

# Strategy 2010–2012

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## 1. University of Turku

### ***Operational idea***

The new University of Turku, which will be created by the merge of the University of Turku and the Turku School of Economics, is an internationally competitive research university whose operation is based on high-level multidisciplinary research. The mission of the University is to promote free research and academic education and to provide higher education based on research.

The University of Turku is developed as a multidisciplinary and international community, focused on basic research and teaching based on research. The operation is founded on advanced, strong and profiling areas of research, which are complemented by selected development targets and special national assignments. The synergy is strengthened by the cooperation between subjects, merging related subjects and actively searching for new combinations of research and education on discipline interfaces. The new University will also become a strong centre of business competence where specialised business know-how is applied to different substance areas.

The education at the University of Turku is based on scientific research and the principle of lifelong learning. The students at the university community will acquire a scientific way of thinking where the aspiration towards creativity, a critical approach and the ethic responsibility are highlighted.

The University of Turku is a scientific expert organisation, whose success rests on talented personnel, motivated students and an environment that encourages towards creativity. The University is a fair employer, whose personnel policy is guided by openness, staff development and well-being. The students are an active part of the university community. The University operates in a transparent and overt manner.

The University of Turku emphasises its role as an educational and scientific university founded by the citizens. It is also a responsible actor at the societal level. Close cooperation relationships with various operational environments at international, national and regional levels are an essential part of the operations of the modern top-level research university. The added value created by this interaction is manifested as new knowledge, new viewpoints and the increase in general impact. This guarantees the University's development as an international research university and enables the production of social and technological innovations.

### ***Basic values***

As the first Finnish-language university, the University of Turku has from the beginning upheld its founding message *from a free people to free science and learning* as its starting point. For the Turku School of Economics, combining theoretical knowledge with practical business know-how has been characteristic since its establishment.

The basic values of the new University of Turku are *ethicality, criticality, creativity, openness and communality*. Freedom of education and research prevails at the University and it can independently determine the means to achieve the jointly set goals.

*Ethicality* defines all activities within the University: aiming at good and appropriate decisions. Both in research and other operations, university staff and students follow the principles of high professional ethics and good scientific practice.

*Criticality* is the foundation for scientific culture. It means aiming at the truth through questioning certainties and through good-quality research in all operations. Thus genuine criticality leads to high quality and reliability.

The University's operation is based on looking for new knowledge and new meanings as well as communicating them further. *Creativity* means the ability to see and do things in a new way so that the individual or the community gets both benefit and intellectual satisfaction from what they do and is ready to encounter new challenges.

*Openness* is manifested in the open culture and in scientific freedom from prejudice: the University is open for different scientific viewpoints, research approaches and unexpected results. Openness also means commitment to communicating new knowledge and interaction with the surrounding society.

Amid the pressure for change, it is crucial that the whole university community commits to the University and to the development of its activities. The main themes of *communality* are trust, participation, commitment, motivation and closeness.

### ***Orientation for 2010–2012***

The University of Turku is internationally well-known and recognised in its chosen areas of strength and nationally among the top universities in all its research fields. The University offers attractive higher education and it forms a network together with the higher education institutions, public sector research institutes and enterprises in the region. The University takes an active role in developing the network.

The University is an open, motivating, interactive and international environment for research, learning and working, which attracts both staff and students. The administrative services are customer-oriented, flexible and cost-effective.

The University is an active player in the strategic top know-how centres and the Centre of Expertise Programmes. For developing innovations, the University has a system which supports processing inventions made within the University into products and business activities. The University works in close cooperation with the Åbo Akademi University in the field of innovation development.

## 2. Competitive research

High-standard, multi- and interdisciplinary research forms the basis of the University's operations, and the education and the societal interaction of the University are built on this basis. The strong basis enables the University to develop as an internationally recognized research university and it facilitates success in producing social and technological innovations. Internationally competitive research offers a logical route for the increasing internationalisation of all operational fields at the University.

The research done at the University is free and depends on the scholar. Basic research is a precondition for making significant scientific breakthroughs. In addition to basic research, jointly financed research and service research financed completely by external sources is important for the University. Service research consolidates the position of applied research and increases the University's impact. The goal is that with the stability provided by the basic funding, the University is also able to conduct research which aims primarily at creating new knowledge, regardless of whether or not it can be exploited, and which involves the risk of failing. However, the University ensures that also research conducted for external sources supports the basic operations of the University and is economically and ethically sustainable.

The University develops the national innovation system by actively taking part in those centres of strategic top know-how where it is strong in terms of content. The close research cooperation in Southwest Finland is a special regional strength, which the University actively exploits, supports and develops by creating common structures. The cooperation network is formed by the universities, the universities of applied sciences, the government sectoral research organisations, Turku University Hospital as well as other public organisations and enterprises in the region.

The University has many strong areas of research. Among them, the University identifies internationally and nationally profiling areas which receive strategic investments. Defining the areas is based on the University's own scientific starting points, cooperation possibilities, future prospects and societal needs. The University also identifies areas which are in a strong development stage and which are supported so that they can become profiling areas. In addition, the University encourages building new multidisciplinary and interdisciplinary research programmes.

The University of Turku and the Ministry of Education have agreed on the following special national assignments: PET Centre, Tuorla Observatory and the affiliated ESO Centre to be founded, Research Unit for the Sociology of Education (RUSE), and Finland Futures Research Centre. Obtaining the responsibility for the special assignments is based on significant national know-how. The University is committed to developing these fields.

### ***Areas of strength in research***

**Research on molecular biosciences** forms the largest area of strength in the University's research. The University has made together with the Åbo Akademi University, the VTT Technical Research Centre of Finland and the City of Turku substantial investments in order to create a competitive operational environment for researchers in the field and for those who exploit the research results. The development work on the regional biocluster will be continued. The research is supported especially

by the methodological development in the fields of bioimaging and systems biology. The leading projects in the field are host defence research, especially immunology as well as studies on photosynthesis and bioenergy. Nationally strong research in bioorganic chemistry supports the development of the area of strength.

**Cardiovascular and metabolic research** is an area of strength in medical research where experimental and clinical studies have been successfully combined. One of the focal areas is the development of imaging methods for cardiovascular and metabolic disorders, their follow-up and therapy monitoring. Extensive follow-up studies are made on the origins and prevention of coronary artery disease and diabetes.

**Ecological interactions and ecological genetics research** is based on the integration of research on ecological interactions and ecological genetics. The strength of the combination lies in the new molecular biological methods as well as in the genetic-ecological viewpoint, which helps to understand the mechanisms of ecological interactions innovatively all the way from the level of the ecosystem to the molecular level. In ecological research, emphasis is given to extensive global research challenges such as the effects of the climate change and introduced species on ecological interactions, the biodiversity loss caused by human activity and its consequences to ecosystems, people and societies.

**Research on learning and education** focuses on the cognitive, emotional, social and cultural conditions for learning and development in children, youth and adults as well as on the institutions of education and lifelong learning. Important fields of study include the development of linguistic and mathematical skills, the social regulation of learning, the peer relationships and social well-being of children and youth, bullying at school as well as the higher education system and the relationship between education and working life.

**Future studies** combine content knowledge about history and the present provided by different fields of study with methodological knowledge in order to outline future prospects, for example, by using scenarios. The area of strength benefits from the extension of the scientific base achieved by merging the universities and offers possibilities for developing interdisciplinary research. Future studies are closely connected with social development, planning and decision-making.

**Research on institutional design and social mechanisms** is directed towards social institutions, that is, the emergence and development of social rules and operating mechanisms. Institutional design develops sets of criteria suitable for evaluating institutions and examines the properties and principles of existing institutions. Central focus is given to the evaluation and development of the voting and election systems, the philosophy of the foundations of social institutions, as well as social policy, sociology and research on public law that relate to social interaction mechanisms.

### ***Research areas in a strong development stage***

**Business knowledge and innovation research** emerge from the focus areas of the Turku School of Economics. The merger of the universities and the active role of the new University of Turku in the innovation network of the region offer plenty of new multidisciplinary possibilities for these focus areas. Business knowledge in the global environment, multidisciplinary research on entrepreneurship, business knowledge for

innovations, responsible business and sustainable development, business models in networks, strategic financial management and the welfare field represent areas where research is proceeding rapidly and which are given special emphasis at the Turku School of Economics.

**Research on cultural and social interaction processes** is research on migration patterns, multiculturalism, ethnicity, social exclusion and well-being, as well as on the conveyance of cultural influences, including popular culture. Multidisciplinary research creates possibilities for understanding these multidimensional phenomena. Special focus is given to research on the Baltic Sea region, East Asian studies and urban studies.

**Medieval and early modern studies** is anthropological research carried out within a broad range of disciplines, mainly in the field of humanities (archaeology, history, cultural research and linguistics, among others), but also in the social sciences, natural sciences and medicine. The central focus is on medieval and early modern Europe and Finland in particular. Research themes include the Europeanisation, literarisation and urbanisation of culture and the development of scientific thinking, social structures and networks of power.

**Research on discrete mathematics and data security** focuses on the mathematical foundations of data processing and especially on studying character strings, coding theory and new revolutionary computational models, such as molecular and quantum computations and tiling. Knowledge of number theory, automata theory and the complexity theory of algorithms complement these and create the necessary prerequisites for developing extensive and socially important data security research and teaching.

### ***Operational principles***

The University will create a system for the strategic recruitment of researchers, the purpose of which is to employ internationally renowned researchers. Factors that support commitment to the University are negotiated with the recruitee. In the first place, the purpose of the procedure is to internationalise the teaching and research staff. It is, however, applied also to internal recruitments.

Research cooperation with the Åbo Akademi University and the universities of applied sciences in the region is further developed by establishing research and educational environments that utilise common infrastructures. The recruitment and integration of international students and researchers are strengthened in cooperation.

A central procedure for the continuous quality assurance of research is the peer review and feedback of the international and national scientific community. The University will develop a system based on international databases to ensure the continuous monitoring of the visibility and impact of its research. An overall evaluation of the University's research is conducted with regular intervals. The evaluation is of use in revising the areas of strength in research and the research areas in a strong development stage.

The support services of research are developed to meet the demands created by the heightening competition for external funding and the responsibility following the increasing financial autonomy.

More attention is paid to communicating research results for the society's use.

### **3. Attractive doctoral education and research career**

The doctoral and research education at the University is realised with uniform principles and its aim is a comprehensive doctoral degree of good quality. It equips for national and international research and expert positions. The University recruits especially domestic and foreign students who are talented and interested in research work as well as post-doctoral researchers.

There are two research collegia at the University of Turku: Turku Institute for Advanced Studies in Humanities and Social Sciences, and Turku Collegium for Science and Medicine. The collegia are developed as communities of young independent researchers and top researchers in the field so that they create an interdisciplinary and interactive research community for promising post-doctoral researchers. The research collegia consolidate the status of Turku as a centre of scientific expertise.

The attractiveness and predictability of the research career are increased by establishing the four-tiered research career model, which enables the long-term recruitment of students and researchers and allows distinguished researchers to advance in their career from one tier to another.

The quality and quantity of doctoral and research education as well as the early careers of doctorate holders are evaluated as part of the quality assurance of education and research. Good practices in research education will be defined, and their continuity and adoption in the university community will be promoted.

#### ***Operational principles***

The operational preconditions and mutual cooperation of graduate schools will be improved. The possibilities offered by the multidisciplinary of the University will be utilised by further developing joint study modules to ensure multidisciplinary expertise and general working life skills.

The University will create a new programme to incorporate business knowledge into postgraduate degrees in different fields in order to increase the degree of exploitable research results.

The international mobility of doctoral and research students will be increased by utilising the University's international connections.

Reciprocal commitment to the supervision of doctoral students will be strengthened by utilising good practices in education. The attachment of doctoral students and researchers to multidisciplinary research groups will be supported.

The coordination of doctoral and research education at the University and faculty level will be further increased, especially to improve the post-doctoral research education and to facilitate the independence of researchers.

A new kind of evaluation practice and financing model will be created to ensure that talented researchers can advance in their career.

#### **4. Science-based education and lifelong learning**

A close connection between scientific research and the educational task of the University as well as the principle of lifelong learning are the starting points for the operation of the University of Turku. In undergraduate education, science-based learning is evidenced in the close connection of the studies with the scientific work carried out at the University, in student-centredness, and in supporting the skills and motivation for independent learning.

The profiling of the University as an international multidisciplinary university concentrating on basic research is reflected also in the educational task. The multidisciplinary education at the University implies a wide-ranging responsibility for educating experts in different fields as well as the ability to respond to the needs of the society by creating new combinations of expertise across the traditional discipline boundaries. A special characteristic of the University of Turku is the possibility to combine expertise in different fields with strong business competence and the ability to anticipate the future.

The University emphasises participation and communality in its operations. These principles are manifested in equal opportunities to take part in the University's operations and to develop one's skills and competence in a versatile way. It also means taking into account the needs of the community in developing curricula and the forms of teaching, ensuring accessibility, and sensitivity to recognise the demands of a multicultural environment.

The University advances the student's study capabilities by developing the study environment so that it supports the physical, mental and social health of the students. The University ensures that all students have possibilities for adequate personal study and career guidance. The learning goals listed in the curricula support teaching and learning. The University sets as its aim to improve the teacher-student ratio.

The principle of the continuum of lifelong learning means that it is possible to get science-based education and support for professional development at the University throughout the entire professional career. The University realises the principle by educating versatile teachers with high scientific qualifications for the needs of pre-university education, and by providing scientific knowledge for the society. This ensures that young people are interested in university studies and supports flexible selection to suitable fields of study.

The University produces services in lifelong learning that are directed towards adults. These include the Open University, continuing education, management training, and specialization studies together with related development projects. The services form a flexible and coordinated whole.

The conditions for studying along with work are further developed by the study opportunities offered at the Open University and by study counselling. Alongside with multidisciplinary continuing professional education, development work is done in specialization studies that recognise prior learning and support achieving defined special qualifications. The University utilises its expanding business competence also by diversifying the educational services it provides for experts.

## **Operational principles**

In student recruitment, different applicant groups are taken into consideration in a versatile and international way. Special attention is paid to attracting talented and motivated students to master's and doctoral level studies in the University's areas of strength.

The University advances teaching cooperation between the faculties in developing problem-based and multidisciplinary study modules on discipline interfaces. The multidisciplinary of the studies on offer will be increased by systematic cooperation with the Åbo Akademi University and the universities of applied sciences in the region.

International teacher exchange, teaching in foreign languages and the recruitment of foreign teachers will be increased so that students can assume the principles of the internationally oriented scientific community and gain the prerequisites to work as experts also in international working communities. Special attention is paid to the quality of teaching in foreign languages. Teaching Finnish language and culture for foreign students and immigrants will be increased so that the students will better integrate into the Finnish society and it will be easier for them to find employment. The international attractiveness of the Turku scientific community will be strengthened through the Campus Aboensis cooperation.

The students' learning of general skills is supported by using working methods that utilise networks and technology, and by producing field-specific study modules for improving working life skills. To strengthen the working life relevance of the education, connections to national and international working life, alumni and other interest groups of the University are utilised in developing teaching. Working life relevance is strengthened also by decentralizing the practical periods included in the studies outside the Turku region to the appropriate extent.

Students, teachers and representatives of the most relevant interest groups for education regularly evaluate the quality and content of teaching, using different feedback methods. The methods used in the evaluations ensure that the feedback generates dialogue between the different groups and thus promotes educational development. The University participates in national and international evaluations of education and utilises their results.

The pedagogical training is developed to respond to the needs of the university community and the society. The significance of pedagogical training or otherwise demonstrated pedagogical skills, language skills, and merits in providing and developing quality education will be increased when recruiting for teaching posts at the University.

The realisation of lifelong learning is supported through research and development activities. Central targets include learning environments and the recognition of prior learning.

## 5. Science for the society

The University of Turku emphasises its role as an educational and scientific university founded by the citizens. Societal interaction is part of the University's basic mission integrated into research and education. All university units and members of the university community take part in it with different emphases. The results are taken into account in the allocation of resources and in career development.

The basic research in business knowledge at the University of Turku forms a foundation for strengthening innovation activities. The commercialization of product and service ideas and establishing enterprises is thus supported. At the same time, also the implementation of the national innovation policy is promoted. In cooperation with the Åbo Akademi University, the University offers for the members of its community centralized expertise for exploiting immaterial property rights and for the commercialization of innovations.

Constant interaction with enterprises, public governance and the third sector improves the quality and impact of research and education. The cooperation takes a concrete form in service research and in exploiting the research results, in the working life relevance of degree education and the export of education, in alumni activities, in services for lifelong learning and in regional development projects.

The operational environment of scientific research is global. In higher education, the University is the most attractive unit in Southwest Finland. In societal interaction, a special focus is given to the Baltic Sea region, where the University has strong traditions.

In the regional strategy 2006–2012 for the higher education institutions in Turku, the University has committed to developing well-being, internationality, entrepreneurship, and cooperation between higher education institutions in Southwest Finland. In the strategy, the central regional operators commit to a high level of competence, advancing technology and developing innovative entrepreneurship especially in the fields of biotechnology, health technology and information technology as well as in cultural, environmental and material fields. The University emphasises its special role in the national maritime cluster.

### Operational principles

The impact of the University is primarily based on the new knowledge research produces. Exploiting the results requires structures where interest groups and the University work together. The University clarifies the steering system of societal interaction and strengthens the necessary support.

The working life relevance of education will be strengthened by offering meaningful and individualized study paths for both degree and adult students. The know-how and networks of the alumni are utilised both at the level of the University and in its different units. The working life connection offered by the alumni is utilised more effectively in developing the content of the studies, in acquiring internship and thesis commissions as well as in creating working life contacts for students, for example, through the mentoring programme.

The precondition for productive regional cooperation is that the interest groups in the sub-regions are given a clear picture of the University's expertise and services. At the University, cooperation requires of the staff the ability to work on different interfaces in research, education and development. The University strengthens the operational preconditions of the existing networks and actively seeks new solutions for cooperation.

The University consolidates the connections of research on innovations, entrepreneurship and business competence with research in other fields. One tool for developing innovation activities is the Turku Innovation Platform TIP, which provides services for utilising research results, commercializing innovations and developing science-based business activities.

## **6. Preconditions for success**

### **Staff**

The University of Turku is a learning community with shared values. Following the principle of lifelong learning, the University encourages its staff to learn and to develop their own work. Each member of the staff is an important part of the University and an expert in their own work.

An important value in a long-term and systematic staff policy is the equal and fair treatment of all individuals. The University ensures that it has competent, motivated and healthy staff. The University encourages especially teachers and researchers for international activity.

In recruitment, international experience and cooperation as well as participation in societal interaction will receive more emphasis in addition to competence in the basic tasks. In particular, the University invests in recruiting international top level researchers in the areas of strength in research, for example, by increasing the use of different kinds of international recruitment channels.

In addition to maintaining and developing the professional skills and special know-how of the staff, also staff well-being and coping with the workload are goals of the University's staff strategy. In achieving these goals, good leadership plays a crucial role. The University aims at creating possibilities for advancing in one's career and at ensuring that its staff have good work ability throughout their professional career. Transferring silent knowledge to the remaining and new staff in connection with retirements, and the controlled anticipation and systematic execution of retirements play a key role in ensuring the preservation of adequate know-how and the correct dimensioning of staff also in the future.

Changes in the operational environment, such as the new legal position of the University, pose special challenges for the leadership and management. A successful follow through of the changes requires the adoption of a new culture in leadership and decision-making that lends itself to the scientific community. Individual leadership is implemented on all organisational levels, while also providing an opportunity for the members of the university community to act and be heard on matters concerning them.

Seeking leadership positions is encouraged, for example, by revising the remuneration system, training, and by enabling research leaves after leadership periods.

The changes in occupational well-being and working atmosphere, the functioning of the leadership and management, and the development of the employer image are monitored regularly.

### **Finance**

Financially balanced operation is a precondition for the success of the University of Turku in its main areas of activity. Service-oriented and developed financial administration supports the University in its basic mission. The University's financial administration is a centralised unit that serves the profit centres and projects.

The changing operational environment of the University means that financial expertise is accentuated. In the near future, the University will increase cost awareness among its staff and improve cost-effectiveness. In order to increase cost awareness, the University must clarify the responsibilities for financial matters, give staff training, and allocate the real administrative, general and premises costs to the profit centres.

The University is active in procuring external funding and strives to increase the share of external funding of the total funding. The University aims to increase especially the amount of funding from international sources for research and educational projects by offering support for applying for such funding. Good quality project management is ensured with the help of the support services offered by the University.

In the University's finance and business strategy for the strategy period, financial planning and monitoring are integrated into the university steering system. Financial planning and monitoring play a central role both in determining the set of criteria for allocating performance-based funding and in rewarding for outperforming and research results.

For its part, the financial administration has to meet the challenges set by the full cost model for financial planning, cost accounting and control, and to ensure that the overhead costs are allocated correctly according to the matching principle. As part of the cash management, the University commits to managing the finances of agreed projects and covering the self-financing proportion in jointly funded projects.

### **Infrastructures**

The University has infrastructures that serve the University as a whole, such as the Library and the Computing Centre, as well as infrastructures that serve mainly research and research education. Some of the latter are common with the Åbo Akademi University.

The profiling infrastructures of the University of Turku are Turku Bioimaging as well as the Tuorla Observatory and the space physics infrastructure. Of these, bioimaging was included among the 24 most important infrastructures in Finland in a survey commissioned by the Ministry of Education. The equipment of the national PET centre is an important infrastructure in the field of bioimaging. The maintenance and development of the profiling infrastructures require investments at the strategic level. Other

infrastructures that require investments at the strategic level include the systems biology and protein crystallography infrastructure at the Centre for Biotechnology, the spectrometers at the chemistry laboratory, the solid-state physics and materials science infrastructure as well as the infrastructures used for teaching dentistry.

Along with the profiling infrastructure, the University takes care of the financing needed for maintaining and renewing the basic infrastructure in the units. The advantageous joint use of expensive equipment will be intensified within the University and in cooperation with universities and other research institutes. Infrastructure units that require substantial resources and special know-how will be further developed in cooperation with different organisations regionally, nationally and internationally. The University seeks to procure the status of a national unit and permanent funding for more units than at present.

In Turku, the University forms a large and continuous campus area together with the Åbo Akademi University. In addition to Turku, the university premises in Rauma, Pori and Salo are located in strategically good positions in close proximity of the city centres. The main objective of the premises strategy is to offer university staff and students functional, healthy and comfortable work premises. When planning the premises, attention is paid to their safety, accessibility and the principles of sustainable development.

### ***Support services of research and education***

The University's success in carrying out its basic missions requires well-designed support services for research and education. The task of the centralised administrative and support services is to produce the services required by the University's core functions in the most appropriate and efficient way. These services are guaranteed by skilful and competent staff. This leads to high customer satisfaction and confidence in the quality of the service. In addition to the centralised services, the University's units are allocated resources to provide adequate administrative and support services for their teaching and research.

The University communicates its activities and strengths to the university community and the whole society. Special emphasis is given to the readiness and ability of the community members to make the University known through congruent communication.

## **7. Strategy implementation and monitoring**

Strategy 2010–2012 steers the University's activities during the next performance agreement period. The University executes its strategy with central university-level action plans and the units' strategies.

The strategy is concretised in the following action plans:

- Completion of the merger of the University of Turku and the Turku School of Economics
- Developing the areas of strength in research and the areas in a strong development stage
- Establishing the four-tiered research career model

- Strengthening the research collegia
- Science-based education and lifelong learning
- Integrating societal interaction into the basic missions
- Intensifying internationalisation

Strategy implementation and monitoring are integral parts of the university steering system. The methods of strategy monitoring are described in the action plans and in the university quality system. The monitoring of the strategy and the action plans will be conducted with the help of the criteria developed for quality assurance systems and field-specific evaluations which complement them.

The implementation of the university main strategy is monitored and evaluated during each performance agreement period. As part of the university steering system, the action plans and other selected areas will be monitored every year. The next overall evaluation of the strategy will be done in 2012 and the first annual evaluation in 2011.