

STRATEGIC PLAN

(approved by the Governing Board of the Foundation on 28 April 2006)

Strategic plan

According to its statutes, the objective of the Swedish Foundation for Strategic Research is to support research in natural science, engineering and medicine in order to promote the development of research environments of the highest scientific quality in an international perspective with a view to enhancing Sweden's future competitiveness.

The interpretation of the key words *strategic research* and *competitiveness* is decisive for how the Foundation carries out its mission. The Foundation has defined *strategic research* as research that will be of benefit for Sweden in the long term. Benefit can be judged from one or more of the following aspects: Research, the results of which may serve as a basis for the development of existing or new companies; well-educated graduates, who through broadened and improved graduate training are attractive for employment primarily in the industrial and public sectors, but also in academia; the ability of internationally high-class research environments to attract uniquely qualified researchers and international investments to Sweden; research that serves as a focus for international cooperation, whereby knowledge of interest to Swedish industry can be accumulated. All of this also contributes to a higher quality of life via more employment opportunities, improved working conditions and better health, as well as to a more sustainable society.

Competitiveness is judged on the basis of how well Swedish research and its results stand up to international comparison. The goal is that Swedish industry and society should be strengthened, that Swedish positions should be advanced in terms of growth and sustainable development as well as central human measures such as quality of life, and that the contribution of Swedish researchers to global research should grow in importance and scope.

Focus of activities and prioritisation of areas

Thanks to its organisational form and independence, the Foundation enjoys unique freedom to act without regard to short-term and constraining considerations. The Foundation does not assume long-term funding responsibility for individual research areas; rather, its commitments are time-limited and its priorities shift between different areas and organisational forms based on (re)current assessments of needs and opportunities. This means that resources are not

distributed evenly over time between different research groups, scientific fields, and societal sectors, branches of industry, or universities or institutes.

The Foundation strives to focus its efforts and resources on areas where it can serve as a catalyst in creating added value by supporting creativity and innovative thinking in research and graduate education within its field of activity in Sweden. The resources are targeted within selected focus areas, both at strong research environments and individual researchers.

The Foundation supports research of great importance for the development of Swedish industry and society, both in areas where Sweden is a world leader today and in areas where Sweden has a potential to become a leader, in order to take advantage of the in-depth knowledge, expertise and structures that exist and can be created in our country.

In addition to aiming at the highest scientific quality in an international perspective, the work of the Foundation must fulfil the following conditions:

1. The supported research shall result in deeper knowledge and expertise that is expected in the long term to be *applicable* in knowledge-intensive and high-technology branches of industry or social sectors in Sweden. A *plan* shall be drawn up for the supported research indicating how the research results can eventually be *put to use*, for example in the form of technology transfer, demonstrators (new functional or technical concepts) or intellectual property rights. The Foundation does not support commercialisation processes *per se*; however, the Foundation's efforts should lay the foundation for and promote such initiatives.

Priority is given to research efforts that are *expected to lead to applications in:*

- Biotechnology, drug discovery and development, medical technology/biomedical engineering
- Systems, information and communication technologies
- Materials development
- Process and production technology

The Foundation furthermore strives to strongly encourage linkages between research areas that have not previously collaborated for the purpose of stimulating transboundary research.

2. The time frame for individual initiatives normally encompasses a *grant period of 3 - 6 years*, but the Foundation can also support *one-off initiatives*

for individual researchers or other specific needs, for example when immediate action is required.

3. A condition for funding of more long-term initiatives is that *potential exists for a continuation and development of the programme with other funding*, for example if the programme fits into the long-term plans of the concerned university/institute, or if it can bring a new field to competitiveness within other funding bodies or be taken over by relevant actors in industry.

The financial framework

In contrast to most other major research funding bodies, the Foundation is not dependent on annual appropriations. The Board determines the budget for new commitments over time and is able to use the capital, not just the return. The Foundation's freedom to decide on the annual grant volume makes it possible to adjust the level of the grant volume to the prevailing situation in the Swedish research and educational system and in Swedish society at large.

Based on current and projected capital growth and research needs viewed in relation to demands on long-term stability in the Foundation's funding, the Foundation judges that the annual grant volume should be at a level of about SEK 500 million. The Foundation thereby expects to continue to be an important actor in the Swedish research funding system into the 2020s.

The role of the Foundation in relation to other research funding bodies, universities and institutes, as well as to beneficiaries of the research conducted

In accordance with its statutes, the Foundation moves freely between basic and applied research, with an emphasis on high-quality research which actively strives towards applications.

The Foundation is prepared to contribute to and develop the cooperation that exists today between different research funding bodies. In particular, the Foundation regards it as advantageous if funding bodies with differing responsibilities can shift responsibility for certain programmes between themselves as they develop from basic research towards applied R&D. Furthermore, the Foundation considers it essential that the funding bodies consult with each other prior to deciding on potential reallocations of resources to certain relevant areas. Howe-

ver, joint funding of programmes by the Foundation and other funding bodies should be considered only in cases where such cooperation entails a considerable advantage due, for example, to the specific complementary expertise of another funding body. Furthermore, the Foundation is always striving to find new forms for research support that are important for Sweden's development, but which other funding bodies cannot always offer, in order to complement these other funding bodies for the purpose of meeting strategic needs expediently and flexibly. The Foundation can, for example, provide timely support to meet acute needs, in addition to being able to make large and relatively long-term commitments.

As regards infrastructural research initiatives¹ the Foundation does not undertake any permanent commitment that replaces the responsibility of governmental research funding bodies. However, when it comes to measures of importance for research projects already funded by the Foundation, it can make time-limited commitments on an individual case basis.

The Foundation regards international collaboration as essential for maintaining quality in Swedish research. Thus it intends to improve its efforts to strengthen Swedish competitiveness by greater cooperation with research funding bodies in countries deemed important with regard to economic development, potential strategic research collaboration or opportunities for Swedish enterprise.

Contacts and cooperation with university and faculty administrations are of great importance in ensuring that the work of the Foundation will interact expediently with the plans of the universities. The Foundation intends to make greater efforts to solicit viewpoints from universities in connection with major calls for proposals and to hold regular consultation meetings with them.

The Foundation is also trying to improve its relations with universities and industrial research institutes in order to link academic research more closely to societal needs and trends and to assist the universities in exploiting and commercialising their own research.

¹ expensive equipment, international research facilities, special premises (e.g. clean rooms), computer networks, databases, registers, software, data collection, monitoring stations, core facilities, payroll costs for directors, etc.

Contacts with the Foundation's beneficiaries (i.e. those who stand to benefit from the results of the research conducted) in the private and public sectors are likewise of crucial importance to the Foundation. The Foundation's selection committees always include industry and society representatives. The Foundation also encourages the supported research programmes to cooperate with actors in industry and society. The Foundation intends to increase its efforts to foster closer interaction between funded researchers and industry/society. The demands for concrete results from such contacts will steadily increase during the lifespan of the research programmes and will in many cases be a prerequisite for potentially continued support.

Appendix

Modes of support

The Foundation's work forms change dynamically to keep up with changes in society and research and are based on experience and evaluation of the modes of support that are used. The Foundation aspires to be a pioneer in the development of new modes of support with high added value and strong bridges between academia and industry/society. New forms are constantly being introduced. The main grant forms the Foundation is currently working with are strategic research centres, framework grants and various kinds of programmes for individual senior and younger investigators. During the Foundation's initial phase, graduate schools and national network programmes have represented a large part of the supported activities, but these modes of support now comprise a limited portion. The grants are essentially allocated on the basis of applications from researchers and research groups in broad or targeted calls for proposals within the framework of the programme descriptions established by the Board.

One of the Board's principal aims is to contribute to Swedish research environments that are judged to be of great strategic importance and to have the potential to become strong enough to contribute to and meet future demands on scientific and technological renewal. This requires coherent, effective and often multidisciplinary units that are preferably geographically co-located. Strategic support to research at the highest international scientific level also requires identification of and stronger support to young scientists with optimal prospects of leading research in such strong research environments in the future. A strong research environment is of great importance for researchers at all levels from senior scientists to doctoral students, where the role of the senior researcher is to renew and keep the environment at the cutting edge of research, and the role of the junior scientist is to become established as an independent investigator. The Foundation's support should consist of more than just funding for the supported research environments. Great importance should also be attached to the added value of the initiatives, for example in the form of interaction with the beneficiaries of the research carried out.

The Foundation strives for high credibility among both the academic and business communities when it comes to identifying researchers with both leading-edge scientific expertise and the motivation to use their research results for practical purposes. Scientific review is done with the aid of both Swedish and international scientific experts, and strategic review with Swedish and international experts outside academia.

The requirements mentioned above (i.e. applicability, time-frame of support 3-6 years or one-off initiative, and prospects of planned continuation) must be met by most of the Foundation's initiatives.

Modes of support currently employed by the Foundation

The modes of support that the Foundation is currently working with are strategic research centres, framework grants and individual grants, each of which represent approximately one-third of the grant volume. In the longer term, framework grants are expected to increase in proportion to strategic research centres.

- *Strategic research centres (SEK 40-80 million per centre for a five-year period)*

Strategic research centres are joint, focused, strong research environments of the highest scientific standard with great strategic importance and a considerable measure of renewal and innovation, consisting of complementary constellations of researchers with both depth and breadth who, under strong leadership, collaborate on a common platform and are held together by the scientific and technical issues to be solved, with graduate studies as an important component.

In the future, the Foundation intends to delimit its calls for proposals by stipulating more clearly defined criteria in order to get a smaller number of well-positioned applications to analyse in the best possible way.

- *Strategic framework grants (about SEK 4-20 million per grant)*

Framework grants are a flexible mode of support aimed at achieving new, interdisciplinary directions in strategically important areas, strengthening areas by e.g. recruitment to Sweden of researchers active abroad, preventing the emigration of leading scientists, or supporting research carried out in collaboration between researchers at universities/institutes and persons working in smaller high-tech companies.

- *Individual grants (SEK 1-10 million per grant)*

Attention is being given to the importance of the individual in two ongoing programmes aimed at young researchers for the purpose of enabling them to launch independent research initiatives as a part of a strong research environment: Firstly the *Ingvar Carlsson Award*, a repatriation grant which is aimed at highly qualified Swedish-trained PhDs who, after a postdoctoral period abroad, wish to return to Sweden, and secondly *Individual grants for future research leaders* (formerly nicknamed "INGVAR" grants), which are aimed at particularly promising young researchers with leadership potential at a somewhat more senior level than in the former programme.

In addition, an individual programme aimed at clearly established researchers, *Senior Individual Grants (SIG)*, has been carried out in two slightly different forms.