

Multi-Year Programme 2025–2028



We invest in researchers and their ideas

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Summary

The Swiss National Science Foundation (SNSF) is Switzerland's principal research funding institution. On behalf of the government, we promote the full range of topics and methods found at higher education institutions across Switzerland. Thousands of researchers receive financial support from the SNSF to study nature and technology as well as cultural and societal issues. Their findings are a key pillar of progress.

The SNSF awards all grants in competitive procedures that meet the highest international standards. This is how we ensure the quality of research «Made in Switzerland».

With our 2025–2028 Multi-Year Programme, we are focusing on continuity. In doing so, we take into account the changes in the international environment as well as current social and research policy challenges. Numerous planned measures make an important contribution to the transversal themes specified by the federal government. We continue to invest the majority of funding in projects proposed by the researchers themselves. These curiositydriven research projects help advance society and the economy in the long term.

Priority areas 2025-2028

We have set the following priorities for the 2025–2028 period:

Strengthening international collaboration and competitiveness

Uncertainty in the European and global environment poses a threat to participation in the international research community by researchers from Switzerland. Therefore, the SNSF's previous approach of enabling international collaboration across its funding portfolio is no longer sufficient. We propose additional measures to counteract the threat of isolation and to support the different ways in which Switzerland participates in international research, both at European and at global level. With these measures, we aim to strengthen the competitiveness of Swiss research independently of association to the European Research Framework Programmes.

Measures

- Provide better support for cross-border cooperation through expansion of Weave / Lead Agency, Co-Investigator Scheme and multilateral cooperation.
- Promote research-driven consortia with international participation to strengthen the international leadership of Swiss research teams in the long term.
- Expand support for talented young researchers from abroad who wish to continue their academic careers in Switzerland.

Exploiting research potential in its entirety

The SNSF places particular emphasis on funding basic research, but would also like to ensure funding for other types of research. We want to support collaboration between researchers and non-scientific actors so that the results of research projects can be used more quickly and more broadly.

Measures

- Intensify the exchange between researchers and non-academic stakeholders and exploit synergies.
- Optimise Investigator Initiated Clinical Trials to strengthen clinical research.
- Expand the BRIDGE programme to increase the diversity of participating researchers and improve the interfaces between research and innovation.

Working together for a sustainable future

The SNSF contributes to the United Nations (UN) 2030 Agenda in its research funding and in its own operations (Administrative Offices, honorary bodies). The UN's sustainable development goals for a better life for all people – within planetary limits – matter a lot to us. We are already supporting many projects that address these goals. Nevertheless, existing funding schemes are being stretched to the limit, and for this reason we want to specifically promote transdisciplinary research that is particularly effective in helping to achieve the Sustainable Development Goals. In addition, researchers and the SNSF itself must act sustainably.

Measures

 Promote research on sustainable development in living laboratories (transdisciplinary consortia).

Expand, extend and critically reflect on digitisation in the sciences

The current methods of digitisation have greatly changed science and society. And yet we are still only at the beginning of the digital transformation. Increasing computing power and highly complex models developed with the help of artificial intelligence will offer entirely new opportunities for gaining knowledge – and bring new challenges. The research skills required for this are not yet sufficiently established in Switzerland, and we want to specifically promote them with an offer for young researchers. By supporting the principles of Findability, Accessibility, Interoperability and Reuse of digital assets (FAIR), Open Research Data (ORD), and data infrastructures and services (DIS), we are creating an excellent framework for research.

Measures

- Launch «Digital X» funding offer for young researchers, where X is a variable for a scientific field, to strengthen research skills for digital transformation.
- Promote exploratory ORD practices (as envisioned in the National Open Research Data Action Plan) and provide greater support for active data management and ORD in projects.
- Optional: assume more responsibility in promoting data infrastructures in Switzerland (not included in the financial planning).

All new objectives and measures contribute to one or more of the transversal themes in the ERI Dispatch: equal opportunities, digitalisation, national and international cooperation, sustainable development.

Funding portfolio

No major shifts are planned in the funding portfolio for the 2025–2028 period. The new measures complement the existing funding portfolio through which we have successfully promoted scientific research in Switzerland. Open formats with few thematic or other requirements (projects and careers) still account for the largest share of the funding budget, approximately 80 per cent.

- Project funding is the SNSF's main scheme and will be strengthened in the 2025–2028 period in order to meet increasing demand as well as to increase the salaries of PhD students who work in the projects. The SNSF has not adjusted their salaries to the development of nominal wages in Switzerland since 2014.
- The SNSF's career funding offers researchers additional options at the beginning of their careers. We complement the activities of the universities and contribute to the diversity of the Swiss research landscape.
- Programmes are focused on specific overarching goals or themes. Nevertheless, the individual research questions and approaches emanate from the researchers. In the programmes, we enable research groups from different institutions to join forces.
- We promote infrastructures based on strategic considerations. They can be crucial to the development of entire research areas.
- In addition, the SNSF promotes exchanges between researchers as well as dialogue between researchers and the public.

Finances 2025-2028

In order to implement the planned goals and measures, we will need federal contributions of 5.17 billion Swiss francs in the 2025–2028 period (see Table 1)¹. This corresponds to linear budget growth of 3.5 per cent per year². This calculation takes into account savings made by forgoing elements of existing funding measures as well as the reserves that are expected to be available at year-end 2024.

In 2025–2028, we intend to approve new grants in the existing funding schemes at the 2024 level. This will not include project funding, which we want to strengthen in a targeted manner, and the NRPs, whose contributions we are increasing on behalf of the State Secretariat for Education, Research and Innovation (SERI). We are also discontinuing some schemes as of 2025.

As requested by the federal government, we have created a multi-year programme based on scenarios and assigned priorities. The definitive priorities in respect of the planned measures will be set on the basis of the ERI dispatch 2025–2028.

¹ Contributions for transitional measures in connection with Horizon Europe are not included.

² Growth for 2025–2028 was calculated based on the inflation-adjusted baseline of 1184.4 million Swiss francs for 2024 as cited by SERI.

-2028 ft Projects 615 632 667 703 728 2,730 Careers 205 199 195 194 206 795 Programmes 32 40 52 54 55 202 Infrastructure 40 32 25 25 108 55 Science 23 23 23 23 23 90 56 Total I 913 926 962 999 1,038 3,925 NRPs 15 20 20 20 80 55 NCCRs 55 55 55 55 220 Additional federal mogrammes 20 20 20 79 Total II 1,003 1,021 1,057 1,094 1,133 4,305 Service provision 76 77 80 82 85 324 Indirect costs of higher education institutions (Overhead) 124 128								
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	Total III⁴	1,202	1,226	1,270	1,314	1,360	5,169	360

Table 1 Overview of the required federal contributions 2025–2028 (in CHF million)

³ The additional funds are calculated as the difference between the 2025–2028 funding requirement and four times the relevant 2024 amount.

⁴ Total III for 2024 is equal to the figure from the 2021–2024 service level agreement.

1 Introduction



1 Introduction

1.1 The Swiss National Science Foundation

The Swiss National Science Foundation (SNSF) is Switzerland's principal research funding institution. On *behalf of the government*, we promote the full range of topics and methods found at higher education institutions across Switzerland. Thousands of researchers receive financial support from the SNSF to study nature and technology as well as cultural and societal issues. Their findings are a key pillar of progress.

The SNSF awards all grants in *competitive procedures* that meet the highest international standards. This is how we ensure the quality of research «Made in Switzerland». Every year, we receive around 6,000 grant applications, from which evaluation panels of 1,000 top researchers in total – supported by almost 10,000 external reviewers – select the most promising ideas.

We offer various funding schemes which we continuously adapt to the needs of research and researchers. In the majority of schemes (80 per cent of total funding), *researchers propose their own topic*. In this way, we encourage creativity and enable researchers to stay in sync with the latest developments in their field, conduct relevant research and achieve scientific breakthroughs. This approach contributes significantly to the quality and relevance of research and sets the SNSF apart from the vast majority of funding organisations in other countries.

Every year, based on our competitive processes, we approve funding for approximately 2,500 projects that advance research with innovative ideas. Some of these are projects by young researchers (800), who will then be optimally positioned to pursue a career within or outside academia. In this way, by *supporting good ideas and bright minds*, the SNSF contributes to science-based innovation. This is a key pillar of progress and prosperity, and the best possible investment for tackling future societal challenges.

The SNSF promotes collaboration between researchers from different universities, disciplines and types of research. In doing so, we enable teams throughout Switzerland and internationally to build up their networks. We support stays abroad by researchers from Switzerland and enable scientists from abroad to conduct research at a Swiss higher education institution. We use various formats to support international collaboration among researchers in Switzerland in around 1,200 of the projects we fund each year. To this end, we, as an organisation, maintain our own extensive international networks. The SNSF participates in the most important bodies for the further development of research funding; we have established ourselves as one of the pioneers in this area.

The SNSF significantly shapes the *development* of research and research practices in Switzerland. We often initiate pioneering practices and standards through our funding policy. Examples of this are real equal opportunities for women and men in research, the early independence of young researchers, and free access to research results (open access) and the related data (open data).

Research funding on behalf of the federal government

The SNSF's mandate is set out in the Federal Law on the Promotion of Research and Innovation (RIPA). In addition to the awarding of funds for outstanding projects and early-career researchers, the promotion of infrastructures (insofar as they are not the responsibility of the government or the universities) and international cooperation are defined as core tasks. Our current multi-year programme is integrated into the four-year Education, Research and Innovation Dispatch (ERI Dispatch) 2025–2028. The Dispatch defines the priorities, goals and measures as well as the budget of the SNSF and is further specified in a four-year service level agreement.

⁵ Organisation for Economic Co-operation and Development (OECD), Main Science and Technology Indicators, «Gross domestic expenditure on research and development (GERD) as a percentage of gross domestic product (GDP)», 2019.

1.2 Strengths and challenges of Switzerland as a centre for research and innovation

Switzerland's *performance* is reflected in top rankings for various research and innovation indicators (e.g. in the European Innovation Scoreboard or in terms of publication impact). But other scientific nations and regions are catching up. For example, although Switzerland's investment in research and development as a percentage of GDP has been higher than the global and European averages for years, a number of research-intensive nations such as Germany and Israel now invest more⁵.

In Switzerland, the public research and innovation actors (e.g. the SNSF, Innosuisse and the universities) have the necessary *autonomy*. This ensures effective use of funds, even if some topics (e.g. infrastructures) would require greater coordination. Students and young researchers in Switzerland have access to universities of the highest quality. The research community maintains *networks* in all parts of the world. With CERN, Switzerland hosts one of the most renowned international infrastructures and is in turn well connected to other international, especially European, research infrastructures.

With SNSF and Innosuisse, the federal government finances two internationally renowned funding agencies that work closely together. Their complementary portfolios support new and unconventional collaborations between institutions and professional cultures beyond the capabilities of universities, and initiate research and innovation in new fields. At the same time, the SNSF and Innosuisse safeguard and develop the excellent quality of Swiss research and innovation through their competitive procedures at national level. This gives Switzerland a good basis for combining and strengthening its forces. Even if the starting position is basically positive, some achievements of the Swiss science system are at risk, especially due to political and social developments. *Challenges* have so far mainly concerned the *research system and culture*: high publication pressure affecting research culture; underrepresentation of women; lack of openness to certain types of research; and unclear roles in infrastructure funding.

On the other hand, new challenges are emerging outside the Swiss research system. First and foremost, the increasingly volatile international environment that threatens crossborder research collaboration in Europe and around the world. In particular, the current *non-association to Horizon Europe* significantly reduces the attractiveness and integration of Switzerland as a centre for research. It endangers the competitiveness of Swiss research. This makes national and international cooperation even more important, in Europe and around the world.

In addition, the research community needs to strengthen its commitment to *sustainable development* in view of the *existential threat to the Earth as a habitat.* Research can make an important contribution to the Sustainable Development Goals, but its potential is not fully exploited. To accelerate the application of research results, better understanding of value creation processes and more exchanges between researchers and other stakeholders in society are needed.

1.3 Our ambition for research in Switzerland

The SNSF is meeting the challenges facing research in Switzerland with a long-term strategy:

Safeguarding and promoting diversity in research

It is crucial for Switzerland to *exploit* the *full potential of its research* so that it does not miss out on important developments, but can help shape them. Revolutionary new discoveries are usually not predictable and plannable; rather they are often the result of thematically free and curiosity-driven research. For this reason, our aim is to provide opportunities for a wide variety of researchers, topics, disciplines and types of research, and to facilitate an open and fair research culture. Diverse perspectives and methods are an important prerequisite for the relevance and effectiveness of research.

As the most important actor in public funding, the SNSF addresses this with suitable funding schemes and practices. In recent years, we have developed our evaluation processes and tools to ensure that they are open to all researchers and types of research (see «Review» below). With financing getting tighter, the goal of diversity is more difficult to achieve, as we are increasingly forced to reject even very good research projects that are worthy of funding. In the coming years, the challenge will be to counteract this development. In this context, we want to continue our efforts to ensure that underrepresented groups in research (especially women) can develop their potential. It is equally important to adequately promote interdisciplinary, transdisciplinary and useinspired research alongside highly specialised basic research (see sections 2.2, 2.3, and 3).

Making research more socially relevant

The rapid development of solutions to current societal problems is only possible if the foundation has already been laid through curiosity-driven basic research that is not application-oriented. However, it is also important for Switzerland as a centre for innovation that the results of publicly funded research are applied as fully and rapidly as possible. This calls for short distances between research and innovation partners in complex value creation processes. We want to promote interaction between stakeholders, accelerate the transition from knowledge to application wherever possible, and support effective dialogue between research and its stakeholders (see section 2.2). This is particularly true in the context of sustainable development: on the one hand, research can develop sustainable solutions to existing problems; on the other hand, it must itself act sustainably (see section 2.3).

Last but not least, scientific findings will only be put into practice or taken into account in decision-making if the public and politicians have confidence in research and perceive it as a value-adding partner. To embed research in as many areas of life as possible and to actively combat disinformation and hostility to science, it is necessary to *expand the dialogue with society and political decision-makers*. This requires interactive communication that is understandable, empathetic and based on scientific findings.

Ensuring that Swiss research is fit for the future

Research «Made in Switzerland» must continue to produce innovative ideas and attract bright minds in order to maintain or expand its leading international position. To this end, we want to shape effective, future-oriented framework conditions. In the coming years, the biggest challenge will be the complex political environment in Europe. The SNSF must use suitable instruments to safeguard *international cooperation for researchers in Switzerland and ensure the attractiveness of Switzerland as a research location for researchers from abroad* (see section 2.1). National research cooperation also needs to be strengthened as a means of maintaining competitiveness. At the same time, excellent research is increasingly built on data and data infrastructures. Against the background of multiple actors and long-term costs in this area, Switzerland must in the coming years develop a *clear separation of roles and responsibilities* that creates added value through high-quality research within the country (see section 2.4).

In the past, the SNSF has shown that it can react quickly to new developments – be it in connection with the non-association to Horizon Europe or the Covid-19 crisis. Drawing on our knowledge of research projects throughout Switzerland, we want to play an even more active role in shaping research in Switzerland in the future – so that it is always at the frontiers of knowledge and contributes to solving urgent problems.

Strengthening the resilience of research

All three of the strategic focus areas mentioned above help to ensure that research can make important contributions in times of crisis. The Covid-19 pandemic has shown that without initially purely curiosity-driven basic research (e.g. on coronaviruses), it is not possible to develop solutions (e.g. vaccines and drugs) to acute problems. The pandemic has also highlighted the great importance of national and international research collaboration. It has shown that good networks of research and innovation actors and, above all, the dialogue between researchers, politicians and the public are central to successful crisis management.

The framework conditions for research must be flexible and straightforward so that it can function effectively in times of crisis and produce solutions quickly and without the need to cut back on important research investments in other areas.

Review - what we have achieved in the past few years

Concept of excellence

To create clarity and transparency, we have developed an excellence model that describes the kind of research we want to promote – always with the aim of creating knowledge for the benefit of society. We support the implementation of the San Francisco Declaration on Research Assessment (DORA), which aims to counteract high publication pressure and to measure scientific performance fairly through awareness-raising measures and adjustments to evaluation. We have put central aspects of open science on the research policy agenda with our Open Access and Open Research Data (ORD) policies in Switzerland and are implementing them ourselves.

Innovation in evaluation procedures

Based on the above principles, we piloted changes in evaluation (for example, narrative CV, double-blind evaluation and lottery procedures). We are analysing the extent to which such changes affect the quality and effectiveness of evaluation. We are doing so in close coordination with international partners and the research community, e.g. in the Research on Research Institute (RORI). We make our data available for research on research wherever possible. Internationally, the SNSF is perceived as a pioneer in terms of funding policy.

Innovation in funding schemes

We have tested new funding schemes: for the rapid promotion of unconventional ideas (Spark), equality (PRIMA) and intersectoral mobility (Practice-to-Science), at the interface between research and innovation (BRIDGE) or for research infrastructures (e.g. BioLink). We assess goal achievement internally or externally and draw appropriate conclusions. In some cases, we modify the schemes (Spark, BRIDGE), in others we integrate them into existing funding schemes (PRIMA), and in yet others we critically monitor goal achievement (Practice-to-Science).

Responsiveness

In various contexts, the SNSF has shown that it can respond quickly and effectively to new challenges. In February 2020, we launched a special call for research on coronaviruses, followed by two National Research Programmes (NRPs) on Covid-19. In 2021, as in 2014, we created transitional measures for European Research Council (ERC) instruments and for the Marie Skłodowska-Curie Fellowships in a short period of time. And in early 2022, we rapidly and unbureaucratically provided support measures for researchers affected by the war in Ukraine.

Development of the organisation

We are continuously developing processes and structures within the SNSF in order to be ready to meet further challenges and achieve new goals. In spring 2022, we reorganised the Administrative Offices to further increase flexibility and efficiency. By 2024, we aim to review the roles and responsibilities of all bodies of the foundation and adapt the statutes in order to make the entire SNSF more agile and fit for the future.

1.4 Contribution and needs of the SNSF for 2025–2028

Two *distinctive features* of the SNSF enable us to make a decisive contribution to meeting the challenges ahead:

- Research orientation: We are an organisation of researchers that promotes research and our funding schemes are designed to meet research needs. In most schemes, we do not prescribe topics, thus keeping our finger on the pulse of the new ideas emanating from within the research community. The diverse range of funding gives us an excellent overview of research in Switzerland. If necessary, we can set forward-looking topics, provide advice on key challenges (e.g. in the field of sustainable development) or create incentives for future-oriented practices (e.g. data-driven research)
- Collaboration and networking: We have many years of experience in incentivising and organising research collaborations at both national and international level. Agreements with numerous countries simplify crossborder partnerships. In a currently unstable international environment, this know-how carries considerable potential for ensuring that Swiss scientists can keep up with the frontrunners in global research.

Against the backdrop of the challenges, opportunities and strengths described above, the SNSF intends to focus in particular on the following *priorities* in the coming years:

- reinforce our support for collaborative research by researchers in Switzerland and increase Switzerland's appeal as a research destination for scientists from abroad (see section 2.1)
- improve and accelerate the use of research results and the interactions between research and application where possible (see section 2.2)
- strengthen the commitment of Swiss research to sustainable development (see section 2.3)

 Promote research skills for the digital transformation of science and create firstclass framework conditions for open, datadriven research (see section 2.4).

These priorities support the transversal themes of the ERI Dispatch (see section 3) and the strategic priorities of the SNSF (see section 1.3).

One of the ways we aim to achieve our goals is by *promoting cooperation at all levels:*

- between researchers at national and international level
- between researchers and innovators
- between researchers and actors beyond science
- between the SNSF and its national and international partner organisations
- between the SNSF and the universities

To achieve its goals, the SNSF needs adequate funding. Our statutory duty is to promote excellent research in Switzerland in all its diversity. However, budget development in recent years has not been able to keep pace with the permanent and rapidly growing demand for funding. In project funding, demand has increased by 5 per cent annually since 2017. In addition to the growing needs of researchers at universities, we also have to cater to a growing number of new target groups, e.g. at universities of applied sciences (UASs) and universities of teacher education (UTEs). This represents a major challenge in view of the budget-related sharp drop in approval rates for project funding. The mismatch between budget and demand acts as a potential «brake on innovation». Having good prospects of receiving a grant for freely chosen, outstanding research projects is also a key feature that makes Switzerland attractive to top researchers from around the world.

Overall, the share of government money awarded in Switzerland for R&D on a project basis and thus in a competitive process is low compared to other countries. Most of the funding goes directly to the universities (institu-

1 Introduction

tional funding)⁶. However, internationally underpinned, Swiss-wide quality benchmarks, a healthy degree of competition and incentives for collaboration across universities are crucial. The SNSF offers all of this as an independent, national organisation that has a broad basis in the research community.

Another success factor is the SNSF's autonomy, which is enshrined in the Federal Act on the Promotion of Research and Innovation (RIPA). Within the legal framework, the SNSF is expected to be able to act autonomously and thus rapidly and effectively. In recent years, it has received an increasing number of additional mandates, provisions and agreements from the federal government. This development illustrates the high standing of the SNSF, but also restricts its area of competence. Having enough room for manoeuvre has become even more important, especially in an uncertain world, in order to act rapidly and boldly: be it with a larger programme at the very beginning of the Covid-19 crisis or simultaneous calls for proposals after the exclusion from ERC funding schemes. In general, it is of great importance for the quality and flexibility of scientific research in Switzerland that the SNSF remains an organisation run by researchers for researchers.

The last two years - from the Covid-19 pandemic to the war in Ukraine - have shown how quickly the world can change and how difficult it is to plan for the long term. The 2025–2028 period is still relatively far away, and there is currently a great deal of uncertainty in Europe. The SNSF's proposals for this period are therefore at a corresponding level of abstraction. We need sufficient flexibility with regard to implementation so that we are able to take future developments into account. In this context, we will also take due account of the results and recommendations of the current overall evaluation of the SNSF by the Swiss Science Council (SSC), which were not yet available at the time of writing.

⁶ Eurostat, «Staatliche Budgetzuweisungen für FuE nach Finanzierungsmodus» (Government budget allocations for R&D by funding mode), 2022. <u>https://ec.europa.eu/eurostat/databrowser/view/gba_</u> fundmod/default/table

2 Priorities for 2025-2028



2 Priorities for 2025–2028

2.1 Strengthening international collaboration and competitiveness

In brief

Uncertainty in the European and global environment threatens the participation of researchers from Switzerland in the international research community. Hence, the SNSF's previous approach of enabling international collaboration across its funding portfolio is no longer sufficient. We therefore propose additional measures to ensure Switzerland maintains its diverse participation in the international research scene. With these measures, we aim to strengthen the competitiveness of Swiss research independently of the opportunities for association to the European Research Framework Programmes.



Challenges

Research is international: researchers share knowledge and new ideas across borders. This is the only way they can answer society's pressing questions – whether about climate change, pandemics or artificial intelligence. They cooperate in international consortia of different sizes. Together, they generate and process huge amounts of data and build infrastructures that would overburden a single country. In addition to collaboration, competition among the world's best researchers is an indispensable means of guaranteeing research of high quality.

It is still uncertain whether our country will be able to regain its association to the European Research Framework Programmes. Therefore, the Swiss research community is threatened with being marginalised across networks and largely excluded from European competition. The first time Switzerland was excluded from the Framework Programme, in 2014, its participation in international consortia was affected for years7. This shows that uncertainty about future participation alone harms Swiss research not only in the short term, but also in the long term. We must resolutely counteract the impending isolation of our researchers before it further reduces the international competitiveness of Swiss research.

Opportunities

- Researchers in Switzerland have extensive networks, are considered desirable partners for joint research projects and benefit from the advantages that Switzerland brings as a centre for research.
- The SNSF also has very good networks: agreements such as Weave, Lead Agency or International Co-Investigator Scheme with an increasing number of funding organisations now enable uncomplicated collaboration between individual research teams. On behalf of the federal government, the SNSF funds partnerships with selected countries (bilateral programmes).
- The existing networks hold the potential for more extensive partnerships with a broader, longer-term reach and provide additional leverage vis-à-vis larger countries.
- The SNSF's autonomy and agility enable it to respond flexibly and rapidly to changing conditions.

Aims and measures

Better support for international collaboration through existing funding schemes

As mentioned, the SNSF has in recent years signed an increasing number of agreements (Weave, Lead Agency, International Co-Investigator Scheme) that facilitate crossborder collaboration through existing funding schemes. To avoid having to choose between excellent national and international projects when funds are scarce, we want to increase the budget for such collaborations. Since most agreements link the SNSF with European partner organisations, we are simultaneously promoting more cooperation within Europe.

At the same time, we want to expand our networks beyond Europe and the global West. Where feasible, we seek to evolve from bilateral to multilateral agreements to enable broader and more diverse collaborations among researchers. We want to continually increase our participation in multilateral cooperation (e.g. European Partnerships, Belmont Forum for sustainable development research) so that

⁷ State Secretariat for Education, Research and Innovation (SERI), «Aktualisierter Auszug: Zahlen und Fakten zur Beteiligung der Schweiz am 8. Europäischen Rahmenprogramm für Forschung und Innovation» (Updated extract: Facts and Figures on Switzerland's Participation in the 8th European Framework Programme for Research and Innovation), 2021. <u>https://www.</u> sbfi.admin.ch/dam/sbfi/de/dokumente/2020/05/ frp-8-update.pdf.download.pdf/update_ff_d.pdf

researchers from Switzerland can help shape and drive trendsetting collaborations.

Promote research-driven consortia with international participation

With the above agreements, we provide opportunities for international collaboration at project level within the existing funding portfolio and facilitate the participation of Swiss researchers in international thematic initiatives. As of 2025, we will create additional incentives for researchers to tackle larger projects together with partners in Switzerland and abroad. We want to provide flexible support for researcher-initiated medium-sized consortia. These are larger than projects in the project funding scheme and smaller than National Centres of Competence in Research (NCCRs). The SNSF wanted to fund research in such consortia as early as 2021–2024, but did not receive the necessary financial resources for that period. We would like to revisit the measure for 2025-2028 because the goals associated with it have become even more relevant:

- Pool resources for important current issues and open up new areas of knowledge.
- Keep Switzerland at the forefront of the latest research developments and strengthen the international position of Swiss researchers for specific topics.
- Ensure that Swiss research groups are able to play a leading role in international consortia.

The consortia can, but do not necessarily have to, work in an interdisciplinary and applicationoriented manner.

Attracting talent from abroad to Switzerland

With its career funding schemes, the SNSF is already helping to attract talent from abroad to Switzerland. With Ambizione, for example, researchers in Switzerland are in direct competition with upcoming researchers who want to come to our country. In this way, we also ensure that all recipients of an Ambizione grant are highly competitive internationally. In the 2025– 2028 period, the SNSF would like to expand its offer for talented young scientists from abroad. This will help increase Switzerland's appeal as a place to do research.

Budget requirements for the planned measures

In order to strengthen the international lead of Swiss research groups in the long term and to promote medium-sized consortia, the SNSF needs an annual budget growth of 3.5 per cent in the 2025–2028 period. With 2.5 percent, we could promote talent from abroad and increase the budget for collaborative projects, but not fund the consortia. At 1.5 percent, only a minimal increase in the budget for collaboration on projects would be possible.

2.2 Exploiting research potential in its entirety

In brief

The SNSF places particular emphasis on funding basic research, but also aims to ensure funding for all other types of research. We want to support collaboration between researchers and non-scientific actors so that results from research projects are used more quickly and extensively. To this end, we are optimising existing schemes (implementation networks, BRIDGE, Investigator Initiated Clinical Trials).



Challenges

The SNSF funds all types of research, from basic to use-inspired. We place particular emphasis on basic research. The focus is always on the quality of the research and the potential for knowledge gain. This focus should remain, because we are convinced that research projects driven by curiosity make an essential, long-term contribution to progress in society and the competitiveness of the economy.

However, the transition from research to the use of scientific knowledge in technology, education, medicine or politics is often slow and cumbersome. It is a complex problem: cultural differences and incompatible incentive systems impede collaboration between researchers and non-scientific actors and inhibit the development of shared quality standards. In addition, translation between research and application takes time, is not easily predictable or plannable, and therefore requires a willingness to take risks on the part of everyone involved.

We now know that new findings are not transferred in a straight line from basic research via use-inspired research to practice. Value creation is long-term and hardly plannable. It results from a complex interplay between actors. We want to promote this interaction in order to – where possible – accelerate the exploitation of research results.

Opportunities

- The SNSF has a nationwide overview of the latest research developments across all disciplines. It can synthesise existing research findings to support their further exploitation.
- In addition, interactions with non-scientific actors give rise to further research questions and additional knowledge gains for basic research.
- The SNSF already offers funding opportunities that are well suited to research with specific application potential and on which we can build: e.g. the NRPs, the Investigator Initiated Clinical Trials programme and the

BRIDGE programme. We will also be testing implementation networks for researchers and non-scientific stakeholders in the 2021–2024 period.

 The SNSF and Innosuisse have established close cooperation to cover the interface between research and innovation, including within the framework of BRIDGE.

Aims and measures

Promote synergies and exchange

Diverse interactions between researchers and non-scientific actors strengthen the social relevance and implementation potential of research⁸. Therefore, we want to specifically promote these interactions along the value creation processes, from the definition of research questions to the dissemination of results.

- In the case of NRPs, we want to involve non-scientific actors from the outset, i.e. already at the feasibility assessment and evaluation stage.
- We would like to systematically evaluate and synthesise the results from funded projects. In this way, we want to show what impact the research is already having, what further questions are emerging and how the results could be utilised further.
- As mentioned, to accelerate the exploitation of research results, we will be testing implementation networks in the 2021–2024 period. These are intended to facilitate and stimulate exchanges between researchers and potential users from the private and public sectors. If the networks are successful, we plan to continue and expand them in 2025–2028.

⁸ Molas-Gallart, J., and P. Tang. «Tracing Productive Interactions to Identify Social Impacts: An Example from the Social Sciences», 2011. <u>https://doi.org/10.3152/09582021</u> <u>1X12941371876706</u>

 We want to offer consulting opportunities for researchers who are looking for partners to exploit their results. There is potential here for collaboration with Innosuisse, which already runs mentoring programmes, but with a focus on users.

New research questions can arise from closer interactions between researchers and nonscientific actors. This should also lead to greater mutual understanding. Our goal is that this should have a positive effect on the research culture and thus also on the evaluation culture at the SNSF and the diversity of the funded projects. Considering translational aspects in the funding of collaborations is one example of this.

Strengthen clinical research

Thanks to clinical trials, new medical findings can be transferred directly to patient care. Such studies make an important contribution to society by promoting a scientifically based, patient-centred and efficient healthcare system. They are long-term, usually require a multicentre setting and often international collaborations. Therefore they incur high costs. In the Investigator Initiated Clinical Trials programme, the SNSF funds studies, initiated by researchers, that are not in the industry focus. The choice of topics is highly selective and the funded clinical trials meet the highest international quality standards. Between 2025 and 2027, we would like to:

- Strengthen patient and public participation in the choice of study topics and design, and in the conduct of studies.
- Provide mentoring and training for young clinical researchers.
- Support research into trial methodology (e.g. trial design, recruitment and monitoring) to enhance the efficiency of clinical research.
- Cover rising costs of studies.
- Fund longer-term projects, e.g. cancer studies with five-year survival rates.
- Facilitate (inter)national networks of clinical trial leaders.

With these optimisations, the SNSF is also taking up key recommendations from the «Clinical Research» white paper of the Swiss Academy of Medical Sciences (SAMS).

Expand BRIDGE together with Innosuisse

With the BRIDGE programme, the SNSF and Innosuisse have since 2017 been funding researchers who want to develop their scientific results with high implementation and innovation potential. BRIDGE offers two funding opportunities:

- Proof of Concept is aimed at young researchers who want to develop an application or service based on their research results.
- Discovery is aimed at experienced researchers who want to investigate and implement the innovation potential of research results.

Both funding opportunities are a success: the 121 proof-of-concept projects between 2017 and 2020 have already resulted in 79 startups (April 2022). The impact of the discovery projects cannot yet be gauged because of their longer duration. The broadbased participation in this funding opportunity is particularly gratifying as it meets one of the programme goals: the project leaders are from the ETH Domain (27 per cent), from universities (35 per cent) and from universities of applied sciences (23 per cent).

Competition for BRIDGE funding is fierce, with 22 per cent of applicants being successful in Proof of Concept and only 12 per cent in Discovery. In both funding options, the participation of women is too low at around 25 per cent. An interim report on the external evaluation of the BRIDGE programme provided initial recommendations for its development, which have been incorporated here.

- In 2025–2028 Innosuisse and SNSF want to:
- further diversify BRIDGE by strengthening the promotion of social innovation and using appropriate measures to increase the participation of women, UAS / PH researchers, and younger target groups.

extend funding and expand towards implementation. Systematic consulting services are intended to help younger target groups in particular (Proof of Concept) to bridge cultural differences between research and application and establish contacts to expedite implementation. In Discovery, the evaluation of grant applications should focus even more strongly on the implementation potential of projects.

Budget requirements for the planned measures

The SNSF can only implement these measures with an annual budget growth of 2.5 per cent. With 1.5 percent, we could expand BRIDGE and Investigator Initiated Clinical Trials, but not expand implementation networks or offer consulting opportunities to researchers.

Strategic partnership between SNSF and Innosuisse

Research and innovation fuel each other: scientific breakthroughs lead to unexpected innovations – problems in business and society inspire science. That is why Innosuisse and the SNSF work closely and effectively together as national organisations that provide public funding for research and innovation. While the SNSF supports all types of research aimed at acquiring new knowledge, Innosuisse promotes science-based innovation. Our common goal is to create a strong and efficient public funding and innovation environment. We coordinate our strategies to ensure the best possible implementation of research results for the benefit of the business sector and society at large. In 2021, we formalised a collaboration that has been ongoing since 2017 in a memorandum of understanding.

As Figure 1 shows, the respective funding schemes of the SNSF and Innosuisse and the funding opportunities jointly offered under BRIDGE complement each other well. Nevertheless, it is a declared goal of both organisations to continue optimising our interfaces and strengthening the exchange. We will be able to make even better use of synergies in the future with the following measures:

Further develop the joint BRIDGE programme

Based on an external evaluation, we aim to diversify participation in BRIDGE and enhance the programme's contribution to the implementation of research results (see section 2.2 and letter (a) in Figure 1).

Strengthen institutionalised collaboration on thematic schemes

In funding schemes with a thematic focus, both funding organisations want an intensive exchange of expertise and experience, allowing us to exploit the full potential of the dynamic between research and innovation. The SNSF and Innosuisse want to better identify the extent to which topics of scientific interest can specifically create added value for the economy and society as a whole. Conversely, we want to identify innovation projects that can provide stimuli for research.

2 Priorities for 2025-2028

The SNSF aims to strengthen the transfer of research results into practice, notably in NRPs. With the involvement of the State Secretariat for Education, Research and Innovation (SERI), greater involvement of Innosuisse in both the creation and the management of NRPs is to be examined. Innosuisse, in turn, will examine SNSF thematic projects, especially NRPs, for their potential for future flagship topics when setting topics for flagship initiatives (see letter (b) in Figure 1). Furthermore, the SNSF and Innosuisse participate jointly in certain European Partnerships.

Exploit synergies in the promotion of networks

For the interface between research and innovation to be effective, the exchange of ideas, knowledge and know-how between science, industry and society is of central importance. Both in research and in application, the success of a project depends on the involvement of all relevant players in the subject area. In the case of thematic overlaps between implementation networks of the SNSF and network activities of Innosuisse, we want to intensify our exchange and jointly approach the establishment of expert pools (see letter (c) in Figure 1).

Promote mutual understanding between research and practice

To ensure high permeability of ideas from research to application and equally from application to research, differences in values and culture must be known and taken into account. The aim is to create a common basis and to constantly foster the dialogue between research and application. In the new funding period, Innosuisse and the SNSF would like to promote this dialogue through exchange programmes and mentoring (see letter (d) in Figure 1).



Figure 1 Positioning of the funding schemes of the SNSF and Innosuisse

²³

2.3 Working together for a sustainable future

In brief

Both in its research funding and in its own operations (Administrative Offices, honorary bodies), the SNSF contributes to the United Nations (UN) 2030 Agenda. The UN goals of sustainable development for a better life for all people - within planetary limits matter a great deal to us, and we are already funding numerous projects in this context. That said, existing funding schemes are approaching their limits. We there-fore want to specifically promote transdisciplinary research that is particularly effective in supporting the Sustainable Development Goals. In addition, researchers and the SNSF itself must act in a manner that is sustainable.



Challenges

Global challenges such as climate change, political instability or resource scarcity pose an existential threat to humanity and the ecosystem. Research must develop solutions, but also stimulate thought and changes in the system. Because the challenges affect all domains, systems and dimensions of our habitat, they cannot be researched and fully covered by single disciplines or actors. Intensive collaboration is required between researchers from different disciplines and between researchers and non-scientific actors from business, politics, civil society or nongovernmental organisations.

What is needed is joint knowledge production (co-creation). Researchers and non-scientific actors must work together to identify and prioritise problem areas in the highly complex relationships between society and the environment where research can make a difference. Concrete solutions can then be developed, tested and adapted based on the research results, and with the involvement and interaction of all stakeholders concerned. In this way, the necessary innovations and changes in behaviour can be implemented and embedded in society.

To ensure that such transdisciplinary approaches succeed, the SNSF aims to offer long-term funding schemes that are open in terms of design and results. Such schemes facilitate joint learning processes so that new insights can be directly incorporated into projects. Current research cultures and funding schemes do not optimally support these approaches and interactions. For example, researchers' practical and transformational knowledge should be a more important selection criterion than publication metrics.

Opportunities

- Researchers in Switzerland are strongly positioned internationally in relevant research fields, e.g. the environmental sciences, and the SNSF is already funding numerous relevant projects.
- Novel, more interactive research approaches generate actionable knowledge for a more sustainable society as well as technical and social innovation.
- The SNSF can join forces with partners in new collaborations, notably the Academies of Arts and Sciences, Innosuisse or private foundations.
- The global challenges and the high societal relevance and urgency of sustainable development also represent an opportunity to attract additional private resources for promising research.

Aims and measures

Promote research on sustainable development in living laboratories

Basic research on sustainable development issues continues to play an important role. However, the SNSF intends to strengthen the link between basic research and solution orientation in this topic area in the future. We want to promote so-called living laboratories for sustainable development. In this way, we will be offering researchers and non-scientific actors a new forum. Here, they will be able to jointly define and prioritise relevant problems and generate actionable research aimed at real-world solutions and behavioural adaptations. Research findings are translated and embedded in society.

In the living labs, non-scientific actors are given the opportunity to present what they see as the most pressing problems. Knowledge users are thus involved in problem definition and prioritisation, creates a sense responsibility, pools forces and paves the way for cofinancing. Interdisciplinary research teams and non-scientific stakeholders come together to iteratively develop common solutions through co-creation over six to seven years. The Swiss «Sustainable Development 2030» strategy with its thematic areas «Sustainable Consumption and Production», «Climate, Energy and Biodiversity» and «Equal Opportunities and Social Cohesion» provides an open framework for the living labs in terms of discipline. Going further, in a participatory process, the Academies of Arts and Sciences have defined the priority research topics that can guide the SNSF: from sustainable food and economic systems to shared values and visions for sustainability.

The funding format of living labs complements the funding of sustainable development research in existing schemes. Based on the experience with the new format, we will examine the extent to which it is also suitable for other topics or to what extent insights can be derived from it for the design of existing funding schemes. The SNSF would also welcome it if the next series of NCCRs were related to sustainable development and launched in an accelerated procedure.

Setting incentives for sustainable research

For research to make a comprehensive contribution to sustainable development, it must itself use resources sustainably, whether in the laboratory or at international conferences. In collaboration with the universities, the SNSF aims to create structures and incentives for sustainable research. We will also support initiatives such as the development of tools to measure the carbon footprint of research activities. Promoting gender equality and ORD also contributes to the Sustainable Development Goals (see sections 3 and 2.4). Last but not least, the SNSF aims to make its own activities sustainable (see section 5).

Budget requirements for the planned measures

To advance research for sustainable development, the SNSF requires budget growth of 2.5 percent annually. If growth is lower, it will only be able to support this research area within the framework of existing schemes, e.g. with an NCCR call for proposals on sustainable development.

2.4 Expand, extend and critically reflect on digitalisation in science

In brief

Current methods of digitisation have greatly changed science and society. And yet we are still at the beginning of the digital transformation. Increasing computing power and highly complex models developed with the help of artificial intelligence will offer entirely new opportunities for gaining knowledge – and bring new challenges. The research skills required for this are not yet sufficiently established in Switzerland, and we want to specifically promote them with an offer for young researchers. By supporting the FAIR principles and ORD as well as data infrastructures and services (DIS), we provide excellent framework conditions for research.



Challenges

Over the past 20 years, science has tried to mimic humans with machines. And using powerful computers, it has calculated models designed by humans. The amount of data is already so large that humans can no longer analyse and use it without a computer. The current methods of digitisation (machine learning and efficient algorithms for data storage and analysis) have greatly advanced science, society and politics – and raised questions: about the traceability of methods, the legitimacy of influence and the social impact.

Now another revolution is on the horizon: in the future, machines will have such great computing power and storage capacity that they will develop models themselves with the help of artificial intelligence. Humans will want to use and control these possibilities even though they do not understand the underlying models in detail. Novel methods will emerge from this, which in turn benefit science, society and government policy.

New research on decision-making mechanisms is needed when human experts cannot be consulted or can only be consulted insufficiently due to the high complexity or the enormous speed of decision-making. The interface between the levels of societal value formation and the scientific facts must be clearly defined in the future and made available for autonomous decision-making processes.

In order for researchers to make scientific use of the opportunities associated with digitisation, they need:

- Research competencies for shaping the upcoming digital transformation.
- Competencies to use the novel methodologies.
- The capacity for critical reflection.
- High quality, interoperable data and a willingness to share it.
- Well-coordinated research infrastructures and services that support the new methodologies and make them accessible.

Opportunities

The next wave of digitalisation now on the horizon brings entirely new opportunities and challenges for science, society and politics.

- By generating ever-larger volumes of increasingly sophisticated data, researchers can use artificial intelligence to develop highly complex models. This allows them to explore problems that were previously beyond their reach.
- The digital transformation is also bringing about a paradigm shift in the methodology of (almost) all sciences. In the future, evidenced-based models will be generated from huge volumes of data – also with the help of artificial intelligence – and used to predict and explain natural, cultural and social phenomena. For example, researchers in almost all disciplines will be able to study problems of high complexity and considerable uncertainty.

The groundwork will be laid here over the next 20 years. The Swiss science sector is well positioned to play an active and leading role in shaping this new wave of digitalisation and reflecting on its potentials and dangers.

Aims and measures

Strengthening research competencies in view of the digital transformation

Digital transformation makes it possible to explore previously unknown and inaccessible model worlds with traditional quantitative methods and to use them for the benefit of society and the economy. The SNSF, as the nation's biggest funding organisation, wants to contribute to positioning Switzerland at the cutting edge of international research related to this fundamental expansion of scientific methodology. Our proposals for the 2025–2028 period:

 In order to build and strengthen research competencies for the digital transformation, we want to launch a funding opportunity for young researchers called «Digital X», where X is a variable for a scientific field. To underpin today's knowledge-based society, the SNSF is encouraging new research programmes (NRPs) on the topic of «Digital transformation and societal value formation». Ongoing NRPs are not yet geared to the opportunities that are just opening up, which is why they cannot sufficiently prepare for and follow the paradigm shift in science that will occur in the next few years.

With these measures, the SNSF wants to help ensure that the digital transformation is perceived as an opportunity for Swiss society and used accordingly.

Incentivise discoverable, accessible, interoperable, reusable and open research data

In many research fields, data is a prerequisite for scientific progress and a key competitive factor. The FAIR principles⁹ for the collection and processing of data aim to ensure that they are discoverable, accessible, interoperable and reusable by other researchers. This is the only way researchers can understand existing results and build on them. It is a key requirement for ensuring quality, effectiveness and sustainability in research. Therefore, the SNSF requires all funded researchers to manage their data in accordance with the FAIR principles and to make them as accessible as possible, in compliance with legal and ethical requirements (ORD). In so doing, we are applying internationally compatible standards for research in all disciplines and throughout Switzerland.

At the same time, we want to provide even greater support in data management to researchers:

 ORD / research data management costs in SNSF-funded projects:
Active research data management (RDM) is demanding and expensive for researchers.
The SNSF already covers data preparation costs in funded projects. We want to ensure that the entire data lifecycle is adequately funded and expect these costs to increase in the future. That is one of the reasons we need additional funding for projects in 2025–2028. Increased funding requires a clear division of tasks with the universities in the development and use of RDM tools and services, as well as the development of simple and clear rate structures. On the one hand, there is otherwise a risk of overlapping tools and services being funded. On the other hand, the SNSF cannot budget ORD costs for projects indefinitely without this crowding out new research projects.

 Exploratory ORD practices and methods: As envisaged in the National ORD Action Plan, the SNSF would like to provide incentives for researchers to actively and innovatively (further) develop RDM and ORD practices in their research projects. This development must be carried out by the scientific communities. The SNSF is well positioned to support researchers in this and can build on the experience of organisations in Switzerland and abroad: EPFL, the funding organisation NWO in the Netherlands and the Wellcome Trust in the UK have established Open Research Funds.

⁹ Findable, Accessible, Interoperable and Reusable

Support data infrastructures and services (DIS)

Specialised infrastructure is required to ensure the quality, security and accessibility of research data. To take account of this development, the SNSF focuses particularly on research-driven data infrastructures when funding research infrastructures.

- Since 2021, we have been supporting two DIS in the social sciences and humanities on behalf of the SERI. The Swiss Centre of Expertise in the Social Sciences (FORS) has established itself as a nationally and internationally recognised data centre. For the humanities, the Data and Service Center for the Humanities (DaSCH) is under construction as a DIS. In the SNSF's assessment, FORS and DaSCH – both also integrated in corresponding European and international networks - meet the needs of the research communities or will be able to meet them as they continue to develop. We expect to support both DIS 2025-2028 to the current extent and to foster synergies with other DIS in the humanities and social sciences.
- In the *health and life sciences*, the SNSF is currently funding two long-term cohort studies on behalf of the SERI: the Swiss HIV Cohort Study and the Swiss Transplant Cohort Study. We also fund the Swiss Biobanking Platform (SBP). These initiatives should be able to fit into a DIS of health and life sciences. Currently, however, coordination and long-term sustainability are lacking in this area.
- A comprehensive needs assessment is pending in the *natural sciences*. It must also take into account the international environment, as researchers in these fields often collaborate on international infrastructures. In the geosciences, the SNSF is currently funding Swiss participation in the Integrated Carbon Observation System (ICOS).

Based on the experience with FORS and DaSCH, the SNSF believes that a *discipline-specific or community-specific approach* can be relied on. Only in this way can we ensure that DIS can deliver what research needs and support the development of research fields. For DIS to foster collaboration among researchers across Switzerland and pool all competencies, their *governance* needs to be *broad-based*, regardless of the home institution. The SNSF sees the greatest need in the health and life sciences. Here, the Swiss Personalized Health Network (SPHN) has brought significant progress, for example in the development of common standards for handling clinical data and for coordinating between the cantonal universities, ETH / EPFL and the (university) hospitals. However, this progress is currently jeopardised by planning insecurity.

In a self-evaluation conducted in 2021, the SNSF agreed to play an active role in longterm DIS core funding. We represent the entire research community in Switzerland and are familiar with current developments in various disciplines. Therefore, we can assess the relevance and potential added value of research infrastructures based on scientific needs. In addition, we can involve researchers in setting agendas, categorising diverse interests and ensuring that investments are in line with overarching strategic priorities.

For an effective DIS portfolio, an *explicit man*date from the federal government and a separate budget are a prerequisite, as well as consensus on the corresponding role of the SNSF in the ERI sector.

Budget requirements for the planned measures

In order to strengthen research competencies for the digital transformation and create additional incentives for ORD, the SNSF needs budget growth of 3.5 per cent. With 2.5 per cent, we could build research capabilities for digital transformation, but not promote exploratory ORD practices. We have not integrated any funds for the promotion of further DIS, beyond FORS and DaSCH, into the financial scenarios. This would require a separate budget.

3 SNSF contribution to the transversal themes of the ERI Dispatch



3 SNSF contribution to the transversal themes of the ERI Dispatch

The federal government has identified four transversal themes for the ERI Dispatch 2025–2028: equal opportunities, digitalisation, national and international cooperation and sustainable development. The SNSF has been contributing to these themes for many years. The most important contributions are listed in the following.

Equal opportunities

Here we have two focal points. The first is on gender equality in research. For example, we monitor equal opportunities in funding schemes, provide targeted support for women (PRIMA), make it easier to reconcile work and family life, and adapt funding criteria to non-linear careers. Thus, at all levels after the doctorate (or equivalent), we encourage a large pool of highly qualified women to pursue academic careers. Despite this, the percentage of women professors has barely increased over the past decade¹⁰. In the coming ERI period, therefore, we believe that national equality standards are needed, and we are striving to achieve them. At the SNSF itself, we achieve gender equality through quotas in the honorary bodies. We believe that there is a need for future action in Switzerland with regard to equal opportunities in terms of social background, especially for people with a migrant background. However, this topic is difficult to address due to the data situation in Switzerland. We will explore our options for action in the 2025-2028 period.

The second focus is equal opportunities between younger and older researchers. While most SNSF funding schemes require at least four years of postdoctoral research experience (or equivalent), we have already for a long time invested about a quarter of our budget in direct career funding for early-career scientists. And the SNSF's other schemes offer numerous opportunities for employing young researchers in projects. We intend to maintain this focus (see section 4).

Digitalisation

For some time now, digital methods, datadriven work and artificial intelligence have been used increasingly in research. This has led to the development of new research opportunities and fields. We have proactively addressed this trend, e.g., by implementing data management plans at an early stage, covering data and computational costs in projects, and actively supporting data infrastructures. Several NRPs and NCCRs (e.g. NRP 75 Big Data, NRP 77 Digital Transformation, NCCR Digital Fabrication) as well as the Digital Lives call also have digitalisation as a topic. In the future, however, the focus will be on the management and consequences of highly complex models that are no longer comprehensible to humans. Research on this second digital transformation is essential and requires corresponding competencies (see section 2.4.).

National and international cooperation

Promoting collaboration between different actors in Switzerland is a priority of the SNSF. Over several ERI periods, we have supported such collaboration in our main funding scheme, project funding (19 per cent of projects involve more than one applicant), as well as in the Sinergia (interdisciplinary research), NRP, NCCR and BRIDGE (Discovery) schemes. Since the introduction of the «project partner» status, informal collaboration on SNSF projects is possible both nationally and internationally. The SNSF is also playing a pioneering role in promoting international cooperation. In addition to the inclusion of co-applicants from abroad (Sinergia, SPIRIT, r4d), agreements with other funding agencies facilitate cross-border collaboration under joint projects (Lead Agency, Weave, etc.). Specific schemes are dedicated exclusively to international cooperation (SPIRIT, bilateral programmes on behalf of the federal government). Under the career funding scheme Ambizione, about 50 talented scientists from abroad come to Switzerland every year. In view of the second exclusion

¹⁰ Swiss Federal Statistical Office (SFSO), «Women and Science», 2022 (available in German and French). <u>https://www.bfs.admin.ch/bfs/de/home/statistiken/ bildung-wissenschaft/technologie/indikatorsystem/ zugang-indikatoren/w-t-input/frauen-und-wissenschaft. assetdetail.21285474.html</u>

from a European Research Framework Programme and recent political developments in Europe, we must further expand international cooperation without compromising on national funding (see section 2.1).

Sustainable development

Various aspects of sustainable development have been and are being researched in NRPs and NCCRs (e.g. NRP 73 Sustainable Economy, NCCR Catalysis). In addition, we promote sustainable development projects in all funding schemes. We want to make the benefits of funded research more visible in the coming period. Overall, however, given the urgency of the situation, the SNSF must invest more resources in sustainable development in the future. And we will also work to ensure that research itself is more sustainable (see section 2.3).

The additional goals and measures planned for 2025–2028 for the transversal themes of the ERI Dispatch are summarised in the following table.

Table 2 Transversal themes: Targets and measures

Transversal	Sustainable development	
themes	National and international cooperation	
	Digitalisation	
	Equal opportunities	
Strategic priority of the SNSF	Goal/Measure	
Research	Achieve gender equality in SNSF funding.	
diversity	Promote the collaborative development of national equality standards, coupled with incentives for higher education institutions to take action (see section 3).	
	Expand definition of «equality» beyond gender equality and create corresponding action plan (see section 3).	

Transversal	Sustainable development				
themes	National and international cooperation				
	Digitalisation				
	Equal opportunities				
Strategic priority of the SNSF	Goal / Measure				
Future of research	Review role of SNSF in funding research infra- structures and possibly, building on experience with FORS and DaSCH, further develop role in funding research-driven DIS (see section 2.4).				
	Support exploratory ORD practices, as proposed in the National ORD Action Plan, and ORD / research data management in SNF-funded projects (see section 2.4).				
	Strengthen research competencies in the area of digital transformation (section 2.4).				
	Support international collaboration independently of European research programmes (in existing schemes, with research-driven consortia with international participation, by promoting talent from abroad; see section 2.1).				
Value of research	Realise full potential of research (by optimising BRIDGE, Investigator Initiated Clinical Trials and implementation networks and through synthesis of results from SNSF-funded research) (see section 2.2).				
	Actively promote research on sustainable develop- ment (through living labs for sustainable develop- ment, with a subsequent round of NCCRs on this topic; see section 2.3).				
	Contribute to more sustainable research (e.g. scheme to measure CO2 footprint, travel rules; see section 2.3).				
Competence of the SNSF	Exploit technological opportunities (e.g. machine learning, blockchain) in SNSF processes and strengthen sustainability in SNSF operations (see section 5).				

4 Funding portfolio 2025-2028



4 Funding portfolio 2025–2028

The proposed goals and measures lead to adjustments in various funding categories of the SNSF. However, the focus and structure of the funding portfolio do not change fundamentally. We will continue to use about 80 per cent of requested federal grants for research-driven projects on self-chosen topics (see Figure 2, Projects and Careers).

In line with the motto «Focus and develop», we want to consolidate the funding portfolio. In this way, we can strengthen our main funding scheme, project funding, and meet new challenges. We will be able to establish new focus areas with additional funds.

Figure 2.

Distribution of the federal contributions in 2025–2028 across the funding categories, with 3.5 per cent growth.



4.1 Projects

Project funding is the backbone of the SNSF's funding portfolio. Researchers from all disciplines can apply for support to realise research ideas of their own choosing. In doing so, we also promote national and international collaborations and interdisciplinary research. Every year, around 930 teams launch projects.

The flexibility of project funding allows researchers to respond to new developments in a timely manner. This increases the relevance of research and enables scientific breakthroughs. In addition, project funding makes a crucial contribution to the diversity of research in Switzerland through its thematic openness.

Due to the longstanding increase in demand for funding and in view of new challenges in the research environment, we want to strengthen project funding in the 2025–2028 period.

- Demand for funds has increased 5 per cent annually in project funding since 2017. To ensure that we can partially meet the increasing demand and do not have to reject excellent projects, we are giving a high priority to increasing the 2025–2028 project funding budget (see section 6.1).
- Following a successful pilot phase, the «Spark» scheme will become a permanent part of the funding portfolio. It allows researchers to quickly test or develop new scientific approaches, methods, theories, standards and ideas.
- To further promote cross-border collaboration in projects, we are expanding international agreements with other funding agencies (notably Weave, Lead Agency, International Co-Investigator Scheme, multilateral collaborations). We are budgeting more funds for projects (see section 2.1).
- We now want to promote research-driven consortia with international participation. In this way, we aim to strengthen the international leadership position of Swiss research groups in the long term (see section 2.1).
- To keep the quality and impact of research high, we want to support researchers who are actively and innovatively pursuing research data management and ORD practices (see section 2.4).

4.2 Careers

The SNSF's career funding offers researchers additional options at the beginning of their careers. We complement the activities of the universities and contribute to the diversity of the Swiss research landscape. In total, we provide career funding for approximately 800 young researchers per year, most of whom are awarded postdoctoral fellowships for stays abroad. The funding is highly competitive and sets quality benchmarks across Switzerland. It also makes the funded researchers more competitive internationally.

To give our portfolio greater focus, we will in future concentrate on direct career funding starting at the postdoc level. The Doc.CH and MD-PhD schemes will therefore be discontinued as of 2025. And we will not be implementing the support measure for female researchers at doctoral level in the STEM disciplines, which was presented in the multiyear programme 2021–2024. Furthermore, we do not plan to stage any Practice-to-Science calls as of 2025 (reasons are given under «Focus funding portfolio» below).

As of 2025, our consolidated portfolio will include the following funding schemes for the postdoctoral and assistant professorship levels:

- Mobility fellowships: allow postdocs to conduct research and gain more in-depth knowledge at a university abroad.
- Ambizione: supports the independence of young researchers. It allows them to develop a more specialised scientific profile by conducting a sizeable project they have planned themselves.
- SNSF Professorial Fellowships: will in future merge the existing funding schemes Eccellenza and PRIMA. The scheme offers flexible, multi-year funding opportunities at the assistant professor level to support researchers in building their own team.

4 Funding portfolio 2025-2028

Within the scope of Ambizione and / or the SNSF Professorial Fellowships, we also want to pursue two specific goals in a suitable manner:

- Attracting talent from abroad: by expanding the range of funding for talented scientists from abroad, we aim to maintain Switzerland's attractiveness for promising young minds (see section 2.1).
- Digital X: we want to strengthen research competencies in view of the digital transformation with a new offering for early-career researchers (see section 2.4).

Support for early-career researchers across the SNSF portfolio

We not only support young researchers directly in the career funding schemes, but also indirectly as team members in projects and programmes. In doing so, we are promoting scientific early careers in all areas of society. We want to continue developing our strategy for promoting young talent, taking into account the results of the overall evaluation by the Swiss Science Council, which are still pending. This will require flexibility in resource allocation to careers, projects and programmes during the 2025–2028 period.

In any case, we will strengthen our efforts to achieve optimal working conditions for early-career researchers, whether they are supported in career funding schemes or other schemes. To this end, we will:

- further intensify cooperation and dialogue with universities.
- be more demanding with regard to the conditions that universities offer SNSF-funded early-career researchers.
- monitor the situation of young researchers and, if necessary, bring about improvements through dialogue with the universities.

4.3 Programmes

Programmes are focused on specific overarching goals or themes. Nevertheless, the individual research questions and approaches are developed by the researchers. With the programmes, we enable research groups from different institutions to join forces. For many years, we have used ten to fifteen per cent of our funding for this purpose. We aim to maintain this degree of allocation in the coming period.

- We carry out the National Research Programmes (NRPs) on behalf of the Swiss government. They generate knowledge aimed at solving major problems of our time. The SNSF supports the launch of an NRP «Digital Transformation and Societal Value Formation» to strengthen the modern, digitised knowledge society.
- We also launch calls for the National Centres of Competence in Research (NCCRs) based on a direct mandate from the government. The NCCRs strengthen Swiss research structures and networks in areas of strategic importance for the future of Swiss science, business and society. The SNSF would welcome it if the next series of NCCRs were linked to sustainable development.
- The SPIRIT programme supports research collaborations with countries that receive development assistance.
- During the 2025–2028 period, we aim to optimise and expand the Investigator Initiated Clinical Trials programme, which we use to promote clinical research (see section 2.2).
- We also want to optimise and expand the BRIDGE programme. Together with Innosuisse, we use BRIDGE to finance useinspired projects at the interface between basic research and science-based innovation (see section 2.2).

- In the current 2021–2024 funding period, we are testing implementation networks. These facilitate exchanges between researchers and potential users in the private and public sectors. If successful, we plan to expand the offer as of 2025 (see section 2.2).
- With living laboratories for sustainable development, we want to expand our contribution to the UN's Agenda 2030 (see section 2.3).
- The SOR4D programme, started in 2021, funds transdisciplinary projects for sustainable development. We want to continue developing it together with the Swiss Agency for Development and Cooperation (SDC).

4.4 Infrastructures

Research infrastructures can be crucial to the development of entire research areas. In the current period 2021–2024, we have consolidated our infrastructure funding portfolio and transferred some tasks to the Swiss Academies. Our funding is now based more strongly on strategic orientations and priorities.

- We place a special focus on data infrastructures and services (DIS). These are becoming increasingly important for datadriven research. Based on a federal mandate, we have funded FORS, DaSCH and two biomedical cohort studies since 2021. With BioLink, we support researchers who use IT systems to interconnect their biobanks and build networks; this enables the exchange and further use of data as well as providing answers to new questions. The SNSF is ready to take on more responsibility with regard to funding DIS. The prerequisites for this are consensus on the appropriate role of the SNSF in the ERI sector, an explicit mandate from the federal government, and a separate budget. Our financial planning does not include any funds for this (see section 2.4).
- We will not continue with the R'Equip instrument. In the future, we will promote research equipment within projects. Such acquisitions will be covered up to a total of 100,000 francs per project. Our view is that the financing of larger research apparatuses outside of SNSF projects is a task of the universities.
- On behalf of the federal government, we fund research infrastructure for important international experiments in the fields of particle physics, astrophysics and astroparticle physics through FLARE (Funding Large International Research Projects). For a clear division of roles, we would welcome it if the SNSF were given an evaluation mandate in the future but the budget was not set at the SNSF.

The SNSF's contribution to the national coordination of research infrastructures

In addition to its own funding activities, the SNSF plays an important role in the national roadmap process for research infrastructures. With the National Roadmap, the federal government aims to coordinate prioritisation and investments in research infrastructures. The SNSF is participating in the process as an evaluator. It comments on the importance of research infrastructures and evaluates projects from a scientific point of view. We are also actively participating in the national ORD Strategy Council established to coordinate the DIS. Research infrastructures are an important prerequisite for the further development and innovative capacity of research. Therefore, in its 2021 self-evaluation, the SNSF signalled its willingness to take on more responsibility in the roadmap process and in the promotion of data infrastructures. As stated above, this requires an explicit mandate from the federal government, a separate budget, and consensus on the SNSF's role within the ERI sector (see section2.4).

4 Funding portfolio 2025–2028

4.5 Science communication

In the area of science communication, the SNSF promotes exchanges between a wide variety of actors both within the research community and more broadly. We will continue to offer two dedicated funding schemes:

- The Scientific Exchanges scheme supports exchanges between researchers at the international level.
- Agora is aimed at fostering dialogue between science and society.

Focusing our funding portfolio

By concentrating its efforts, the SNSF can make a more effective contribution to research in Switzerland. This is why we want to focus our funding portfolio, strengthen project funding and invest additional funds in new goals.

For the period from 2025 to 2028, we envisage the following adjustments to our current funding portfolio:

- In future, we will focus on direct career development starting at the postdoc level. Support at doctoral level is primarily the responsibility of the universities. The Doc.CH and MD-PhD schemes will therefore be discontinued as of 2025¹¹. And we will not be implementing the intended support measure at doctoral level for female researchers in STEM. This will enable us to sharpen our focus within career funding.
- Having completed four Practice-to-Science pilot calls, we do not plan to launch any more calls as of 2025. Practice-to-Science is aimed at experts who have practical experience. They want to change to a UAS or a UTE as professor; or they have recently started working there and want to strengthen their scientific-practical dual competency profile. Only a few new people joined a UAS based on the initial calls. Two further calls are planned until 2024. Should there subsequently be enough evidence that the scheme is meeting its objectives, we will reconsider continuing it as of 2025. We will, in any case, develop the portfolio in a way that allows us to offer suitable career funding for experts with certified practical experience who want to strengthen the research component of their competency profile.
- As of 2025, we will support research equipment only within projects and will not continue the R'Equip funding scheme. Within projects, the SNSF will continue to consider up to CHF 100,000 for infrastructure as eligible costs that are chargeable to the grant. The financing of larger research apparatuses outside of SNSF projects is, in our view, a task of the universities.

All of these funding measures which we have decided to forgo are not unequivocally part of the SNSF's mandate. Relative to the budget and the number of people supported, they incur high costs. By sharpening and focusing our portfolio accordingly, we can make our funding even more effective and increase the benefits for research in Switzerland.

¹¹ With Doc.CH and MD-PhD, the SNSF currently supports about 50 doctoral students per year. Compared to the total number of doctoral students in Switzerland, this number is very low.

5 Service provision



5 Service provision

The design of funding schemes, the scientific review of applications and the lifetime management of projects remain central to the SNSF's activities, as does the organisation of these processes. However, a significant and growing part of our work now also involves helping to shape Switzerland as a centre for research and adding value for society through research. These tasks place new demands on the National Research Council, the evaluation panels and the Administrative Offices.

We are focusing on the following further developments in 2025–2028:

- As mentioned, we help shape research in Switzerland – for example, by funding research infrastructures, through the NCCRs and their structural goals, or by setting thematic priorities. This role requires knowledge of developments across the research landscape. We will evaluate and synthesise existing research results from funded projects, thereby supporting synergies and applications and underpinning science communication (see sections 2.2 and 2.4).
- To achieve these goals, we need flexible organisational structures that are fit for the future. In the current funding period 2021–2024, we have adjusted the organisation of the Administrative Offices to improve our collaboration and make it more effective. By 2024, we will review the role and composition of all bodies of the foundation and further develop structures as part of a full revision of the Statutes. In this way, we are creating a flexible, lean and modern statutory basis that enables us to respond quickly and efficiently to new challenges.
- In the current funding period 2021–2024, we have forged ahead with the *digitalisation* of our processes in evaluation procedures and in the office (human resources, finance). We are replacing our longstanding online platform mySNF with the new SNSF Portal. This will enable us to focus our activities even more sharply on the needs of our customers. Where appropriate, we are harmonising processes. Our systems should be flexible so that we can take specific

needs into account, accommodate developments and test innovations. We are actively and responsibly exploring new technological possibilities; we want to fully exploit their potential in terms of quality and greater effectiveness in research funding at an early stage.

- Sustainability in operations is one of our key concerns. We aim to continuously reduce the negative impact of our activities on natural resources. An important measure is the move to an ecologically optimised building in Bern-Wankdorf planned for around 2027. We have enshrined the topic of sustainable development in our organisational structure for the long term and are continuing to strengthen our competencies in this area.
- We continue to attach great importance to maintaining our extensive network of national and international partners. It enables collaborations that add value for researchers (e.g. BRIDGE with Innosuisse, agreements for cross-border collaboration with international funding organisations). It supports coordination in the ERI sector (e.g. ORD Strategy Council, ERI partners). And it allows us to help shape international research parameters and take into account international best practices (Science Europe, Global Research Council, RORI).

The variables influencing the cost of service provision are:

- Use of honorary bodies for scientific evaluation and governance.
- All activities of the honorary bodies are supported by the Administrative Offices.
- Science communication and outreach.
- Premises and information technology / systems.

The share of these costs in the total budget (excl. overhead as compensation for indirect costs of the universities) must not exceed 7 per cent in the current funding period 2021–2024. Past experience has shown that the cost of providing services depends primarily on the number of applications submitted (not projects funded), research policy activities and the task portfolio in general. None of these are directly related to the federal contributions that the SNSF receives. Therefore, we would like to define the share of the service provision costs not in the multi-year programme or the ERI Dispatch, but in the service agreement with the federal government. As a provisional estimate, we continue to expect 7 per cent of the total budget (excl. overhead).

Continual increase in efficiency and effectiveness

We invest public money in research for the good of society. We are constantly increasing the efficiency and effectiveness of our activities in various areas.

Organisational efficiency and effectiveness

We reflect on and improve our internal processes and structures as well as our innovation activity. The goal is to align activities with strategic priorities and maintain an appropriate ratio of administrative costs to total costs. We are currently conducting change projects to make the structures of the Offices and the honorary bodies more flexible, so that they are well positioned in the face of future goals and challenges.

Evidence-based advancement of funding activities

We believe that funding should be guided by research on research. This is why we are a member of the Research on Research Institute (RORI). In RORI, international research funders and researchers join forces to develop principles for science management. In a pilot project supported by international experts, we tested narrative CVs designed to make the evaluation process more inclusive. We supplement internal analyses with independent external assessments of our funding schemes and activities. Currently, the SNSF itself is undergoing a full evaluation by the Swiss Science Council (SSC). The results of these evaluations are incorporated into goal-setting and goal-review processes and taken into account in the further design of the funding portfolio. A current example of the evidence-based advancement of funding activities with partners is the evaluation of the BRIDGE programme, including any adjustments based on that evaluation.

Cooperation and division of tasks in the ERI sector

We are committed to implementing effective and efficient cooperation and division of tasks in the ERI sector. To this end, we make the most of synergies with partners, in particular Innosuisse, and promote long-term, overarching themes, for example ORD, in order to advance Switzerland's position as a centre for research and innovation.

Together with our partners, we also aim to provide more stimuli for the continuing development of research in the future and, in so doing, to increase the effectiveness of research funding. To this end, we are continuously improving our understanding of impact chains (e.g. through studies on individual topics such as start-ups or social innovation), making the content and performance of funded research visible and usable, and sharing our research policy knowledge with partners.

Finances



6 Finances

In order to implement the planned goals and measures, we will need federal contributions of 5.17 billion francs in the period 2025–2028. This corresponds to linear budget growth of 3.5 per cent per year. It takes into account savings from forgoing certain aspects of existing funding measures as well as the reserves expected to be available at the end of 2024¹².

We want to approve new grants in existing funding schemes in 2025–2028 basically at the 2024 level. This does not include project funding, which we would like to strengthen in a targeted manner and NRPs whose funding we are increasing on behalf of the SERI. We will discontinue some instruments as of 2025 (see section 6.1).

As requested by the federal government, we have set up our multi-year programme based on scenarios and defined priorities. In the following, we derive the required federal contributions for the period 2025–2028 and present financial scenarios for four different annual growth rates: 3.5 per cent (scenario in which we can implement all the measures described), 2.5 per cent, 1.5 per cent and 0.5 per cent.

6.1 Funds required

Strengthening project funding

Demand for funds has risen by 5 per cent annually since 2017 in the area of project funding. On the one hand, the number of applications is continually increasing. This reflects, inter alia, an increase in the number of professors at universities¹³. On the other hand, the costs for equipment and infrastructure as well as for open access to publications and data are rising. Therefore, the average grant amount awarded by the SNSF per project per year is increasing.

These increases could not be absorbed by the available budgets, which is why success rates have fallen relatively sharply in recent years. Low success rates lead to inefficiency, as applicants have to allocate resources for very good applications that cannot be funded, and reviewers have to assess them. In addition, low success rates jeopardise the diversity of research: they reduce the range of topics and disproportionately affect researchers from minority groups or those starting their careers or doing interdisciplinary work¹⁴. This poses a threat to an important advantage that Switzerland enjoys as a research location. The SNSF is the only research funder in Switzerland that supports all types of research and awards grants based on a competitive process. Researchers whose applications are rejected have fewer options to obtain funding from other sources than in some other countries.

¹³ Swiss Federal Statistical Office (SFSO), «Personal der universitären Hochschulen», 2021. <u>https://www.bfs.admin.ch/bfs/de/home/statistiken/</u> <u>bildung-wissenschaft/personal-bildungsinstitutionen/</u> tertiaerstufe-hochschulen.assetdetail.17504434.html

¹² Contributions for any transitional, complementary or replacement measures for Horizon Europe are not included.

¹⁴ Naylor, C. David, Robert J. Birgeneau, Martha Crago, Mike Laziridis, Claudia Malacrida, Arthur B. McDonald, Martha C. Piper, Remi Quirion, and Anne Wilson. «Canada's Fundamental Science review: strengthening the Foundations of Canadian Research. Advisory Panel on Federal Support for Fundamental Science», 2017.

Project funding is the SNSF's main funding scheme and contributes significantly to the quality, relevance and dynamism of research. To ensure that we can at least partially meet the increasing demand and do not have to reject any excellent projects, we want to give a high priority to increasing the project funding budget in the 2025–2028 period. Furthermore, we want to increase the salaries of the doctoral students who work in the funded projects. We want young researchers to have good working conditions and we have not adjusted these salaries to the development of nominal wages in Switzerland since 2014¹⁵.

Table 3Requirement for strengthening project funding 2025-2028

Strengthening project funding	Additional funds 2025–2028		
Increase budget for projects – to maintain efficiency and ensure diversity	74 million francs		
Increase the salaries of doctoral students	52 million francs		

The above-mentioned measures are to be implemented by forgoing measures in other areas and by drawing on the reserves as of a growth rate of 1.5 per cent (0.5 per cent: partial implementation). On the one hand, this is in view of the indicated strengthening of project funding and, on the other hand, because of the undeniable need to catch up as regards doctoral students' salaries.

Funds required for new measures

New measures will result in additional costs amounting to 262 million francs:

Table 4Requirement for new measures 2025-2028¹⁶.

Measures	Additional funds 2025-2028
Simplifying cross-border cooperation: increasing the budget for Weave, Lead Agency, International Co-Investigator Scheme and Multilateral Cooperation (see section 2.1)	49 million francs
Securing international leadership: promoting research-driven consortia (see section 2.1)	73 million francs
Maitaining Switzerland's appeal as a research location: supporting talented young researchers from abroad (see section 2.1)	24 million francs
Synergies and exchanges: implementation networks, consulting services / mentoring (see section 2.2)	16 million francs
Strengthening clinical research: optimising Investigator Initiated Clinical Trials (see section 2.2)	20 million francs
Interface between research and innovation: expansion and diversifica- tion of BRIDGE, with Innosuisse (see section 2.2)	7 million francs
Research for sustainable development: promotion of living laboratories (see section 2.3)	36 Millionen Franken
Research competencies for the digital transformation: promoting young researchers (see section 2.4)	17 million francs
Incentives for Research Data Management and Open Research Data: support for exploratory ORD practices (see section 2.4)	20 million francs
Promotion of DIS: More responsibility in promoting data infrastructures in Switzerland (see section 2.4.)	Only possible with specific additional budget

Additional funding is also needed for NRPs, overhead (compensation for indirect costs incurred by universities) and service provision by the SNSF (see 6).

¹⁶ In most cases, the reference value for the period 2021–2024 is zero, as these are new measures. Excluding: for Weave, Lead Agency, International Co-Investigator Scheme: approximately 140 million francs, BRIDGE: 53 million francs (excluding Innosuisse funding), Investigator Initiated Clinical Trials: 40 million francs, and Implementation Networks: 2 million francs. These figures concern the period 2021–2024 and include the current planning figures for 2023 and 2024.

Savings

By focusing the portfolio as planned (see «Focusing the funding portfolio,» section 4, valid for all scenarios), we can cover part of the additional funding requirements with the following savings:

Table 5 Savings from focusing the portfolio

Shelved	Savings 2025-2028
Doc.CH, MD-PhD and Doc.STEM	33 million francs
Practice-to-Science	18 million francs
R'Equip	51 million francs

Service provision

Provisionally, we expect 7 per cent of the total budget (excl. overhead) to be used for service provision. The actual costs for service provision depend on the development of the task portfolio. We will determine the maximum costs in the service level agreement with the federal government.

Overhead incurred by universities

With overhead contributions, we finance part of the indirect research costs incurred by SNSF projects at universities. The federal government sets the corresponding contribution rate. We assume that this will be 15 per cent of the eligible funding approved by the SNSF, as until now.

Our requirement in terms of federal contributions (see Total II in 6) is independent of overhead contributions. The latter vary in proportion to the overhead-eligible new awards approved in the previous year.

Total requirement – 3.5 per cent growth per year¹⁷

The SNSF needs 5.17 billion francs in 2025–2028 to achieve the goals and contribute to all transversal themes. This corresponds to an average annual growth of 3.5 per cent¹⁸. We assume real, linear growth, which increases stability and our ability to plan.

- ¹⁷ The detailed financial scenarios may be subject to adjustments because the funding measures to be budgeted in 2023 and 2024, as well as the distribution of annual instalments for grants still to be approved, will have an impact on financial commitments as of 2025.
- ¹⁸ Growth for 2025–2028 was calculated based on the inflation-adjusted baseline of 1184.4 million francs for 2024 as cited by SERI.

	2024	2025	2026	2027	2028	2025 -2028	Additional funds ¹⁹
Projects	615	632	667	703	728	2,730	272
Careers	205	199	195	194	206	795	-24
Programmes	32	40	52	54	55	202	76
Infrastructures	40	32	25	25	25	108	-52
Science communication	23	23	23	23	23	90	0
Total I	913	926	962	999	1,038	3,925	273
NRP	15	20	20	20	20	80	20
NCCR	55	55	55	55	55	220	0
Additional federal mandates: FLARE and bilateral programmes	20	20	20	20	20	79	0
Total II	1,003	1,021	1,057	1,094	1,133	4,305	293
Service provision	76	77	80	82	85	324	22
Indirect costs of the universities (overhead)	124	128	133	138	142	541	45
Total III ²⁰	1,202	1,226	1,270	1,314	1,360	5,169	360

Table 6 Overview of the federal contributions required in 2025–2028 (in CHF million)

¹⁹ The additional funds are calculated as the difference between the 2025–2028 funding requirement and four times the relevant 2024 amount.

 ²⁰ Total III for 2024 is equal to the figure from the 2021–2024 service level agreement.

6.2 Financial scenarios

With budget growth of 3.5 per cent, we can implement all measures. What cuts do the financial scenarios specified by the federal government (2.5 per cent, 1.5 per cent and 0.5 percent annual real growth) entail for the SNSF? We drew up the financial scenarios based on the following priorities:

- 1. Securing and strengthening project funding
- 2. Targeted optimisation of existing schemes for international cooperation and for translation between research and application
- 3. Active contribution to sustainable development and digitalisation
- 4. New measures to strengthen our international networks and our competitiveness; measures in the area of ORD

The focusing of the portfolio and associated shelving of measures apply in all scenarios. Also in all scenarios, reserves presumed to be available at the end of 2024 will be used.

The following financial scenarios emerge:

3.5 per cent real growth – contribution to all transversal themes

We can implement the planned measures and contribute to all transversal themes, also for strengthening international cooperation and in the area of ORD.

2.5 per cent real growth – Active contribution to sustainable development and digitalisation

Our focus is on research for sustainable development and digitalisation as well as on optimising existing schemes. We cannot optimally strengthen international cooperation and have to forgo ORD measures.

1.5 per cent real growth - consolidation

All we can do is strengthen project funding to partially meet rising demand and make certain improvements in existing funding schemes.

0.5 per cent real growth – downsizing

We can only slightly increase resources for project funding; and even this is only possible thanks to the focusing of our portfolio and the resulting savings.

Table 7Activities supported/shelved per financial scenario for the period 2025-2028

	3.5%	2.5%	1.5%	0.5%
Strengthening project funding				
Increase project funding budget				
– Minimum increase				
– Adequate increase				
Adjust salaries of doctoral students to the increase in nominal wages				
Strengthening competitiveness and integration in internation	ional netv	vorks		
Increase budgets for Weave, Lead Agency, International Co-Investigator Scheme and Multilateral Collaborations				
– Minimum increase				
– Adequate increase				
Expand support for talented young researchers from abroad				
Promote research-driven international consortia				
Exploiting research potential in its entirety				
Optimise Investigator Initiated Clinical Trials				
Expand BRIDGE together with Innosuisse				
Promote synergies and exchange				
Working together for a sustainable future				
Promote real labs for sustainable development				
Develop, expand and critically question digitalisation in sci	ence			
Introduce «Digital X» career funding, where X is a variable for a scientific field				
Promote exploratory ORD practices				

Table 8
Federal contributions required in 2025–2028 (in millions of francs) per scenario

	3.5%	2.5%	1.5%	0.5%
Projects	2,730	2,625	2,616	2,540
Careers	795	795	754	754
Programmes	202	202	150	123
Infrastructures	108	108	108	108
Science communication	90	90	90	90
Total I	3,925	3,821	3,718	3,615
NRP	80	80	80	80
NCCR	220	220	220	220
Additional federal mandates: FLARE and bilateral programmes	79	79	79	79
Total II	4,305	4,200	4,097	3,994
Service provision	324	316	308	301
Indirect costs of the universities (overhead)	541	528	515	502
Total III	5,169	5,044	4,920	4,797

Table 9

Annual federal contributions required (in millions of francs) per scenario

	2024	2025	2026	2027	2028	2025 -2028	Additional funds
3.5%	1,202	1,226	1,270	1,314	1,360	5,169	360
2.5%	1,202	1,214	1,245	1,276	1,308	5,044	234
1.5 %	1,202	1,202	1,221	1,239	1,258	4,920	111
0.5 % ²¹	1,202	1,190	1,196	1,202	1,208	4,797	-13

²¹ In the lowest growth scenario, annual federal contributions in 2025–2028 average slightly less than in 2024 because the federal government adjusted the baseline used to calculate growth to reflect the expected rate of inflation.

Abbreviations

ERI Dispatch	Federal Dispatch on the Promotion of Education, Science and Innovation
DaSCH	Data and Service Centre for the Humanities
SDC	Swiss Agency for Development and Cooperation
DIS	Data infrastructures and services
DORA	San Francisco Declaration on Research Assessment
ERC	European Research Council
UAS	University of applied sciences
RIPA	Federal Research and Innovation Promotion Act
FLARE	Funding Large International Research Projects
FORS	Swiss Centre of Expertise in the Social Sciences
RFP	Research Framework Program
R&D	Research and development
Horizon Europe	European Framework Programme for Research and Innovation 2021–2027
HR	Human resources
2020 hours	Horizon 2020 – European Framework Programme for Research and Innovation 2014–2020
ICOS	Integrated Carbon Observation System
CTI/Innosuisse	Swiss innovation agency
NRP	National Research Programme
NCCR	National Centre of Competence in Research
ORD	Open Research Data
UTE	University of teacher education
PRIMA	Promoting Women in Academia (SNSF funding scheme)
RDM	Research data management
R'Equip	SNSF funding programme for research equipment
RORI	Research on Research Institute
SAMS	Swiss Academy of Medical Sciences
SERI	Swiss State Secretariat for Education, Research and Innovation
SBP	Swiss Biobanking Platform
SNSF	Swiss National Science Foundation
SPIRIT	Swiss Programme for International Research by Scientific Investigation Teams
SPHN	Swiss Personalized Health Network
SWR	Swiss Science Council
UNO	United Nations

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