SELF-EVALUATION REPORT
FOR INSTITUTIONAL ACCREDITATION

University of Tartu

Submitted to the Estonian Higher Education Quality Agency:
20 January 2015

Tartu 2014

CONTENT

The text contains links to legal acts, documents and other relevant online resources. The words containing links to additional materials have been underlined, whereas blue links lead to materials in English and grey links lead to materials in Estonian.

ABBREVIATIONS

Universities

EAA	Estonian Academy of Arts
EAMT	Estonian Academy of Music and Theatre
EULS	Estonian University of Life Sciences
TU	Tallinn University
TUT	Tallinn University of Technology
UT	University of Tartu

Other abbreviations

A2008	University of Tartu Strategic Plan 2008
A2015	University of Tartu Strategic Plan 2009–2015
A2020	Strategic Plan of the University of Tartu for 2015–2020
BA	bachelor's studies
DAAD	*Deutscher Akademischer Austauschdienst*
DOAB	Directory of Open Access Books
ECTS	credit point (European Credit Transfer and Accumulation System)
EDEN	European Distance and E-Learning Network
EFQM	European Foundation of Quality Management
EHIS	Estonian Education Information System (Eesti Hariduse Infosüsteem)
ETIS	Estonian Research Information System (Eesti Teaduse Infosüsteem)
ETV	Eesti Televisioon (TV channel of Estonian Public Broadcasting)
EU	European Union
EUCEN	European Universities Continuing Education Network
EUR	euro
FTE	full-time equivalent
HEI	higher education institution
HITSA	Information Technology Foundation for Education (Hariduse Infotehnoloogia Sihtasutus)
IB	International Baccalaureate
Int	integrated bachelor's and master's studies
IT	information technology
KRIS	reporting system of the University of Tartu
MA	master's studies
MOOC	massive open online course
MTÜ	non-profit association (mittetulundusühing)
OAPEN	Open Access Publishing in European Networks
OÜ	private limited company (osaühing)
QS	QS World University Rankings
R&D	research and development
Rak	professional higher education (rakenduskõrgharidusõpe)
RPL	Recognition of prior learning and professional experience
PhD	doctoral studies
SAIS	National Admissions Information System (Sisseastumise Infosüsteem)
SIS	Study Information System of the University of Tartu
SME	small and medium-sized enterprises
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UTTV	University of Tartu Television

1. ORGANISATIONAL MANAGEMENT AND PERFORMANCE

Legal form: legal person in public law

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TABLE 1.1. University of Tartu in figures

	2009	2010	2011	2012	2013
EMPLOYEES					
Number of employees (FTE)	2957	2947	3025	3161	3129
incl. academic staff (FTE)	1440	1450	1474	1515	1525
incl. non-academic staff (FTE)	1517	1498	1551	1646	1604
Number of academic staff with PhD (FTE)	895	969	1041	1083	1074
Number of professors (FTE)	164	163	173	177	180
percentage of women of all professors	21.3%	17.7%	19.2%	20.7%	20.8%
Percentage of international academic staff (FTE)	4.8%	6.6%	6.9%	8.3%	9.4%
STUDENTS					
Number of students	17,493	18,136	18,047	17,370	16,025
incl. first level of higher education	12,101	12,324	11,923	11,176	10,075
incl. master's studies	4052	4375	4631	4690	4493
incl. doctoral studies	1340	1437	1493	1504	1457
Number of students aged 30 and over	4032	4224	4418	4336	4047
percentage of all students	23.0%	23.3%	24.5%	25.0%	25.3%
Number of international students	343	438	484	546	579
percentage of all students	2.0%	2.4%	2.7%	3.1%	3.6%
Number of graduates	2726	3145	3132	3038	3117
incl. PhD graduates	100	109	152	107	114
CURRICULA					
Number of curricula	275	240	201	194	193
incl. joint curricula	3	4	6	7	8
incl. English-taught curricula in the first and second level of higher education	8	9	12	12	14
RESEARCH PUBLICATIONS					
Number of publications	2127	2507	2479	2744	2879
incl. high-level publications (ETIS categories 1.1, 1.2, 2.1, and 3.1)	1248	1564	1593	1810	1957
incl. number of publications of the ETIS category 1.1	804	943	952	1074	1175
FINANCIAL FIGURES					
Operating income (millions of euros)	129.8	118.1	127.0	154.6	173.9
Operating expenses (millions of euros)	117.4	127.2	129.0	143.0	153.7

The University of Tartu activity report 2013 gives a closer look at the university's objectives, activities and results.
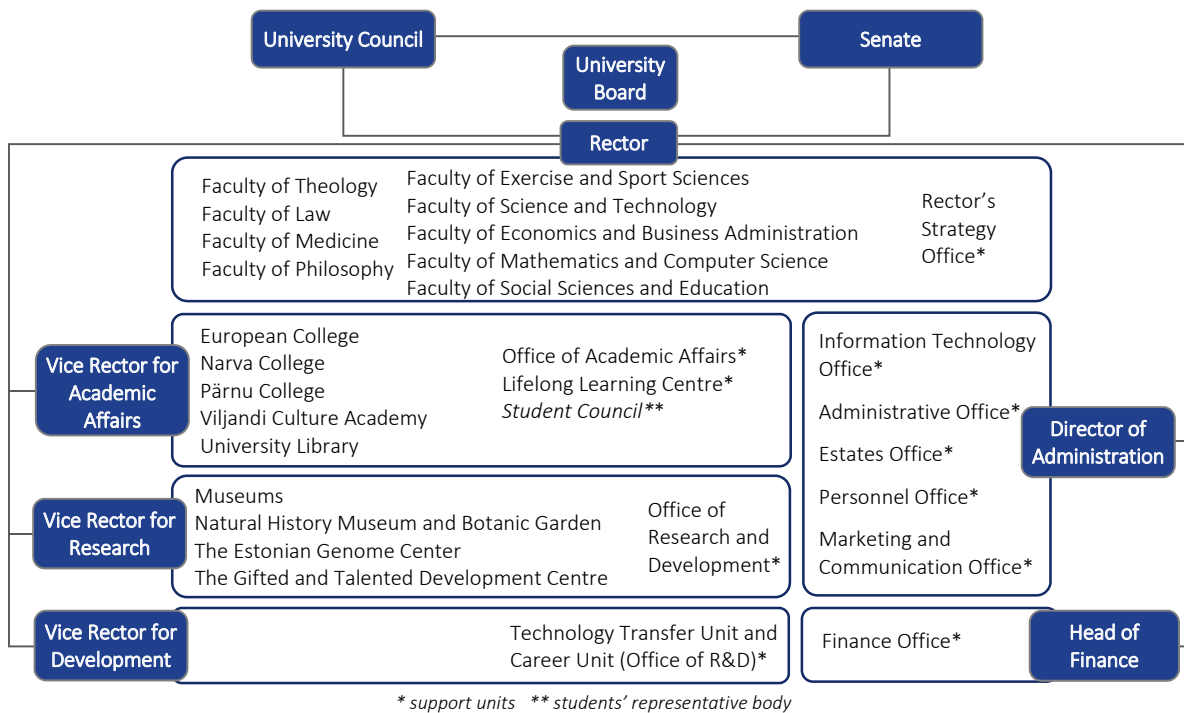
FIGURE 1.1. *Structure of the university as on 1 January 2014 (Detailed structure)*
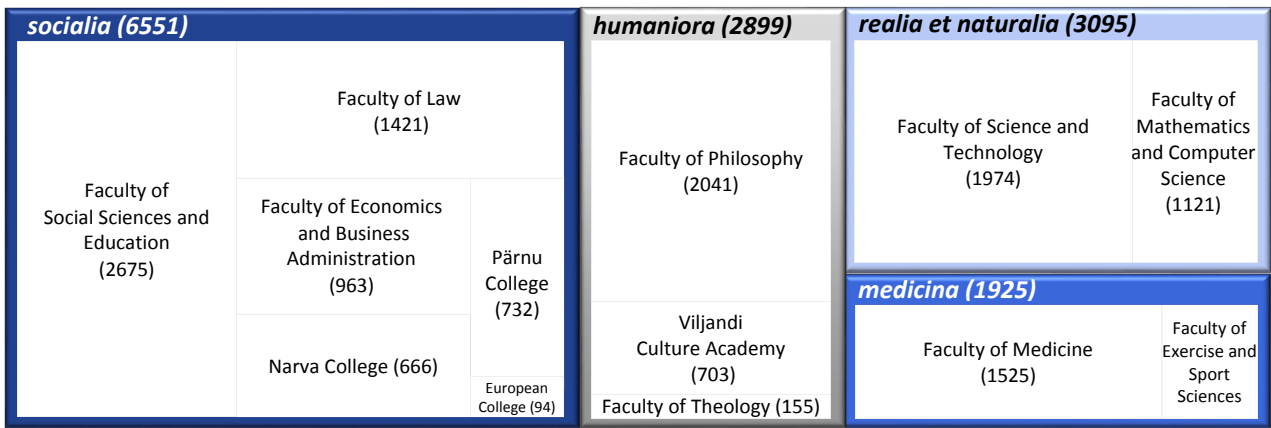
FIGURE 1.2. *Number of students by each of the university's four areas of teaching and research and by structural units in 2014 (the boxes on the drawing are proportional in size, and add up to 100%)*
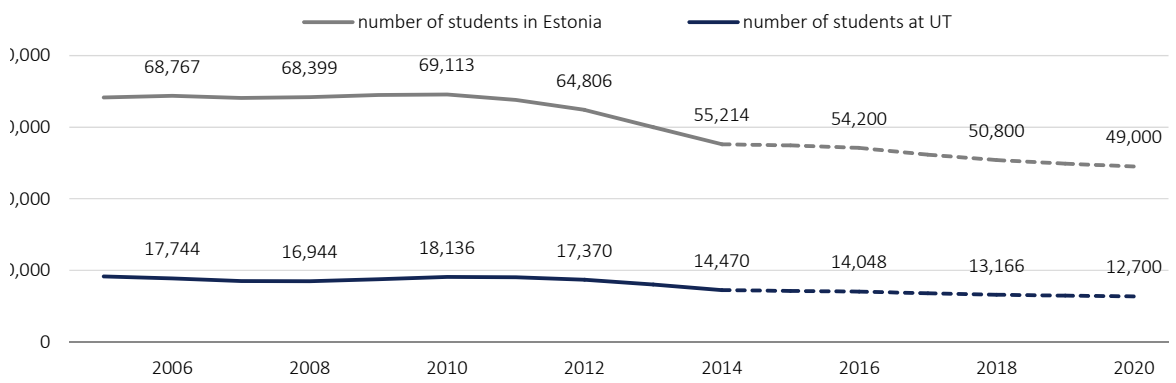
FIGURE 1.3. *The number of UT students up to 2014 and the estimated number of students up to 2020. The latter is based on the estimate of the Ministry of Education and Research of the number of students in Estonia, assuming that the average proportion of UT students in the entire student body in Estonia does not change over time (in 2005–2014 the average proportion has been 26%)*

1.1. GENERAL MANAGEMENT

1.1.1. Role of the university in the Estonian society

The UT is a public university that operates on the basis of the University of Tartu Act, the Universities Act and the Statutes of the University of Tartu, in the framework established by other legislation. In Estonia, the UT is the university with the largest number of members and its volume of teaching, research and development is the largest.

Pursuant to the University of Tartu Act, the university's mission is to advance science and culture, provide the possibilities for the acquisition of higher education based on the development of science and technology on the three levels of higher education in the field of the humanities, social, medical and natural science, and to provide public services based on teaching, research and other creative activities. For the purpose of the preservation and development of the Estonian language and culture, the function of the university is to advance the sciences investigating Estonia and Estonian-language education, preserve cultural heritage and provide related services to the public. Based on the above, the university also preserves and develops buildings that are part of the cultural heritage, and collections and archives of scientific, artistic and historical significance. To provide public services, the university has a library, botanic garden, museums and the Gifted and Talented Development Centre.

FIGURE 1.4. The objective of the University of Tartu is to be national and international at the same time

The **vision** of the UT is to be a rapidly developing international research university, the centre of academic spirit in Estonia and a leader in social development. The **mission** of the UT as the national university of Estonia is to bear the responsibility for solving problems faced by the society by ensuring the continuity of Estonian intellectuals and language and culture and by contributing to the development of education, research and technology and other creative activities throughout the world.

1.1.2. Setting the university's objectives

The objectives of the UT are in line with national priorities and the expectations of society. The UT is an active partner in developing and implementing strategies and reform plans in all policy fields and other walks of life in the country. The role of the university in working towards national objectives and the conformity between the objectives of the university's strategic plan and national strategy documents is proven by the use of EU Structural Fund resources: the UT was responsible for the implementation of about 40% of the projects (in monetary terms) under the research and higher education measures during the period 2007–2013.

The University of Tartu Strategic Plan 2009–2015 (A2015) set the goal of training the country's leading intellectuals, strengthening the national university and internationalisation, developing centres of excellence of international influence, ensuring the quality of studies and implementing principles of serving the society. To implement the goals of the strategic plan, the first four-year implementation plan was compiled, which the university council approved in 2009.

The setting of goals of the strategic plan has been improved during the A2015 period, based on the council's desire to focus on a smaller number of activities. In both 2013 and 2014, the university council approved the most important development activities (5–8 activities) necessary for fulfilling the strategic plan, the indicators descriptive of achieving the goals and the expected results of implemented activities. From 2014, the university's annual report also includes, besides the report on achievement of development goals set by the council, a report on tasks agreed upon in the agreement concluded with the Ministry of Education and Research on allocation of activity support.

It was decided to compile a new UT strategic plan for 2015–2020 to bring the interval for setting the university's goals into conformity with the preparation of national strategies taking place as part of the EU's new multiannual financial framework (see also the comparison of the processes of preparing the university's development plans, 1.1.4).
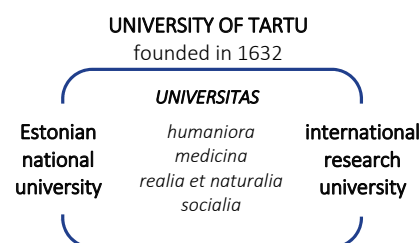
The Strategic Plan of the University of Tartu for 2015–2020 (A2020) has five development objectives:

- graduates who change the world,
- research and development work that has a global impact and guides the development of Estonia,
- innovation and enterprising spirit through which knowledge finds its way into the economy,
- organisation that inspires and unites people,
- continuous development that reinforces the survival of Estonian language and national culture.

Discussions during the preparation of the strategic plan led to the understanding that the university has to be a balanced mix of national and international elements. Thus a multi-level approach was used to set the university's objectives, describing the university's role in the city of Tartu, Estonia, the Baltic Sea region and the whole world. The focus of A2020 lies on developing knowledge-based, high-quality and practical teaching, instilling an enterprising spirit and developing entrepreneurship.

At the time of preparing the A2015, the UT lacked clearly articulated common values, as a result of which the shaping of the value system was itself listed as an activity. The core values of the employees were studied and analysed at the university during the period 2010–2011 using a university-wide survey and focus group interviews (staff, students, alumni). Topics related to values returned to the agenda in the process of preparing the new strategic plan. In developing A2020, the Centre for Ethics of the University of Tartu led the process of articulating the core values and mission of the university.

> Core values of the University of Tartu
>
> **Research-based** activities are the criterion for professionalism in everything we do. **Academic freedom** and **autonomy of the university** help us to carry out our ideas, but are accompanied by **responsibility** for our decisions. **Openness to new ideas, cooperation** between people, organisations and research areas, and a **human-centred approach** and **individual development** contribute to positive changes at the university and the world around it.

1.1.3. Performance indicators of the university

Along with the four-year implementation plan of A2015, the performance indicators for the strategic plan were approved. The performance indicators were adopted to describe the development of the university as a whole, analysing the reasons for progress or the lack thereof and to think about the development prerequisites and activities that help to reach a better result. Performance indicators were not linked to the financing model for academic units. Above all, Estonian universities were the basis for comparing the achieved results. This was due to the availability and comparability of the data as well as for the reason that the indicators being compared are either related to national objectives (e.g. internationalisation) or influence the university's success in obtaining study, research and development funding (e.g. R&D results).

Each year, the university council has evaluated the fulfilment of the A2015 performance indicators and approved next year's target levels. The council has increased the target levels of some of the performance indicators for 2015 (e.g. the number of participants in continuing education) and discontinued some of them if they are no longer measurable or viable in a manner comparable with the baseline level (e.g. the number of patents and patent applications, due to change in the methodology). The council also selected 11 performance indicators as key indicators, these being termed the university scorecard.

> During the period 2011–2014, many structural units have set their goals in the scorecard form. The university's key indicators as well as indicators chosen by the units themselves have been used on the scorecards. The dean's performance interview with the rector has been held on the basis of the respective faculty's scorecard at the start of the year.

TABLE 1.2. University of Tartu A2015 scorecard (marks the 11 performance indicators that were selected as key indicators)*

	Indicators		Base level	Achieved result					Expected result
			2008	2009	2010	2011	2012	2013	2015
Stakeholders	Overall student satisfaction*		3.99	3.99	3.99	3.96	4.01	4.06	4.1
	Overall job satisfaction		-	-	93.6%	94.2%	93.2%	92.20%	>=90%
	Alumni satisfaction with current job*		-	-	-	89.0%	-	-	>=90%
	Number of participants in continuing education programmes		20,945	21,393	25,138	30,160	33,730	31,219	↑
	Number of visitors to university museums		43,375	48,274	48,270	76,730	71,847	65,734	>= 50,000
Finance	Income per FTE academic staff*		€ 72,219	€ 66,985	€ 69,920	€ 72,051	€ 77,200	€ 91,408	↑
	Income from continuing education* (millions of euros)		€ 2.36	€ 2.67	€ 2.89	€ 3.36	€ 3.55	€ 4.17	> € 3.5
	Proportion of R&D income in annual budget		41%	40%	42%	41%	44%	48%	50%
	Proportion of international R&D grants in research funding		13%	14%	14%	13%	10%	13%	>=14%
	Research income from industry (millions of euros)		€ 1.4	€ 0.4	€ 1.6	€ 1.2	€ 2.4	€ 3.9	> € 4
	Income from commercialisation of intellectual property		€ 37,708	€ 39,382	€ 91,398	€ 110,104	€ 108,874	€ 121,902	> € 63,000
Processes	Graduation rate within the nominal period*	BA	-	38.3%	41.5%	40.8%	41.5%	40.7%	55%
		MA	-	43.6%	49.4%	47.9%	48.4%	47.3%	66%
		PhD	-	20.9%	19.7%	18.1%	14.6%	15.9%	25%
		Int	-	62.0%	58.8%	66.6%	67.5%	68.2%	70%
		Rak	-	39.1%	48.8%	38.8%	42.3%	38.8%	55%
	Doctoral degrees conferred*		77	100	109	152	107	114	150
	Number of internationally published peer-reviewed articles/ monographs/ chapters in books per FTE academic staff*		0.83	0.87	1.08	1.08	1.19	1.28	>=1.2
	Fields of research in which UT is ranked in top 1% of institutions (Thomson Reuters)		5	5	5	5 (9)	8 (9)	9(10)	>=6
Development prerequisites	Percentage of full-time academic staff with PhDs*		64%	66%	70%	74%	74%	74%	75%
	Percentage of international academic staff*		3.9%	4.5%	6.0%	6.4%	7.9%	8.8%	>7%
	Number of candidates to academic positions		0.9	1.2	1.2	1.3	1.3	1.4	>1
	Percentage of international students*	first level	1.6%	1.4%	1.4%	1.4%	1.6%	1.9%	1.8%
		MA	1.5%	2.3%	4.0%	4.7%	5.2%	5.8%	>=5%
		PhD	5.5%	6.1%	6.6%	6.9%	8.1%	8.9%	10%
	Short-term incoming and outgoing mobile students*	in	-	328	340	380	432	491	400
		out	-	383	402	479	519	474	600

Note: the arrow sign denotes results where an increase in participants or budget was expected, but no numerical target value was assigned.

Prestigious universities in the Baltic Sea region and Scotland have become the University of Tartu's international reference universities, as they are very similar to the UT in many regards (e.g. size, research areas, R&D intensity, location outside the capital, etc.) and successful in their activity (including in rankings). The key indicators aid the choice of reference universities, but to this point, the focus of learning has mainly been processes – ways to reach the desired result. The goal of comparative evaluation has been to increase the effectiveness of the university's strategic management and to get confirmation that the UT is competitive.

TABLE 1.3. Examples of processes where practices have been learned from reference universities in 2012–2014

Topic	Reference university	Implementation at the UT
University governance and structural reforms	Uppsala University, University of Glasgow, University of Eastern Finland, University of Konstanz	Preparation of the new statutes. Examples that confirmed that universities have similar goals and showed different ways of reaching the result, including the strategic decision to consolidate the structure into larger units.
Process of preparing a strategic plan and evaluating its fulfilment	University of Helsinki	Preparation of A2020. Example of best practices that influenced the selected approach.
Recognition of teaching, development of teaching skills	University of Helsinki, Lund University	Best practices used for setting the goal and planning the development of the Centre of Excellent in Teaching and Learning.
Measures for ensuring academic quality	University of Edinburgh, University of Gothenburg, University of Kiel, Lüneburg University	Best practices for ensuring academic quality, used as a context for reviewing and planning changes in the system for ensuring academic quality at the UT. E.g., integrating transferable skills into curricula and developing a multi-specialisation curriculum model to improve competitiveness of bachelor's degree graduates on the job market.

1.1.4. Development and implementation of the university's strategic plan and action plan

A Strategic Plan Committee was formed to prepare the strategic plan A2020. The committee was led by the vice rector for development. When the work began, the committee set the goal that besides defining development, the strategic plan should also be an instrument of internal and external communication, during both the preparation and implementation of the strategy. The experience of preparing A2015 proved instructive in preparing A2020, including in connection with involving the members of the academic community.

TABLE 1.4. Comparison of the processes of preparing the UT strategic plans A2015 and A2020

	A2015	A2020
Analysis	The fulfilment of A2008 was analysed and an analysis of the operating environment was prepared.	The fulfilment of A2015 was analysed and an analysis of the operating environment was prepared. In the Faculty of Economics and Business Administration, the study report "Strateegiline juhtimine ülikoolides" (Strategic management of universities) was compiled.
Principles for forming the committee	Representation that involves opinion leaders. Members are the members of the Rector's Office (except the rector), leading professors from areas of teaching and research, and representatives of colleges and students.	Representation that is balanced with regard to areas of teaching and research and distributes responsibility for the flow of information at various levels and in various structures. Members are representatives of the council, senate, board, students, and support units.
Leadership	The committee was headed by the vice rector for research, members of the Rector's Office took part in the committee, and the rector led discussions in the council and board of trustees.	The committee was led by the vice rector for development, and the members of the Rector's Office took part in committee meetings and in info list discussions. The rector led discussion seminars held at the university.

Involvement of experts	Seminars of the Steering Committee and deans took place with the participation of experts from outside and within the university.	13 young and successful academic staff and student representatives from various faculties were included in the work of the committee to strengthen the "university of the future" perspective. The university's Centre for Ethics led the effort to articulate the university's mission and core values.
Process of preparing a draft	The process started with seminars on different topics with experts from outside and within the university. A discussion on strategic choices was held in the board and council. At the proposal of the council, a working group made up of heads of support units prepared a draft strategic plan that the committee supplemented. Discussions on the draft took place in faculties, colleges and other institutions and in the board of trustees. The second draft was prepared and sent for written feedback to all academic units and for discussion by the Research and Development Committee and the board of trustees. The strategic plan was approved by the university council.	Proposals began to be collected in the strategic plan online environment. The committee prepared principles for preparing the strategic plan and principles for making strategic decisions, which were discussed in a joint session of the board, senate and council, at the meetings of area councils, seminars in the areas and at a seminar with international staff. Based on the above, a draft strategic plan was produced, and discussed in the board, council, and area councils, and in the strategic plan online environment. The second draft strategic plan was prepared and discussed at the seminar of the heads of support units, Strategy Committee, board and senate. The strategic plan was approved by the university council.
Broader involvement of partners and public, and public relations	The general trends and opportunities for the university and the Estonian society were discussed with the university's partners at a development conference that launched a longer-term public discussion on the role of the university in the society. The conference's speeches were published as a special issue of the UT magazine, and the recording is available in the UTTV archive.	At the university's international vision conference, the university looked ahead to 2032 and an academic innovation conference looked ahead to 2020. The conferences were webcast in Estonian and English and are available (with translation) on UTTV. During one month, the university's media partner Estonian Public Broadcasting covered researchers' opinions on important topics for society. Before the conference, a special edition of the university's magazine UT was published, in which researchers looked ahead to 2032.
Time period	February until December 2008	February 2013 until June 2014
Statistics	A total of 8 Steering Committee meetings and seminars with experts took place. No statistics were recorded.	There were 16 Strategic Plan Committee meetings. About 310 staff and students took part in seminars in areas. The vision conference had about 300 participants and 150 people streaming the conference online, the media covered the researchers' visions on 140 occasions during one month.

In spring 2014, at the end of the strategic plan preparation period, an internal risk assessment held at the university, which also tested the assessment methodology proposed by the internal audit staff. The greatest risks as perceived by the members of the Rector's Office and board fell into five groups, as the Rector's Office saw it:

- governance risks stemming from the size, structure and organisational culture of the university;
- risks related to external environment factors (EU funding, project-based approach, frequent reforms, demographic changes);
- personnel policy risks, including risks related to maintaining competitiveness on the salary market, low effectiveness of the doctoral study, and low requirements in the employment culture;
- risks related to the regionally disadvantageous location of Tartu, including lack of transport links and the preferred position of Tallinn as a population centre;
- risks related to the quality of the strategic planning process, including the complexity of implementing comprehensive development objectives.

It was decided to focus on risks that the university can influence and the causes of which lie within the organisation. The main instrument for hedging risks is planned to be the A2020 action plan, including carrying out governance reform. In autumn 2014, risk assessment continued with an improved methodology (improved assessment criteria, broader range of risk identifiers and evaluators, and the use of an online environment in assessment).

The preparation of the 2015 action plan of A2020 took place along with the planning of the 2015 budget, and the activities planned by the faculties and colleges were taken into account as one input. The main ways of financing the activities were planned as follows:

- the activity can be implemented without additional resources;
- the activity is financed from the university's funds on the basis of competition (objectives are reviewed, various funds are consolidated into the development fund);
- the implementation of activities takes place with additional development support from the council, pursuant to the action plan of the academic unit. The latter is also the performance component for financing faculties and colleges.

The implementation of the A2020 objectives is also supported by all five components of distributing activity support: the basic activity support (which also takes the number of graduates into account), the support specified in the performance agreement concluded with the Ministry of Education and Research, the support for interdisciplinary studies, the support for international (visiting) students and additional support from the council. In planning the 2015 budget, the council decided to support the fulfilment of the A2020 objectives using, in addition to the abovementioned performance components, the salary increase measure and support measures for the curricula of medical, natural and exact sciences.

The key indicators and long-term action plan for A2020 will be submitted to the council in spring 2015. In autumn, the functioning of the process of fulfilling the 2015 action plan will be assessed and if necessary, changes will be planned.

In implementing the strategic plan, important considerations are the staff's general comprehension of the university's objectives and a sense of how the university is moving toward the objectives. The job satisfaction survey reveals differences in this regard yet also a positive trend.
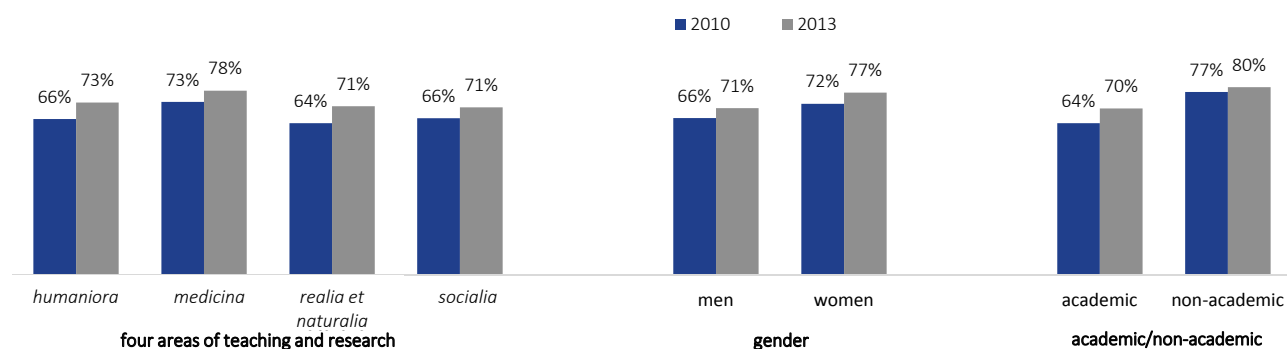
FIGURE 1.5. The share of respondents in 2010 and 2013 who gave an affirmative answer to the statement "The University of Tartu is making progress towards achieving its aims"

1.1.5. University governance

In 2010, the Rector's Office decided to bring the proposals for university governance reform back on to the agenda. This was followed by discussions in various decision-making bodies on the topic of revising the university's governance. In summer 2010, the university council adopted a decision stating that the University of Tartu Act needed an update. In February 2011, Riigikogu adopted amendments to the University of Tartu Act and the Universities Act that introduced changes in the governance structure of the University of Tartu. The governance model set forth in the University of Tartu Act, which provided for a new type of council and senate, took effect in 2012.

The highest decision-making body of the UT is the university council, which is responsible for the university's economic activity and long-term development, approves the university's statutes and adopts the university's strategic plan and budget. The council is made up of 11 members, of whom five are appointed by the University of Tartu, five by the Minister of Education and Research, and one by the Estonian Academy of Sciences.

The senate is the university's highest academic decision-making body which is responsible for the university's teaching, research and development activities and for ensuring the excellent quality of these activities. The senate has 22 members: the rector of the university as the chair of the senate, four representatives from each of the university's areas of teaching and research and five student representatives.

The rector manages the university's day-to-day activities, is responsible for the lawful and expedient use of the university's funds and exercises the highest administrative and disciplinary authority at the university within the limits of his or her powers and pursuant to the resolutions of the council and the senate.

The Rector's Office is formed by a rector's directive that defines the areas of activity of the members of the Rector's Office.

The university board is an advisory body. It currently includes the rector, vice rectors, deans of all faculties, representatives of the colleges and research and development institutions outside faculties appointed by the rector and the president of the student council. The university's statutes that will come into effect in 2016 assigns the role of the university board to the Rector's Office, which will be made up of the rector, vice rectors and heads of areas of responsibility, and four deans.

The University of Tartu administrative procedure rules govern the drafting and approval of regulations of the university council and senate, rector's directives and development plans and strategies adopted by the university council and senate. All such bylaws go through the approval round within the university before they are approved. For that purpose, an electronic workflow has been established for staff in the university's intranet (see 1.3.2).

Management structure as of 1 January 2012
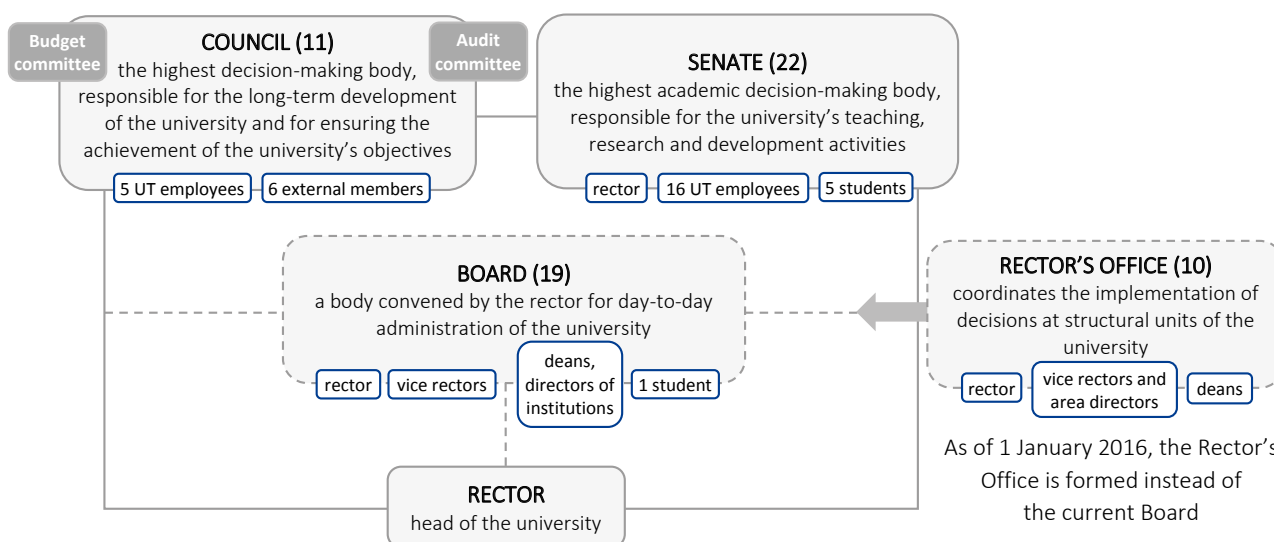
FIGURE 1.6. *Governance structure of the UT (number of members in each body shown in brackets)*

The implementation of the second stage of governance reform will take place in 2012–2015. The objective is to restructure the university's governance so that the decisions taken on each level take into account the objectives of the university as a whole, support the mission of the university and the fulfilment of its academic capability. The new university statutes prepared since 2012 and adopted and approved in July 2014 were drafted based on the principle that the areas of teaching and research that have developed at the university *(humaniora, medicina, realia et naturalia* and *socialia)* are equally important and that the university's academic structure must be balanced between the teaching and research areas to fulfil its strategic objectives. As the next step, the academic structure within each area of teaching and research will be developed and the statutes for institutes and colleges will be drafted and approved. The new statutes will enter into force on 1 January 2016.

According to the statutes that will enter into force in 2016, the academic structure will have two governance levels: 1) four *valdkond* in place of the current nine *teaduskond* as the first-level units, and 2) institutes and colleges as the university's principal academic units with their own statutes and budget. After long discussions, the proposal that academic heads be appointed by their direct supervisors was dropped. Deans will be selected from among professors also in the future and the functions of dean will be an additional job assignment. Similarly to the governance of the areas of teaching and research, the administration of institutes will also constitute an additional job assignment alongside teaching and research work.

structure until 31 December 2015

humaniora   *medicina*   *realia et naturalia*   *socialia*

number of employees (FTE) at faculties and colleges

20   319   107   403   49   951   144   89   67   198   50   53   19

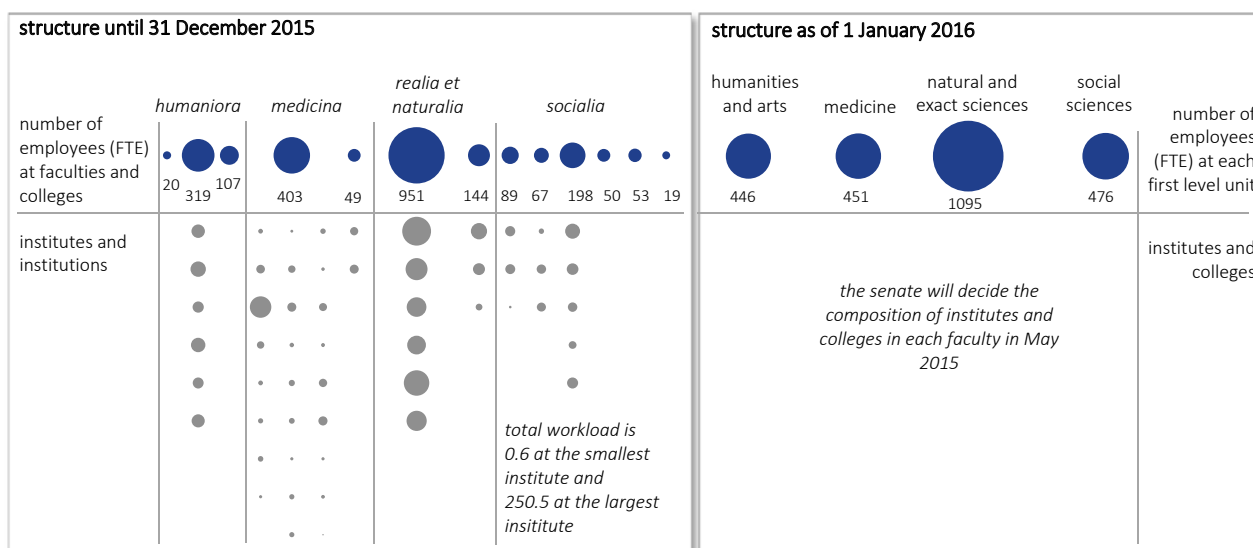institutes and institutions

total workload is 0.6 at the smallest institute and 250.5 at the largest insititute

structure as of 1 January 2016

humanities and arts   medicine   natural and exact sciences   social sciences

number of employees (FTE) at each first level unit

446   451   1095   476

institutes and colleges

the senate will decide the composition of institutes and colleges in each faculty in May 2015

FIGURE 1.7. *The structure of the UT before and after the amendment of the statutes. The size of academic units is shown in the figure by the number of staff in the unit in 2013 (FTE)*

1.1.6. Management of internal and external communication

The field of marketing and communication is headed by the director of administration and the corresponding work is organised and coordinated by the Marketing and Communication Office. The faculties and colleges have a major role in implementing both communication and marketing activities. The relevant cooperation at the university is based more on good practices and oral agreements than on legislative regulations.

The principles and organisation of the university's internal communication are set out in the intranet. The general principle is that all staff but above all the heads of all governance levels are responsible for the flow of information within the university. A good practice is for the organisation's members to be in the know before information is shared with the outside world. Staff members are notified of key management decisions, and information on academic events and news related to the organisation of work is also sent. All employees are responsible for keeping themselves informed, using the university's information channels for this purpose.

The most important central internal information channels used at the university are the intranet, the UT newsletter in Estonian and English, the mailing list for all employees, various thematic or target-group-related mailing lists and the magazine Universitas Tartuensis. University staff are offered support and training for the use of internal information channels, advising people by telephone and email and introducing the information channels at training sessions (such as the new employee training course, information coordinator meetings, etc.). The communication activities within the university units depend on the practices of each unit and these can vary (see also 1.2.4 on the employees' satisfaction with access to information).

The Marketing and Communication Office regularly measures the use of the main internal information channels and keeps track of the university employees' information needs (see e.g. the UT newsletter readership survey 2012, intranet user survey 2011). As a result of these studies, the newsletter and intranet have been updated (in 2013 and 2014, respectively). In addition to the studies conducted, the intranet use is analysed and visitor counts for the UT newsletter (in Estonian and English) news are tracked. The studies have shown that sometimes the heads of units do not sense their responsibility for keeping the employees informed or do not have the necessary competence: nearly half of university staff receive information from the head of their structural unit or their direct supervisor only a few times a month or even less frequently.

Besides the information channels used by the Marketing and Communication Office, students are informed by the Student Council, the Office of Academic Affairs and faculties, institutes and colleges. The university's central support units have limited opportunities to send target-group-based information to students and thus the level of awareness can vary among students in different academic units.

The university's external communication includes public relations, providing advice to the university community in the field of communication and website management and preparation of training and information materials. The main external communication activities and channels as well as the principles of media communication and use of social media are available in the intranet.

Development of alumni activities is an important part of external communication. This is based on the corresponding principles approved by the university board. The main channel of communication with alumni is the relevant page in the external web. To track communication outreach with alumni, the readership of the alumni monthly newsletter and blog and the number of UT alumni in the LinkedIn social media environment are monitored.

According to the University of Tartu marketing principles approved by the council in 2011, marketing is conducted through marketing fields (degree studies, continuing education and knowledge transfer) and all activities have objectives and are target-group-based. The implementation of the marketing principles is coordinated by the Marketing Committee. The marketing activity survey conducted in 2012 in cooperation with internal auditors proposed many areas for improvement. It was recommended to further support and promote cooperation between structural units, better (more regular) exchange of information, quality counselling and marketing training.

Each year, the Marketing and Communication Office tracks changes in the university's image using a reputation survey conducted by market research company TNS Emor. In the university reputation study conducted in 2014 by TNS Emor, the University of Tartu was at the top of the university rankings, and had increased its prestige compared to the previous year, but the edge over second-place Tallinn University of Technology (TUT) had decreased. The range of people who consider the UT to be prestigious is wide and includes a greater than average number of people with higher education, top managers and specialists.

1.2. PERSONNEL MANAGEMENT

The university's strategic plan A2015 set the goal that the university has international academic employees who are highly qualified and the university promotes the self-improvement and academic migration of employees.

Personnel-related work is centrally organised by the Personnel Office in the area of responsibility of the director of administration. The office provides support in all fields of personnel work. Each head of a structural unit is responsible for organising operations that support smooth and productive work and legally correct procedures.

The functions of academic staff are detailed in the job descriptions of academic staff and the requirements applicable to the qualification and experience of academic staff are governed by the requirements for teaching and research staff. The professional review of employees is governed by the procedure for the evaluation of teaching and research staff (the new procedure entered into force on 1 January 2015). Remuneration of staff is regulated by the salary rules, which determine the principles for remuneration and providing motivation for employees, sets out the categories of positions and the respective pay grades and the minimum pay for each pay grade.

1.2.1. Recruitment of staff and academic sustainability

The recruitment and selection of academic staff is decided, depending on the position, by either the senate or the faculty/institute council. Recruitment of non-academic staff is decided by the head of unit. To ensure the transparency of recruitment to and quality of non-academic positions, guidelines have been drafted that describe good practices for recruiting support staff.

The university considers it important that open academic positions be filled by way of a public competition, the information on the competition reach all relevant target groups and the average number of participants in each competition be more than one.

In Estonia, the practice to date has been to enter into employment contracts with teaching and research staff for a specified term of up to five years. Academic positions at the university are filled either by a public competition, without announcing such a competition, or by inviting a visiting professor. A position may be filled for up to five years without a competition if the competition for filling the position was unsuccessful. Visiting professors may be invited to teach for up to five years; they must be researchers, outstanding creative artists or outstanding practitioners in their field.

The ways of creating and filling positions of professors and lead research fellows are decided by the rector at the proposal of the council of the faculty or the non-faculty institution, after reviewing the opinion of the area council upon establishing the position. Professors and lead research fellows are selected by the senate, and the candidates for the position are evaluated by at least three experts from outside Estonia. The election is preceded by a recommendation vote in the faculty council and discussion and forming an opinion in the area

council. Associate professors are selected by the council of the faculty or of a non-faculty institution. In filling other positions, the constitutive regulations of the faculty may stipulate that employees are to be selected by the institute council.

Candidates for academic positions are evaluated based on the requirements for teaching and research staff. In addition to the performance in teaching and R&D, the criteria for evaluation include preparation of textbooks, work done in continuing education and e-learning, popularisation of the specialisation, participation in the organisation of teaching (preparation of curricula and syllabi, etc.) and the work of academic and administrative bodies and committees.

Based on the objectives of A2015, the job requirements of teaching and research staff have been supplemented. Starting from 2018, those filling the position of a lecturer are required to hold a doctoral degree. Positions that require a doctoral degree are subject to a mobility requirement that will be taken into account for evaluation purposes starting from 2015.

The requirement that teaching staff participate in continuing education in the field of teaching skills has been in effect since 2010. In selecting teaching staff, their contribution to teaching, and in particular the feedback from students, is taken into account. To use the feedback from students better, a module with the relevant functionality has been created in the Study Information System (SIS) allowing both staff and their supervisors to conveniently get an overview of the feedback given by students.

In October 2012, the senate formed a committee, the objective of which was to offer solutions on how to update the principles used by the university to open, finance and close professorships and to establish requirements for filling these positions. Based on the committee's proposals, preparations began in 2014 to update the requirements for teaching and research staff.

An amendment to the Universities Act sets forth that starting from 1 January 2015, only employment contracts without a specified term are signed with ordinary teaching and research staff. As the university is obliged to regularly evaluate whether teaching and academic staff meet the requirements of the position, the current periodic appointment will be replaced with professional review. The establishment of the review procedure and conditions is in the powers of the university. The current professional review procedure was brought into conformity with the amended legislation in autumn 2014, taking into account the current operating practice at academic units.

According to the plans, teaching and research staff working at the UT on the basis of an employment contract without a term will undergo professional review every fifth year of employment. A committee of at least three members is formed for the review, and the committee itself determines the details of its working procedure. If this Review Committee finds that a staff member or his or her performance does not meet the requirements for the position, the head of the structural unit has two options: to specify a time for the repeat review or
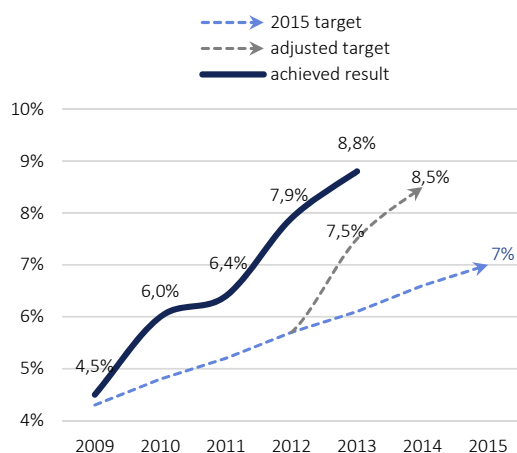

FIGURE 1.8. *Share of international teaching and research staff of all academic staff in the years 2009–2013 (expected result and achieved result)*
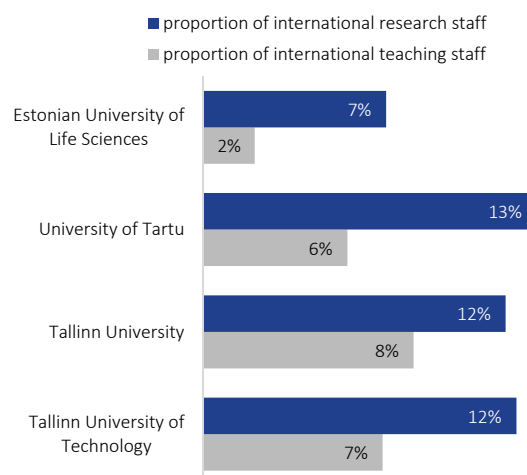
FIGURE 1.9. *Comparison of the share of international teaching and research staff at major Estonian universities in 2013. Sources: universities' personnel offices*

to initiate extraordinary cancellation of the employment contract on conditions set forth in the Employment Contracts Act. Establishing an effective professional review system is one of the most important objectives for the university in the years ahead.

In 2013, the number of international members of the research and teaching staff made up almost 9% of the total number of academic staff at the university. Various inter-university programmes, largely financed from the EU Structural Funds, have aided the recruitment of top researchers. With regard to specialisation-based measures, several programmes have been launched in Estonia, of which the information and communication technology development measure has allowed top specialists to be brought to Estonia and the university at a competitive salary level.

The share of those 30 years of age and under among academic staff has decreased and the share of those 31 and over has increased, except for the 51–60 age group, where the number of staff has remained the same. To some extent, the trend could point to problems with sustainability but the majority of the university's academic staff members are in the 31–50 age group and the share of older staff has not increased much in the period in question. The creation of the position of junior research fellow (amendment to the Organisation of Research and Development Act, which entered into force in the University of Tartu statutes on 5 November 2012), aiming to involve doctoral students in research at the university, helps to increase sustainability.

FIGURE 1.10. *Number of academic staff by age in 2009 and 2013*

In 2013, 60% of the university's non-academic staff worked at faculties and colleges, 24% in the support structure of the university and 16% at the university's institutions. In 2012, the functions of non-academic staff and the reasons for the increased number of non-academic positions at the UT's academic units in 2006–2011 were audited. The audit confirmed that in 59% of cases, new positions had been created in connection with the implementation of projects. The Faculty of Science and Technology has seen the largest increase in the number of non-academic positions. An important part of non-academic staff is in fact also engaged in R&D activities: more than 70% of UT employees spend at least 10% of their working time on R&D activities.

FIGURE 1.11. *Change in the number of employees working in non-academic positions at the UT compared to each preceding year, during the period 2009–2013*

1.2.2. Staff development

The organisation of regular and consistent staff development and the effective and balanced use of the unit's training budget are one of the functions of the heads of structural units and most of the decisions pertaining to staff development are made in structural units. The development of staff's teaching skills is supported by the Centre for Excellence in Teaching and Learning located in the Lifelong Learning Centre, and in the case of e-courses, by the Educational Technology Centre. In other fields, training is organised by the Personnel Office in cooperation with other support units. The performance agreement between the Ministry of Education and Research and the university states that the University of Tartu is responsible for providing high-calibre continuing education for teaching staff in Estonia, which the university has done at the state and university level with support from the EU Structural Funds (continuing education is also offered to teaching staff from other universities, and teachers at schools, etc.).

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- Different academic communities (of practice) have started work, research of teaching and the publication of its results has been launched.
- Summer and winter academies for teaching staff take place regularly, where best international trainers provide instruction on teaching and academic supervision.
- Various university units employ a total of 16 trained mentors who support new teaching staff and all others who want to develop their teaching and supervision skills. Among other things, mentors support starting teaching staff in academic supervision of their first doctoral students.
- A number of teaching-related guidelines for teaching staff have been developed and published (on outcome-based assessment in higher education, supervision of and giving feedback on students' research papers, social and communicative skills of teaching staff, study methods in higher education, project-based practical training, development of transferable skills in higher education).
- A quality award has been established, awarded to the best structural unit in terms of cooperative development of teaching quality.

In-house training aimed at the university's staff is carried out by support unit staff who have received training in the respective field as well as by the university's teaching and research staff and professional trainers from outside the university. In 2009, a webpage on training and professional development was opened in the university's intranet, where each target group can find complete information on development opportunities, programmes set to start, advice and recommendations for self-improvement or organising a training course. In addition to the training webpage, staff can find information on in-house training on the in-house training calendar, which has forms for registering for training courses and giving feedback. In 2012, a periodic self-improvement newsletter began to be sent out to all staff and a separate newsletter is also compiled for managers. An analysis was carried out in 2012 for promoting self-improvement in the field of management, based on which the content and format of managerial training was changed. Feedback is collected from all participants of in-house training courses and it is taken into account in planning new training courses.

In 2013:

- the university organised a total of 180 staff training courses in different fields, and there were a total of 2,628 participants;
- 18 pairs of academic adviser and advisee with a work cycle of up to one year took part in a mentorship programme designed to advance professional leadership and support managers with less experience.

To promote professional self-improvement, it is planned to adopt techniques that support the development of staff (e.g. methodology for mapping an employee's development needs, etc.) and provide more centralised support and recognition to activities aimed at developing managerial staff. Traditionally, recognition is accorded each year to one support unit that has done the most to contribute to in-house training activities.

Each year, several hundred people start working for the university. New employee orientation seminars are held (including a separate English-language seminar for international staff) where an overview is given of the university's development objectives, salient topics in university life and recommendations for better organising working life, and where participants discuss the university's values. At the seminar, new staff members have the opportunity to meet the Rector's Office and ask questions. The university offers international staff and their family members the opportunity to learn Estonian, take part in seminars that introduce the Estonian culture and in social events as well as to improve their academic English language skills. Each year, the welcome guide for international staff is updated. It gives practical information on Estonia in general, living in Tartu, and working at the university. A separate guideline has been developed for university employees who are in charge of supporting the orientation and adjustment process for international staff. The UT has joined the pan-European Euraxess Researchers in Motion network.

In parallel with the growing number of international staff, the selection of Estonian language and culture courses on offer expanded in 2009–2013. Starting from 2013, Estonian courses and culture seminars are free of charge also for the family members of international staff.

1.2.3. Remuneration of work and motivation of staff

The remuneration of university staff may, in addition to basic salary, include additional remuneration. The types of additional remuneration are: remuneration for the performance of additional or managerial duties, individual performance pay, performance pay for research work, performance pay for the supervision of a doctoral student, unit-wide performance pay and bonus (see components of remuneration). The Salary Committee appointed by the rector's directive submits to the rector proposals on developing principles of salary policy, salary system and amendment of the salary rules. All faculties, institutes and colleges are included in the decision-making process in the intra-university approval round.

At the proposal of the Strategy Committee, it is planned to review the principles of remuneration of the UT staff in 2015. To this point, the following principles have been the basis.

- **Uniformity and integrity.** All principles apply to all staff.
- **The basis for remuneration is the value of the work done by the staff member** in the context of the university as a whole, the linkage between the work and the fulfilment of objectives in the university statutes and the strategic plan and the nature of the work (extent of responsibility, complexity, etc.).
- **The Estonian salary market context is taken into account.** In the case of academic positions, the goal is to be the leader of the Estonian salary market and to raise the average total pay for professor, lead research fellow, associate professor/senior research fellow, lecturer/research fellow and assistant/teacher/junior research fellow to 4, 3, 2, or 1.7 times the national average salary, respectively. The goal in non-academic positions is to pay a salary that is competitive on the job market.
- **Result-oriented organisation of work and remuneration are valued.** For this purpose, when evaluating job performance in the previous period, individual and/or unit-wide performance pay and/or changes in the basic pay rate is used based on the functions agreed upon in the performance interview.
- **Decentralisation.** The actual person organising the work has the power and responsibility to determine staff salaries. Decisions on remuneration are made by the head of structural unit, who consults with the Personnel Office if necessary.
- **All employees are expected to produce good results in all areas of their work.** The variable component in the salary is relatively small compared to the fixed salary.

To carry out remuneration policy that fulfils the objectives and to make reasoned remuneration decisions, the Personnel Office regularly prepares comparative studies with regard to the Estonian salary market (e.g. remuneration of non-academic staff in the context of the Estonian salary market, comparison of salaries of academic and non-academic staff at public universities) and analyses of the salary system and organisation of work within the university. Analyses containing confidential data on staff salaries can be accessed on the salary web only by managers. Starting from 2013, the main conclusions from the analyses are available to everyone on the university's public website.

TABLE 1.5. Average salaries in academic positions in 2013 at major Estonian universities (euros)

Position	EULS	TU	TUT	UT
Professor	2204	2409	3101	2707
Associate professor	1341	1281	1850	1614
Lecturer	1039	1068	1216	1133
Assistant	843	-	1288	983
Teacher	-	1052	1032	888
Lead research fellow	-	1844	2725	2829
Senior research fellow	1414	1371	1757	1708
Research fellow	1257	1259	1415	1305
Junior research fellow	850	1031	953	985
Average	1275	1332	1707	1530

When comparing the level of the average salaries of the universities' academic staff, the major pay disparities between different fields should be considered. On average, the field of technology, manufacturing and construction is better paid, followed by social sciences and natural and exact sciences. The field of humanities and arts, in which 20% of the UT professors work, has the lowest salaries (in Estonia overall). By field, the average salary at the UT is on the same level as the average salary of academic staff at Tallinn University of Technology and Tallinn University.

In 2013, the minimum salary levels in pay grades were increased at the university. As the rise was the greatest in the academic positions with the lowest pay grade, the competitiveness of lecturers' salaries, for instance, improved somewhat.

By position, there are gender differences in the average remuneration paid to men and women at the UT, but these are not all in the favour of men. The main reason for the gender gap lies in structural differences: women make up a greater share of staff in lower-paid fields (education, humanities and arts) and in lower positions

(lecturer, teacher, assistant). According to Statistics Estonia, in the field of education, the average gross hourly wage for women was 26.4 percent lower than that of men in 2013. At the UT, the greatest salary difference in favour of men is in the position of associate professor (women's average wage is 10% lower than that of men). Female staff members are paid more than male staff in the position of teacher (16%).

In 2014, the Salary Committee made a proposal to increase pay in teaching academic staff positions (teacher, assistant, lecturer, lecturer with a doctoral degree) starting from 1 March 2015.

TABLE 1.6. Satisfaction with pay and recognition in 2010–2013 (share of respondents who strongly, generally or slightly agreed with the statement)

Statement	2010	2011	2012	2013
I receive a fair salary	53.6%	51.3%	53.0%	53.1%
My good work performance receives recognition	65.7%	70.8%	70.8%	68.2%

When recognising staff, the basis is the University of Tartu regulations for giving recognition. There are forms of recognition that are awarded for especially good performance, excellence in teaching (e.g. programme director of the year, teaching staff member of the year), long-standing service rendered to the university (e.g. Grand Medal, Letter of Appreciation, University of Tartu Medal) and recognitions awarded for many other accomplishments (e.g. the most sports-minded employee, the most sports-minded unit).

To support achieving the results of the areas of activity in the strategic plan, the university uses a performance management and recognition system.
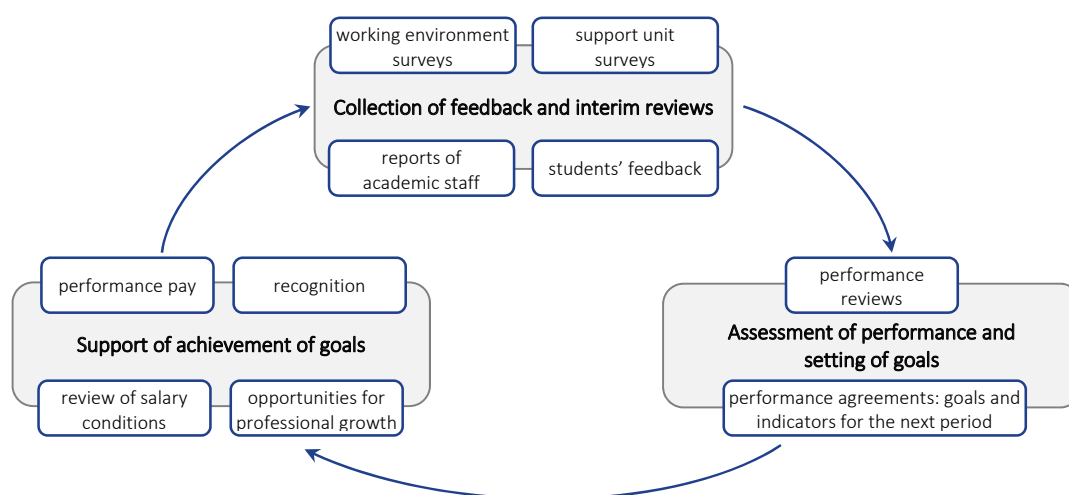
FIGURE 1.12. Performance management system

1.2.4. Staff satisfaction

To improve the university's work environment, management and activities and services of support units, university-wide surveys on the work environment and work of the support units have taken place each year since 2011 in the university's feedback web. The surveys are also a part of the university's performance management and recognition system.

Summaries of the unit's results are available to employees in the feedback web. In addition, general summaries of results are posted on the intranet, describing and analysing the changes that have taken place at the university. To make the use of the survey results more

TABLE 1.7. Staff satisfaction with the work of the support units in 2011–2013 (share of respondents who strongly, generally or slightly agreed with the statement)

	2011	2012	2013
Appropriateness of communication	89.8%	90.4%	95.6%
Availability of services	91.7%	92.5%	93.5%
Adherence to agreements	87.2%	88.3%	90.8%
Obtaining solution to problem	85.2%	83.2%	89.9%
Proceeding from university's objectives	79.2%	74.8%	85.2%
Competence of initiatives	73.9%	80.3%	84.2%
Overall satisfaction with work of units	84.1%	86.6%	90.9%

effective, the Personnel Office plans to start organising in-house training seminars after the survey period, centred on the results of each unit and a discussion of development proposals and activities.

The university gathers data on staff satisfaction and work environment using other surveys as well. For instance, in 2014, as part of the 7th framework programme's TANDEM project, international researchers were surveyed, and as a result, action was taken to provide better support for the orientation of new international staff. New employees are regularly polled for feedback in the new employee survey, the results of which are used to improve recruitment, organisation of work and work environment.

The consolidated indicator for university staff job satisfaction is high: in 2013, 92% of the respondents are satisfied with their work (respondents who indicated to either strongly, generally or slightly agree with the statement "All in all, I am satisfied with my job"). University staff members consider their work to be important (97%) and interesting (97%) and are proud to work at the UT (92%).

In 2011–2013, two-thirds of staff participating in the survey agreed with the statement that their supervisor requests their opinion regarding management decisions where necessary. To increase involvement and make the organisational culture more open, a number of steps have been taken: discussion of changes to the university's strategic plan and management reform at seminars and decision-making bodies, encouraging commenting in the university's intranet, publication of the results of feedback surveys, etc.

TABLE 1.8. Satisfaction with the availability of information and involvement in management in 2010–2013 (share of respondents who strongly, generally or slightly agreed with the statement)

Statement	2010	2011	2012	2013
The information I require for my job is available to me	93.6%	94.0%	92.8%	92.8%
Where necessary, my supervisor requests my opinion regarding management decisions	62.4%	67.0%	66.1%	67.3%

To improve cohesiveness of the university community and promote caring attitudes from the employer, 2010 brought new traditions: an annual family day, sports days for staff, recognition of the most sports-minded unit and employees, more attention to preventing job-related stress (training courses and information materials), and Christmas parties for staff members' children, etc.

A club evening series called "Dorpater Dozentenabend" was set up to offer cultural entertainment and social venue for the UT's international community. Cultural experiences are also offered through outings, seminars and other activities organised for international staff and their families.

1.2.5. Participation of staff in international cooperation projects and mobility programmes

To increase its international cooperation and its visibility, the UT has joined several regional and pan-European networks (e.g. Coimbra group, Utrecht network). The goal of the networks is to represent the common interests of their members, facilitate the search for partners and to strengthen the academic and cultural connections between universities, creating preconditions for well-functioning exchange of information and developing exchange of researchers, teaching staff and students.

The process of reaching agreements between the UT and partner universities is coordinated by the International Cooperation Unit of the Rector's Strategy Office. The agreements govern the exchange of students and academic staff encompassing all UT faculties and units. UT researchers have the researcher exchange opportunity to make short-term visits (5–10 days) to partner universities to initiate projects and cooperation or to invite their colleagues from partner universities on short visits. To a smaller extent, this activity area also supports participation in conferences.

Besides the teaching staff exchange of the Erasmus+ programme, a number of other mobility programmes support staff development abroad. For instance, programmes funded by foreign countries such as DAAD in Germany and the Fulbright Scholar Program in the US enable longer term research mobility and knowledge exchange.

To provide information on the opportunities of mobility programmes and introduce scholarship programmes, in-house training courses are held regularly. To find funding and orientate amidst the complicated system of grants and scholarships, staff can get support from the database of funding opportunities.

Along with growing internationalisation, staff mobility has also increased. Each year, the Finance Office makes a thorough overview of the business trips in the budget year. In 2013, 2,522 staff members went on business trips, which is 67% of all university staff.

TABLE 1.9. Business trips taken by UT employees in 2009–2013, including the share of academic staff members who went on business trips abroad

Year	No. of employees who went on business trip	of which trips abroad	Total cost of trips abroad (euros)	Share of academic staff who went on business trips abroad
2013	2,522	1,708	3,575,528	52.0%
2012	2,425	1,700	3,358,562	50.6%
2011	2,267	1,644	2,807,464	49.6%
2010	2,198	1,558	2,624,974	49.5%
2009	2,131	1,518	2,542,062	49.6%

1.2.6. Principles of academic ethics

Unlike many Estonian universities, the UT has not set forth a code of ethics as a single document. The academic practices at the UT are indirectly reflected in the university's core values. The Study Regulations (clause 204) defines disregard for academic practices as academic fraud and improper behaviour, with improper behaviour seen as a serious violation of generally accepted rules of behaviour or academic traditions, forgery of documents or an intentionally committed criminal offence by a student. Actions to be taken to prevent or detect plagiarism are dealt with in 3.3.3.

The Study Regulations also govern the process of contesting decisions related to the organisation of study. For this purpose, the Appeals Committee has been formed as an independent academic body at the university (four students and four members of teaching staff), which processes 10 appeals per year on average.

The UT has a Research Ethics Committee, which as an independent body forms an opinion on all projects submitted to the committee. The function of the committee is to ensure adherence to internationally recognised ethics principles, including protection of the health, human dignity, identity, privacy and other fundamental rights and freedoms and safety and well-being of the subjects of research projects.

Universities Estonia recognised the principles of the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers in the Estonian public universities' Agreement on Good Practice Regarding Quality signed in September 2011. It was decided to discuss the accession to the charter and the guidelines again once the universities have undergone institutional accreditation and it is possible to assess to what extent accreditation will simplify the complicated process of applying for a quality label.

At the initiative of the University of Tartu Centre for Ethics and UNESCO, the Ministry of Education and Research and the Ministry of Social Affairs, an ethics-related website Eetikaveeb (Ethics in Estonia portal) has been launched. It is a source of information on different trends in the field of ethics, literature published in the field, regulations, courses offered, case studies, codes of ethics and ethics committees.

1.3. MANAGEMENT OF FINANCIAL RESOURCES AND INFRASTRUCTURE

The university's budget and annual report are approved by the university council, which also decides on taking loans on behalf of the university and establishes principles for the acquisition, encumbrance with limited real right and transfer of immovable property, and the creation of and membership in legal entities. The head of finance is responsible for organising and developing the university's financial activities, financial accounting, planning, and analysis and organising the drafting of the budget and annual report. The Finance Office is in the area of responsibility of the head of finance.

To implement the university's strategic plan A2015, in 2010 the council adopted the financial strategy until 2015, which gave the strategic plan a financial framework. The everyday management of financial resources is done through the budget, the principles for the drafting, amendment and reporting of which are established

in the underlined budget rules. The accounting and financial reporting procedure is established in the internal accounting rules.

The director of administration is responsible for the administration of immovable and movable property, risks related to procurements, objects and benefits, security, information technology and information systems and managing and developing the university's administrative affairs through the Estates Office, Information Technology Office and Administrative Office in his/her area of responsibility.

The underlying documents on the planning, acquisition and sale of university buildings are the principles for the spatial development of the University of Tartu in the city of Tartu up to 2015, the principles for the acquisition, encumbrance, transfer and let of immovable property and the rules for investing into fixed assets. All construction work at the university takes place pursuant to the procedure for performing construction works. In resolving matters related to the university's use of space, including in preparing the division of space, the basis is the rules for use of buildings and premises, which also establishes the basis and procedure for the university's Premises Committee.

The IT area is governed by the university's IT standard, and computer network usage rules have also been established. Procedure for the provision of IT services and principles for investment into IT development projects have been developed. The field of administrative affairs is governed by the administrative procedure rules.

1.3.1. University's financial management principles and system

The UT's income has grown with each year: in 2013, income was the highest it has ever been. The main sources of the increased income in 2009–2013 were the EU Structural Fund resources. The largest portion of the income in the university's basic budget is the higher education activity support, followed by the EU Structural Fund resources oriented at research. In 2013, for the first time, the share of research income in the basic budget exceeded the income from teaching.
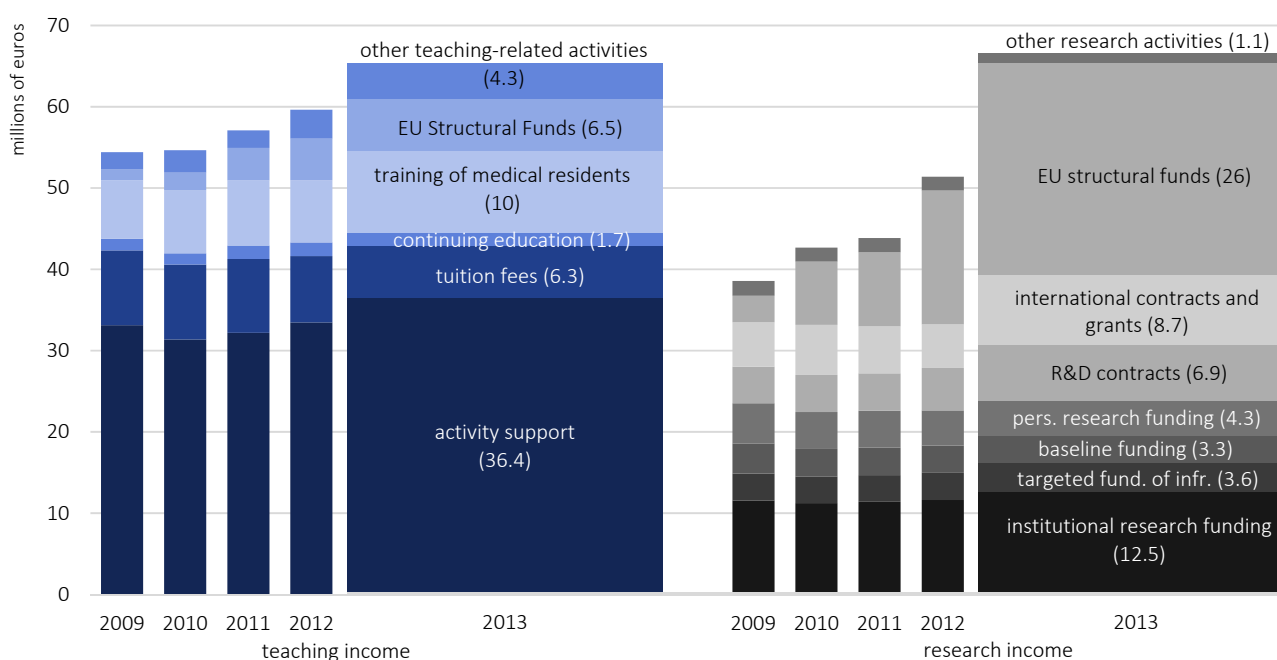
FIGURE 1.13. Amount and classification of the UT's income from teaching and research in 2009–2013

The largest contractual partner of the university is the state of Estonia. To increase and diversify the revenue base, the university works to find new contractual partners. The importance of this is underlined by the financial performance indicators of the strategic plan (income per FTE academic staff, income from continuing education, proportion of R&D income in annual budget, proportion of international R&D grants in research funding, research income from industry and income from commercialisation of intellectual property).

Each year, the university council approves the principles for drafting the next year's budget, based on the strategic plan, the financial strategy, changes deemed necessary by the council, senate and board and the changing external environment. One of the principles for drafting the budget is that the university's loan burden has to stay at a level where the university is able to pay back its loans without refinancing them, and planned expenses are kept below income. Budget subjects are the faculties, institutions and support units. The budget is approved and compliance verified by the university council, assisted by the Budget Committee formed by the council. The distribution of the budget within faculties is approved by the council of each faculty.

The financial strategy specifies objectives that are the basis for drafting the budget:

- the share of the university's net assets on the balance sheet is at least 75%;
- loan burden is below 25% of income;
- expense to income ratio is below 98%;
- cash flows from economic activity are positive each year and the total cash flows in 2009–2015 exceed the depreciation on fixed assets during the same period.

TABLE 1.10. Adherence to the budget drafting objectives specified in the financial strategy in 2009–2013

	2009	2010	2011	2012	2013
Net assets/Balance sheet volume	86.3%	86.4%	84.4%	84.7%	85.4%
Loans/Operating income	15.4%	16.0%	17.3%	12.5%	9.3%
Operating expenses/Operating income	90.4%	107.7%	101.6%	92.5%	88.4%
Cash flows from economic activity (in thousands of euros)	23,152	9,699	5,348	20,353	38,300
Depreciation on fixed assets (in thousands of euros)	13,069	23,549	16,536	16,231	16,262
Cumulative depreciation on cash flows (in thousands of euros)	10,083	-3,767	-14,955	-10,833	11,205

The fact that expenses exceeded income in 2010 was due to austerity measures imposed on the national level due to the recession. State financing was reduced as a result of these measures, but as a large organisation, it took the university some time to adapt to the (unexpected) changes in the external environment. However, already by 2011, thanks to budget cuts and its own austerity measures, the university managed to embark on a course toward achieving the financial strategy goals, and in a year's time, actually achieved the goals.

A comparison of financial indicators with other public universities in Estonia can be found in the 2013 yearbook of Universities Estonia.

The university seeks to adhere to the principle that new projects may be launched and new contracts signed only if the coverage of the related overhead costs is ensured. Due to the need to achieve the primary goals of the university as an educational and research institution, financial principles are sometimes reprioritised and the above principle is not applied. A basis for making such exceptions is given by, for instance, clause 13 of the procedure for distribution and use of income established for 2014.

The activity support funds distributed by the university council among academic units ties in with the volume and quality of education and must ensure the sustainability of all curriculum groups taught at the university. The costs of all curricula at the university have been calculated and they are used as an input in the budget division. The calculation of the profitability of the curriculum and description of resources must be submitted already in the preliminary application for opening the curriculum.

The expenses related to the university's museums, Botanic Garden and athletic and cultural activities are covered from the university's budget and the principles for financing them are reviewed annually, with adjustments made where necessary.

The university is dealing with reorganising inefficiently functioning structural units and the transfer of assets unnecessary for its activities under the university's statutes. For this purpose, active measures are employed for reducing and preventing fragmentation of actions and resources. The university's history contains many examples of how deleterious activities are brought to an end through structural changes, either by liquidations or mergers: the closure of Türi College, the merger of the Entrepreneurship Centre with the Institute of Business Administration in the Faculty of Economics and Business Administration, and the merger of the Institute of Sociology and Social Policy and the Institute of Journalism, Communication and Information Studies in the

Faculty of Social Sciences and Education. The largest structural reform is being prepared in connection with the adoption of the new statutes.

Monitoring of financial resource balances and financial discipline is carried out by the Finance Office on a running basis. The financial web (see 1.3.2) has been set up for detailed current tracking of funds and can be used by everyone who manages the university's funds. To ensure an increase in financial management competence at all management levels and in all university structural units and bring an even higher level of awareness to the making of management decisions, the Finance Office systematically carries out in-house training courses on accounting and budgeting.

Structural units have the possibility of taking internal loans at the university to purchase research equipment and assets to be acquired at public procurements. Internal loans are granted by council decision at an interest rate of 5%. Structural units whose budget is running a deficit must pay the overdraft facility interest if the university takes a loan to cover the deficit. Various actions can be taken to rectify the situation. Besides budgetary decisions, a financial administrator can also be introduced into structural units (budget rules, clauses 93–95), which will result in a strict prohibition on raising remuneration, additional remuneration and hiring of new staff. All disbursements in such a situation can only go through the financial administrator. Based on financial status ratings, in 2014, the rector by his order assigned financial administrators for six months to the Institute of Physics and Institute of Chemistry.

The UT is a legal person in public law and is obliged to prepare consolidated financial statements in line with good accounting practice of the Republic of Estonia. The council has set up an Audit Committee, which provides consultation to the council in issues related to performance of supervision, including with regard to monitoring of accounting principles, external audits, functioning of the internal audit system, management of financial risks and legality of activity, and drafting of the budget and approval of the annual report. The UT's annual reports are audited by an auditing company selected by the council and the audit reports have been spotless in the recent years.

1.3.2. Developing and administering information systems

The university uses a number of information systems to support and effectively administer management and core processes. The main goal in developing information systems is their functionality and user-friendliness, which helps reduce paper use and ensures rapid, convenient and transparent administration and processing of data and working processes for both the university and its partners. The number of electronic documents increases each year (almost 30% of official documents were processed electronically in 2013) and staff are continuously kept informed of changes in (electronic) administration procedures.

The university's central information systems are:

- Study Information System for organising the study process (including continuing education) and drawing up summaries of the study results;
- Document Management Information System for registering and managing university's documents;
- Personnel and Financial Information System for organising accounting and personnel operations;
- Asset Management Information System for managing the university's real estate.

For organising the university's financial and personnel management, the following systems are in use:

- Financial web for managers and financial account holders for tracking funds, making and analysing potential financial decisions and planning the budget;
- Salary web allowing managers to make salary decisions. The salary web also presents staff salary data and analyses that help make salary decisions;
- Asset web to allow persons in charge of asset accounting to track assets and perform procedures related to asset management.

Day-to-day work is supported by various workflows and environments on the intranet desktop, which are used, among others, for the following:

- processing and coordination of draft university bylaws;
- submitting and processing university staff's travel orders and reports;
- submitting and processing university's internal invoices;
- managing and tracking university staff's leave periods;

- announcing and processing competitions for academic positions;
- submitting and managing academic mobility applications;
- registration for and giving feedback on in-house training courses.

The following have also been established for planning and organising day-to-day work:

- group work environment for administering guidelines and manuals and internal information of units (UT wiki);
- environment for creating websites related to teaching and research at the university (sisu@ut.ee);
- environment for managing working processes (Atlassian JIRA);
- environment for preparing and managing work plans.

A reporting system for supporting the setting and evaluation of goals and making everyday management decisions (KRIS) is being developed. It will integrate data from various information systems and allow the volume and performance of activities to be measured and analyses and reports to be generated more rapidly and easily.

For the purposeful development of support functions and information and document management systems, the IT-development ordering process has been implemented since autumn 2013. It ensures that development projects are justified (profitability analysis), priorities are set and there is a defined customer. Depending on the volume of development, the IT Development Council formed by the directive of the director of administration must approve the development. The IT Development Council also regularly reviews the IT development ordering process.

The goal of the process of consolidating IT management was to create better conditions for developing competence, to limit the growth of expenses and improve the security of IT service. Key steps in this direction were taken in early 2012. A unit price concept was adopted: faculties began paying the IT Office for IT administration service based on the set price. IT specialists from the faculties were migrated to the IT Office. The office took an obligation to register all incidents and instead of direct contacts, the call centre service was introduced. Earlier, staff members were polled on their satisfaction with IT Office services once a year, but now they are asked for feedback after each contact (incident-based approach). Centralisation has contributed to more uniform competences, improved the comparison of staff performance and allowed staff numbers to be reduced.

The next step planned in the IT field is to develop an IT strategy. The need for an IT strategy has been occasioned by the changes in the provision of IT services over time and the adoption and implementation of a new strategic plan.

1.3.3. Study and work conditions

Since 2003, over half of the teaching and research buildings of the university have undergone a thorough overhaul. The largest investments to develop the R&D buildings in Estonia and at the university have been made using the EU Structural Fund resources. In 2009–2014, three new research buildings were built in Tartu: the chemistry building Chemicum, the physics building Physicum and the Centre for Translational Research (on the modernisation of research infrastructure, see 3.2.3) and the study building of Narva College.

The preservation and renovation of the university's historical buildings has been supported by the state in 2012 and 2013. Among the historical buildings, the Faculty of Philosophy and the Faculty of Social Sciences and Education, the north wing of the university's main building, the observatory complex and the Natural History Museum have been renovated. In the near future, it is planned to continue the renovation of the Old Anatomical Theatre to transform it into an attractive teaching centre that also houses the university's Gifted and Talented Development Centre and Pedagogicum. As at the end of 2013, the UT had a total of 107 pieces of real estate (with a total floor space of 269,000 m^2) including 13 buildings listed as architectural and historical monuments in the city of Tartu.

In the annual university-wide work environment survey, staff members are also polled for feedback on working conditions. The positive change in assessments given to work premises and the work environment is due to the repairs the university has made to its facilities, the completion of new buildings and occupational environment-related activities: carrying out risk analyses, internal audits of the work environment and preparation of action plans for avoiding or reducing health risks, in-house training activities related to the

work environment and good cooperation with the work environment specialist and work environment representatives.

TABLE 1.11. Satisfaction with work equipment and environment in 2010–2013 (share of respondents who strongly, generally or slightly agreed with the statement)

Statement	2010	2011	2012	2013
My work equipment allows me to do my job well	88.9%	88.8%	90.4%	90.8%
The room that I work in and my physical work environment allow me to do my job well	81.4%	84.8%	83.4%	85.4%

With regard to student feedback, the UT has so far focused most on assessments on academic quality, teaching methods, materials and other substantive areas rather than on study and research conditions. The feedback form has short-answer fields that students can use for commenting, also on topics not otherwise included in the form. Study conditions have seldom appeared in the comments. Thus the university has concluded that students put more value on the quality of studies than on the environment where the quality is pursued, and/or students do not find reason to be dissatisfied as the study environment has been upgraded consistently. In this report, 2.1.5 gives an overview of the improvement of study opportunities based on students' special needs.

Infrastructure development has been based on principles for optimising the university's use of space. The effectiveness and intensity of the use of real estate has increased significantly in the period 2003–2013. At the UT, the structural unit level is now responsible for covering the administrative costs related to the use of space. This ensures optimum use of space and, as a result, greater cost-effectiveness. As at the end of 2013, the expenses of faculties and colleges related to premises made up an average of 5.4% of their budget, which is the lowest level of the last five years. At the same time, a central stake has to some degree been maintained in the interests of ensuring essential and reasonable maintenance of administrative space (e.g. for certain maintenance works, structural units make payments to a central fund on the basis of unit of useful space).

TABLE 1.12. Overall space in UT's teaching and research buildings and per staff position (in FTE) and volume of investments made into buildings in 2003–2013

Year	Space (m²)	Space per staff position (m²)	Volume of investments made into buildings (euros)
2003	128,244	50.3	2,399,311
2004	128,244	49.2	4,178,092
2005	143,942	52.2	4,035,823
2006	143,942	50.8	6,690,692
2007	143,942	49.3	13,235,079
2008	143,942	49.1	23,495,537
2009	155,882	52.7	16,360,782
2010	155,882	52.9	5,504,437
2011	160,692	53.1	11,666,569
2012	141,479	44.8	13,488,189
2013	129,701	41.5	21,967,436

The vice rector, head of an area of responsibility, dean and director of an institution have the right to submit an investment application for building construction or repair. The application is processed by the Premises Committee. On the basis of the committee's proposal, the rector assigns a rating to the investment application. On the basis of the ratings, the investment applications are ranked, and this is taken into account in drafting the capital budget.

TABLE 1.13. UT's income from the sale of non-essential immovable assets in 2009–2013

	2009	2010	2011	2012	2013
Income from the sale of non-essential immovable assets (euros)	65,190	816,177	646,745	2,144,500	4,225,150

At the proposal of the rector, the university council approves the list of non-essential immovable assets. Sale and encumbrance of assets on this list, and the conditions and manner for doing so and the price, are decided by the rector, unless set forth otherwise in a regulation or decided otherwise by the council. This list is reviewed and modified by the university council.

2. TEACHING AND LEARNING

Development of the field of teaching and learning proceeds from the objectives set in the strategic plan A2015 and is based on statistics, research and learning from the good practices of (foreign) partners.

The field is headed by the vice rector for academic affairs. The deans of faculties and directors of colleges have appointed programme directors for degree study curricula. The responsibility for the quality of teaching and supervision lies with the teaching staff, who can develop their skills at, among other places, the Centre for Excellence in Teaching and Learning of the Lifelong Learning Centre. The teaching staff members are supported in the organisation of studies by the dean's offices in each of the faculties or by college staff. The development of curricula is coordinated by the Office of Academic Affairs that is also responsible for developing and enforcing the rules and guidelines needed for the organisation of degree studies. Development of e-learning is coordinated by the Lifelong Learning Centre that also coordinates and develops continuing education (see also 4.2). Marketing of degree studies is coordinated by the Marketing and Communication Office.

The degree study curricula and the organisation of degree studies are based on various national and university legal acts. The most important state legal acts are the Universities Act and the Standard of Higher Education, and the most important bylaws of the university are the Study Regulations, the Statutes of Curriculum and the Procedure for Awarding Doctorates. The consolidated texts of all legal acts and the document forms for students are public and available online.

2.1. EFFECTIVENESS OF TEACHING AND LEARNING, AND FORMATION OF THE STUDENT BODY

2.1.1. Objectives of teaching and learning

The strategic plan A2015 set the goal that the university offers knowledge-based degree studies, continuing education and retraining on the basis of curricula that meet the society's needs and have received a positive rating in the quality assessment of curriculum groups. The students studying at the university should be international and capable, have made an informed decision when choosing their respective specialities and be motivated. To achieve this goal, the university defined 10 areas of activity (including preparing prospective students, improving the support system, supporting the study of various target groups and developing a learner-centred study environment) and consolidated performance indicators including target values for 2015 (see 1.1.3). Compliance with the objectives of teaching and learning are assessed regularly as part of the general system for ensuring academic quality through student feedback surveys, annual reports, internal evaluation of curricula and the supervision calendar, as well as ad hoc whenever problems emerge.

The most important activities in the strategic plan that contribute to achieving the student-related objectives, increase student satisfaction with the quality of studies and motivate them to continue studies are:

- curriculum development that considers the needs and expectations of students;
- good supervision and teaching skills as well as social and communication abilities of teaching staff;
- grading/assessment that supports learning;
- practical training opportunities that support the achievement of learning outcomes;
- advising students from the beginning until the end of their studies;
- involving talented students in research and development;
- support from experienced students to new students;
- opportunities for studies abroad and taking credit obtained abroad into account in the completion of curriculum;
- support for international students to help them integrate into the linguistic and cultural environment;
- involving students in development activities.

2.1.2. Ensuring the competitiveness of graduates

Based on the university's strategic plan, activities to ensure students' competitiveness fall into five different areas (see TABLE 2.1).

The university's plan to develop entrepreneurial studies holds that during their studies all students should have the possibility to take, in either curricular or extracurricular form, entrepreneurial courses according to their needs and interests, including practical training, and to take part in projects that support enterprising spirit. Progress toward this objective is supported by the Centre for Entrepreneurship and Innovation established in 2014 as a consortium of five faculties and three colleges, aiming to promote enterprising attitudes and innovation awareness and coordinate the necessary activities at the university and in Estonia as a whole. The centre also includes the university's Idea Lab: a place where students can find novel and practical solutions to problems they themselves, entrepreneurs or the teaching staff raise. In cooperation with the SEB Bank, the Vega Fund supports the development of ideas from paper into practice. During three years, 150,000 euros of financial support is distributed to help establish a product prototype or market the product or service.

TABLE 2.1. *Areas of activity for ensuring the competitiveness of students*

Area of activity	Coordinating unit	Examples
Developing entrepreneurship	Rector's Office	In 2012, the position of vice rector for development was created. Among other things, this person is responsible for developing entrepreneurship relations of the university.
		In 2013, the principles and action plan of an enterprising university were articulated.
		In 2014, the Centre for Entrepreneurship and Innovation started work. The UT Idea Lab launched in late 2011 was incorporated into it.
Valuing transferable skills	Office of Academic Affairs	Starting from 2006, all doctoral curricula must contain a university-wide elective module worth 12 ECTS.
		In 2011, special syllabi were prepared so that transferable skills could be taken into account as optional courses by the recognition of prior learning and professional experience (RPL).
Offering practical training opportunities	Office of Academic Affairs	Since 2009, the curricula of all levels of study must include practical training.
		The position of a traineeship coordinator was created at the Office of Academic Affairs in early 2013 (see also 2.4.2) with focus on practical training abroad.
	Office of Research and Development	In 2013, the information portal Studentweb was developed by Estonian institutions of higher education and employers: the UT was a leading partner in the development (see also 2.4.1).
Supporting knowledge transfer and innovation	Office of Research and Development	Since June 2008, patents and patent applications are considered equivalent to journal publications of research results included in a dissertation.
Improving the international dimension of curricula	Office of Academic Affairs	Since 2009, all bachelor's, master's and doctoral curricula must include foreign-language courses (modules) (see also 2.4.2).
		Since 2009, faculties are paid additional money for carrying out teaching work aimed at international (visiting) students.
		From 2012, the specialisation module of doctoral curricula must include foreign-language courses.

In 2013, the groundwork was laid for the competition "Kaleidoskoop" ("Kaleidoscope") for business plans and concepts developed in entrepreneurship courses. Twelve teams took part in the first competition. Besides the jury, mentors from the mentor network attended the competition, and participants discussed their entrepreneurial problems with them. A number of teams found advisers and the opportunity to sell their service or product, while others were able to join the incubation programme either at the Idea Lab or Tartu Creative Incubator. On 12 December 2014, Kaleidoskoop took place for the third time already.

Viljandi Culture Academy launched, as a pilot project, entrepreneurship studies as a compulsory course. Students must complete a 6 ECTS basic course on practical entrepreneurship, in which they develop an actual business project concept. The course is followed by a 6 ECTS practical training, during which the students launch their own company or implement a project.

Much attention is devoted at the university to offering practical training opportunities. The results of the survey among practical training coordinators showed that the current practical training system and coordination do not require changing but a problem lies in the limited number of practical training places and, to some degree, covering the expenses related to practical training. To resolve the problem, the Office of Academic Affairs helped to prepare, in the framework of the Primus programme for developing higher education at Estonian institutions of higher education, guidelines for project-based practical training, and to start informing the university's teaching staff on the subject and offer the respective training courses. The rector has established a fund for supporting teaching and learning, from which academic units can also apply for support for organising practical training starting from 2013.

2.1.3. Planning student places

The principle for planning the number of student places in degree studies is that the number of degree study places is integrally linked to academic quality. Maintaining the number of student places (and thus the number of students) is not a separate goal at the university. Considering the demographic trend, the total number of student places at the UT has been reduced, plus the admission requirements have been made more stringent for the purpose of ensuring quality. For this reason, the UT has admitted increasingly fewer students since the academic year 2010/2011. Up to 2012, state-commissioned education defined the society's needs for the university. In establishing admission quotas for student places, the teaching capacity of faculties and colleges was also considered in addition to the above. The higher education reform implemented in 2013 created equal opportunity for all entering students to acquire higher education free of charge. As a result, the number of free student places at the University of Tartu grew almost 40%.
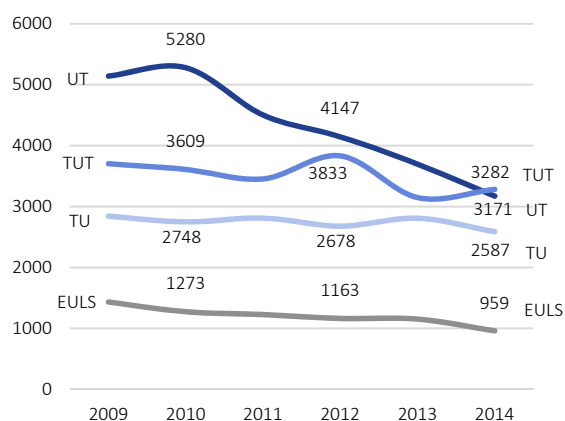

FIGURE 2.1. *Number of students admitted to major Estonian universities in 2009–2014. Source: Estonian Education Information System (EHIS)*

Since 2013, the research areas for which the university is responsible, the primary quantitative and qualitative performance indicators for university activity and objectives pertaining to the number of student places to be opened are agreed in a three-year performance agreement signed with the Ministry of Education and Research. Based on the national priorities, the university has reduced the number of student places in the curriculum group of law. Training capacity has been increased in medicine.

84% of the students of the UT study in curriculum groups that are listed in the performance agreement as being in the university's area of responsibility.

Every year, after the end of the admission period, the Office of Academic Affairs compiles an analysis of admissions, which is the basis for determining teaching capacity for the next academic year, planning and allocating the number of student places and developing curricula. The results of the analysis are discussed at the Rector's Office, board and senate, after which changes to the admission requirements and procedure are decided if necessary. In 2013, the senate approved the admission principles, under which the number of student places were reduced (7% in the first level and 6% in the second level) and which provided for the reorganisation of teaching in curricula which have less than 15 students in bachelor's study and less than 10 students in master's study. In August 2014, the vice rector for academic affairs ordered the faculties and colleges to submit an action plan for the further development of curricula that did not manage to fill the student places: based on how student places have been filled in the last three years in each curriculum (up to 60% – very poor, 61–80% – average, 81–100% – good), a decision must be made whether to open admission to the curriculum in the next year, plan additional marketing measures, focus on curriculum development or reorganise the curriculum.

In 2014, an analysis was prepared on the basis of the data of the national admission system SAIS in which the profile of each curriculum was described allowing to assess the potential target group of each curriculum and its behaviour. The university is planning to take the analysis into consideration to a significant degree in planning admissions for the academic year 2015/2016. The reasons for the choice of curriculum are also evaluated on the basis of results of the feedback survey organised among the first-year students in the first and second level of higher education. First-year students' feedback survey results have showed that the decision to study at the university has been previously thought through and is purposeful. This trend is more prominent among master's students. The first-semester studies of most first-year students meet their initial expectations. This trend was more prominent among students of the first level of higher education.

TABLE 2.2. Results of the student feedback survey in the first and second levels of higher education in the academic year 2012/2013 and 2013/2014

Statement	2012/13	2013/14
I know why I came to the UT	96.7%	95.5%
Studies at the UT meet my expectations	83.6%	81.2%
My preparation (earlier education) is sufficient to manage well with my university studies here	85.0%	86.5%

It is likely that master's students had developed more specific and clear-cut expectations to their future curriculum and specialisation on the basis of their previous studies, making it easier to compare how the expectations match up to the reality. The majority of the respondents in the first-year feedback surveys deemed their previous education to be sufficient to cope well with university studies.

2.1.4. Admission rules

To be in a position to admit capable and motivated students, the UT has established a minimum admission score to apply for a student place. Only those who exceed the threshold can be eligible candidates for admission, although achieving the minimum score does not guarantee admission by itself. With the decreasing number of secondary school graduates, the minimum required score has not dropped. On the contrary, the minimum has been increased and unlike other major universities, no follow-up competition is held to fill vacant student places.

A number of exceptions have been provided in admissions depending on the target group.

- Above all to support natural and exact sciences, a separate admission threshold has been established to certain curricula, where applicants are guaranteed a student place at the UT if they exceed the threshold.
- Considering the needs of adult learners, an exception is made in admissions to the open university: in contrast to daytime study, work experience is taken into account or even required; state examinations have lesser importance or are not required at all.
- Especially capable applicants who have achieved very good results at academic or athletic competitions or received a certain score in the academic test are admitted under special conditions following a simplified procedure.
- The admission requirements for English-language master's curricula take into account the varying educational background of international applicants: instead of final grades in disparate educational systems, which are difficult to compare, admission depends, among other things, on a motivation letter or score in an entrance exam. The principles for converting study results have been defined for graduates of international schools (IB, European School) and educational institutions of countries most represented in bachelor's study (such as Finland).

	80 or less	81-90	91-100	IB*
University of Tartu	45	169	130	10
Tallinn University of Technology	62	77	29	4
other HEI in Estonia	66	48	16	4
did not continue studying in Estonia	77	80	32	4

average result of the best three national examinations
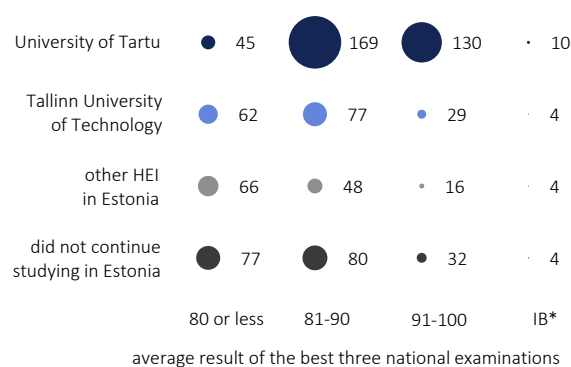
*FIGURE 2.2. Ten best schools according to state examination results in 2012 and the number of their graduates who were admitted to the UT, TUT or other Estonian institutions of higher education in the same year, viewed by the average of the best three results in state examinations. *IB – International Baccalaureate, where state examinations do not have to be taken. Source: EHIS*

To attract capable and motivated students, the university:

- pursues close cooperation with general education schools (see also 4.1.1);
- has allocated tuition-waiver scholarships to best entrants to foreign-language bachelor's and master's curricula since 2013;
- analyses in detail the ways of increasing admission to the open university, as the higher education reform created restrictions on organising admissions in the open university and brought along a certain drawback to the filling of certain curricula.

To ascertain the needs and expectations of adult learners, including with regard to admission requirements and procedures, a study regarding the open university study format was commissioned from Praxis Center for Policy Research in 2012. The study revealed that more information about studying should be given to potential students. Above all, the implications of full-time study at the university for people raising a family should be explained.

2.1.5. Study opportunities that take into account special needs

To support the study of different target groups, the focus in implementing the university's strategic plan was placed on three areas of activity:

- developing and improving the tutor system;
- supporting Estonian language learning among students who speak Estonian as a foreign language and introducing Estonian history, culture and traditions to them;
- gathering, in cooperation with partners, information on services needed by students and developing these services.

To support students with special needs, the position of an adviser for students with special needs was established at the university in 2006. Also a tradition to hold roundtables for students with special needs was started. Discussion at the roundtables is devoted to the needs and problem areas, but also support services and scholarship opportunities are introduced. Starting from the academic year 2009/2010, the first support students are active at the UT. These are volunteers who help students with special needs. Support students and teaching staff have the opportunity to supplement their skills at training courses on special needs and short clips have been produced on teaching such students.

Using the EU Structural Fund support, the university's study buildings were mapped in 2009 from the standpoint of the wheelchair user. This allowed getting support from the European Regional Development Fund to eliminate access problems in study buildings. In spring 2014, the accessibility mapping of study buildings was updated and the results were added to the freedom of movement webpage (linked to on the UT's public website). Feedback from students with special needs resulted in purchasing wheelchairs, walking frames and crutches for various buildings and the library.

Creation of audio and digital study resources was launched in 2008 at the UT library thanks to the EU Structural Fund support. The textbooks produced are also sent to the Estonian Library for the Blind, making the works available to students of other educational institutions as well. A computer with a special screen reading program, a video magnifier and a Braille printer were also acquired by the library for visually impaired readers. The library offers home delivery service for readers with special needs, in which volunteers can actively participate. A project for adding subtitles and sign language translations to video lectures has been launched.

2.2. CURRICULUM DEVELOPMENT

2.2.1. Opening of curricula

The basic principle for the process of developing curricula is that education is provided only on the basis of curricula that have received a positive rating at quality assessment of curriculum groups. The main activities for achieving this goal are:

- reducing the fragmentation of curricula, integrating the strengths of different curricula into interdisciplinary, attractive and competitive curricula;
- improving the system of funding degree studies within the university;
- creating joint curricula with other institutions of higher education and research and development institutions.

To ensure that the opening of curricula is expedient and based on the needs of society, the Statutes of Curriculum (clause 43) sets forth that the preconditions of opening a curriculum are the sufficient academic and material resources and a clearly justified need. The precondition of opening a doctoral curriculum is the existence of a relevant positively evaluated research field at the university. The council of the faculty or college wishing to open a curriculum must submit a preliminary application to the vice rector for academic affairs, which, among other things, includes a reasoning for the societal and individual need for the curriculum, an analysis of the existence of resources, and an analysis of potential students, their interests and needs and potential of graduates in the labour market. If, after the discussion in the Academic Affairs Committee, the vice rector for academic affairs declares the preliminary application to be in line with the requirements, the faculty or college drafts an application for opening the curriculum and submits it to the senate. Besides the draft curriculum and syllabi, the application also includes evaluations from potential target and interest groups (professional associations, ministries or future employers). In addition, English-language curricula, including joint curricula, are required to be internationally competitive. The opening of the curriculum is preceded by an analysis of similar English-language curricula offered in the region. The university's curricula are approved by the senate.

2.2.2. Development of curricula

To ensure systematic and regular curriculum development and involve all stakeholders, the administration of curricula at the UT is programme-based. A programme includes curriculum development, organisation of study, financial development, related support services, etc. Each programme has its own programme council, which sets a goal for the activity, advises programme directors and evaluates the performance of the programme. Non-university stakeholders (employers) and students are involved in the development process through the programme councils.

Programme-based administration of curricula and outcome-based curriculum development began in 2006. In the strategic plan A2015, greater attention was thus paid to evaluating academic quality and to creating and implementing an integral quality system, including asking students for feedback and taking it into account in curriculum development. Insofar as the basic features of the academic quality system managed to be developed in the strategic plan A2015, the next years will see a focus on consistent implementation of the system at the university, including shaping common understandings. According to the opinion of the committee reviewing the principles of quality management of degree studies, more decision-making power and responsibility for organising study should be given to the programme director.

Based on the above and on the general changes in quality assessment of higher education in Estonia and elsewhere, the system for internal evaluation of curricula was completely updated at the university. At the UT, internal evaluation is the systematic and regular monitoring and analysis of teaching and learning and their results, allowing highlighting the strengths of teaching and learning and areas that require improvement. The internal evaluation culminates in the planning, implementation and monitoring the course of development activities.

The procedure for internal evaluation of curricula established in 2009 governs the system for internal evaluation of curricula, and the preparation and publication of reports. Internal evaluation is carried out at the start of the academic year once every three years and covers the three previous academic years. Internal evaluation takes place in the SIS and is coordinated by the programme director, who prepares, on the basis of the statistical data available in the SIS (contained in the pre-filled internal evaluation form) and the guidelines prepared by the Office of Academic Affairs, a preliminary analysis and formulates conclusions. Besides statistical data, student feedback must also be considered in the analysis. Before internal evaluation of a curriculum, it is advised to gather feedback regularly and as needed from teaching staff and/or employers.

The internal evaluation outcome is discussed by the programme council, who approves the internal evaluation report along with action plan for the next three academic years. The Office of Academic Affairs analyses the results of the internal evaluation and draws up a summary, which is available to all members of the university community online.

> The programme director of the year award was established to recognise and motivate programme directors. The award was first announced in 2014.

One focus of curriculum development in the past few years has been reducing the fragmentation of curricula. To do this, a number of analyses have been performed and the question is regularly under discussion in various cooperative and decision-making bodies, either in the context of processing draft bylaws (e.g. drafting the admission rules) or in the context of specific topics that come up (such as discussions throughout the university and within structural units after the publication of large-scale study results, emergence of salient problems, etc.). As a result of these discussions, a number of curricula have been merged. To further reorganise curricula, it was decided in September 2014 to divide curricula into four groups on the basis of the following criteria: connection with the mission of the national university; importance to society and exclusivity in Estonia; being an underlying discipline; financial sustainability; interest from target groups (percentage of filled study places in the last two years); existence or absence of (partially) overlapping curricula at the UT or other Estonian universities; the university's strategic interest; current state of the curriculum (problems emerging in the development and provision, cost-effectiveness, etc.)

The university's curriculum development has received positive feedback in the quality assessment of curriculum groups. In 2009–2011, the UT curricula successfully passed the academic quality, resource and sustainability evaluation organised by the Estonian Higher Education Quality Agency. The evaluation took place separately for each level of study and a total of 65 evaluation decisions were made for the university. In 59 cases, it was decided that the next evaluation would be organised in seven years' time and in six cases it was decided that the university must find solutions to the problems highlighted by the evaluation committee and conduct new evaluations in 2–3 years' time.

One such case was the teacher training and educational science curriculum group, where after the 2011 decision from the evaluation committee to allow provision of education for a specified term, the University of Tartu teacher education development plan 2012–2015 was drawn up the same year to eliminate the problems highlighted by the committee and, in early 2012, an implementation plan followed. In 2014, the university successfully passed the repeat evaluation of the teacher training and educational science curriculum group and received the right to provide education in this area without a term.

2.2.3. Feedback from graduates

In addition to involving graduates and employers in programme councils, the results of countrywide and university-wide alumni surveys are used to learn about alumni satisfaction. Alumni surveys are also conducted by academic units. Countrywide alumni surveys are held every three years. Thus it must be evaluated whether the university-wide alumni survey conducted by the university itself brings new information that cannot be obtained from the Estonia-wide study. If not, perhaps unit-based surveys should be conducted instead of university-wide alumni surveys. The latter may better delineate the specifics of the field under study.

According to the alumni study conducted in 2010 at the UT, alumni are for the most part content with their choice of specialisation (92% of respondents) and their choice of university (97%). The employment rate among UT graduates is very high. According to the alumni study organised in 2010, a year after graduation, 80% of respondents were employed; 14% were solely studying, 5% were at home caring for a child and only 1% were not working, studying or caring for a child. Graduates found that their studies had helped the most to improve specialised skills and knowledge (4.2) and their research and analytical skills (4.1) (scale of 1–5). Higher education studies contributed to the increase of transferable skills to an average or lesser degree. The lowest rating was given to the role of the university in increasing management skills (2.6), self-assertion and negotiation skills (2.9) and increasing enterprising spirit and initiative (2.9). The university's contribution to the information and communication technology skills (3.0) and foreign language proficiency (3.1) also received lower ratings.

Based on alumni feedback, it is planned in subsequent years to devote more attention in curriculum development to transferable skills, including the integration of IT competences and enterprising spirit into curricula and diversifying practical training opportunities.

The most recent unit-based alumni survey was carried out in 2014 at the Faculty of Philosophy. This study revealed that respondents were mostly content with their choice of university and specialisation and the level of the teaching staff and teaching. Satisfaction was lowest with the counselling service and practical training opportunities offered by the university. The university is actively engaged in improving the latter two areas (see also 2.1.2 and 2.4.1).

2.3. STUDENT ACADEMIC PROGRESS AND STUDENT ASSESSMENT

2.3.1. Monitoring and supporting students' academic progress

The academic progress is monitored at the UT using the Study Information System, which is also constantly being developed for this very purpose. The SIS allows the graduation effectiveness to be analysed each year and student surveys to be organised. In 2011, the university participated in the international project TRACKIT, as a part of which the systems of tracking progress at 23 European universities were mapped to get even more information and ideas for developing the system in use.

As activities to support students' academic progress, the university's strategic plan A2015 called for the improvement of the availability and quality of support services and further development of the tutor system (see also 2.4).

> In the Faculty of Science and Technology, the "Introduction to speciality" courses have been launched in a number of curricula, in the course of which first-year students get a better understanding of studying at the university and their future career. Starting from 2011, all first-year students are offered a 1–2-day motivation and learning skill development training, aiming to prevent, along with other measures, learning difficulties and reduce the dropout rate. Based on the model of the Faculty of Science of Technology, it is planned to organise similar events in other academic units.

TABLE 2.3. Dropout rate in bachelor's study and professional higher education as a percentage of the number of students in the previous year at major Estonian universities in 2009–2013

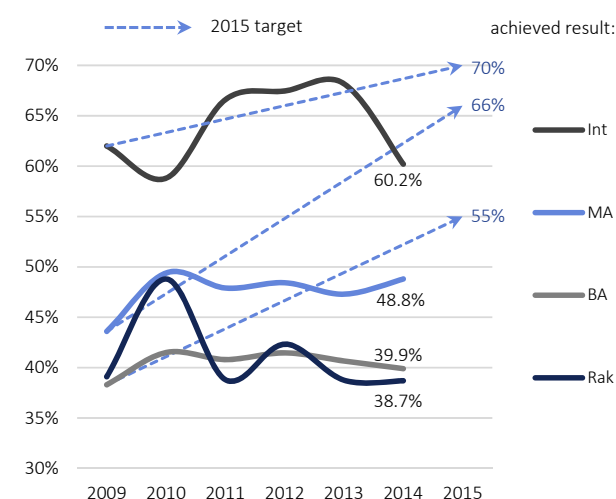|	2009	2010	2011	2012	2013
UT	16%	17%	16%	17%	18%
TUT	15%	19%	16%	19%	21%
TU	14%	16%	17%	17%	17%
EULS	16%	17%	17%	19%	20%

FIGURE 2.3. Graduation effectiveness (the share of those graduating in the standard period of study + 1 year among students admitted in one particular year) in the first two levels of higher education in 2009–2014 (expected result and achieved result)

Since 2013, additional funds for supporting academic progress can be sought from the fund for supporting teaching and learning created to support academic quality. One of the most important activities related to this objective and launched based on student feedback is the use of teaching assistants in courses where the teaching staff cannot take an individual approach to students or support them as needed due to the large number of participants, the varying level of students' previous knowledge or the complexity of the course. The hiring of teaching assistants for (mainly technical) assistance in the process of teaching allows the teaching staff to focus more on face-to-face teaching and gives more time to develop the subject matter, thus increasing teaching quality and supporting student progress. Being a teaching assistant gives students the possibility to integrate themselves more closely with the university, allowing them to see other facets related to the university besides student life, including the peculiarities of teaching at a university.

In spring 2014, a survey was conducted among those who were admitted in 2013 but dropped out by the spring semester to determine possible influences stemming from the higher education reform and to plan changes if needed in the system of admission and organisation of studies. The survey revealed that among the respondents the main reasons for dropping out were the wrong choice of specialisation and, to a lesser degree, lack of motivation. Based on this, it is planned to use much more resources in the next years to contributing to the informed choice of specialisation and supporting the self-analysis and -management among students.

2.3.2. Student assessment

The UT curricula are outcome-based: all syllabi must contain information on the knowledge, skills and competences gained by the student upon completing a course, i.e. learning outcomes. The syllabus must list assessment criteria and methods, final assessment (differentiated or non-differentiated) and conditions for eligibility to take exam and resits. The syllabi have been entered into the Study Information System and are public, and contain information in Estonian and English. The Office of Academic Affairs reviews the syllabi regularly. Learning outcomes and information on assessment are checked for completeness and sufficiency, and if necessary, academic units are asked to supplement the syllabi. Since the academic year 2011/2012, students have been asked about the assessment of learning outcomes in the feedback questionnaire on teaching and courses. The results show that 95% of students agree that the teaching staff assess what has previously been described in the course's learning outcomes. The SIS gives the teaching staff an opportunity to comment on the student feedback.

The UT launched the transition to outcome-based assessment in 2009. Immediately after the Minister of Education and Research issued the regulation on a unified evaluation system in 2010, the Office of Academic Affairs organised a total of 15 training courses on outcome-based assessment for academic units and several information seminars for reviewing assessment. The goal was to ensure that all teaching staff received sufficient knowledge and consultation in the field of outcome-based assessment. Training and counselling in the field of outcome-based assessment are organised by the Centre for Excellence in Teaching and Learning.

Since 2009, mentor teaching staff also work at the university. One of their goals is to provide counselling to teaching staff in matters of teaching and supervision, including in matters of assessment. In 2013, 16 members of teaching staff had passed the relevant training and were filling the functions of a mentor.

2.3.3. Recognition of prior learning and professional experience

The recognition of prior learning and professional experience programme at the university is governed by the Study Regulations and the RPL procedure approved by the senate. RPL takes place on the basis of an application from the student, external student or prospective student. The application must be submitted to the dean's office of the student's faculty or the academic affairs department of the college and is evaluated by the RPL Committee of the faculty/college. Previous study and work experience may be counted in an unlimited extent toward the completion of a curriculum, but it is not implemented in the case of final exams and defences of final theses in the first and second level of study.

The strategic plan A2015 sets the goal of applying the principles of RPL more extensively, improving, above all, the system of taking work experience into account in cooperation with employers. On the basis of the problems that emerged in mapping the process, discussions of working groups and results of cooperation with other institutions of higher education, the RPL regulations and the information aimed at students have been significantly supplemented at the university. In 2011, the RPL principles were agreed upon at the initiative of the Archimedes Foundation in cooperation with other institutions of higher education, vocational educational institutions, the Estonian Qualifications Authority and the Ministry of Education and Research. The principles were approved by the rectors' councils of both public universities (Universities Estonia) and institutions of professional higher education. Based on these principles, an RPL quality evaluation project was launched using the EU Structural Fund support (Primus programme). The project was piloted in 2012 at the UT Viljandi Culture Academy.
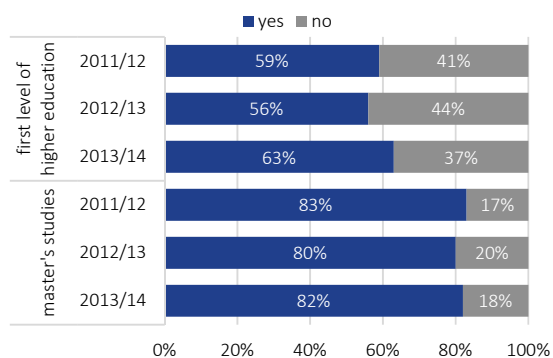

FIGURE 2.4. Satisfaction with assistance received by those who sought out an RPL adviser among first-year students in 2011/2012–2013/2014
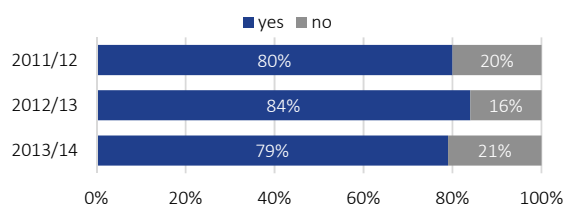

FIGURE 2.5. Awareness of RPL possibilities in planning studies among first-year students in 2011/2012–2013/2014

Information seminars and training courses on RPL take place regularly at the university for RPL applicants, advisers and evaluators, as those who have used the system have noted a certain degree of uncertainty as to which courses can be transferred by RPL and which cannot, and how previous work experience can be taken into account by RPL. To simplify the process, a special RPL module will be added to the SIS in 2015. An RPL applicant feedback survey form is being prepared (will be ready in 2015).

2.4. SUPPORT PROCESSES FOR LEARNING SUPPORT

2.4.1. Academic and career counselling support system for students

The university's strategic plan A2015 set the goal of improving the support system of admissions, career and specialisation counselling.

Six employees of the Office of Academic Affairs support internationalisation: they help students find suitable student exchange and practical training opportunities at foreign institutions of higher education and help international (visiting) students start their studies at the UT.

Three student advisers of the Office of Academic Affairs offer assistance in matters of academic affairs and the organisation of studies in general (such as curriculum structure, selection of a minor specialisation, filling vacant student places). Students can contact student advisers in person or through a forum or by email. There is also a webpage for students, where they can give feedback or make suggestions on how to improve the organisation of studies. Each year, all first-year students receive a student's handbook/Getting Started brochure compiled by student advisers, which can be used as an e-book as well and contains essential information on studying and university life. Student advisers also train tutors on topics related to the organisation of study and support students in assisting students with special needs.

In the faculties and colleges, students are assisted in matters of the organisation of studies by academic affairs specialists and in pure academic matters by the programme directors. Besides this, tutors provide assistance to first-year students in adjusting to university life: in 2013, 153 students who had received special training volunteered as tutors.

In addition, two part-time psychologists of the Office of Academic Affairs help students in solving psychological problems. The psychologists also organise training courses on self-assertion, self-esteem, stress, excessive anxiety, learning motivation and other topics.

Three career counsellors of the Office of Research and Development offer assistance in career planning and development and in making decisions related to the choice of job and educational path. Career counsellors also forward job and traineeship offers to students. An entrepreneurship counsellor works at the same office and helps students analyse the business potential of their ideas and plan how to move forward in developing a business.

The university's website has information about support services aimed at students. This online environment is supplemented, evaluated and improved regularly. Another source is the Studentweb developed at the initiative of the UT. It serves as an information gateway to institutions of higher education and employers. Employers can enter job and traineeship offers and browse CVs submitted by students and graduates. The Studentweb also features many articles of interest and recommendations on topics related to studying at a university.

The academic and career-related development of students is also supported as part of the "Ole rohkem" ("Be more") campaign led by the UT Student Council. In this campaign, the students get information on how to study better, are encouraged to be more enterprising and the campaign also supports the creation of student organisations that offer practical transferable skills and experience, etc. Besides these activities, the Student Council organises three traditional UT events: the Freshers' Week, the Night Library and the anniversary ball.

Feedback results from first-year students indicate that most new students receive enough support and counselling in the first semester from both faculty staff and tutors to help them adjust to the new conditions. Students are content that their questions and problems get a response, that solutions are sought and they are provided with necessary information. Feedback surveys conducted among final-year students have revealed that the support given to students by the university does not decrease during the period of study (the share of those who are satisfied is the same as in the first year).

2.4.2. Supporting international mobility of students

Above all, the university supports the international mobility of students by opening English-language bachelor's, master's and doctoral curricula.

The UT has proceeded from the principle that an English-language bachelor's curriculum can be opened only if it is also possible to study in Estonian in the same area of study. In the academic year 2013/2014, the first and second level of higher education had a total of 14 English-language curricula. Of these, 12 were master's curricula (including five joint curricula) which were established in the period 2007–2012. Eight master's degree curricula were established with support from the funding programmes of the Ministry of Education and Research. Additional funding was the stimulus for the creation of interdisciplinary curricula that combine the best competences of the universities and are of interest to both Estonian and international students. The university takes part in three Erasmus Mundus joint programmes.

> In 2014, the joint master's curriculum "Excellence in Analytical Chemistry" (EACH) led by the University of Tartu received support from the Erasmus+ programme. The joint curriculum partners are Université Claude Bernard Lyon 1, Åbo Akademi and Uppsala Universitet.

TABLE 2.4. *Number of curricula at the UT in 2009–2014*

	2009	2010	2011	2012	2013	2014
Number of curricula at the first and second level	202	168	162	155	158	160
including joint curricula	3	4	6	7	8	8
including English-language curricula	8	9	12	12	14	16
Number of doctoral curricula*	71	70	36	35	35	35

* Doctoral curricula generally have more than one language of instruction (most often Estonian and English)

In accordance with the UT Statutes of Curriculum, all curricula must include foreign-language courses. The addition of English-taught courses and modules to master's curricula has been supported from the fund for supporting teaching and learning. The reason for supporting this activity derived from the results of the internal supervision. The supervision conducted in autumn 2013 showed that a number of curricula had problems in offering foreign-language courses. The results of the supervision were also discussed with the programme directors, with the aim to eliminate hindrances to compliance with the requirements and offer necessary support for curriculum development.
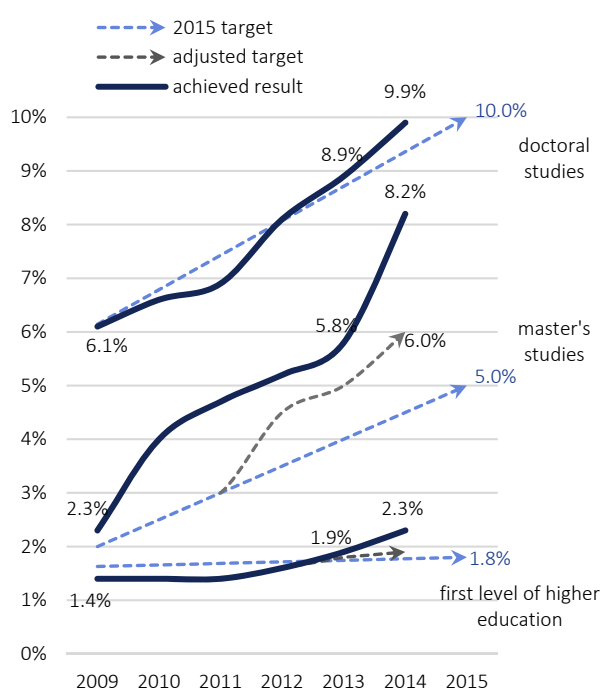

FIGURE 2.6. *Share of international students in three levels of higher education in 2009–2014 (expected result and achieved result)*

International and domestic students studying in English-language curricula are supported by the university's tuition-waiver scholarship system implemented starting from the academic year 2013/2014. This allows the best students to study in an English-language curriculum without paying the tuition fee on the same grounds that apply to Estonian-language curricula (students must obtain a certain required number of credit points per academic year). In the academic year 2013/2014, seven English-language curricula had student places with tuition-waiver scholarships.

Both before and during their studies, international (visiting) students are advised by the International Student Service of the Office of Academic Affairs and by the academic units. At the start of each semester, an introductory short course (orientation course) on Tartu and the university is held, and guidelines and information materials are available for international (visiting) students.

An international feedback survey i-graduate conducted in the academic year 2011/2012 among

international (visiting) students studying at Estonian institutions of higher education showed that one strength of the UT lies in its very good support services, the counselling and supervision provided to students and the study environment (libraries and laboratories). Compared to the average survey result, the UT's international students were less content with the linkage between study and work and labour market opportunities; they also sensed a lack of practical training opportunities and information on them.

The precondition for students' participation in academic mobility is the existence of international cooperation agreements at the level of both the university and academic units. In entering into cooperation agreements, units must bear in mind that both sides have to contribute to promoting cooperation, including the existence of English-language courses and readiness to provide advice to participants in student exchange. For instance, guidelines have been compiled for participation in the Erasmus programme.

The International Student Service of the Office of Academic Affairs informs students of academic mobility opportunities through both Estonian- and English-language information channels and regular information days. Besides major information days, information events aimed at specific target audiences are also held. An important information source for students is the experience of students who have studied abroad.

Similarly to other institutions of higher education, the share of students who do their practical training abroad has increased at the UT. As a result, the position of a traineeship coordinator was established at the International Student Service of the Office of Academic Affairs in 2013, aiming to offer support services to international trainees coming to the UT from foreign partner institutions and to UT students looking for practical training opportunities abroad.

TABLE 2.5. Participation of UT students in international academic mobility in academic year 2012/2013

	No. of students who have studied abroad
Studying	404
Practical training	70
TOTAL	474

2.4.3. Use of educational technology in teaching and learning

Modernisation of educational methods and formats is one of the university's goals. Achieving the goal involves the development and improvement of opportunities of e-learning.

The university uses Moodle as the e-learning environment, which is upgraded and improved based on the university's needs. Moodle is linked to the SIS. For instance, the teaching staff can order a new Moodle course template from the SIS under the plan for the relevant course and students registered for the course can be added to the Moodle course from the syllabus in the SIS. In 2014, the opportunity to transfer exam results from a Moodle course to the exam records in the SIS was developed.

Besides Moodle, the SISU@ut administrative tool is also developed at the university. It is based on OpenScholar software and allows creating websites and quality learning modules for independent study. The UT submitted the development of the SISU@ut tool for the Dørup e-study award at the EUNIS conference "Higher Education in the Digital Era" taking place at University of Umeå (Sweden) and was chosen among five finalists.

TABLE 2.6. Number of web-based courses and participants in them in 2011–2013

	2011	2012	2013
Number of courses that are partially or fully web-based*	850 (9%)	1264 (14%)	1580 (18%)
including the number of courses that are fully web-based	111	110	108
Number of participants in web-based courses	26,870	38,614	46,672
Number of users of Moodle, the web-based learning environment	18,902	24,753	27,537
Number of courses on Moodle, the web-based learning environment	1475	2047	2545
Number of videos in the UTTV video portal	1681	2175	2838
Number of teaching staff using web seminar	49	49	33
Duration (in hours) of using the web seminar	3147	4680	2128
Number of LimeSurvey software users	*was not used before 2013*		598

* The percentage of partially or fully web-based courses among all courses is given in brackets.

To support the recording and wider use of video lectures, the university uses the Echo360 automatic recording system. The UT television UTTV is used as the video portal. To organise web seminars, Adobe Acrobat Connect

Pro can be used, allowing synchronous presentations, audio and video conferences, sharing of files in various formats and screen sharing, the use of a common chatroom and a whiteboard. The freeware LimeSurvey program is used for creating surveys.

Creation of new web-based learning opportunities was largely funded from the EU Structural Funds. The e-learning program BeST was used in 2008–2013 at the UT for creating new e-courses in the volume of 1219 ECTS and 424 learning objects. The implementer of the program recognised the UT as the best cooperation partner.

> E-course quality labels are awarded at the initiative of the e-learning quality working group of the Information Technology Foundation for Education (HITSA). A total of 58 UT courses (of 78 applications) were awarded the quality label in the 2008–2014.

Similarly to contact-based courses, feedback is given to web-based courses through the feedback form in the SIS. In addition, teaching staff of e-courses ask for feedback from students using feedback forms in Moodle. In early 2012, the study results of contact-based, partly web-based and completely web-based courses held in 2011 were compared on the basis of SIS statistics. No statistically significant differences between the average grades were identified.

In 2013, two English-language massive open online courses (MOOCs) were developed at the university: "Energy policies in Europe" and "Estimation of measurement uncertainty in chemical analysis". The latter was successfully carried out in spring 2014: 141 of 270 participants completed the course (52.2%).

In 2014, the university developed a document on the procedure for developing and administering open-access e-courses. Also a MOOC advertising page was set up to present the UT MOOCs in one place. To introduce study opportunities at UT, it is planned to create Estonian-language open-access e-courses which would be targeted to both university students and pupils (project entitled "Raketina ülikooli"– "Rocket to the university").

2.4.4. Student feedback

The university's statutes and the constitutive regulations of academic units state that all major decision-making and advisory bodies of the university must include student representatives. The Statutes of Curriculum stipulate that programme councils include student representatives. Both the Rector's Office and the Office of Academic Affairs regularly meet with the board of the Student Council. Student representatives are involved in all discussions, working groups and other projects convened to develop degree studies. In 2014, at the proposal of the Student Council, the rector formed a committee for reviewing and improving the principles of quality management in degree studies. The work of this committee is led by students.

Mapping of the situation of gathering and using feedback in the field of academic affairs and the preparation of an action plan began at the university in 2010. A working group was formed, including representatives of academic units and the student body. In 2011, by rector's directive, the procedure for asking and taking into account feedback in degree studies was established (amended on 31 May 2013), which set out, besides target groups and methods for collecting feedback, also instructions and requirements for gathering, disclosing, analysing and using feedback in curriculum development and the organisation of studies. As at the end of 2013, the comprehensive feedback system includes feedback from first-year students, feedback on teaching and courses gathered at the end of each semester, feedback from final-year students, continuous feedback from Estonian (visiting) students and international (visiting) students, and international (visiting) student feedback. The types of collected feedback have been either updated or newly created. Late 2014 saw the completion of a questionnaire that asks doctoral students for feedback about their academic supervisors. The feedback will be linked to the progress review of doctoral students. In 2015, plans call for the RPL applicant feedback survey to be implemented. In 2015, the university is planning to reorganise the gathering of feedback on practical training from students.

When giving feedback on teaching and courses, the student analyses him- or herself, gives feedback on the member of the teaching staff, answers questions about the course and can make suggestions for future students. Several steps were taken to improve the use of the survey results. For example, the responses to multiple-choice questions and suggestions were made public for all SIS users; the faculty and college councils must discuss the feedback results once a semester and plan activities for eliminating problems. In internal evaluation of curricula, the programme directors have to explain once every three years how feedback results from students have been taken into account.

3. RESEARCH AND DEVELOPMENT

The development of the research and development (R&D) area follows the objectives established in the UT's strategic plan A2015 and is based on academic competence, modern infrastructure and internal and external collaboration.

The university's activities in the field of fundamental and applied research are directed by the vice rector for research who is responsible for research activities, including matters related to research in doctoral studies, as well as for organising and developing the promotion of research. The vice rector for development directs the university's activities in the field of knowledge transfer and research-based development. The resources necessary for the organisation of R&D largely depend on the success of the university's researchers in applying for research funding. The Office of Research and Development, the Finance Office, the Personnel Office, the Estates Office (Procurement Unit) and the Marketing and Communication Office assist in seeking financing possibilities, initiating and implementing projects and organising the communication of research results.

The organisation of R&D and other creative activities is based on various external and internal legal acts and strategy documents. Besides the University Act and the Organisation of Research and Development Act, the main national legislation includes the Estonian Research and Development and Innovation Strategy 2007–2013 and the Estonian Research and Development and Innovation Strategy 2014–2020.

The main internal regulations of the university are the Regulations for Processing Development Projects and the Procedure for Managing Intellectual Property Created at the University of Tartu.

3.1. R&D OBJECTIVES AND EFFECTIVENESS

The university's strategic plan A2015 established the objective of ensuring that research and development activities are competitive and meet high standards in every discipline engaged in at the university. The university's R&D and other creative activities also focus on ensuring the continuation of Estonia's national culture and independence, supporting the socio-economic development of the Estonian society, improving public health, innovation and promoting research-intensive business ventures.

To evaluate the competitiveness of the university's research areas, the university participates in targeted evaluations and regular evaluations organised in Estonia. In the 2010 regular evaluation, the university received a positive evaluation in all four areas *(humaniora, medicina, realia et naturalia, socialia)*. The A2015 performance indicators include R&D indicators the level of which is monitored every year (see subsection 1.1.3). One A2015 performance indicator is being among the top 1% of the world's most cited universities and research institutions according to Thomson Reuters Web of Science. In March 2014, this category included 10 fields of research of the UT.

TABLE 3.1. *Overview of Estonian centres of excellence with UT partnership, financed from EU Structural Funds*

Centre of excellence	Lead partner	Total support from EU Structural Funds (euros)
Frontiers in Biodiversity Research (2008–2015)	UT	4,340,240
Centre of Excellence for Translational Medicine (2008–2015)	UT	4,966,255
Centre of Excellence in Chemical Biology (2008–2015)	UT	5,597,125
Centre of Excellence in Cultural Theory (2008–2015)	UT	4,801,938
Mesosystems – Theory and Applications (2011–2015)	UT	2,901,100
High-Technology Materials for Sustainable Development (2011–2015)	UT	2,870,087
Estonian Excellence in Computer Science (2008–2015)	TUT	4,244,373
Centre of Excellence in Genomics (2008–2015)	Estonian Biocentre	4,844,886
Centre for Nonlinear Studies (2011–2015)	TUT	2,729,927
Centre of Excellence in Environmental Adaptation ENVIRON (2011–2015)	EULS	3,054,553

FINLAND
University of Helsinki	263
University of Turku	94
University of Eastern Finland	58
University of Oulu	51
National Institute for Health and Welfare, Finland	50

USA
University of California	64
Harvard University	59

SWEDEN
Uppsala University	122
Karolinska Institutet	100
Lund University	76
Stockholm University	76
University of Gothenburg	56

GERMANY
Helmholtz Association	82

ENGLAND
University of London	109
University of Oxford	87
University of Cambridge	73
London Imperial College	64
Wellcome Trust Sanger Institute	58

OTHERS
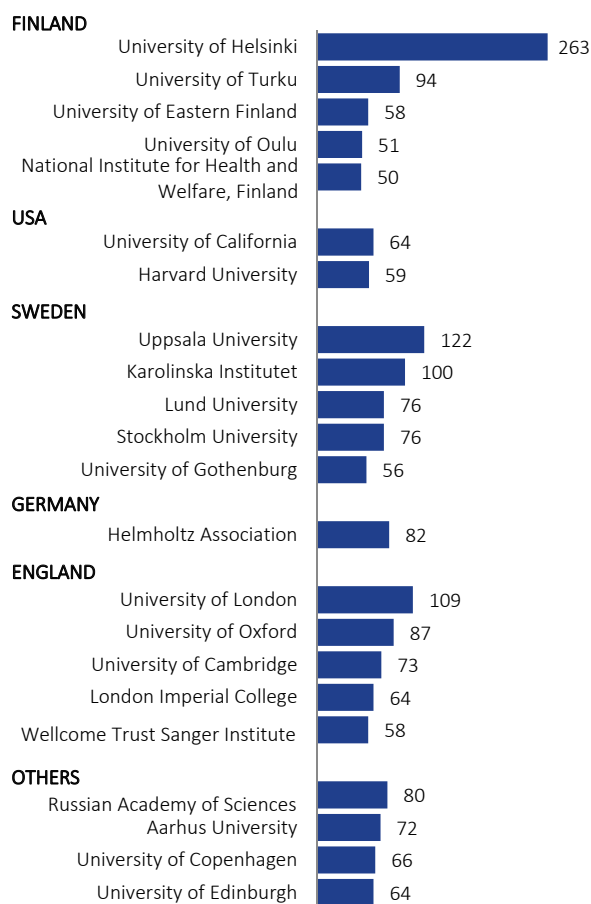|	
Russian Academy of Sciences	80
Aarhus University	72
University of Copenhagen	66
University of Edinburgh	64

FIGURE 3.1. Foreign research and development institutions, in cooperation with which UT researchers have published more than 50 Thomson Reuters Web of Science articles in 2008–2012. Source: Thomson Reuters Web of Science (data extracted in April 2013)
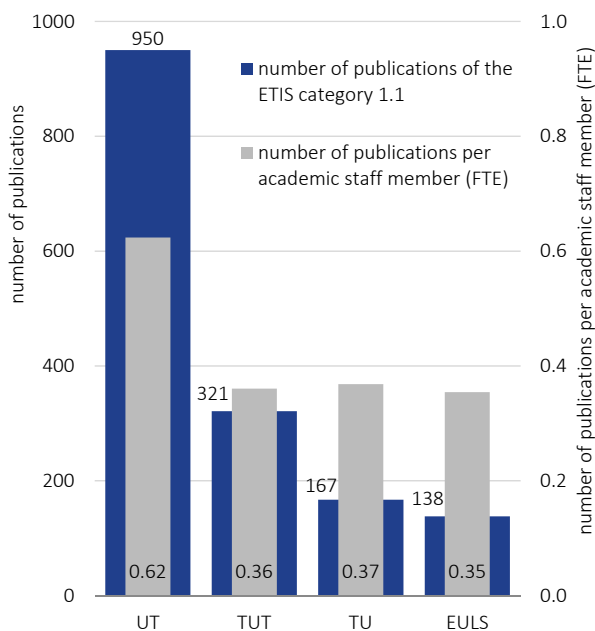

FIGURE 3.2. Overall number of ETIS (Estonian Research Information System) category 1.1 publications by four public universities and the average number per academic staff member in 2012. Sources: Ministry of Education and Research, baseline funding data of R&D institutions

In total, Estonia has twelve centres of excellence financed from the EU Structural Funds. The UT coordinates the work of six and participates as a partner in four. Centres of excellence are centres of cooperation of high-level scientific research groups that are thematically close or mutually supplementary. The aim of the centres is to increase the level and effectiveness and improve the international competitiveness of Estonian scientific research.

The number of high-level research publications published per one academic staff member at the UT was 0.87 in 2009 and 1.28 in 2013. The number of high-level publications has grown at the university each year and in 2013 formed 68% of all published research publications.

The UT has carried out various successful cooperation projects with private and public sector organisations in Estonia. R&D cooperation is carried out with both large and small enterprises. Cooperation with large enterprises has ranged from the improvement of work environment conditions to the development of new technologies. Small enterprises have been able to use the university's laboratories and the services of structural units in conducting development or research work. In 2013, a total of EUR 3.9 million worth of new research and development agreements were concluded with enterprises.

A database of services has been created to provide enterprises and other partners a prompt and clear overview of the services offered by the university. The university has regularly (at least once a year) organised entrepreneurship days in the course of which it has gathered and received feedback from enterprises and other partners.
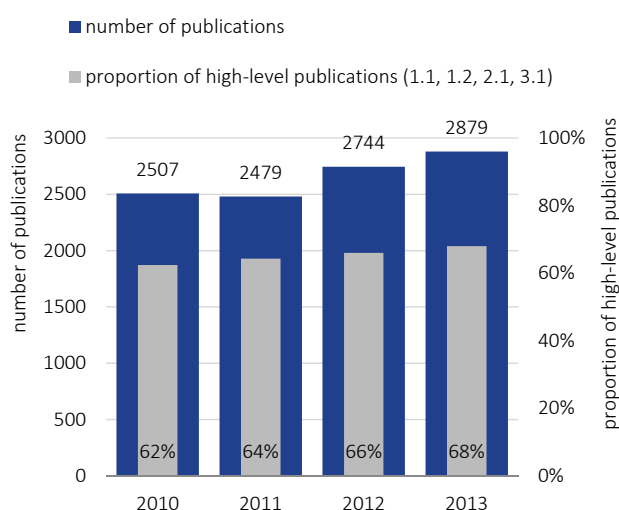

FIGURE 3.3. Number of research publications by UT members and the proportion of high-level research publications in 2010–2013. Source: ETIS
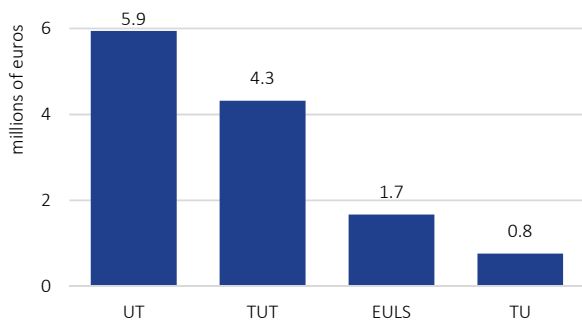
FIGURE 3.4. *Income from entrepreneurship agreements in 2011–2012. Source: Enterprise Estonia, primary data of the baseline funding of knowledge and technology transfer*
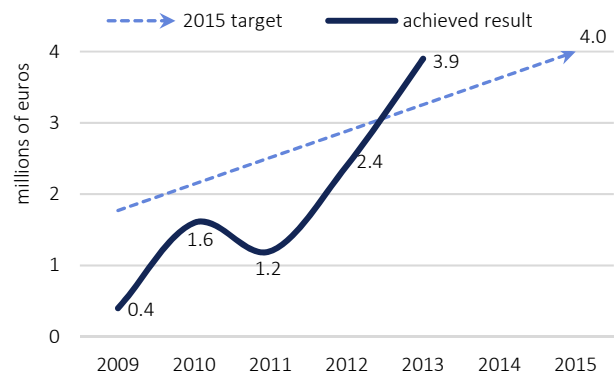

FIGURE 3.5. *Volume of agreements concluded with enterprises in 2009–2013 (expected result and achieved result)*

> The UT is a partner to foreign enterprises in Estonia, with cooperation focused on modern technologies in areas ranging from materials science to psychology. Up-to-date training courses, research methods and patented scientific discoveries have made the UT a research and development partner for large international enterprises such as Mercedes-Benz Driving Academy, Pfizer Inc., Raisio Nutrition Ltd, Nestle Institute of Health Sciences SA, Jordan Oil Shale Energy Co., Maeil Dairies Co., Borkraft Ltd, SelfD Technologie GmbH, Olvi Group, Wolf Group, The Linde Group. For instance, the driving instructors of Mercedes-Benz will be using the intervention methods developed by UT psychologists and health scientists in their work with the aim to reduce speeding by young drivers by a half.

One opportunity the university has used less so far is the development of cooperation in fields of research in which enterpreneurship in Estonia is weak or practically non-existent. These are often the fields in which the UT has world-class equipment and facilities (see also 3.2.3). To advance the university's knowledge and technology transfer outside Estonia, the university must create a systematic approach for activities in different foreign countries.

The university encourages the creation of spin-offs based on its know-how and infrastructure. The creation of spin-offs is one of the ways to commercialise the results of the university's R&D work. In 2010–2014, 19 new enterprises were added to the list of businesses that have grown out of the university. As at 31 August 2014, there was a total of 48 spin-offs associated with UT members.

The university participates in the work of five technology development centres and leads the Research and Innovation Policy Monitoring Programme. The UT European College includes the Centre for Applied Social Sciences (CASS), the fundamental goal of which is to organise applied research in social sciences that is important for the Estonian society. To promote national sciences, professorships engaged in the study, research and development activities related to the Estonian culture, Estonian language and Estonian history have been created. The list and financing of these professorships have been agreed in the performance agreement. In addition, projects related to national sciences are funded from baseline financing resources of research.

3.2. R&D RESOURCES AND SUPPORT PROCESSES

3.2.1. R&D support system

The university offers favourable conditions for applying for R&D projects: the Office of Research and Development provides support services in project coordination, management and information exchange; all members of the university have access to various R&D-related background information for use in financing applications, management decisions and elsewhere. A support system for knowledge and technology transfer (including the protection and marketing of intellectual property) has also been developed. The services include the mediation of challenges encountered by enterprises to researchers, assistance in contract negotiations and counselling researchers and enterprises in planning and carrying out development activities. Intellectual property protection and commercialisation is also organised.

Since the beginning of 2011, the university implements the Regulations for Processing Development Projects that stipulate the bases and procedure for processing various projects, including R&D projects.

A database of funding opportunities has been created to make finding information easier. Information on different funding opportunities is also disseminated via the university's mailing list on grants. In 2013, a series of information seminars was launched to disseminate information on, among others, topics related to R&D (e.g. the creation of spin-offs, promotion of research, etc.). In finding funding opportunities, internal support is provided primarily by the Office of Research and Development and the Office of Academic Affairs, but also the International Cooperation Unit of the Rector's Strategy Office and the University of Tartu Foundation. In addition to support units, project managers in academic units are also involved in R&D support services (the positions have been created by academic units according to their needs and possibilities).

The processing of research and development projects and study projects at the University of Tartu was audited in 2013, with the aim to determine whether the processing of projects was efficient and the university's internal control system sufficient in that regard. The internal audit unit found that the regulation of processing projects at the UT was adequate and it has been updated according to the changing external environment and the university's organisation of work. The audit did not identify any significant deviations from the established requirements and the internal control system implemented in the processing of projects was mostly considered sufficient. As a result of the audit, the obsolete bylaws regulating the treatment of intellectual property were replaced with the Procedure for Managing Intellectual Property Created at the University of Tartu, which regulates the relationships that arise in using the results of the creative activities of staff and students.

3.2.2. Financial resources for R&D development

Compared to other Estonian research and development institutions, the UT is successful in R&D activities, including in obtaining the resources necessary for conducting R&D. The success is based on academic competence, modern infrastructure and internal and external cooperation. As a rule, applying for R&D funding at the UT is based on the initiative and academic competence of academic staff and units. In applying for R&D funding and in concluding contracts (i.e. in initiating and implementing projects), the university follows the principle that the projects are expedient for the university and support the core activities of the university.

Since 2013, the financial support measure called institutional research funding has been allocated to research and development institutions in Estonia for financing R&D and the related activities (research themes), ensuring the continuity of R&D, and updating, upgrading and maintaining the infrastructure necessary for that. The university senate annually approves the procedure for applying for institutional research funding, which regulates the application submission process at the university.

TABLE 3.2. Research funding allocated to Estonian R&D institutions from major national financing programmes in 2014 (in millions of euros)

R&D institution	2012	2014	Change compared to 2012
UT	19.8	21.7	1.9
TUT	8.6	8.2	-0.3
TU	2.1	2.0	-0.1
EULS	2.6	2.6	-0.1
Other R&D institutions*	5.4	6.0	0.6
Total	38.6	40.6	2.0

Source: Estonian Research Council, Ministry of Education and Research

*In 2014, this amount was divided between 22 other R&D institutions in different financing programmes.

In 2013, Estonian research and development institutions were allocated state research funding in a total amount of EUR 40.6 million in the framework of major national financing programmes[1]. The volume of funding allocated to the UT made up 53.6%. The total amount allocated to the UT under national financing programmes has grown. The growth mainly stems from an increase in the volumes of two highly competitive financing measures – institutional research funding and personal research funding – in which only the best get funded. In 2014, the total financial volume of institutional research funding was EUR 19.3 million, of which the UT was granted funding for 59 themes in the amount of EUR 11 million (including EUR 6.5 million for 38 new institutional research funding projects). The total financial volume of personal research funding was EUR 3.6 million, of which the UT was granted funding for 46 themes in the amount of EUR 2.3 million. A total of 19 new personal research

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[1] The major national financing programmes are targeted financing, institutional research funding, grants of Estonian Science Foundation, personal research funding, national programmes and baseline funding.

	targeted funding of research topics/ institutional research funding	Estonian Science Foundation grants/ personal research funding	baseline funding	national programmes
UT	13.1	4.5	3.7	0.4
TUT	4.5	1.7	1.9	0.1

FIGURE 3.6. Research funding allocated to the UT and TUT from major national financing programmes in 2014 (in millions of euros). Source: Estonian Research Council, Ministry of Education and Research

funding projects were financed at the UT in 2014, in the total volume of EUR 917,860. The success rate in applying for new personal research funding at the UT was 18.2%, which was higher than the average success rate (13.1%) in Estonia.

In Estonia, the increase in R&D income has been supported by EU Structural Funds, as a result of which also activities requiring continuous funding have been founded upon temporary resources. Baseline funding makes up only about 16–17% of the national research funding allocated to the university. A part of the baseline funding resources allocated to the university is assigned directly for financing the research themes and research groups of academic units. For instance, pursuant to the council's resolution, 43% of the baseline funding is assigned to academic units in 2014 and 2015 so that faculties and institutions could initiate and/or provide additional support to research activities important for the area as necessary. The rest of the baseline funding allocated by the state is assigned to the development fund, research support fund and, to a smaller degree, to the capital budget.

The UT development fund was established in 2009 with the aim to support innovative activities at the university and study and research areas with a potential to attract international attention. In 2011, a

FIGURE 3.7. Income per academic staff member (expected result and achieved result) and R&D income per academic staff member in 2009–2013

decision was made on the basis of expert assessments to finance three projects until 2015 in the total amount of EUR 6.1 million: the Centre for EU-Russia Studies (EUR 1.6 million), the Centre of Translational Genomics (EUR 3.5 million) and the Centre for Disease Models (EUR 1 million). The statutes of the development fund were updated in 2013: the development fund now finances high-level R&D projects, innovative activities at the university, and the engagement of outstanding research and teaching staff. In 2013, the research support fund was established to develop the research activities of structural units where the proportion of R&D activities is small (up to 25% of the budget). The application for and allocation of support from the research support fund was in 2013 regulated by the rector's directive. The activities of funds established for various development activities are planned to be reviewed and consolidated in 2015.

The university is actively engaged in the protection and commercialisation of intellectual property and has also allocated budget resources for expenses related to intellectual property protection. To motivate researchers to conduct applied research, the net income received from allowing other persons to use the university's intellectual property (licensing) is divided between the authors and the development funds of their structural units. The patent portfolio is reviewed regularly and the intellectual property protection strategy is amended as necessary.
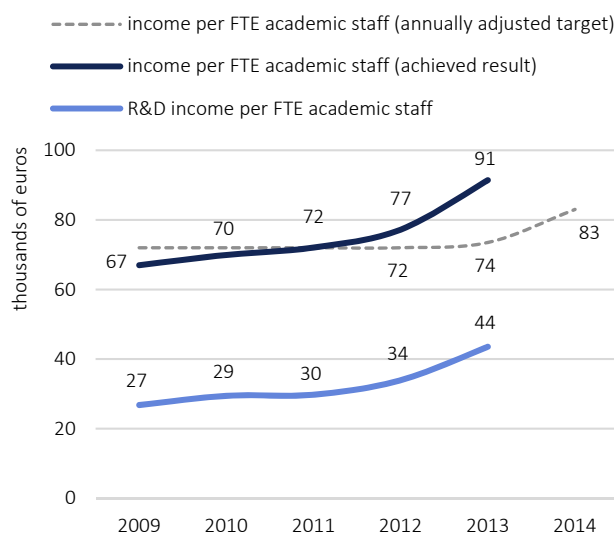
3.2.3. R&D networks and infrastructure

The university takes part in the work of Estonian and international organisations and participates in various joint projects as a coordinator or partner (see also 1.2.5). Participation in the establishment of infrastructures of national importance is decided at the university management level, taking into account the proposals and opinions received from academic units. Specialisation- and research-specific decisions on cooperation partners and participation in organisations are mainly made at the level of institutes, faculties and/or research groups.

Both regular evaluations and targeted evaluations assess the university's participation in (inter)national R&D networks. International cooperation is also evaluated in applications for the main national research financing instruments. The international cooperation of researchers and the performance of existing cooperation agreements are regularly monitored. According to evaluation reports and the institutional research funding evaluation results, the university's R&D cooperation and participation in various networks is rated as good. An international cooperation register to be linked to the travel workflow is currently being launched. The goal of the register is to get an overview of the purposes and destinations of international business trips of the university's researchers.

The systematic policy of investing in research infrastructure in Estonia was started in 2004 when several underlying strategic documents were prepared. In 2010, the appliances and equipment and the relevant needs of the UT were mapped, on the basis of which applications were submitted for support from the EU Structural Funds and proposals were made for the Estonian Research Infrastructures Roadmap.

One criterion in the evaluation of institutional research funding applications is the condition of R&D infrastructure. On the basis of evaluation results, we can say that the university' infrastructure is good. The condition of the infrastructure has earned the maximum or nearly the maximum score in all themes (see also 1.3.1 and 1.3.3).

With the university's active participation, the state is creating an equipment register in the Estonian Research Information System. The register will provide an overview of the existing equipment at research institutions as well as of the terms of use and availability and the condition of such equipment. There has been a great need for such a register, but as the decision to create the national equipment register was made already in 2011, the university decided not to develop such a system itself.

TABLE 3.3. Estonia's participation in international research infrastructures

Participation as a founding country	
	CLARIN ERIC – Common Language Resources and Technology Infrastructure; Center of Estonian Language Resources (UT, TUT, Institute of the Estonian Language)
	BBMRI ERIC – Biobanking and Biomolecular Resources Infrastructure; Centre of Excellence in Genomics (UT, Estonian Biocentre)
	ESS ERIC – European Social Survey; Estonian participation in the European Social Survey project (UT)
	EATRIS ERIC – European Infrastructure for Translational Medicine; National Centre for Translational Medicine (UT, EULS, Tartu University Hospital)
	ELIXIR – European Life-Science Infrastructure for Biological Information; Estonian ELIXIR (UT, TUT, National Institute of Chemical Physics and Biophysics, Estonian Biocentre, TU)

Participation as a cooperation partner	
	MAX IV LABORATORY; Estonian beamline at MAX-IV Synchrotron Radiation Source (UT)
	EUROPEAN SPALLATION SOURCE; European Spallation Source (UT, TUT, National Institute of Chemical Physics and Biophysics)
	CERN; Estonian participation in the European Organization for Nuclear Research (National Institute of Chemical Physics and Biophysics, UT, TUT)
	EUROPEAN SPACE AGENCY; Estonian membership in the European Space Agency (Tartu Observatory, UT)
	SHARE ERIC – Survey of Health, Ageing and Retirement in Europe; SHARE EESTI OÜ (TU, UT)

TABLE 3.4. Acquisition cost of research appliances and equipment acquired by the UT in 2010–2013 (VAT excluded)

	Acquisition cost of research appliances and equipment (euros)
2010	6,392,118
2011	7,752,208
2012	8,255,011
2013	15,106,422

In 2013, a list of the so-called core infrastructure objects was compiled in Estonia for the first time, based on the Estonian Research Infrastructures Roadmap and infrastructures of national importance financed on the basis of that. The objective of the core infrastructure is to use high-level research equipment and labour force to offer our expert knowledge and skills and analytical capabilities to researchers and research and development groups both in R&D and the business sector. The measure "Modernising of research infrastructure of national priority" has financed nine objects and the UT participates in the development of eight of these (being the lead partner in seven): the Estonian Centre for Genomics (lead partner: Estonian Biocentre), the Estonian e-Repository and Conservation of Collections, the Center of Estonian Language Resources, the Estonian Environmental Observatory, the Estonian Scientific Computing Infrastructure, the Natural History Archives and Information Network, Nanomaterials – Research and Application, and the National Centre for Translational and Clinical Research.

3.3. DOCTORAL STUDIES[2]

3.3.1. Development of doctoral studies

The organisation of doctoral studies is regulated at the UT by Study Regulations. The Procedure for Awarding Doctorates regulates the requirements applicable to doctoral dissertations and the procedure for applying for and awarding doctorates.

The requirements applicable to doctoral theses are relatively similar in Estonian universities, as the main principles were agreed upon in 2003 in the Estonian public universities' Agreement on Good Practice Regarding Quality. Compliance with requirements was assessed annually. The universities agreed that a doctoral research thesis generally requires the existence of at least three research publications. The publication of at least three articles in international pre-reviewed journals is the prerequisite to defending a doctoral thesis on the basis of a series of publications and a review article. In the case of a dissertation or monograph, at least one research publication is required, including at least one article directly related to the subject of the doctoral thesis, published in an international pre-reviewed journal or compendium. A patent or patent application is considered equal to a research publication. In arts, a public concert, performance, exhibition or other presentation open to the public is considered equal to a publication.

With support from the EU Structural Funds, 13 doctoral schools operate at Estonian public universities in 2009–2015. The UT leads eight doctoral schools and participates in another three as a partner. National and international cooperation is mandatory in a doctoral school. Among other things, doctoral schools support internationalisation and student mobility, interdisciplinary research projects, the development of the Estonian research language and terminology, the return of doctoral students who have discontinued studies, cooperation with the private and public sectors and other cooperation and development activities.

In Estonia, all doctoral students receive doctoral allowance in their first year of studies. From the second year of studies, doctoral allowance is available to doctoral students who have passed the progress review and have not exceeded the standard duration of the curriculum. In the year of its introduction (2004), doctoral allowance amounted to 80% of the average salary in Estonia. Doctoral allowance has not been increased in a decade and thus in 2014 the allowance (EUR 383.47 a month) formed only 40% of the average salary. A 2013 study of the efficiency and monitoring of doctoral studies showed that engagement in full-time employment is the

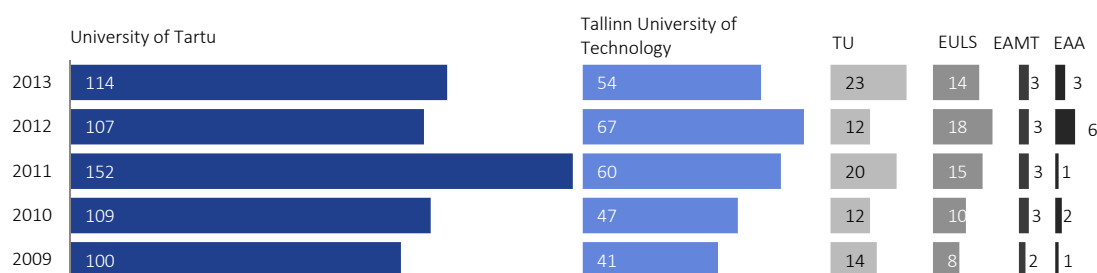*FIGURE 3.8. Graduates of doctoral studies of public universities in 2009–2013. Source: EHIS*

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[2] *The University of Tartu considers it important that all degree study is research-based. Thus student research and involvement of students in research projects is an integral part of degree studies that is not analysed separately or considered as a R&D activity. Thus the supervision of student research, including feedback, and the involvement of students in projects has been described in chapter 2.*
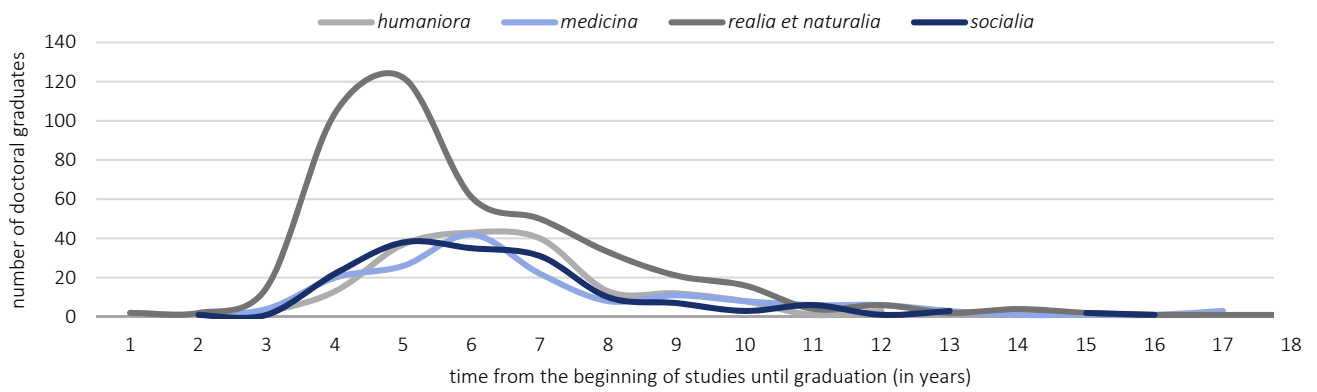
FIGURE 3.9. Number of doctoral students who graduated from the UT in the university's four areas in 2003–2012, by the length of studies (excluding external students who have not been matriculated to doctoral studies at the UT)

main problem in reaching the successful defence of a doctoral thesis: 35% of doctoral students work full time besides their studies and often the job is not related to the research topic.

In 2003–2012, 990 doctoral degrees were defended at the UT, with nearly a half of these in the area of *realia et naturalia*. On average, it took a doctoral student almost six years from beginning their studies to defending their doctoral degree. Of the doctoral students admitted to the UT in 2005–2007, 17% defended their doctoral degree within five years: 9% in *humaniora*, 21% in *medicina*, 25% in r*ealia et naturalia* and 11% in *socialia*.

Since 2005, a PhD Study Agreement is signed by the doctoral student, the supervisor(s) and the university upon admission to the UT. A doctoral student and his/her supervisor must draw up an individual study plan covering the entire period of his/her studies. That plan will be specified by an annual study and research plan each year. Doctoral students must pass a progress review once during the academic year. The progress review is based on the fulfilment of the individual study plan: since the academic year 2013/2014, doctoral students are considered positively attested only if they have fulfilled at least 50% of their individual study plan or submitted their doctoral thesis for defence. The survey among doctoral students revealed that doctoral students appreciate thorough and constructive progress reviews, but in some fields of study of the university, the progress reviews are relatively formal and the doctoral student does not get any feedback or support from the review.

To develop doctoral studies, the university implements measures for enhancing the efficiency of doctoral studies, which have been approved by the board and the senate (prepared in 2010, updated in 2011 and 2013). The measures stipulate the development of integral training and mentor services for developing the supervision skills of the supervisors of doctoral students. In February 2014, the senate approved additional measures for increasing the quality and effectiveness of the supervision of doctoral studies. The senate stipulated that a system for developing, evaluating and recognising good supervision skills will be created by the end of 2014. According to the doctoral studies development plan, to ensure the efficiency and quality of doctoral studies, a gradual
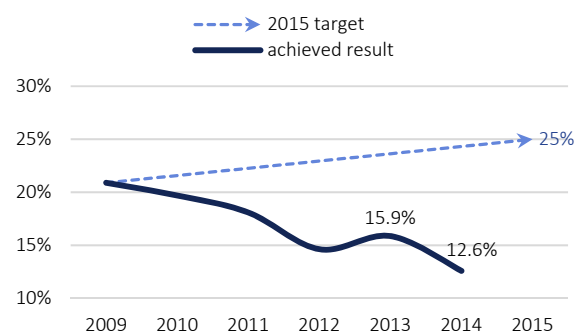

FIGURE 3.10. Efficiency of completion of doctoral studies (proportion of students who completed doctoral studies within the standard study period + one year) in 2009–2013 (expected result and achieved result)

transition is being made since 2011 to take into account the ratio of students and supervisors, the efficiency of supervision and the feedback from students in assigning doctoral study places. To value and motivate the supervision of doctoral students, the supervisors of doctoral students are paid a lump sum performance pay after the successful defence of a doctoral thesis.

To assess whether these activities have had an effect on increasing the quality of supervision, a feedback questionnaire for doctoral students on supervision is prepared (see also 2.4.4).

Since the academic year 2014/2015, project- and theme-based admission is used in doctoral studies: doctoral students are admitted into the strongest projects and themes which have ensured funding and can provide

competent and capable supervisors. The involvement of doctoral students in strong research projects creates better opportunities for doctoral students to find external supervisors and increasing their mobility (see also 2.1.3).

To assess the result of the activities aimed at doctoral studies, the efficiency of doctoral studies is regularly analysed, the number of teaching staff members participating in supervision training is monitored and compliance with regulations is checked (e.g. the Personnel Office together with the Office of Academic Affairs reviews the list of defended doctoral theses and the transferred performance pay for the supervision of doctoral students and draws attention to payments that have not been made). In 2014, the UT Good Practice of Doctoral Studies was prepared. The senate approved it on 19 December 2014.

3.3.2. International dimension of doctoral studies

In line with the overall objective of doctoral studies to bring the knowledge and skills of doctoral students to the high level recognised in the international research world, doctoral students are recommended to participate in international conferences, seminars, training courses and research visits and to study at a foreign university or education institution for a total of at least one semester during their period of studies. The university has simplified the procedure of registering doctoral students for studies abroad if the commencement of studies abroad does not require the preparation and approval of a study plan (short-term research visit, etc.). The experience gained abroad and the progress of research is evaluated once in every academic year at the progress review of doctoral students.

TABLE 3.5. *Number of doctoral students studying abroad in the academic years 2008/2009–2012/2013*

	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
Total number of doctoral students	1259	1340	1437	1493	1504
...studying abroad	61	52	58	87	69
...proportion of doctoral students studying abroad	5%	4%	4%	6%	5%

* The table only shows doctoral students who have had themselves registered as studying abroad.

TABLE 3.6. *Use of mobility scholarships of the DoRa programme supported by the EU Structural Funds at the UT in the academic years 2008/2009–2013/2014 (number of financed applications)*

	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014
Short-term research projects of visiting doctoral students in Estonia (1–10 months)	19	11	27	33	40	22
Estonian doctoral students completing research or training courses abroad (1–5 months)	26	43	37	73	61	54
Short-term foreign visits of young Estonian researchers (3–21 days)	192	254	290	302	292	208

The University of Tartu Strategic Plan for 2009–2015 established the objective to increase the proportion of international doctoral students to 10% by 2015. In 2013, the proportion of international doctoral students at the UT was nearly 9% (see also FIGURE 2.6).

As obstacles arising from national legal acts were discovered in the admission of international doctoral students, the university actively participated in the initiation and preparation of amendments to the Aliens Act (stage 1 of the amendments entered into force on 1 September 2013). For instance, applying for the residence permit became more flexible for third-country nationals and it is possible for research and teaching staff to commence work by simplified procedure. The procedure for registering short-term employment was simplified, so that foreign staff can change jobs inside the organisation without having to apply for a new residence permit and it is possible to work at several R&D institutions on the basis of the same residence permit (joint projects), etc.

Feedback from doctoral students and the supervision of curricula revealed that the limited number of courses taught in English was a problem for international students in doctoral studies. In 2013, study languages were defined for all doctoral curricula to make it clearly understandable which doctoral curricula can be completed in English.

The university's goal is to encourage and engage more highly recognised international researchers to supervise doctoral students. The Doctoral Studies and Internationalisation Programme DoRa financed from the EU Structural Funds gave the university an opportunity to engage teaching staff with top-level foreign experience as professors for five years (2009–2015). A great number of international teaching staff has been engaged in the supervision of doctoral students in doctoral schools, and international teaching staff has been invited to the UT to develop new and improve existing courses and to participate in doctoral summer schools and research seminars. At the UT, at least one opponent of a doctoral thesis must be from outside Estonia (unless the rector decides otherwise upon the council's proposal). This has resulted in the majority of doctoral theses being written in a foreign language at the university. For instance, only 16% of the doctoral theses defended in 2013 were written in Estonian. However, a thesis in a foreign language must contain an exhaustive Estonian summary of the content of the individual parts of the thesis, which contributes to the development of Estonian-language terminology.

In 2012, UT researchers analysed the influence of doctoral schools. The results showed that the representatives of universities appreciated highly the possibility of engaging foreign supervisors and its impact on the quality of doctoral theses. Doctoral students themselves, however, rated the impact of cooperation with a foreign supervisor as less significant. At the same time, a large number of doctoral students took a critical view of their main supervisor's competence in supervising their particular research topic. Why the engagement of a foreign supervisor has not helped solve that problem for doctoral students was not determined in the study and therefore requires further analysis.

Since 2012, the Procedure for Awarding Doctorates regulates the conclusion of joint supervision agreements or the so-called cotutelle agreements under which doctoral students receive a diploma from two universities. In 2012, one doctoral student defended the doctoral thesis under a cotutelle agreement and in 2013 there were three such students.

3.3.3. Recognising and avoiding plagiarism

The UT stands for the preservation of academic values and traditions. For this purpose, various units have cooperated to significantly update the information aimed to help students prevent plagiarism. A web page has been created for evaluating the sources of information found for research and/or scientific work and for recognising plagiarism. Faculties have developed rules for the formatting of theses, processing incidents of plagiarism and punishing students for plagiarism. To increase the awareness of the teaching staff, information related to copyright and plagiarism has been significantly supplemented and concentrated on a separate page on the intranet: copyright in studies. The Procedure for Awarding Doctorates has been updated, establishing the rules of procedure for cases in which plagiarism or academic fraud is suspected in the process of applying for a doctoral degree. The university is planning to update the clauses related to plagiarism also in the Study Regulations similarly to the Procedure for Awarding Doctorates.

In cooperation with other Estonian universities (Tallinn University of Technology, Tallinn University, Estonian University of Life Sciences, Tartu Health Care College, Estonian Academy of Security Sciences and Tallinn Health Care College), the UT participated in the development of the portal KRATT which is aimed at preventing plagiarism. The portal allows users to analyse Estonian-language theses and papers that have been digitally archived by higher education institutions, comparing these to each other and to the internet sources, and to manually upload theses and papers to compare their content with the archives of higher education institutions and the Estonian-language internet sources.

4. SERVICE TO SOCIETY, INCLUDING EDUCATIONAL ACTIVITIES FOR GENERAL PUBLIC

In providing service to society, the objective established in the strategic plan A2015 is to exert an active influence on Estonia's economic and cultural life and social development, communicate its activities to the public and promote lifelong learning. Service to society, including educational activities for general public

The organisation and development of promoting research is the responsibility of the vice rector for research who coordinates the activities of museums, the Botanic Garden and the Gifted and Talented Development Centre. The director of administration is responsible for the management and development of marketing and communication activities and cultural and sports activities. The vice rector for academic affairs is responsible for the management and development of continuing education and publishing activities.

4.1. PROMOTION OF CORE ACTIVITIES AND INVOLVEMENT IN SOCIAL DEVELOPMENT

4.1.1. Promotion of core activities

Research communication and the promotion of studies are the two main areas of raising awareness of study and research activities at the university.

To support research communication, information is available on the intranet to help the research staff of the UT to present their work professionally and inspiringly in the media. Research communication is also supported by the requirement of the Procedure for Awarding Doctorates that all students applying for a doctoral degree have to write a brief popular science summary of their thesis in Estonian and English, aimed at a broad audience.

The university's research news portal Novaator publishes research news from Estonia and abroad and is primarily intended for readers who do not have a specialised education, but wish to educate themselves on a certain subject area or simply broaden their horizon. According to a survey among readers, the main visitors of the portal include managers and entrepreneurs as well as students and pupils, which is in line with the established objectives. Other important channels besides Novaator include the research news portal of the Estonian Public Broadcasting, and the radio programme "Kukkuv õun" ("Falling Apple") which is focused on scientific achievements, phenomena, areas and problems and is jointly supported by the UT, the Estonian Academy of Sciences and Tallinn University of Technology. The activities of the university are also covered by the University of Tartu television (UTTV) which offers both live and recorded webcasts from various events taking place at the UT or with the university's participation (lectures, conferences, sports competitions, etc.).

The volume of research communication is measured by the number of coverage of research topics and the so-called pure science news in major media channels. In 2013, research topics as a whole (both science news and topics related to research) made up 36% (3975 news items) of all media coverage related to the UT.

TABLE 4.1. Coverage of research topics in the media in 2013, by media type, across four Estonian universities

Coverage of research topics by media type	UT	TUT	TU	EULS
Online channels	1725	630	513	383
Daily newspapers	713	211	162	106
Weekly newspapers	372	122	148	85
Journals	366	158	67	72
County newspapers	342	143	75	70
Radio channels	241	95	70	43
TV channels	162	72	52	26
Local newspapers	54	35	21	16
News agencies	0	360	0	0
Total	3975	1826	1108	801

Source: Estonian News Agency's 2013 media monitoring

The organisation of external communication has been developed on the basis of conclusions drawn from the results of communication audits and measurements of communication activities. For instance, the frequency of the coverage of the university's research news via channels that have the greatest influence in society is monitored as closely as possible to improve the planning of dissemination of the university's research news.

The promotion of studies aims to attract capable, motivated and determined students who have made an informed decision when choosing their specialisation to come and study at the university. To achieve this objective, the UT describes its study opportunities on its homepage, takes part in education fairs, creates information materials, presents the university at events aimed at various target groups, and publishes relevant adverts in printed and digital media. To promote degree study opportunities, the university has established objectives for a recruitment campaign to promote higher education and student life. Recruitment activities are reviewed every year on the basis of those objectives and the media audit of recruitment activities. Domestic recruitment activities are aimed at the following target groups (in the order of priority):

TABLE 4.2. Number of research news items of the UT and TUT in major publications in 2013

Research news in TOP 6 channels	UT	TUT
ETV 'AK' (120,000 viewers)	81	26
Kanal 2 'Reporter' (124,000 viewers)	18	8
Postimees (print run 50,000)	141	46
Eesti Päevaleht (print run 23,000)	135	46
Äripäev (print run 13,000)	23	27
Maaleht (print run 44,000)	36	8

Source: Estonian News Agency's 2013 media monitoring

- entrants to regular bachelor's studies, 16–25-year-olds and their parents;
- entrants to master's studies and open university, 25–35-year-olds;
- the entire population of Estonia.

TABLE 4.3. Domestic recruitment marketing plan for the academic year 2013/2014

Channel/Activity	Description
Homepage	ut.ee/sisseastumine, facebook/tuleulikooli (more than 3600 Facebook likes)
Student shadowing	ut.ee/tudengivari (ca 450 student shadows in 2012/2013)
Events	Open Doors' Day (ca 1000 visitors), Teeviit, Intellektika, regional education fairs
Direct marketing	Sending letters to participants in courses of the Gifted and Talented Development Centre (ca 500) and those who fulfil special admission conditions (ca 200), direct posting on special events (posters, emails); direct communication with 75 schools (ca 200 events); separate events in Tallinn (lecture series, workshop event)
Printed media	Admission brochure, promotion flyers for first level of study
Campaign	tuleulikooli.ee, mass media

The university cooperates with a large number of general education schools and has concluded a cooperation agreement with 19 of them. With activities aimed at school-age youth, the university wishes to:

- support the specialisation choices made by higher secondary school students by disseminating practical information about the university and introducing the specialisations taught at the UT;
- enable young people interested in research to engage in their areas of interest already before entering the university;
- promote academic education, research and the profession of a researcher to a larger number of students.

Many units of the university are involved in the promotion of studies. The university's Gifted and Talented Development Centre plays a unique role in the Estonian education system as a support and competence centre for gifted pupils interested in science. The centre also coordinates study and hobby activities the university's faculties, colleges and institutions offer to the students of general education schools. The majority of the lectures of the centre belong to area of *realia et naturalia*.

The physics portal Fyysika.ee provides answers mainly to questions in the area of physics. The teams of the UT's Teadusbuss ("Science Bus") and Psühhobuss ("Psycho Bus") may be encountered in various locations all over Estonia. The performances of Teadusbuss allow young people to experience natural sciences through engaging experiments, while the Psühhobuss team entertainingly demonstrates psychology-related phenomena. The UT takes part in the Researchers' Night and the Museum Night. To promote research primarily among the students

of general education schools, the state, the city of Tartu and the University of Tartu established the Science Centre AHHAA in 2004. The centre had actually been launched as a UT project already in 1997.

In 2007, the UT Narva College opened its Children's University aimed at 8–12-year-old children. The objective of the Children's University is to offer the children of the city of Narva and the surrounding areas additional knowledge in the form of lectures, seminars and excursions (in Estonian and Russian). By now, the children of Tartu and Tallinn are also included in the target group.

Although the university actively engages in the promotion of study and research activities, there is no overall concept of promoting the core activities which would formulate the goals of promotion activities, including across various target groups. An activity programme based on such a concept would allow a better coordination of individual initiatives.

4.1.2. Staff activities oriented to society

Participating in the work of various professional associations and other advisory and decision-making bodies in society is one of the functions in the UT academic staff job description. The university has not gathered detailed statistics on staff members' participation in the work of professional associations and advisory and decision-making bodies in society, but the involvement of university staff in such activities is strongly visible and significant in everyday life. University's employees contribute to society through many activities, of which the main ones are consultations and expert analyses (including the drafting of strategies and regulations), training activities and conducting analyses and applied research. 48% of the members of the Estonian Academy of Sciences work at the University of Tartu.

The need to ensure better visibility of the society-oriented activities of university has continuously increased. Participation in the work of academic and administrative bodies and committees outside the university could be evaluated to a certain degree on the basis of academic staff reports. But this report format has not become a widely used instrument of performance-based management. When developing information systems and IT solutions, opportunities must be found for improving the reporting on staff functions and outcomes.

4.2. CONTINUING EDUCATION

In-service training (continuing education) is organised and developed by the Lifelong Learning Centre. At the UT, all academic units are allowed to organise continuing education within their area and in cooperation between the areas. Support units may organise continuing education in accordance with the tasks established in the description of the unit. The two faculties offering continuing education in a larger volume (Faculty of Medicine and Faculty of Social Sciences and Education) have created separate structural units that organise continuing education.

Continuing education is regulated by the Study Regulations. The Procedures for Continuing Education have been established to ensure the quality of continuing education at the university and stipulate the general responsibility and the persons responsible for quality (defining the requirements for programmes and documents, and the rights and obligations of learners).

4.2.1. Objectives of continuing education

The university's strategic plan A2015 established the objective for the university to develop lifelong learning, foreseeing a significant increase in the number of adult learners, including participants in continuing education and retraining. In 2009, the UT was the first Estonian university to adopt the Principles of Lifelong Learning. An impulse for this came from the European Universities' Charter on Lifelong Learning, which establishes development tasks for both universities and ministries.

> For the purpose of shaping lifelong learning attitudes, the university has organised free public lectures and training events in the framework of the Adult Learner's Week (täiskasvanud õppija nädal), the national Entrepreneurship Week (ettevõtlusnädal), the University of Tartu Tallinn Week and other events. In the academic year 2013/2014, free lecture series "Google'ist ei piisa" ("Google is not enough", Tallinn) and on national sciences (Tartu and Tallinn) were held.

The UT has several brands under which training events are organised, e.g. *lasteülikool* (Children's University), *eelkolledž* (Pre-College) and the Gifted and Talented Development Centre for pupils; *suveülikool* (Summer University), *talveülikool* (Winter University) and *juhtimiskool* (Management School) for students, alumni, specialists, managers and others; *väärikate ülikool* for senior citizens (in 2010, the citizens of Tartu voted the latter among the ten most important deeds of the year in Tartu). The International Summer University and the university's first open-access e-courses or MOOCs are aimed at international learners. In addition, e-learning continuing education opportunities are available to everyone. In 2013, more than 7000 learners took part in continuing education with web support, i.e. every fourth continuing education learner. The university offers courses in Estonian, Russian and English.

To support the implementation of RPL, the UT issues learners a continuing education certificate together with the academic transcript. The training courses offered by the university can be used towards the completion of degree study curricula via RPL if the courses match in terms of learning outcomes.

The A2015 objective related to the number of continuing education learners (25,300 continuing education learners) was achieved already in 2011. Pursuant to A2015, the financial objective of continuing education was EUR 3.5 million, which was achieved in 2012. It can be said on the basis of recent years' data that the optimum volume of continuing education offered by the UT is approximately 30,000 learners a year as long as the number of students has not yet started to fall considerably.

The UT is the main provider of continuing education among Estonian public universities. It can be estimated that the university is the largest provider of continuing education in Estonia in general (the comparison is based on the annual turnover data of the private sector in Äripäev's list of top training service providers).

4.2.2. Continuing education target groups

According to the university's marketing principles, the primary target groups for the UT's continuing education are education and medical workers, lawyers, executives and mid-level managers, specialists, public servants, alumni, students and pupils. Each year, around 40% of the training courses are held for education workers and almost 10% for medical workers. For example, the university organises retraining courses for teachers, which give teachers with higher education the right to teach an additional specialty.

In 2014, a promotional campaign for continuing education courses based on degree studies was carried out centrally for the first time. All faculties and colleges offer the possibility of taking individual courses from the degree study curricula. Starting from the academic year 2014/2015, the university offers continuing education programmes developed on the basis of degree study curricula, which allow learners flexible conditions for attaining an academic degree.

Many large enterprises and public sector organisations order training courses from the university. Such training courses are tailored in cooperation with the representatives of the relevant organisation. The analysis shows that the share of ordered training courses has been growing each year. To achieve the growth, systematic work has been done by both the organisers of continuing education and the university representatives who work in regional colleges and the UT's Tallinn representation.
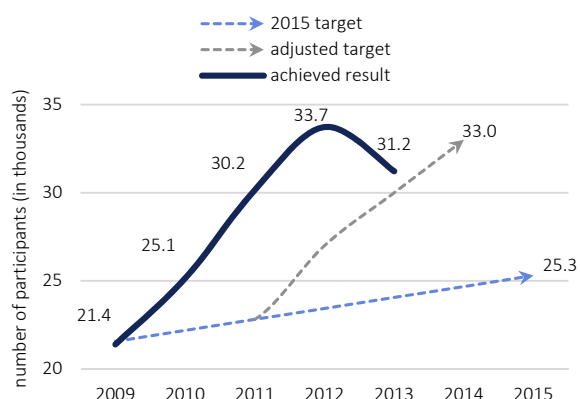

FIGURE 4.1. Number of participants in continuing education at the UT in 2009–2013 (expected result and achieved result)
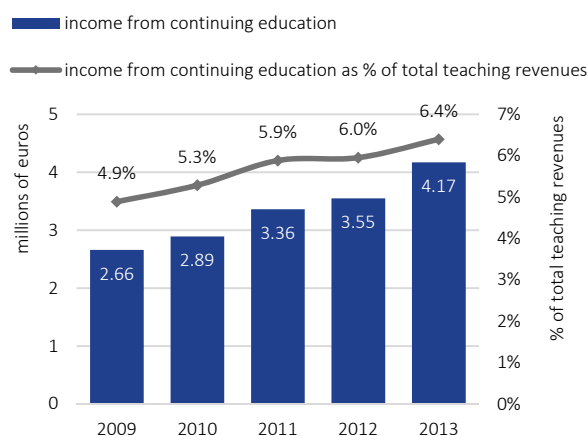

FIGURE 4.2. Income from continuing education in 2009–2013

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In one year, around 1000 trainers teach at the continuing education courses organised by the university. About 50% of them are university staff. Besides university's teaching staff, practitioners are also involved in continuing education.

The main means for reaching target groups is the university's continuing education webpage. Subscribers of a designated mailing list (over 8000 members) receive a monthly newsletter on continuing education opportunities across the university. All structural units that carry out continuing education communicate with the target groups of their training courses and get feedback from training participants for planning new programmes. Professional qualification requirements are the basis for developing and carrying out programmes aimed at the target audience.

FIGURE 4.3. *Number of participants in continuing education in major public universities in 2009–2013*

To maintain and expand the continuing education target groups, the university organises various client events (such as the University of Tartu Tallinn week) and visits fairs and conferences/seminars of professional associations. To introduce continuing education possibilities, meetings are held with new and existing cooperation partners from companies and institutions. Each year, the best cooperation partners are recognised.

4.2.3. Ensuring quality of continuing education and satisfaction of participants

To evaluate satisfaction, learners are asked for written feedback after each training session. The feedback is not analysed centrally – the data is consolidated and analysed at the structural unit level and the outcomes are taken into account in organising the subsequent training courses. Oral feedback is also requested from trainers and, in the case of ordered training courses, from the institution that ordered the course. The summary of feedback from participants and the trainer is sent to the institution that ordered the training.

To ensure the quality of continuing education, programme directors and trainers are offered opportunities to develop their professional competences. Regular training days on topics related to continuing education are held for programme directors. Those dealing with e-learning and interested in it can attend "e-luncheons" to discuss and hear about new developments in the field. Programme directors can supplement their professional skills at various training courses organised by the Personnel Office, and these are generally free of charge for participants (see also 1.2.2). To resolve problems related to organising continuing education and develop the activities in the field of continuing education, roundtables and meetings within the university with different parties are organised. If needed, the Academic Affairs Committee discusses continuing education topics.

In 2011–2013, in the course of the project "Kvaliteetne ja mitmekülgne täiendusõpe ülikoolide koostöös" (HYPE) ("Quality and multifaceted continuing education in collaboration between universities"), the Estonian public universities developed a unified model for evaluating the quality of continuing educating based on the EFQM Excellence Model, the principles for applying RPL in continuing education and the principles for independent and supervised learning. In 2013, on the basis of the quality evaluation model, the UT launched quality evaluation of continuing education system for the first time, with conclusions drawn in 2014. The outcomes were assessed on the basis of the goals set in the A2015 strategic plan and action plan.

The university is part of the Estonian Network for University Continuing Education and Association of Estonian Adult Educators Andras. Among international cooperation networks, the university is a member of the European Universities Continuing Education Network (EUCEN) and the European Distance and E-Learning Network (EDEN). As an EUCEN member, the university took part in the ALLUME project, where the fields of lifelong learning of participating universities were evaluated and recommendations were developed for establishing a European lifelong university. The lifelong learning field of the UT received a very positive evaluation in this project.

Important development goals for the near future in the field of continuing education is developing and agreeing on unified principles for feedback on the university's continuing education, including consolidating summaries of training feedback in the SIS. Every three years, a self-assessment of the quality of provision of continuing education at the university will also be organised.
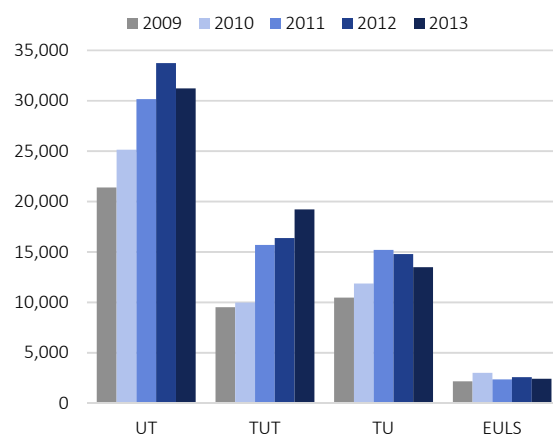
4.3. OTHER PUBLIC-ORIENTED ACTIVITIES

The UT contributes to societal wellbeing through a number of activities and institutions and units. The university's public lectures, discussion evenings, conferences, concerts and sports competitions enrich cultural and intellectual life. The university's memory institutions (museums, Botanic Garden and library) ensure that the national cultural heritage is preserved and developed and offer various groups of visitors education, culture and information services. The university values students' contributions to the society also through the RPL process, in which learning taking place during leisure time is also taken into account.

From 1 January 2014, the university's museums and Botanic Garden were reorganised into two institutions: the University of Tartu Museum (established on the basis of the university's History Museum and Art Museum) and the University of Tartu Natural History Museum and Botanic Garden.

In the recent years, some 70,000 people have visited the museums each year. In 2011, the number of visits to the university's museum grew thanks to the opening of the renovated Observatory with a new exhibition, and the organising of attractive events, exhibitions and educational programmes that promote research and the university. The drop in the number of visitors to the Natural History Museum is related to the museum's ongoing renovation. During the renovation, the museum has continued educational activities oriented at teachers, pupils and nature fans. In spring 2015, the renovated museum will open its doors to present its upgraded exhibition.

The city of Tartu has a delightful and scenic park in the city centre – the university's Botanic Garden – which is visited by 120,000 people each year. Visiting the open-air collections in the garden is free of charge and there is also a children's playground. The city has provided financial support for the maintenance of the public park area of the garden and for ensuring that it is a worthy recreation area for visitors.

Students, staff and alumni who are passionate about music and dance participate in the UT's performing arts ensembles. The work of people interested in creative cultural pursuits is organised and coordinated by the non-profit organisation MTÜ Tartu Üliõpilasmaja (the Student House), representing 12 different cultural associations and ensembles in 2014.

Founded by UT students in 1908, the University of Tartu Academic Sports Club is now one of Estonia's biggest sports clubs. The club organises training activities and high-level competitions in 16 different fields.

Both the Student House and the Academic Sports Club contribute to the internationalisation of the university. The first takes part in the organisation of the International Student Song and Dance Festival Gaudeamus and the second in the international SELL Student Games.
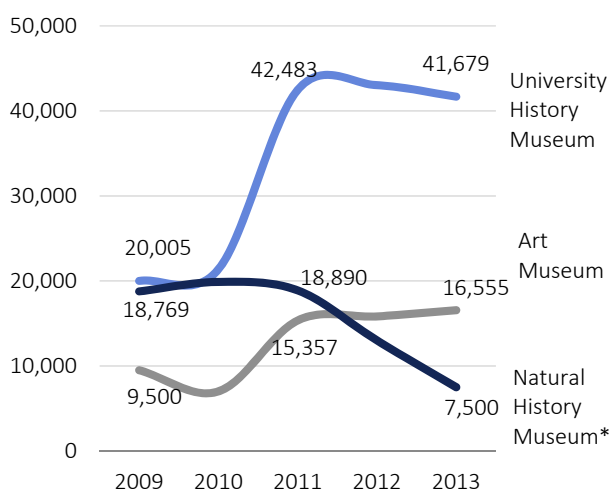
The Natural History Museum exhibition was closed in 2013 due to renovation. The figure shows the number of participants at events organised by the museum.

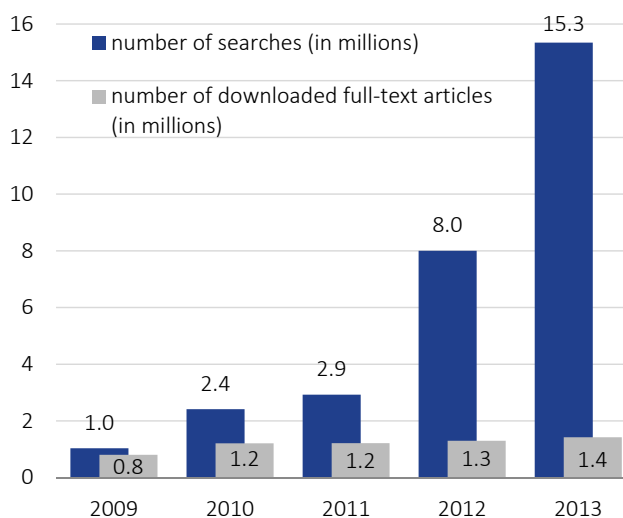FIGURE 4.4. *Number of visitors to museums in 2009–2013*

FIGURE 4.5. *Use of databases in 2009–2013*

TABLE 4.4. Overview of various activities the UT offers to the society

Activity	Implementer
Public lectures, discussion and cultural evenings	faculties, colleges, institutions
Developing and carrying out information literacy e-courses for different target groups	library
Digitisation and making collections available to the public in the DSpace repository	library
Promoting open access and organising the Open Access Week	library
Making collections available to readers who are not UT students or staff	library
Exhibitions, education programmes and cultural events	museum, natural history museum and botanic garden
Publishing books, book series, research journals and textbooks for institutions of higher education and making some of the published books available over the open access platforms OAPEN and DOAB	OÜ Tartu Ülikooli Kirjastus (university press)
Offering possibilities to engage in recreational sport	MTÜ TÜ akadeemiline spordiklubi (Sports Club)
Organising sporting events	MTÜ TÜ akadeemiline spordiklubi (Sports Club)
Coordinating the activities of 12 performing arts ensembles of the UT and EULS (including organising events)	MTÜ Tartu Üliõpilasmaja (Student House)

The University of Tartu Museum, the University of Tartu Natural History Museum and Botanic Garden, the University of Tartu Library, the Student House, the University of Tartu Press and the University of Tartu Academic Sports Club have defined their own development areas and strategic objectives and monitor their compliance.

> The University Culture Club (Ülikooli Kultuuriklubi) also meets at the Student House. Each year, the collaboration between the Student House and the University Culture Club gives rise to the festivals Tartu Spring Days and Tartu Autumn Days.

The city of Tartu is an important cooperation partner for the University of Tartu. The development strategy of the city, Tartu 2030, foresees that the development of Tartu is primarily based on a strong international academic reputation and the city's role as a centre of education, research and medicine in Estonia and as a bearer of national culture. The following areas and directions of activity of joint interest were agreed on in the framework cooperation agreement concluded between the city and the university in 2010:

- knowledge-intensive business ventures;
- conference tourism and joint marketing;
- internationalisation;
- urban space and modern living environment;
- sports and cultural activities;
- healthcare.

> The project "Hea kool heade mõtete linnas" ("A good school in the city of good thoughts") was born from the cooperation between the Tartu City Government and the University of Tartu Centre for Ethics. Through the project, the city became the first local government in Estonia to offer support to its schools in carrying out self-assessment and articulating development goals. The model of good school is an initiative of the University of Tartu Centre for Ethics, aiming to articulate the attributes of a good school and find good metrics to evaluate the work done in schools. More than 80 experts including school administrators, teachers, researchers and education officials across Estonia are involved in developing the model. The initiative is financed by the national values development programme of the Ministry of Education and Research.

5. SUMMARY

5.1. STRENGTHS

- **The UT has a very good reputation in Estonia**. The UT is at the top of the university rankings in the reputation survey conducted by TNS Emor. The university's employees value the opportunity to work for the UT. The prominence and good reputation of the UT in Europe and in the world is attested by the university's partnership with prestigious universities from other countries and the fact that the university is listed in international university rankings.

- **The employment rate among UT graduates is high**. The university's graduates are predominantly content with their choice of specialisation and university.

- **Applicants for admission to the UT are the best and brightest in Estonia**. The UT is the desired university for the best prospective students in the country – students who have made an informed decision in favour of the UT and are satisfied with their choice.

- **The university community is international**. The number of international research and teaching staff and international students has grown in line with the set objectives. As the strengths of the university, international students emphasise the university's excellent support services and academic environment and the mentorship and supervision students receive from teaching staff.

- **The study and work environment is of high quality**. Thanks to the development of the university's infrastructure, the study and work conditions of the university are internationally competitive. The university's research equipment and appliances allow top-flight R&D and advance international cooperation with R&D institutions and companies.

- **International cooperation is strong**. The UT is a member of prestigious international networks and a cooperation partner for renowned research universities. UT employees actively participate in international cooperation projects and mobility programmes.

- **The development of teaching and learning at the university is goal-oriented and supported**. The achievement of educational goals is assessed regularly as part of the overall system for ensuring academic quality. Collecting feedback from students is linked to the development of curricula and organisation of studies and internal evaluation of curricula. Systematic efforts are put into improving faculty members' teaching and supervision skills. Mentors, teaching assistants, tutors and support students are all available to provide support to teaching staff and students.

- **Research and development is of high calibre.** The university's R&D results are in line with the set objectives. Many of the UT's research areas employ researchers and research groups who are among the best in the world in their respective fields. The UT has been successful in applying for assistance from Estonian and EU research funding programmes. Two of three top researcher grants awarded to Estonian research institutions by the European Research Council went to UT researchers. The UT participates in the work of 10 Estonian centres of excellence and 11 doctoral schools, and is the leader of the majority of them.

- **The university enjoys productive cooperation with businesses**. The university's up-to-date training courses, research methods and research results have made the UT an innovative R&D partner for many enterprises in Estonia, from SMEs to international corporations. The volume of R&D contracts signed with the private sector has grown. Most of Estonia's spin-offs have spawned at the UT. The UT takes part in the work of five technology development centres in Estonia.

- **The university largely contributes to national policy planning**. The UT is a key partner for the state in shaping and implementing policy in education, research, language, culture, health care and other walks of life, as well as in regional development, environmental protection and maintaining a balanced economic and social development.

- **The university has an important role in providing lifelong learning, promoting research and enriching the cultural life**. The UT is the largest provider of continuing education in Estonia, enabling a diverse array of possibilities for self-improvement in various forms. The university offers continuing education programmes which provide dedicated learners flexible conditions for attaining an academic degree. The university's public lectures, discussion evenings, conferences, concerts and sports competitions enrich the Estonian cultural and intellectual life.

- **Development activities at the university are based on facts and analysis**. Planning of changes is preceded by analyses and research and learning from the best international practice. The legal framework of the university's activity is carefully considered and meets the standards, and often serves as a role model for other institutions of higher education. The university's information systems are functional and support work processes. There is a good overview of the university's activities and operating costs. Qualitative and quantitative objectives have been set for fulfilling the strategic plan, and the fulfilment of these is measured each year.

- **The university's financial and economic activity is sustainable**. The objectives of the university's financial strategy are met and financial discipline is constantly scrutinised.

5.2. AREAS FOR IMPROVEMENT

Key problems that impact the efficacy of various activities, including the management of changes:

- The principles for making strategic decisions have been articulated, but many strategic decisions are yet to be made at the university and area level. It has become the norm to interpret the rights and responsibilities given to decision-making bodies and management positions in a convenient manner, and to avoid making complex or unpopular decisions.

- Fulfilling the functions of a head of academic unit is mainly an additional task performed in addition to the main job of the head of unit. Heads of units do not place enough importance on their role as a motivator and developer of human resources, or in setting and carrying out longer-term goals.

- The high-calibre studies and analyses conducted at the university are not used systematically to make critical management decisions, which results in short-sighted management and unreasonable resource cost.

- Compliance with requirements established at the university is inconsistent, as is the use of support services. Openness to innovation, readiness for cooperation and the desire to be a force for change varies from one structural unit and research group to another. Best practices all too often do not cross the boundaries of structural units.

- The existing central internal information channels are used passively. Attempts to incite interest among staff towards university-related information have not been successful. The people in control of information (managers on various levels, members of decision-making bodies and working groups) do not have the relevant competence or do not always sense their shared responsibility for keeping staff informed.

The process of preparing the university's strategic plan A2020, the internal and external environment risk assessment and institutional accreditation self-evaluation have highlighted the following topics and led the university to address them.

To improve organisational management and performance, the university should:

- develop the key indicators and long-term action plan for A2020;
- develop the intranet and public website and other central information channels on the basis of user feedback;
- improve the informing of students on the university's activities that do not concern directly studies;
- strengthen the university's marketing activities and achieve broader-based cooperation;
- intensify activities directed to alumni to support the development of the university as an organisation;
- implement a professional review system of teaching and research staff with the goal to achieve a more substantive approach to assessing the quality and efficiency of teaching and research and apply more demanding standards;
- offer managers opportunities for self-improvement and advice in planning and implementing changes;

- review the principles of remuneration, achieve more competitive remuneration of staff;
- apply the results of staff feedback survey more broadly in making management decisions;
- determine the goals and principles of internationalisation and ensure their achievement even after the end of major non-university financing measures;
- define and implement the chief activities to improve the English-language work and study environment;
- organise discussions about the university's academic practices, helping to shape a feeling of unity and the attitudes and behaviour of the university community;
- prepare the university's financial strategy up to 2020, review the university's system for distributing research funding and implement a performance-based financing model;
- constantly monitor and implement measures with regard to structural units that do not adhere to financial discipline, including audits to determine the reasons of it;
- hedge major risks that have been revealed in internal and external environment risk assessment, including plan a strategy for reducing dependence on the use of EU Structural Fund resources at the level of each structural unit and improve the coordination of participation in the Structural Fund programmes;
- design a strategy for developing the university's information systems and services and invest into the development of information systems, including to consolidate data and improve data analysis;
- continue developing the university campus, including the IT development centre, and devote more attention to energy efficiency and reducing maintenance costs.

To improve teaching and learning, the university should:
- integrate enterprising attitudes, entrepreneurial skills and other transferable competences (IT, management skills, etc.) into curricula and develop a multi-specialisation curriculum model for bachelor's studies;
- diversify practical training opportunities and improve the distribution of information on practical training opportunities;
- systematically inform the adult learner target group of study opportunities and provide target group-based counselling, remove obstacles arising from the higher education reform to give working students opportunities of part-time study;
- reduce the fragmentation of curricula, taking into account the declining number of students and the possibility and need to better integrate the potential of research and teaching areas;
- implement the academic quality system in a consistent manner throughout the university, increase the decision-making powers and responsibility of programme directors;
- integrate teaching staff and employer feedback more effectively into the internal evaluation of curricula and teaching;
- integrate alumni activities, including alumni feedback, into curriculum development and studies;
- introduce the offered specialisations in general educational schools, contribute to career counselling and inform prospective students to reduce dropping out due to students choosing the wrong specialisation;
- strengthen the system of admissions, career counselling and professional counselling;
- support student mobility and develop international curricula, defining the objectives and support measures for the internationalisation of studies;
- encourage everyday use of digital technology in teaching and learning.

To improve research and development activities, the university should:
- establish jointly used laboratories, describe the R&D opportunities and offer cooperation opportunities and services based on the existing research equipment and technology;
- search for foreign funding opportunities more systematically and establish a support system that provides incentive for applying for foreign funding;
- develop cooperation with both Estonian and foreign companies, contribute to the founding and growth of knowledge-based companies;
- review and consolidate the activity principles of funds created to support various development activities;

- increase the competitiveness of applying for research funding, especially in structural units with a low share of research income;
- implement recommended activity guidelines for all parties in doctoral study (doctoral student, supervisor, review committee, defence council) and assess their influence on the increased efficacy of doctoral study;
- keep the need to increase the doctoral allowance at the forefront of discussing higher education and research policy;
- supplement procedural rules related to plagiarism.

To improve other society-oriented activities, the university should:

- improve the coordination of promoting the university's core activities and reinforce the promotion of higher education, keep young people studying abroad up to date with developments at the UT;
- place more importance on contributing to the society among the university staff and make the related efforts more visible to the society;
- value and support the social activities of students;
- develop unified principles for collecting and using feedback on continuing education, conduct regular self-assessment to ensure the quality of organising continuing education;
- pursue closer integration of the library, museums, Botanic Garden and the Gifted and Talented Development Centre with general educational and hobby schools and with the teaching and research of the university to develop services needed by the society;
- shape Tartu's international image as a university town and a research and innovation hub in cooperation with the city.