

SUMMARY

Benefit and need

Dutch scientific research is world class. In recent decades, however, the science system has evolved in such a way that groundbreaking, continuous lines of research have become unstuck. In practice, scientists are currently hopping from project grant to project grant. As a result of this 'projectification', Dutch science has become fragmented; it lacks continuity. In addition, scientists spend a disproportionate amount of their time on grant applications and award percentages in these grant rounds are low. As a result, a lot of time and therefore money is lost, and there is less likelihood of groundbreaking scientific discoveries and new applications.

In addition, the career of many scientific talents is stagnating, as success in obtaining research grants has become the most important, if not the only, criterion for an appointment or promotion. And even if a scientist has obtained a permanent position, it does not provide sufficient research resources in many cases in terms of time, money, people and facilities. Organising those resources is often left to scientists themselves. If that doesn't work out, they have hardly any scope to perform research.

The rolling grant fund in outline

The rolling grant fund for unfettered research provides working capital in the form of research grants to assistant, associate and full professors with a permanent appointment. They can use these at different points in their scientific careers so that they can continue to develop.

The fund works with modules that correspond to the different phases of a scientific career. The starter modules are intended for assistant, associate and full professors with a permanent appointment in the first phase of their careers. For professors with a permanent appointment who are no longer eligible for a VICI grant from the Netherlands Organisation for Scientific Research (NWO) – fifteen years after obtaining their PhD – there are follow-up modules.

The fund is available across the full scientific spectrum. Recipients of a research grant may decide for themselves how they spend it. The fund is intended to mitigate the excesses of the current competition system and to create space for innovative, unfettered research and longer research lines. The fund is complementary to personal and project-based research grants from, for example, NWO and the European Research Council (ERC). This is where scientists can obtain additional funding in competition.

An important starting point for the rolling grant fund for unfettered research is the simple method of awarding the grants. The Dutch Minister of Education, Culture and Science allocates earmarked budgets to the universities, also for the benefit of the University Medical Centres (UMCs). The executive board of the university or the management board of the UMC awards the fund grants to recently appointed assistant, associate or full professors with a permanent appointment (starter modules) or to professors who are no longer eligible for a VICI grant from NWO (follow-up modules). For the required quality assurance, existing promotion procedures and assessment systems of universities and UMCs are used. These systems award a permanent appointment or promotion only to high-performing scientists. This guarantees selectivity and avoids extra paperwork. Moreover, the primacy of scientific talent policy remains where it belongs, i.e. at universities and UMCs.

Another important starting point is that the rolling grant fund contains safeguards for the integration of research and academic teaching. To this end, grants are made available only to scientists who conduct research *and* teach, each for at least 20 percent of their appointment.

Funding

The annual budget required for the rolling grant fund for unfettered research can be roughly estimated at over half a billion euros. For the funding, universities and UMCs depend on additional financial resources made available by the Dutch Minister of Education, Culture and Science. By shifting existing resources, the introduction of the fund will create or increase problems elsewhere in the science system. In that case, the fund's objective will not be achieved. It is not possible to improve the status quo without additional resources.

If public investment in research and innovation increases annually by a fixed percentage of – say – 3% to 5%, then the Dutch Minister of Education, Culture and Science can create the rolling grant fund for unfettered research to the value of half a billion euros annually within a few years. The fund must be part of the university's core funding and will therefore be included in the first flow of funds.¹

Impact

The fund offers Dutch science the confidence and continuity needed to conduct genuinely groundbreaking fundamental and applied research. It provides a simple and effective remedy for the lack of core funding for permanent assistant, associate and full professors at all stages of their careers. As a result of this remedy, Dutch science will remain world class, will have maximum scientific, social and economic impact and will be a breeding ground and attraction for domestic and foreign talent. This will be of great importance for academic institutions and industry, and for the establishment of new and growing businesses. Consequently, the rolling grant fund for unfettered research will contribute to the stability of the science system and to the growth capacity of the Netherlands as a knowledge society.

Just like the Academy advisory report *The science system in balance* (2019), this advisory report emphasises that balance and stability in the science system can be achieved only by sufficiently strengthening unfettered research in both the first and second flow of funds. For the first flow of funds, the rolling grant fund proposed here will be an effective instrument. At NWO – as the above advisory report stated – an additional budget will be required in order to bring about an equivalent pillar for unfettered research in addition to that for strategic research.

1 The core funding of the Dutch science system is provided via the first flow of funds (the universities and the UMCs; part of the government grant to the universities is earmarked for research at the UMCs) and the second flow of funds (the Academy and NWO institutes). In addition, universities, UMCs, and Academy and NWO institutes receive funding for scientific research in competition via the second flow of funds. NWO (including ZonMw) allocates these resources on the basis of excellence and thematic priorities (Ministry of Finance, 2014).