fellowship scheme. Both of these are successes of the DG Research. A similar high mark can be given to the Future Emerging

⁴ **Creating an Innovative Europe**, Expert Group on RTD chaired by Mr Esko Aho, EUR 2205, January 2006

⁵ **Energising Europe’s Knowledge Triangle of Research, Education and Innovation through the Structural Funds**. EURAB Final Report, DG-Research: Brussels April 2007

⁶ **Preparing Europe for a New Renaissance A Strategic View of the European Research Area**; ERAB first annual report, DG-Research: Brussels 2009

Technology (FET) set of programmes, created and successfully run by the DG INFSO. The first calls opening the Framework Programmes to social sciences and the humanities must also be noted with satisfaction but tempered with the hope and our strong recommendation to see a much more prominent and significant placement of these areas in the upcoming CSF.

The networking initiatives, especially some of the ERA-NETs and the beginning of the Joint Programming are we feel, good signals that there is serious progress in building genuine coherence between the Member States enabled with assistance of the European Commission.

At the same time and somewhat worrying to the Academia Europaea, was the closure and lack of the follow-up of the successful and acclaimed NEST programme, and in our opinion. Also a lack of real advance in the ESFRI initiative. We wait for the assessment of the European Institute of Innovation and technology (the EIT). We do remain concerned that this particular initiative has evolved from the initial concept of reasonably well defined academic institution (the "European MIT") to become more a network dominated by academic institutions of the EU-15. We feel that this flows very much against the initial tide as expressed in the original declarations.

The Academia Europaea sees that by taking together the new financial perspective and the intended scale of the CSF; the new leadership backing truly innovative and simplified solutions and at least expressing a verbal determination to harmonise various research, education and innovation-related portions of the EU budget into one powerful EU instrument and having the ambition to stimulate and enable implementation of ambitious goals of the knowledge-based Europe – all these together create in our mind, great hopes worth the support and active involvement of the learned community of Europe.

The Framework Programme is critical to all aspects of the realisation of the Europe 2020 strategy. We feel that at this time, a change of focus of FP may allow it to play much more significant role than currently is the case. We therefore suggest consideration of a construction of future Framework Programmes upon these three pillars:

- I. A smaller number of drivers, expressed as significant European **"Grand Challenges"**, that we and the rest of the world face,*
- II. **"Challenging Ideas - Moving Frontiers"** leading blue skies research with the European Research Council being responsible for its implementation,*
- III. **Assistance to the member states in stimulating joint undertakings** via: clear, goal-oriented networking, enabling more joint research infrastructure by appropriate financial and personnel support and finally by dedicated mobility actions.*

The relative financial scale of these three pillars should be about equal. We recognise that there remain a number of major obstacles to international and inter-institutional collaboration that still await resolution and we acknowledge that these are not necessarily all of a financial character, but rather regulatory, particularly affecting cross border mobility and human resource capacity.

Detailed recommendations for the future CSF

Below we list some concrete comments to the document and offer suggestions for the future approach to financing of a research-based, innovative Europe.

1. **Excellence must always be a priority. However**, we recognise that this can only be a part of the total message. Equally as important, is a recognition and a firm commitment from member states to ensuring a sustainable, viable and high quality research and education base. We feel that the education and research base should reflect the needs of their societies and inter alia, should be one that is responsive and sympathetic to industrial needs, but which does not exclude or destroy those areas of 'scholarship' which cannot immediately demonstrate in a 'political context' an immediate short-term technological or economic benefit. Especially critical we feel, is the ongoing need to continue to prioritise significant investment in the development of science education capacity - at all levels. **Appropriate benchmarking and applicable and relevant statistical measures (indicators) should receive some priority, as a part of the strategic process.** The Academia Europaea would encourage the Commission to create the best conditions for attaining this goal, in a timely fashion.
2. We see that the best guarantee to delivery of excellence, objectivity, fairness and accountability of the CSF, is to equip it with the **advice and assessment from recognised authorities not only with respect to their respective fields of interest, but also authorities having well documented experience in the science and research policy area, especially for the highest level advisory bodies to the European Commission.** Too often in the past, the specific program committees have been selected on the basis of nationalistic and political standpoints and sometimes political correctness arguments (geography, gender but also under the political influence). One of few examples of the contrary was the selection of the Council and Panel Chairpersons and Panel Members of the ERC. Our Academy stands ready to participate in providing the Commission with the highest standards and independence in these endeavours, especially in programmes with the dominant academic components.
3. We believe that the **Community R&D budget must continue to develop as a major European resource that addresses in a comprehensive way, a small targeted number of European level "Grand Challenges" that we and the rest of the world faces.**^{7,8} The identification and prioritisation of such "challenges" is an immense task carrying enormous responsibility, and even some risk. To achieve agreement therefore, Member States and the Institutions must cooperate openly to avoid bias in favour of narrow sectoral interests. We do observe with great concern that the process of identification of the subjects of Joint Programming initiatives, has been thus far dominated by the governmental services and functionaries. This needs to change. To achieve the best going forwards, the process should also include academic and industrial authorities especially at the implementation level. We would like to recall some good regional practices, especially those of the Nordic European countries realising the so called Top Research Initiative (TRI) under the umbrella of

⁷ **Challenging Europe's Research: Rationales for the European Research Area**, ERA Expert Group, EUR 23326, DG-Research: Brussels, 2008

⁸ **Europe must focus on the grand challenges of our time**, Lund, July 2009, <http://www.vr.se/lunddeclaration>

the Nordic Council. Also, an Interesting path to attack the “Grand Challenges” issue was recently offered by the DG INFSO in their FET-flagship initiative, where the selection process has had a concourse character with a stringent procedure of the choice of the final flagships to be co-financed by the European Commission.

4. The Academia Europaea would propose and support **“Great Ideas, Moving Frontiers”** as a flagship second pillar of the future CSF. We think that this approach would satisfy the need for a ‘bottom-up’ framework that enables community needs driven science, with a clear quality and originality focus. **The European Research Council**, which is currently administering a 1bn-euro yearly budget has proved to be a sound platform. However, we feel that the initial emphasis on an elitist and individual system, should be broadened into the future; **to include excellent transdisciplinary research funded collaborations and networks more in the spirit of the abandoned NEST programme.** It is extremely difficult, if not impossible, to predict the most fruitful future research fields and history demonstrates that the most significant discoveries with the greatest long term impact on society, both in terms of economy and human well being, have more often than not, come from serendipitous, frontier ‘blue skies’ research.
5. The Academia Europaea feels that the third and final pillar of a future CSF, should be **assistance to the member states in stimulating joint undertakings, via clear, goal-oriented networking (akin to the ERA-NET programmes), enabling more joint research infrastructure collaborations by appropriate financial and personnel support and incorporating dedicated mobility actions.** 21st Century Science is increasingly a collaborative effort,⁹ sometimes in giant and very distributed networks, but more often, in much smaller groupings created to solve a particular problem. There are however, still a number of major obstacles for international and inter-institutional collaboration which have not yet been resolved, despite the fact that they have been clearly enunciated for at least a decade. These are not necessarily of a financial character, but rather regulatory, for example like the lack of the portability of social rights, which impedes the longer-term mobility of researchers.
6. Europe’s gross domestic expenditure on R&D (GERD) is one third of the world research total¹⁰. The Framework Programmes have over the past decades, been highly successful in creating a dynamic international community of scholars, undertaking value added research and networking that is highly transdisciplinary, collaborative and productive - extending well beyond the EU-27. These structural developments must continue to be developed to ensure that a future CSF can deliver the highest quality research, that is ‘fit for purpose’. It is our view, that **future CSF should play much more significant role in opening the European Research Area to the world** than has been the case with the FPs to date.
7. The Academia Europaea would like to strongly encourage all parties involved, to build into any future CSF a **greater flexibility and time responsivity.** The current Framework programme has seen some beneficial innovation with regard to

⁹ **Knowledge, networks and nations**, policy report prepared by the Royal Society, UK, 28 03 2011, <http://royalsociety.org/policy/reports/knowledge-networks-nations/>

¹⁰ **A more research-intensive and integrated European Research Area, Science, Technology and Competitiveness key figures report 2008/2009**, EUR 23608 EN, DG-Research: Brussels, 2008

administration and financial rules.¹¹ However, we feel that these are nowhere near substantial enough. Where it exists, the **good practices of the member states should be built into the CSF procedures as much, as possible.**

8. **Increase of innovativeness and entrepreneurship** are well taken targets for the future European strategy. Quite a substantial part of this theme is beyond our competence. However, we would like to reiterate and reinforce the view that only through excellence in “basic” and “applied” research and education can success be guaranteed into the longer term. We wish in this context to suggest the **grouping together of most competitive FP programmes that address either individuals or small groups and high-risk innovative SMEs, combining these into one flagship program of the CSF.** This instrument would then become the counterpoint partner to the ERC, but in the pre-normative and applied research arena, targeted at products and technologies that could revolutionise future European industry. Establishment of an **European High Risk Innovation Council** could likely do the same for the European applied research scene, as the ERC has done for the more curiosity driven European research community. The FET program, run for quite a time by the DG INFSO, could be very good model for such an initiative. Any such development would need a comparable treatment as the ERC in order to have a similar effect.

9. The Academia Europaea noted with great regret the **disappearance of the achievement award system at the EU level** and the closure of the “Descartes award” scheme. We understand the argument that the award(s) would be better made by independent prestigious bodies outside of the Commission, and we would offer our Academy as host for such a scheme on behalf of the European Commission and its future Framework programmes. The many examples of most prestigious awards (like Nobel Prize, the Millennium Prize and a number of highly regarded topical prizes) demonstrate that they do attract public attention and serve well not only to identify “giants of science”, but also show the community at large the importance of excellence benefiting our civilisation and to identify greatest achievements of everlasting value to the mankind. If done in conjunction with the CSF a renewal of European award(s) would also reinforce the role of the European Community effort to develop and to support European Research, Education and Innovation Space.

10. Education and particularly higher-education, is vital to assuring the long-term goals outlined in the “Europe 2020 strategy” can be delivered. **We do not however believe that it is the role of the Universities to compensate for the relative weakness of industrially driven R&D in Europe.** The Universities and other public research bodies have to maintain their focus on the dual roles of education and delivering high quality science and scholarship outputs that underpin the cultural demands of the system. The Universities seek to excel at basic knowledge generation and the basic ideas that might subsequently be developed and finally exploited by industry and in society. Close contacts and mutual involvement with industry are always helpful in general and crucially important in some fields of endeavour. But, **the Academia Europaea stresses the need to maintain a vigorous and broadly based scholarship capacity across Europe. The time from discovery to practical realization is very variable, unpredictable and frequently long and any significant decline in the collective capacity of Europe to respond**

¹¹ **Evaluation of the sixth framework programme for research and technological development 2002-2006, Report of the Expert Group, DG-Research: Brussels, Feb. 2009.**

to the unpredictable and unforeseen would put Europe at a strategic disadvantage. We strongly warn against the trends currently emerging in many member countries and would counsel on the devastating consequences that may result if scholarship and education depend for their existence only upon gross and immediate economic utility arguments and seeing academic research only through the lenses of cost, performance and short-term production activity.

11. Following on from our view on the need for a broad scholarship base in Europe, we also would reject the imposition of a business-based parametric model on research and teaching, and that there should be any exclusive emphasis only, on those parts of science and scholarship that seem to be able to deliver short-term economic benefits through technology. **We strongly believe that research in the arts and the humanities (including the social sciences) is just as essential for the future of Europe, as that of the natural sciences.** For example, in the very rapidly expanding field of neurobiology, the borders between molecular, cellular and systems neuroscience, psychology and all the branches of the arts are likely to become increasingly blurred over the next decades. Some of the most profound psychological analyses are deeply embedded in the best of European literature. At a more general level, critical and theoretical awareness about the use of conceptual tools, models of reasoning, cultural traditions, truth and moral values and beliefs is deeply embedded in the historical development of the forms of thought and in the current philosophical reflection upon the challenges of our era. **The Academia Europaea feels strongly that research and scholarship are as much a cultural good as an economic good. European society can only benefit from having a strong viable and sustained cultural academic diversity.**
12. Europe has a proud history and research culture in this regard, but that position is under threat from increasing investments in major sustained programmes in other parts of the world – not only in the USA but particularly in South and East Asia. A relative lack of investment in basic research and in some subject areas and fields of scholarship in parts of Europe, does in our view threaten to weaken our collective research and scholarship capacity over the longer-term. There are clear and very **worrying signals coming from even the wealthiest EU countries, of the closure of certain unique faculties that could offer at least some continuity of the European knowledge and scholar tradition.** This worrying observation does not only refer to the humanities. We would urge the Commission and member states to open a competitive and dedicated programme to remedy this dangerous threat.

Finally, the Academia Europaea (directly or on specific issues through the EASAC¹²), as a completely independent body, made up of about 2500 members elected via a competitive peer review process and comprising the best scholars and scientists in Europe, are pleased to declares its full assistance the Commission and other institutions and organisations, in taking forward the visions and aspirations of the Europe 2020 Strategy.

¹² **EASAC** is the European Academies Science Advisory Council of which the Academia was a founder academy: provides an independent academic advice on specific and timely issues (<http://www.easac.org>)