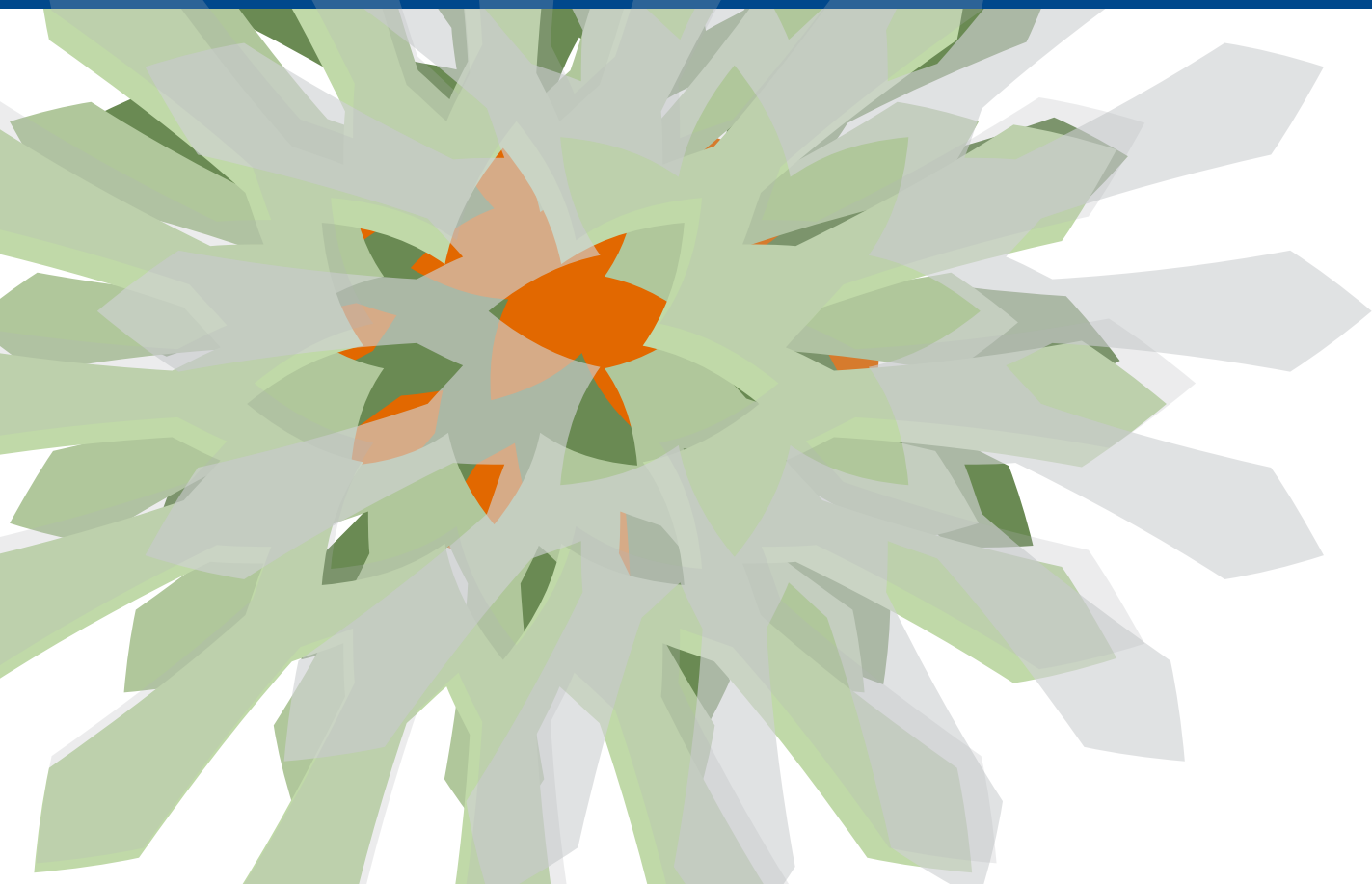


Change for quality and renewal

Strategies for Research and Education 2009 – 2012



UNIVERSITY OF GOTHENBURG



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Change for quality and renewal

THE MOST VALUABLE capital a university possesses lies in quality in research and education; a capital that must be continually taken care of and developed. This constitutes the starting point for the work on research and education strategies of the University of Gothenburg. In recent years, universities have changed markedly in that they have been allocated more and more tasks alongside those of education and research. In this new situation, it is increasingly important to maintain the special character of universities. The main task of universities – to conduct high quality research and education – demands active academic leadership at the same time as it presupposes openness along with dialogue and interaction with the world around us. Universities have an important role in society, not just regionally but also nationally and internationally.

THE UNIVERSITY OF GOTHENBURG 2007

The University of Gothenburg is the largest university in Sweden with eight faculties, some 50,000 students and 5,200 employees. It accommodates a broad spectrum of disciplines including Art, Education, Health and Care Sciences, the Humanities, Information Technology, Law, Medicine, Odontology, Science and Social Science. The University is characterized by many attractive programmes and courses for which there is a large number of applications. According to evaluations conducted by the National Agency for Higher Education, approximately twenty of the University's programmes are among the five best in the country within their respective fields. Over the years, the University of Gothenburg has incorporated a number of single subject programmes. In addition, the University has taken on more extensive educational contracts during the last decade and has therefore assumed a major responsibility for the provision of competence at a regional level.

The focus is on strengthening the quality and long-term competitiveness of research.

Within a number of fields, both nationally and internationally, the University of Gothenburg plays a leading role in research. In terms of the overall picture, budgetary allocations for research and doctoral education have not increased to the same extent as those for undergraduate education. As a consequence, research has become far too

dependent on short-term external financing. In the strategic plan for the University of Gothenburg for 2007-2010, the focus is on strengthening the quality and long-term competitiveness of research.

The University of Gothenburg has an living tradition of active cooperation with the community. A distinguishing feature is a distinct presence in the city and the region which is achieved with lectures open to the public and other public events. In 2005, the National Agency for Higher Education conferred upon the University of Gothenburg a distinction for its work in relation to democracy. The University co-operates actively in its innovation system with Chalmers University of Technology and a variety of social actors, including the region of Västra Götaland.

INCREASED COLLABORATION AND RENEWED LEADERSHIP

A fundamental idea in the implementation of changes at the University of Gothenburg has been to make better use of the University's overall expertise. This has primarily entailed creating increased affiliation and interdisciplinary collaboration within the University. In 2003, the University Identity and Image Committee drafted a platform for the University's overall profile and principle characteristics. This became the basis for the vision adopted by the University Board in 2004, University of Gothenburg 2010. A third stage entailed the establishment of a strategic plan for the organisation for 2007-2010.

The basis for the strategic work for the University of Gothenburg is to use the University's diversification to generate new and interesting opportunities for research and education. Diversity does not have an intrinsic value, but it is significant because the different environments can have an inspiring effect on each other with a view to developing new knowledge. Successful collaboration presupposes a high level of quality in the disciplines affected. Collaboration, therefore, concerns both the development of disciplinary knowledge and the creation of new platforms for the formation of knowledge.

At the same time, the quality level in the research and education environments must be continuously tested to optimize the allocation of resources between environments with high quality research and education and environments that require increased support for development. It is also necessary to investigate the possible discontinuation of

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less successful environments. In the strategic plan for the University of Gothenburg for 2007-2010, emphasis is placed on the importance of developing quality indicators as the basis for quality management and for use when making priorities. However, the work on quality indicators

must not be based on using them in any simple mathematical model. The indicators only constitute one of several bases for decisions and they require analysis and interpretation. They must also be supplemented with strategic considerations. Clear academic leadership is required to accomplish this. The University of Gothenburg has, therefore, initiated in-house training with the aim of strengthening academic leadership so that the University organisation is able to fulfil the set requirements.

SELF-CONTAINED ENVIRONMENTS FOR HIGH QUALITY RESEARCH AND EDUCATION

The University of Gothenburg has successfully united research, education and collaboration with the surrounding community. The objective, for the future, is that activities are to be based on what we are designating “complete high quality academic environments”. All education at both undergraduate and advanced level must have a clear link to research. This also entails that all research must have a link to education. Cooperation with the society around us means that new ideas can be disseminated to wider circles. At the same time, it gives an influx of new ideas and new knowledge, which reinforce and regenerate the disciplinary environment.

There is a variety of models at the University of Gothenburg to develop interdisciplinary research and education environments. One example is multi-disciplinary institutes and the formation of centres where lecturers can conduct research during specific periods, another example is that prominent researchers regularly teach in introductory courses. Furthermore, the gradual expansion of the advanced level reinforces the link between research and education.

It is the University’s intention to identify the role played by solid research environments in education and similarly to illustrate the links that solid educational environments have to research. In both cases, there are reasons to assess the extent to which development work is needed to establish self-contained environments. As far as possible, a self-contained environment also includes cooperation with the surrounding community. The way in which cooperation takes place can vary between different

subject areas, however, there is a need also for strategic and quality-driven development work. With a solid link to research in education, students - and alumni – will play an important role as ambassadors for the University’s research and contribute to strengthening cooperation with the surrounding community.

THE UNIVERSITY OF GOTHENBURG – AN IMPORTANT ACTOR IN SOCIETY

Ever since socially committed citizens founded Göteborg University College in 1891, the University has had a distinct social profile. Openness to the outside world is a distinguishing feature of the organisation and is clearly highlighted in the University’s vision from 2004. Research and education are to be based on the fact that the University of Gothenburg has a global responsibility and that the University contributes to shedding light on issues that are relevant to both local and global social problems. The University must follow, but also influence, social development and be a visible social actor. Courses must be designed to take into account both the demands of the labour market and the students’ interests. It must also be possible for the range of courses available to have an influence on tomorrow’s labour market.

The University is dependent on developments in society. Political decisions, demographics, infrastructural conditions and financing affect the organisation’s circumstances. The fundamental principle is, however, that the University’s social involvement must be based on the University contributing to social development as an independent and critical institution with a high level of integrity. At the same time, the University must utilize knowledge and experience from outside the academia with sensitivity and have the capacity to implement them in education and research.

The University of Gothenburg gives priority to society in so far as all activities – not just collaboration – must have social relevance regionally, nationally and globally. Our research and education must contribute to the development of society in both the short term and the long term.

The University contributes to shedding light on issues that are relevant to both local and global social problems.

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Research

THE OBJECTIVE FOR THE NEXT FEW YEARS is to strengthen research at the University of Gothenburg. In the long term, a better balance is required between research and education, not least to enable us to develop self-contained research and education environments. Funding for undergraduate studies currently stands at approximately 60 per cent and funding for research and doctoral studies approximately 40 per cent of the Government funding. In this respect, the University of Gothenburg differs from other large institutes of higher education where funding for research normally constitutes at least half of the Government funding.

With regard to its capacity to attract external funding, the University's relative competitiveness has declined somewhat, even though the trend varies with respect to different research financiers. One explanation is the relative shortage of faculty funding. A national survey within the field of science reveals a clear connection between the size of faculty funding and the possibility of obtaining external research funding. For the University of Gothenburg, it is, therefore, a strategic question of how Government funding and externally financed research is to be increased.

STRATEGY FOR BOTH BROAD AND CUTTING-EDGE RESEARCH

The University of Gothenburg is concerned about the weakening of research resources. Furthermore, Government finance for research is only able to support a small proportion of all applications. It is frequently the case that researchers whose applications maintain a high international standard do not receive funding. This must be considered a serious problem in both the short and the long term. It is, therefore, a major political issue to increase the resources for research and to work with freer forms of financing. This is also an internal strategic issue for the University in relation to the new knowledge-driven economy.

Within the University of Gothenburg different subject areas have vastly differing prerequisites when it comes to the possibilities of attracting external research funding. Several faculties acquire substantial external funding but our strategy is to strengthen the competitiveness of all faculty areas. Using an extensive external analysis, we have identified five possibilities to strengthen research which match the requirements within different areas of the University:

- ▶ **to stimulate innovative research within the University's framework.** It is of particular interest to develop interdisciplinary research in order to establish new platforms for research collaboration, which in the long term can result in entirely new research fields. One model, which was applied for the first time in 2007, is to advertise specially designated funding for interfaculty research initiatives within the University.
- ▶ **to improve the prospects for research of a high international standard.** In this context, the primary task for the University is to provide researchers with support for applications, both by conducting a dialogue with research financiers and by supporting the work of making applications. Increased support is provided chiefly through the University's research and innovation service.
- ▶ **to form strategic research alliances with other institutes of higher education.** This might involve creating a joint infrastructure and/or research environments or to bring together two complementary research environments. Alliances such as these have been primarily developed with Chalmers University of Technology and with Lund University, but also with foreign universities.
- ▶ **to allocate an increased proportion of lecturers' working hours to research and development work within fields that are deemed to have difficulties in attracting external funding with their own resources and in which research has to be strengthened.** The process includes evaluation and following-up.
- ▶ **to undertake further work with quality indicators as the basis for strategic rankings between different research fields and academic areas.**

These ways of strengthening research make it possible to improve the conditions for both cutting-edge research and general research. Established research can be supported at the same time as initiatives from researchers/lecturers can lead to new areas being developed. To further stimulate mergers of researchers from different faculty areas,

The University must work to improve a common infra-structure for research.

the University must work to improve a common infra-structure for research. In addition, increased financial incentives are needed, along with meeting and working areas common for researchers/lecturers/students across traditional boundaries.

PROMINENT RESEARCH AREAS

It appears increasingly important for the University of Gothenburg to develop alternative models for prioritising research. The predominant model has been to identify the environments that have been most successful on the basis of how much research funding, how many publications and the amount of scholarly attention that has been devoted to the research. These are obviously important criteria that can be used to prioritize between subject areas or individual environments. However, there is reason to be cautious in pushing this approach too far. The criteria tend to have a conserving effect and benefit areas with long traditions. At the same time, the University is responsible for developing creative new environments for the future. We need to be courageous and focus on ground-breaking areas – even though this will inevitably entail risks on occasion - not least when it concerns research that transcends traditional subject boundaries.

The University of Gothenburg focuses on a number of strong areas with the aim of drawing attention to both those fields that have a long and established tradition and those that are relatively new. Also the latter are considered to have great potential to become prominent as they are within productive academic environments. Three criteria have been of particular importance in the choice of fields. The first is that the field has a high level of academic quality and/or that it is located within an environment where advanced research is being conducted, preferably

At the same time, the University is responsible for developing creative new environments for the future.

in collaboration across traditional faculty boundaries. The second is that the field can, in some way, be designated as unique to the University of Gothenburg or that the University is strong nationally or internationally within the field. The third criterion is that the field has social relevance in the sense that the University believes itself to be capable of making a contribution to social development.

With this in mind, we have identified eight areas, the first four (1–4) of which comprise strong areas with long traditions within the University of Gothenburg and with a high level of academic quality which is

documented. The latter four (5–8) are deemed to contain strong environments with the potential to be developed into strong areas:

1. *The patient-centred research concerning cardio-vascular disease including obesity, biomaterial and vaccines.* The research field represents a highly productive model based in Gothenburg that brings together research at the molecular level with patient-centred research. In addition the field is characterized by close relations to research in other disciplines, primarily biology (natural science) but also diet and prophylaxis (education) and lifestyle (social sciences). The area has great practical significance and represents a field with substantial collaboration with both other institutes of higher education such as Chalmers University of Technology, and with successful biomedical and medical technology industries.

2. *The research about learning* is one of the strong academic environments at the University of Gothenburg. It has a long tradition of empirically focused research at schools and poses general questions about knowledge formation. These have subsequently been broadened to include issues concerning new technology and learning both within the education sector and within working life. Research about learning has its centre within the Faculty of Education, however, the environment has been expanded to also include the IT University, and the Faculty of Social Science (political science) and the Faculty of Fine, Applied and Performing Arts (drama).

3. *The research on language technology* is nationally unique. Its background is in a research programme on computer-readable newspaper text that started as long ago as 1966. It analyses Swedish prose for linguistic research, but it is also used for lexicographic purposes. The University of Gothenburg is host to a national research school. This internationally renowned strong environment is one reason why the University has been given the responsibility for the Swedish National Data Service (SND). In addition, cutting-edge research is conducted on communication between human beings and computers.

4. *The research on democracy and public opinion* chiefly within the social sciences. The area has a very long tradition of compiling public opinion polls among voters. It was developed as early as the 1950s and

has become prominent nationally. This is another reason why the University of Gothenburg was given the responsibility for SND, firstly for social sciences and, starting in 2008, for research material from the humanities and medicine too. The research has subsequently been expanded both through new issues, for example, the Quality of Government research programme, and new forms of data collection (the SOM Institute), in which other faculty areas also are included.

5. *Research on the marine environment.* This has its background in the marine profile of the natural sciences with the Sven Lovén Centre for Marine Sciences at Tjärnö and Kristineberg. It has developed strong links to most faculties that pursue activities within the field of environmental studies, for example the School of Business, Economics and Law (environmental economics and maritime law), the social sciences (environmental views and human ecology) and the humanities. The prioritising of the marine environment as a field of research and education at the University of Gothenburg has strong national support and collaboration takes place with, among others, Chalmers University of Technology and institutes of higher education in Norway.

6. *Research on cultural heritage* chiefly at the interface between the humanities, natural sciences and the arts. This is a relatively new field of research that has acquired its strength through close collaboration between the subjects of conservation and archaeology, as well as the connection to artistic development work and applied arts. The Gothenburg profile is characterized by applied research similar to that conducted at DaCapo in Mariestad. In addition there is a large amount of interest for research and education for the field within the Västra Götaland Region and at the national Museum of World Culture.

7. *Research on globalisation* is a new field that has emerged in the intersection between the School of Business, Economics and Law (development economics, international law), social sciences (global studies including peace studies, human rights), the humanities (language) and the Sahlgrenska Academy. This field of research is still in an early stage of becoming a unified field. However, the environment that has crystallized is strong and also undeniably of great social relevance.

8. *Research on culture and health* is a relatively new academic field. Its strength lies in the fact that the University of Gothenburg has a tradition of collaboration between medicine and health care on the one hand, and art, the humanities and social sciences on the other. A number of sub-projects have been identified and work is underway in developing new forms for collaboration within the field.

The University of Gothenburg considers a number of additional areas to have great potential for the future. One example is a multi-disciplinary research initiative on “risks and security”, within the framework of the Centre for Public Sector Research (CEFOS) and in collaboration with Chalmers University of Technology. Another area is systems biology, which is extremely strong and where work is currently being pursued to broaden its base. A third area is gender studies which relies on collaboration between six faculties as well as the expertise within the Swedish Secretariat for Gender Research.

The strategic work on research is primarily concerned with generating an inner dynamism which will facilitate the emergence of new research ideas.

CONTINUED DYNAMISM AND BETTER INFRASTRUCTURE

It is important not to concentrate on giving priority to a few research fields, or even to highlight some new, exciting environments. The strategic work on research is primarily concerned with generating an inner dynamism which will facilitate the emergence of new research ideas. One such idea is to combine strategic ventures within the prioritized areas by advertising internationally for post-doctoral positions where prominent researchers are given the opportunity to develop their projects.

The research fields which have been given priority must, as far as possible, be given a clear connection to education. If an area is to be developed and regenerated, it is important to have the participation of students and doctoral students. The self-contained environment also presupposes collaboration with the surrounding community, where not least the opportunities for innovations are continuously evaluated as an additional factor in generating dynamism in the organisation. The unique artistic research environment that has emerged at the University of Gothenburg in collaboration with other academic areas works not only

with practical” research but also with research based in creative work.

An important part of future development – an aspect that individual teams of researchers are not able to deal with themselves – is the creation of an infrastructure that is regularly upgraded and developed. Research requires increasingly expensive high technology equipment and IT support. This does not only require strategies for financing and management which are common to the whole university, but also collaboration with other institutes of higher education to ensure access to the best possible infrastructure. This may entail regional as well as national or international responsibility.



Education

GÖTEBORG (GOTHENBURG) is an attractive city for students. This fact is confirmed by the large number of applications for courses at the University. Regular surveys of new students indicate that the University's attraction lies in both the high quality of its education and the extensive range of courses. There is a large number of applications from the area surrounding Gothenburg, but many courses recruit students both nationally and internationally. Increasing involvement from the city of Gothenburg and trade and industry will further improve conditions for students in Gothenburg.

LARGE BUT NOT LARGER

The University of Gothenburg has approximately 50,000 students at undergraduate and advanced level. This is considered to be a reasonable number for the time being.

The vast majority of the students at the University are undergraduates; analyses of student statistics for the last decade show that the proportion of students at advanced level has decreased somewhat. This is partially explained by the fact that students have exploited the good economic situation at the beginning of the 21st century and have chosen the labour market instead of further studies. A follow-up of all students that graduated from the University of Gothenburg between 2000–2003 also reveals that they have found it easy to find employment. It is the University's long-term intention to increase the proportion of students at advanced level, among other things to accomplish the goal of self-contained research and education environments.

Regular surveys of new students indicate that the University's attraction lies in both the high quality of its education and the extensive range of courses.

MORE DISTINCT UNDERGRADUATE LEVEL DEGREE PATHS

The students at the University of Gothenburg are distributed relatively evenly between programmes and single-subject courses. There has, however, been increasing pressure on applications for the programmes, not least among students from backgrounds where studying is less common. One consequence of this is that there has been a gradual

increase in the number of places in programmes in almost all of the faculty areas in order to accommodate student interest. However, there are differences between the faculties. At the IT University and the Faculty of Fine, Applied and Performing Arts programmes are almost entirely predominant and there is instead a need to increase the number of single-subject courses. The emphasis on programmes at the University of Gothenburg should not, however, exclude the opportunity for students to put together their own programme of single-subject courses.

Programmes that last for a number of years and lead to professional qualifications are usually well established, but other programmes do not have the same clarity for new students. The University of Gothenburg intends to use the increased programme character of studies to show possible combinations of subjects, and to show how these relate to the labour market. The University has started to conduct a survey of its graduate students. The aim is to show how different course pathways relate to the requirements of the labour market, as well as how the students subsequently perceive the relevance of their studies.

TWO MODELS FOR EDUCATION AT ADVANCED LEVEL

The advanced level also needs to be made more transparent. The current set of rules and regulations for both one-year and two-year Master's degrees is unclear. It is the University's view that for the sake of clarity, the Master's degree should be re-formed into a one-year Master's degree alongside the two-year Master's degree. This is an issue that the Government should analyse at the earliest possible opportunity.

The model that dominates the transition from undergraduate level to advanced level can be described as progression within a subject; the student conducts more in-depth studies of a subject field. A Master's course such as this either provides the basis for vocational specialisation or for a transition to doctoral studies. At the same time, the Master's level can be developed so that in addition to being a natural progression for the University's own students, it also promotes national and international recruitment. This is the model that has become evident in the adaptation to the Bologna process, but which has been used by the School of Business, Economics and Law at the University of Gothenburg for some time.

Furthermore, it is the University's ambition to also introduce programmes at advanced level that are not based on subject progression.

Such programmes that do not require specific subject qualifications at undergraduate level are in demand, especially within the fields of economics, organisation and leadership. The University feels that this will also enable the development of single-subject courses within the humanities and social sciences, so that they become a part of lifelong learning.

MODERNIZED RESOURCE ALLOCATION

For some time, the University of Gothenburg has demanded a modernized model for resource allocation to increase its freedom of action. Although it is already possible to change the order of priority locally but as the level of remuneration for education is specified by the Government, in practice this entails that these levels also determine the local order of priority. With the aim of facilitating interdisciplinary collaboration, a modernisation of the system consisting of specific levels of remuneration could entail a basic allocation for traditional teaching that is the same for all faculty areas. Another part of the remuneration would be determined on the basis of the particular character of the teaching.

Since 2006, the University of Gothenburg has been working on the development of a similar model for the order of priority that also includes a third part with remuneration for special assignments. This was intended to be introduced in 2009, but the University has decided to delay the implementation since the Resources for quality (RUT 2) enquiry contains similar proposals.

THE STUDENT BEFORE, DURING AND AFTER STUDIES

Broader recruitment and increased diversity among students and employees contributes to a higher level of quality as more experience is brought into the education. Furthermore, student influence constitutes a cornerstone of the University's quality management. The University of Gothenburg uses a model of integrated, systematic and long-term support facilities for all students. However, student support is not just about recruitment and selection. To enable the University to fulfil its commission, all students have to be provided with the conditions to successfully complete their studies. The model entails an overall responsibility for the students from recruitment to labour market:

- ▶ Measures to interest potential students in higher education, for example cooperation with secondary schools, upper secondary schools and colleges for adult education.

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- ▶ Measures for those who are interested in higher education but who are not qualified, or whose qualifications are not clear. Examples of measures include the assessment of actual qualifications, the validation of qualifications and foundation years.
- ▶ Measures involving an offer of support and help during the entire period of study, for example, student support, mentoring activities and language and study guidance, particularly during the first year. Analyses are conducted on how the students assess their education both through recurrent questionnaires (STUG) and analyses of study data from Ladok (a student documentation system).
- ▶ Measures towards the end of the education and also after completion of the undergraduate studies should be taken in order to facilitate the transition from undergraduate level to advanced level or to working life. Examples of this are career planning and guidance for further studies. For a number of years, there has been active career counselling at the University of Gothenburg that assists students to enter the job market.
- ▶ Following-up and documentation related to overriding goals. One example is to follow-up the students' continued careers, *Göteborgsakademiker 2006 (Gothenburg Academics 2006)*, which was recently presented and which will be implemented for a second time in 2009..

The University of Gothenburg is to introduce and develop alumni organisations within all its faculties no later than 2010. A plan of action for this is under development. Alumni organisations reinforce connections with the outside world and constitute an important link to working life, at the same time as they contribute to the development of education. In addition, opportunities for more trainee placements and degree projects are created.

RESPONSIBILITY FOR LIFELONG LEARNING

Lifelong learning should contribute to both the development of the individual's skills and to the expansion of knowledge in society. The University of Gothenburg's ambition goes back to the spirit in which it was

founded. It is also reflected in the European Commission's new Lifelong Learning Programme. Working life in the future will entail a high level of demands on the individual's capacity to cope with changes, to follow the developments and to invest in lifelong learning. Further, this will demand good information skills. It is not least in this context that the University Library has an important pedagogical role to play.

The Grundtvig Institute at the University of Gothenburg is a meeting place for dialogue and collaboration between public institutions, organisations and individuals who are involved in adult education. The institute has a special commission to develop models for lifelong learning. The commission is to be undertaken in close cooperation with other education organisers, for example, adult educational associations, public adult education and colleges for adult education.

The University has an important role in developing the skills of personnel within trade and industry and the public sector. The University of Gothenburg aims to develop its range of courses so that it is possible to study both parallel to having a job and during short periods. This will enable the University to participate in the work of raising the level of education in the region as well as participating in international skills development. The education can be offered as individual or as commissioned education. Both forms will be expanded during the period.

The basis for high quality academic education is that it is closely connected to the latest research findings.

NEW MEASURES FOR INCREASED QUALITY OF EDUCATION

The basis for high quality academic education is that it is closely connected to the latest research findings and that it is conducted in a way that arouses interest at the same time as it is efficient. The University of Gothenburg's efforts to develop self-contained environments represent an important measure in the work of reinforcing links to research. The University has set up a new unit for pedagogical development and interactive learning to implement the task of developing alternative forms of study in programmes and courses for the entire organisation. The unit, which starts in 2008, has two main tasks. The first is to develop and strengthen teaching expertise in higher education and the capacity to vary the forms of teaching. This is done, for example, by creating advanced courses in higher education teaching. The second task is to introduce second-generation computer-based learning platforms in

the education. This work takes place in close collaboration with the IT University, where such activities are conducted with great success. The Internet and digital technology in general offer new possibilities to develop the education. Of particular importance in this context is the University's unit for digital media which includes the University TV. The University TV is unique to Sweden and it regularly contributes productions to the national knowledge channel as well as working closely with the Swedish Educational Broadcasting Company.

COLLABORATION IN DOCTORAL STUDIES

A comprehensive programme for the renewal and improved quality of doctoral studies has been pursued at the University of Gothenburg since 2006. A university-wide advisory committee has been set up. Its job is to work with overriding issues concerning doctoral studies in accordance with the University's strategic plan, and it also constitutes a forum for exchange of experience between the faculties that have the primary responsibility for doctoral studies. Important issues include strengthening the role of the supervisor, developing quality indicators and reinforcing aspects that entail preparation for professional life. Further issues include a broadening of education, primarily leadership, project management and communication. An important issue for improved quality is also the increased possibility for interdisciplinary collaboration both nationally and internationally, and also support for applications to establish research schools.

Cooperation with the surrounding community is also to be developed, for example with schools, medical care, trade and industry, where there is a great need for and interest in qualified doctoral students to supply expertise and renewal. A model that has received national attention is the CUL research school (Centre for Educational Science and Teacher Research) in which doctoral students are completely or partially financed by local authorities. The research fields are linked to teacher training and to professional pedagogical activities. The rationale behind this is to develop this research school within the framework of the so-called 'teacher enhancement' initiative. Similar models will be developed in other areas. It is likely that national research schools also will be important for high quality doctoral studies within narrow subject areas.

One of the most important strategic issues is to create distinct career paths for doctoral students. A first step is that all doctoral and

postdoctoral positions should be advertised and appointed in competition with other applicants in order to increase national and international mobility. This model was applied across the university in the spring of 2007. It is assumed that career planning will continue after completion of a postdoctoral appointment. Future prospects will be determined by forthcoming decisions based on proposals from the Academic Career Enquiry.

In the spring of 2007, the University of Gothenburg made a decision in principle to phase out all financing of doctoral studies by grants and scholarships and to introduce doctoral positions within all fields of research. The economic consequences of the decision for the faculties that have not already implemented the reform are currently being analysed in order to provide a basis for a decision on the implementation period. The reform may reduce the extent of doctoral studies. Such a reduction may, however, be partially counter-balanced by the instigation of both local and national interdisciplinary research schools, and partially by an increase in the number of doctoral students that have full external funding.

Profiles for research and education

THE UNIVERSITY OF GOTHENBURG has a wide scope in both research and education. The foundation of all academic work is strong disciplines that have been developed within the University's traditional faculty areas. However, today's academic issues and those of the future seldom correspond to the present organisation of the faculties and departments. For several years, increased collaboration between faculties and between disciplines has, therefore, been a distinguishing feature of the strategic work at the University of Gothenburg.

One aspect of the strategic work concerning research and education has been to profile the University of Gothenburg by highlighting prominent research and education environments. These environments must comprise research and education at more than one faculty – usually the majority of faculties. The issues that characterize these environments also have a long tradition at the University of Gothenburg.

Several research teams with high international standing are accommodated within one single research and education profile. Other research teams are perhaps less prominent, but they are equally important for the overall environment. It is also anticipated that the areas will be able to include new, innovative environments that can emerge within the framework of a strong overall research and education environment.

The areas of strength within the environments also have very good potential for development in order to utilize new areas. All in all, this entails areas that are both strong in relation to the requirements of the surrounding community and that have a high level of legitimacy within the University.

The University of Gothenburg currently has five research and education profiles that meet the criteria indicated:

1. **Health** is a profile with its foundation in the medical research at the Sahlgrenska Academy. The Gothenburg tradition entails close contact between health research, clinics and society. The Sahlgrenska University

The foundation of all academic work is strong disciplines that have been developed within the University's traditional faculty areas.

Hospital is the largest in the Nordic region, and a distinguishing feature of the University of Gothenburg is the patient-centred research that this facilitates. The research is supported by a systematic development of infrastructure within the field of life science, for example the Swedish NMR Centre. The most prominent environments at the Sahlgrenska Academy are those previously mentioned: biomaterial, vaccines, cardio-vascular diseases including obesity and odontology. A research school in the field of sex hormones has been added. Other faculties are also pursuing important research into health and quality of life: medicines (science), disability and addiction research (social sciences), medical informatics (the IT University) as well as the field of culture and health (art, the humanities and social sciences). The profile also accommodates some of the University's most sought-after educations: the medicine, pharmacy, speech therapy, nursing and psychology programmes, and also the programme for public health science.

2. **Culture** is important in that the University of Gothenburg has the Nordic region's largest Faculty of Fine, Applied and Performing Arts which includes all types of art (with the exception of dance) and which works in close collaboration with other faculties. This has created strong research and education at the intersection between cultural studies and art. That research links research environments within the humanities, science, and social sciences with research and development work within the Faculty of Fine, Applied and Performing Arts. One example is the construction and renovation of organs within the GoArt Centre. Within the field there are a number of profiled education programmes, for example, literary composition, film, applied art (Stenebyskolan), the curator programme, museum studies and theology, as well as a large number of single-subject courses.

3. **Environmental science** has a strong tradition in Gothenburg. The University of Gothenburg and Chalmers University of Technology are extremely prominent with approximately 40 per cent of the environmental science research conducted in Sweden. The joint Centre for Environment and Sustainability (GMV) acts as a bridge to external collaborative partners nationally and internationally. The University of Gothenburg is internationally unique in that it has been awarded environmental certification both according to ISO14001 and EMAS. Research and education within the environmental field is currently not only conducted within the Faculty

of Science but also in the School of Business, Economics and Law (environmental economics and consumption research) and the Faculty of Social Science (environmental psychology, human ecology, risk and environment, as well as issues concerning global environment and sustainability). The Environment and Health research school involves all faculties. The marine environment is an area of priority in which the Faculty of Science – with research stations on Tjärnö and Kristineberg – is prominent.

4. ***Democracy and social development*** is a profile area particularly within the social sciences and the School of Business, Economics and Law, but also within the humanities. The University of Gothenburg has several national undertakings within the field, among others, the Swedish Secretariat for Gender Studies and the recently commissioned Swedish National Data Service (SND), which has its background in the renowned survey research at the University of Gothenburg. Another asset is the internationally unique SOM Institute (a centre studying Society, Opinion and Media). Further prominent areas include development economics and transportation (the School of Business, Economics and Law), democracy/opinion, security/safety and global development (social sciences), “e-government” and security (the IT University), historical research such as Medieval Studies (the humanities) as well as interdisciplinary research within gender studies and human rights. The Faculty of Fine, Applied and Performing Arts has a number of projects at the interface between social planning, democracy issues and art.

5. ***Knowledge formation and learning*** is a very strong research environment at the University of Gothenburg and in recent years it has received a great deal of attention nationally and obtained significant research funding. The Faculty of Education accommodates the Learning, Interaction and Mediated Communication in Modern Society (LinCS) programme and Learning in Working Life programme, along with research within the field of early childhood education. The Faculty of Fine, Applied and Performing Arts includes literary composition and the pedagogy of music. The Centre for Educational Science and Teacher Research (CUL) is responsible for an inter-faculty and internationally unique research school within teacher training.

The five profiles are supported by close collaboration between well-established disciplines. The previously mentioned strong areas within

research are well adapted to the profiles. However, collaboration and the connection to education demonstrates the University's desire to establish self-contained environments. The University also intends to use a variety of means to give priority to activities connected to the profiles. Examples of possible ventures are the establishment of courses at advanced level with international recruitment, research schools and investments to support infrastructure.

The research and education profiles, which have emerged over a long period at the University of Gothenburg, are based on a long-term process of stimulating collaboration between different fields of knowledge and disciplines. The University has also tried to accomplish this by developing new organisational models for the organisation. The Sahlgrenska Academy was consequently set up in 2001 by amalgamating the Faculties of Medicine, Odontology and Health Sciences with the intention of integrating research and education within the field of health sciences. A model consisting of interdisciplinary research platforms is being tested within the Faculty of Science. Also within the humanities, the present organisational structure is being changed to more interrelated research and education environments. Furthermore, an assessment is being carried out on how the formation of temporary centres can be used to the best advantage as bearers of interdisciplinary research.

With this in mind, the University of Gothenburg is prepared to take on increased national responsibility within its profile areas. In conjunction with the Sahlgrenska University Hospital, the University could thus become a national centre for Swedish clinical research. The University could also increase its national activities in research into the environment, democracy, and learning. There are local structures that can be further developed within the University or in collaboration with others, for example, the Centre for Environment and Sustainability, the Swedish National Data Service, which is partially funded by the Swedish Research Council, and the national Museum of World Culture.

It is important for the University of Gothenburg to create conditions for increased flexibility in interdisciplinary collaboration. At the same time, it is the University's opinion that political decision-making bodies and funding authorities and organisations are rarely able to meet these requirements. The University's assessment is, therefore, that there is also reason to review the overall authority structure within research and education with the aim of preventing a simplistic, linear way of thinking.

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Collaboration – an increasingly important task

THE WORLD AROUND US is continuously changing and so also the prerequisites for the University's activities. A special unit will be set up at the University of Gothenburg in 2008 to provide more in-depth analysis of surrounding factors and to make the work on long-term strategies more efficient.

COLLABORATION FOR DEMOCRACY ...

The University of Gothenburg has, ever since it was established as a university college, been characterized by a strong tradition of adult education. The University works in a determined way on all levels to ensure that adult education and the dissemination of research findings are integrated parts of the organisation. It is a clearly defined ambition to

The University will continue to develop, co-ordinate and find new ways to communicate research.

be an open, socially-involved University, centrally located in the city and to be at the centre of debate, thereby fulfilling the role of educating adults for as many groups as possible. Numerous activities and events across the university such as

the Science Festival, University TV, the Alltinget radio programme and the Universeum Museum are important arenas, but also lectures in different parts of the city, in book shops, cafés etc., create interesting meeting places. Through its art departments, the University of Gothenburg has also expanded and added to the cultural scene in Gothenburg.

The University will continue to develop, co-ordinate and find new ways to communicate research both to the general public and to specific target groups. The University website is going to become increasingly important, as will the GU-spegeln research magazine. Researchers are to be trained and encouraged to take part in public debate, and are to be given support to facilitate communication. Dialogues with different key actors in society will be intensified: a variety of skills needs to be assembled to solve complex social problems, and collaboration with society needs to take place across disciplinary boundaries. The Jonsered Manor has become an intellectual centre where researchers and representatives of different sectors of society can meet. Continued active work on a programme to utilize the University's broad scope of research will be pursued.

... AND FOR THE KNOWLEDGE-BASED ECONOMY

Universities are very well placed to act in the international scene as motors in the transformation to a knowledge-based society. Individual institutes of higher education have a great social responsibility to ensure that the knowledge that is generated is put to good use. This presupposes that the University takes its responsibility so that utilization and collaboration can take place professionally, without foregoing moral responsibility and independence. The University must have the capacity to decide how the results and assets that exist are to be used so as to avoid any possible conflicts of interest. Both national and international research financiers are placing ever higher requirements on this responsibility. It can also apply to specific academic projects, value creation in preincubators, incubators, science/technology parks and “open arenas” as well as the value of the university for the city and the region. Collaborations of this kind are important not least in the development of prominent environments within the University’s research and education profiles.

In accordance with the above, the University of Gothenburg is to continue to develop its platform for courses in entrepreneurship, research, CIP (Centre for Intellectual Property), administrative research and innovation support, as well as the University’s holding company. The University already has study programmes for entrepreneurship within certain areas and intends to increase the general level of knowledge in entrepreneurship and to offer courses within more areas. Collaboration with other actors such as Chalmers University of Technology, the Västra Götaland Region, Innovationsbron (The Innovation Bridge) and Business Region Göteborg are to contribute to developing the area of innovation. Increased professionalisation will enable the University of Gothenburg to be ready for a phasing-out of the co-called “teachers’ exception” *). Professionalisation of the work requires, however, that financing is also guaranteed in the long run. The financing system must also be broadened so that the fast growing service sector has access to innovation support.

*) The so called “teachers’ exception” means that teachers and researchers at the University own the right to commercially exploit the inventions created in the context of their employment. Inventions may, for example, be results from research. In practice the teachers’ exception implies that the researchers completely own the results generated by their research. The teachers/researchers are therefore free to decide how to commercialize their results.

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The international perspective

THE UNIVERSITY OF GOTHENBURG must have a distinct international profile and the international perspective must be aimed for in all research and education. The current policy for internationalization will be revised in 2009. A new plan of action is under development including several projects with the aim of rationalizing the administration pertaining to teacher and student mobility. The University's language policy, with an accompanying plan of action, will also constitute the foundation for future work. The work on increasing international visibility with the help of the Web and the GUP and GUPEA publication databases is underway and will be further intensified during 2008–2009.

The University of Gothenburg must have a distinct international profile and the international perspective must be aimed for in all research and education.

In addition, the University will be developing the relevant prerequisites to accept researchers from other countries and also stimulate an increase in international research collaboration. Similarly, the conditions for accepting more students from other countries will be improved. This is taking place in conjunction with Chalmers University of Technology and the city of Göteborg, among others. More courses at advanced level with international recruitment and with English as the teaching language will be developed in the long term. The fact that the Swedish students at the University of Gothenburg study together with international students is a way of raising the students' international perspective. Work is also underway to increase Swedish students' level of interest in participating in international student exchanges.

The University of Gothenburg is to work actively to expand international recruitment of researchers and lecturers. Particular importance will be placed on systematically recruiting more visiting researchers of a high international standard. Different models have been investigated and planning is currently underway to give a viable form to both recruitment and targeting. The international advertisements for two-year post-doctoral positions in the spring of 2007 attracted almost 500 applicants from 50 countries.

The European dimension is central to internationalisation, not least due to the Bologna reform. On the basis of its outstanding European research, the University of Gothenburg was awarded the status of "Jean

Monnet Centre of Excellence” in 1998. There are two Jean Monnet professorships at the University, one in political science and one in law, as well as a Centre for European Research (CERGU), with the aim of stimulating multi-disciplinary research and education. The European Studies programme, which is a collaboration between several faculties, is one of the University’s most sought-after programmes. The University of Gothenburg is very active within the Socrates/Erasmus programme as well as within the EU’s framework programmes for research. The University also welcomes national initiatives for financing joint European projects for basic research.

For many years, the University of Gothenburg has been known both for its outstanding research on third-world countries and its research conducted with third-world countries.

Furthermore, it is commissioned by SIDA (the Swedish International Development Cooperation Agency) to educate doctoral students from a number of African countries. With this background, the University has also been one of the most successful institutes of higher education within the Linnaeus-Palme programme. The School of Global Studies comprises research and education concerning global and international issues and centres have also been set up for studies of most regions of the world. This gives the University of Gothenburg a unique environment for the study of global problems and for international collaboration.

Internationalisation is also to operate within self-contained environments. The university-wide co-operation agreements are so-called “umbrella agreements” that accommodate both research collaboration and possibilities for student and teacher exchanges. The University of Gothenburg also intends to develop more extensive collaboration with one or more partner universities within each continent.

The University will be developing the relevant prerequisites to accept researchers from other countries and also stimulate an increase in international research collaboration.

Academic leadership and quality management

UNIVERSITIES AND COLLEGES are situated at the frontline of knowledge, and new organizations frequently have to be set up in order to acquire and disseminate new knowledge. During a period of expansion, it has been possible to focus on new and interesting ideas without having to change the order of priority of resources. Today the situation is different. Institutes of higher education can no longer expect expansion or unchanged resources,

Active prioritization is therefore to be seen more clearly as an important tool in the quality management of the University of Gothenburg.

but have to prioritize on the basis of strategic and quality-based decisions. This is absolutely crucial for efficient use of resources and consequently for greater competitiveness. In the future, active prioritization is therefore to be seen more clearly as an important tool in the quality management of the University of Gothenburg.

Quality development at the University of Gothenburg must consequently take place according to two main principles: allocation of resources to the benefit of activities with a good potential for development and strategic importance, and development of the quality of all activities that the University wants to pursue. Both principles are to be used together in active leadership where the principle task of management is to take responsibility for the quality and success of the organisation.

REINFORCED ACADEMIC LEADERSHIP

To enable further reinforcement of the above two modes, the University must give priority to the task of developing its leadership culture so that

In active leadership the principle task of management is to take responsibility for the quality and success of the organisation.

managers at all levels are prepared to shoulder a more substantial responsibility for quality than was previously the case. It is also necessary that the University selects methods of quality control that enable leadership to be exercised in such a way as to inspire confidence in staff, students and the surrounding community.

Since 2005, quality management has been followed-up at faculty level by means of so-called faculty audits. Faculty deans, heads of administration and students audit the quality management within a faculty and submit a report to the university management. The audit is clearly targeted on how the management at faculty and department level are following quality development and if necessary, they have to intervene. The audit thus generates both awareness of quality responsibilities and knowledge of working methods, both in the auditors and those who are audited. Equivalent follow-up mechanisms are being developed at faculty level.

With these activities, along with new management courses, the university management are working to clarify and develop lines of responsibility for quality development. The University of Gothenburg will also be testing new ways to recruit managers, for example, by advertising posts with special requirements.

PERFORMANCE INDICATORS AND QUALITY CONTROL

Work across the University is underway to develop performance indicators and forms for their use in quality control. The aim is to produce practical tools for active academic leadership.

The faculties have tried different ways to stimulate quality development through resource allocation. Based on this experience, the University of Gothenburg is considering introducing a management model in which quality control is achieved through a combination of dialogue, quality management and resource allocation. The aim is to facilitate quality control and strategic profiling. The model is to take into account both documented performance and plans for the future. It is also necessary to consider the fact that indicators are not perfect standards of value – indicators must be interpreted and put into a larger context as a basis for decisions.

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Even though the active management model uses allocation of funding as a control instrument, it is not the model's only or necessarily main control instrument. The University management and the faculty administration are to continuously follow-up activities using different kinds of indicators, and these are to be regularly used as a basis for follow-up discussions with operational managers at faculty board and department level respectively.

BIBLIOMETRICS AND RANKING – TOOLS TO ENHANCE QUALITY?

The University Library is an important centre of competence with regard to the University's quality management in terms of, among other things:

- ▶ Using its GUP and GUPEA publication databases increase the University's visibility internationally
- ▶ Working actively with bibliometric analyses and offering services within the field
- ▶ Participating in the monitoring and discussion of national and international ranking lists

Bibliometrics is a particularly strategic issue in quality management. As issues of quality in higher education are increasingly related to academic publications and citations, it has become increasingly important to

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exploit the University Library's expertise in the field. With its own publication databases as a point of departure, the University is to analyse the quality of the publication statistics that are offered through the international systems. The analyses are to form the foundation for continued strategic development but are also one possible quality indicator when giving priority to research resources.

Publications and citations are partial measurements that are frequently used when producing the ranking lists that have become more common in conjunction with evaluating the quality of individual universities. The analyses that the University of Gothenburg has conducted to date indicate that there is reason to be cautious when interpreting such ranking lists, as they function differently both within and between different disciplines. The University Library is, therefore, to conduct studies within a number of defined fields of research with the aim of illustrating how research findings within different disciplines are reflected in different kinds of bibliometric measurements.

Continued work for quality and renewal

THE RESEARCH AND EDUCATION STRATEGIES are primarily to indicate a direction for the University of Gothenburg to take with regard to research, education and collaboration. Important requirements for change within education are emphasized at the same time as the profiling of education and research is clarified. The University of Gothenburg also indicates the responsibility it is prepared to take in the new knowledge-driven economy and how quality management and academic leadership are to be developed. Other important points concern the need for further internationalisation and an expansion of the collaboration with Chalmers University of Technology in terms of research and education with the aim of strengthening the local academic environment. Collaboration with an autonomous institute of higher education such as Chalmers University of Technology would, moreover, be made considerably easier if the University of Gothenburg had a freer form of association than that of an authority.

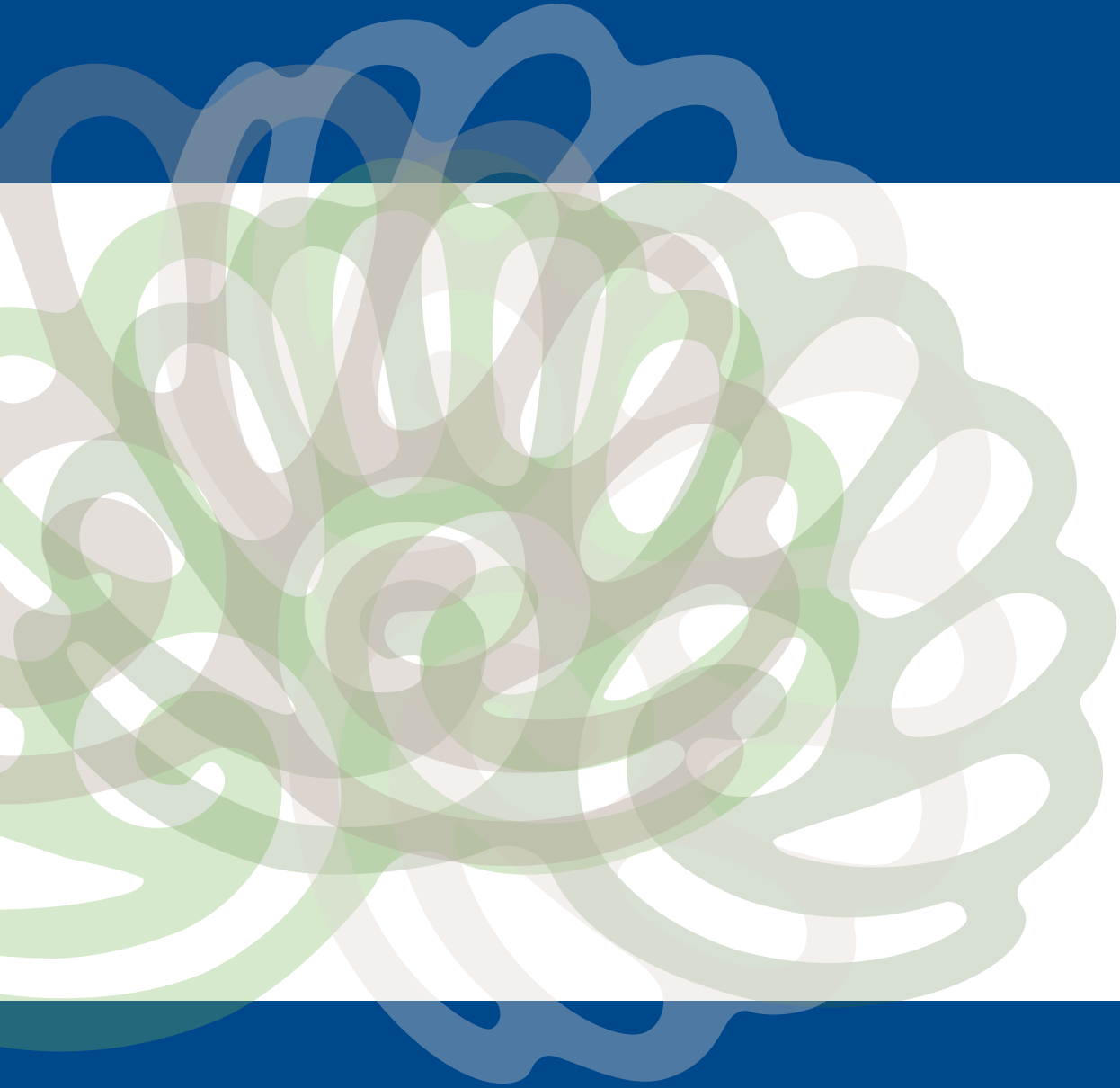
Much of the concrete work must take place within the University. The 2007 – 2010 strategic plan, the research and education strategies presented here for 2009 – 2012 and new quality indicators provide clear parameters for the University Management's annual dialogue with the faculties, the University Library and the administration. The dialogue leads to annual assignments from the university management. These in turn lead to operational plans, which are followed-up, analysed and evaluated as a basis for next year's dialogue and assignments. In 2008, work on strategies will also be followed-up with a number of university seminars in which different themes will be discussed. The seminars are an expression of the University's manifestation as an institution that disseminates knowledge and that is characterized by internal exchange of experience to assure the quality of its activities.

Some of the future work will also concern the University as an organisation and employer. A stimulating working environment and

A stimulating working environment and good working conditions in general are fundamental conditions for good working activities.

good working conditions in general are fundamental conditions for good working activities. The University of Gothenburg uses regular surveys to follow-up how staff and students evaluate the University as a workplace. There is a special focus on leadership. The administration must be assured for quality with the aim of achieving activities that are suitable and rational. Furthermore, the long-term intention is to be able to allocate resources for research and education. In this context in particular, the indirect costs – those that do not relate primarily to the University's core activities – have to be analysed and made visible. The goal is to find working guidelines and procedures at both national and local level.

To conclude, it has to be emphasized that the point of departure for our work is the major changes that are taking place within the academic system. During the coming year, several Government Commissions will be presenting their proposals. In different ways, these will have an impact on the prerequisites for education, research and collaboration. The strategies will, therefore, be regularly updated and revised.



UNIVERSITY OF GOTHENBURG