

## Statement for the interim evaluation Horizon 2020

Leuven, 21<sup>st</sup> October 2016

Fifty-one leading doctoral-granting universities of science and technology from twenty-six European countries herewith report on their experiences with Horizon 2020 to contribute to its [interim evaluation](#). Our key messages are:

**We urge the European Union (EU) to draw on its historical and geopolitical responsibility to provide new *momentum* to maintain and strengthen the Europe of Knowledge. We need to reinforce our joint efforts to safeguard the necessary boundary conditions that promote sustainable peace and prosperity in Europe.**

- Excellence must - without compromise - prevail as the key criterion for Horizon 2020, and its successors, and the European Research Council (ERC) deserves more funding.
- We encourage the EU, its member states and the associated countries to prioritise funding into research and research-based innovation, in spite of - or rather because of - the current economic challenges in Europe. Continued investments in research and innovation create more synergies with other EU programmes and national funds and leverage more private investments into research and development, thereby improving our global performance.
- There is a need for better balance between short-term economic gain on the one side and ground-breaking research by the universities of science and technology that tackle grand societal challenges on the other.
- Horizon 2020 in general and Priority 3: Societal Challenges in particular put too much focus on incremental innovation and projects with high Technology Readiness Levels (TRL), resulting in an increasing gap between fundamental research and the closer to the market activities. We call upon the EU to urgently address this problem and re-enable us universities to effectively cover the entire value chain from research to innovation.
- The European Innovation Council (EIC) should strengthen the role of universities feeding into disruptive innovation by supporting highly interactive innovation eco-systems and support bottom-up science-driven inventors, entrepreneurs and their ideas.
- It is vital to ensure long-term financial commitment for research to prepare the ground for the innovations of tomorrow. The European Commission (EC) proposal to increase the funding for Horizon 2020 is a first step in the right direction and deserves greatest support by the Council and Parliament.
- We urge the EU to safeguard the longstanding and excellent intra-European cooperation in research and innovation through direct participation in Horizon 2020 and its successors. The EU must prepare for a new ethical, legal and financial framework allowing for direct participation of institutions from the entire European Research Area (ERA).

We - universities of science and technology united within the Conference of European Schools for Advanced Engineering Education and Research ([CESAER](#)) - are committed to work together with European institutions, countries and other stakeholders in making Horizon 2020 a success. We hereby offer our expertise, constructive input and sharing of best practice.

## PREAMBLE

With growing concern we perceive the changing political and societal context concerning international cooperation and European integration in recent years: post-factual politics, populism and separatism threaten the free circulation of knowledge and its bearers (students, teachers, researchers, inventors and other staff), the international orientation of our universities and in some cases even academic freedom and our institutional autonomy. Migration and terrorism are topping these crises. Amongst others, the adoption of popular votes on the limitation of mass immigration on 9<sup>th</sup> February 2014 in Switzerland and on the Brexit on 23<sup>rd</sup> June 2016 in the United Kingdom, and the political developments in Turkey pose great challenges to our longstanding intra-European cooperation with institutions from these countries. The EU as the main driver of the Europe of Knowledge risks failing to promote and deliver the overall policies and financial means to enable us universities of science and technology to optimally contribute to safeguarding sustainable peace and prosperity in Europe.

**We urge the EU to draw on its historical and geopolitical responsibility to provide new momentum to the Europe of Knowledge. We need to reinforce our joint efforts to safeguard the necessary boundary conditions for sustainable peace and prosperity in Europe - such as the respect for the rule of law and human rights, democratic citizenship, evidence-based policy making, free circulation of knowledge and its bearers, academic freedom and institutional autonomy. A renewed focus on knowledge - i.e. youth, education and training, sports, research, innovation, culture and media - is paramount and more involvement of civil society at large in all EU programmes and funded projects is necessary, so that the people better understand the added value of being part of our European community and culture.**

## Horizon 2020 creates jobs and boosts sustainable growth

Horizon 2020 is a powerful EU funding programme creating jobs and effectively boosting smart, inclusive and sustainable growth. Although limited in size, it is crucial for us universities of science and technology as it stimulates us to deliver the highest scientific excellence, boosts our attractiveness worldwide and promotes collaborative research allowing our scientists to contribute to tackling societal challenges across borders. As such, Horizon 2020 is essential for realising our institutional development strategies.

- Importantly, Horizon 2020 supports the implementation of the ERA and the Innovation Union. Horizon 2020 and its successors must continue to provide for clear links with the ERA and to support its further implementation, e.g. in the field of innovative doctoral training, inter-sectoral mobility and the design and incubation of large pan-European research infrastructures.
- We reconfirm our commitment to open access to scientific publications. With regard to the pilot on open access to scientific data, we insist on Findable, Accessible, Interoperable, and Reusable (FAIR) and secure scientific data. Furthermore, information for researchers on research data management must be improved and the costs of data stewardship declared eligible.

## Better design and structure, but a larger budget is required

We welcome the integration of the EU Framework Programme for Research & Innovation (FP), the Competitiveness and Innovation Programme (CIP) and the European Institute for Innovation and Technology (EIT) within Horizon 2020. The Highly prestigious ERC is arguably the single most successful European research funding instrument ever, raising the reputation of our institutions and attracting talent to us due to its strong recognition of bottom-up excellent science. Funding for collaborative research & innovation plays a crucial role in tackling societal challenges across borders. The closer linking of research and innovation is useful as research universities are the key players in bridging fundamental science and research-based innovation, given our unique coverage of education, research and innovation. However, Horizon 2020 puts too much focus on incremental innovation and projects with high TRL and this over emphasis on incremental-innovation and the closer to the market activities prevents us from participating optimally. This gap is especially evident in Priority 3: Societal Challenges where there is no proper connection between the technologies to bring solutions to the market, and the ground-breaking research as a pre-requisite for anticipated solutions. The trend towards higher TRL is somewhat exacerbated by the increasing importance of public-private partnerships.

- In our view, Europe would have a stronger competitive edge if more funding was allocated for the ERC: we plea for an extension of the Proof of Concept grants across all priorities of Horizon 2020 and advocate that the Synergy grants are supported into the future. We strongly advocate the criterion of excellence is applied across all instruments - from basic and applied research to innovation and close-to-the market actions. Excellence should - without compromise - be the key driver for Horizon 2020 and its successors.
- There is a need for a better balance between top-down programming of research and innovation with focus on short term impact on the one side and allowing universities of science and technology to bring about ground-breaking research results tackling societal challenges on the other. We encourage the EC to continue and intensify its contacts with relevant expert groupings and (public) consultations when drafting work programmes.
- We advocate a better balance between TRL on one hand and research-based innovation on the other. Such an approach considers and includes a strong focus on fundamental research activities and emphasises that TRL is a means of explanation rather than a goal in itself. We furthermore advise the allocation of more funding to collaborative solution-oriented academic research at lower TRL in Priority 2: Industrial Leadership and in Priority 3: Societal Challenges, and to better align the actions in the three priorities of Horizon 2020. In particular better connections between Priority 1: Excellent Science and Priority 3: Societal Challenges are needed, e.g. through proof of concept funding for Horizon 2020 projects with high innovation potential across the entire programme.
- We welcome the current focus on open innovation strengthening the role of universities in feeding into disruptive innovation. The presented vision on a European Innovation Council (EIC) from the EC offers opportunities in this respect and we are dedicated and committed to contribute to its further development. We refer to our joint [Statement on the EIC](#) and our follow up Statement on its implementation which provide concrete and constructive input.

- We emphasise the importance of engineering science and research which feeds our industry, business, public services and civil society. Universities of science and technology base engineering education on research findings and convey an open attitude to research and innovation to our students; the inventors, innovators and entrepreneurs of the future.
- Concerning `Widening of participation and spreading of excellence`, we underline the necessity for better synergies and complementarity with the European Structural and Investment Funds (ESIF) and other EU funding programmes. Too often research and innovation are not included in ESIF operational programmes and not enough funding is ring-fenced for research and innovation in the other programmes.
- Although we welcome the overall initial budget of €77 billion, we are deeply concerned about Horizon 2020 budget cuts in relation to the European Fund for Strategic Investments (EFSI). So far, no university or research centre-related activities have been funded under the EFSI and we thus call upon the EC to revise the corresponding concept of bankability to also include impact. Funding from EFSI should be made possible in the form of grants for universities in order to improve academia and business relations.
- An increase of current and future financial support for the framework programmes should allow for more excellent proposals to be funded ensuring that the brightest minds do not turn away from the programme. The most oversubscribed action is FET-Open. The EC should take measures to further inform the scientific community about the crucially important novelty elements of an FET-Open project. We believe it is vital to ensure sufficient long-term financial commitment for the models of research that will prepare the ground for the innovations of tomorrow. The EC proposal to increase funding for Horizon 2020 until 2020 is a good first step in the right direction and deserves greatest support by the Council and Parliament.

## **Worrying decline of third country participation**

With great concern we witness the decline of third country participation in Horizon 2020. Increased international scientific collaboration is driven by the pursuit of quality. International collaboration is essential to enhance competences at individual, institutional and societal level as well as to address the societal challenges across borders and continents.

- Science is a strong force in international diplomacy and the EU should seek to further strengthen collaboration in science and technology within Europe and beyond.
- The EC should reinforce its efforts to seek matching funds with other international partners. Importantly, it must ensure that evaluators are well instructed not to subtract points in the evaluation when parties from third countries are involved and that full transparency in the evaluation summary reports is provided.
- The current legal and financial framework for intra-European cooperation in research and innovation under Horizon 2020 with non-EU countries is not fit for purpose. We view the ERA covering all signatory countries of the European Cultural Convention and other associated countries to the FP. Whatever the composition or exact structure of the EU is or will be in the future, we urge the EU to safeguard our longstanding and excellent intra-European cooperation. Therefore the EU must prepare for a new ethical, legal and financial framework allowing for the direct participation of institutions from Europe in future knowledge funding programmes.

## Actions and simplification

The introduction of a single set of rules combined with fewer schemes (simplification) is welcome. However, the overall research and innovation funding instruments landscape in Europe is still too complex. Moreover, different project officers may have different approaches, and situations in which project officers deviate from the guidelines may occur.

- We welcome the simplification and clarification in funding models and urge the EU to allocate full funding of grants instead of focusing on financial instruments such as loans. Grants are extremely important for us not-for-profit universities and should be given out via EFSI as well.
- We suggest nominating an ombudsman for the FP to mediate on issues and concerns regarding the ruling of project officers.
- Acknowledging the importance of cooperation projects, we feel that the size of the consortia in terms of participants should be reduced.
- Once the quality of a system or institution has been assessed and approved, Horizon 2020 should rely on control of the overall system rather than monitoring all detailed parts of that system that have been approved and accredited. We fully endorse the large support of the acceptance of usual accounting principles.
- With great concern, we flag the dramatic oversubscription and low success rates in Horizon 2020. Increasing the budgets for Horizon 2020 and better strategic alignment and more synergies with the other EU funding instruments will help to reduce this problem.
- Concerning the proposal evaluation, we advise to re-introduce consensus meetings and ensure adequate briefing of evaluators.

## Commitment and contribution of universities of science and technology

We, universities of science and technology, translate scientific research and technological and social development into innovative solutions for the benefit of society and educate and train future generations. University engineering education transforms the world in which we live and contributes to solving the challenges of tomorrow. Based on our intense collaboration with business, industry and public services and the strong culture of entrepreneurship within our institutions, our activities encompass higher education, research and innovation and we strongly bridge between academia, state, market and civil society. We bring open education, open science and open innovation into practice on a daily basis and we are open to the world.

In light of our prominent participation in Horizon 2020 and as key stakeholders in Europe, we are prepared and committed to work together with the EC, member states, associated countries and the European Parliament as well as with other institutions and stakeholders in improving the workings of Horizon 2020 and making it a success. We hereby offer our expertise and constructive input and sharing of best practice.

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