



6 July 2017 – Background material

Ten years of the European Research Council – 30 years of Swiss participation in the European Union’s framework programmes for research

1) European Research Council

The European Research Council (ERC) was founded in **2007** as part of the European Union’s **7th Framework Programme (FP7, 2007-2013)** aimed at strengthening basic research. It awards **generous grants** to excellent scientists across all disciplines to carry out pioneering research at an institution in an **EU member state or an associated state**. An ERC grant is extremely beneficial for a researcher’s scientific career.

The calls are thematically entirely open, which makes the ERC one of the few **bottom-up programmes** within the current 8th framework programme generation (Horizon 2020). The ERC represents **17% of the overall Horizon 2020 budget**.

The ERC has its own executive agency (ERC Executive Agency) and an independent governing body, the **ERC Scientific Council**, which sets the funding strategy and procedures. The ERC Scientific Council is composed of 22 eminent scientists and scholars appointed by the European Commission.

The ERC’s three main funding instruments are:

- **Starting Grants** for promising early-career researchers
- **Consolidator Grants** for excellent established researchers
- **Advanced Grants** for established researcher leaders with a recognised track record

In addition to these three main instruments there are also far smaller **Proof of Concept Grants**. These are open to current and former ERC grant recipients to test the market and innovation potential of an idea arising from their project. 2018 will also see the launch of **Synergy Grants**. These will enable small, interdisciplinary teams of project partners to work on ambitious and ground-breaking research questions.

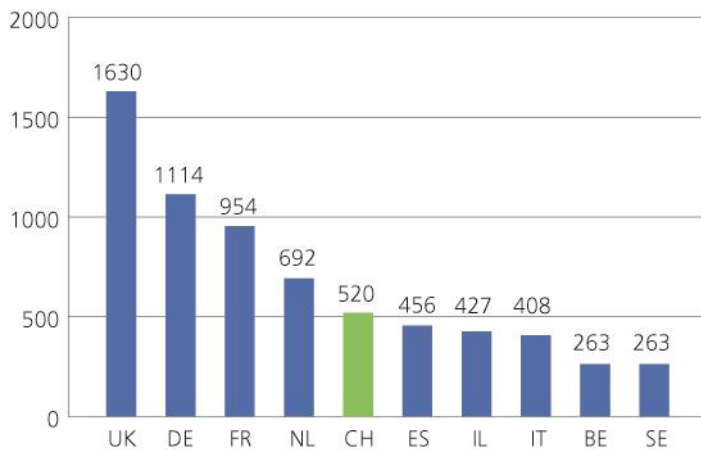
Since 2007 the ERC has funded around **7,000 projects** deriving from over 65,000 applications (average success rate: 10.8%). These projects have resulted in over 800 patents. ERC grantees have gone on to win prestigious awards including six Nobel Prizes, four Fields Medals and five Wolf Prizes.

2) Switzerland and the ERC

Through its association to FP7 (2007-2013) Switzerland has been involved in the ERC from the outset. Due to the outcome of the vote on the mass immigration initiative on 9 February 2014, researchers in Switzerland were excluded from the first two ERC calls for Horizon 2020 (2014-2020) (Starting Grants and Consolidator Grants 2014). The Swiss National Science Foundation (SNSF) therefore set up an alternative national measure, the **SNSF Temporary Backup Schemes**. With an additional budget of CHF 94 million from the federal government, the SNSF funded 27 starting and 21 consolidator grants.

Researchers in Switzerland are extremely successful in the competition for ERC grants. **520 ERC grants** have been awarded to Switzerland since 2007 with total funding of **around EUR 900 million**. In terms of the number of ERC projects, this puts Switzerland in fifth place in international comparison behind the UK, Germany, France and the Netherlands.

No. of ERC grants 2007-2016



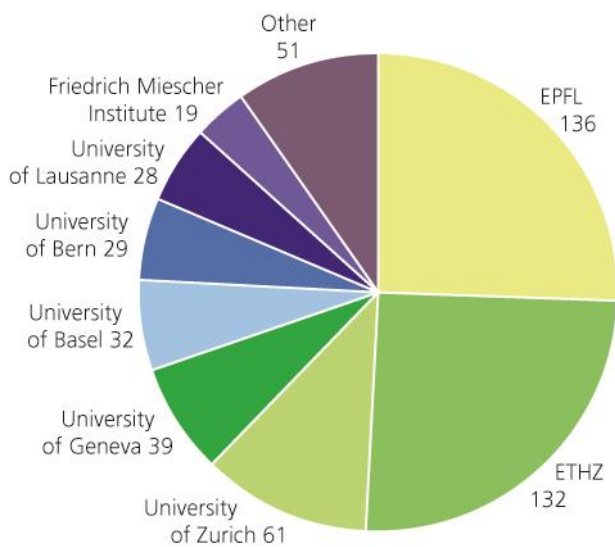
Since 2007 researchers in Switzerland have been awarded a total of 520 ERC grants. This puts Switzerland in fifth place in terms of the number of ERC grants. Source: EC / ERC / SERI

At 24%, applications from Switzerland have the **highest rate of success**, significantly higher than the European average of around 11%.

17% of all current and former ERC grantees in Switzerland are **female**, as opposed to 22% Europe-wide.

Roughly three-quarters of all ERC grantees in Switzerland are **foreign nationals**. This ratio is rather unusual in European comparison. It indicates that Switzerland is a very **attractive location for leading researchers** from around the world. The vast majority of these researchers were already in Switzerland before receiving the ERC grant and are from other European countries.

ERC grants by institution in Switzerland 2007-2016



Most of the ERC grants since 2007 have been awarded to the two **federal institutes of technology** in Zurich and Lausanne. The Universities of Zurich and Geneva have also been very successful in the allocation of grants. Source: EC / SERI.

43% of all Swiss ERC grants are in the field of **Life Sciences**, 49% in the field of **Physical Sciences and Engineering** and 8% in the field of Social Sciences and Humanities (SSH). In overall European comparison, Life Sciences are particularly strongly represented (43% CH vs. 35% EU), while SSH is underrepresented (8% CH vs. 19% EU).

3) European Union Framework Programmes

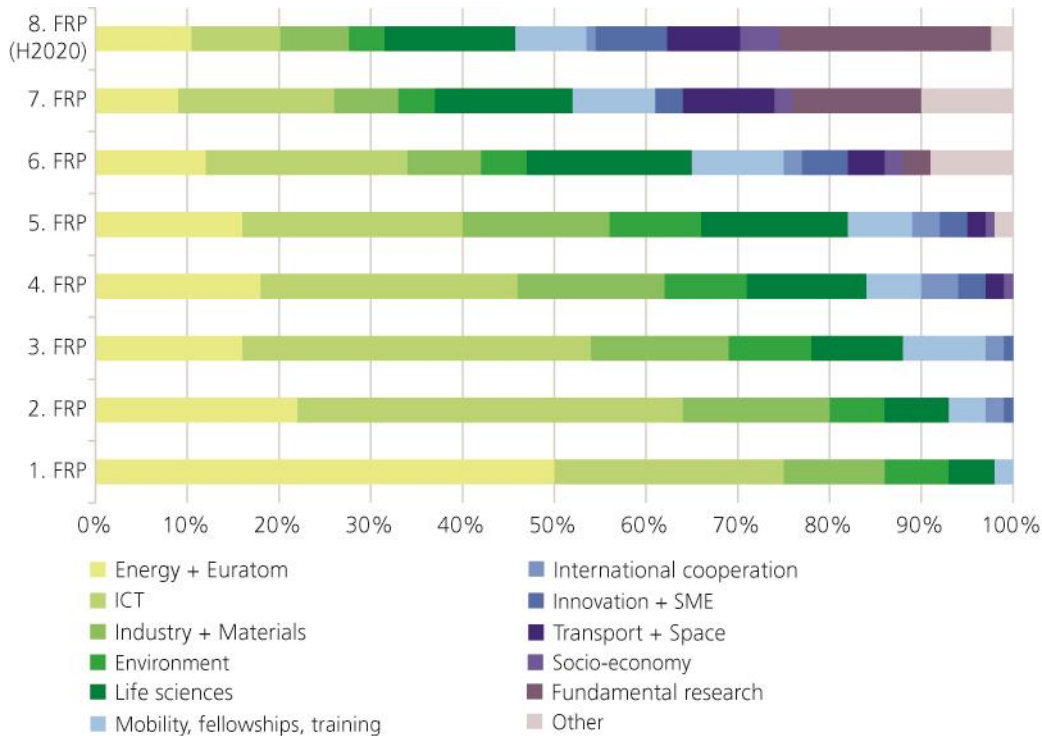
The Framework Programmes (FPs) are the European Union's **main instruments** for implementing its **common science and technology policy**. The FPs basically have two origins: on the one hand a common research body was set up as part of the **Euratom Treaty in 1957**. Then on 25 July 1983 following a decision of the European Council, the **Framework Programme of the European Community for Research, Technological Development and Demonstration Activities** (FRP) was introduced. The first framework programme was launched in 1984.

The aim of the FPs is to promote **balanced scientific and technologic development** in Europe. These programmes set out the desired scientific and technological objectives and the selection criteria, the corresponding priorities and the financial requirements. The FP instrument bundles research **transnationally** across European countries where it makes sense to do so – be it due to cost or the scale of the research project, or because it involves solutions to problems that are of **key importance** for the whole of Europe.

The FPs are financed by the EU member states via their regular contributions to the EU, as well as through proportionate contributions from associated states. Grants are allocated to individual researchers, scientific institutions and businesses on a competitive basis. Project submissions are evaluated by **independent experts from the respective field** and categorised as worthy of funding or not worthy of funding. The decisive factor is the **excellence of the projects**. There are no country quotas.

The 8th generation of the programme has been running since 2014. It will last until 2020, bears the title Horizon 2020. The FP budget has continually risen over the years: from EUR 3.3 billion (1984–1988) to EUR 81.6 billion (2014–2020).

Relative development of FP thematic priorities



The theme of the programmes has changed over the years according to the EU's political needs. Horizon 2020 is by far the largest funding instrument for research and innovation worldwide and covers a **broad spectrum of thematic fields** (e.g. Health, Information and Communications Technologies, Social Sciences and Humanities, Environment, Food, Transport and Space). Source: EC.

4) Switzerland and the framework programmes

The **framework agreement on scientific and technological cooperation** between Switzerland and the European Community, as it was then, came into force **30 years ago**. That formed the basis for Switzerland's official participation in the EU framework programmes.

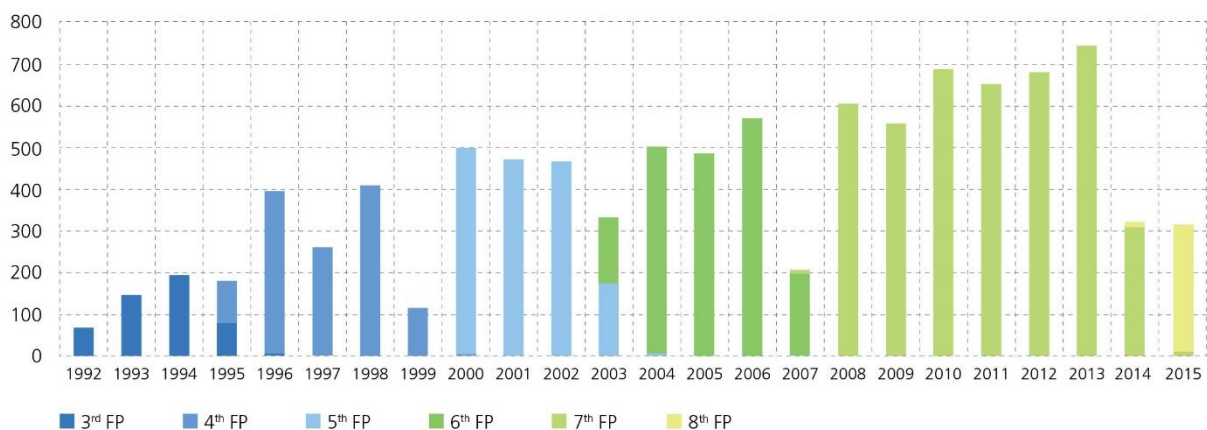
The FPs generally distinguish between three categories of participating state: EU member states, associated states and third countries. Between **1987 and 2003** Switzerland held the status of a third country: researchers in Switzerland participated in FPs on a **project by project basis**, self-funded and only at the invitation of other FP project partners. From 1992 the federal government assumed the funding of Swiss FP project participations. From **2004 until the end of 2013** – during FP6 and FP7 – Switzerland was an **associated state**. These states co-finance the FPs and are therefore able to participate in them with the same rights and obligations. Between 2014 and 2016, following the adoption of the mass immigration initiative, Switzerland was partially associated and only able to participate in Horizon 2020 on a limited basis. **As of 2017** Switzerland is **fully associated** and therefore enjoys full access to all programme sections of Horizon 2020.

Association and participation in the FPs is of **great interest** to Switzerland. International competition strengthens national research competences. Participation also generates a

whole host of research and networking-related, scientific, technological, and – through innovation – ultimately economic benefits. There is also a financial incentive: the value of the funding that researchers in Switzerland have competitively acquired from the EU thus far has been higher than the contribution made by the federal government to participate. The FPs are the largest source of funding for research and innovation in Switzerland after the Swiss National Science Foundation, particularly for Swiss SMEs and other businesses.

The **number of Swiss participations** in FP projects **rose continually** between 1990 and 2013: whereas 501 Swiss participations received funding of around CHF 127 million in FP3 (1990–1994), the figure had risen during FP7 (2007–2013) to 4269 participations with total contributions of almost CHF 2482 million. The **high success rate** of Swiss project proposals is particularly noteworthy.

No. of new Swiss participations in FPs



Source: Report on Research and Innovation in Switzerland 2016, SERI, p. 82.

Further information:

FP dossier: www.h2020.ch

Switzerland's participation in European framework programmes: Facts and figures 2015:

https://www.sbf.admin.ch/dam/sbf/de/dokumente/2016/01/beteiligung_der_schweizande-neuropaeischenforschungsrahmenprogram.pdf.download.pdf/beteiligung_der_schweizande-neuropaeischenforschungsrahmenprogram.pdf

Euresearch information network: www.euresearch.ch

European Research Council: www.erc.europa.eu

Horizon 2020: www.ec.europa.eu/programmes/horizon2020/