

Use-inspired basic research—external report recommends targeted adjustments

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The Swiss National Science Foundation (SNSF) commissioned an external evaluation of its funding category "use-inspired basic research" last year. Based on the evaluators' recommendations, it has now decided to introduce targeted changes in its processes.

Based on a mandate from the federal government, the Swiss National Science Foundation promotes [scientific research](#); the focus is on basic research. Applied research with an immediate commercial potential does not feature in the SNSF's portfolio. However, the organisation supports research that is linked to practical issues, but makes a contribution to basic science as well. In 2011, the SNSF introduced the [category](#) "use-inspired basic research" to ensure the adequate evaluation of [applications](#) with a strong practical orientation.

Last year it launched a public tender process, eventually selecting Technopolis, a consulting firm specialising in science policy, to analyse the category. The in-depth study focused on the question of how researchers and evaluators define "use-inspired basic research". In addition, it examined whether the evaluation process for use-inspired applications took account of their specific characteristics.

Broadening the scope of scientific research

Technopolis came to the overall conclusion that the category "use-inspired basic research" has allowed the SNSF to broaden the scope of

scientific proposals it receives for evaluation. It does not recommend overhauling the evaluation process and creating a specialised funding scheme.

However, the analysis by Technopolis does suggest that the category should be defined more clearly to ensure that applicants, external experts and members of evaluation committees have a shared understanding of it. To this end, Technopolis developed a useful typology of use-inspired applications.

The authors also note that use-inspired applications have a lower success rate than applications concerning basic research. In their view, the difference is attributable to the greater complexity found in the two-pronged approach of use-inspired research projects.

In addition, they suggest that the evaluation of use-inspired projects could be fine-tuned by giving greater weight to their broader impact and consulting more experts from the practical realm. They also note that the diversity among members of the Research Council and the evaluation panels does not mirror the diversity of the submitted project proposals.

Implementing the recommendations

- Based on the study, the SNSF has decided to make a number of adjustments aimed at optimising the evaluation of use-inspired research projects:
- adopting the typology of key elements (developed by Technopolis) to define the category more precisely
- fully implementing the San Francisco Declaration on Research Assessment, of which the SNSF is a signatory
- giving greater weight to the "broader impact" criterion during evaluation meetings of the Research Council
- including at least one expert from the practical realm for each

application

- ensuring greater diversity in the evaluation bodies in order to match the diverse nature of the proposed research projects.

Jana Koehler, member of the National Research Council (2012 – 2016) and the advisory group of the study, welcomes the fine-tuning measures defined on the basis of the recommendations: "When developing innovative applications, we often encounter fundamental problems that require an in-depth analysis and a basic science approach. Thanks to the category use-inspired basic research, researchers can take inspiration from practical issues and explore them freely and thoroughly. Such research can open up new horizons far beyond the reach of the original application. The study showed that the SNSF is on the right track: by introducing the use-inspired category it has adopted a more inclusive definition of basic science. The evaluation gives us a very good idea of what measures are needed next. First we need to launch an open debate among researchers and implement the recommendations, for instance by diversifying the expert commissions as initiated in 2015."

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