

UNIVERSITY OF JYVÄSKYLÄ  
RESEARCH, INNOVATION AND INFRASTRUCTURE POLICY  
2012–2017



Approved at the University Board meeting of 22 February 2012



## STRATEGIC PLANNING

The University of Jyväskylä's strategy 'Excellence and Dynamism 2017' also includes a research strategy for 2012–2017, which has replaced the previous research strategy from 2006. This policy will address the management of research, the research periods, the funding and maintenance of the University's infrastructure, research funding, and innovation activity.

The University of Jyväskylä Graduate School is in charge of organising doctoral training at the University of Jyväskylä.

The faculties are responsible for ensuring that the departments have research strategies that are updated at least every three years. Alternatively, a faculty may have only one research strategy that defines the different departments' research policies. In the research strategies and in resourcing research, the faculties and departments take into account the University's overall strategy regarding the core fields and orientation of research activities, as well as the developmental needs highlighted in the assessments of the University's research.

## THE MANAGEMENT OF RESEARCH

The University's strategy, this policy, the faculties/departments' research strategies and the research groups' research plans provide the foundation for the management of research at the various levels.

*The management of research at the University level:* The Rector is responsible for ensuring that the University's research activities comply with the University strategy and this policy. The Rector may delegate University-level responsibilities related to the management of research to the Vice-Rector. The Rector or Vice-Rector is assisted in this task by the Science Council and the University Services personnel assigned to the promotion of research and innovation activities.

*The management of research at the faculty and departmental levels:* The dean and department head are responsible for the faculty/department having a research strategy and that research activities are developed according to the strategy. Training on the strategic management of research is organised for the department heads, and training in project management for the leaders of research groups.

The faculties aim at ensuring that the core fields defined in the University strategy have broad and focused research clusters, which have a leader in charge of research. Examples of these kinds of clusters are the centres of excellence financed by the Academy of Finland, the Accelerator Laboratory, the Nanoscience Center, the Finnish Institute for Educational Research (FIER), the Centre for Applied Language Studies (CALs), the Family Research Centre, and the Brain Research Centre to be founded at the University of Jyväskylä. Examples of organisations that coordinate research are the Agora Center



and the Schildt Institute. However, a research cluster does not need to be a separate administrative unit. If needed, an international scientific advisory board will be formed for the research cluster, which will evaluate the cluster's activities. The research clusters enable long-term research and provide the opportunity to achieve an internationally leading position in one's own field of research. The research clusters offer optimal, versatile environments for doctoral training.

The University of Jyväskylä also supports interdisciplinary and multidisciplinary research, as well as multidisciplinary research clusters. In the multidisciplinary research projects, the research costs are divided between the participating departments, as agreed while planning the research project.

The University of Jyväskylä is committed to the principle of freedom of research. The freedom of research and self-direction are prerequisites for new research innovations. Therefore, part of the research conducted may also deviate from the strategy – for example, research based purely on the pursuit of knowledge. In such cases it is, as a rule, implemented with supplementary funding. New, significant research initiatives are taken into consideration when updating the research strategies.

#### KEY STRENGTH AREAS

According to its strategy, the University of Jyväskylä implements a policy of key strength areas, which is based on the identification of areas of research strength through external evaluation. The success in research assessments, the centres of excellence, academy professorships, FiDiPro professorships, competitive national funding, EU and European Research Council (ERC) funding, and frequently cited international publications are indications of internationally successful research. The overall assessment of research in 2011 demonstrated that the University's areas of research strength focus on the core fields identified in the strategy.

In the years 2012–2017, the University allocates resources to the areas of research that have been evaluated to be at an outstanding international level. According to the aforementioned assessment from 2011, such areas include biology of physical activity, health sciences, psychology, information technology, history and ethnology, languages, music, physics, chemistry, bio- and environmental sciences, and mathematics and statistics. In compliance with the University's overall strategy, new promising fields are also supported. The Science Council monitors the activities and progress of established and rising key strength areas in connection with the yearly Board Review.

#### RESEARCH PERSONNEL

According to the University strategy, research and education strengthen each other. This is best achieved if research and education are conducted by the same people. Professors and university researchers (university lecturers), as a rule, are involved both in teaching and research. Postdoctoral researchers and doctoral students are mainly re-



sponsible for research, but they are also expected to undertake a small amount of teaching.

The personnel structure of large research groups must comply with the needs for research and education so as to include a suitable ratio of professors, university researchers (university lecturers), postdoctoral researchers, doctoral students and research support personnel. University services and service centres (as well as the administrative systems) are developed in order to better serve the research projects.

The doctoral schools of the University's faculties utilise the University's internationally recognised research clusters, in which the students obtain internationally competitive, versatile research training, and simultaneously learn to manage large research projects.

The recruitment of research personnel (doctoral students, postdoctoral researchers, university researchers, university lecturers and professors) is, as a rule, international. The qualification requirements for the positions of professor, university researcher (university lecturer) and postdoctoral researcher have been recorded in the University Regulations. Upon recruiting the professors and university researchers (university lecturers) crucial for research activities, increasing attention is paid to research merits, evidence of research group management, and long work experience outside of the University of Jyväskylä. The aim is that doctoral graduates from the University of Jyväskylä would also have worked outside of the University of Jyväskylä before receiving a permanent position at the University of Jyväskylä.

Retired professors and university researchers/lecturers who are actively involved in research can obtain the status of emeritus/emerita, upon which separate instructions are provided.

## RESEARCHER MOBILITY

High-level research is global and attracts international top researchers to the University of Jyväskylä. It also enables career progress at foreign universities for young researchers trained at the University of Jyväskylä.

The University of Jyväskylä promotes researcher mobility by offering travel grants for 1- to 3-month research visits abroad.

The University of Jyväskylä Graduate School supports the internationalisation of doctoral programmes by paying a doctoral student's fourth-year salary in international programmes with three-year funding (e.g. Erasmus Mundus and Marie Curie doctoral programmes).

The mobility of professors and university researchers/lecturers is promoted through the research period system.

The faculties and departments provide non-Finnish professors (and Finnish professors working abroad) with the opportunity to spend a research period at the University of Jyväskylä. The annual aim is for approximately ten foreign professors to spend a re-



search period (6–12 months) at the University of Jyväskylä with the status *visiting professor* or *visiting junior professor*. The University actively seeks to employ young international top researchers and to offer them attractive working conditions.

## RESEARCH PERIODS

The purpose of the research period system is to promote international research cooperation, increase the scientific visibility of research, and provide researchers with the opportunity to fully concentrate on research. Professors and university researchers/lecturers may apply for a research period to be included in their work plan, during which they are exempt from teaching and administrative duties. The objectives and length of the period are defined in the work plan. The research periods are granted by the dean.

The general principle in funding the research periods is that the department/faculty pays half of the researcher's salary, and the other half is paid with external funding. The faculties and departments may also provide funding for the entire research period.

Professors and university researchers/lecturers are encouraged to apply for external funding for a research period from the Foundations' Professor Pool, the Academy of Finland and other sources of funding.

The University also supports professors' research periods with separate funding allotted for the purpose. At the most, half of the research period's salary is paid from the University's common funds. The University arranges an annual internal application round for its research periods. The Science Council evaluates the applications and makes a funding proposal to the Rector. Active research work and international collaboration are prerequisites for the funding. Priority is given to applications in which a significant part of the research period will be spent at a foreign university or research institute.

## INFRASTRUCTURES

Research infrastructure refers to the reserve of research equipment, devices, materials and services that facilitates research and development at different stages of the innovation chain, supports organised research, and maintains and develops research capacity. The creation of a new research group and hiring research personnel or personnel to assist in research is not infrastructure in this sense.

The University Library, information technology services, the infrastructure of educational technology, and the appropriate premises are important parts of the University's infrastructure.

Modern infrastructures are an essential part of state-of-the-art research. The University of Jyväskylä builds and maintains internationally unique research environments, which attract international top researchers.



The University's infrastructures are developed and maintained both with funding separately allotted to large-scale infrastructures and with basic funding. The infrastructure investments will be kept at least at the present level in order to maintain the balance sheet value of the assets.

The expensive infrastructural entities of the University's key strength areas will be kept up-to-date and developed further. The Accelerator Laboratory will strengthen its position as one of the key European laboratories in the research of nuclear- and accelerator-based physics and their applications; it will also continue to acquire foreign funding for the research equipment. The research equipment of material physics, chemistry and biology will be retained up-to-date. The research profile of the Nanoscience Center will be increasingly focused on the joint projects of material physics, chemistry and cell and molecule biology; this means that particularly the acquisition of devices promoting interdisciplinary research are given precedence. The conditions for research in psychology, biology of physical activity, health sciences, educational sciences, musicology, and human technology will be improved by developing brain research laboratory equipment. The supply of research equipment in sport and health sciences, which is unique in Finland, will also be developed further.

National and international funding programmes will be fully utilised in the acquisition of large-scale infrastructures.

A separate funding allotment will also be reserved in the yearly University budget for the acquisition and maintenance of large-scale infrastructures. Large-scale infrastructures refer to expensive research infrastructures, whose costs are a minimum of approximately 300,000 euro. Their acquisition always requires a plan, in which the infrastructure and its use are described, including a financing plan, the persons in charge, and the profit targets and research objectives. The Science Council evaluates the applications, consulting external experts, if needed. The Chair of the Science Council makes a proposal to the Rector, who will grant the funding. The respective faculty always participates in the financing, making sure that the necessary personnel resources and sufficient expertise for the use of the large-scale infrastructures are available. The faculty is also in charge of maintaining and updating the research infrastructures. The annual maintenance and updating of an infrastructure, as a rule, requires approximately 10 per cent of the acquisition price for five years.

Infrastructure acquisitions will be integrated into the University's planning, budgeting and performance negotiation system.

In addition to the separate funding for infrastructure, the University's financing model guarantees that the faculties have sufficient yearly funding to cover infrastructure acquisitions totalling less than 300,000 euro, as well as their maintenance. The deans are to ensure that a sufficient amount of the funding received by the faculties is spent on infrastructures and their maintenance.



The faculties maintain centralised information on the research infrastructure that is at their disposal.

The University is also actively involved in the utilisation and development of large national and international research infrastructures. The nationally significant infrastructures (Ministry of Education and Culture's "Roadmap" 2009) in which the University of Jyväskylä is involved include FinELib, JYFL-ACCLAB, FinLTSER, FinCLARIN and CSC; and the internationally significant CERN, FAIR, EMBL, and the LAGUNA scheme.

## RESEARCH FUNDING

### *Budget funding*

The University of Jyväskylä's internal funding model for the agreement period 2013–2016 is prepared during spring 2012.

A separate annual allotment is reserved in the University budget for large-scale infrastructures. The Chair of the Science Council presents the financing plan to the Rector based on the proposals of the faculties, as part of the performance negotiation preparations.

Upon establishing new research units or areas and deciding on their financing, the unit's long-term dedication to research (minimum 3+3 years) is taken into account.

### *Supplementary funding*

The strategic goal of the University is to increase the share of supplementary funding to 40 per cent of the overall funding. During the agreement period, the target is to increase competitive, particularly foreign research funding.

The University will ensure sufficient resources for supporting research, particularly as regards the acquisition of international funding and the management of international projects. The research support services will ensure that the applications submitted from the University are of a high quality. More expertise will be provided to prepare and manage international projects either in the faculties or at the University Services.

The aim is that success in acquiring supplementary (research) funding is taken into account when compensating the staff.

## PUBLISHING AND VISIBILITY OF RESEARCH

Research results are published in high-level international forums. In addition to submitting their articles to scientific journals, the University encourages researchers to publish their articles as open access parallel publications. The visibility of research is monitored using bibliographic methods. The departments/faculties promote the publishing of research results in the high-quality publications specified by the national publication forum. The research groups present their results at internationally significant scientific conferences.



The University also promotes publishing in Finnish and the development of the Finnish language as a language of science.

Research results are also presented outside of the academia. The research groups are to inform the press about particularly remarkable results with the help of the University Communications unit. The University's researchers actively give interviews to media (the press, radio, TV) and popularise their results for the public and actors in different sectors.

The key scientific results are presented on the University website. The websites are developed in order to serve the publishing of research results both for the academic community and the general public.

#### ADMINISTRATIVE SUPPORT FOR RESEARCH

The University of Jyväskylä provides high-quality, expert support services for research, which promote the internationalisation of research and the acquisition of research funding. The research support services produce the data for assessing the state of research and organise, when necessary, an overall assessment of research.

The research support services will centralise their operations in order to increase international, in particular, EU and ERC funding at the University of Jyväskylä.

The research support services also encompass the agreement services related to research and innovation activities, as well as the coordination of the University of Jyväskylä Graduate School.

The University ensures sufficient guidance and support for international staff in their integration into the University and Finnish society.

The research data produced at the University of Jyväskylä is owned by the University of Jyväskylä. The University will develop its systems intended for saving and utilising the research data.

#### INNOVATION ACTIVITY

The active efforts to make research results utilisable are an essential form of societal impact for the University of Jyväskylä. The University atmosphere is innovative and creative.

The University of Jyväskylä provides innovation services that include the identification, evaluation and refinement of commercialisable research results; the management of intellectual property rights (IPR), and guidance on IPR issues. In addition, the innovation services support the departments' service business and creation of partnerships with the actors involved in commercialisation, as well as takes care of commercialisation contracts. The support services are primarily targeted at the IPR owned by the University of Jyväskylä and at related evaluation, commercialisation/productisation, making the products ready for sale, and selling them to existing or founded businesses.



The innovation activities are guided by the University of Jyväskylä Regulations Regarding Inventions (2012).

The University takes care of the initial protection of ideas with commercial potential that become its property based on agreements and legislation. The members of staff can also voluntarily agree to transfer the ownership of their research results to the University, thus to be utilised by the University.

Before launching any protection measures, a utilisation plan is created in cooperation with the individual who produced the result. As a rule, the University bears the cost risk only for protection in Finland during the first year.

The University is committed to promoting research-based entrepreneurship and to discretionary investment activity.

The intellectual property rights owned by the University are commercialised either by licensing, selling or founding an enterprise. The share capital for the new companies founded on the initiative of the University is acquired against cash and/or non-cash contributions. Non-cash contributions can be any property that has financial value and can be transferred.

The University community will continue to strengthen its internal and external cooperation within innovation activity. In transferring expertise to large companies, the collaboration with SHOKs – Strategic Centres for Science, Technology and Innovation – will be utilised. The University's SHOK activities are implemented in compliance with its ownership policy in SHOKs, approved by the University Board on 16 June 2010.

The University has various units whose activities also include the promotion of business cooperation and innovation activities (e.g. the Council of Societal Interaction; the Research, Entrepreneurship and Innovation Services; the Nanoscience Center; Viveca; the Accelerator Laboratory; Agora Center; Pekan Paja; and the School of Business and Economics). In order to rationalise the utilisation of resources and to enhance expertise, collaboration between the various actors will be intensified and the division of tasks clarified.

## EVALUATION AND FOLLOW-UP

The University Board will monitor the implementation and impact of this programme. The Science Council will evaluate the state of research and report on it to the Board in connection with the yearly Board Review. In the evaluation, the Science Barometer, bibliographic reviews and the departments' self-evaluations will be utilised. The Science Barometer and the performance criteria will be developed in order to comply with the goals of the University strategy, in accordance with this policy. The next overall assessment of research will be implemented in 2015–2016.

The research, infrastructure and innovation policy will be revised upon renewing the University strategy (Excellence and Dynamism 2012–2017).