

# swissuniversities

swissuniversities  
Effingerstrasse 15  
3001 Berne  
www.swissuniversities.ch

## swissuniversities' statement on the mid-term review of Horizon 2020

Adopted by the swissuniversities Plenary Assembly on 12 January 2017

This document illustrates the view of swissuniversities regarding Horizon 2020 as well as some first thoughts about the next EU framework programme, FP9. swissuniversities is the Rectors' Conference of Swiss higher education institutions. It performs coordination tasks and acts as the national rectors' conference for all universities, universities of applied sciences and universities of teacher education in Switzerland. In particular, swissuniversities tackles questions about research, development and the next generation of researchers with the goal of creating and maintaining an optimal framework for Swiss higher education institutions.

In accordance with their profile, the universities, universities of applied sciences and universities of teacher education have developed their own type of research with specific needs. This reality is considered in this statement and for some points a differentiated view of a specific type of institution is presented.

In addition to its statement, swissuniversities welcomes the EUA positions regarding the next EU framework programme for research and innovation published in November 2016. Moreover, the Swiss universities support the LERU's advice paper 'Interim Evaluation of Horizon 2020' and the Swiss universities of applied sciences endorse the network UAS4Europe's statement on the mid-term review Horizon 2020.

### **1. Find a better balanced approach between fundamental research, applied research, innovation and close-to-market activities**

Horizon 2020 reflects the ambition to foster ideas, growth and jobs for the future. It was developed to become a key tool for implementing strategic objectives of the European Union, particularly to tackle the economic crisis in terms of investing in future jobs and growth and in addressing societal challenges.

From swissuniversities' point of view, the Horizon 2020's principle of treating research and innovation within one program is judicious and in Horizon 2020 there is a good integration of research and innovation activities which covers the full research and innovation cycle (better than in FP7). However, swissuniversities is worried about the EC's strong focus on innova-

tion activities, which focus too narrowly on technology and on close-to-market activities. swissuniversities would support a more balanced approach.

Excellence as a seal of quality from fundamental and applied research to product development must remain the key driver of Horizon 2020. swissuniversities is a firm supporter of the approach of the ERC programme and strongly recommends to pursue this strength of the EU research programmes.

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On the other hand, especially for the Swiss universities of applied sciences, pillars two and three, Industrial Leadership and Societal Challenges, which support research projects on the basis of predefined, broad themes, are also indispensable approaches if research is to provide solutions for the short and medium term challenges of our society.

The balance between fundamental research and applied research should be treated with sensitivity and it would be wrong to play them off against each other. In reality, the process of valorizing research is not always linear and cannot be seen as a unidirectional process, moving gradually from discovery to application – knowledge transfer occurs in different phases of the research-innovation-chain and it can work in all directions. Many major innovations result from fundamental research. At the same time, quite a lot of fundamental research emerges from specific fields of application or is based on application-oriented goals. Furthermore, one needs to acknowledge that not all fundamental research will lead to an application. In this regard, it is essential to stress that the full diversity of research efforts is necessary in order to reach societal and economic benefit in a most effective way. The founding principle of Horizon 2020 is thus relevant. Yet, swissuniversities believes that there is room for improvement in the implementation of the component 'innovation' within Horizon 2020. For example, technology readiness levels (TRL) are too high and there is a strong need for more bottom-up calls (see below).

Moreover, swissuniversities is convinced that big industries, such as multinational companies should be entitled to participate in Horizon 2020 projects. However, they should not receive funding from the EU as they are usually able to fund with their own budgets the research activities they are strategically interested in. Public funding should be reserved for institutions such as higher education institutions, research organizations, hospitals, medium-sized industries as well as SME's.

### **2. Stronger focus on collaborative projects**

Collaborative research is essential because it brings together specific expertise, resources from different disciplines and various research fields. Its potential to foster interdisciplinarity and to generate novel approaches, higher research impact and improved innovation through cross-fertilisation is broadly acknowledged. swissuniversities would therefore welcome a stronger focus on fundamental collaborative research and appreciates the reintroduction of the Synergy grants in 2018.

swissuniversities is convinced that collaborative research at all levels of the value chain is essential for Europe to act at the forefront of innovation and to deliver economic and societal impacts. The complexity and enormous dimensions of today's societal challenges require combined and interdisciplinary short-term as well as long-term solutions.

In particular the FET Flagships create unique collaboration opportunities between the participating organizations and beyond and constitute a long-term investment; as such, they guarantee a substantial societal and economic added value for and in Europe. Therefore, swissuniversities welcomes the continuation of this instrument and the preparation of further calls and projects.

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### **3. Stronger focus on bottom-up projects**

Bottom-up research is important at all stages of research and innovation. Therefore, bottom-up research calls should be launched within all three pillars (in particular within the pillar “Societal Challenges”) and should not be limited ‘excellence sciences’ pillar. This would provide applicants with better opportunities to come up with their own ideas. This would enhance innovation and applications that cannot be anticipated or it would solve important future challenges not yet completely identified.

### **4. Stronger focus on Social sciences, Arts and Humanities**

swissuniversities strongly supports a better inclusion of Social sciences, Arts and Humanities research in Horizon 2020. The Swiss Universities of teacher education in particular would welcome an emphasis on research on education.

swissuniversities acknowledges that in theory, Social sciences, Arts and Humanities research seems to be well embedded as an essential component in Horizon 2020. However, it does not see how this idea is implemented in practice. Indeed, it is difficult so far to identify existing funding opportunities for these disciplines.

Research in Humanities has been generating important new knowledge that is fundamental to broader societal issues in Europe, for example in the fields of international conflicts, gender diversity, religious traditions, identities and cultural memories, linguistic diversity, creative industries and cultural heritage, which evidently constitute major societal challenges for Europe. Moreover, educational sciences, for example didactics or education of young children and immigrants, are not at all visible in the priorities of Horizon 2020. This is in strong contrast to the pivotal role of education also in developing societies.

In the integration of Social sciences, Arts and Humanities it is a challenge that interdisciplinary networking, respectively real interdisciplinary research is still not rewarded. swissuniversities calls for the introduction of such a criterion within the evaluation process. It is also important to have evaluators coming from the domains of Social sciences, Arts and Humanities who are able to assess interdisciplinary projects.

### **5. More funding is required for projects at lower TRL levels**

Although technology readiness levels (TRL) could be a hurdle, swissuniversities supports the idea to make researchers think about their research’s level of development regarding its implementation. However, by focusing too strongly on the ‘market readiness’ with high TRL projects and less on the early, critical part of the innovation pipeline, this pipeline is at risk of running dry. Together with LERU, swissuniversities recommends to take a more balanced approach and to spread its funding for collaborative research over all stages of the innovation pipeline. More funding is required for projects at lower TRL levels, especially in the societal challenges. Indeed, the application of TRL complicates the integration of Social sciences, Arts and Humanities research mostly because TRL is technology oriented. Being not

fundamentally opposed to maintain TRL levels to categorize research and innovation projects, swissuniversities asks for a better orientation of indicators towards societal innovation.

Furthermore, swissuniversities wonders whether projects at TRL6 (or higher) should be part of a publicly funded programme like Horizon 2020.

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### **6. Good focus on Diversity issues**

swissuniversities welcomes the commitment to enhance women's participation by removing barriers preventing women from pursuing successful scientific careers and by integrating a gender dimension in research and innovation programming, content and evaluation. It is important for swissuniversities that both the application and success rates of women in fields where they are underrepresented are increased in H2020. swissuniversities appreciates the efforts made to foster female participation and recommends that they are monitored and continued. Furthermore, in times of globalization it is important to take into account and to make use of all kinds of diversities.

### **7. Appropriate balance between effort for the application and success rates**

With less than 5% in some programmes, success rates appear to be very low. Low success rates like this constitute a major challenge, as there is a risk that excellent scientists might decide not to spend time on submitting proposals. Different potential tracks should be explored, for example:

- wider use of two-stage evaluation processes: the EC has already moved in this direction. We are looking forward to seeing the results;
- realistic definitions of the expected impact which can be achieved within the running-time of projects;
- additional budget for the concerned programmes: whereas oversubscription can be caused by a lack of national funds, it can also be a sign of an urgent need for research in those areas;
- recurrent call topics;
- training for applicants in the process of choosing the appropriate funding instrument and in proposal writing (to be implemented on national level within and by the participating countries).

### **8. Open Sciences**

Open access to scientific peer reviewed publications has been defined as a fundamental principle in Horizon 2020. swissuniversities welcomes this policy and would like to underline that issues and challenges regarding Open Sciences have to be addressed at European level (e.g. in cooperation with the current activities of the European University Association EUA as well as in cooperation with all projectbound stakeholders).

### **9. Outlook for FP9**

The points mentioned above have to be addressed both, in the second period of Horizon 2020 and in the successor programme of Horizon 2020, FP9. swissuniversities considers that the existing architecture of Horizon 2020 does not require major changes for FP9. Yet, it is essential that funding for FP9 is secured.

#### **10. Conclusion**

swissuniversities would like to emphasise the huge importance of the European Framework Programmes for all Swiss higher education Institutions and is more than happy that Switzerland is again a full participant in Horizon 2020 as of 2017. We thank all our partners for their precious support.

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Regardless of the specific political situation, swissuniversities would like to stress that European cooperation in research, innovation and education should remain outside of any political turmoil in order to pursue its mission of producing new knowledge and innovation for the well-being of society. It should remain an area, in which excellence meets beyond boundaries and without any barrier.