

Reform of funding for Academy Research Fellowships: preparation and implementation plan

1. Introduction

The Academy of Finland is committed in its strategy to provide funding for high-quality, high-impact and pioneering research. One of the Academy's science policy objectives is to support early-career researchers, who have a key role to play in driving the renewal of science.

The Academy's current portfolio of funding opportunities for early-career researchers consists of funding for Postdoctoral Researchers and Academy Research Fellows and early-career Academy Project funding. In addition, early-career researchers are hired to work on other Academy-funded projects. In 2020, the total number of FTEs performed on the second tier of the research career at Finnish universities stood at 4,711. Out of that total, Academy funding for Postdoctoral Researchers accounted for 287 FTEs (6%) and Academy Project funding for 559 FTEs (12%).

Funding opportunities specifically targeted at early-career researchers have been developed and upgraded over several years of time. Nonetheless, based on feedback from both applicants and research organisations, the overall funding system is considered complicated and administratively burdensome. Ways of doing research and forms of research collaboration have become more and more diversified, and universities' career systems have continued to evolve. Therefore the existing funding system no longer provides the best possible support for the work of early-career researchers or their prospects for career progress.

The Academy's strategy implementation programme for 2022–2025 identifies the need to explore avenues for developing the funding opportunities available for researchers on fast career tracks.

On 8 June 2021, the Academy appointed an internal team to preliminarily explore avenues for reforming the portfolio of funding opportunities available for early-career researchers. Following on the publication of the team's report on 31 August 2021, the Academy launched on 15 September 2021 a project to put this reform into effect.

The current plan for reforming Academy of Finland funding for early-career researchers is based on the objectives set out in the Academy's strategy, the strategy implementation programme; discussions among Academy Board members; discussions held in autumn 2021 with and survey responses from scientists and researchers, the management of research organisations, research services and financial administrations, Universities Finland UNIFI, the cooperation body of government research institutes Tulanet, the Finnish Union of University Teachers and Researchers, the Finnish Union of University Professors and various foundations; interviews with



Academy research councils and divisions; liaisons with the internal support network; and other extensive preparatory work undertaken by the project team.

The present document describes the conduct and outcomes of the preparatory work, the key objectives identified in that work, the main features of the funding scheme and the further steps towards implementation with a view to introducing the new scheme in the autumn 2022 call.

2. Outcomes of preparation

Assisted by a support network recruited from the Academy's Administration Office, the project team conducted extensive preparatory work in June–October 2021 to lay the ground for reforming the funding opportunities available for early-career researchers. The aim of this preparatory work has been to consider what kind of overall funding model would best serve the needs of the most promising and talented early-career researchers and allow them to develop the competencies and qualifications needed in demanding research positions.

To this end the team conducted extensive reviews and analyses of application and funding statistics, examined earlier feedback from applicants, interviewed research council members, presenting officials and other Administration Office staff, and canvassed views and opinions from various stakeholders through surveys, discussions and other meetings.

Based on the experiences collected, the Academy's system of funding opportunities for early-career researchers is considered complex and unnecessarily burdensome in administrative terms. The main causes of that burden for research organisations, individual applicants and the Academy's Administration Office, and at once a source of some criticism, were the requirement of multiple applications and funding decisions for the post of Academy Research Fellow, the difficulties in meeting and interpreting the mobility requirement, the lack of flexibility in funding uses and the low application success rate, a cause of much redundant work for all parties concerned.

The survey for researchers attracted 828 responses. Based on those responses the most important features of a funding scheme for early-career researchers are the opportunity to use funds for the payment of the applicant's salary; having a long enough funding period; and having a reasonable success rate. Furthermore, the survey and the discussions with researchers made it clear there is a felt need for more career support from the host organisation. Difficulties associated with the mobility requirement were also highlighted.

The responses from research services and financial administration staff underlined the challenges involved in interpreting the mobility requirement and the difficulties in preparing cost estimates and applying cost models, the lack of flexibility in funding uses and the problems with combining multiple sources of funding. Open-ended responses called for greater clarity, simplicity and flexibility.

Responses from and discussions with the management of research organisations drew attention to the imperative of supporting early-career researchers and the importance of international mobility to individual research careers. In addition, it was stressed that researchers with Academy Research Fellow funding must maintain close relations with their host organisation, and to this end it was suggested that as well as conducting their research, Academy Research



Fellows should make some minor contribution to other tasks within that organisation. This was also considered crucial in terms of building up the professional researcher's competencies and integrating foreign early-careers researchers into the Finnish science community.

The project team has also put together a comprehensive statistical and background data package, drawn up scenario calculations to assist comparisons between different options, addressed equality and nondiscrimination issues, considered what changes are required by the Academy's online services (SARA) and assessed the viability of these changes, and produced a communications and interaction plan.

3. Key objectives and features of the funding scheme based on the preparatory work

The science policy objective of the funding scheme reform is to identify and support the best early-career researchers so that during their funding period, they can make significant career progress towards more demanding research positions.

Another major aim is to simplify the Academy's funding portfolio and the funding application process, to allow greater flexibility in funding uses during the funding period and to ease the administrative burden on individual researchers, research organisations and the Academy of Finland.

To further these objectives, the Academy will introduce a new funding scheme for Academy Research Fellowships in order to support early-career researchers on fast career tracks. At the same time, the Academy will discontinue funding for research posts as Postdoctoral Researcher and current research posts as Academy Research Fellow, funding to cover current Academy Research Fellows' research costs and Academy Project funding targeted at early-career researchers. All these changes are aimed to offer applicants a simple and more streamlined range of funding opportunities.

Science policy objective. The science policy objective of the new Academy Research Fellowship funding scheme is to identify the most promising early-career research talents and to support their research so that during their funding period, they can make significant career progress towards more demanding research positions and at the same time achieve an established position in the national and international research community.. Academy Research Fellows produce high-quality, high-impact research that stimulates the renewal of science.

Review criteria. The criteria used in the scientific review of applications for new Academy Research Fellowships are in line with the peer review criteria applied to research funding decisions: the scientific quality, innovativeness and novelty value of the research described in the research plan as well as its impact in the scientific community, the competence of the applicant or research team in terms of project implementation, the feasibility of the research plan (including research ethics considerations), the quality of the research environment and collaborative networks, researcher mobility and researcher training.

The academic competence and qualifications of applicants for new Academy Research Fellowships will be evaluated with special reference to their postdoctoral research and scientific collaborations in relation to their current career stage. A major focus will be to evaluate the research plan and the applicant's competence, which is not based on quantitative indicators.



Furthermore, the researcher's merits will be assessed through a wide range of outputs and research career roles, taking account of any career breaks. The researcher's progress will also be evaluated in relation to their doctoral dissertation and any other earlier research work. In line with the broader science policy objectives of the funding scheme, Academy Research Fellows shall be promising research talents who are on a rising career trajectory and who have the potential to advance to more demanding research positions. The evaluation will devote special attention to the applicant's career development and ability to generate scientific renewal.

Applicants are expected to provide proof of having completed or having commenced the process of completing postdoctoral qualifications. This evidence may be in different forms in different situations and different fields of research, which is why the evaluation of qualifications will be conducted as part of the scientific peer review process. In their applications, applicants can demonstrate their competence by describing, for example, their experience of different research environments, their ability to build up collaborative networks, previous national or international mobility, existing or planned joint projects or more independent publishing than in previous career stages.

Eligibility. Applications for new Academy Research Fellowships may be submitted by researchers who at the application deadline have completed their first doctorate at least two years but no more than seven years ago. During this career phase, applicants will be in the position to demonstrate the standard of their postdoctoral qualifications required for an Academy Research Fellowship and during the funding period to make significant progress towards tenure track and other demanding research positions. Applicants will already have conducted postdoctoral research and made conscious choices to advance their research career, but as a rule will not yet have reached the career stage necessary to be eligible for a position as principal investigator of an Academy Project.

The Academy Research Fellowships call is targeted at a rather closely defined group of applicants in order to maximise the chances of achieving the science policy objectives set for the funding scheme and to gain maximum impact, as well as to communicate these objectives with a view to achieving a reasonable application success rate.

From mobility requirement to evaluating applicants' qualifications. National and especially international researcher mobility is important both for the renewal of science and for early-career researchers' growth to independence. The Academy has been keen to promote these positive effects of mobility and therefore required that early-career researchers applying for research funding at the same site where they took their doctorate must have previously spent a minimum of six months in some other research environment. Based on the feedback received, this mobility requirement is considered difficult to fulfil in a meaningful manner, and in its current form it has poor acceptance within the research community. The requirement is considered particularly challenging from the point of view of family life. Addressing and accommodating various exceptions puts an unreasonable drain on resources and may also give rise to issues related to nondiscrimination.

Given the difficulties brought to light and the science policy objective of the new Academy Research Fellowship funding scheme, the decision has been made to rescind the eligibility requirement of researcher mobility in its current form.



While the aim of the current mobility requirement has been to support applicants' growth to independence by getting them to move to new research environments at the latest during the funding period, under the new funding scheme applicants will be required to show such independence by the time they submit their application. The new funding scheme attaches the same importance to immersing oneself in a new research environment. Past and planned mobility, research collaborations, the international dimension of the research plan and other competencies and qualifications achieved by the applicant are important considerations in the application review.

Four-year funding period. Under the new funding scheme for Academy Research Fellowships, funding decisions are principally made for periods of four years. According to the survey responses from researchers, one of the most important aspects of research funding is to have a sufficiently long funding period. A four-year period allows the Academy Research Fellow to make significant career progress towards more demanding research positions, as spelled out in the objectives for the funding scheme. During this period, even researchers whose work involves long-term experimental studies, for example, will have the opportunity to conduct significant research.

Based on the feedback from research organisations, it is important that Academy Research Fellows gain the skills and competencies needed to become wide-ranging, innovative and high-impact professionals. At the same time, the mutual commitment of the individual researcher and the research organisation and the impact of the researcher's contributions will begin to strengthen during the funding period.

During the four-year funding period, the duties of new Academy Research Fellows will include an average of four months in roles and tasks other than actual research yet relevant to the professional research career. These may include teaching and supervision, administrative duties, interaction or advocacy, or other tasks related to the organisation's core functions. Compensation for this period, equivalent to four months of full-time work, will be jointly paid with the host institution, with a maximum of two months' pay covered from the Fellowship funding. The cost estimate for the four-year funding period may therefore include payment of the applicant's salary for a maximum of 46 months.

Single cost model and flexible funding terms for different situations. Successful applicants for a new Academy Research Fellowship will receive one funding decision. That decision may include funding to cover the costs of the Academy Research Fellow's salary or costs associated with implementation of the research plan, or both. The cost items proposed in the cost estimate are not binding. Allowable funding uses are separately detailed in the funding terms. The principles of one funding decision and flexible funding uses are important steps towards greater flexibility in the application process and in doing research, as well as towards easing the administrative burden.

Cost estimates submitted for Academy Research Fellowships may include funds for salary payment in keeping with the pay system applied at the site of research. If the applicant's salary is paid in full or in part from sources other than the Academy's funding, the share of research expenses in the proposed cost estimate can be increased accordingly. Based on the feedback provided during the preparatory process, the needs and the structures of cost estimates vary considerably between different fields of research. Therefore a funding scheme that takes



account of the special needs in different fields (e.g. differences between disciplines that rely on research teams and the work of individual researchers, differences between experimental and non-experimental research) is the most appropriate option for all parties concerned and in the best interests of science.

The full cost model, which is commonly applied in the case of discretionary government grants awarded by the Academy, follows a principle whereby not only direct costs but also the indirect costs of the research site are allocated to the project. Furthermore, the full cost model follows the co-funding principle whereby an outside funding agency only covers part of the total costs while the rest is financed by the site of research. As a rule, the Academy's contribution to overall funding in funding decisions based on the full cost model amounts to no more than 70% of the research project's total costs. Some funding schemes, including funding for research posts as Academy Research Fellow, apply the additional cost model, where the Academy only takes account of direct costs as well as a fixed share of indirect costs (indirect employee costs 28% and overheads 14.29%). In these instances the Academy's funding contribution is 100%.

In order to achieve the goals of flexibility, it is imperative to adopt a practice whereby funding decisions for Academy Research Fellowships follow one single cost model. Administrative simplicity dictates that the choice of cost model is made between those in current use, as described above. Although the full cost model offers the important advantage of complete cost transparency, the preparatory process made clear the significant benefits of the additional cost model. According to the feedback from stakeholders, funding based on the additional cost model facilitates the task of preparing cost estimates in that it affords equitable treatment to projects with very different cost structures, as the overheads percentage is calculated as a share of the total cost estimate rather than as a share of salary costs. To ensure that Academy funding is used appropriately, it is crucial that cost estimates can be drawn up first and foremost with successful research implementation in mind. What is more, based on the responses to our surveys and other feedback, applicants find the additional cost model clearer and easier to understand than the full cost model.

Further planning and preparation of the reform must consider whether the points raised above warrant deviating from common practice and adopting the additional cost model in the new funding scheme for Academy Research Fellowships.

4. Further steps towards reforming funding for early-career researchers

The process to reform Academy funding for early-career researchers will be continued with a view to launching the new funding scheme for Academy Research Fellowships in the autumn 2022 call. At the same time, the Academy will discontinue existing funding schemes for posts as Postdoctoral Researcher and current posts as Academy Research Fellow, funding to cover current Academy Research Fellows' research costs and Academy Project funding for early-career researchers.

In early 2022 the Academy will engage with stakeholders to discuss the key objectives of this plan and the main features of the new funding scheme and weigh the insights gained from these discussions in preparing the criteria for research funding decisions. Some of the changes to the



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Academy's existing portfolio of funding opportunities can be rolled out in phases if this is considered expedient.

All transitions cause uncertainty and disruption and therefore the changeover should be completed within as short a period as possible, without unnecessary delay.

It is important that adequate resources are made available in the spring for careful preparation and that those resources are specifically allocated to communications, interaction and guidance for applicants. Communications must start as soon as possible in order to give applicants enough time to adjust and prepare for the changes.