



# EUA VISION FOR THE NEXT EU FRAMEWORK PROGRAMME FOR RESEARCH & INNOVATION (FP9)

3 November 2016

EUA presents its vision for the design of the Ninth EU Framework Programme for Research and Innovation (FP9) and a contribution to the future development of EU investments in education, research and innovation post-2020. EUA's position reflects the significant contribution made by European universities in promoting excellence in research and education and their role in advancing societal, cultural and economic development.

## Vision for FP9

Reaching the long-term objectives of balanced growth and development of European societies, as well as tackling societal challenges requires agreement on common goals amongst public authorities and policy makers, the public and the private sector, as well as coherent policies and instruments. University-based education, research and innovation are key for bolstering Europe's democratic societies and strengthening its economic competitiveness.

EUA strongly encourages the European institutions, in particular the European Parliament, the European Council and the European Commission, to come together and affirm a positive, strategic conception with clear objectives that stimulates the widest possible engagement for the development of European society in the coming decades.

It is EUA's vision in this context that the next EU Framework Programme, FP9, should constitute the European research and innovation instrument to further develop these objectives, by supporting and promoting excellent research and education. Policies and programmes should have clear added value for Europe, particularly increasing excellence through research collaboration and minimising discrepancies across the EU. Investment in fundamental research is imperative and fundamental to ensure the continuous flow of new knowledge required to develop innovative products and services in the long term. Partnerships for collaborative research across countries, and all sectors, should be encouraged for the same reasons. Moreover, science communication to the general public must improve, so as to provide citizens with the information they need to take an active part in decision-making processes. For these reasons, funding for FP9 should be increased in order to deliver long-

term benefit and competitiveness of our society.

Universities, as institutions responsible for generating new knowledge and for transmitting this knowledge widely, play an ever more important role in contributing to the development of European society. At present, with over 19 million students, European universities educate and train the lion's share of Europe's highly-skilled professionals and future leaders, i.e. those researchers and innovators, practitioners and entrepreneurs, who will be responsible for proposing and developing new solutions for solving societal and technological challenges. Collectively, European universities should reach out to students and researchers across the world and take a leading role in the global research and learning community.

It is therefore of paramount importance that politicians and policy makers at national and European level aim to build a stronger, better interlinked European Higher Education and Research Area, based on the successes of past framework programmes for research and innovation, of structural funds for research, and of European programmes supporting education and training. In future it will be important to continue ongoing streamlining efforts and alignment of policies, programmes and funding instruments, in the most efficient way possible.

Overall, from the perspective of universities there are some fundamental principles that should be embedded in all EU education, research and innovation policies: excellence must be the predominant criterion in the assessment and selection of proposals; promote activity in all fields of knowledge based on research integrity and ethical values; support for multi-disciplinarity required to address the complex needs and problems of today's society; the striving for inclusive societal approaches, facilitating access to education regardless of gender, social or cultural background; promotion of 'open' policies that enable and accelerate exchange and dissemination of knowledge.

The capacity of universities to stimulate and foster a culture of innovation through the creation of new knowledge sustains the entire gamut of innovation activities and its benefits for society. In this respect, the EU Framework Programmes for Research and Innovation have made a major contribution to building critical mass, addressing discrepancies between different parts of Europe, e.g. through teaming and twinning in Horizon 2020, and boosting cutting-edge research and innovation across Europe. However, at the same time, the divide amongst European countries in relation to their R&D-to-GDP targets is widening and thus more concerted efforts and investment at national and at EU levels are needed to increase Europe's overall competitiveness vis-à-vis the rest of the world.

## Recommendations

With a view to the development of FP9, EUA urges the European Commission, the European Parliament and Member States to consider the following priorities:

### **1. Provide long-term policies and funding instruments for research**

University-based research, particularly fundamental research, generates and stimulates the whole bandwidth of innovation that benefits local, national and European economies, as well as society at large. In order to capitalise on these benefits, it is crucial to nurture an environment characterised by

articulated policies and instruments. These should support both basic and applied research, promote collaboration amongst different European regions and stimulate interdisciplinary research. Furthermore, a coherent set of policies and instruments for European research should also emphasise that the final goal is not only about direct applications of technology, but also stimulating scientific freedom, autonomy and ethical behaviour, as well as enabling long-term benefits for societal welfare.

Navigating safely through unknown parts of the world with the help of GPS, for example, would not have been possible without the insights of the theory of relativity at the beginning of the 20th century. Advances in cell biology more than 40 years ago presently enable a wide range of anti-cancer therapies. Social sciences and humanities (SSH) provide essential insights into human interaction and the working of our societies. The knowledge produced by these disciplines have a high intrinsic value, as well as important applications: Solving current challenges like migration or radicalisation requires and will continue to require the expertise and knowledge provided by the SSH disciplines. In essence, these cases illustrate that yesterday's and today's fundamental research can deliver tomorrow's breakthroughs and that therefore long-term investments and grants have to remain the major instruments to adequately fund research and innovation, particularly basic research. Furthermore, the variety and complexity of innovation activities resulting from fundamental and multidisciplinary research, including the SSH disciplines, cannot be fully captured by reductionist conceptions of innovation based on Technology Readiness Levels (TRLs) alone.

Financial mechanisms, such as high-risk investments, e.g. the European Fund for Strategic Investments (EFSI) and the SME instrument in Horizon 2020, are mostly suitable to make capital available for research and innovation that is close to market and capital intensive, but this represents only a small proportion of research activities undertaken by universities. In order for European universities to remain internationally competitive and at the leading edge of research and innovation, it is important that FP9 moves beyond the traditional, linear model of innovation and encourages a balanced mix of funding instruments to equitably address all areas of innovation. Future solutions will come from present creative and outside-the-box ideas. The greatest and most disruptive innovations, after all, originate in fundamental research. Therefore, it is highly critical to expand funding for collaborative and basic research based on grants.

## **2. Reinforce collaboration and minimise discrepancies across the EU**

Collaboration amongst researchers from universities, companies, research organisations and the public sector in different areas and across different European countries is essential to create a dynamic scientific and innovation system and to increase its excellence. With a view to global challenges such as climate change, migration and growing social discrepancies, it is more important than ever before that science and innovation incorporates reflective knowledge generated in the social sciences and humanities.

Europe is clearly affected by these global trends and collaborative research in small, medium-sized and big flagship projects is vital for accelerating its growth and development for better societal fairness and progress. Therefore, closing the research and innovation divide of investment in research and innovation remains a crucial prerequisite to boost the competitiveness of the EU as a whole. This should be done both at global level (closing the R&D intensity gap between Europe and

other regions in the world, such as Japan and the United States) and at internal level, as substantial differences in R&D intensity are registered across Europe (e.g. R&D intensity in Finland was 3.55% in 2012, whereas in Cyprus and Romania it did not exceed 0.47% and 0.42%, respectively). FP9 should make wider participation based on excellent research a priority. It should further incentivise developing the organisational and human capacity of universities in countries with low participation as well as collaborative research between universities and the private and public sector. Its budget should increase and represent more than the current 6% of the total EU R&I expenditure. More synergies and alignment with the European Structural and Investment Funds (ESIF) are also needed to advance capacity building all over Europe. In addition, FP9 should focus on better leveraging and exploiting the outcomes of European research and innovation projects in Europe, for example, by developing a unified scheme for European patents and supporting all areas of innovation, including technological, non-technological, social and cultural innovation.

### **3. Seek a stronger alignment of policies for education, research and innovation**

Universities are hubs for research, education, entrepreneurship and innovation. They have a unique role as they are the only type of institutions integrating these three elements, i.e. the knowledge triangle, into their core mission. A stronger alignment of EU policies and instruments in the areas of education, research and innovation would greatly benefit the individuals educated and trained in universities and would, thus, provide people with skills to elevate the social, technological and economic interactions that underpin Europe's competitiveness. The alignment of policies and instruments has to build on existing and past activities developed in the framework of the European Research and Higher Education Areas.

Additionally, recent technological advancements and the consolidation of the Open Science movement will have a critical role in reinforcing the linkages between education, research and innovation. Open Science and Open Access are bound to improve scholarly communication, bolster interdisciplinary research, enhance research-based education, accelerate the take-up of academic knowledge by society, the public and private sector, and embed more education, science and innovation in society.

## **Background rationale**

Education, research and innovation are central to the development and growth of the European society. In today's Europe, universities are critical to safeguard a democratic, tolerant and progressive society and are fundamental in sustaining and advancing Europe's cultural values which are under increasing pressures.

Universities have facilitated over the years the progress of society based on their scientific breakthroughs that have enabled the development of innovations that positively impact economic, technological, and social welfare in many fields. For example, discoveries in the areas of electromagnetic waves have made possible the development of diverse applications such as X-rays, microwaves, radar and telemetry, today part of our daily life, whereas improved medical imaging techniques, the discovery of DNA and advances in DNA sequencing bring about remarkable possibilities for healthcare. Some of these and many other scientific discoveries have been possible and are still possible today thanks to European funding programmes for research and innovation. In

this sense, it can be said that universities act as catalysts in promoting innovation.

Universities are core in research and innovation ecosystems, that is, environments with appropriate infrastructure in which knowledge flows between people. Universities are developing more sophisticated interactions between their professional research staff and industry leaders, and establishing stronger ties with entrepreneurs. Universities are spaces where students have the opportunity to develop awareness of the link between education, research and innovation, and experience it firsthand together with research and innovation leaders. Europe has the opportunity to tap more and better into the capacities of universities to act as catalysts in innovation.

## Final remarks

European universities have a long tradition of leading global innovation in social sciences, arts and humanities as well as in science, engineering and medicine and this should be continuously supported by European policies and funding programmes. Higher education and research constitute the foundation of societal progress. Universities remain committed to enhancing Europe's competitiveness as leading centres for research, education and innovation in the 21st century.

This vision and the related recommendations are based on the views and experience of EUA universities with FP7 and the current Horizon 2020 Framework Programme (FP8) collected through a survey among its members. It is furthermore based on the views of universities on innovation collected through another survey, which was reflected in the EUA's statement on a future European Innovation Council published on 29 April 2016. They also take into consideration the official results of the ex-post evaluation of FP7 and the EU Council Conclusions on "FP7 and the Future Outlook", adopted on 27 May 2016.

Moreover these proposals have been developed in close cooperation with the EUA Research Policy Working Group, the EUA Board and Council.

*The European University Association (EUA) is the representative organisation of more than 800 universities and 33 national rectors' conferences in 47 European countries. EUA and its members play a crucial role in the development and implementation of the European Higher Education and the European Research Areas. Thanks to its interaction with a range of other European and international organisations, EUA ensures that the independent voice of European universities is heard, wherever decisions are being taken that will impact their activities.*