



Science communication

Over 80 Agora projects in five years

The SNSF has supported a total of 81 science communication projects through Agora since 2011. By 2016, the scheme had already been going strong for five years. To celebrate the anniversary, Frank Burnet, president of the Agora Commission at the time, presented the funding scheme in a video clip in which he focused on three communication projects: the “cOld Ice” training project on glaciers for laypeople conducted by Leandra Reitmaier-Naef; Francesco Mondada’s instructive and enjoyable “Robotics in schools” project; and “Numb3d by numb3ers” by Antonietta Mira, an interactive exhibition about working with numbers. By awarding Agora grants of between 5,000 and 200,000 francs, the SNSF aims to promote the spread of knowledge in society as well as the exchange of ideas and opinions on scientific research.

Innovations in project funding

Fewer proposals, asking for higher amounts

The SNSF modified its project funding scheme in 2016. Responding to the first call after the changes in autumn 2016, researchers submitted 842 project proposals and requested a total amount of 512 million francs to finance their projects. This corresponds to a decline in submissions of 22% year-on-year; at the same time, the total amount of requested funding increased by over 6%. This shows that the amount of money requested per project has risen substantially. This is largely a result of the maximum project duration being extended from three to four years. Over 60% of the submitted projects will last for more than three years.

Bilateral research collaboration

27 projects with China, Japan and South Africa

In the context of the Swiss government’s bilateral programmes, the SNSF last year launched calls for joint research projects with China (11 projects approved), Japan (4 projects) and South Africa (12 projects). The bilateral programmes enable researchers in Switzerland to collaborate on a project with their counterparts in a partner country. The projects generally last for three or four years and are jointly evaluated by the SNSF and the partner organisation, if possible. They focus on the following research areas:

- China: environmental sciences, engineering, material sciences
- Japan: social sciences, humanities, biology and medicine
- South Africa: ensure healthy lives and promote well-being – from new tools to systems understanding



PROMYS – Promotion of Young Scientists in Eastern Europe

From democracy to genomics

Genomic analyses of fish, new chemical concepts or questions about democracy in Europe – in 2016, seven projects launched by young researchers in Eastern Europe were funded with a total budget of 4.3 million francs under an initiative known as PROMYS (Promotion of Young Scientists in Eastern Europe). With this initiative, the SNSF is investing in long-term cooperation with promising young researchers in Eastern Europe and, at the same time, helping to stem the “brain drain” in these countries. All scientists taking part in PROMYS have studied or worked in Switzerland for at least two years and subsequently continued their careers in a new EU member state in Eastern Europe.

Highlights and daily business – the specialised committees at work

The specialised committees of the National Research Council carry out work that is of high importance to research conducted in Switzerland: they promote the interdisciplinarity and internationality of research and support the careers of young researchers.

What were the main tasks of the Specialised Committee International Cooperation last year? The committee's president, Urs Baltensperger, pauses only briefly to think: most of the work had been "hard and unspectacular", but the committee had been well supported by the Administrative Offices throughout. The three specialised committees of the SNSF carry out key tasks on behalf of the Research Council, the most important being the evaluation of proposals in their respective areas of competence: interdisciplinary research, international cooperation, and careers. In this evaluation work, they are supported by panels composed of national and international experts. Within these three areas, they also develop funding strategies for the SNSF and draft Research Council statements on science policy matters. The members of the specialised committees are elected from among the one hundred or so scientists comprising the Research Council.

Europe, but not only

In addition to its daily work, each specialised committee is aware of the specific challenges it has to deal with. "For the Specialised Committee International Cooperation, the highlight of 2016 was the agreement on research policy between Switzerland and



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Urs Baltensperger, Paul Scherrer Institute, President of the Specialised Committee International Cooperation

the EU. It is a great relief that we are once more a fully associated member of the European research community," says Urs Baltensperger, who is Professor of Atmospheric Chemistry at the Paul Scherrer Institute. But cooperation with Europe is only one aspect of the committee's work. On behalf of the State Secretariat for Education, Research and Innovation, the Specialised Committee International Cooperation works alongside research funding

organisations in Argentina, China, Japan, the state of Rio de Janeiro in Brazil and South Korea. In addition, the SNSF has initiated cooperation with other research funders, e.g. the National Science Foundation in the United States. "Together with our partners, we aim to promote collaboration between groups that include the best researchers from both countries," says Urs Baltensperger. Setting up such collaborative projects was highly time-consuming. The parties involved had to agree on all the specifics, starting with the choice of a *lingua franca*. Even if the two sides did not invest the same amount of funds – Switzerland assumes a far larger share than the emerging countries – care was taken to ensure approximately the same level of scientific participation for both.

Swapping lenses

For the Specialised Committee Interdisciplinary Research, implementation of the redesigned Sinergia scheme was the main highlight. "The funding scheme is being geared 100% to interdisciplinarity," says Rita Franceschini, president of the Specialised Committee. A linguist from Switzerland and professor at the Free University of Bozen-Bolzano in South Tirol, she is optimistic about the innovations: "We are hoping that researchers will apply the lens of another researcher from another disci-



“We want to give researchers who are able to think outside the box the freedoms they need to succeed.”

Rita Franceschini, Free University of Bozen-Bolzano (I), President of the Specialised Committee Interdisciplinary Research

pline to their own topic, and that these exchanges will lead to groundbreaking research. We want to give scientists who think outside the box the freedoms that they need.” Since introducing the changes to the funding scheme, the SNSF has received approximately 160 Sinergia projects involving two or more groups engaged in collaborative and interdisciplinary research. Looking to the future, Rita Franceschini is hoping that more applicants will show a willingness to take risks and more women will be successful with their applications.

PRIMA instead of MHV

The SNSF is now recalibrating its funding scheme for women researchers. For 25 years, Marie Heim-Vögtlin (MHV) grants helped women who had interrupted their research career for family reasons – mainly childcare duties – to make a comeback in academia. The MHV grants are now set to be replaced by the new PRIMA funding scheme (see article on page 7). “PRIMA will enable outstanding female talents to do research at the highest level. We will be able to offer them a generously funded grant for up to five years, so that they can successfully negotiate the demanding phase leading up to a professorship,” says Markus Fischer, member of the Specialised Committee Careers and professor of plant ecology at the University of Bern. “Our goal is to finally

increase the number of female professors in Switzerland, which is still too low.”

But Markus Fischer stresses that along with important strategic discussions and the creation of this new funding scheme, the daily business of the Specialised Committee Careers consists mainly in monitoring the quality of the evaluation process.



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Markus Fischer, University of Bern, member of the Specialised Committee Careers

Panels of the SNSF

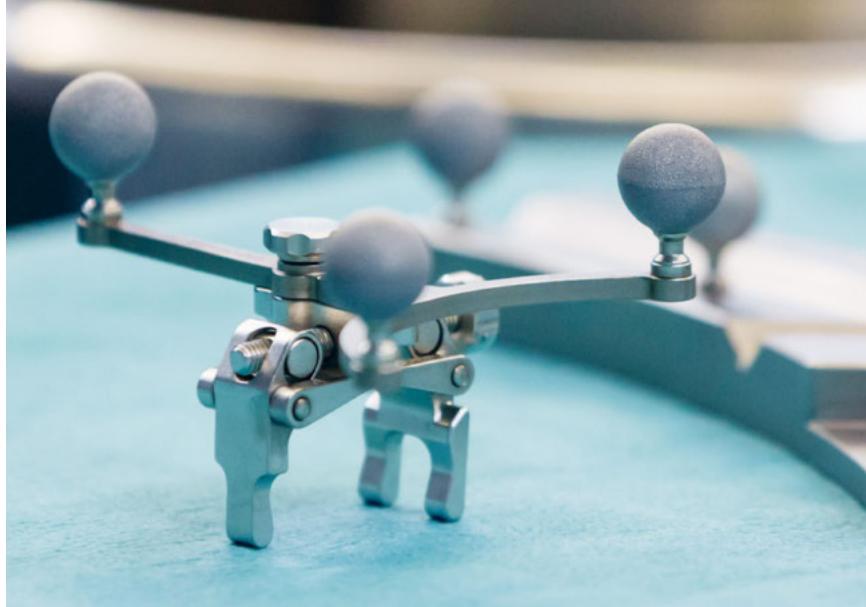
Over 1,200 members

The approximately 100-strong National Research Council carries out its evaluation work supported by around 90 further evaluation bodies consisting of a total of over 1,200 members. 29% thereof are women, and 30% are from institutions abroad.

The three project funding divisions of the SNSF comprise nine review panels for the evaluation of applications in specific research areas. For instance, there is a panel for arts, art studies, design and architecture in the Humanities and Social Sciences division, and one for longitudinal studies in clinical research in the Biology and Medicine division.

Applications in the various schemes of the Careers division are evaluated by more than 34 evaluation commissions, including the Research Commissions of the higher education institutions.

In the Programmes division, the NRP steering committees function as panels for evaluating project proposals for NRPs, along with any experts invited to sit on the panels on an ad hoc basis. For the NCCRs, the division also appoints international panels for selection and scientific supervision. Panels are formed in numerous other areas as well, such as international cooperation (SCOPES, r4d, etc.) or science communication (Agora).



BRIDGE – the SNSF and CTI funding programme

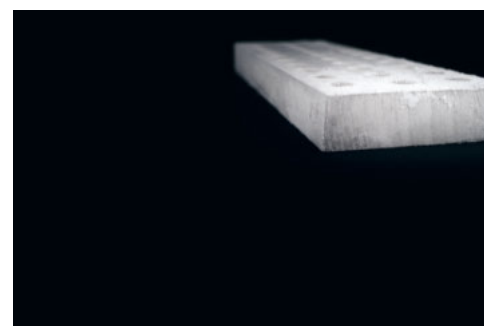
Assessing and implementing innovation potential

Aiming to enhance the innovation potential of scientific research, the SNSF and the CTI jointly launched the BRIDGE funding programme in 2016. BRIDGE strengthens cooperation between science, the private sector and society and comprises two distinct funding lines. The first line – Proof of Concept – promotes young researchers who wish to develop an innovative application based on their own research results. Projects generally last for 12 months and can be submitted by scientists from all research fields. A total of 102 projects were submitted in response to the first call in October 2016. As a second funding line, Discovery is aimed at experienced researchers seeking interactions between basic and applied research in order to assess and realise the innovation potential of research results. However, only technological innovations with a strong societal or economic impact will be funded. A Discovery call for projects that last a maximum of four years was launched in December 2016.

Scientific Image Competition

The hidden beauty of science

Research can produce extraordinary images that reveal unseen worlds, display astonishing tools or document unique human stories. To encourage researchers to come forward and share these images with the public, the SNSF has launched an annual competition for scientific images and videos. They not only show current objects of study, but also different scientific locations and tools, as well as the men and women who do the actual research work. The initiative has been a success: 239 researchers from all parts of Switzerland have made nearly 500 entries to the competition. An international jury will pick the winning entries, which will then be awarded at a ceremony to be held at the Biel/Bienne Festival of Photography between 5 and 28 May 2017.



“Bloc froid pour éprouvettes”, prizewinning image in the category “Places and instruments of research”, sent in by Madlaina Boillat, doctoral student at the University of Geneva.



BioLink initiative

Integration of biobanks for research purposes

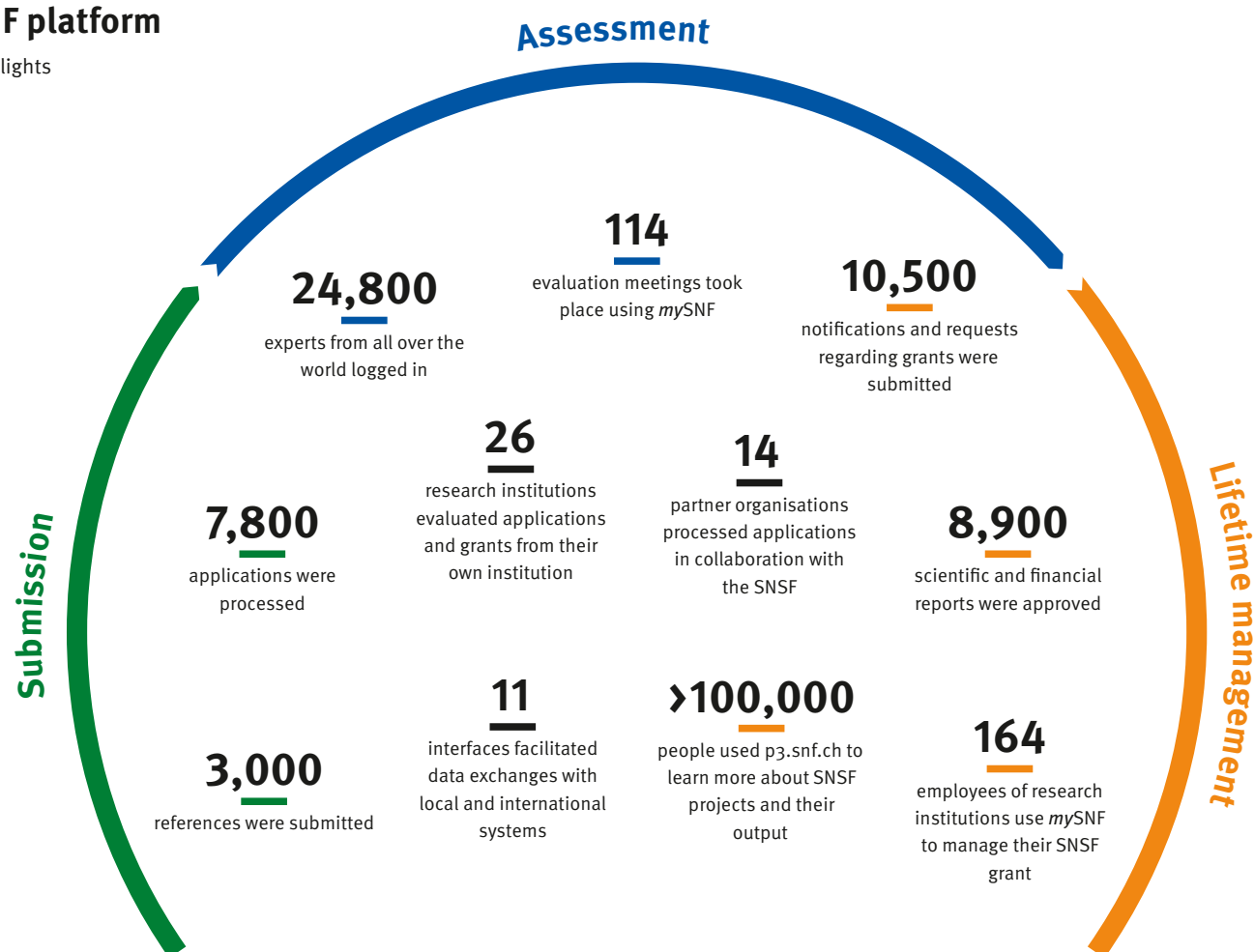
To improve the quality and accessibility of biobank data and help set up a biobank network in Switzerland for the long term, the SNSF launched the BioLink initiative in 2016. It is aimed at researchers who wish to use IT systems to interconnect their biobanks for research purposes. The harmonisation of these systems will make it easier for researchers to consolidate their data and answer specific scientific questions. BioLink is open to all scientific disciplines. The SNSF is funding three projects with a total of 2.5 million Swiss francs. A second call is planned for 2018.

mySNF – ten years old and at the heart of all processes

From application submission and evaluation to project management – the *mySNF* web portal today guides researchers and reviewers through all funding-related processes. But it's been a long journey getting to this point.

mySNF platform

2016 highlights



In 2011, the SNSF entered the realm of paperless processing once and for all by introducing fully electronic processing and monitoring of applications and approved projects via the *mySNF* platform: the laborious process of completing forms and other tasks on paper was now a thing of the past. From the moment the system was introduced, researchers were able to jettison their paperwork, including trips to the post office, and efficiently manage and complete their SNSF proposals and projects.

From punch card to online system

"But the road from a paper-based management system to an integrated online system with various process control and information functions was long and winding," says Mario Andenmatten, head of the IT Business Services division. From its beginnings in the 1950s until 1972, the typewriter ruled supreme at the SNSF, as it did everywhere else. According to Andenmatten, 1972 was the year that heralded in the digital age: "The introduction of a punch card system made it possible for the SNSF to store and

process data in a structured manner." But it had to wait another ten years (until 1982) for the first real data management system to arrive, and until 1991 for a more powerful computer system for data management.

Progress: at a leisurely pace at first...

By continually developing its management systems – initially at ten-year intervals – the SNSF had been able to steadily increase the number of "paperless" dossiers by the turn of the millennium. "But paper continued to hold sway for a while yet," says Benjamin

Rindlisbacher, head of the Data and Systems division, looking back. For example, applications handed in on paper had to be typed into the existing administration systems, which was very costly and time-consuming. And for many aspects of the evaluation process, documents still had to be sent in by mail or fax, and compliance with deadlines was based on the date stamp. "What is more, updating and analysing information was a long-winded process," says Rindlisbacher.

... then suddenly gathering momentum

But from the turn of the millennium, digitalisation began to gather pace at the SNSF as well. Between 2002 and 2012, the organisation saw a quick-fire development of its management system. Among the milestones were the introduction of a new electronic application management system (2002), the launch of the *mySNF* web platform for researchers (2007) and reviewers (2008) and the establishment of the new P3 research database (2012). Today, P3 contains publicly accessible information on approximately 65,000 funded projects and on the over 90,000 researchers involved in them, thus making the funding activities of the SNSF fully transparent. Since 2016, the database has been connected to the opendata.swiss portal, where data collected by various authorities is available free of charge.

mySNF covers almost all processes

Initially, *mySNF* was solely a platform on which researchers could submit their applications, but from 2008 onwards, the SNSF started extending it step by step. "Today, *mySNF* covers practically all research funding processes, from application submission to evaluation and lifetime management, and that makes it quite unique," Rindlisbacher adds. With the number of applications rising steadily, the SNSF's workload didn't

necessarily shrink, but the work became less arduous: "Today, more resources flow into the quality side. With the advent of digitalisation, entering and managing application and project data became a lot more reliable and efficient." The central idea was to enter data once and then use them repeatedly. What is more, *mySNF* is now the main tool for organising evaluation processes and for conducting the time-consuming search for international reviewers. In 2016, around 26,500 requests to review a total of 3,000 applications were dispatched, resulting in 9,600 external reviews being provided to the SNSF.

Pressures and advantages

mySNF was introduced mainly to lighten the administrative workload of researchers filing applications or conducting projects. And the reviewers, too, benefited from an integrated system in which they could efficiently manage the entire evaluation process. Nevertheless, *mySNF* is also exposed to the pressures of mounting digitalisation: ever-larger amounts of data run counter to the universal desire for less administration. And the stringent data protection requirements, though fully justified, limit the extent to which the available data can be used for analytical purposes or management support. It is in everyone's interest to find the right balance here – today and in the future.

What the future will bring ...

"The continual technological advancement of the ten-year-old *mySNF* web portal is and will continue to be a central issue," says Andenmatten. It would also be necessary to provide greater support for fast-growing trends such as mobile working. The processes facilitated by *mySNF* are continually being optimised and developed. For example, the SNSF is increasingly feeding

"Thanks to *mySNF*, I can stay updated and take care of my applications, reviews and projects simply and efficiently online."

Carlo R. Largiadèr, Vice Director of the Department of Clinical Chemistry at Bern University Hospital

data provided by partner organisations and research institutions into its web platform. "The future will be all about interconnecting data and services across borders – which is why we are forging ahead with the integration of ORCID, a global non-profit information platform for researchers," Benjamin Rindlisbacher adds. He is convinced that *mySNF* development will follow the path from an administration system to an information system, from a tool to a process control system, and from a local system to an online service network. But the goal will remain the same: "to reduce the administrative workload for researchers with the help of new methods and technologies, optimise processes, and raise quality standards within research funding!"

"Our central idea is: enter data once, then use it repeatedly!"

Benjamin Rindlisbacher, SNSF

