



Coimbra Group position paper on *Horizon 2020*

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Introduction

The Coimbra Group (hereafter, CG) welcomes the *Horizon 2020* proposal, which builds on the strengths of the Seventh Framework Programme (hereafter, FP 7), retaining some of its best instruments, while developing new ones. We warmly welcome *Horizon 2020* not least because of its determination to strengthen the emphasis on research excellence, its continued support to open, basic research and the ambition to increase European and cross-sectoral research collaboration. While the CG has a number of important concerns and recommendations, we are broadly in agreement with the objectives and the instruments proposed in the three priority areas. The structure of our comments on the proposal follows the three priorities of *Horizon 2020*, and refers to the proposal as put forward by the European Commission.

I. Research Excellence

The focus on research excellence as the dominant criterion across the proposal and especially in Priority 1, ‘Excellent Science’, is most welcome. The CG is heartened by the strong support afforded to the European Research Council (hereafter, ERC) and its instruments to support the best researchers across all fields at the frontier of knowledge and research, to create space for innovative, curiosity-driven research and open, long-term research questions. In our view this **support of future research leaders is of the utmost importance if we wish to retain them within the European Research Area** (hereafter, ERA) by creating competitive research career conditions.

We acknowledge that this focus on research excellence needs to be balanced by a complementary focus on policy priorities, societal challenges and emerging lead technologies. **The CG is concerned, however, that the overall broad and inclusive approach in *Horizon 2020* is in danger of being compromised by an undue focus on perceived short-term market requirements in the definition of its outcomes and deliverables**, such as ‘end user driven innovation’, ‘customer needs’ or ‘market take-up of innovations’. In particular, the ‘Excellent Science’ and ‘Societal challenges’ parts of *Horizon 2020* are hardly served by such a restrictive short-term focus on market forces and end user needs, and we strongly advise against prioritizing them as blanket objectives.

The CG wishes to see a clear commitment throughout *Horizon 2020* to open, long-term research questions, flexible methodologies and an openness towards the (often unpredictable and serendipitous) dynamics of the research process as well as towards the overarching political, social and cultural complexities that European research has to address. It is, indeed, this kind of open knowledge and research culture that historically has fostered open societies with the most dynamic innovative and adaptive capacities.

I.1 Marie Skłodowska-Curie Actions and Early Stage Researchers

The CG strongly supports the European Commission's ambitious targets for overall mobility within Europe and between Europe and other parts of the world, but is very concerned about the relative weakening of the budget available for **Marie Skłodowska-Curie Actions** (hereafter, MSCA), especially during the early years of *Horizon 2020*, with MSCA only reaching FP 7 funding levels by 2017. The European Commission is urged to reverse this negative trend and, in particular, to strengthen programme instruments within MSCA to support doctoral candidates and early-stage researchers as well as mobility schemes that link European researchers to other parts of the world. Adequate instruments should be created to support efforts among European universities to develop collaborative graduate and doctoral level programmes, based on networks of research excellence and with a potential to expand the network capacity and global horizon of the next generation of researchers. In order to reach the ambitious target of 30 % mobility among doctoral candidates by 2030, it is of the utmost importance that the European research universities are supported in their efforts to develop institutional collaboration such as joint and double degree programmes, 'sandwich' programmes, international co-supervision, mobility schemes, and jointly developed and mutually recognized quality assurance.

In order to make academic careers within the ERA attractive internationally to the best researchers and to retain them, all programmes, and not only the programme on research excellence, need to recognize the obligation to integrate and support the promotion of early-stage research careers within the framework of relevant research and development projects. In general, *Horizon 2020* instruments should support the creation of an open labour market for researchers as defined in the European Commission's ERA communication of 17 July 2012.

Special consideration should be given to the commitment of principal investigators and partner institutions to support efforts to develop well-structured doctoral programmes and initiatives resulting in excellent and innovative doctoral schools. Particular emphasis should be placed on the commitment of the degree-awarding institutions to ensure the quality and international recognition of doctoral degrees by involving international experts in the evaluation procedures for doctoral theses. Furthermore, principal investigators and partner institutions should commit themselves to good practice in the recruitment of researchers, e.g. as defined in the *European Charter for Researchers* and *Code of Conduct for the Recruitment of Researchers*.

The CG welcomes the importance placed in *Horizon 2020* on support for transferable skills and employability as early-stage researchers need training or additional professional development to obtain the necessary competences to move across sectoral borders, i.e. choose between careers in private or public employment. Adequate funding and programme instruments should therefore be dedicated to collaborative approaches to professional development and career preparation of early-stage researchers.

Furthermore, the CG would like to emphasize the importance of synergies between activities under MCSA and those defined for the grand societal challenges. Optimal results in long-term research investment are decisively strengthened by support for mobility, networking and matchmaking of young researchers. We therefore recommend that *Horizon 2020* include specific proposals to support the development of networks within the grand societal challenges to integrate early-stage researchers not only across the ERA, but also with other established or emerging knowledge regions around the world.

I.2 Cohesion of the ERA

The CG is concerned that progress made over the last 15 years in creating a strong and cohesive ERA is currently being undermined by the effects of the European and global economic crisis. There is evidence of old divisions in Europe thought to have been overcome re-emerging as a result of budget constraints. As a European network the CG is acutely aware of a potential new divide between universities in Western Europe and those in economically less strong European countries in terms of access to project funding and participation in large-scale research networks. Equally worrying is a new type of brain drain from some economically weaker European countries with less developed research and development infrastructures to other and stronger economies. Instruments within *Horizon 2020* which counter these trends and enable increased collaboration must be sufficiently strong to ensure that valuable progress made towards a cohesive ERA is not lost; e.g. such innovative instruments as the recently developed ERA Chairs or the twinning and teaming initiatives. Funding mechanisms must be sufficiently robust to avoid the exclusion of

structurally disadvantaged countries. The structural funds have enabled many countries to develop areas of research excellence valuable to the whole of the ERA. Their integration into ERA-wide training and research networks is of the utmost importance to the future competitiveness of Europe. The CG is of the view that the EU's structural funds should be targeted to deal with this pressing issue, in combination with other funding mechanisms developed within *Horizon 2020*. The potential of *Horizon 2020* instruments to strengthen nationally created clusters through international collaboration is an important element in regional development. Excellent research, increasing industrial competitiveness and sustainable development of answers to society's biggest concerns cannot be achieved without cooperation across programmes. It is therefore **recommended that mechanisms to combine funding from the structural funds and *Horizon 2020* are developed to achieve a maximum of synergy.**

I.3 Global Collaboration

The development of a culture of research excellence with maximum impact requires a truly global outlook. It is essential that *Horizon 2020* strongly supports efforts of European networks and research collaboration to expand and engage in global research partnerships. The CG especially urges the European Commission to consider a continuation, strengthening, and integration into *Horizon 2020* of instruments similar to the collaborative doctoral programmes within the Erasmus Mundus Programme, which have proven transformative in this respect in the past. The CG would like to draw attention to the importance not only of creating strong partnerships with long-standing knowledge hubs and centres of excellence, but also, in the long term, of creating equitable partnerships in research and higher education with new and emerging centres of knowledge and research, thus contributing to capacity building with existing and emerging partners from outside Europe. None of the major societal challenges can be resolved by research and development efforts in Europe alone. The answers to the grand challenges such as sustainable energy or climate change must be found in close collaboration with partners throughout the world. The CG recognizes the aim to build reciprocal cooperation with third countries – as defined in the European Commission's communication on EU international cooperation in research and innovation of 14 September 2012 – but is concerned that the necessary mapping, information gathering and negotiations should not delay the unfolding of the potential for global research and innovation cooperation.

II. Industrial Leadership and Future Technologies

Supporting technological innovation undoubtedly has to be a key element of *Horizon 2020* and we welcome the envisaged closer cooperation between research institutions and industry. At the same time, the **instruments and processes to be developed under *Horizon 2020* must be designed to ensure that the specificities of the research and innovation processes in the respective environments are taken into account and supported.** In particular the differences between research and development (hereafter, R&D) functions in research institutions and in industry need to be considered carefully and taken into account. Understanding these differences and achieving the right balance between the respective activities will be one of the key factors determining the success of *Horizon 2020*.

The CG would like to emphasize that any decisions on research and innovation funding have to take into account that universities and research centres do not mature their work in short-term cycles and that the breadth of research is a matter of long-term commitment. It requires patience, persistence, a long-term view and substantial investment. We strongly believe that basic research is the foundation of future development, and while *Horizon 2020* is an important milestone in bringing together research and innovation, the question of how innovation in industry can be most efficiently supported through EU funds is still largely open. There is indeed a risk that the underfunding of the early stages of a research process and a focus on purely business related research could prevent *Horizon 2020* from having its fullest effect as a long-term research programme. There is no pre-ordained linear sequence from basic research to innovation and marketable products – industry might just as well benefit from an early-stage research result, and basic research may well benefit from a by-product of an industrial development or research results from a completely different discipline. The important aspect is to acknowledge the complexity of research processes and include a clear distinction between marketable R&D on the one hand and long-term fundamental research on the other.

There are several ways in which the balance between industry needs and the objectives of research institutions can be safeguarded. **The CG strongly urges having universities – and principles of research excellence – adequately represented in the setup, governance and guidance of the European Institute of**

Innovation and Technology (EIT) and of the Knowledge and Innovation Communities (KICs). In order to reach a maximum level of buy-in and support for the KICs by all stakeholders there needs to be full transparency in the design and setup procedures for these new collaborative instruments.

The CG welcomes the strong focus on the Digital Agenda in Priority 2 and in *Horizon 2020* in general and strongly recommends further decisive support for large research infrastructures in Digital Humanities. This should, throughout *Horizon 2020*, be combined with a proactive and forceful agenda for the widening and standardization of digital networks and strong advocacy for Open Access policies. These should include, wherever possible, provisions for mandatory Open Access for the dissemination of research results funded under *Horizon 2020*.

III. Societal Challenges and the Role of the Social Science and the Humanities

Formidable global challenges have been identified under Priority 3 that can only be tackled in cross-disciplinary research. The CG welcomes the proposal's commitment to focused, strategic investment in these areas. It is without doubt that these challenges can only be effectively addressed and investigated by including the perspectives of the Social Sciences and the Humanities (hereafter, SSH) as integral elements of the research process. Moreover, the thematic areas present a unique opportunity to strengthen the interaction between the Humanities, the Social Sciences and the Sciences. **The CG is, however, deeply concerned that there is currently hardly any mention of the necessary contributions the SSH can make to all challenges, with the exception of the last two.** The general statements on the role of the SSH are so vague that it is difficult to see a precise role for them. There is, therefore, a danger that the important contribution the SSH have to offer to the grand societal challenges will be lost.

The CG does agree on the great potential of the specific objective 'Europe in a changing world: Inclusive, innovative and reflective societies' and commends the European Commission for adding this challenge and giving it due prominence. The addition of the dimension of 'reflective societies' offers important opportunities to investigate, among other things, the dynamics of processes of identity formation in Europe. A better understanding of these processes is crucial to social cohesion, inclusion and stability. Moreover, for Europe to develop as a reflective, democratic entity, research based knowledge about the functioning of its democratic institutions and societies is required. The CG equally welcomes the objective 'Secure societies – protecting freedom and security in Europe and its citizens'.

In the first five societal challenges, however, the contribution of the SSH is entirely underdeveloped or indeed ignored. The CG is seriously concerned at this lacuna, since **all these challenges have to be addressed not only at the level of technology, but crucially at that of attitudes and motivations. Tackling each of them, be it health, food and agriculture, energy, transport or climate change depends entirely on investigating underlying social, cultural and behavioural dimensions.** In each of these challenges it is, after all, human behaviour that has created the problems, and human behaviour in all its complexity is, alongside the human and societal implementation of social and technological innovations, also one of the keys to their solution. **The CG therefore joins LERU, ALLEA, the Academia Europaea, Science Europe, and others in their call to give due prominence to the SSH aspects of these challenges and to involve SSH representatives in all stages of shaping their agenda.**

Another concern in the definition of Priority 3 is the need for adequate interdisciplinarity in the assessment of responses to the thematic calls. While it is clearly the case that much of the most innovative and most relevant research happens at the interface between disciplines, it is also the case that these endeavours are the hardest to measure with established disciplinary evaluation tools. **Criteria for excellence and the composition of evaluation panels need to reflect this, need to embrace a pluralistic approach to research evaluation and need to respect different scientific paradigms, methodologies and evaluation patterns.** The CG finds confirmation of our concern in this respect in the listing of possible performance indicators in the current proposal, which privilege mostly quantitative bibliometric methods of measuring research quality at the expense of other methods widely used by a broad range of disciplines in the SSH such as the inclusion of research-based monographs or internet-based publishing of peer-reviewed conference contributions.

IV. Rules of Participation and Proposed Budget Rules

The CG welcomes the proposed 100% reimbursement rate for direct costs in thematic calls as a major move towards more equitable and simplified funding mechanisms, as co-funding requirements are likely to exclude or seriously disadvantage collaborators especially from weaker economies and those hit especially hard by the financial crisis. However, the CG remains concerned about the proposed 25% margin on indirect costs. Especially in the current critical situation where many university systems are faced with drastic budget cuts year by year, such a low overhead margin might in many cases prove prohibitive to the development of sustainable research environments, threatening to create a two-tier system of access to EU project funding, thereby deepening divisions within the ERA. Access to research funding should be based on research excellence and not on the financial capacity of a particular region or state. **The CG strongly advocates an overhead margin of 40%, even if this would mean that fewer projects could be funded. This would strengthen the repeated commitment in *Horizon 2020* to the goal of widening participation from countries with a low level of R&D** and would, together with the 100% reimbursement rate, offer strong support to establishing and maintaining a sustainable R&D culture across the whole of the ERA.

However, we do agree with the European Commission that full economic costing would be the better alternative to any overhead regime and we would strongly encourage the European Commission to consider introducing a parallel mechanism that rewards and incentivises the development and application of full economic costing models.

While we welcome the proposed simplification of the funding architecture in principle, we would like to see further details of how this is to be implemented, as we remain concerned that a one-size-fits-all model cannot take into account diversity in the cost structures of the different participants.

The CG wholeheartedly supports the ambition to simplify procedures and reporting requirements. The determination to move from expensive and laborious time sheets towards a simplified and trust-based system is, indeed, to be especially welcomed.

Finally, the Coimbra Group would like to express its strong solidarity with all efforts to resist a reduction of the overall *Horizon 2020* budget in the context of current EU budget negotiations. Strong and sustained investment in collaborative research and development is of the utmost importance for the future of European societies and their global competitiveness and yields richer and more sustainable returns than almost any other form of investment. In order to have the desired impact, the crucial role of *Horizon 2020* in fostering excellence, innovation and cohesion across the ERA must be underpinned by the proposed funding envelope of € 80 billion for the proposal.

Brussels, 22 February 2013

The **Coimbra Group** is a **European university network**, which, since 1985, has promoted higher education and research cooperation. **The CG consists of thirty-nine comprehensive, long-established research universities from across Europe.** It comprises key institutions for promoting staff and student mobility (its members are involved in 20% of all Erasmus student mobility) and fostering international mobility of doctoral candidates and early-stage researchers. It brings together members from all European regions. It has, therefore, a particular awareness of regional differences and the varying impact of economic and financial instability on different higher education and research systems. The CG members put a strong emphasis on fundamental and blue sky research and see the Humanities and Social Sciences as equal and integral parts not only of their teaching and research portfolio, but also of their contribution to society and economic development. Moreover, the CG and its member universities have a long-standing tradition of global collaboration with institutions of research and higher education in other world regions. The CG offers its comments on the proposed *Horizon 2020* proposal from the specific vantage point of these characteristics. www.coimbra-group.eu

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