

Sustainable science

Strategic plan 2007-2010 of the Royal Netherlands Academy of Arts and Sciences

Summary

As a scientific society, the Royal Netherlands Academy of Arts and Sciences (KNAW) derives its authority from its members, who are selected due to the high quality of their work. This is the basis on which the Academy advises the Dutch government and the scientific world on research and on which it strives to promote national and international scientific collaboration. The Academy is also the umbrella organisation for a number of scientific institutes in the humanities, social sciences, and life sciences. These diverse activities are expressed in the Academy's mission:

“As the forum, conscience, and voice of the arts and sciences in the Netherlands, the Academy promotes the quality of scientific and scholarly work and strives to ensure that Dutch scholars and scientists make the best possible contribution to the cultural, social, and economic development of Dutch society.”

This strategic plan bears the title “sustainable science”, referring to the pressing need to pay greater attention to research in the longer term. Long-term investment in research, researchers, and research infrastructure is under far too much pressure. There has been a major increase in the pressure on science to come up with research results quickly – preferably ones that can be applied. The Academy believes that there needs to be much more attention and room for research with a long-term perspective. It is, after all, that kind of research that provides the very basis for applications in the long term.

“Sustainable science” also refers to the importance of having a sufficient supply of talented young scientists and to the “life course” of scientists. In this context, scientific communication demands attention; to a considerable extent, this should focus on secondary schools, on fostering the next generation of scientists, and on rewarding high-quality scientific work. The central theme can be found in the Academy's specific aims for the coming years.

The society

Election to membership of the Academy is seen as a great honour in the world of science in the Netherlands – the 200 active members in fact represent less than one percent of the country's scientists. Selection is based on scientific excellence. Over the next few years, the Academy's strategy in relation to the society as such will focus primarily on two objectives: maintaining the standard of selection procedures and enlivening the Academy's function as a forum. The first of these strategic objectives is by no means new: the composition and structure of the society and the extent to which different disciplines are represented is the subject of a review approximately twice every ten years.

Enlivening the forum function will reinforce the Academy's position as a venue for scientific discussion, in the first place between its members but – emphatically – not only between them. As an institution of renown, the Academy can make its headquarters – the Trippenhuis Building in Amsterdam – into a popular location for scientists to meet. Thematic meetings to discuss topical scientific issues, science policy, and more general issues within a broad scientific context are also likely to be of interest to a wider public. Such meetings can also form the basis for the provision of advice by the Academy or act as the starting point for the creation of a broader platform for the exchange of knowledge regarding such issues. A special committee will be charged with the task of making proposals to enliven the function of the Academy as a forum.

In the next few years, the Academy will continue to encourage the expansion of the activities of The Young Academy [*De Jonge Akademie* (DJA)], which currently consists of fifty enthusiastic young scientists. The aim of The Young Academy is to bring promising young scientists into contact with

disciplines outside their own area of specialisation, to get them to communicate their scientific findings to the general public, and to encourage them to develop their views of science policy.

The Academy also intends reassessing a number of aspects of its role as a funding organisation (funds, scientific prizes, and grants). The “Academy Professorships” programme will be reviewed. The Academy is considering introducing a programme of KNAW assistantships for top students at university so that they can collaborate in scientific research.

Advice

The Academy also intends reinforcing its role as an adviser to government, scientists, and society in general. It will do this not necessarily by providing a greater volume of advice but by operating more quickly and decisively – for example by means of “up-to-the-minute” advice – and by dealing with more matters of principle. The Academy’s Board will draw up an integrated advisory programme; in this context, the structure of the Academy’s Advisory Councils will be reconsidered.

Many consider identifying new scientific trends – with a view to optimum planning of Dutch research – to be a vital task for the Academy. The Academy intends making significantly greater efforts in this field in the coming years. It believes that carrying out foresight studies from a scientific perspective is a valuable task, one that is also closely related to the role it sees for itself as the guardian of Dutch scientific research and the Netherlands’ research portfolio. Creating a basis of support in the scientific field and fostering collaboration with other parties – including internationally – in preparing and carrying out foresight studies are important conditions for ensuring more effective implementation of results. The Academy’s Board intends playing a greater role in setting the agenda for providing advice and carrying out foresight studies; it also intends keeping closer track of the impact of its advice and studies.

The Academy has set up a quality assurance committee to advise the Board on fundamental questions relating to the broad field of quality assurance, quality assessment, and quality incentives. One of the most appropriate tasks of the Academy as an independent national society is, after all, that of ensuring the quality of research in the Netherlands.

Research organisation

Although the various Academy institutes developed in different ways, they were all set up because there was a scientific and public need for a central facility for one or more disciplines. These facilities were intended to carry out high-quality research – frequently by making use of important scientific collections – and to combine forces at national level; this approach would therefore make them facilities on a larger scale, relatively speaking, and with a longer-term perspective than local research facilities. The Academy institutes have consequently become scientific leaders both nationally and internationally. The fact that they can carry out long-term research without being burdened by other tasks does, however, create certain obligations. Academy institutes are required to achieve an evaluation of “excellent” or at least “very good” when being assessed.

If an institute wishes to be in the top group, it is essential for it to effectively and therefore dynamically respond to developments in research. But the aim for the next few years goes even further: the Academy institutes must set the research agenda in their field. All this requires that research programming be clearer and more flexible.

Improving their HRM policy – with a specific focus on investment in staff so as to further professionalise scientific and support personnel – is vital to the intended flexibility of the institutes. One of the duties of the institutes is to act as a breeding ground for talented young researchers. With that in mind, greater emphasis will be placed in the next few years on the acquisition of personalised grants, which are an excellent way of attracting and keeping young researchers.

Where collections are concerned, policy on digitisation and developing new access techniques will be given high priority. This will involve not only digitising analogue documents but also conserving and providing access to sources that have always been digital. Digitisation of collections is also becoming increasingly important in the life sciences. The Academy will consequently promote the development of life sciences databases.

Research in the Netherlands benefits not only from healthy competition but also from effective collaboration and exchanges between researchers and research institutes. Over the next few years, the Academy will promote interaction with Dutch universities and other partners, both national and international. The intention will be to house Academy institutes as far as possible on campus, in the immediate vicinity of a university. The Academy will also promote focus and mass in national and international scientific research by having its institutes share staff with universities. This will involve not only the appointment of part-time professorships and endowed chairs to be filled by institute staff but also the temporary appointment of top-class university researchers to posts within the various institutes.

Special attention will be paid to the development of a national Centre for Dutch Language, Culture and History, with the Academy's humanities institutes playing a major role, and to strengthening the Netherlands Institute for Neurosciences, which is intended to acquire a leading position in the field in the next few years.

Internationalisation

The Academy works to promote international collaboration. Important items on the agenda are the acquisition of international funds and the exchange of knowledge. Ways of facilitating the latter include the KNAW guest researcher programme, which is open to members of the Academy and Academy institutes, and facilitating national and international exchanges between researchers.

The Academy aims to reinforce its leading role in international discussion of science policy. It wishes to ensure that the views of the Dutch scientific world are properly represented in that context.

In many countries – particularly those with a relatively weak university infrastructure – institutional support from academies in the West can create a context in which individual researchers and research projects can be more effective. One of the tasks of the Academy will be to maintain its active role in this area of capacity building.

There is a constant risk of the fragmentation of international collaboration based in the Netherlands and within Europe. The Academy wishes to contribute to creating synergy between efforts to internationalise science.

Communication

Over the next few years, the Academy intends making its internal and above all external communication more professional. The Academy considers encouraging interest in science and technology at schools to be crucial to the future of science. Fostering enthusiasm among young people at an early stage is an important objective.

The Academy also intends playing a leading role in public discussion of science, technology, and related issues. Initiating and supporting activities to popularise science can make a major contribution to creating public support for science.

Organisation and operational management

A high level of ambition in all Academy fields demands the focused deployment of human resources and funds. In the near future, various measures to restructure the KNAW Bureau will be carried out with a view to increasing the cohesion, external focus, and alertness of the organisation.

Where the research organisation is concerned, steps have been taken in the past few years to bring about operational collaboration between institutes located close to one another. The Academy will continue to pursue this course. At the same time, consideration will be given to more far-reaching measures, for example setting up shared service centres or shared support activities or the procurement of expertise.

The Academy aims to ensure that its institutes are located in the immediate vicinity of the Dutch universities. At the same time, however, it is considering options for physically clustering institutes with a view to ensuring greater operational efficiency and also greater flexibility in the event of institutes needing to become larger or smaller.

Finances

In the course of recent years, the Academy's budget margins have gradually disappeared. This has been due for one thing to accommodation problems – when state-owned buildings were transferred to the Academy, insufficient funds were made available for their upkeep and maintenance – and on the other to an insufficient level of wage and price indexation in government funding. The Academy is now noticing that research is becoming more expensive, if only because of the greatly increased demand for the investment that is absolutely necessary in order to remain competitive.

The options for new policy open to the Academy within its current budget are extremely restricted or even non-existent. The Academy has therefore asked the Minister of Education, Culture and Science to provide a regular annual contribution of EUR 23 million, because many of the ambitions set out in this strategic plan can only be achieved if the necessary financial scope is available.

The report *Duurzame wetenschap. Strategisch plan KNAW 2007-2010* (May 2006) can be ordered from the KNAW free of charge (tel. +31 (0)20-5510780, e-mail: edita@bureau.knaw.nl) or downloaded from the KNAW website (www.knaw.nl) as a [PDF file](#).