

HORIZON 2020

Position of Switzerland

State Secretariat for Education and Research (SER)

Switzerland is a close and dynamic partner of the EU and an integral part of the European Research Area. It participates since 1992 in the Framework Programmes (since 2004 as an associated country). It is in our common interest to make Europe smarter, greener and more inclusive and as attractive as possible for researchers. With this goal in mind, the Swiss government shares some observations on the draft of Horizon 2020.

Key points and suggestions from a Swiss point of view:

- The links and synergies between different EU programmes in the field of research, innovation, SMEs, education and structural policy should still be further clarified.
- Transparency between the different advisory bodies, platforms and initiatives must be ensured.
- The participation of associated countries should be clearly guaranteed on all the bodies and committees foreseen by the Horizon 2020 programme.
- The 20% flat rate for indirect costs may create serious problems for research and other institutions with a high overhead.
- The increased marketability of Horizon 2020 requires clear guidelines and templates for the involved actors.
- A strong and independent ERC should absolutely be maintained.
- The difference between ERC and FET funding schemes should be further clarified.
- It is crucial to ensure a smooth transition for the FET flagship projects between the 7th Framework Programme and Horizon 2020.
- The MCSA programme should be given a higher budget increase and priority.
- Flexibility with regard to the suggested definition of legal/governance structures of Research Infrastructures would be welcomed.
- The access conditions to the risk-financing instruments (equity and loan) under COSME and HORIZON 2020 is unclear.
- It is important that the new SME instruments complement, and not replace, the national / regional SME support instruments.
- Full access to the KICs of the European Institute of Innovation and Technology should be granted for researchers from all member and associated states.

GENERAL COMMENTS ON HORIZON 2020

Switzerland **welcomes the European Commission's proposal** for Horizon 2020, which intends to reduce complexity, simplify participation and unite almost all European research and innovation programmes under one roof. We warmly welcome that '**Excellent Science**' is given high priority in the EU's research and innovation funding. In our view, the emphasis on 'Societal Challenges' and the **multidisciplinary approach** are necessary to safeguard the competitiveness of Europe in the global market, and thus to preserve and improve a sustainable prosperity in Europe. We would also like to emphasise the role of **sustainable development**, which could serve as cross-cutting theme that addresses the interconnectedness and the mutual dependency of the societal challenges while making them visible and better understood. However, there is an **uncertainty on the instruments** for implementing Horizon 2020. This obviously impacts our possible judgement on the attractiveness of the whole programme. Furthermore, we would like to ask for **further explanations** of the implication of the **new legal form** of the programme (regulation instead of decision) as well as of the introduction of "**delegated acts**" for associated countries.

COMMENTS ON THE GOVERNANCE OF HORIZON 2020

As a general point, we would like to see the **links in content and budget** between Horizon 2020 and other Community programmes defined in a clearer way. This particularly holds for the EU programmes on education, cohesion and economic policy (especially towards SMEs). It is important that a clear distinction between the financing of Horizon 2020 and Structural Funds be made.

Networks beyond the traditional research projects (e.g. as part of the EIT, the SET-Plan, FET flagships, PPP and P2P) will take over an important strategic role in Horizon 2020. For the target groups, the effect of these networks must be **transparent** and serve their goals. Networks must remain **accessible** for associated countries. In addition, the roles, tasks and instruments in the context of the future European Innovation Partnerships should be clearly visible.

We recommend creating a specific **Programme Configuration** for each Societal Challenge and one per topic within the pillars of 'Industrial Leadership' and 'Excellent Science'. Member states and associated states should not only deal with the preparation of the upcoming work programmes, but also with the further planning and giving opinions on selected projects.

We also would encourage the Commission to prepare a good transition for the **NCP network**.

COMMENTS ON RULES FOR PARTICIPATION (RfP)

In general, the H2020 RfP draft presented by the EC has been **received very positively in Switzerland** and its aim to simplify the current rules is **mostly appreciated** (unification of reimbursement rates for direct and indirect costs; simplified access to RSFF for SMEs; continued flexibility of IPR rules). The inclusion of non-recoverable VAT among the eligible costs is also welcome.

Nevertheless, certain suggestions raise **serious concerns**:

- The stronger **reliance** of the RfP **on the EU's Financial Regulation** does not only create some legal uncertainty (a new regulation is foreseen for 2016). It is also even further apart from the daily business of the H2020 participants and from associated states.
- The **20% flat rate for indirect costs** may create serious problems for research and other institutions with a high overhead.
- The increased marketability of Horizon 2020 requires **clear guidelines and templates** for the involved actors. The Model Grant Agreement should be clarified in terms of IPR.

- States associated to Horizon 2020 should have the possibility to joint P2P and PPP initiatives (Art. 185 and 187) without additional negotiations and agreements.
- Switzerland welcomes the distinction between two support rates depending on the proximity of a project to the market. However, we consider a 70% support rate is too high for big companies, which are in principle more able to finance a market-driven project (risk of windfall gain). On the other hand, this 70% could lead to a funding gap for public financed research. Overall, we feel that the overall logic as well as the instance of decision of **when to apply 70% or 100% should be clear before projects are submitted.**
- Finally, **a number of aspects are new** and/or cannot be judged as long as further details remain unclear. This concerns above all the use of grant decisions instead of grant agreements; the acceptance of scale of unit costs as well as the use of pre-commercial and public procurement.

COMMENTS ON THE EXCELLENT SCIENCE BASE

European Research Council

The duplication of the **ERC budget** in Horizon 2020 is seen very positively and is a clear commitment to the needs of the scientific community. Existing only since the beginning of FP7, the ERC is a real success story and of great value for the ERA at every level: scientific, structural, and long term strategic. The new structure of H2020 with the ERC as a part of the 'Excellent Science' is welcomed, as **synergies** between the four schemes (ERC, Marie Skłodowska Curie Actions, FET and Research Infrastructures) can be very fruitful at every level.

It is important that the ERC can keep its autonomy and credibility and set its own rules, aiming at low administrative burden for the scientific beneficiaries. The **ERC Executive Agency** has proven to be one of the best functioning administrations within FP7 and can be taken as an example for H2020.

Furthermore, one should consider the possible **relations between FET and ERC**. There should be no duplication and synergies should be used, as for example with regards to the Synergy Grants or the Proofs of Concept. Given that the ERC is based on excellence, it is qualified to assess the quality of large scale projects.

Future and Emerging Technologies

Switzerland highly appreciates that within the Horizon 2020 proposal, the activities for Future and Emerging Technologies (FET) - that have been a successful element of FP7 - are continued and expanded to cover **all thematic domains** beyond ICT. Given the fact that the three-pillar structure (FET Open, FET Flagships and FET Proactive) will be kept, we support the concept of funding **bottom-up** activities within FET-Open, but would strongly recommend to strive for a **clear partition of roles** (e.g. by the criterion of technology – and fundamental research based activities) between FET and ERC in the field of excellence based bottom-up activities.

The FET-Flagships to be launched under FP7 should be formally established within H2020 ensuring **institutional and budgetary security**. It is of paramount importance that the transition from FP7 to Horizon 2020 causes as little administrative efforts and institutional/budgetary insecurities as possible for the partners participating in the Flagships to be chosen under FP7.

The set-up of a **FET Advisory Board** to provide input to the work programmes of FET is welcome as long as its role and influence are transparent and as long as appropriate participation of member as well as associated countries is possible.

Switzerland highly appreciates the EC's commitment to keep the 'FET spirit' of simple and fast administrative procedures.

Marie Curie Skłodowska Actions (MCSA)

Switzerland supports the three funding schemes under MCSA. We particularly appreciate the idea of bringing together all doctoral funding into one funding scheme.

Our main concern is the **budget**: The share of MCSA in the overall budget will decrease from 9% to 7,4%. This seems unjustified given the ever increasing interest in these actions. We fear that if the success rates of e.g. the ITNs or fellowships further decrease, these instruments will not be considered attractive anymore even by top young researchers and research organisations.

We are also worried about the tendency towards more **co-funding**, if it is intended as additional cash contributions from the participants or more co-funding of existing programmes. Public and non-profit institutions will not be able to co-fund new projects in the short time: they plan their resources on the long term, and must follow objectives and rules of their own funders. Project participants already co-fund in kind the MCSA by training and supervising the doctoral students and fellows. Requiring additional co-funding from universities and research funders will move the focus from funding excellent science to funding economically strong institutions.

Research Infrastructures

Research infrastructures (RI) represent an essential sector of the European cooperation in research and innovation and clearly provide European added value. Thus, Switzerland strongly welcomes the contribution by Horizon 2020, for the development of world-class pan-European RI, and even recommends to substantially **increase the corresponding budget**.

However, the fact that the Commission suggests the **ERIC framework** as legal basis for RI is problematic. For several RI (international organisations as well as projects of the ESFRI roadmap) the application of national law in addition to provisions of international/European agreements appear to be necessary. Such RI must not be excluded from funding. Therefore, Switzerland would welcome **flexibility** with regard to the suggested definition of legal/governance structures of RI.

SPECIFIC COMMENTS ON INDUSTRIAL LEADERSHIP AND COMPETITIVE FRAMEWORKS

The topic of **Future Internet** will have benefitted from a massive investment within FP7 (and via the FI-PPP). Before allocating resources to this key activity (one of the 6 in ICT), a careful analysis of the FI PPP outcomes needs to be performed.

A dedicated line of research for '**Future computing systems**' is very welcome. Here the key issue is to ensure an impact in job creation and innovation in a field where start-ups and SME are not so well represented.

The level of integration/synergy between the ETP, EIT, JTIs, ERA-NET, and other external programmes is still very weak and vague. Their links and use should be clarified further.

Leadership in enabling and industrial technologies

By dividing the **FP / ICT program** into three different areas ('ICT as enabler' in Societal challenges, KET / ICT in Industrial Sciences in Excellent leadership and FET), we feel that an additional **complexity** is introduced for the ICT players. This situation requires a coordinated and transparent formulation of the individual work programs.

In the **NMP theme** is a clear reinforcement of the issues 'nano', 'materials' and 'production': in FP7, these topics have been collectively treated in one 'NMP' theme and are now structured independently. The Public-Private Partnership 'Factory of the Future' was very well received by the industry and it is therefore important to enhance and strengthen this topic financially.

Innovation in SMEs

We welcome the introduction of **new SME-instruments** which supports the multiple stages for the SME-commercialisation and the start up. We are in favour of the simplification of the standards and the frame conditions for the SME, in particular for the SME and start up.

SMEs from countries that are associated to Horizon 2020, but not associated to COSME, should not be disadvantaged. Furthermore, Eurostars 2 is an important funding instrument for research intensive SMEs, and we welcome the reinforced **link between Eurostars and SME** funding within Horizon 2020. It is recommended to increase the support rate of Eurostars 2 stars at least to 33% (to the same level as in the other Art. 185 initiative Ambient Assisted Living - AAL).

The access to the **risk-financing instruments** (equity and loan) under COSME and HORIZON 2020 is unclear. In practice, the parallel instruments for risk financing for SMEs under COSME and Horizon 2020 could be a problem for third countries not associated to COSME (or their SMEs).

It is important to us that the **new SME instruments complement**, and not replace, the national / regional SME support instruments. The needs of many SMEs can be met most easily and satisfactory at the regional / national level. A relation to the national / regional funding could be created through an SME-specific ERA-NET plus.

SPECIFIC COMMENTS ON TACKLING SOCIETAL CHALLENGES

Health, demographic change and wellbeing

The health research community emphasises that the health **budget** should not be reduced. It is essential that the health budget is larger than in FP7, even after the subtraction of the IMI-part.

The level of information on what type of research will be financed within which programme should be clearly improved and simplified. This information shall help researchers to find the instruments that are particularly relevant and suitable for their projects and to orientate themselves in the multitude of the programmes. This regards for example

- topics of the Health Challenge aiming at 'improving the lifelong health and wellbeing': coordination with topics in the field of health that will be published under other programmes (e.g. IMI, EIP, JPI, JPND...);
- the field of 'alternative testing strategies': need to define which topics will be published under the Societal Challenge on Health and which under IMI;
- clear definitions about the attribution of topics to specific fields: e.g. nanomedicine to the NMP field; basic genomic research to the biotech field; diseases in the Societal Health Challenge, etc.
- the vision of the fusion between the themes "Health research "and "Demographics development", under the challenge, "Demographic Change and Well-Being". To understand the biological, psychological and socio-cultural dimensions of aging, a more broadly based systemic approach is needed.

Food security, sustainable agriculture and the bio-based economy

Cross-cutting actions among the societal challenges will be necessary to exploit the full potential of interdisciplinary research and to avoid duplications: nutrition – consumer – health, sustainable agriculture – energy – climate change, food security – secure societies.

Secure, clean and efficient energy

Switzerland clearly supports **linking policy and research** in the field of energy. We would especially like to support forms of cooperation like the SET-Plan that allow for incorporation of national level initiatives. At the same time, with regard to non-renewable energy, we would be in favour of a strong focus on energy efficiency.

Smart, green and integrated transport

On this issue, we would like to call for a close **cooperation** with the themes of 'Industrial Leadership' (e.g. with space, materials and manufacturing) and other Societal Challenges (e.g. on Energy).

The programme should be people-oriented and integrate aspects of demographic changes, ageing, immigration, multiculturalism etc. The programme should focus more on the **demand for solutions** than on supply of new solutions. The potential for adapting Europeans travel expectations and needs could also be included.

The main objective of the Societal Challenge 'Smart, green and integrated transport' should be to achieve a resource-efficient, environmentally-friendly, safe and seamless transport. In addition transport should also be more cost-efficient and economical. Capacity, stability and maintenance of transport will be a big challenge for the coming years in Europe.

In addition to the emphasis on technological solutions, **non-technological innovations** should be reinforced. With respect to "Resource efficient transport that respects the environment", the focus should not only be on CO2 reduction but on minimizing resource consumption in general. Finally, research on energy efficiency and new propulsion technologies should be addressed for private transport and public transport in an integrated way.

Climate action & resource efficiency including raw materials

In comparison to FP7 this Societal Challenge is now, in addition to the environment theme, also responsible for raw materials. The **budget** for the Societal Challenge **should** therefore **be higher** than proposed by the European Commission.

Innovative dissemination tools will be essential for policy and should have high priority.

Fighting and adapting to climate change: The barriers why we are not further in actively combating climate change should also be addressed.

Sustainably managing natural resources and ecosystems: The protection of extensively used areas in **mountain regions** and Eastern Europe should also be addressed. Research on natural hazards, like seismic risks, landslides, etc., should be included.

To further boost eco-innovation, we would support **strong synergies** to be set up between Horizon 2020 and other initiatives such as the Financial Instrument for the Environment (LIFE+).

Inclusive, innovative and secure societies

The combination of the FP7 programmes SSH, SiS and Security in a single challenge 'Inclusive, innovative and secure societies' is a **considerable step forward**. Not only does this rapprochement 'tame' the technology focused understanding of the concept 'security', it also gives the concerns and the potential of SSH research some much needed visibility and increases its weight in the FP family.

Also, researchers from **the Humanities** will hardly have more opportunities to submit or participate in proposals. Given the better possibilities for the researchers from the Social and Economic Sciences, the **divide of opportunities** will probably deepen.

OTHERS

Horizontal themes: In principle, Switzerland welcomes the orientation of the international cooperation. The principle of reciprocity should be strengthened to ensure that Europe takes better advantage of international cooperation. Additionally, clear rules in the field of IPR should be established to ensure mutual benefit for the EU and third countries. Added value and compliance with the goals of different initiative of Horizon 2020 need to be independently evaluated.

European Institute for Innovation and Technology (EIT): The EIT, with regard to its potential for the development of new fields of a knowledge-based economy in Europe, is unchallenged. However, the functional and structural match between the priorities of the EIT and those of 'Societal Challenges' as well as the 'Joint Programming Initiatives' must be guaranteed. Switzerland would also like to be ensured that full access to the KICs will be granted for the researchers from all member and associated states. Simplification must be implemented, also with regard to the rules for participation of such initiatives that fall within the scope of Horizon 2020.

COST: Having in mind the core business of COST with its bottom-up approach enabling networks of excellent scientists and the development of new emerging scientific topics, COST's position in the Horizon 2020 proposal should shift from 'Societal Challenges' to 'Excellent Science'. This would enable COST to develop further synergies with excellence programmes like the ERC, RI and FET as well as with national research programs while reinforcing strategic activities like integrating young scientist and upcoming scientific topics and their scientific communities.

EUREKA: For the specification and implementation of the new Risk Financing Instruments for equity and debt facilities for SMEs we are strongly supporting the consultation and reconciliation of interests between the EU-Commission and the EUREKA Member States. This will enable an efficient and transparent support for the SME's.