

## **Estonian University of Life Sciences**

**Self-Assessment Report**  
**Submitted for the Estonian Higher Education Quality Agency**  
**(EKKA)**  
**2012**

## Message from the Rector

Eesti Maaülikool (Estonian University of Life Sciences, EMÜ) is pleased to present the Self-Assessment Report to the Estonian Higher Education Quality Agency (EKKA). EMÜ has accepted the offer by EKKA to pilot the institutional accreditation prior to applying it to all institutions of higher education. We are open to share the good practice of our university and to identify the areas in need of improvement.

Quality is the measure for improvement. Improvement has been our objective in the management and operation of our organisation, also gaining and applying better experience via quality management projects.

In 2005-2008 EMÜ was a partner in the ESF project “Quality Assurance in Universities”, and the results were:

- expectations for the quality system in the university were mapped, also the needs according to the questionnaire of the target groups;
- needs for training in the target groups were clarified and competence after training assessed in cooperation with the Estonian Employers' Confederation;
- quality management training and seminars were organised;
- quality handbook was completed.

We have volunteered to participate in external assessments.

In 2009 we were the only public university in Estonia to analyse the institutional capabilities of our organisation by the modified EFQM model in the framework ESF Primus project “Quality Management in Higher Education Institutions”. Other universities participated in the EFQM model analyses with one structural unit each. Three major improvement projects were initiated by EMÜ in 2010/11 to eliminate the drawbacks identified in the feedback report:

- 1) developing the marketing strategy for EMÜ
- 2) working out the questionnaire for the employee satisfaction study
- 3) analyses and planning of curricula group sustainability and measures accordingly.

Employees from several units were engaged in the improvement projects. The intermediate and final results of improvement projects were disseminated to the EMÜ staff.

The results of the projects have been included in the corresponding areas of self-reviews.

This self-review maps the current situation and compares it to the previous one. We aim at providing confidence to the interested parties that our organisation is improving, also the conviction that we are able to maintain and develop our quality.

The quality criteria by the Estonian Higher Education Quality Agency were the basis for the self-assessment. The document is structured according to the assessment criteria; the supporting material has been given in the text.

Self-assessment was carried out by teams formed for it; the intermediate and final reports were studied by the self-review management group and the quality commission. The self-assessment report was discussed at the meeting of the EMÜ Board, 20.12.2011.

Welcome to our home page [www.emu.ee](http://www.emu.ee)

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Mait Klaassen  
Rector

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Glossary of terms

<b>AGRIMBA - International Network for the MBA Agribusiness and Commerce</b>
<b>AGRINATURA - European Alliance on Agricultural Knowledge for Development</b>
<b>ASU – Aleksandras Stulginskis University</b>
<b>AÜ – Open University</b>
<b>BA – Bachelor of Arts</b>
<b>BEENOVA – NOVA sub-network</b>
<b>BOVA University Network – forestry, veterinary and agricultural sciences universities of the Baltic countries, founded in 1996. Members: Estonian University of Life Sciences, Latvia University of Agriculture, Aleksandras Stulginskis University, Lithuanian University of Health Sciences</b>
<b>BSRUN – The Baltic Sea Region University Network (40 institutions)</b>
<b>EAEVE – European Association of Establishments for Veterinary Education</b>
<b>EAEVE – European Association of Establishments for Veterinary Education</b>
<b>ECHAE – European Conference of Higher Agricultural Education</b>
<b>ECTS - European Credit Transfer System</b>
<b>EFLA – European Federation for Landscape Architecture</b>
<b>EMOR – market research and consulting company TNS EMOR</b>
<b>EMÜ – Eesti Maaülikool, Estonian University of Life Sciences</b>
<b>EPKK – Estonian Chamber of Agriculture and Commerce</b>
<b>ERABEE – Network for Education and Research in Agricultural and Biosystems Engineering in Europe</b>
<b>ERACON – Network of Erasmus coordinators of Europe</b>
<b>ERA-NET – Networking the European Research Area</b>
<b>ETA – Estonian Information Agency</b>
<b>ETA – Estonian Information Agency</b>
<b>ETIS – Estonian Research Information System</b>
<b>EUA – European University Association</b>
<b>EURAXESS – Researchers in Motion homepage, Job Portals</b>
<b>EVEA – Estonian Association of SMEs</b>
<b>FADN – The Farm Accountancy Data Network</b>
<b>FAO – Food and Agriculture Organization of the United Nations</b>
<b>FORPEC – MSc Curriculum in Forest Policy and Economics</b>
<b>GCHERA – Global Consortium of Higher Education and Research for Agriculture</b>
<b>ICA – Association for European Life Science Universities</b>
<b>ICT – Information Communication Technologies</b>
<b>INTERREG – European Interregional Cooperation Program</b>
<b>IROICA – European Network of International Relations Officers at Higher Education Institutes for Agricultural and Related Sciences</b>
<b>IUCN – International Union for Conservation of Nature</b>
<b>LEADER – European Network for Rural Development</b>
<b>LLU – Latvia University of Agriculture</b>
<b>MA – Master of Arts</b>
<b>MAK – Development centres in Estonian counties</b>
<b>MI – Institute of Forestry and Rural Engineering</b>
<b>MS – Institute of Economics and Social Sciences</b>
<b>NORDPLUS – Nordic Council of Ministers’ program for lifelong learning</b>

<b>NOVA University Network – Forestry, Veterinary and Agricultural Universities of Nordic Countries</b>
<b>PhD – Doctor of Philosophy</b>
<b>PK – Institute of Agricultural and Environmental Sciences</b>
<b>RDC – Research, development and/or other creative activity</b>
<b>R&amp;D – Research and development</b>
<b>RPL – Recognition of Prior Learning</b>
<b>SILVA – European Forest Science Academic Network</b>
<b>SME – Small and medium-sized enterprises</b>
<b>TE – Institute of Technology</b>
<b>TLÜ – Tallinn University</b>
<b>TS – College of Technology</b>
<b>TTÜ – Tallinn University of Technology</b>
<b>TÜ – Tartu University</b>
<b>VL – Institute of Veterinary Medicine and Animal Sciences</b>

## Self-review team

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## INTRODUCTION

EMÜ is registered as a public legal person in the state register of state and local government agencies, 26.02.2003, registry code 74001086, acting according to the Constitution of the Republic of Estonia, the Universities Act, the Statutes and other legislative acts. The main field of activity is research concerning sustainable use of natural resources and studies based on the research.

The abbreviation for the Estonian University of Life Sciences is EMÜ. The official name of the Estonian University of Life Sciences, Eesti Maaülikool, and the abbreviation EMÜ is also used in foreign languages as the original name. Estonian University of Life Sciences on the logo is the name of the university in English.

EMÜ as a centre of Life Sciences is a harmonious unit comprising:

- traditional agricultural research;
- economical and sustainable use of renewable natural resources;
- environmental protection;
- preserving natural biodiversity;
- food quality and safety;
- landscape design;
- tourism and socio-economic viability of rural areas.

### History

The first educational establishment in Estonia providing higher education with a full agricultural curriculum – in veterinary medicine – was the Tartu Veterinary School, founded in 1848 and reorganised as Tartu Veterinary Institute in 1873. In 1919 the Veterinary Institute was united with Tartu University and re-named as the Faculty of Veterinary Medicine. In the same year the Department of Agriculture was established in Tartu University. In 1920 it was divided into the Faculty of Forestry and Agronomy, and the latter comprised both plant production and animal husbandry. In 1946 a separate Faculty of Forestry was established.

In 1951 the three above mentioned faculties were the basis for establishing the Estonian Agricultural Academy, which was re-named as Estonian Agricultural University.

In 2005 Estonian Agricultural University (Estonian University of Life Sciences today) implemented a restructuring program. 01.01.2005 new academic structural units – institutes – were established.

Instead of a classical organisational model of a university with faculties as academic structural units, 5 institutes were established. An institute is a structural unit, acting as a public legal person, research- and development institution or an establishment aiming at fostering science and academic practice, also providing the necessary study, research and development services to the society.

Estonian University of Life Sciences as of 27.11.2005 reflects the new direction of the university – to organise research and provide education not only in the traditional agricultural sciences, but also in life sciences, bio- and gene technology and environmental sciences. The initiative to change the name was spearheaded by the university [newspaper “Maaülikool”](#). The new name brought along the new logo and [visual identity](#).

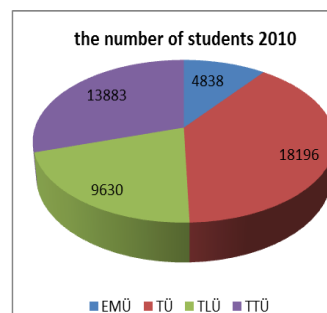
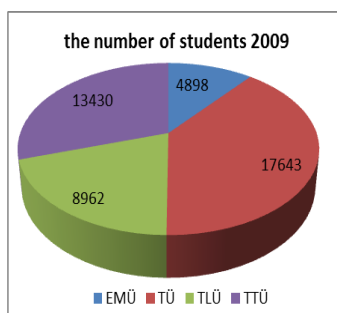
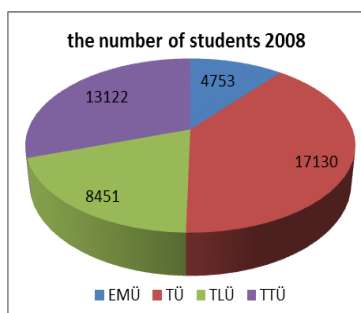
The EMÜ today fosters research, academic traditions, provides higher education according to the Standard of Higher Education, based on integrated study and research on all the three academic study levels; organises lifelong learning and services needed by the society based on study, research and development activities. The university participates in international research and development and promotes innovation in all the interdisciplinary fields concerning rural life and economy and the sustainable use of primary resources that are vital for life, also preserving the environment.



## Estonian University of Life Sciences in numbers

<b>Students as of 01.01.2012</b>	- Students, total	4612	
	<b>Studying in</b>		
	- full-time study	3532	
	- distance learning	1080	
	- state budget student places	2730	
	- non-state budget student places	1882	
	- professional higher education	146	
- Bachelor's study	2607		
- Master's study	896		
- Doctoral study	219		
- integrated study	744		
<b>Personnel as of 01.01.2012</b>	Personnel, total	956	
	<b>Employed as</b>		
	- academic personnel	423	
	- support structure personnel	533	
	<b>Academic personnel</b>		
	- Professors	37	
	- Docents	64	
- Lecturers	158		
- Assistants	9		
<b>Structure</b>	The university has 5 institutes and one college, with students and personnel as follows:	students	staff members
	- Institute of Economics and Social Sciences	793	48
	- Institute of Forestry and Rural Engineering	1266	115
	- Institute of Forestry and Rural Engineering	1237	298
	- Institute of Agricultural and Environmental Sciences	629	67
	- Institute of Technology and College of Technology	687	207
- Institute of Veterinary Medicine and Animal Sciences			

EMÜ is one of the four biggest public universities in Estonia.



# Management and Operation of the Organisation

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## 1.1 General management

### *1.1.1 Planning and implementing the development and operation principles of EMÜ*

#### *1.1.1.1 EMÜ vision, mission and strategies*

##### **Mission**

As a carrier of academic culture to promote the environmental way of thinking and the smart and balanced management of rural life through research-based education.

##### **Vision**

EMÜ is a highly valued international educational and research centre in the area of rural economy and sustainable use of natural resources.

##### **Values**

The university applies the principles of ethical requirements in all its fields of activity, the values are:

- development and reliability
- openness and civil courage
- sustainability and ethics
- balance between urban and rural life
- Estonian language and culture
- relationships, traditions and home
- equal treatment and tolerance

Further details can be seen in the EMÜ [Development Plan till 2015](#).

##### **Strategies**

The strategic planning process of EMÜ is depicted on Figure 1.1. The basis for planning is the mission, vision and values of EMÜ. These will be revised before a new development plan is compiled, analysed and discussed with different interest groups and improved if necessary. Feedback and suggestions from the interest groups for the previous period are taken in consideration when working on the next development plan. The development plan is the basis for the action plan, which gives guidelines to the academic study year; also the budget for fulfilling the tasks is compiled and confirmed. Operation of the university, fulfilling the goals and tasks, is supported by permanent and temporary processes and policies that have been agreed upon, also procedures and directives regulating the activities. Implementation of the planned activities and achievement of expected results will be reviewed according to the prescribed procedures.

Once a year an overview of development tasks and a summary of results is made

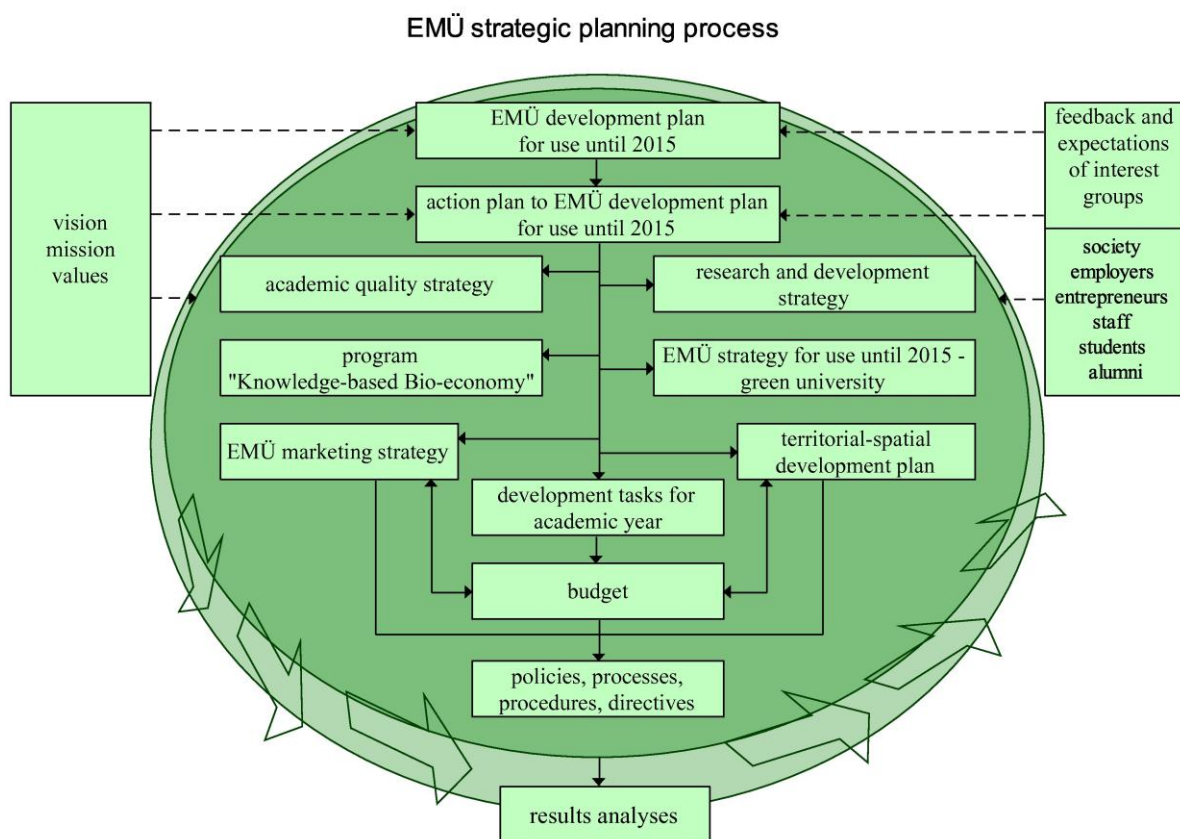


Fig. 1.1 EMÜ strategic planning process

### **Development plan and strategy of the university**

[The Development Plan till 2015](#) outlines the general principles for EMÜ in the society and describes the main objectives and activities to fulfil the calling and duties of the university. The Development Plan supports the obligations of an EU member state to foster knowledge-based society and is based on the main Estonian and EU guidelines and strategic documents. The main objective of the strategy is to contribute to creating European common values and preserve the culture and research in our mother tongue - to make university education more competitive and promote research and development and innovation. The strategic aim is to operate in a more international environment and foster international research and scientific cooperation. More attention will be paid to practical application of research results.

### **Strategic fields of activity of the university**

The factors influencing higher education in Estonia and in the world have guided the planning process of the activities of the university in four strategic areas:

**Fostering knowledge-based Estonia. Internationally recognised research** - the objective of EMÜ is to improve the quality of research and make it more international. In research high quality and ethics are relevant. EMÜ recognises the role of a researcher as an opinion-leader in the society.

**Highly valued provider of university education. Internationally open university** - the objective of EMÜ is to provide highly valued higher education of quality, based on competitive academic studies and research and educate the students to become specialists of their field and versatile personalities.

**Promoter in society. Enterprising and sustainable way of thinking** - one of the main objectives of EMÜ is practical application of research results and providing specialists for the labour market - specialists with a sustainable attitude to life and social responsibility. **Carrier of academic culture. Motivating work environment and coherent organisation of life** - the aim of EMÜ is to create motivating work environment of high quality for studies and research and to guarantee an effective administrative and support structure.

### **Plans of action and priority fields**

According to the EMÜ Development Plan **the development plans for the institutes** are worked out, also more detailed operational plans for shorter periods and more specific fields of activity. Implementation of the Development Plan is coordinated by the Vice-Rector of Research. The institutes report on implementing their development plans in the EMÜ Council at least once in every three years.

[The Action Plan 2010-2015](#) has been compiled for fulfilling the EMÜ Development Plan objectives and tasks in two stages, identifying the short term directions and measures to assess the desired outcomes. The operational plans are based on the mission, vision and basic values of the university, considering the specific goals according to the priorities of the country and expectations of the society.

The Action Plan highlights the priority fields. The fields are determined by the EMÜ development vision, which is about gaining the leading position (e.g. a centre of excellence) in the fields of sustainable use of resources concerning:

- 1) producing healthy and safe food;
- 2) sustainable use of the terrestrial and aquatic biological resources, incl. protecting biological diversity, heritage communities and heritage landscapes;
- 3) use of the biotechnology of non-food biological products and processes;
- 4) animal health;
- 5) using wood and timber;
- 6) sustainable energy
- 7) ecological construction technologies and materials;
- 8) organic products;
- 9) agroecology;
- 10) environmental technologies;
- 11) environmental economics.

### **Sub-strategies and programs**

EMÜ compiles and updates the following documents, according to the Development Plan:

- 1) strategy for research and development;
- 2) academic study quality strategy;
- 3) territorial-spatial development plan;
- 4) program “Knowledge-based Bioeconomy”;
- 5) Estonian University of Life Sciences Strategy for up to 2015: the green university;
- 6) Estonian University of Life Sciences Marketing Strategy

**1) Research and development strategy** (regulation of the University Council as of 26.05.2005, No. 17 and 24.03.2011, No. 1 Estonian University of Life Sciences Research and Development Strategy until 2015 “[Knowledge-based Bio-Economy](#)”) is the basis for working out more detailed operational plans for shorter periods or specific activities. The following indicators are used for monitoring implementation of the objectives of the strategy and development directions:

- 1) results of the regular evaluations;
- 2) publications data;
- 3) numeric data of RDC contracts and projects;
- 4) numeric data of various financial sources for RDC;
- 5) proportion of the profit of RDC activities in the budget;
- 6) numeric data of the efficiency of research by scientific and academic staff;
- 7) numeric data concerning staff members involved with RDC;
- 8) efficiency of doctoral studies and defending PhD theses;
- 9) popularising results of research.

2) **Academic Quality Strategy** (regulation by the University Council, 01.12.2005 No 10) is a document on the quality policy of EMÜ and the main activities for increasing the quality of studies in Estonian and international context of higher education. The document is the basis for ensuring quality on the general common basic values, expectations and good custom in the university as a whole and in each sub-unit of the university. The following indicators are used for monitoring fulfilment of the objectives of the strategy and development directions:

- 1) indicators of students' academic achievement and success;
- 2) indicators of students' academic mobility;
- 3) indicators of efficiency on admission of new students;
- 4) indicators of applying the RPL-system, which recognises the student's previous studies and work experience;
- 5) contemporary social infrastructure for students, incl. living conditions;
- 6) analysis and considering the opinions and suggestions by the personnel and students, also alumni, for developing curricula;
- 7) feedback from the employers; analysis and considering the information for developing curricula;
- 8) the funds and capacity of the library according to the needs for studies;
- 9) academic and research staff participation in teaching skills training;
- 10) results of students' feedback on teaching;
- 11) results of evaluating curriculum groups and institutional accreditation.

**3) Territorial-Spatial Development Plan** (Regulation of the University Council, 22.02.2007, No.3 and 25.02.2010, No.1) is the basis for determining the function of the EMÜ buildings, for planning investments and for making transfer decisions. The strategies for fulfilling the objectives and following the development directions are discussed and the current situation is assessed for each budget year, and the decisions made accordingly are taken into consideration in the capital budget project.

**4) Programme “Knowledge-based Bio-Economy”** (Decision of the University Council, 29.06.2005, No 32) – the program to integrate agricultural, food and environmental sciences via a shared research chain: 1) sustainable use of biological resources from terrestrial, forest and aquatic environment; 2) enhancing food related health and welfare; 3) life sciences and biotechnology aimed at improving non-food biological products and processes. The research and development strategy points out the indicators used for fulfilling the objectives of the strategy and monitoring development.

**5) Strategy of Eesti Maaülikool until 2015 - GREEN UNIVERSITY** (University Council Regulation, 24.05.2011) has been created as a wider support basis for the mission of EMÜ. The aims of the green university are the principles of sustainable development and integrating them

with study and research, reducing the ecological footprint of the university, creating a healthy and good study and work environment and rising the awareness of staff and students and the society about environmental issues, also promoting cooperation with the society to achieve the goals of sustainable development. The green university is the so-called future status of EMÜ, the goal of the university as a whole. The green university is focused on the following fields of activity, in accordance with the principles of sustainable development and the EMÜ fields of activity:

- environmentally friendly energy supply;
- healthy and safe food;
- sustainable use of terrestrial and aquatic biological resources;
- protection of biodiversity, heritage communities and heritage landscapes;
- methods and principles of sustainable planning of life environment;
- ecological construction technologies and materials;
- environmental economics;
- environmentally friendly waste management;
- environmental awareness and education.

The strategy is the basis for working out operational plans and annual development tasks. Achievement of the objectives of the strategy and the development tasks are discussed by the EMÜ Council at least once a year. Each institute and unit is responsible for fulfilling the strategy in their area and will report to the EMÜ Council, at least once every three years. Promoting the green university is voluntary by the students and staff. The following indicators are used for monitoring fulfilment of the objectives of the strategy and development directions:

- 1) environment and sustainable development related public events organised by EMÜ;
- 2) applied projects, studies and state policies on environment and sustainable development with the contribution by EMÜ experts;
- 3) subjects and projects for different specialities on environment and sustainable development on speciality fields;
- 4) environment and sustainable development related events organised by students;
- 5) numeric data on energy and water usage in EMÜ houses and facilities, amount of waste;
- 6) number of bicycle spaces and pavement maintenance in the campus;
- 7) data on minimising the use of paper

**Marketing Strategy of EMÜ** (University Council Regulation, 05.10.2011, No 7) outlines the general and strategic aims of the marketing strategy and management principles. The marketing strategy is based on the Development Plan of EMÜ until 2015 and comprises three fields of activity:

- 1) tertiary education (incl. professional higher education, Bachelor's study, Master's study and Doctoral study, also integrated curricula based on BA and MA curricula);
- 2) lifelong learning;
- 3) RDC.

The following indicators are used for monitoring fulfilment of the objectives of the strategy and development directions:

- 1) number of first-year students;
- 2) number of students;
- 3) number of lifelong learning participants;
- 4) number of RDC projects with co-partners;
- 5) EMÜ image.

## 7) Development tasks for the academic year

Specific development tasks are drawn up for each academic year. The development tasks are confirmed by the EMÜ Council, based on the responsibility of the units of academic and support structure, which guarantees the contribution of each unit to the achievement of goals set by EMÜ, also targeted operation. A performance overview of development tasks is presented to the EMÜ Council at the end of the academic year. The process of development tasks is described on Figure 1.2.

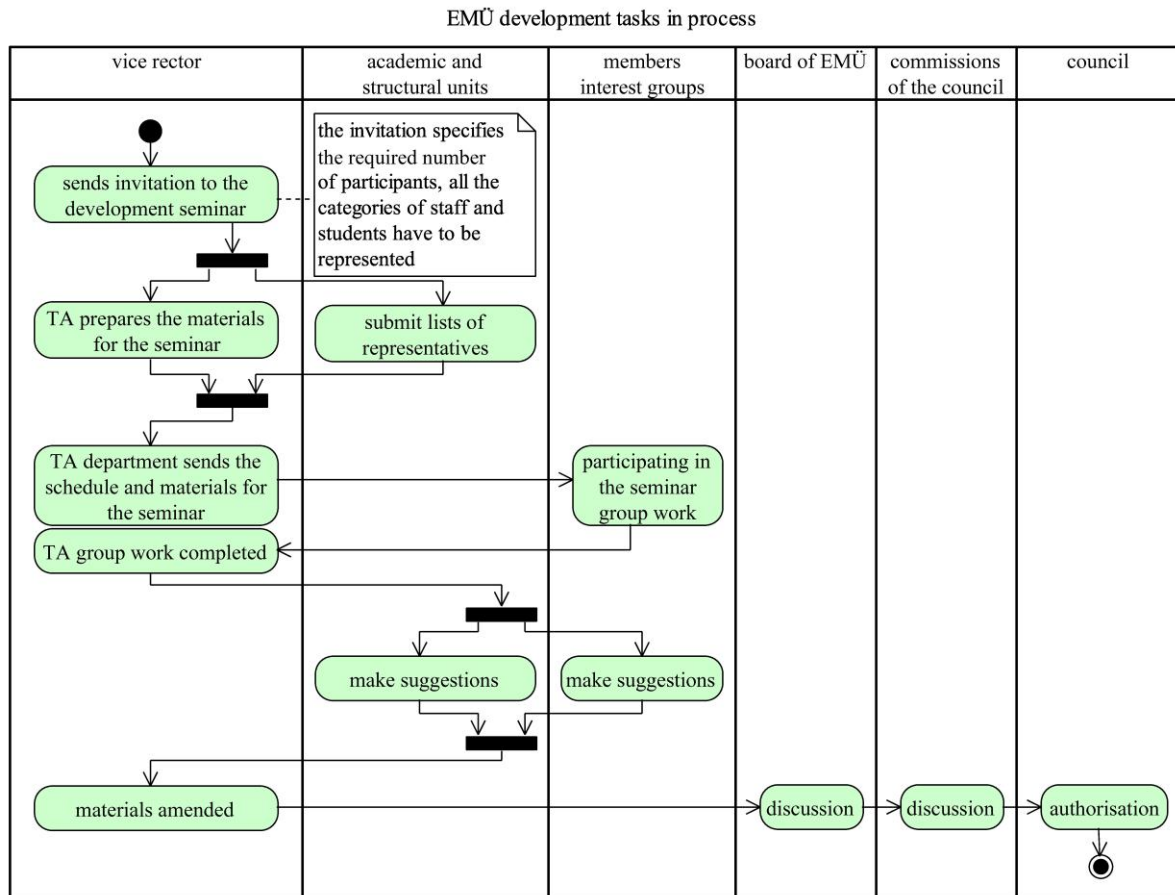


Fig. 1.2 EMÜ development tasks procedure

### 1.1.1.2 Risk assessment

EMÜ regularly assesses risks, works out activities to manage risks, implements the activities and evaluates the effectiveness of the measures used. Risk management and working out development tasks support each other.

In 2008 the Rectorate with the directors of the institutes assessed the risks in EMÜ, based on the Development Plan until 2015. The evaluation and analyses resulted in suggestions for operations to manage risks. In 2011 risks were assessed again, and although the objectives in the EMÜ Development Plan had not been changed, it was agreed that the risks have become different in some aspects, as compared to the year 2008. The risk assessment review with the list of risks found in 2011 and the risk management activities suggested in 2008 was one of the main documents for the development tasks for the 2011/2012 academic year, compiled at the development seminar in May 2011.

An Audit Committee is operating as a unit of EMÜ Council. They monitor and analyse the processing of financial information; the efficiency of risk management and internal audit;

the process of conducting audit on annual accounts; the independency of the audit institution. The Audit Committee has an advisory function to the Council.

#### *1.1.1.3 EMÜ performance indicators:*

##### **I Performance indicators of research and development:**

- 1) data on research publications;
- 2) data on research projects and contracts;
- 3) efficiency of science funding applications.

##### **II Performance indicators of academic study**

- 1) percentage of achievement among EMÜ graduates;
- 2) employment (on the speciality);
- 3) percentage of further studies;
- 4) proportion of foreign students;
- 5) number of graduates;
- 6) number of first-year students;
- 7) student and other interest groups satisfaction.

##### **III Performance indicators of lifelong learning**

- 1) number of participants of lifelong learning;
- 2) participant satisfaction of lifelong learning.

#### *1.1.2. EMÜ management and structure*

##### *1.1.2.1. Management principles:*

**Inclusion of students and members of staff:** The students, staff (personnel, professors emeriti, docents emeriti) and interest groups are included in the process of drawing up, working out and carrying out, introducing, implementing, reviewing and updating the mission, vision, development plans, strategies and policies of specific fields and action plans of EMÜ. It is the concern of the management that the students and staff of EMÜ have an idea of the university as a unit and are able to evaluate the developments that have taken place.

**The needs of EMÜ interest groups** (the Estonian state, local municipalities, undergraduates, alumni, employers, consumers/users (producers) of the results and services of RDC, staff and society) are identified, their satisfaction is evaluated and the results are taken into consideration for developing the quality management of EMÜ (Feedback System, University Council Regulation, 05.10.2011) Our alumni and other interest groups contribute remarkably to developing EMÜ via the alumni donation foundation, university marketing, organising events and developing the curricula and study process.

**Personnel satisfaction with involvement:** Satisfaction surveys show that 67% of the respondents are satisfied with inclusion to the EMÜ objectives and development plans. Surveys on the inclusion to objectives and development plans of the structural units show that 75% of the respondents are satisfied, and surveys on the inclusion to objectives and development plans of the institutes show that 72% of the respondents are satisfied. 78% of the respondents are satisfied with inclusion to decisions concerning their work.

#### **Orientation to collaboration**



EMÜ management values teamwork and collaboration internally and externally. In order to plan the development tasks of the academic year, development seminars are organised annually for cooperation between the institutes and structural units, also the units work together on a steady basis to carry out the tasks (e.g. compile the curricula and organise academic study, evaluate the results, work on RDC projects and articles, organise conferences and seminars etc.).

The EMÜ Professors' Council is an independent academic association. The membership is voluntary for professors and professors emeriti, the activities are organised by the Management Board that is elected at the general meeting. The Rector of EMÜ is a member of the Board. The fields of activity of the Professors' Council include the academic spirit in EMÜ, attitudes and internal culture; study and RDC issues, help with developing the EMÜ infrastructure, counselling and development, participation in working out rural and agricultural policies, communication with counties and agricultural producers, cooperation with Estonian universities and other educational establishments etc.

There are good contacts between the students and the staff planning and organising academic studies – students provide feedback and make suggestions about the study process, its content and form, which helps to improve the study process and curricula on a regular basis. Last academic year the feedback form and content was updated according to the suggestions by the students. The procedure and format of the feedback from the teaching staff to students is being worked out.

EMÜ has tight contacts with the alumni. The alumni participate in developing the curricula and study process, also organising events. During the celebration of the 60th anniversary of EMÜ the contribution by the alumni was remarkable. A big proportion of the alumni and their employers are also employers to the graduates of EMÜ today and in the future. To ensure the graduates' success in the labour market, cooperation with interest groups is organised on a steady basis. Feedback for curriculum development is received from the graduates and employers, also about the practical efficiency and general competence of our trainees - that is taken into account when developing curricula and subjects, also teaching methods.

Cooperation with people who order research and development services is taking place during completing the order, starting from the planning process for the order until feedback and improvement decisions. The services have had very positive feedback. Of the reasons for high satisfaction as mentioned have been mostly the good positive attitude towards the partners from EMÜ and the high level of competency of the EMÜ specialists. [Technology Transfer Survey 2010](#)

EMÜ has versatile contacts with schools and EMÜ has its Life Sciences School. The project "Live Science" has been started. (See chapter 4 – Serving the Society).

EMÜ is a member of Estonian Rectors' Conference. In cooperation with other universities the Agreement of Quality Good Custom of Estonian Universities has been worked out and approved. Cooperation of universities is aimed at strengthening the sustainability of Estonian culture and competitiveness of education, considering the expectations of the society. To implement the Agreement of Quality Good Custom, seminars are organised by the universities. Once a year the Rectors discuss the work, evaluate the positive steps and confirm the future activities plan.

### **Clear definition of responsibilities**

In order to support fulfilling the objectives and coherent operation of main processes of EMÜ, the responsibility has been defined and described on all levels of management, maintenance and support structures.

The highest decision-making body is the EMÜ Council, comprised of 30 members. The members are the Rector, Vice-Rectors, the Academic Secretary, the elected representatives of the academic structural units and students, two persons outside the university staff who are appointed by the Rector. The work of the Council is regulated by the Council's Rules of Procedure.

The Board of Governors (Advisory Board) appointed by the Government of Estonia, is the highest advisory body linking the university and the society, which makes suggestions to the Minister of Education and Research and the EMÜ Council, concerning issues on EMÜ development.

The Board of EMÜ is a body of operational management formed by the Rector. The Board takes decisions and works out the opinions for passing legislative acts and expresses their opinion on the issues in the agenda of the Council. The Board members are the Rector, Vice-Rectors, the Chief Accountant – the Head of Department of Finances, the Management Director, the Directors of Institutes, the Director of Tartu College of Technology, the Chairperson of the Student Union.

The EMÜ leadership includes the Rector, the Vice-Rector of Research, the Vice-Rector of Studies, the Management Director and the Chief Accountant – the Head of Department of Finances.

The duties and authority, mutual responsibilities and substituting regulations of the structural units and their staff have been determined in the procedure descriptions, the statutes and descriptions of the structural units and the contracts of employment (administrative and support structure). The responsibility of the directors of institutes is clearly defined and generally it is their principal job.

### **Clear and efficient management structure**

The objective and tasks of EMÜ, the structure, management procedures, the basic principles of the organisation of studies, the basic rights and obligations of the staff and students, the procedure for using the property, the basics of financing and the systems to guarantee reporting and inspection are provided in the [Statutes of EMÜ](#).

The academic structure of EMÜ comprises five institutes, three of them – the Institute of Agricultural and Environmental Studies, the Institute of Veterinary Medicine and Animal Sciences, the Institute of Forestry and Rural Engineering – have the status of a research and development institution, and two – the Institute of Technology, the Institute of Economics and Social Sciences – are academic educational institutions. There is one college, Tartu College of Technology, and two centres, Language Centre and Karl Ernst von Baer's House Centre for studying research history.

The interdisciplinary units in EMÜ are the Centre of Agro biotechnology, the Centre of Renewable Energy and Nature collections.

EMÜ basic operation is assisted by the support structure, i.e. the administrative and financial services, the library, the units that organise studies, research and development. See Figure 1.3. for the management structure of EMÜ.

**Personnel satisfaction with the management:** The results of the personnel satisfaction survey show that the level of satisfaction is even and high. 78% of the academic personnel (of respondents) are satisfied with the EMÜ management, also 84% are satisfied with the management of the institute. 81% of respondents from the support structure are satisfied with the management of EMÜ and 85% are satisfied with the management of the institute. Satisfaction with the management on EMÜ level is remarkably correlated with employee satisfaction concerning their work environment and the position, image and reputation of EMÜ in our educational system.

Employee satisfaction with EMÜ is mostly high. The highest percentage concerns the values of the university (88%), followed by policy and operational principles (79%).

EMÜ management structure 2011

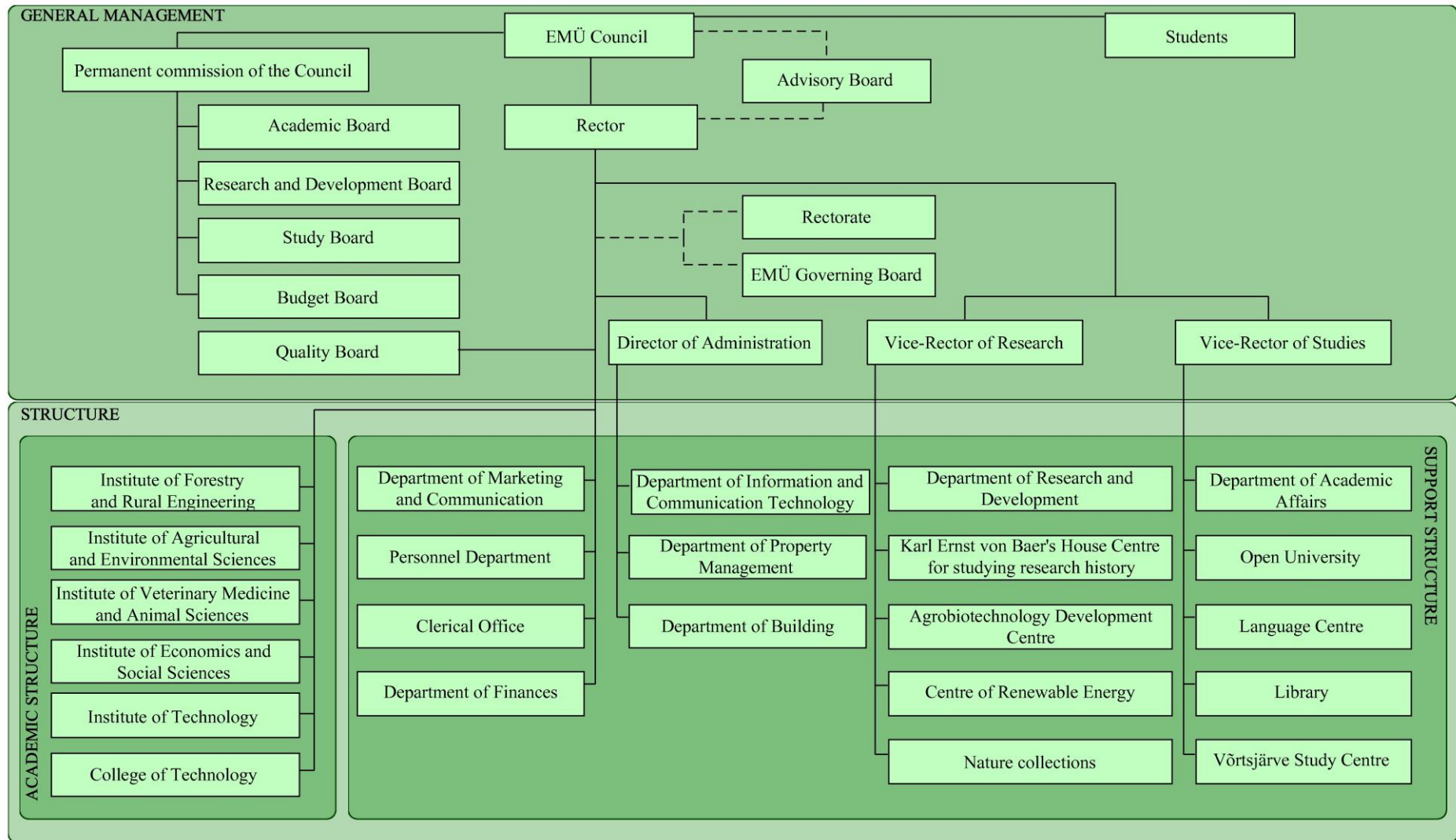


Fig.1.3 EMÜ management structure 2011

**Procedure-based management**

EMÜ has outlined the fields of activity as principal processes and support processes (Fig. 1.4). The principal processes are graduate and lifelong learning and RDC, which are assisted by support processes. The necessary resources and information for the processes have been guaranteed. The processes are monitored, evaluated and analysed, necessary activities are performed to get the expected results. Each process is assigned a leader – a person with authority who has to be acquainted with the process and is responsible for the strategic and practical progress of the process. Requirements by current legal acts are taken into consideration when managing the processes. All the legal acts and contracts are confirmed by the lawyer of EMÜ.

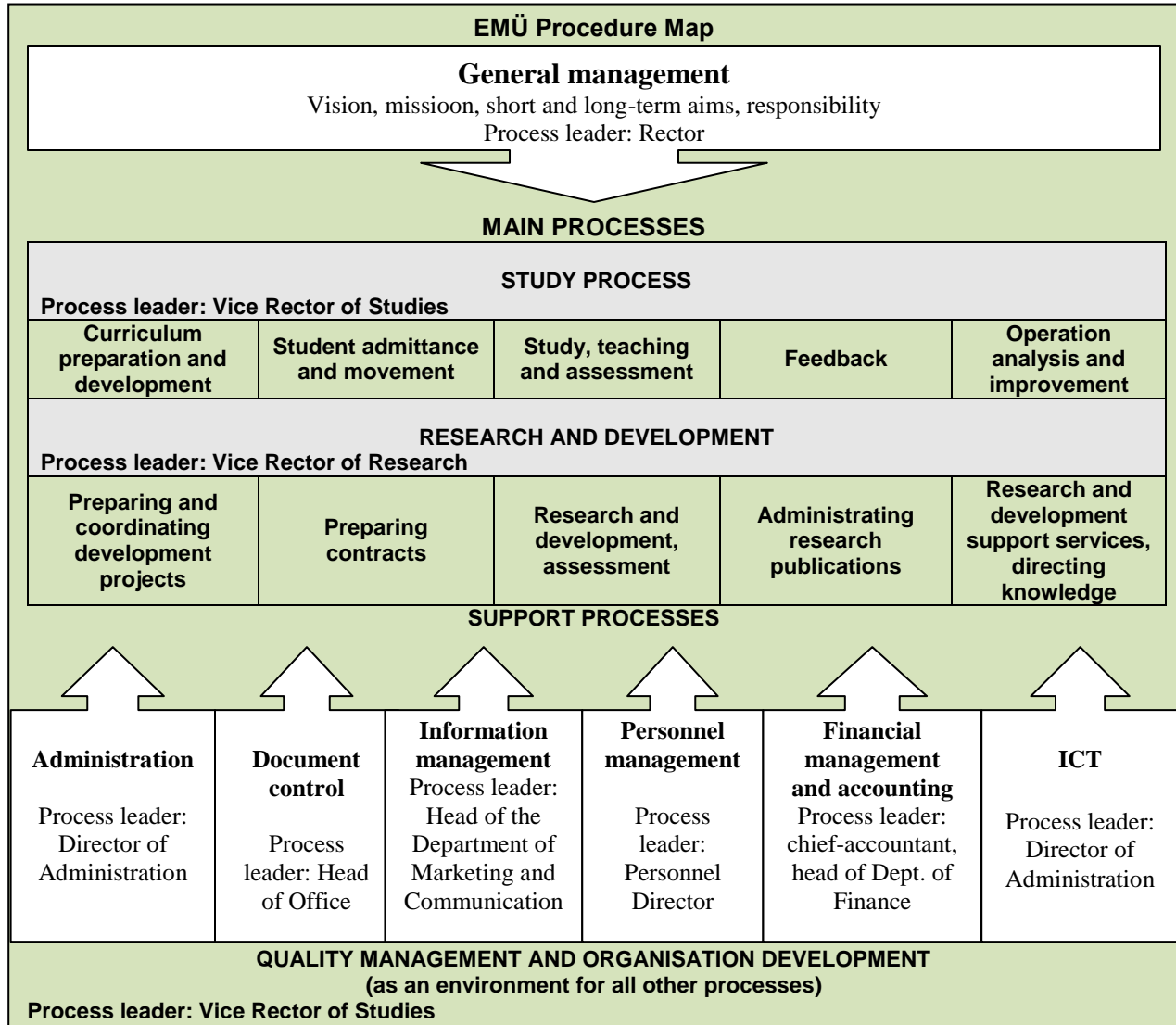


Fig. 1.4 EMÜ process-based management system

**Decision-making based on facts**

The feedback system has been created to constantly improve the quality of EMÜ services, their content and management. Feedback includes all the EMÜ interest groups (Table 1.1.). The results of the feedback are compared with the planned objectives and the results of other universities accordingly. The reference universities are the public universities in Estonia.

Relevant performance indicators are compared in the corresponding sub-sections of the Self-Assessment Report. Feedback from interest groups is obtained according to the questionnaires. The questionnaires of specific interest groups are carried out according to the procedure. The results are disseminated via the EMÜ internal network. The practical steps of organisation are described on Figure 1.5. The results of the analyses are the basis for making decisions for improvement.

Table 1.1 EMÜ feedback matrix

Interest group	Title of feedback questionnaire	Aim of questionnaire	Time of questionnaire	Unit responsible	Results are used:
<b>Students</b>	Feedback to lecturer and subject	Improving teaching quality	Each semester	Academic Affairs	assessment and development of teaching staff, incl. personal evaluation
	Freshmen feedback	Increasing enrolment, decreasing withdrawal	2nd semester	Academic Affairs	to plan marketing and improve academic study
	Graduate feedback	Increasing good references	Last semester	Academic Affairs	to improve academic study and supervision
	Feedback on withdrawals	Decrease withdrawals	during withdrawal process	Academic Affairs	find out reasons for withdrawal and work out preventive measures
<b>Post-graduates</b>	Postgraduate study	Developing study programmes, increasing effect of enrolment advertising	every 3 years	Academic Affairs	to develop curricula and marketing messages
<b>Employers</b>	Employer satisfaction with EMÜ postgraduates	Developing curricula, increasing effect of enrolment advertising	every 3 years	Institutes	to develop curricula and marketing
	Employer assessment to EMÜ trainees	Develop curricula and subjects	every 3 years	Institutes	to develop curricula and subjects
<b>Participants of lifelong learning courses</b>	Feedback on course lecturers and courses	Develop course lecturers and courses	End of course	Open University	to improve courses and choosing course lecturers
<b>People who order RDC services</b>	Knowledge transfer survey	Increase the number of orders and develop services	every 3 years	RDC	to improve RDC and marketing
<b>Students and teachers of upper secondary schools and vocational schools</b>	Reasons behind choices of university by school-leavers, preferences, EMÜ image study	Map preferences on speciality and university by potential students Increase popularity, improve image	every 3 years	Marketing and Communication, EMOR	for marketing and choosing communication channels
<b>Public (society)</b>	EMÜ in media	To be aware of public opinion, attitudes about	Every other year	Marketing and	for media communication and marketing

		the university and its fields of activities and influence they have on the public		Communication	
	Image studies			Marketing and Communication, EMOR	
<b>Staff</b>	Personnel satisfaction survey	Increasing staff satisfaction	Every 2 years	Personnel	develop personnel policy and organisational culture

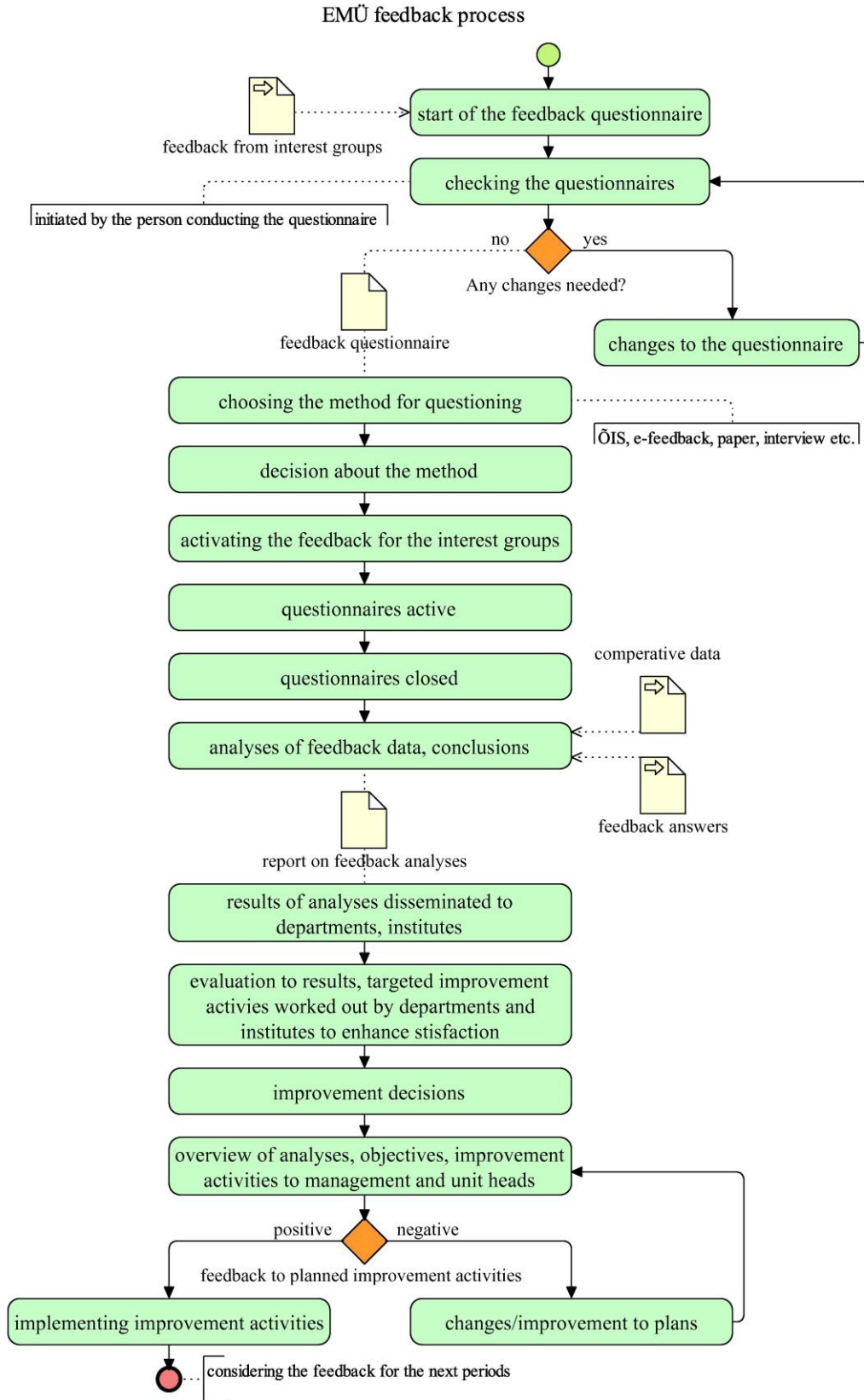


Fig. 1.5 EMÜ feedback process



## **Efficient flow of information**

Objectives of external and internal communication, including its marketing and image-related aims, have been confirmed in the marketing strategy and it is the responsibility of the Department of Marketing and Communication. According to the marketing strategy the annual marketing activities are compiled and described in the development tasks, which have clear objectives and their efficiency is evaluated on the basis of different surveys (EMÜ image study, freshmen survey, recommendation index study etc.).

Planning communication messages is based on the mission and values of the university. The flow of information to all interest groups and target groups is regulated with communication plans by the Department of Marketing and Communication. The internal information channels include intranet, document management system, e-mail lists, the newspaper Maaülikool and information stands; the external information channels are the EMÜ home page, Facebook, Youtube, the blogs, information publications, the newspaper Maaülikool. To inform the public about the activities of EMÜ, communication is organised being a proactive partner to media. In addition EMÜ is promoted in fairs (Teeviit – youth information and education, Intellektika – education and information, Maamess – agricultural exhibition), also regular Doors Open Days. Info flow surveys among students and staff have been carried out to make communication more effective and get feedback.

**Public awareness:** EMÜ holds the 4th position in the frequency of being mentioned among universities, the list has been formed mainly according to the impression one gets from the mass media and recommendations by alumni. EMÜ ranking in the list of more reputable universities had a rising trend (6→10% accordingly) in 2009-2011. The image profile of EMÜ is characterised by the words “green”, “traditional” and “developing”.

**Student satisfaction** with the information flow on studies is 3.5 on average (5 point scale, graduate students’ satisfaction survey in 2011). The survey shows that the students appreciate EMÜ as a university of student friendly atmosphere, which is an important component in image formation.

**Personnel satisfaction with information flow is high.** 89% of respondents among academic staff are satisfied or very satisfied with the information flow within the university. 72% of the university staff are satisfied with the image of EMÜ.

## *Areas of Good Practice and Areas that Need Improvement*

### **Areas of good practice**

- seminars with a wide range of participants, initiated by the leaders, which have improved management of EMÜ and implementation of changes
- efficiency of development and activity plans is assessed periodically, the staff and students of EMÜ have been involved
- information flow is well-organised, the meetings of the Council are open and carried out in different institutes and units
- the management applies doors-open policy and communication with coherent groups;
- participation of the Rector in the Alumni Council has provided the Board of the Council an opportunity for regular communication with EMÜ

- EMÜ is represented in different boards and commissions which influence rural life in Estonia and on international scale;
- EMÜ volunteers to participate in different quality assurance projects for universities and carries out self-evaluation, plans and implements improvement activities.

### **Areas that need improvement**

- the process for revising and improving key results has been worked out and is being implemented;
- the performance and result indicators of EMÜ structural units are not visible enough for the public;
- comparison of results of EMÜ units in order to gain better results is *ad hoc* (the scientific instruments measure, e.g.). Sharing the best practice with partners both outside EMÜ and between the structural units is also being developed;
- implementing developing processes depends on a limited number of leading persons, which means that one of the risk factors of sustainability of these activities is the persons organising it.

## **1.2. Personnel management**

The objective of the Personnel Department is to guarantee work satisfaction of the staff in academic and support structures and develop the quality system supporting their activities. The personnel department gets its guidelines from the EMÜ development plan, mission, vision, priorities and values. Appropriate rules and procedures have been worked out for recruiting, developing, evaluating and motivating employees.

### *1.2.1. Recruiting academic staff*

The power of decision for choosing academic staff lies with the institutes. The head of the institute is authorised to create a job and find staff. The professor's post is an exception, as a professor for 11 years may apply for a contract of employment without a specified term. Academic posts are with fixed terms and filled by open application procedure as a rule, with equal conditions for all applicants ([Rules of competitions for the employment of regular teaching staff and research staff](#)).

It is characteristic to Estonia that there are few people to qualify as teaching or research staff, also low international interest in the positions. For a vacant professor's position there is one applicant on average, the situation is similar for research staff. There are more applicants for the lecturers' positions. The following data compares competition in three universities.

	Vacancies	Candidates		Vacancies	Candidates		Vacancies	Candidates
<b>2008 EMÜ</b>	132	128	2008 TÜ	398	408	2008 TLÜ	139	136
<b>2009 EMÜ</b>	107	126	2009 TÜ	340	409	2009 TLÜ	145	131
<b>2010 EMÜ</b>	79	78	2010 TÜ	no data		2010 TLÜ	120	136

The number of professors has remained stable in the recent years. Starting in 2012 the aim is to increase the number of professors via the program Dora2.

For recruiting, appointing and evaluating academic personnel the previous activities of the person, incl. research, teaching activities and development, supervision, student feedback etc. is considered ([Qualification Requirements for the Teaching Staff and the Research Staff of Estonian University of Life Sciences and the Conditions and Procedure for Assessment of Compliance](#)). Written expert opinions are required on the qualification of the applicant for an academic position.

The procedure for appointment of academic staff is regulated by [Procedure for Appointment of Teaching Staff and Research Staff of Estonian University of Life Sciences](#), the procedure for appointment of visiting academic staff is regulated by [Appointment procedure and requirements for visiting academic staff members of Estonian University of Life Sciences](#).

In 2012 a new regulation on RDC activities will take force, which enables the official title Junior Research Fellow for working doctorates. The position of the junior research fellow helps young scientists to plan their career and balance the age structure in universities.

The qualification requirements for the academic staff have been determined, the age distribution and competition are compared to other Estonian public universities (Figures 1.6 and 1.7).

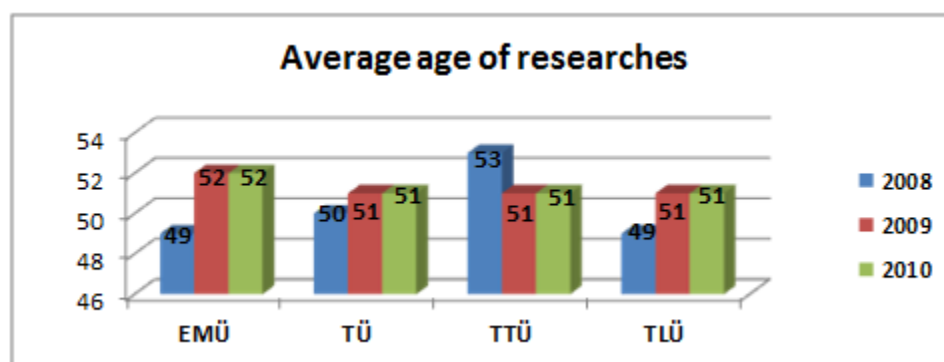


Fig. 1.6 Average age of researchers in Estonian universities

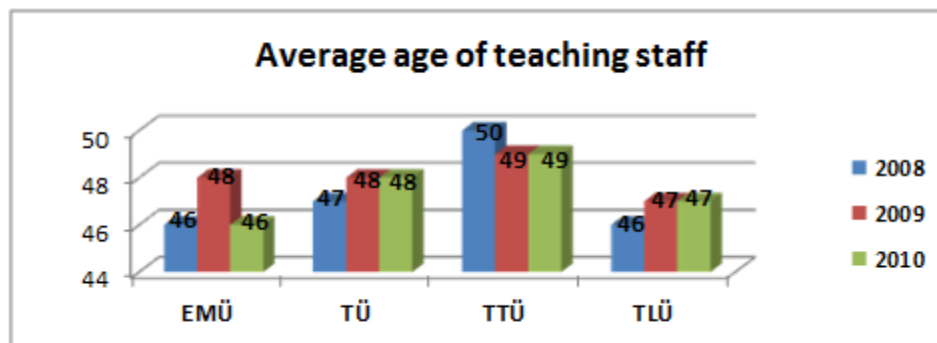


Fig. 1.7 Average age of teaching staff in Estonian universities

### 1.2.2. Recruiting non-academic staff

Recruiting non-academic staff is organised by way of public competitions. Job offers for management positions are also published in national daily newspapers. The director for an institute is elected for a specified term and the procedure is regulated with the Regulations and Procedure of Electing the Director of an Institute of EMÜ.

### 1.2.3. Staff satisfaction

The first satisfaction survey for all the EMÜ staff was organised in the spring of 2011, satisfaction with the institutes and departments had been studied earlier. The initiative to get feedback from the staff came by the heads of institutes and departments.

It is planned to survey staff satisfaction and initiate improvement processes according to improvement decisions on a regular basis, every two years, beginning in 2011.

### Results of satisfaction survey

**Satisfaction with work and the content of work** - EMÜ staff is highly satisfied with their work (89% of respondents were satisfied or very satisfied with work life). The corresponding percentage in Finnish universities is 67% and in Australia it is 55% (Aareavaara, T. et al. 2009, Meek, L. et al. 2008).

A positive result is the very high level of satisfaction of academic and support structure staff with the content of their work (95% are satisfied or very satisfied with it).

**Satisfaction with job-related relationships** - 96% are satisfied with the colleagues, 83% with the staff in support structures and 89% with their direct manager or head of the unit.

**Satisfaction with salary** – 53% of the staff is satisfied with their salary.

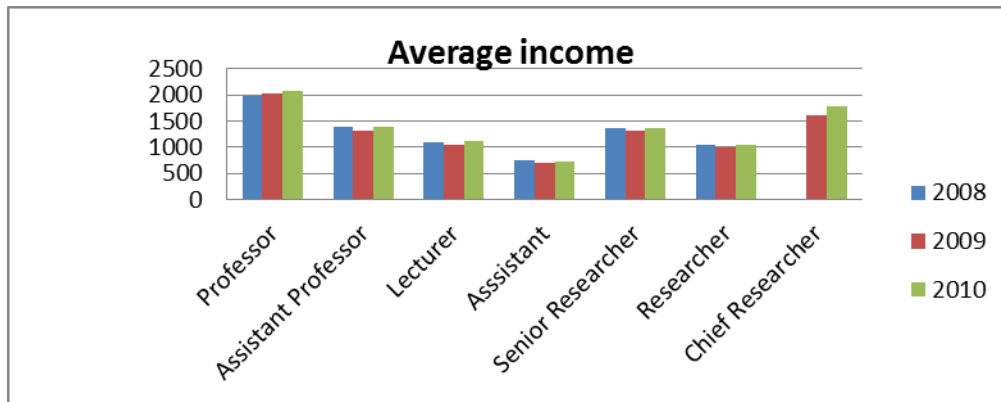


Fig. 1.8 Average income

The average wages of the EMÜ staff in 2010 were 1401 euros and of the teaching staff 1329 euros a month (Figure 1.8). The average wages in Tartu County in 2010 were 772 euros a month.

**Staff satisfaction with the events of the university:** EMÜ organises an annual traditional festive academic meeting. Since 2008 the tradition of the university “summer days” has been started again, to create the shared feeling of a common organisation. Satisfaction with the university events is high – 88% by the academic personnel, 88% of the staff of support structures.

All the EMÜ employees were informed about the results of the satisfaction survey at a special seminar, and the data is the input for the corresponding improvement decisions. The objective is to preserve the employee satisfaction in areas with 80% of the staff being satisfied and increase satisfaction in areas where it is below 80%.

#### *1.2.4. Occupational health and safety*

Since 2010 the occupational accident record in EMÜ has been considerably lower than the average in Estonia, even though in 2009 it was almost as high as the average in Estonia. Work-related diseases (occupational or occupation related diseases) occurred only in 2008 (Figure 1.9.). The reason of the increased numbers of registered occupational accidents is better awareness of occupational accidents or better information to the employer about the accidents.

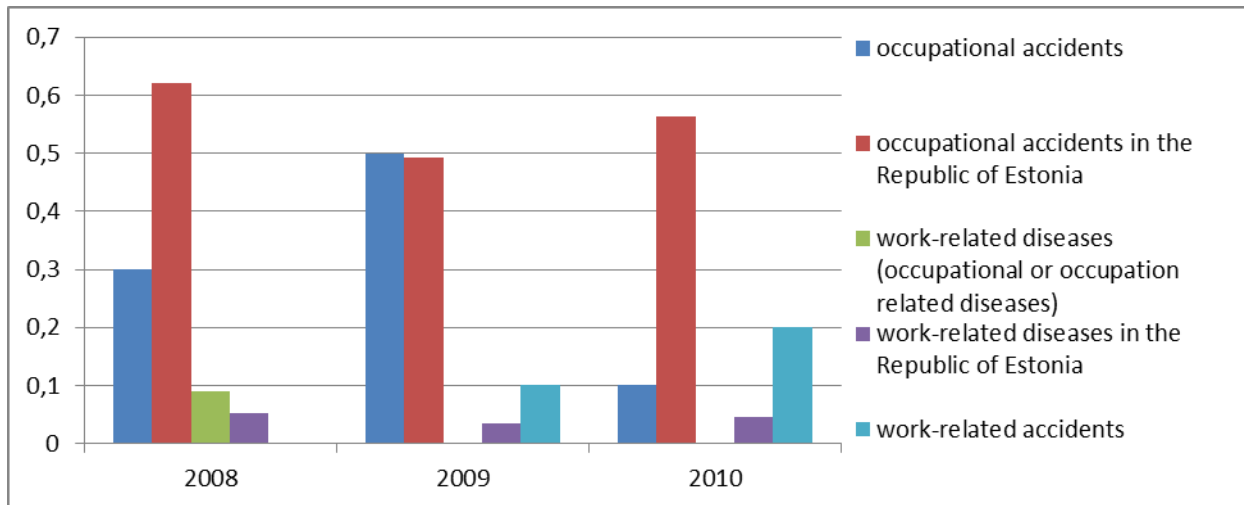


Fig. 1.9 Number of occupational accidents, work-related diseases, accidents per 100 employees in the university as compared to the same data in the Republic of Estonia

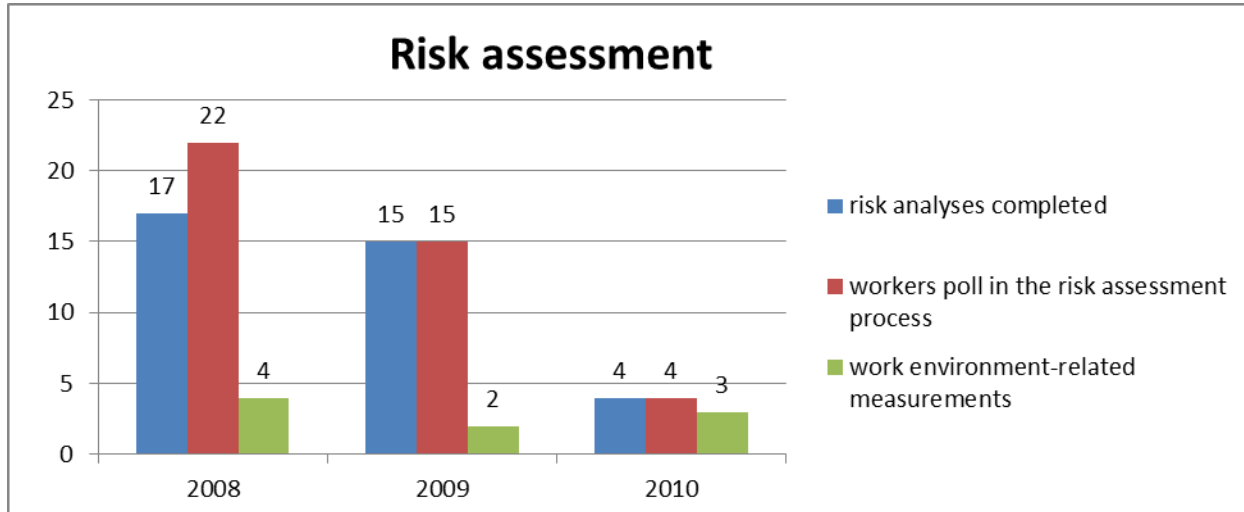


Fig. 1.10 Risk assessment

The physical, biological and chemical risk factors of work environment have been measured in the risk assessment process (Fig. 1.10). After mapping health risks, work environment as a whole has been improved.

### 1.2.5. Personnel development and motivation

Regular evaluations are carried out to support the career and development process and needs.

The Universities Act defines the evaluation of the members of teaching staff as a periodic evaluation aimed at supporting the development and career options of the person and assessing their suitability for the position ([Terms and procedure for the evaluation of the teaching staff and the research staff members of Estonian University of Life Sciences and for conducting development discussions](#)).

Ordinary teaching staff is entitled to get a sabbatical semester once in every five years for individual development outside their university, with the regular wages ([Conditions and procedure for granting sabbatical leave](#)).

Motivation system for staff is described in EMÜ work organisation regulations. The new employee is acquainted with the regulations in the Personnel Department.

Non-monetary motivators are various social events: summer games for institutes, all staff of the university and the annual festive academic meeting.

The festive academic meeting is to recognise the current staff, the people who have worked in the university, also persons and organisations outside the university who have contributed to the operation of the university:

- degrees of honorary doctor are conferred;
- professors emeriti are honoured;
- medals of merit are awarded;
- the award to the best lifelong learning provider is given;
- the reward to the innovative member of the teaching staff is given;
- The laureate of the Deed of the Year is nominated.

A contest is held annually to promote activities popularising research to wider audience and recognise the members of EMÜ staff who have been successful in it.

**Staff satisfaction with recognition** - 61% of the respondents to the satisfaction survey were satisfied or highly satisfied with the system.

Monetary motivator is extra payment for tasks that are more demanding than the regular daily tasks.

Costs for using a mobile phone and a personal car are compensated for on the basis of a mutual agreement. Also some occupational health items are compensated for: glasses, vaccination, rehabilitation treatment.

There are opportunities for lifelong study at the centres of TÜ and TLÜ for the academic staff and PhD students. The training plans for academic staff take into consideration the feedback from the students and the issues that came up during evaluation.

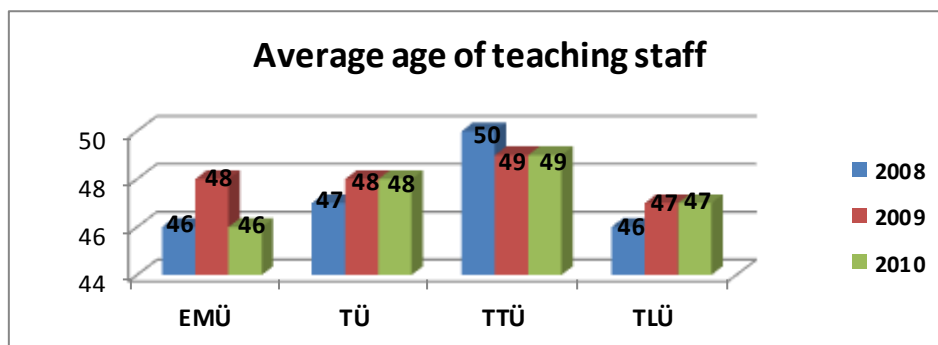


Fig. 1.11 Teacher training

In 2008-2010 the participation of academic staff in lifelong learning increased (Figure 1.11). The result was obtained thanks to intensive work in the field of informing people during meetings, seminars and via direct communication in institutes. The quality of lifelong learning has been improved by training seminars on didactics by external lecturers.

In 2007-2008 the opportunities for individual development in foreign universities and research institutions was used by 49 members of EMÜ academic staff, duration from 3 months to 1 week, with the project “Creating a System for Individual Development for the Academic Staff of the Estonian Universities”.

Since 2009 there is a system of mentor teaching staff, currently there are seven trained mentors. The aim is to train two mentors each year. The staff is informed about the mentor system and seminars held. When the employment contracts are signed, the members of teaching staff get an information leaflet about the mentor system and the contact data of mentors.

Individual development has increased the satisfaction of students with their teaching staff (Figure 1.12).

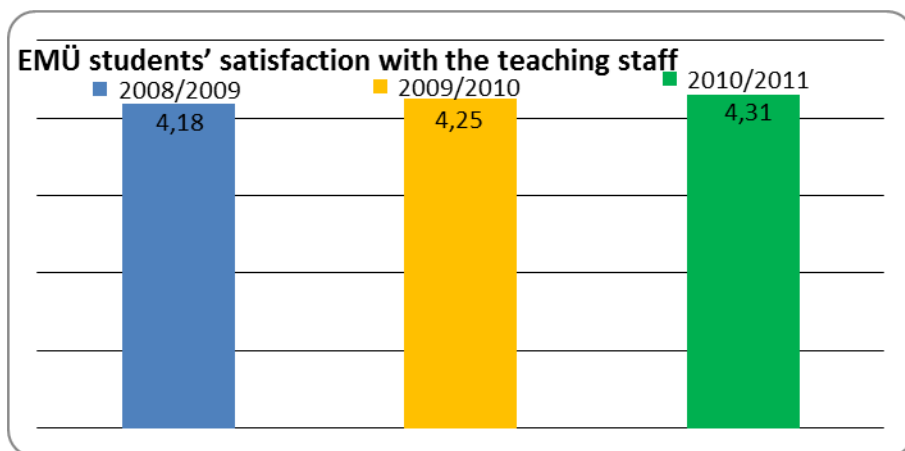


Fig. 1.12 EMÜ students' satisfaction with the teaching staff on a five point scale

**Personnel satisfaction with personal development and career opportunities** - 75% of the respondents are satisfied with professional development opportunities, 77% with individual development opportunities.

### *Areas of Good Practice and Areas that Need Improvement*

#### **Areas of good practice**

- the personnel feedback (evaluation) system has been initiated and is operational;
- non-academic positions are filled by public competition, also the number of applicants per post has increased;
- good occupational health and safety practice;
- the proportion of the personnel lifelong learning has increased, which has had indirect influence on the rising trend of student satisfaction concerning teaching;



- the mentor system in teaching practice.

### **Areas that need improvement**

- academic staff and applicants do not have clear career perspectives;
- research career is not attractive for the youth;
- recruiting staff from abroad has not functioned as expected;
- contests for academic positions have not been attractive;
- research funds are not systematic;
- low wages.

## **1.3. Management of financial means and infrastructure**

The aim of managing the financial resources and infrastructure is to support the main fields of activity of the university and guarantee sufficient resources for effective functioning, also their targeted use.

### *1.3.1. Management of financial means*

**Working out financial and investment policies:** The general provisions for using the assets are determined in Procedures of holding, using and disposing property; for obtaining objects, services and construction work the guidelines are given in the Procurement Procedure, decisions on investments to fixed assets are based on the Directive on Investments for Fixed Assets.

**Budget and monitoring the implementation of the budget:** Advice for working out a budget project is given by the Budget Commission, taking into consideration the conditions prescribed by the Rector. The Chief Accountant – the Head of Department of Finance hands in the project to the Rector and the head of the Budget Commission. The budget is based on the EMÜ development plan and investment plan, the current financing principles and customs, also the development plans of the units. Financial discipline is monitored by the Department of Finance.

**Audit of financial means:** The finances are used according to the Rules for Budget and Basics of Comprising Budget for Studies.

[Annual reports](#) are worked out according to the Internal Provisions for Accounting in EMÜ, the Accounting Act of the Republic of Estonia, directives by the Accounting Group and the General Rules of Accounting in the Republic of Estonia.

Authorisation for using money is given by the EMÜ Council by approving and confirming the budget. The EMÜ Council confirms the budget for the financial year and the report on implementing the budget. The budget consists of:

1. Planning the income and expenses for one financial year.
2. General budget, comprised of the basic budget, state grants budget and capital budget.
3. Basic budget comprises the profit of economic activities and expenses of operational costs.
4. Grants budget comprises the payments via EMÜ (study grants, wages for professors emeriti, money for writing off study loans etc.).
5. Capital budget, an independent part of the general budget, comprises targeted financing for construction and reconstruction and loans.
6. EMÜ units (institutes, structural units outside institutes, institutions etc.) work out their budgets as sub-budgets to the basic budget.

The Audit Committee to the EMÜ Council was formed in 2011 by the Council. The main task is to guarantee the required internal audit system, so that the finances and assets of the university are used as best and reasonably as possible.

### 1.3.2. Information systems infrastructure

Information systems support management and coherent operation of basic processes.

Name of the information system	Purpose	Notes
1. Study Information System (ÕIS)	To manage the students' data and coordinate study processes	
2. Personnel information system	Managing personnel data	In 2011 a new platform
3. Accounting	Financial management and economic accounting	
4. Document management system	Source of information for formal functions	In 2011 a new platform

#### 1.3.2.1. Document management system as part of managing information flow

The document management system is a source of information on activities of EMÜ, also it provides continuity, competence and efficiency of management. The Webdesktop in use since 2011 enables transfer to digital administration and proceedings. The main users have been trained. The number of users as to 30.09.2011 is around 150.

#### 1.3.2.2. EMÜ library

The library provides information for studies, research and development, also contemporary information service of good quality. The best possible availability of information in the collections is guaranteed, also access to electronic interlinking databases and e-publications. Publications and e-resources are acquired according to the wishes of academic units. The integrated library system Millennium is used and the e-catalogue ESTER, also the database of Estonian articles ISE (ISE – IndexScriptorumEstoniae).

There are 295 213 publications (incl. 263 107 books and 3850 manuscript researches). 37,7% of these have been virtually catalogised. In 2009 the repository DSpace came into use with full scientific texts in PDF format. EMÜ staff and students are provided with interlinking databases of 19 research journals and 2 e-books, with a total of about 16 000 scientific journals (full text) or reports and more than 14 000 e-books. Using and managing the digital resources is easier with the e-journal web-based tool EBSCO A-to-Z. The institutes assessment is that they have access to the more relevant databases. Smaller collections or libraries in the EMÜ units are found in the e-catalogue.

**EMÜ staff satisfaction with the library** is very high. 94% of the respondents in the satisfaction survey were satisfied or very satisfied with the library. The students are also satisfied with the library. **According to the satisfaction survey** in 2011, 77% of the respondents have assessed the services of the library for the students good or very good.

The level and efficiency of the services of the library and information services are evaluated regularly and the results are used for development.

### *1.3.3. ICT infrastructure*

Since 2008 the infrastructure is coordinated by the Department of Information and Communication Technology. Distant administration means are used. A domain system and Exchange server solution for the whole university has been applied.

The rights and obligations of the users and servicing staff of computers and computer networks are provided in the document Rules for using computers and networks. The information technology standard provides minimum requirements for the computer systems in EMÜ. The internet usage in the university is in compliance with the EENet rules on networks.

### *1.3.4. Management of EMÜ facilities infrastructure*

According to the EMÜ Statutes, EMÜ is the owner of its property and holds, uses and disposes the property according to the conditions and procedure provided in the legislation of the Republic of Estonia and the EMÜ Council (Regulations for holding, using and disposing the property). Acquisition, transfer or encumbrance with limited real right or right of superficies of the real estate is decided by the EMÜ Council. The decisions of the Council are guided by the Territorial-spatial development plan, which aims at creating a motivating work environment of high quality for research and studies and at continuing developing the compact and efficient contemporary Tähtvere campus, also the field facilities and centres outside Tartu. See [Investment Dynamics 2005-2010](#).

The university has 2 dormitories with 952 beds for students. The distance learning students can use 25 beds in Tornii Hostel. The EMÜ Student Council has rooms in the Tornii Dormitory. There are rooms for student speciality associations.

The decisions of using the property are made by the Room Board according to Regulations for holding, using and disposing the property.

**Staff and student satisfaction with the work and study environment:** Staff satisfaction with study and teaching environment (auditoriums, presentation equipment etc.) is high – 80% of respondents answer that the conditions are good or very good, 76% of the respondents of the satisfaction survey are satisfied with their work room and equipment for work. Students value the study environment highly. 70% of respondents in the freshmen satisfaction survey thought the study environment is very contemporary. According to the student recommendation index survey the study environment, greenness and campus are the strong aspects of EMÜ. The work and study environment has also been valued by external assessors (EMÜ transition assessment report, feedback report by assessors of university quality insurance project).

## *Areas of Good Practice and Areas that Need Improvement*

### **Areas of good practice**

- The budget is divided between the institutes and units according to the objectives in the development plan, planning the budget is a transparent process, financial risks are managed and implementing the budget is monitored centrally and each institute and unit has an overview of their costs and it is possible for them to administrate the resources.
- different sources of financing, which is important for risk management;

- clear vision of spatial development;
- the new document management system, the necessary functionalities for the future implementation are there;
- staff and students think the work and study environment is good and see that as a strength of the university.

### **Areas that need improvement**

- preventive activities to stop excess costs from the budget are not sufficient
- project based financing for research does not guarantee funds for unavoidable general costs;
- analyses of project profitability and sustainability is not systematic, there are no clear criteria for evaluation and selection of projects due to the short period between the application round announcement and deadlines for handing them in;
- new procedure for procurement, the procedure for investing to fixed assets has not been implemented and there is no best practice;
- objectives of the territorial-spatial development plan have not been implemented due to lack of finances and the staff working in unreconstructed buildings is not satisfied;
- exploitation load of rooms is not even;
- transfer to digital documents that would enable to rationalise work processes and support the idea of green university had not been completed by 2011.

## Academic study

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### **2.1. Efficiency of academic studies and formation of the student body**

The objectives of academic studies are given in the mission of EMÜ and are fixed in the EMÜ Statutes and the Development Plan. To achieve the objectives, also manage them, clear procedural rules and definite responsibilities for persons have been worked out. Studies are regulated and organised by general rules ([Regulation of Studies of Estonian University of Life Sciences](#)), the directives and order is confirmed by the EMÜ Council.

**Academic study is the principal process in EMÜ with the objectives as:** to teach and train highly valued specialists in agriculture and forestry, animal husbandry, veterinary medicine, rural life and economy, food sciences, biodiversity, environmental protection, renewable natural resources and environmentally sustainable technologies; also guarantee preparing specialists first and foremost for the Republic of Estonia, also to guarantee the number of graduates fixed in the state-commissioned education contract.

#### **Efficiency of study**

One of the relevant measures for evaluating efficiency of study is fulfilling the state-commissioned education contract.

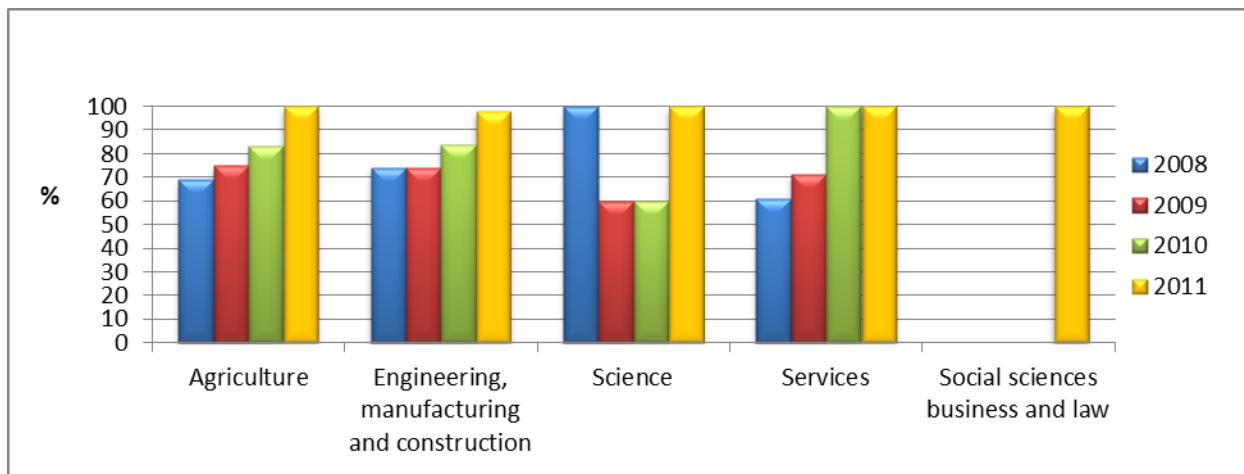


Fig. 2.1 Fulfilling the state-commissioned education contract in 2008-2011 according to speciality groups

The specific fields of study in EMÜ (Agriculture, incl. veterinary sciences, Engineering, manufacturing and construction, Services, incl. environmental protection) have had a rising trend of fulfilling the state-commissioned education contract. The most popular curriculum, Veterinary Medicine, has considerably better results of graduate statistics as compared to other curricula of the field. The reasons are the wide popularity of the speciality and high competition. Engineering, manufacturing and construction – 70% in 2008, 79% in 2009, 78% in 2010. The corresponding data of the two other universities are: Tallinn University of Technology – 2008-15%, 2009-22%, 2010-43%, Tartu University – 2008-41%, 2009-28%, 2010-40%. The more popular curricula of the fields of technology, production and construction, Rural Building and Water Management, (construction engineering curricula, 5-year studies) have considerably better results of graduate numbers (2008-77%, 2009-100%, 2010-100%) as compared to other EMÜ curricula of the field. The reason is the wider popularity of these specialities. Other curricula in the fields of technology, production and construction have improved the graduate numbers as well, 2008-60%, 2009-70%, 2010-72% and 2011-86%.

### 2.1.1. Interest groups feedback to studies

The feedback from the EMÜ graduates, incl. the sufficiency of the skills and knowledge they got in the university for competing on the labour market, has been surveyed since 2003. As an improvement measure the Curriculum Commission has been founded, heads for associated curricula have been appointed by the Rector, the basis has been laid for updating curricula systematically.

The following methods are used to get feedback from the employers and graduates: specialised roundtable talks; participation by employers and alumni in the councils of the institutes and committees of teaching methods; meetings of the university management (incl. representatives of the institutes) with heads of various enterprises, meetings with the Alumni Council and its Board; questionnaire surveys. The information obtained is used for updating the curricula, improving trainee activities, creating new curricula, carrying out various projects and surveys.

There are traditional annual meetings of the management of the university, incl. the representatives of the institutes and Department of Academic Affairs and the Alumni Council to discuss the development of rural economy and studies, incl. curricula and competency of

graduates. This has resulted in more accurate prognosis of the training of state-needed specialists, broader opportunities for internships and proposals for the enhancing of studies and research.

### **Relevant results of alumni surveys (2009 and 2011, 239 graduates answered)**

- 4% of the graduates have founded their own enterprises (other universities accordingly: TTÜ 4%, TŪ 2%, TLŪ 3%).
- 52% of the graduates work in a private company or private sector (other universities accordingly: TTÜ 64%, TŪ 23%, TLŪ 28%).
- 9% of the graduates are higher executives/heads, 24% specialists of the highest rank, 32% specialists (other universities accordingly: TTÜ 12%; 44% and 33%, TŪ 10%; 60% and 13%; TLŪ 8%; 61% and 13%).
- 42% of the graduates work a year after graduating, 1/5 work and study, 1/5 continue with studies only. The feedback study in 2009 showed that 57% of the graduates use the knowledge and skills acquired in the university very often. The graduates highly value the theoretical knowledge and practical skills they have got, the wider view on the world and the ability to analyse. Study counselling has been assessed as a positive feature. A suggestion to improve the development of self-expression, management and negotiation skills has been brought out by the alumni. These skills have been included as optional subjects for all curricula and attended actively. Also management has been included as compulsory subject in several curricula.

As a result of The Study of the Competence, Skills and the Needs of Labour Market in the Agricultural, Food and Forestry Sector made in 2010 and the employee feedback survey made in 2011, it was concluded that the employers highly value the graduates' wish to develop in their job, preparation and motivation for the job, good communication and cooperation skills and application of their knowledge and skills in work. The aspects to be improved as mentioned in the survey were management skills and knowledge on entrepreneurship. The suggestions have been analysed and improvement measures planned. For example, co-operation with entrepreneurs, employers and alumni is now closer, at the same time including them more in the work of study committees, execution of subjects and supervision of course projects.

### **Student feedback**

According to the decision of the University Council as of Dec. 21, 2000 regular assessment of teaching that is based on students' feedback, was started to guarantee the quality of studies. The results of the surveys and suggestions by students are given to the lecturer, study director of the institute and the head of the curriculum.

Since 2008/2009 students' feedback is given in e-ÖIS (Study Information System).

The feedback results are shown on Figure 2.2 and Figure 2.3 (comparison with TŪ and TLŪ).

The chart illustrates following characteristics: use of contemporary teaching methodology by the lecturer (1), lecturer meets his/her job requirements (2), achieving the outcomes from the student point of view (3).

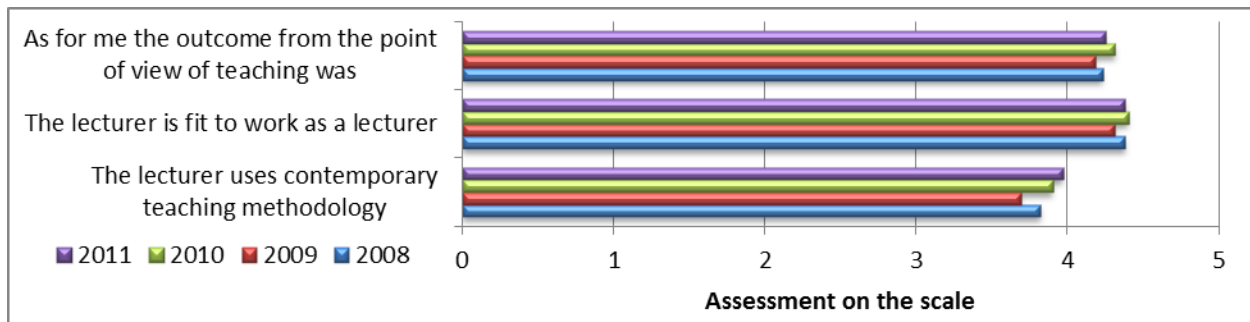


Fig. 2.2 Students' feedback to teaching staff (y-axis: assessment on the scale on a scale of 0 to 5 with 0 - really unsatisfactory and 5 – excellent)

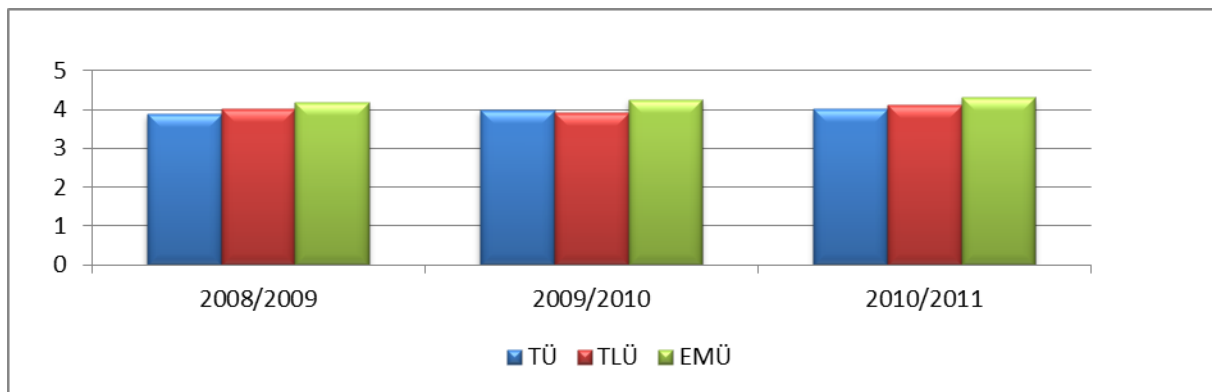


Fig. 2.3 Satisfaction with teaching staff 2008-2011 (y-axis: assessment on the scale on a scale of 0 to 5 with 0 - really unsatisfactory and 5 – excellent)

The foreign students of veterinary medicine provide feedback on the studies on a regular basis via the Finnish Student Organisation Suolet and the participation in the Study Method Committee. Separate surveys have been carried out on PhD students' (including foreign PhD students) satisfaction with their studies and supervision (see 3.3).

Since 2000 feedback surveys have included all the students who have studied or practiced abroad via Erasmus program. According to the feedback, exchange of information has been improved (e.g. information days) and the process for transferring credit points the student has got abroad has been simplified.

In 2009 and 2010 student satisfaction with the RPL process (counselling and assessing) was surveyed. Compared to 2010 (61%), the students were more satisfied with the process in 2011 (68%).

Feedback on career and psychological counselling has been carried out in the format of interviews up to now.

In order to receive feedback more efficiently, changes were made:

1. The Marketing Strategy of EMÜ was worked out (EMÜ Council Regulation 2011), with the purpose of strengthening the competitiveness of the university in Estonia and abroad;
2. [The Feedback System](#) of EMÜ was worked out (EMÜ Council Regulation 2011) with the purpose of receiving feedback from target groups (incl. freshmen) on a regular basis and to improve the services and the quality of leadership of the university based on this feedback;
3. The organisation, analysis and the principles of publicising the results, the possibilities and ways of using the results were worked out;

4. The principle of carrying out a feedback survey among staff every three years was introduced.

### *2.1.2. Factors improving competitiveness of graduates*

- 1) Veterinary studies are in accordance with the quality standards by the EAEVE <http://www.eaeve.org/evaluation/establishments-status.html>.
- 2) The speciality of landscape architecture was fully recognised by the European Federation for Landscape Architecture (EFLA <http://europe.iflaonline.org/index.php/education/education-a-training/1stall/flso>) - which proves that the graduates (5-year study) get specialised preparation that is recognised in Europe.
- 3) The curricula have practical orientation; all include training and the university cooperates with various enterprises/companies to organise trainee programs.
- 4) Students cooperate with enterprises via various projects. The companies recognise and reward students for participating in projects and thesis papers of practical application.
- 5) The students of veterinary medicine have opportunities to practice in veterinary clinics in the Nordic countries and in Europe. Students of veterinary medicine from abroad can do their clinical practice in EMÜ.
- 6) Students participate actively in their 11 speciality associations of EMÜ.

### *2.1.3. Practice and field work*

The mandatory subject of specialised internship is included in every curriculum of the university, the need for it is recognised by both students and employers. Recently the amount of practice has been increased and the system of its organisation has been improved. Practice takes place during the time appointed in the academic calendar.

The procedure and organisation of practice is confirmed by the study director of the institute, according to the proposals of the according commission. The procedure of studies and practice abroad is regulated by the regulation of the organisation of studies and coordinated by the Department of Academic Affairs. To the apprentice in the enterprise a supervisor will be appointed. This supervisor supports the apprentice in achieving the goals and learning outcomes of the practice.

The main improvement activities have been:

- 1) In 2005-2006 the project “Improving the quality of veterinary studies in Estonian University of Life Sciences via systematic enterprise-based training”, coordinated and financed by the foundation Innove (Developing Lifelong Education). As a result, the instructions of internship were drawn up, based on the purposes and outputs of curricula, internship instructors were trained, long-term contracts were signed with organisations and the declaration of common interests was signed.
- 2) In 2006 the project “Improving competence of students of agricultural and rural specialities by in-company work experience and creating a network of training enterprises” was organised by Innove. The project was targeted at improving professional skills of students of agricultural and rural specialities, training the personnel of rural enterprises (possible trainee supervisors) and finding suitable opportunities and enterprises for practice.



- 3) Seminars/roundtable discussions have been organised to share the experience on organising practice. As a result, main problems regarding internship were acknowledged – the position of the subject in the study plan, the need for contracts, the competence and motivation of instructors, finally solutions for fixing these problems were worked out.
- 4) Procedures and issues of specific training and practice are regularly discussed in the study commission of the university, e.g. overview of outputs. By the end of the academic year 2012/2013 all institutes must have modernised and confirmed instructions on the organisation of internship.

#### 2.1.4. Planning study places

For planning the study places according to the state-commissioned education contract the guidelines are given in the recommendations by the Ministry of Education and Research to consider the proportions by speciality and admission experience of the previous years.

The study places that are not state-commissioned are planned according to the attractiveness of the curriculum and needs of society for the graduates. For example, a 2010 survey of the Ministry of Agriculture reveal that in agriculture, 1700 highly educated leaders and specialists need replacement every 10 years. In the food production industry, the number is 450.

#### 2.1.5. Admission of students

[Admission of students](#) follows the rules set by the EMÜ Council. Documents are submitted via the national electronic information system. Admission requirements are stable to guarantee transparency for the candidates when deciding on the choice of the National Exams. EMÜ has decided to admit students on specific conditions (gold or silver honours high school graduates, persons with outstanding sports results, regional principle etc.).

Previous studies and work experience (RPL) is regulated by the decree by the EMÜ Council

[Conditions and procedure for considering previous studies and work experience](#).

In 2008 there were 15 applicants to the MA studies with previous studies and work experience, in 2011 the number was 23.

EMÜ guarantees studies of Estonian language to foreign students.

#### Contest for state-funded study places

Contest for study places in different curricula differs.

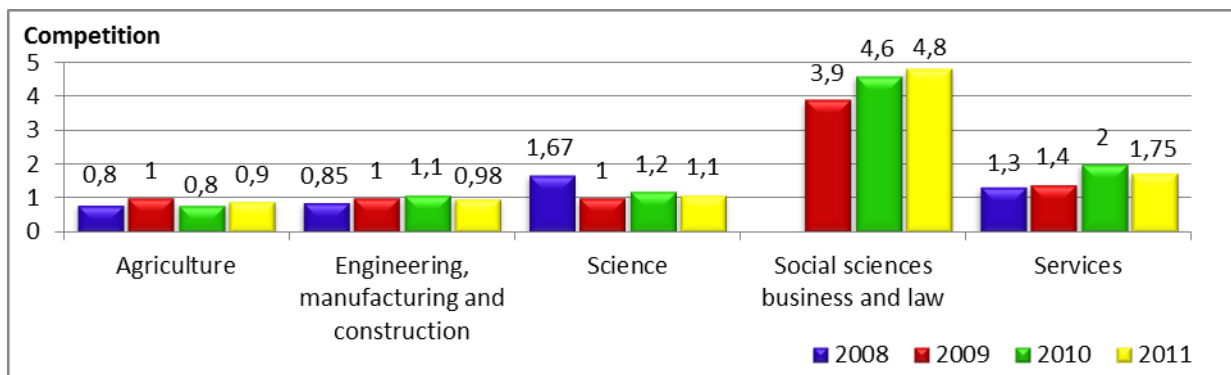


Fig. 2.4 Competition for MA state-funded study places (applications per place)

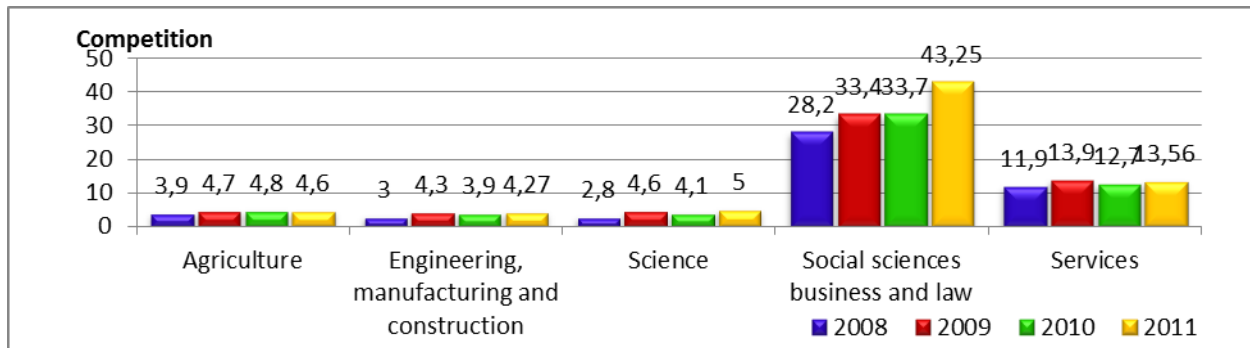


Fig. 2.5 Competition for Bachelor's study and integrated BA and MA state-funded study (applications per place)

The competition for state-funded study places has been fairly stable.

### Analyses of admission:

The admission results are analysed and discussed in the university study commission annually after the end of the admission period. According to the results the necessary improvement activities for the next period are worked out by the commission, also changes to the admission procedure. For example, the graduates of professional education centres or people older than 30 years who have not taken state exams may apply for state-funded spots. Figure 2.6 shows the counties where the students of the first stage university education and integrated study come from.

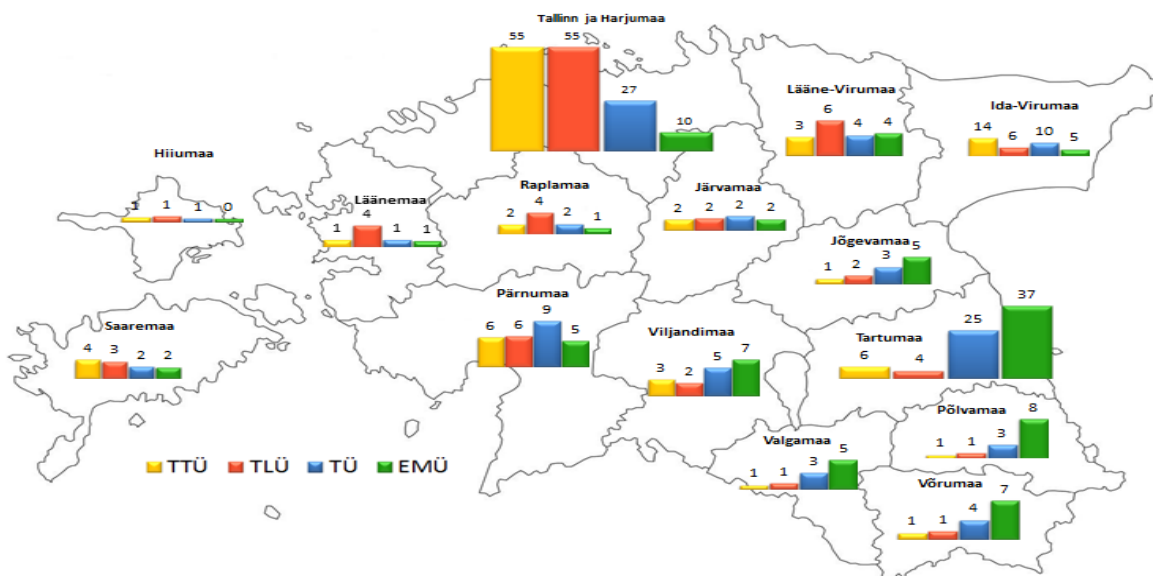


Fig. 2.6 Major universities: counties where the students of the first stage university education and integrated study come from (percentage)

## 2.2. Curriculum development

### 2.2.1. Curricula

EMÜ is the only university in Estonia to provide agricultural, forestry, animal husbandry, veterinary medicine and food science education based on research.

Table 2.1 EMÜ fields and levels of study

Field of Study	Curricula			
	BA and professional higher education	MA	Integrated study	Doctoral study
<b>Agriculture, Forestry and Fishing</b>	<ul style="list-style-type: none"> <li>• Animal Production</li> <li>• Producing of Field and Horticultural Crop Products</li> <li>• Farm Management</li> <li>• Forestry</li> </ul>	<ul style="list-style-type: none"> <li>• Aquaculture</li> <li>• Animal Science</li> <li>• Field Crop Husbandry</li> <li>• Horticulture</li> <li>• Agricultural Production and Marketing</li> <li>• Forest Management</li> <li>• Forest Industry</li> </ul>		<ul style="list-style-type: none"> <li>• Agriculture Sciences</li> <li>• Forestry</li> </ul>
<b>Veterinary Medicine</b>			<ul style="list-style-type: none"> <li>• Veterinary Medicine</li> </ul>	<ul style="list-style-type: none"> <li>• Veterinary Medicine and Food Science</li> </ul>
<b>Production and Processing</b>	<ul style="list-style-type: none"> <li>• Foodstuff Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Meat and Dairy Technology</li> </ul>		
<b>Technical Disciplines</b>	<ul style="list-style-type: none"> <li>• Engineering and Technology</li> <li>• Technotronics (professional higher education)</li> <li>• Biosystem Engineering (professional higher education)</li> </ul>	<ul style="list-style-type: none"> <li>• Production Engineering</li> <li>• Ergonomics</li> <li>• Energy Application Engineering</li> </ul>		<ul style="list-style-type: none"> <li>• Engineering Sciences</li> </ul>
<b>Architecture and Construction</b>	<ul style="list-style-type: none"> <li>• Geomatics</li> </ul>	<ul style="list-style-type: none"> <li>• Geodesy</li> <li>• Real Estate Planning</li> <li>• Land Management</li> <li>• Landscape Architecture</li> </ul>	<ul style="list-style-type: none"> <li>• Rural Buildings (Civil Engineering)</li> <li>• Water Management</li> </ul>	<ul style="list-style-type: none"> <li>• Engineering Sciences</li> </ul>
<b>Bio-sciences</b>	<ul style="list-style-type: none"> <li>• Applied Hydrobiology</li> </ul>	<ul style="list-style-type: none"> <li>• Applied Hydrobiology</li> <li>• Biodiversity and Landscape Management</li> </ul>		<ul style="list-style-type: none"> <li>• Environmental Sciences and Applied Biology</li> </ul>
<b>Environmental Protection</b>	<ul style="list-style-type: none"> <li>• Environmental Protection</li> <li>• Management of Urban and Industrial Landscapes</li> <li>• Nature Tourism</li> <li>• Natural Resources Management</li> </ul>	<ul style="list-style-type: none"> <li>• Landscape Protection and Preservation</li> <li>• Management of Urban and Industrial Landscapes</li> <li>• Nature Tourism</li> <li>• Natural Resources Management</li> <li>• Renewable Energy Resources</li> </ul>		
<b>Business and Administration</b>	<ul style="list-style-type: none"> <li>• Rural Entrepreneurship and Financial Management</li> </ul>	<ul style="list-style-type: none"> <li>• Economic Accounting and Financial Management</li> <li>• Economics and Entrepreneurship</li> </ul>		

Of the 13 BA curricula of the EMÜ, 3 are not financed by the state (21%) and of 24 MA curricula, 3 are not financed by the state (17%).

There are 2 Master's curricula in English – Landscape Architecture, Biodiversity and Landscape Management. Two new MA curricula are currently being worked out.

EMÜ has 5 Doctoral curricula (Environmental Sciences and Applied Biology, Forestry, Agricultural Sciences, Engineering Sciences, Veterinary Medicine and Food Science), with studies in Estonian and/or English.

EMÜ has recognised the importance of teaching in English. Our advantages (compared to other universities providing education in English) are lower fees and cheaper living costs, good practical training and one of the most modern clinical study environments in Europe for veterinary medicine.

The curricula are comparatively interdisciplinary, which guarantees better competence of the graduates.

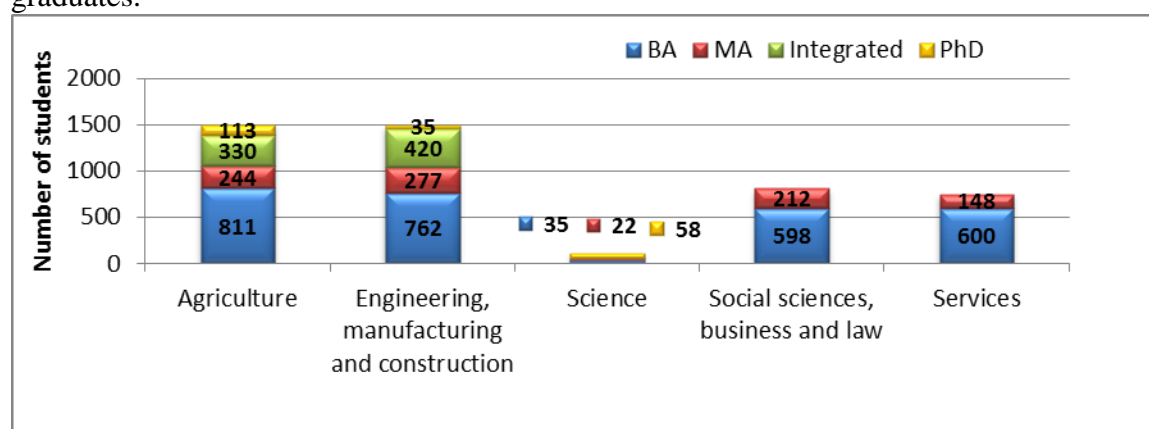


Fig. 2.7 Students per study fields and levels, 2011

### 2.2.2. Curriculum development

The aim of curriculum development is to guarantee the quality of curricula and improve the competitiveness of graduates. The [Statute of Curriculum of Estonian University of Life Sciences](#) regulates the comprising, opening, administering, changing and closing procedure of a curriculum. The process is seen on Figure 2.8. The process of developing curricula for EMÜ as a whole is managed by the Curriculum Committee and the Vice-Rector of Studies. The prerequisite for opening a new curriculum is a clear and grounded need for it in the society and sufficient academic and tangible resources available. The process is seen on Figure 2.9.

According to the needs on labour market 7 new curricula were opened in 2007-2010.

In 2010 a [transitional assessment](#) was carried out in curriculum groups (7). The total number of curricula included was 48, incl. BA curricula – 14, MA – 24, integrated study – 3, professional higher education – 2, PhD – 5. Out of the total 48, 47 were given permissions without a term, one curriculum was given permission for study with a term.

Activities after transitional assessment:

- the results and suggestions were discussed in the institutes and the heads of the curriculum group development commissions summed up the propositions by assessment commissions, also their own suggestions, to the EMÜ Curriculum Commission;
- the Curriculum Commission decided which suggestions by the expert commissions can be implemented by the institute, which ones are to be decided by the EMÜ Council.

**Internal assessment system for curricula**

In the academic year of 2009/2010 EMÜ participated in the pilot project by the Primus programme (financed by ESF) to find out the advantages and areas of improvement, which would be the basis for planning activities and monitoring success. The next step was another project in the next academic year (2010/2011), Analyses of sustainability of curricula groups and activities based on it accordingly – the objective was to work out indicators for measuring sustainability and applying a system of internal assessment for the curricula. By today, the indicators of sustainability have been worked out, data has been collected in 2008-2011. The measures and ÖIS (study information system) are being improved based on this data, this would enable us to collect the data only inside the university.

### Curriculum development process

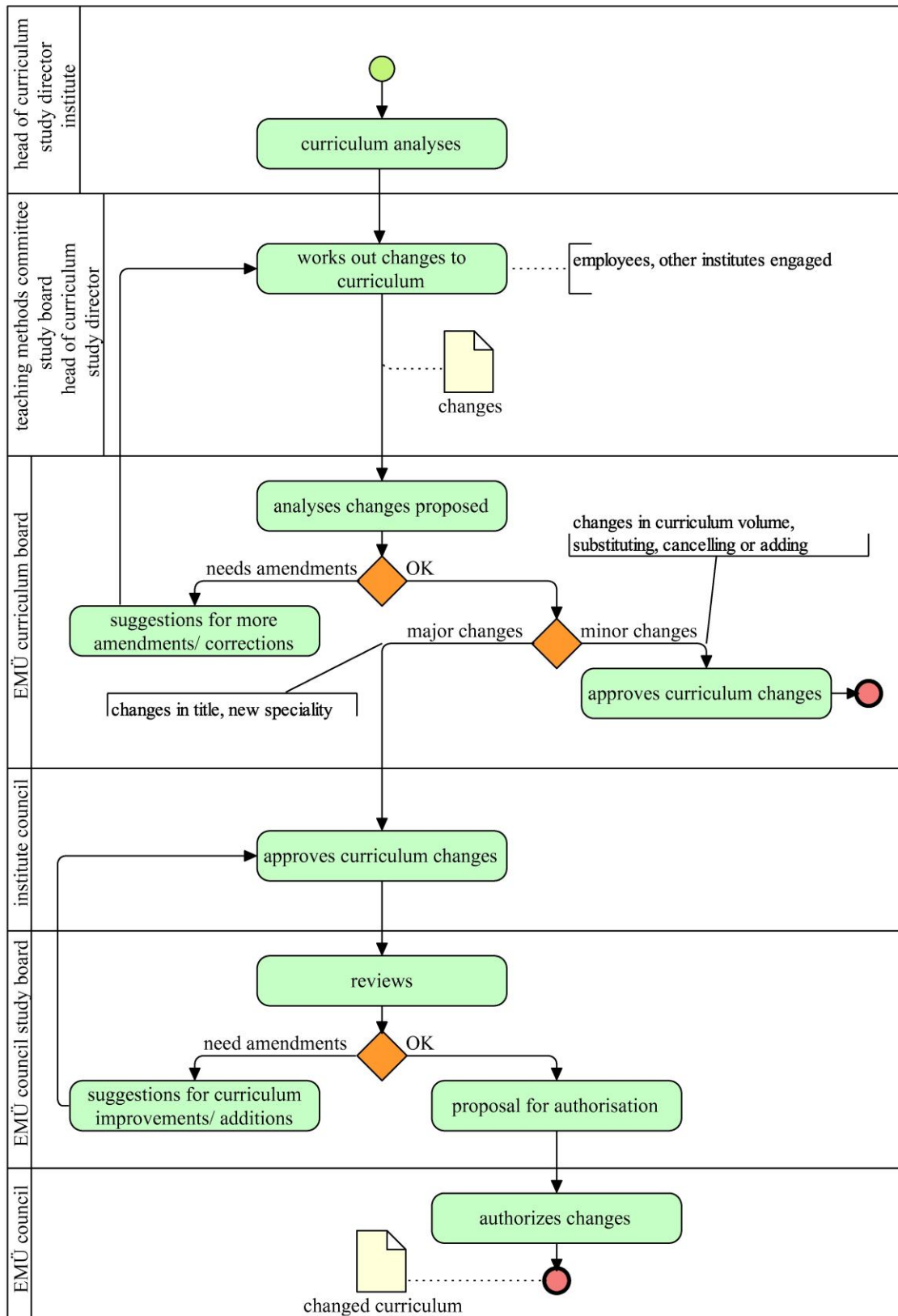


Fig. 2.8 Curriculum development process

### Curriculum opening process

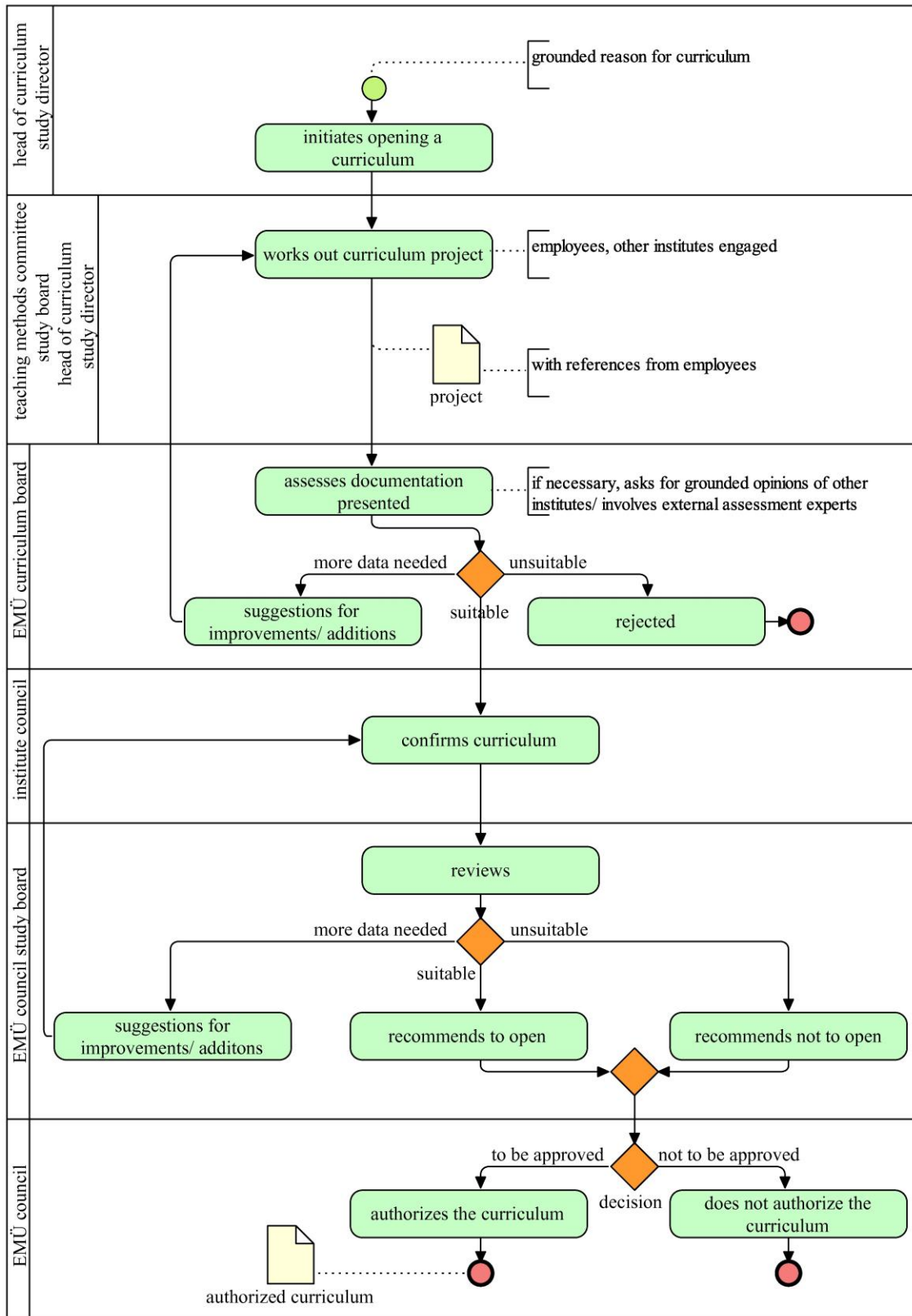


Fig. 2.9 Curriculum opening process

## 2.3. Academic achievement and assessment of students

### 2.3.1. Academic achievement of students

Monitoring academic achievement in EMÜ is regulated by the rules of organisation of studies. Academic achievement of students is assessed according to the data in the ÕIS (Study Information System) on the Academic achievement check day, August 31. As the study allowances are appointed according to the results rank order, the check on following the study programme and academic progress takes place twice an academic year.

The standard period of BA study is 3 years, MA 2, professional higher education and PhD 4, construction engineering 5 and veterinary science 6 years. The actual period of study does not exceed it considerably (Figure 2.9.).

When the studies last longer, there are several acceptable reasons, incl. health and economic circumstances. The students of other Estonian universities also exceed the standard period of study. The data for comparison in the Yearbook of Rectors' Board are as follows: BA actual period of study in EMÜ - 3,3 years, TTÜ - 3,7, TÜ - 3,6, TLÜ - 3,5 years. MA actual period of study in EMÜ - 2,1, TTÜ - 2,4, TÜ - 2,1, TLÜ - 2,5 years. Construction engineering actual period of study in EMÜ - 5,5, TTÜ - 5,5 years. Veterinary medicine in EMÜ - 6,9, medicine in TÜ - 7,3 years. PhD actual period of study in EMÜ - 4,8 years, TTÜ - 4,6, TÜ - 4,9, TLÜ - 4,8 years.

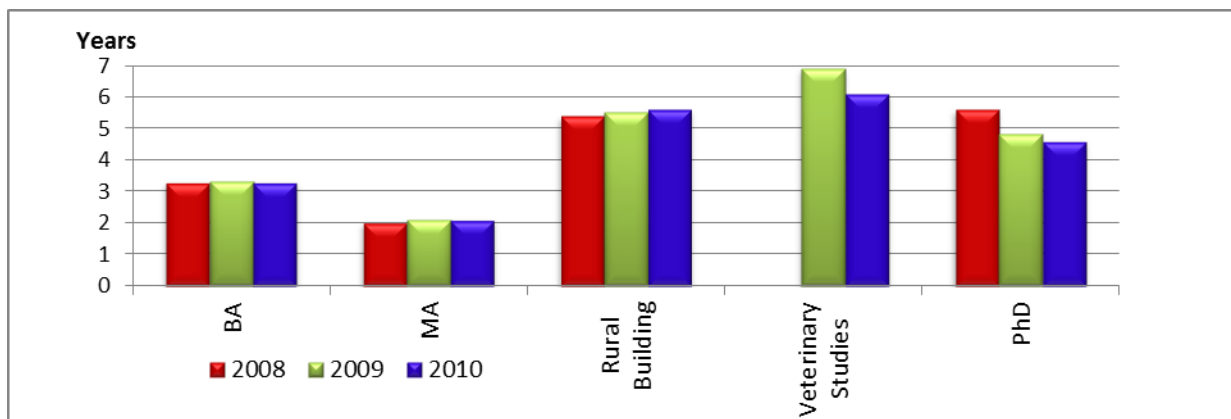


Fig. 2.10 Actual period of study

Withdrawal of freshmen in EMÜ is not more numerous than in other universities (data from the Yearbook of Rectors' Board, Fig. 2.10.).



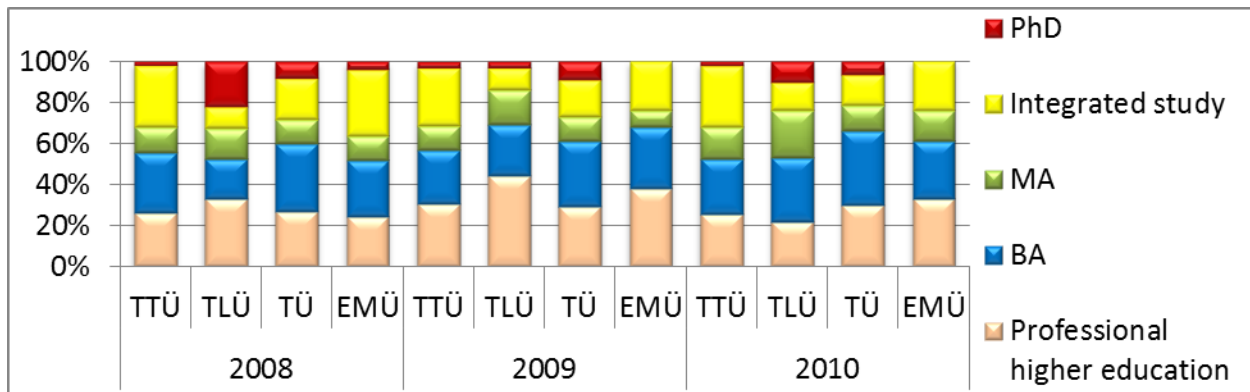


Fig. 2.11 Freshmen withdrawal

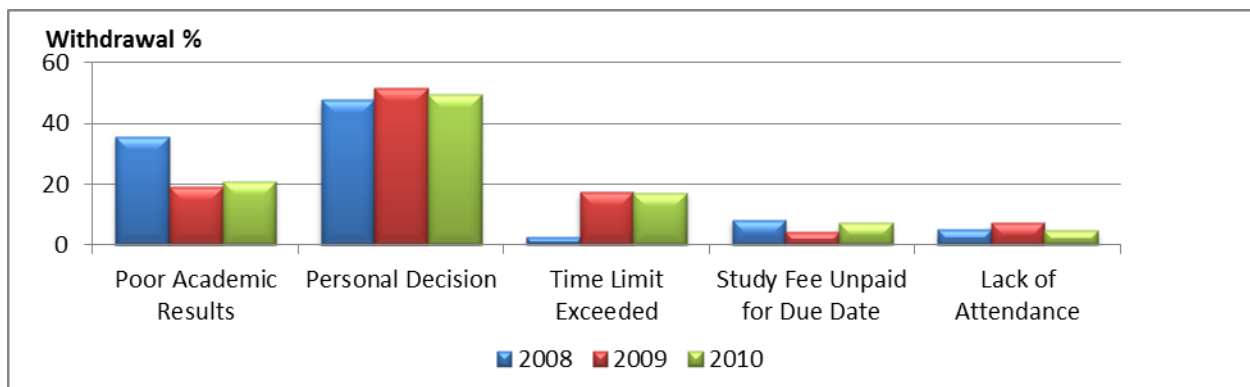


Fig. 2.12 Reasons of withdrawal

The reason “personal decision” cannot be analysed in details as the students don’t have to specify on that.

### 2.3.2. Assessment

Assessment of academic achievement is regulated by the rules of organisation of studies. Assessment procedure (incl. exams and thesis defences, announcement and format of grades) is transparent and guarantees fair treatment of students.

General rules for compiling, defending and supervising theses, also challenging the results, are specified by the regulation of the University Council, [“Requirements and Procedure for the Awarding of Academic Degrees and for the Defence of the Final Thesis of Professional Higher Education”](#).

Specific requirements, incl. the procedure for submitting a thesis for the defence and registration for final exams, are worked out by the councils of the institutes.

In 1.09.2010 the new assessment system for academic results was applied, with appropriate prior training.

Challenging decisions that concern studies is regulated with the rules of organisation of studies. Challenging the procedure and/or results of final exams or theses is provided in the regulation by the EMÜ Council, “Procedure of awarding academic degrees and defending professional higher education final thesis”. Challenging the grades for theses is very rare.

### 2.3.3. Recognition of Prior Learning (RPL)

The procedure of recognition of prior learning and work experience is provided in the regulation by the EMÜ Council, [Requirements and Procedure for Accreditation of Prior Learning and Work Experience \(APEL\) in Estonian University of Life Sciences](#). RPL process is free of charge for the student. The curriculum commission evaluates the decisions by assessors at least once a year to guarantee equal level of assessments.

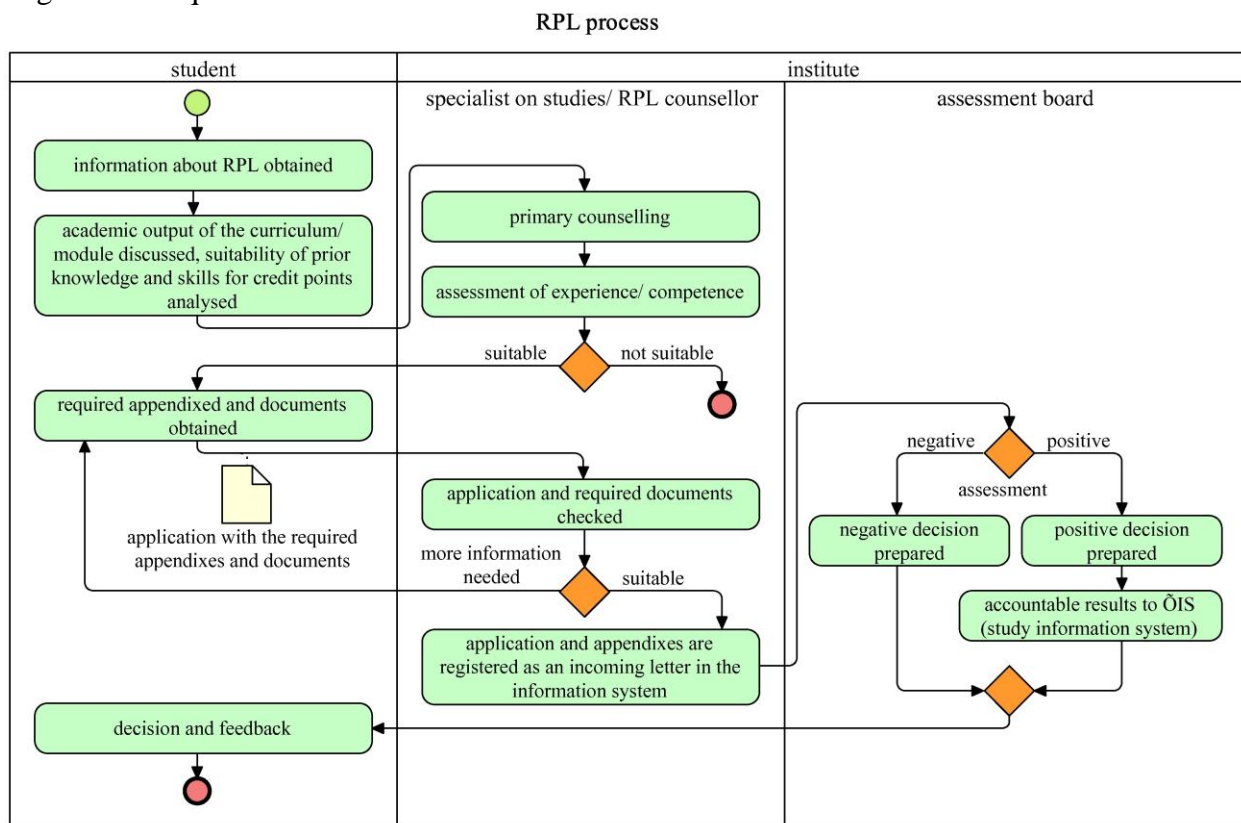


Fig. 2.13 RPL process

The number of applications has risen: in 2009 there were 435 applications, incl. 17% for recognising credit points from foreign universities, in 2010 there were 557 applications, again incl. 17% for recognising credit points from foreign universities. In 2009 credit points from foreign universities formed 17% and in 2010 – 6% of the credit points. In 2009 83% of the applications were accepted, 11% were partly accepted, 6% were not accepted. In 2010 the corresponding numbers were 75, 13 and 12%.

**Student satisfaction with study** has been surveyed in 2010 and 2011, and the qualitative indicators for all answers were the same or had improved as compared to 2010.

## 2.4. Study support processes

### 2.4.1. Study, career and psychological counselling

The general aim of career and psychological counselling is to decrease withdrawal via supporting the student through the studies. The student is entitled to information and advice on

issues concerning study from the Study Director of the Institute and specialist of the organisation of studies; the tutor, the Student Union, the staff in the Department of Academic Affairs. Study, career and psychological counselling is free of charge for the student.

The psychologist gives counsel to students (incl. students with special needs) during their studies or with problems regarding their personal lives. Career counselling supports students in getting a better idea about their personal traits and career planning. Career specialist provides career information, organises consultations, seminars and field trips to help students get a better idea and more information on education, labour market and professions for their future plans, coordinates training and activities of tutors and develops the system of support students. The aim of tutor training is to prepare future tutors, who would support freshmen in their studies and getting adjusted to university life by providing information on the organisation of studies and support systems. In 2011 tutors for foreign students started their work, supporting both postgraduate and exchange students. In 2008-2011 around 100 graduates and postgraduates have used career counselling services, mainly regarding the searching and applying for jobs or internship spots.

In the spring semester of 2011 the career specialist and psychologist started a series of lectures on individual development to support personality development and coping with studies and life. As a result of the seminars, the students' opportunities to learn from others' experience have improved, awareness of career choices has increased, students have gained the knowledge on how to prevent and handle problems. Since autumn semester of 2011, the conditions of career and psychological counselling of students have improved, due to new and more private counselling rooms. Psychological counselling has doubled, compared to the autumn semester of 2010.

Career counselling office coordinates the course "Studying in a university" for freshmen. The corresponding e-course in Moodle was taken by 45 students in 2010/2011, 93.3% of whom will continue their studies at EMÜ.

#### *2.4.2. Supporting students' international mobility*

It is possible for students to study in other Estonian universities as a guest student or study and practice abroad as a foreign guest student. The number of incoming full-time foreign students has risen on the average to 25-35 per year, their total number is between 130-160, which is about 4% of the whole student body.

In 2000-2005 full-time students mainly came from Finland. By now the list of countries our students come from includes Great Britain, Denmark, Columbia, the Netherlands, Russia, China, Spain, Iran; also Latvia and Lithuania. To increase the number of foreign students, EMU has publications in English, it also promotes the curricula in the portals [masterstudies.com](http://masterstudies.com); [moveonnet](http://moveonnet), [educations.com](http://educations.com) and on the SiE webpage.

The number of incoming exchange students has increased the most in landscape architecture, forestry and veterinary medicine. Practical training in the EMÜ Large-Animal Clinic has been of special interest. Student exchange is based on bilateral agreements, made on the initiative of the teaching staff, students or coordinators of Erasmus-program. Both the incoming and outgoing students fill in a feedback questionnaire when they are back in their home university.

In 2011 there are 164 full-time foreign students in EMÜ, 143 in veterinary medicine, 4 in MA study for landscape architecture, 17 in PhD studies. In veterinary medicine we could accept more students, but the size of laboratories is a limiting factor here.

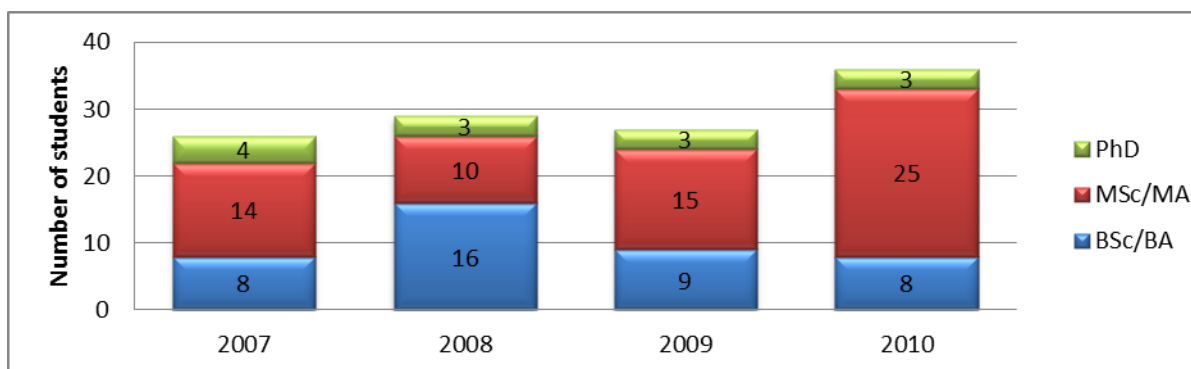


Fig. 2.14 Number of foreign students by study level 2008-2010

The number of outgoing students has risen almost threefold. This increase can be explained by rising interest and the opportunity to do practical training abroad under the ERASMUS program.

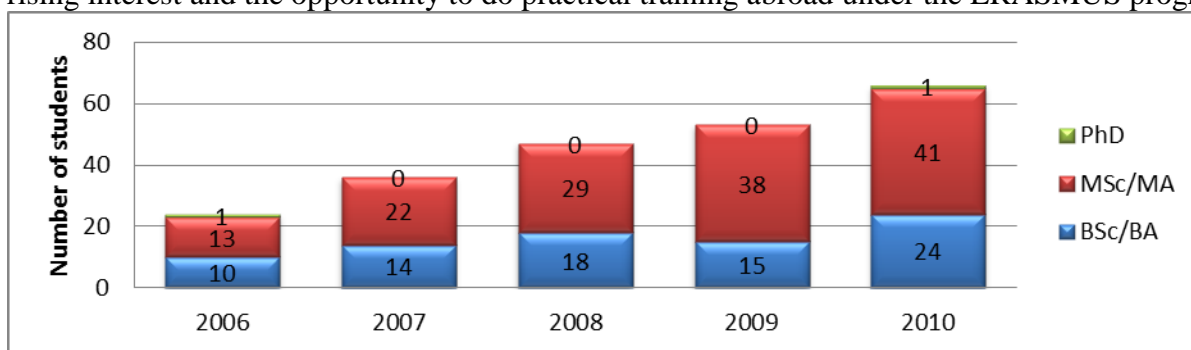


Fig. 2.15 Number of outgoing students 2006-2010

In order to make students more welcome, foreign students are offered orientation days, courses in the Estonian language, welcome packs and the possibility to have a tutor. There is a Rector's reception for the foreign students and staff in autumn. International Club, which organises events for our foreign lecturers and students, celebrated its first birthday this February. New foreign students are included in student lists and Facebook. All foreign students and staff get news in English.

### Programs supporting international mobility

**Erasmus programme:** A pre-requisite for each exchange is a written agreement between the host university and the student's home university.

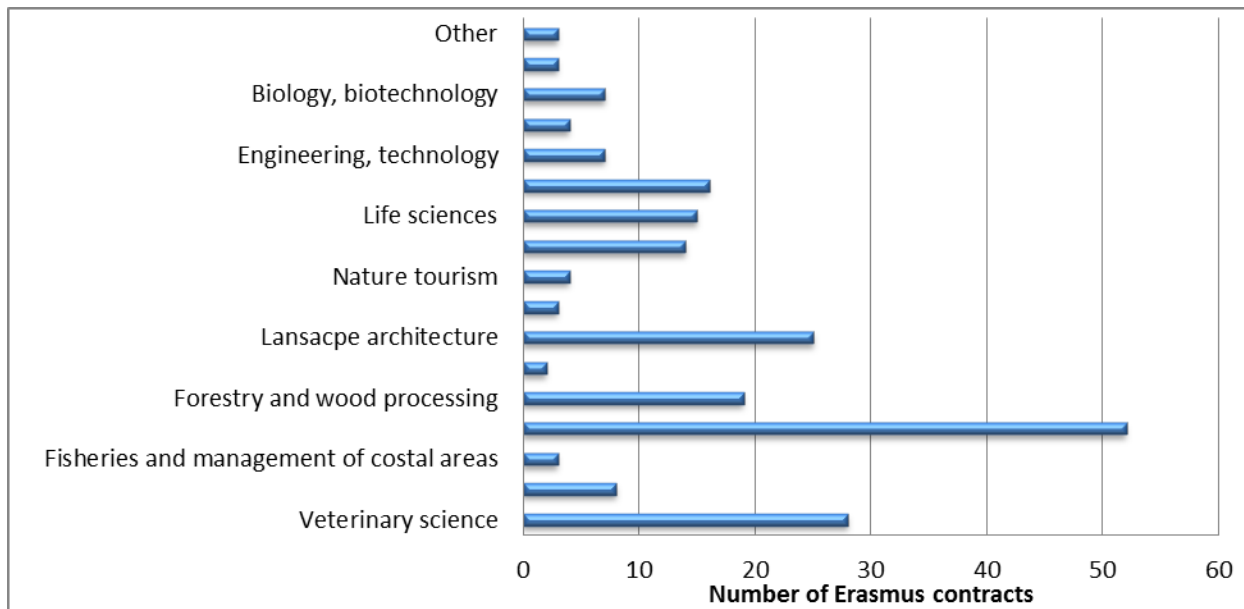


Fig. 2.16 Number of Erasmus contracts with foreign universities according to subject fields

Over the years EMÜ has participated in several Erasmus IP projects (soil recreation; landscape architecture, management of mountain areas, etc.). We have been partners in Erasmus, LEONARDO and TEMPUS curriculum development projects.

The Open University has organised EILC summer courses for teaching Estonian to students from other European countries. The number of participants in 2010 and 2011 was 32.

EMÜ participates in the ESF doctoral study and internationalisation program DoRa, which supports internationalisation of students and teaching staff. Since 2008 ten DoRa doctoral candidates have been immatriculated, six more are studying under other contracts. Three doctoral candidates have short-term grants. During the year 16 doctoral candidates have been given long-term grants to study abroad. In 2007 – 2010 about 35 students have been sent abroad. In total about 205 grants have been handed out.

**The Kristjan Jaak state scholarship program** aims at supporting the MA and PhD studies of students of Estonian universities, also assignments abroad of MA and PhD students and teaching staff connected with studies and research. The total number of grants in EMÜ in 2007-2010 was 45; including three PhD postgraduate and part-time study grants in 2007/2008, two in 2008/2009 and one in 2009/2010. Via the project full-time doctoral studies abroad one EMU graduate studied abroad in 2007-2008 and four in 2009-2010.

**NORDPLUS** – educational program of Nordic countries, supporting mobility, projects and networks; open to institutions and organisations with open education and lifelong learning. NORDPLUS NETWORKS has financed the following projects: NOVA/BOVA Nordplus Network Education for Sustainable Agriculture in the Baltic Sea Region (NOVIA, ASU, EMU). NORDNATUR ABS Atmosphere Biosphere studies Baltic Network in Agrometrics (EMU, LLU, ASU).

### *2.4.3. Technical and technological devices in studies*

Since 2007 the following e-study information days and seminars have been carried out: BeSt programme supported activities and grant application process; innovative study aids were introduced: screen visions, Ispring, lecture recordings with Echo360, presentation program Prezi, mind maps, Blackboard and Moodle compared, web-based study objects with Edicy and Weebly. Since 2008 the number of e-courses and web-based/interactive study objects has increased considerably thanks to internal training and information days.

Until the autumn of 2009 Blackboard Vista was used for e-courses, then the e-university council decided to start using the free environment Moodle instead.

In 2009 creating e-study aids were supported by the BeSt programme. The total number of e-courses created was 17 (48 ECTS) and 12 study objects. In 2010 there were 19 e-courses (61 ECTS) and 39 study objects, in 2011 17 e-courses (74 ECTS) and 49 study objects <http://www.e-ope.ee/repositoorium>.

Thanks to internal training in 2010, the number of lecturers using interactive and e-study aids grew considerably. The training took place in 5 institutes with 200 participants.

## Areas of Good Practice and Areas that need Improvement

### Areas of good practice

- process management of curriculum development is clearly regulated, interest groups included;
- cooperation in international networks;
- well operating practice in institutes
- good cooperation with the Student Union, students are involved in discussions and decision-making;
- good system of counselling
- students' speciality associations are active

### Areas that need improvement

- internal assessment system for curricula
- systematic feedback
- curricula in English

## Research, development and other creative activities (RDC)

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In order to achieve its objectives EMÜ shall conduct research and development in compliance with present-day requirements in all the areas of rural life and rural economy and in areas related with the sustainable use of natural resources; and organise innovative activities ([Statutes of Estonian University of Life Sciences clause 7.1.](#)).

### 3.1. RDC efficiency

#### 3.1.1. Strategic objectives of RDC

The RDC development plans and action plans are worked out with the staff, students and interest groups involved. The aim is that as big proportion of EMÜ students and staff as possible would be aware of the key processes and able to see the university as a whole, assess the development and realise the needs for future.

The strategic aims of RDC have been formulated in the [Development Plan till 2015](#): Clause 7.1: Designer of knowledge-based Estonia through internationally recognised research, clause 7.3: Promoter in society, motivating working environment and coherent way of life. 7.4: Carrier of academic culture, entrepreneurship and environmentally friendly mentality.

The RDC activities needed to implement the objectives and tasks of the development plan have been provided in the [Strategic Development Plan of Estonian University of Life Sciences until 2015 Action Plan](#), whereas multidisciplinary and integration of different fields have been kept

in mind. The action plan includes the time schedule, the units responsible for specific tasks, relevance/impact, the need for financing and outcomes and development indicators.

The action plan for the development plan has been improved in 2010-2011 considering the results of the fulfilment of development plans and changes in the environment, also [Estonian University of Life Sciences Research and Development Strategy until 2015](#) was updated.

To enhance the effect of the activities connected with the RDC main process, more specific programmes and operational strategies have been worked out, the priorities and main directions, general objectives and objectives of specific fields of research and development have been determined, but also the activities and indicators necessary to carry them out:

1. [Programme “Knowledge-based Bio-Economy”](#) and
2. [Strategy of Eesti Maaülikool until 2015 GREEN UNIVERSITY](#).

To better implement the objectives of RDC, define more clearly the responsibility of academic staff as based on the EMÜ mission, special features and division of tasks, the EMÜ Council has confirmed the responsibility [Responsibility Areas of Academic Activities and their Content](#) by the decision of the University Council as of 17.02.2005 No.5 and renewed it with the decision No. 11, dated 31.03.2009.

The responsibility area of academic activity combines research and development and studies based on it, and EMÜ takes the responsibility for its condition, competitiveness and development in Estonia, or bears the co-responsibility with other universities. In EMÜ the responsibility has been delegated to the specific institute with a corresponding profile (Figure 3.1.). As a rule, the responsibility for each specific area lies on the professor ordinarius, who also coordinates the activities of work groups and their members.

In order to create better prerequisites for enhancing multidisciplinary and integration between different areas, the activities are grouped via six focus areas: agriculture, environment, forestry, technics and technology, rural economy, health and food.



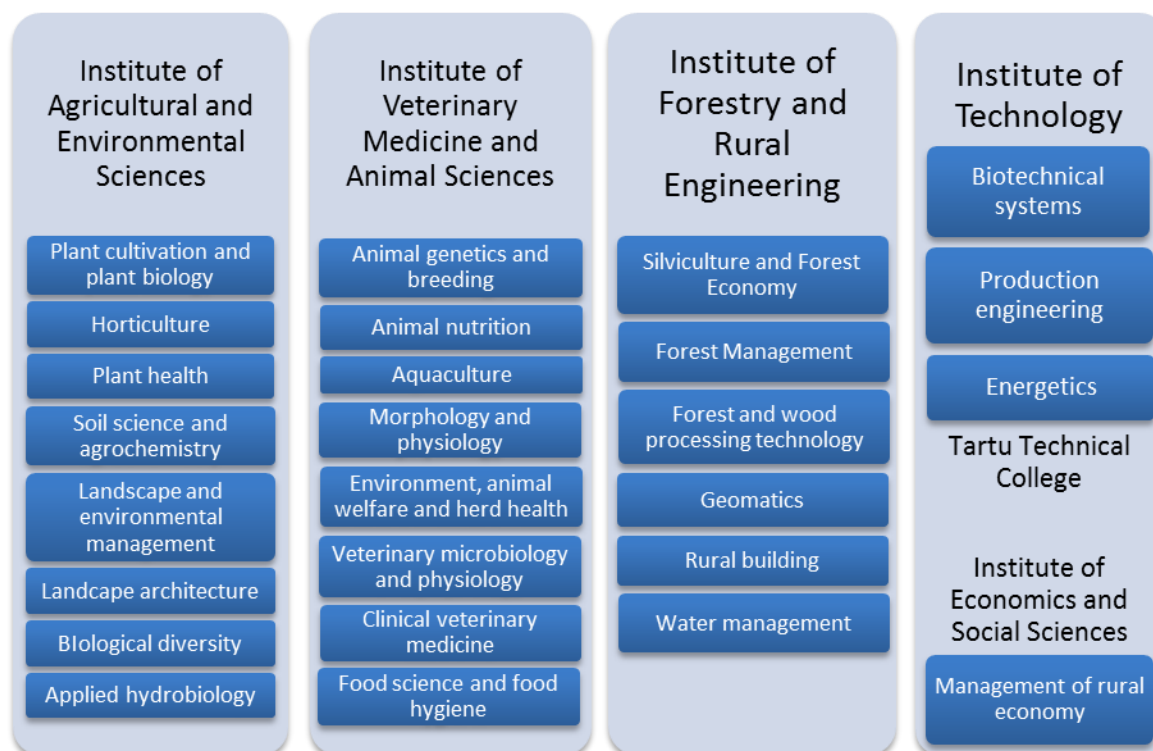


Fig. 3.1 The 26 responsibility areas of academic activities by institutes in the EMÜ

Each year one or two seminars are held to promote cooperation between the focus areas, which has become a tradition with long history already. The practice has been to involve as many members of the EMÜ staff and students as possible, their opinions and suggestions are included via group work. The interest groups are also always involved in solving problems. The solutions agreed upon in the focus area seminars are used for planning the specific RDC activities and recorded in the [annual development tasks](#), which are the basis for changing the university legislation accordingly.

In addition, seminars for planning RDC activities are organised to cover other topical issues, especially those related to areas that need improvement, e.g research financing, career model, using different financing sources simultaneously, overhead policies, applications for scientific instruments and cooperation in usage.

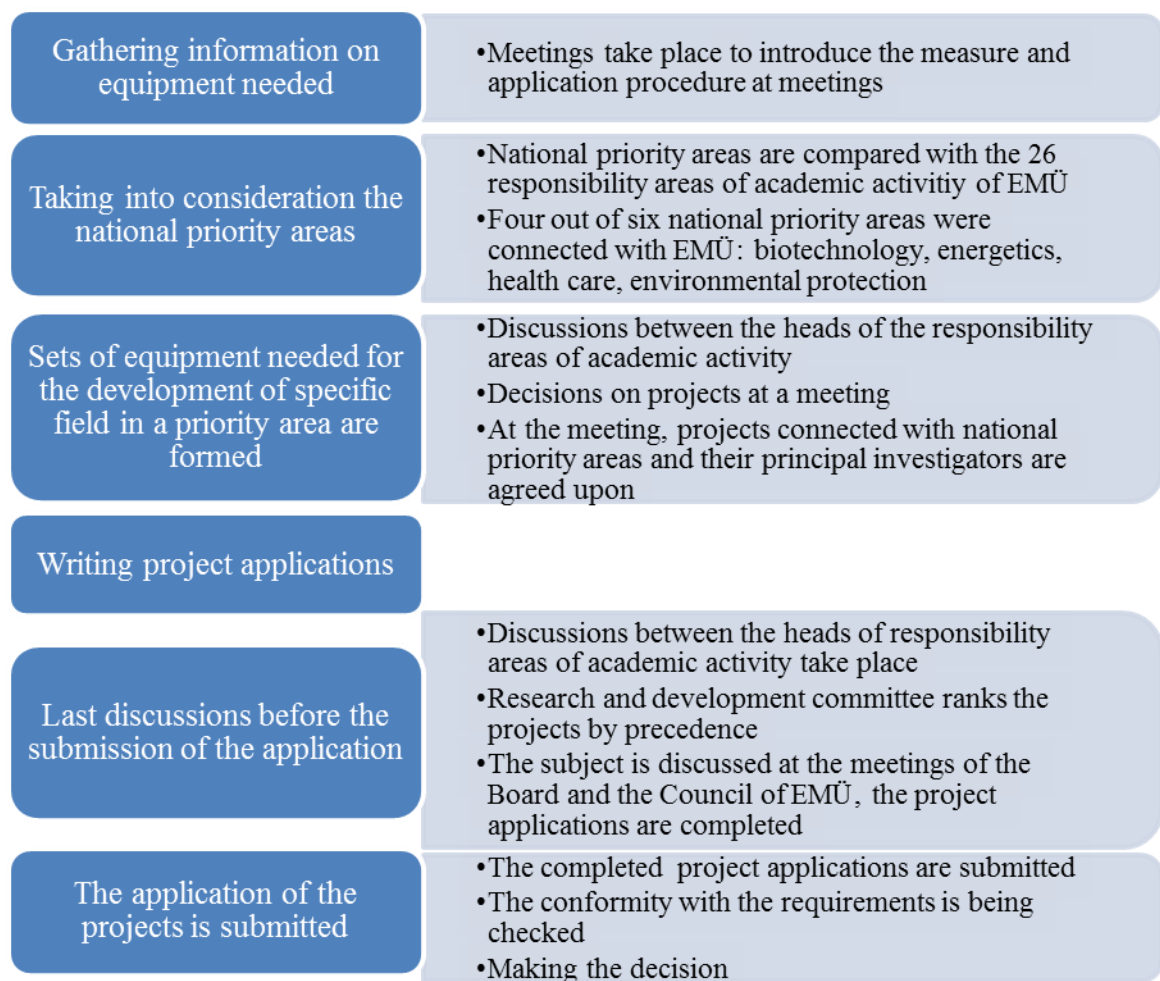


Fig. 3.2 Sample process on applying for scientific instruments and equipment

Execution of the development plan of EMÜ and the activity plans, also the relevance and efficiency of approach of RDC objectives are assessed and followed via the indicators specified in the [R&D strategy until 2015](#).

### Evaluation of research and development

In 2010 the first regular evaluation was carried out in Estonia. All three research fields EMÜ presented for evaluation, i.e. Biosciences and Environment; Health, Natural Sciences and Engineering, got the positive decision ([Directive No. 709 by the Minister of Education and Research, July 2, 2010](#)).

The shortcomings brought out by the evaluation board were mainly about organisation of the earlier research and these drawbacks were known to EMÜ before. EMÜ has been improving the situation for several years on a systematic basis:

1. In 2005 the PhD regulations were updated – at least 3 peer-reviewed articles are required, new curricula and defence boards were created (5 instead of the previous 22), competition for supervisors was initiated, the annual evaluation procedure of doctoral candidates was upgraded.

2. The scientific equipment is modernized with the support of EU structural funds projects: small-scale research infrastructure; modernising scientific instruments and equipment in RDC institutions, developing national research infrastructure etc., applications for purchasing equipment from appropriate measures have been successful (Figure 3.11);
3. EMÜ has increased participation in international cooperation and network projects (4 COST Actions, CORE Organic ERA-Net, Functional biodiversity in Agriculture, A Long-Term Biodiversity, Ecosystem and Awareness Research Network; BEENOVA; Integrated control in oilseed crops; Education and Research in Biosystems Engineering in Europe; Wind Energy Cluster; Nordic Association of Agricultural Scientists; Baltic Sea Universities network; Ecosystem Health & Sustainable Agriculture; Nordic Network of Agriculture and Food Ethics; Nordic Network in Social Evolution, NOVA and BOVA etc.);
4. The development seminars deal with WoS publications and bibliometric overviews. Dynamics of WoS publications are monitored. The annual reports of the departments present the publications according to the classification. The data on publications show a rising trend.

In 2011 targeted [evaluation](#) was carried out in Estonia for the first time. In EMÜ it involved biosciences and environment, more specifically: 1) plant biochemistry, genetics and physiology; 2) agroecology, plant production, horticulture, plant protection and diseases (incl. entomology, mycology and plant parasitology), plant breeding; 3) soil science, agrochemistry.

The efficiency of RDC in EMÜ is compared with partner universities. Baseline financing data from the Ministry of Education and Research are used for comparison, as they show the quality of R&D in universities. The data on 1.1 publications and R&D grants and contracts show a rising trend.

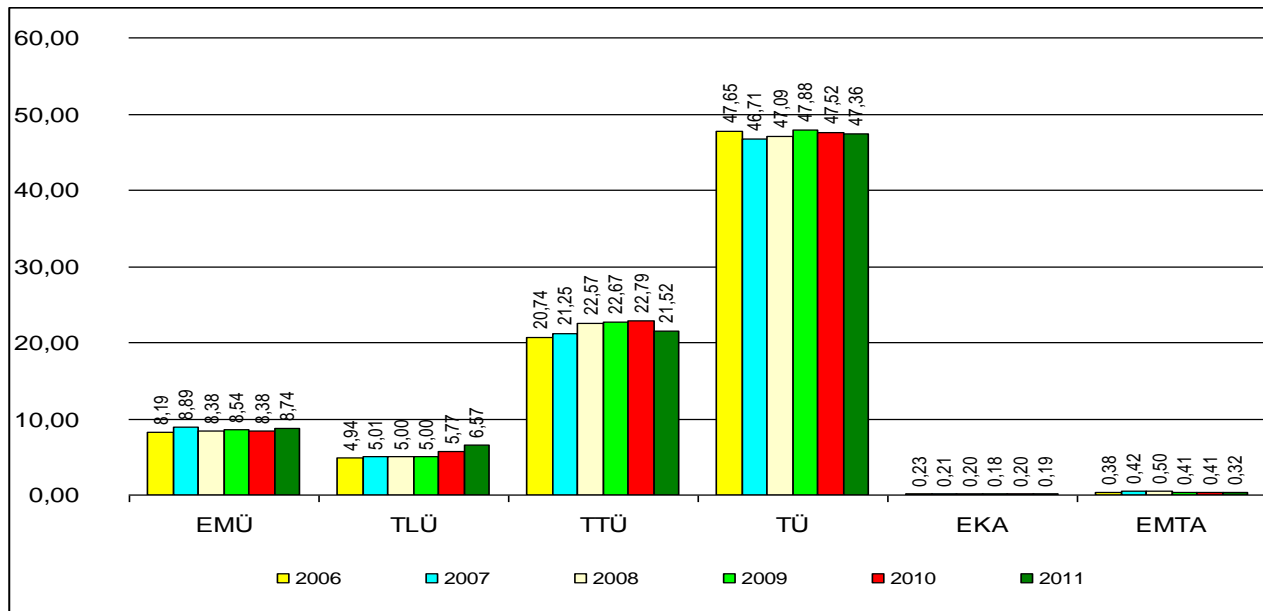


Fig. 3.3 Baseline financing dynamics proportion in the universities, 2006-2011

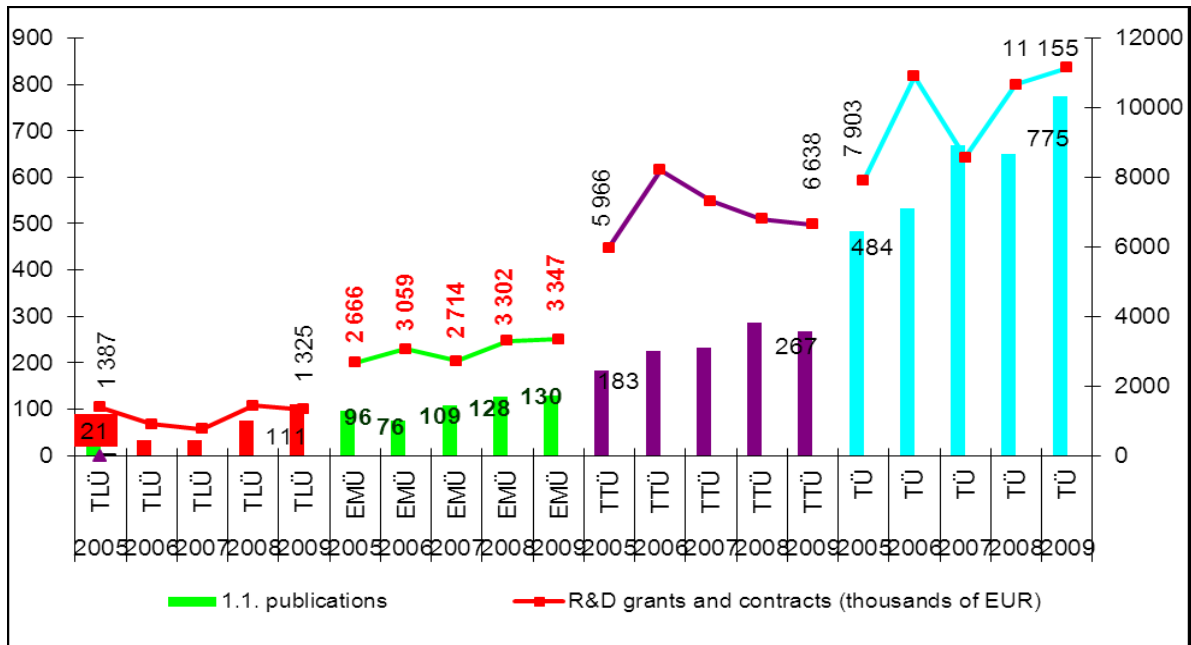


Fig. 3.4 Universities compared by the baseline financing data, 2005-2010; publications, RDC grants and contracts

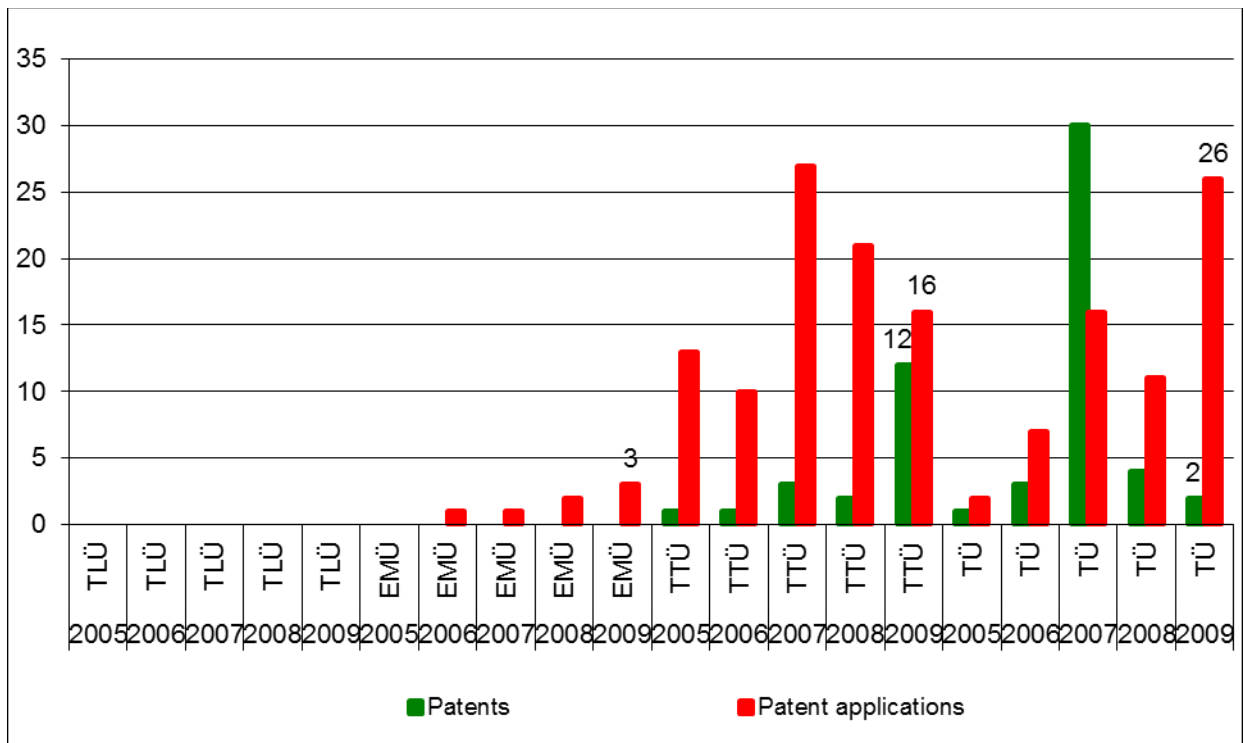


Fig. 3.5 Universities compared by the baseline financing data, 2005-2010, patents and patent applications

Efficiency of EMÜ RDC is monitored (Figures 3.6...3.10).

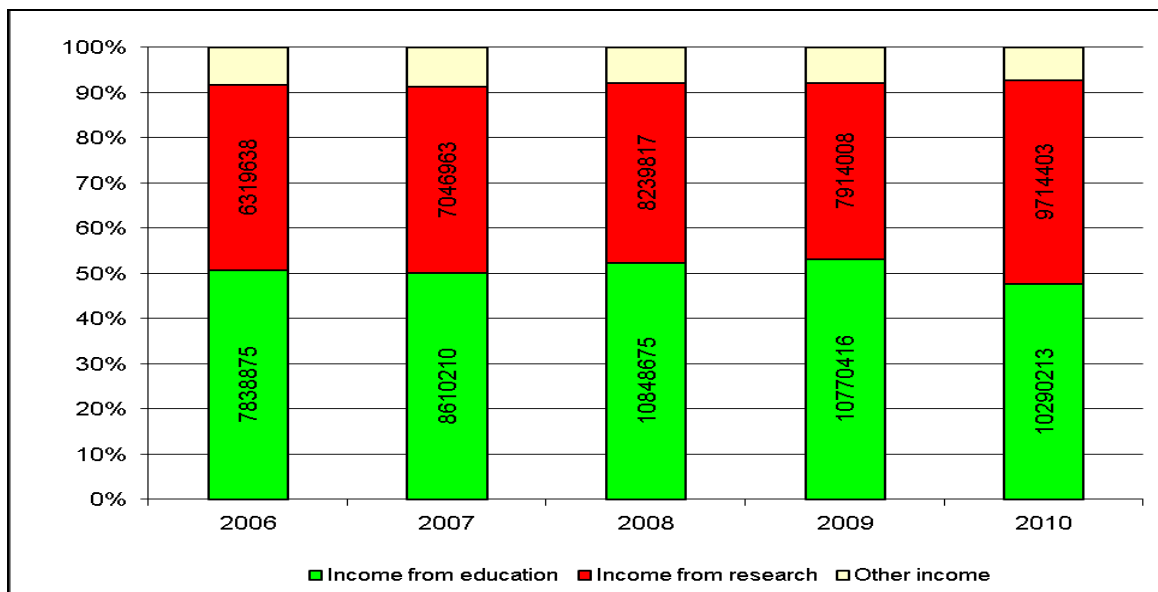


Fig. 3.6 Proportion of RDC income by the EMÜ report on implementing the budget (EUR)

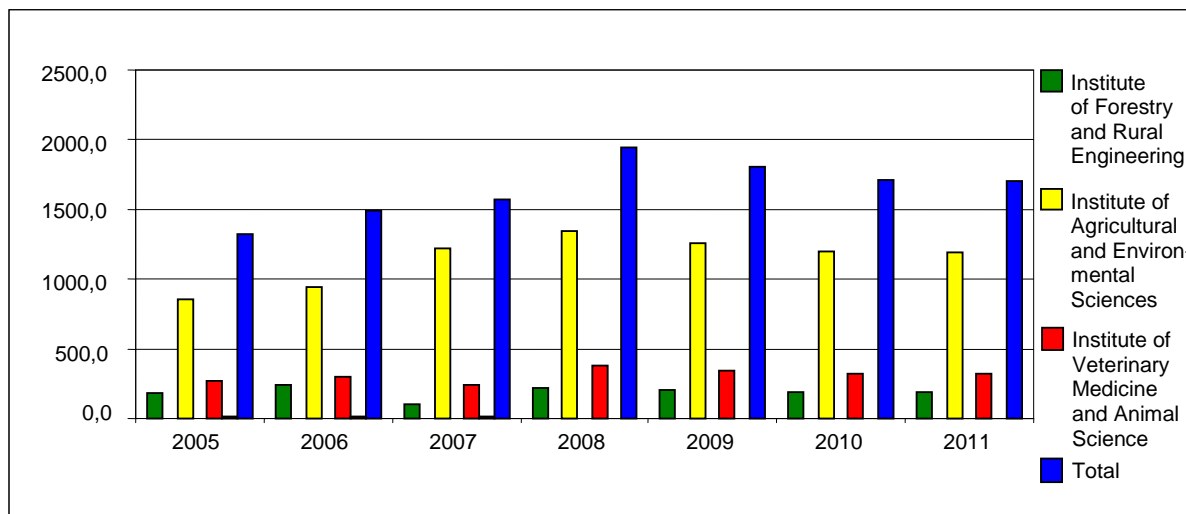


Fig. 3.7 EMÜ Targeted financing of research (thousands of EUR), 2005-2011

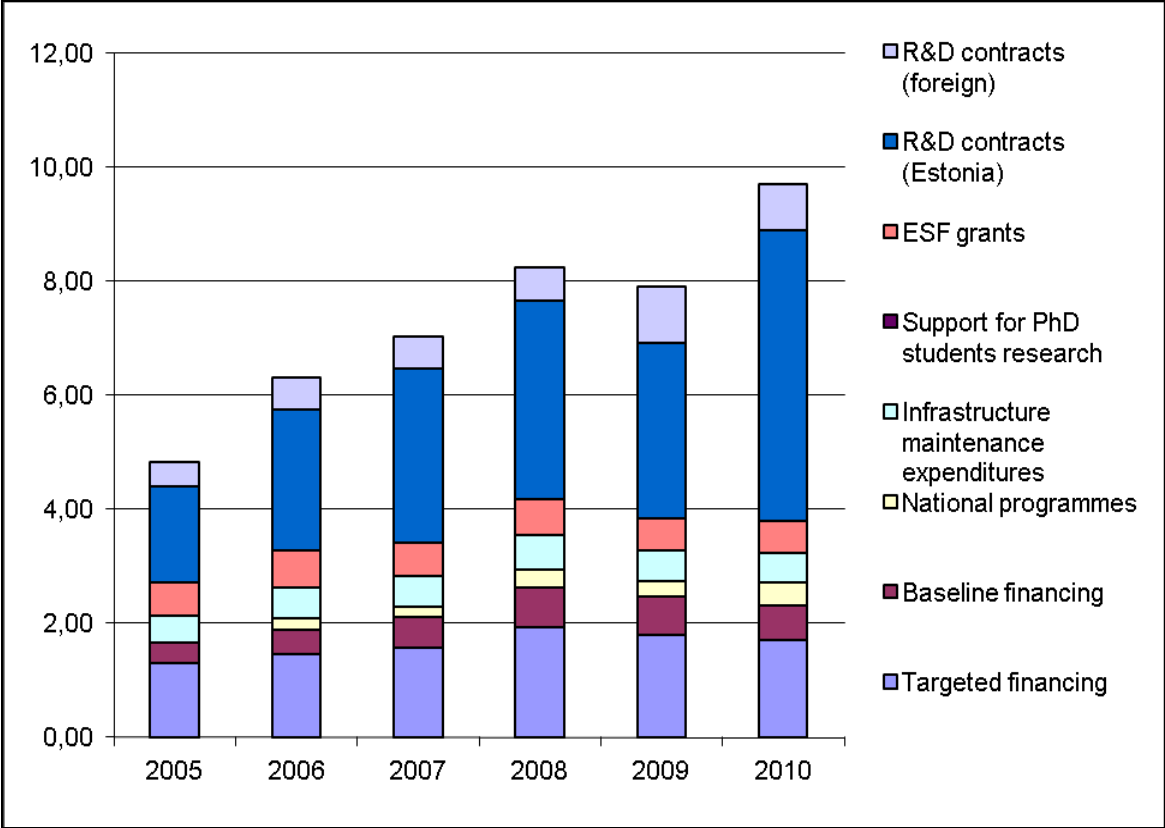


Fig. 3.8 EMÜ RDC income (thousands of EUR)

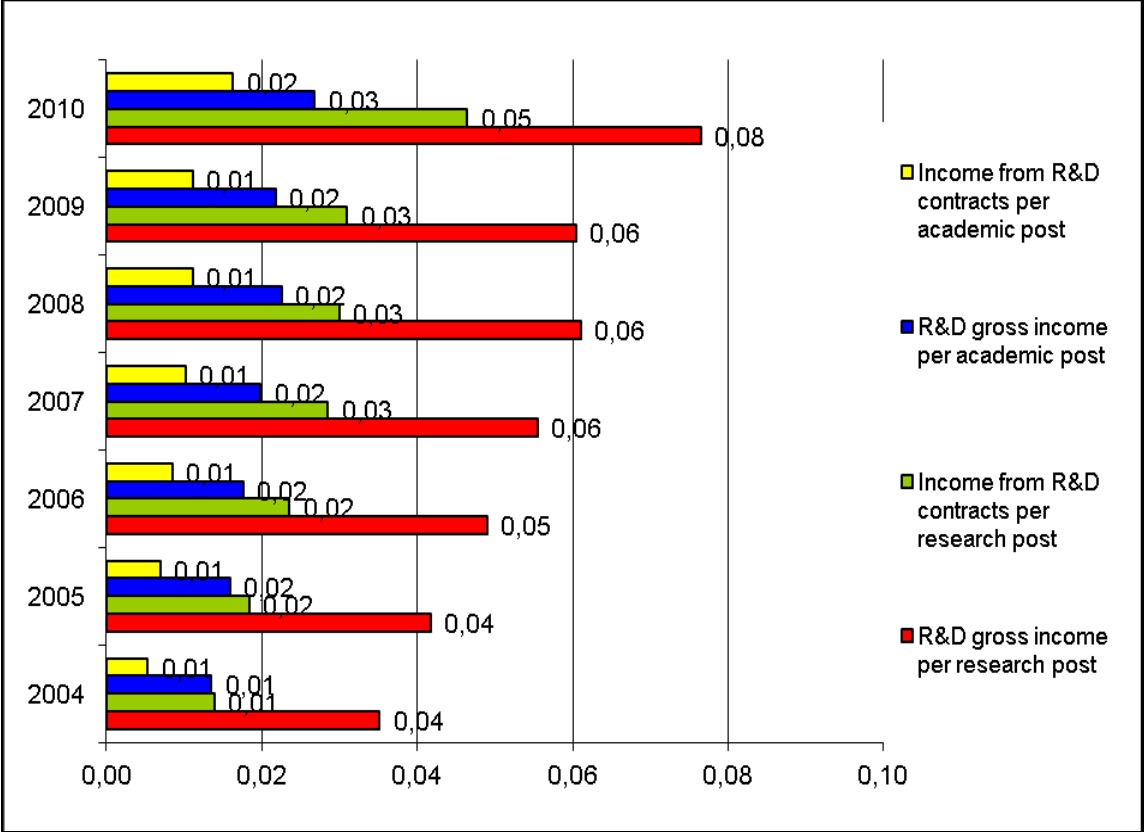


Fig. 3.9 EMÜ RDC income per academic post (millions of EUR)

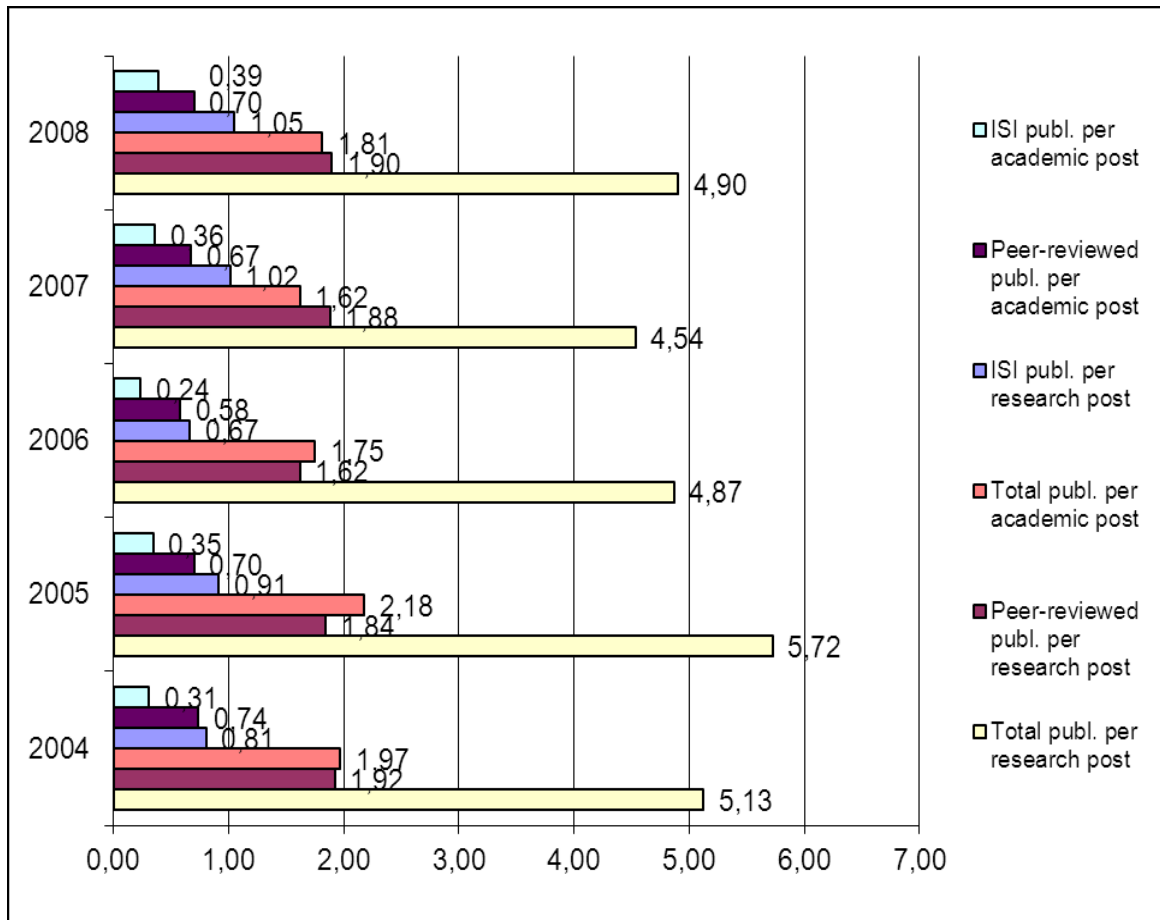


Fig. 3.10 Number of publications per academic post (in equivalents to full-time work) at EMÜ

Since 2011 Estonian University of Life Sciences has hosted the [Centre of Excellence in Environmental Adaptation](#). The financial numbers of the centre in 2011-2015 are 3 215 319 euros total, 3 054 553 of it being structural aid and 160 766 euros self-financing. Partners: University of Tartu, Tallinn University of Technology.

The objectives and activities of EMÜ RDC consider the current needs of the society and labour market, it is organised via systematic planning and coordinating the application; strategies and action plans are updated according to the results. In 2010 a [survey on EMÜ technology transfer and partners](#) was carried out.

In order to develop new technologies and improve contacts with enterprises, the components of [technology pyramid](#) have been determined in cooperation with researchers, within the framework of transfer of knowledge and technology.

EMÜ [Nature collections](#) support research and development.

## 3.2. RDC resources and support processes

### 3.2.1. RDC support system

EMÜ has an operating RDC support system, incl. [counselling on intellectual property](#).



The task of the Department of Research and Development is to coordinate the research and development, also innovation policies and procedures according to the main field of activity of EMÜ, involving the staff and students; develop the support services and coordinate services and activities concerning institutional development.

EAS [SPINNO programme](#) has financed the EMÜ project “Knowledge-Based Bio-Economy” with the general aim of improving the sustainability of the function of knowledge and technology transfer as a strategic mission of Estonian research and development institutions and institutions providing professional higher education on an equal basis with study, research and development. The sub-objectives are: 1. to improve the quality and quantity of business applications of the intellectual property that has been worked out in Estonian R&D institutions and institutions of professional higher education via professional and effective services of knowledge and technology transfer; 2. guarantee the availability of the staff and cooperation necessary for providing knowledge and technology transfer services in Estonian R&D institutions and institutions of professional higher education.

The EMÜ staff participates in the activities of professional and vocational associations and collective advisory and decision-making bodies.

To motivate cooperation with employees, two interdisciplinary units for specific fields have been founded as support units of knowledge and technology transfer with the objective of rising efficiency of managing innovative processes and to guarantee the sustainability of professional support services. 1) [The Centre of Agrobiotechnology](#). The centre supports and fosters application of ideas concerning agrobiotechnology, engaging entrepreneurs, scientists, environmental specialists and students. 2) [Centre of Renewable Energy](#). The objective of the Centre is to initiate, coordinate and develop interdisciplinary research and development in the field of renewable energy. The activities of the near future will be focused on bioenergy first and foremost.

The activities of the units connect the research and development and applied research of the specific fields and motivate cooperation with employers of the corresponding fields. Area-specific approach enables to better identify intellectual property of commercial value, to evaluate and use it.

In addition to interdisciplinary units EMÜ has the foundation [Research Centre of Organic Farming](#). The main focus is research and applied research in organic farming, promoting environmentally friendly ways of life and organic food, educating different target groups and finding solutions for developing organic sector in cooperation with entrepreneurs. The centre gives grants to reward authors of theses on organic farming and junior researchers.

### *3.2.2. Obtaining resources*

Obtaining financial resources is supported by [Estonian University of Life Sciences Research and Development Strategy for up to 2015 “Knowledge-Based Bio-Economy”](#).

I. The funds from the state budget for developing EMÜ RDC are given according to the quality of research and development via project based competition and it is possible to apply for the funds if the RDC activities have got positive evaluation:

1) Targeted funding of research – decision on targeted financing of a new topic is made by the Scientific Competence Council which considers the relevance of the topic and pre-existing conditions for accomplishing the task in the applicant institution. The targeted financing is continued according to the assessment by the Scientific Competence Council on the work done. Research topics of the R&D institutions are assessed each year;

2) Costs of infrastructure of the R&D institutions;

3) Grants by Estonian Science Foundation to support research, including scholarships for MA and PhD students. Research grants are given once a year to projects via public competition; 4. Baseline financing involves the financing of R&D institutions that have received positive evaluations with the aim of realizing their strategic development goals, first and foremost for co-financing foreign and national projects and opening new fields of research; 5. Financing scientific collections (documented artefacts or natural objects and data media as a collection) which have permanent research value and which are used mainly for research work; which are systematised, catalogued or documented as an item; and their required preservation, development and availability for research work is guaranteed by a R&D institution maintaining the collection.

II. Project based financing of RDC is organised via programs and financial support from [EU structural funds](#) incl.: 1) the program for developing research centres of excellence – supporting local research of excellence to create the pre-requisites for strengthening the competitiveness and cooperation of Estonian research on the European scale; 2) modernising R&D infrastructure; 3) study environment of institutions of higher education and R&D; 4) research infrastructures of national importance; 5) equipment for R&D institutions; 6) small-scale research infrastructure; 7) environmental technology programme KESTA; 8) energy technology; 9) biotechnology; 10) doctoral schools. 11) activities of rising knowledge and technological transition sustainability in EMÜ is supported by the [SPINNO programme](#).

III. In addition to that EMÜ has the financial means from RDC contracts and research services (see Fig. 3.9 RDC profit 2004-2010, thousands of euros).

### *3.2.3. RDC networks*

EMÜ participates in various RDC networks: 4 COST Actions, CORE Organic ERA-Net, Functional biodiversity in Agriculture, A Long-Term Biodiversity, Ecosystem and Awareness Research Network; BEENOVA; Integrated control in oilseed crops; Education and Research in Biosystems Engineering in Europe; Wind Energy Cluster; Nordic Association of Agricultural Scientists; Baltic Sea Universities network; Ecosystem Health & Sustainable Agriculture; Nordic Network of Agriculture and Food Ethics; Nordic Network in Social Evolution, NOVA and BOVA etc.

### *3.2.4. RDC infrastructure management*

RDC infrastructure is being modernised ([territorial-spatial development plan](#)) and the [database of the research equipment](#) has been created to enhance the effectiveness of the use of the equipment.

The investments to RDC have been made mainly via the programs and support from the EU structural assistance funds, incl.: modernising R&D infrastructure; study environment of

institutions of higher education and R&D; infrastructure for national research; equipment for institutions of R&D; small-scale research infrastructure; and R&D contracts funding.

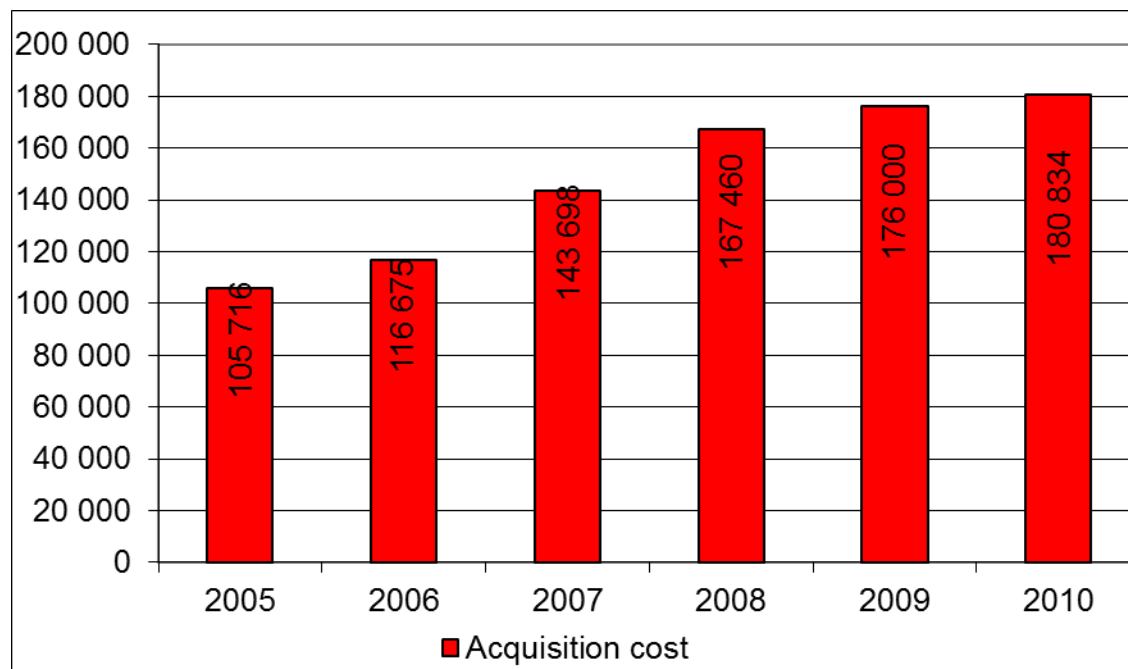


Fig. 3.11 Monetary value of equipment (thousands of EEK) at EMÜ

### *Areas of Good Practice and Areas that Need Improvement*

#### **Areas of good practice**

- as many members of staff and students as possible have been involved in working out RDC strategies and activity plans. Various interest groupings of the university are involved in preparing voluminous and strategically important projects;
- responsibility areas of academic activity have been clearly identified;
- interdisciplinary units and centres support knowledge and technology transfer;
- good cooperation in international networks, cooperation between speciality associations and organisations;
- stable rise in numbers of publications;
- big proportion and number of R&D contracts, incl. with enterprises in the budget of EMÜ.

#### **Areas that need improvement**

- modernising infrastructure;
- minimising the influence of problems caused by dispersed funding;
- developing the career model.

### 3.3. Student research supervision and doctoral studies

#### 3.3.1. Student involvement

EMÜ engages students of all levels to research, creative and project work and systematically surveys their satisfaction with supervision.

According to the curriculum statutes all the higher education levels require an independent research (thesis) or a final exam – the volume, objectives and results are determined in each curriculum, considering the specific features of the field. The institutes have established guidelines for BA and MA theses, the special features of the field have been kept in mind.

For **Bachelor's study** the thesis or final exam is 8–15 ECTS and the aim is to give skills for applying the acquired knowledge in research. For **Master's study** the thesis is 30 ECTS and the aim is to acquire the necessary skills for gathering data, referring to and working with specific terminology, language and publications of the field, analysing it and comparing research data and the methods used. For **Doctoral study** the thesis is 180 ECTS and the aim is to acquire the skills for independent research by planning a study, gathering and processing data and publishing the results and conclusions. The most remarkable theses have been recognised in the national contest for students' scientific work.

#### 3.3.2. Efficiency, professionalism and workload of supervisors

Efficiency, professionalism and workload of supervisors are in reasonable balance, which guarantees the quality of research papers and efficiency of graduation. EMÜ is the only university in Estonia which has applied the system of state-commissioned study places being appointed to supervisors of PhD students by competition since 2005. The aim is to enable supervisors with remarkable research results supervise PhD students, which guarantees the quality of doctoral theses and timely defence. The competition of supervisors is a systematic and well-rooted process, which has given the expected results this academic year – in 2011 the number of doctoral theses approved for defending grew considerably – 15 theses by the end of the calendar year.

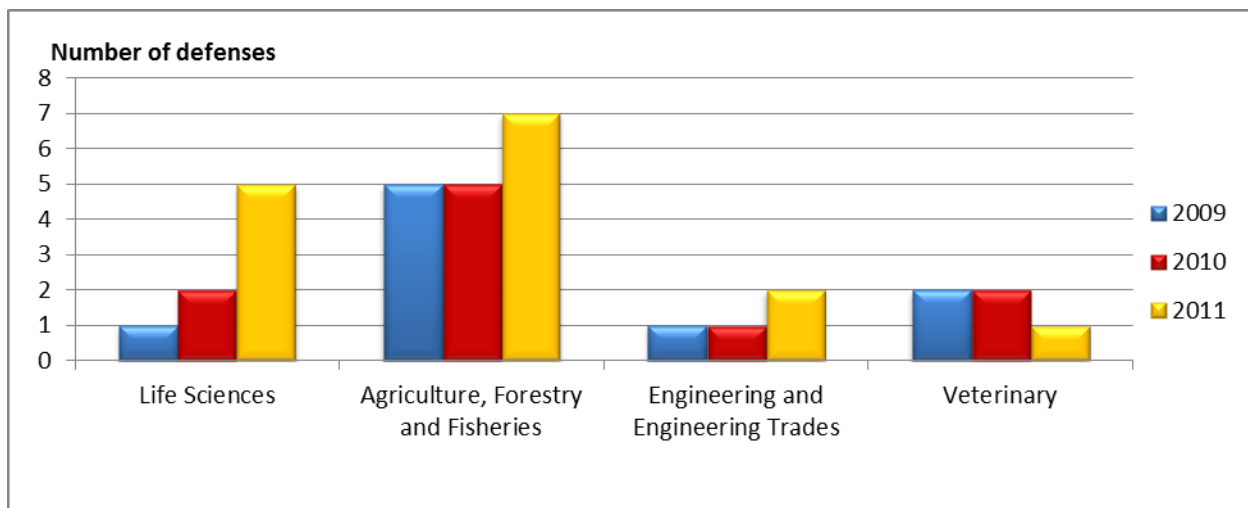


Fig. 3.12 PhD theses defended in 2009-2011 by field of study

The average length of doctoral studies in the last years has been: in 2008 – 5.6 years; in 2009 – 4.8 years; in 2010 – 5.9 years, in 2011 – 5.5 years.

The requirements for a supervisor of a PhD student are provided as [conditions and procedure for the competition for supervisors](#) and the [Requirements and Procedure for the Awarding of Academic Degrees and for the Defence of the Final Thesis of Professional Higher Education](#). To guarantee balanced workload of supervising and include the students to academic work, the MA students are involved with supervising BA theses, also the PhD students supervise MA and BA research and theses. When researchers are involved with student research, it guarantees both communicating actual research competence and more balanced workload of supervision.

Quality of doctoral theses, incl. publication and opposing is up to the required standards and has improved steadily. According to the quality commission of the Rectors' Council the theses of the PhD students have been up to the terms provided in the quality agreement of the Council. Since 2006 the PhD theses defended in EMÜ have had foreign opponents, internationally recognised specialists of their field.

#### **Satisfaction with supervision:**

In 2008 and 2010 satisfaction surveys of PhD students were carried out. The aim was to find out how satisfied the PhD students are with the organisation of doctoral study and get suggestions for improving it. The feedback results were forwarded to supervisors, directors of study, directors of institutes and the doctoral school. According to the results, more attention should be paid to the quality of supervision and cooperation of the PhD students with the corresponding institute.

Compared with the results of 2008 the PhD students were more satisfied with being involved in research projects and networks (“rather yes” and “definitely yes” by 65% respondents in 2008, and 78.7% in 2010). In 2008 the percentage of respondent PhD students finding that the supervisor motivates them to work independently was 65%, in 2010 it had risen to 80%. In 2008, 66% of the respondents said the supervisor found sufficient time for them, in 2010 the number was 73.7%.

The process of developing doctoral studies has considered the feedback, e.g. there are special English courses for PhD students in cooperation with the Language Centre each semester; to improve information exchange the mail lists for supervisors and foreign PhD students have been started in addition to the general list for PhD students; the content and expected results of obligatory subjects in doctoral study have been updated and focused more precisely. The supervisors of PhD students are provided opportunities of attending training and seminars, the supervising competence will be supported via training activities in the future as well.

**The creative activities of** students have been channelled to speciality associations in all the main fields of the university. The students' speciality associations, including Estonian Forestry Students Association (EMEÜS), Estonian Landscape Architecture Students Association (EMÜS), Estonian University of Life Sciences Environmental Protection Students Association, Construction Students Association, Ergonomics Students Association etc. are an outlet for students' creative activities, incl. initiating and carrying out joint projects and popularising the speciality.

EMÜ has supported the students Art&DesignGroup – they make design and decorations for the university events, fairs etc.

In the spring of 2011 the project “Live Science” was initiated with the PhD students visiting schools and promoting research and EMÜ.

Students can present their work to the annual contest in the Institute of Technology “The Technology Student Invents”. A board evaluates the work and the best are awarded.

Most PhD students are involved in research grants from Estonian Science Foundation (ETF), targeted financing projects and other issues, e.g INTERREG. Most MA students have the opportunity to participate in their supervisors’ work of implementing grants from ETF. The data of Estonian Research Information System (ETIS) show that the involvement of MA and PhD students in EMÜ research projects has grown steadily, especially of PhD students. To gain such a result, the thesis themes for students of all levels are given according to the current research projects, related to research work.

### *3.3.3. Intellectual Property Theft*

Students are guided to recognise IPT and avoid it. The questions of IPT, proper ways of source acknowledgement, etc are also handled in the subjects related to academic writing and research methodology in the first two tiers of higher education, as well as in the instructions for compiling students’ research projects and theses, and in the student-supervisor communication on every specific final project. However, the few IPT cases taking place over the years still show that students’ awareness of IPT calls for more attention.

PhD students take compulsory courses in “Academic Writing and Presentation”, “Philosophy of Science”, “Research Methodology” and “Copyright and Legal Protection of Intellectual Property” which deal with theft of intellectual property and researcher’s ethics.

All PhD theses and some MA theses are available on EMÜ webpages, which enables to prevent cases of academic deceit.

### *3.3.4. Foreign PhD students and student mobility*

Conditions for foreign PhD students, also studies of domestic PhD students abroad have been created.

Foreign PhD student can apply for doctoral study through the academic year, if there are vacancies. The flexible entrance system and individual counselling in the doctoral school and institutes has risen the number of foreign students: 31.12.2008 – 199 PhD students, incl. 8 foreign PhD students; 31.12.2009 – 194 / 8; 31.12.2010 – 202/ 12; 20.10.2011 – 229/ 17. Due to the flexibility and individual approach it is possible to plan the doctoral studies abroad; the Estonian, EU and host countries’ scholarship programs give the financial basis for that. The average period spent abroad is 2-3 months, in very few cases a whole semester. E.g. in the academic year 2008/2009 four PhD students (out of 198 students in total) studied one semester at foreign universities or research institutes.

PhD students working as teaching staff can use the sabbatical period for studies abroad, according to the [Conditions and procedure for granting sabbatical leave](#).

### *3.3.5. Involving foreign researchers*

Recognised foreign researchers are involved in doctoral studies and supervising PhD theses in EMÜ. Guest lecturers are invited and included in doctoral study on a regular basis. In the academic year 2011/2012 there are 13 researchers from foreign universities supervising the PhD students in EMÜ.

### *Areas of good practice and areas that need improvement*

#### **Areas of good practice**

- competition for supervisors of PhD theses;
- satisfaction survey of PhD students;
- cooperation with Estonian and foreign doctoral schools for doctoral study and better co-work of PhD students.

#### **Areas that need improvement**

- improve supervisor skills (training and seminars);
- improve continuously the students' awareness of plagiarism by making the procedure for processing the cases of plagiarism more efficient and analyse the information on found cases;
- conduct regular satisfaction surveys for postgraduates who have completed their doctoral study;
- introduce a regular and systematic feedback system to the academic board of the university council and the respective councils at the institutes on the annual evaluation of PhD students;
- support the acquisition of key competencies with appropriate training for PhD students.

## Serving society

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### **4.1 RDC promotion and EMÜ participation in public development**

The EMÜ development plan for up to 2015, article 7.3 „Promoter of Society” provides the activities to support society and the activities to promote the image and popularity of the university.

The EMÜ research and development strategy for up to 2015, article 4.4., provides that the EMÜ strategy “Green University” has been worked out to promote environmental awareness and sustainable development Art. 4.7. provides that one of the indicators used for fulfilling the objectives of the strategy and monitoring development is data on popularising research.

The strategy for up to 2015 – “Green University”, art. 4 “Promoter in Society” provides one of the activities as promoting the results of research and development to public.

The EMÜ marketing strategy research and development subchapter aims at making the society more aware of the research and development activities of the university.

Annual specific activities are laid out as development tasks.

The researchers and students of EMÜ annually participate in:

1. National contest of student research.
2. Award contest for promoting Estonian research. The goal of the award is to value popularisation of research work, promote activities aimed at that and recognise remarkable work done for that by individual persons and teams who have been successful in popularising research, research achievements and the work of a researcher and have initiated interest in young people to the profession of a researcher and an engineer.
3. Project contest for popularising research. Applications for support to the following activities popularising science are accepted: events, activities and contests for public and students of schools; audio-visual study aids; organising exhibitions and obtaining objects of smaller scale; organising days of research, workshops and conferences; publishing research articles and rubrics in media; organising other activities to popularise research.

A contest [of popularization of science in EMÜ](#) is held in EMÜ annually to promote activities popularising research to wider audience and recognise the members of the EMÜ staff who have been successful in it.

The data on popular science presentations, information days, publications etc. about popularising research have been gathered in the reports of the units of academic structure.

EMÜ has considerably influenced the development of Estonian rural life via the Rural Development Board, which considers the various measures concerning rural life in the EU context. The Monitoring Board for Rural Development assesses the grants and investments and how these have fostered rural life in various regions. The Board of Applied Research of the Ministry of Agriculture directs rural life via science. EMÜ coordinated the development plan of agro-sciences for Estonia. In November of 2011 the first Report on Rural Life and Development was completed, initiated by EMÜ Institute of Economics and Social Sciences. The report received much attention and it is planned to publish it annually.

EMÜ is involved in several institutions influencing the society: PRIA counselling board, Central Union of Estonian Farmers' board, LEADER, MAK, EVEA, EPKK, FADN. EMÜ is participating in creating and developing the counselling system for rural life, EMÜ teaching staff and researchers are experts in the system. EMÜ is representing the sector in the cooperation projects of the Estonian Chamber of Agriculture and Commerce. Also EMÜ is represented in several professional councils. Prof Kalev Sepp participates in the management board of the International Union for Conservation of Nature (IUCN). EMÜ participates in the work of several international expert commissions. Researchers and the teaching staff are active as experts and members in several professional associations and are recognised experts in decision-making bodies. Several members of the staff as experts of their field have contributed remarkably to [national development plans](#) and legislation, therefore fostering their field and influencing development.

The contribution of students to the development of society is big. Students have a remarkable amount of trainee time during their studies and their skills for practical application of research results are good. Also BA and MA theses are worked out each year on topics that are socially



significant and applicable to real use. For example the Institute of Economics and Social Sciences has a statute about awards for the two best theses on rural economy each year.

The [student societies](#) are active. Every year [Talveakadeemia](#) (Winter Academy) is organised with the help of students (EMÜ Environmental Protection Student Society, TTÜ Sustainable Development Club, TTÜ Mäering, Estonian Students Society for Environmental Protection “Sorex“). The aim of the academy is to promote student research on sustainable development and unite all Estonian universities for the activities, to promote cooperation of universities and to promote issues of sustainable development (incl. research) for wider audience.

For promoting the fields of research and development regular communication with upper secondary schools and vocational schools takes place, also cooperation contracts with schools have been signed. Regular Doors Open Days are organised by EMÜ twice a year. Since 2009 EMÜ has participated in the all European “Researchers' Night”. All the doors of research laboratories and centres in EMÜ are open for those interested – for example the Centre for Limnology, Märja experimental farm, micro dairy, landscape theatre, the rural building department and the labs of the Institute of Technology. The publication “Researchers to Practitioners” is published regularly to promote research services.

Since 2007 EMÜ organises [the school of natural sciences](#) to teach children how to observe nature. The main participants are students with interest in nature mostly from Tartu and Tartu County, but also from Tallinn and Harju County. The work is carried out as field trips once a month, from September to May. Guidance is provided by the researchers of EMÜ, also some guests. Astronomical observations are organised in cooperation with the Tartu Observatory.

In 2011 the project “Live Science” was initiated with EMÜ doctoral candidates promoting research work and EMÜ. The project won support in the research popularisation projects contest by the Ministry of Education and Research and the Archimedes Foundation, also the grand prix in the contest (by Archimedes Foundation) “Best Initiative for Popularising Research and Technology”.

The opportunities for study and cooperation in EMÜ are presented annually in fairs and events (e.g. education fairs Teeviit and Intellektika, the conference “Cool Schoolday”, agricultural fair Maamess, ecological fair Ökomess, Flower Festival).

Each year the teaching staff and students of EMÜ promote the study opportunities to students of upper secondary and vocational schools. They also come to EMÜ to see the opportunities with their own eyes. As a result the entrance number of students has risen. In 2008 a [video](#) describing the possibilities of study and fields of specialities was sent to all the upper secondary schools of Estonia.

Employees of EMÜ have their word in media. Since 2009 EMÜ monitors the public coverage in media via ETA Monitoring in the [www.monitoring.ee](http://www.monitoring.ee). The keyword “maaülikool“ (“university of life sciences”) has a rising trend.

EMÜ staff is opinion leader in his field of responsibility and target groupings, but it should be more so in topical issues and more visible in public space. The number of interviews and

comments is rising steadily, each year there is more positive media communication, with the topics covered more thoroughly.

	2009	2010	2011
Media coverage of EMÜ	826	1799	1823
Press releases by EMÜ	70	80	107

## 4.2. Lifelong learning and other public educational activities

Implementing lifelong learning is guided by the objective defined in the [statutes of the Open University](#) (AÜ) which is to provide continuing education on a higher education level in cooperation with the academic units (institutes) of the university.

The AÜ aims to improve the learners' knowledge, skills and competencies according to the needs of the society and labor market.

The main tasks of the AÜ are:

1. Creating and organizing opportunities for continuing education and lifelong learning and offering them to the public
2. Identifying the training needs of target groups
3. Cooperation with other universities, institutions, professional associations and enterprises

In cooperation with institutes continuing education and lifelong learning is offered in all the university's fields of competence. The highest number of courses carried out is currently held by the Institute of Veterinary Medicine and Animal Sciences:

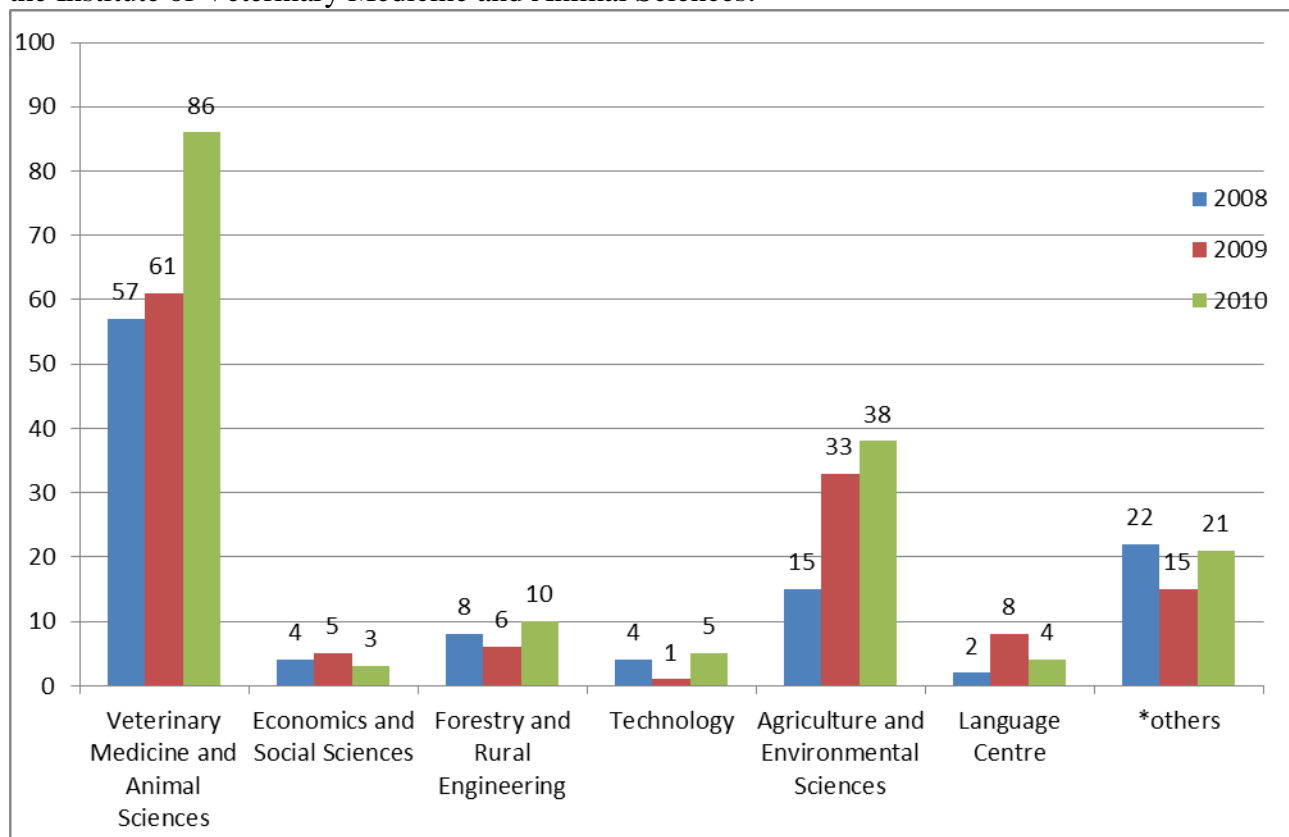


Fig. 4.1 The number of continuing education and lifelong learning courses carried out by institutes

The activities of continued education and lifelong learning are assessed once a year at the annual joint development seminar for all structural units of the university where also the following year's developmental tasks are defined. Lifelong learning is included in the activity and development plans of the institutes as well. To ensure that the continued education learning programmes are kept up to date the AÜ organizes regular meetings with the representatives of the institutes and stakeholders from outside the university.

Documents regulating the field of lifelong learning are confirmed by the University Council. Learning programmes are approved by the Study Committee and registered in the electronic study information system (ÕIS). The programmes are adapted to fit a specific client's needs and wishes if necessary. Certificates are issued according to the regulation of the University Council. The number of participants is increasing: in 2008 – 1955; in 2009 – 2175; in 2010 – 3006. The number of courses is also increasing: in 2008 – 112; in 2009 – 129; in 2010 – 169. The AÜ has kept an electronic register of students since 2006.

Feedback is gathered via printed questionnaires which are stored at the AÜ. Participants are asked to evaluate the lecturer and the overall organization of the course as well as given the opportunity to leave any comments or wishes regarding the programme. The satisfaction level with the courses is rising. The results from feedback are analyzed and used in drawing up development plans, keeping current programmes up to date and developing new programmes (for example food hygiene programmes, organic farming and growing of berries and fruits etc.).

Through the AÜ Estonian University of Life Sciences participates actively in the international cooperation for lifelong learning e.g. in the Grundtvig project 2007-2010 SET, self-entrepreneurship training for trainers which has 10 partners all over Europe. Foreign lecturers are also engaged in different courses.

The AÜ also offers free learning opportunities such as lectures, workshops etc. to the public. This may also have contributed to the effect that the majority of participants are from Tartu county.

### **4.3. Other public activities**

Public activities have objectives and regulated by the EMÜ development plan and strategies. The owners of domestic animals and pets can visit Zoomeedikum, which is a practice basis for students of veterinary medicine. In the Centre of Limnology there is the Võrtsjärve Lake Museum – the aim is to give an idea of the lake and the species living there. In the aquariums there are the fish species, aquatic plants and bottom fauna, and through the microscope the smallest plankton organisms can be observed.

The library and sports hall (finished 2009) are open to public. In the library the main focus is on special literature, but newspapers and fiction is also available. The visitor numbers of both are rising.

A micro dairy is operating with the help of entrepreneurs and local municipalities, also a landscape theatre and Polli Competence Centre (which is just being developed). The micro dairy

is the most visited, the numbers of both visitors (from 150 in 2008 to 250 in 2010) and product development items (almost doubled) are rising, also visitor groups with specific interests.

Foreign students and staff can use a hostel, open for public if vacant rooms are available.

The number of public events is growing, including annual and traditional ones, like the info and technology day „Healthy animal and healthy food“, the forum „Smart green economy“, the conferences „Biosystem Engineering“ and TEUK (renewable energy), the green university events. In 2010 the lecture series „Wednesdays of the University of Life Sciences“ was started – on the first Wednesday of each month the researchers deliver a popular science lecture, inviting the participants to think along and discuss the subject. In 2011 EMÜ celebrated its 60th anniversary – with public events like the history exhibition, conference on the future and a day for „town folks“ with a fair in the campus, a parade through Tartu and a free concert by the hobby groups of the university.

In 2009 the first big homecoming event for alumni took place, with the biggest number of participants – more than 2000. In September 2011 the 60th anniversary event had more than 2300 participants.

One of the goals of EMÜ is green thinking – to develop environmentally friendly and sustainable way of life. Events promoting this are regular. For example the Organic Conference, TEUK, Day of Re-Use, Day of Water, etc. The green university weeks and films with discussions are traditions already. In 2010/2011 there was a seminar cycle „What is the idea of development?“. Our target groups have been involved in car-free days and bicycle days.

## **Areas of good practice and areas that need improvement**

### **Areas of good practice**

- award for popularising research and the project „Live Science“
- Report on Rural Life in Estonia
- final research papers that have practical application
- active student societies
- School of Natural Sciences
- sports club and various facilities

### **Areas that need improvement**

- contacts with entrepreneurs
- recruitment work with student candidates
- disseminating green thinking
- researchers as opinion leaders in society/media
- alumni involvement in media
- quality criteria for lifelong learning.