



ACADEMY OF FINLAND RESEARCH PROGRAMME STRATEGY

RESEARCH PROGRAMMES ARE A SCIENCE- POLICY INSTRUMENT FOR THE DEVELOPMENT OF RESEARCH

Research programmes regenerate and revitalise scientific research. They generate new, interdisciplinary knowledge and competencies, bring deeper understanding and seek new solutions to issues or problems that are of scientific or social significance. The Academy of Finland's Research Programme Strategy outlines the research programme objectives and the means to reaching them.



ACADEMY OF FINLAND

RESEARCH FUNDING AND EXPERTISE

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RESEARCH PROGRAMME IN BRIEF

An Academy of Finland research programme consists of a portfolio of fixed-term research projects that together have significant critical mass. A research programme

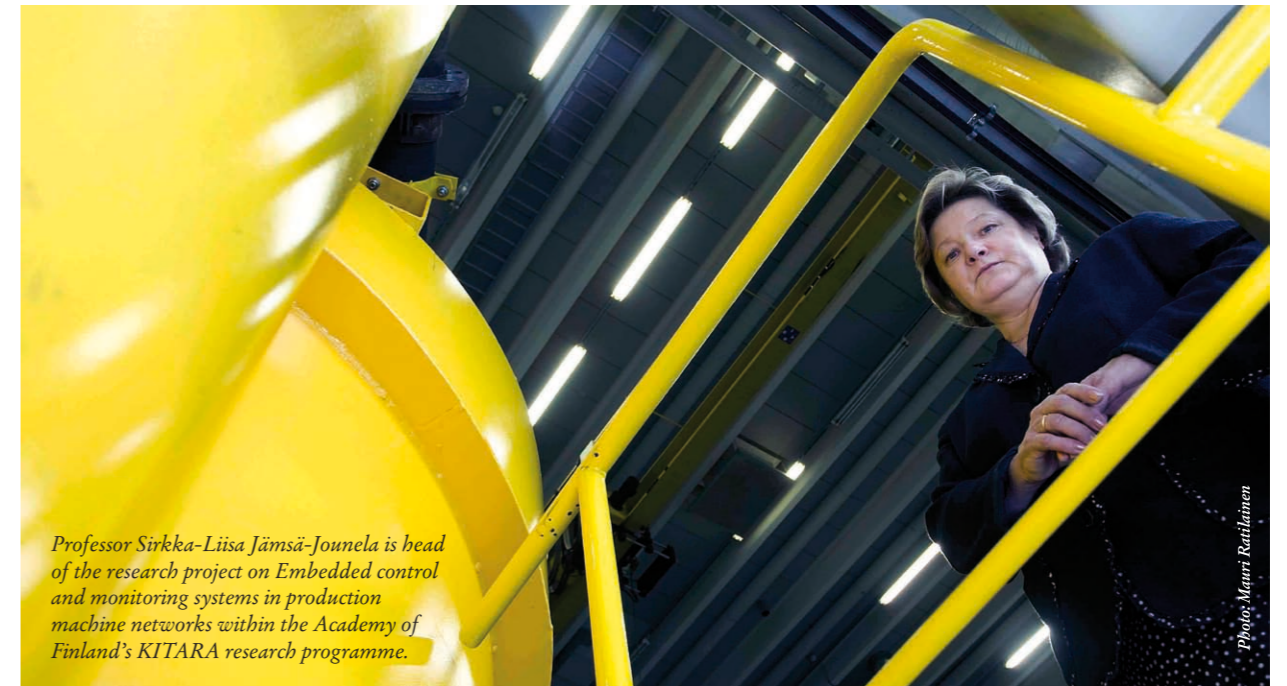
- *focuses on a defined thematic area or problem*
- *joins forces in a coordinated effort to attain the objectives set for the programme*
- *promotes interdisciplinary cooperation*
- *boosts international networking at both project and programme level.*

A research programme regenerates scientific research and creates new knowledge and competencies on designated thematic areas or problems.

A research programme is a forum for national and international cooperation among researchers working in different disciplines, end-users of research results and research funding agencies.

A research programme aims to raise the standards of Finnish scientific research and to achieve long-term scientific and social impacts.

CHANGES IN THE OPERATING ENVIRONMENT



Professor Sirkka-Liisa Jämsä-Jounela is head of the research project on Embedded control and monitoring systems in production machine networks within the Academy of Finland's KITARA research programme.

Photo: Mauri Ranttiläinen

International competition in scientific research is continuing to intensify and its geographical focus is liable to change with the strong growth of research investment by the world's emerging science powers. There is an increasing need for international cooperation globally as well as at European and Nordic level.

The consolidation of the European Research Area has helped to foster collaboration among research funding agencies, improve the international funding of research and opened up new opportunities for researchers to develop international contacts. In the future, we can expect to see deeper, more extensive and more sustained European cooperation both in the planning of research programmes and in the implementation of jointly funded calls.

Scientific research will continue to gain in importance. Society comes to rely increasingly on research knowledge and research collaboration to resolve the complex local, regional and global challenges facing people and the environment and to spur social development.

The competitiveness, appeal and success of the Finnish research and innovation environment require that there is long-term scientific research and competence of the highest calibre in several fields and disciplines.

A number of reforms and structural changes are currently underway in the Finnish research and innovation system. The status and standing of Finnish universities is changing. Strategic Centres for Science, Technology and Innovation are being started in fields that are central to the future of Finnish business and industry and society at large. Sectoral research by government research institutes improves and promotes intersectoral cooperation and also influences these institutes' collaboration with universities. As the role and position of different actors in the research and innovation systems continue to change, new forms of collaboration will also be needed.

With the changes that are taking place in its operating environment, the Academy of Finland shall have to devote increasing effort to strengthening the quality and position of long-term scientific research in designated areas and to developing the research system. Through its research programmes, the Academy is able to channel high-quality research to address the diverse needs of society.

A SCIENCE POLICY INSTRUMENT FOR THE DEVELOPMENT OF RESEARCH



The ELVIRA research programme focuses on topics such as the molecular biology of intestinal microbiota. Ingemar von Ossowski (left) and Justus Reunanen.

The Academy of Finland takes up and considers programme initiatives put forward by the scientific community, by funding agencies at home and abroad and by other stakeholders. The Academy's Research Councils play a key role in the assessment and prioritisation of the initiatives received, taking account of the needs of both research and society as well as the results of national and international foresights and evaluations. Final decisions on research programmes about to start and resource allocation rest with the Board of the Academy. The aim is to launch at least two new research programmes every year. The funding allocated to individual research programmes shall always be adequate in relation to the objectives set.

Preparation of the Academy's research programmes is an open and transparent process. Programme planning reflects a long-term perspective but is also flexible enough to respond quickly to change. In the planning process, both the research community and end-users are consulted so that attainable programme objectives can be set that will have maximum impact. In order to achieve synergy benefits and avoid overlap, programme planning and implementation shall take account of other domestic and foreign programmes and development efforts.

A research programme works to regenerate and revitalise research and to achieve a developmental leap in a strategically selected field or subject area. For example, the programme may be concerned to develop and broaden a multidisciplinary and interdisciplinary knowledge and competence base; to support the growth of a new discipline created at the interface of traditional disciplines; to develop new research methods; or to compile, develop and use new types of data sets.

- A research programme strengthens and regenerates scientific research in designated areas and towards specified objectives.
- A research programme addresses society's needs by means of long-term research.

A research programme shall respond to needs for the development and regeneration of research; to needs for new, interdisciplinary knowledge; and to needs for a deeper understanding and new solutions to issues or problems that are of scientific or social significance.

MEANS

RESEARCH PROGRAMMES AS MEANS OF STRATEGIC PARTNERSHIP

- *International research collaboration in research projects strengthens the Finnish knowledge base and competence.*
- *Research funding cooperation supports the programme's objectives and creates added value for the programme.*
- *National cooperation with funding agencies and stakeholders such as Tekes, ministries, foundations and business and industry serves to strengthen the Finnish research and innovation system.*

International cooperation in the context of a research programme enhances the quality and competitiveness of Finnish research and the Finnish research system as well as its international significance and appeal.

Broadly-based and long-term research programmes that also include international funding facilitate and promote the international networking of Finnish researchers. The Academy of Finland shall make every use of its expertise and contacts to give Finnish researchers the chance to work closely with the best foreign partners.

The Academy of Finland plans and implements research programmes working closely with foreign funding agencies insofar as this cooperation is beneficial to Finnish research and society and it delivers significant added value.

The Academy of Finland is committed to contributing to the development of the European Research Area (ERA) and is proactively involved in improving cooperation among research funding agencies, in Joint Programming as well as in the joint calls and programmes opened through

this cooperation (ERA-NET and ERA-NET+ calls, Article 169 programmes and other joint programmes). During the period of this strategy, the Academy of Finland shall seek to assume responsibility for the coordination of at least one European research programme.

The Academy of Finland is actively involved in strengthening the Nordic Research and Innovation Area (NORIA) as an integral part of the European Research Area. One of the key means in this effort are thematic programmes in areas where the Nordic countries are particularly strong or where there is need for development. The Academy shall seek international programme cooperation not only with major science powers but also with emerging science nations from outside Europe.

International funding cooperation requires flexibility and preparedness to adopt new working structures. The Academy is in the position both to make long-term commitments and to adapt and respond quickly. When it participates in research programmes administered by other national and international organisations, the Academy shall ensure that the research knowledge generated in those programmes is made available to Finnish researchers and end-users.

National funding and other programme cooperation with universities, research institutes, Tekes, the Finnish Funding Agency for Technology and Innovation, ministries, foundations and business and industry is geared to strengthen the whole research and innovation system and to bolster Finnish competitiveness. Strategic Centres for Science, Technology and Innovation provide a new platform for broadly-based national cooperation. A research programme can support the fields and areas of these centres.

The Academy's role in national programme cooperation is to enhance the quality of scientific research, its renewal and regeneration as well as the application of its innovation potential. At the same time, this serves to facilitate researcher mobility and to open up new career opportunities.

COOPERATION AND MANAGEMENT CREATE ADDED VALUE



Annual seminars of research programmes provide a forum for discussing how the programme objectives have been reached.

- *A key purpose of the management and coordination of a research programme is to support the attainment of its objectives.*
- *The added value created by the programme comes from the cooperation and interaction between researchers, end-users of research results and research funding agencies.*
- *A research programme entity may involve several calls.*

A research programme is an interdisciplinary forum of national and international cooperation among researchers, end-users of research results and research funding agencies.

Research programmes combine a bottom-up and a top-down approach. The Academy's role in the research programme is to steer and support research towards bold and creative implementation by means of structural arrangements and well-planned coordination and management.

The scientific coordination of a research programme is the responsibility of the programme steering group and programme manager. All programme activities are designed to meet the objectives set for the programme. It is the programme steering group's and programme manager's job to foster and facilitate the research conducted under the programme umbrella and in this way to help bring added value to the programme.

Research programmes encourage research teams to pool their resources in joint projects and promote mutual and international networking among researchers involved in the programme as well as their contacts with stakeholders. Research programmes bring under the same umbrella major interdisciplinary research projects involving several different research environments or organisations. Interdisciplinarity is a way of reforming and renewing research and deepening knowledge and know-how. This is important from an innovation point of view, too, since innovations often come about through the fusion of different competencies across disciplinary boundaries.

A research programme may involve several calls that together make up a cohesive programme entity. Different calls can be used to allocate funding according to need, for instance to studies on emerging issues and problems in the programme subject areas or to researcher networking and mobility. The Academy's Research Councils and/or the Board can also decide to allocate other funding to research programmes and their aftercare.

RESEARCH PROGRAMMES CREATE SCIENTIFIC AND SOCIAL IMPACT



- *A research programme has a high profile and impact.*
- *Research programmes have significant critical mass and their resources are aligned with the objectives set for the programme.*
- *Research programmes contribute actively to public debate in society.*
- *Programme evaluations are important tools for the development of research and the research system.*

Research programmes exert significant long-term scientific and social impact. Through its research programmes, the Academy of Finland contributes actively to public debate in society.

For the achievement of impact, it is important that research programmes have sufficient critical mass, that they run for a long enough period (4–6 years) and that adequate resources are deployed to meet the programme's objectives.

Scientific impact is based on high scientific standards and on intrascientific debate.

Achieving social impact requires active exchange of information, networking and other collaboration among researchers, funding bodies and end-users of research results at all stages of the programme's life cycle. Broad interaction between researchers involved in the research programme and end-users provides a fruitful basis for social decision-making as well as for innovation.

Research programmes promote and highlight the role and significance of science in society and bring their results into the public domain for debate and practical application. Making research known and disseminating its results is an important means of enhancing the impact of research programmes.

Evaluation of research programmes is an important development tool used to produce information in support of science policy planning and decision-making. Evaluation is conducted to assess the attainment of the programme objectives, the results and impacts of the programme as well as the added value produced. The main emphasis is on how the programme has facilitated research overall as well as on changes in the operating environment. Important lessons from programme evaluations include observations on the research system and recommendations for future courses of action. Another purpose of these evaluations is to gain feedback on the programme process. The Academy is committed to developing methods for assessing the impacts of research.

Information from programme evaluations is widely disseminated to decision-makers and other stakeholders. Implementation of the recommendations put forward in programme evaluations is an important part of its overall impact.