

## **STUDIJŲ KOKYBĖS VERTINIMO CENTRAS**

# **KAUNO TECHNOLOGIJOS UNIVERSITETO VEIKLOS VERTINIMO IŠVADOS**

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## **INSTITUTIONAL REVIEW REPORT OF KAUNAS UNIVERSITY OF TECHNOLOGY**

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## I. INTRODUCTION

1. Kaunas University of Technology (the University/KTU) submitted a Self-Evaluation Report (SER) that addressed the key elements required by the Lithuanian Institutional Review process. The Self-Evaluation Review Group within the University prepared the SER and included contributions from University managers, staff, students and external partners. The SER was shared widely with all stakeholders, including employers, social partners and alumni who contributed through a broad consultation process. Students and external stakeholders confirmed that they had been involved in the consultation process and were able to make comments on the SER. The SER also drew on information in annual reports, student feedback surveys, and made reference to key strategic themes that the University felt to be of significance. The SER also included self-critique and highlighted areas for improvement. The University Governing Council, Rectorate (senior management team) and the University Senate formally approved the SER before its submission to SKVC.
2. The SER sought to explain a very broad range of strategic and operational planning activity (supported by a Renewal Programme consisting of thirty three projects) across Faculties, Departments, Research Institutes and Clusters. The Review Team (the Team) came to the view that, while there could have been more detail to distinguish some elements of this complex range of activity, the SER was well written and clear with an appropriate tone of self-critical comment about the issues that were presented.
3. The SER addressed the information required to prepare the Team for its visit to the University. A comprehensive set of 41 annexes to the SER was provided to give detailed information on strategic planning, the research and HE Renewal Programme, KTU structures, quality assurance systems, income and expenditure data, academic regulations, research outputs & projects and university partnerships with industrial partners, companies and schools. Throughout the review process KTU was able to provide detailed and clear information on all matters requested by the Team and participated in the review in an open and supportive way that signalled a commitment to learn from the process.
4. The Team found that the SER and its annexes were very useful and generally clearly written. The SER could have given more operational detail on decision making to support understanding of the complexity of KTU but the Team came to the conclusion that generally the SER was well crafted.

## THE REVIEW PROCESS

5. Before visiting the University, members of the Team reviewed the SER and its annexes, commenting on the points made and the questions that were prompted. Each member prepared initial comments on the SER using the SKVC review criteria. This facilitated the development of the programme of activities of the review, and enabled identification of potential areas of enquiry for the Team. On arrival at SKVC the Team used the first day of the review to establish a clear overview of the process. The Team also undertook training and preparation from the Sub Director and staff of SKVC, including *inter alia*; the higher education system in Lithuania, Institutional Review procedures and the protocols to be observed within the review process. Lithuania's Research and Higher Education Monitoring and Analysis Centre (MOSTA) provided an external assessment of the University's funding for learning resource for the Team. The Team was able to learn more about the national policy priorities including the funding arrangements that were pertinent to KTU.
6. The Team invested considerable effort on the first day to identify emerging themes. These themes were used to establish an initial agenda for the meetings that were planned for the visit to KTU. Questions were generated to prepare an agenda for the initial meetings. The Team also agreed the style, and approach that would be adopted. This approach proved very helpful to Team members, as there was a clear understanding of the questions that were used to stimulate discussions at KTU. The agenda was reviewed throughout the visit to KTU in order to develop further questions for subsequent meetings. Each day the Team met in the evening to review the day's meetings and plan the agenda for the following meetings.
7. The Team travelled to Kaunas on the first morning of the visit to the University. The site visit to KTU took place over three days (21, 22, 23 October 2014) and included 18 formal meetings with the Rector, Vice Rectors, Governors, University staff, undergraduate, postgraduate and doctoral students, alumni and external partners. Two visits to KTU facilities were undertaken including a tour of laboratories in the Faculty of Chemical Technology, the Centre of Competencies in Food Sciences & Technology, and laboratories at the Faculty of Electrical and Electronic Engineering. A small group of the Team was able to visit the Santaka Valley KTU Science and Technology Centre and Technological Business incubator (Santaka). One member of the team also visited start-up facilities in the business incubator and the IT Department for a demonstration of the key information systems at KTU. The Team spent the final day of the review at SKVC reviewing the evidence collected during the review, discussing and agreeing the findings, and summarising the

conclusions of the review. The Review Team came to a collective and full agreement on all of the judgments in the final report. During all meetings the Secretary and member of the Team, Professor Sue Frost, took detailed notes, and after each meeting the Team identified key points and areas for further exploration in subsequent meetings.

8. The Team also received a range of information from the University in advance of the visit including, amongst other things; the KTU Strategic Plan, Annual Report, University statutes, details of study programmes, organisational structures, research information, staff profile, performance indicators and quality assurance information. Additional material was available to the Team before and during the site visit. These included handbooks and further study programme information documents, committee minutes and detailed financial reports. The members of the Team also had access to the report on learning resources and associated infrastructure prepared by MOSTA with the evaluation decision of 14 August 2014.
9. University staff and students participated actively in meetings and were committed to the process of review. It was clear from the first meeting with the Rector that KTU welcomed the process of external review and is a reflective and open organisation wishing to learn from feedback. The Team was impressed with the willingness of staff, students and external colleagues to engage with the review process. A large number of stakeholders and alumni took time to participate, some having travelled some distance to participate. A range of staff, students and senior managers also took part in the relevant meetings. The standard of English was very good and enabled meetings to be held in English with only occasional interpreter support.
10. At the beginning of each meeting the Chair affirmed the purpose of the review, welcomed those who attended the meeting and invited colleagues to be open and frank in their responses. The meetings were held in a non-confrontational style and participants were willing to make constructive comments and answer questions openly, supporting one another in the process. The participants had a considerable amount to contribute and at times the Chairman acted to curtail discussion when answers had addressed the issues, such was the enthusiasm of those participating. The Team was impressed with the open and enthusiastic participation of staff and students at all levels.
11. The working environment of the Team enabled effective working and was supported by access to Wi-Fi facilities at KTU.

12. The review Team consisted of the following members:

<b>Prof. Dr. Erich Hoedl</b>	<b>(Chair of Team)</b> Former Rector Graz University of Technology and Vice president of the European Academy of Sciences and Arts. Austria
<b>Professor Susan Frost</b>	<b>(Member and Secretary to Panel)</b> Emeritus Professor and former Pro-Vice Chancellor, University of Huddersfield. United Kingdom
<b>Asnate Kazoka</b>	<b>(Student Member of Team)</b> Steering Committee Member Quality Assurance Experts' Pool of the European Students Union. Latvia
<b>Aleksej Kovaliov</b>	Head of Information Systems Department/CEO, TEO LT, part of TeliaSonera Group. Lithuania
<b>Professor Peeter Normak</b>	Director of the Institute of Informatics, Tallinn University. Formerly Vice Rector for Research and Development of Tallinn University. Estonia
<b>Professor Ingegerd Palmer</b>	Formerly Rector Malardalen University and Rector Lulea University of Technology. Sweden

13. The Team was supported very efficiently by Rugile Bluseviciene, SKVC Evaluation Coordinator, who acted as the point of liaison with the University team during the review programme.

## **II. BACKGROUND INFORMATION ABOUT KAUNAS UNIVERSITY OF TECHNOLOGY**

14. Kaunas University of Technology is a state higher education institution functioning under the Law on Higher Education and Research of the Republic of Lithuania. KTU has its origin in the Programme of Higher Studies that was established for the engineering, science and technology education in Kaunas in 1922. In 1950 KTU was re-established as the Kaunas Polytechnic Institute. KTU regained its University status and was re-established as the Kaunas University of Technology in 1990. This period of the University history is very important in understanding the importance of the establishment of a new base in Kaunas for this technology and sciences university that reasserted its focus on research areas and academic subject fields.
15. Since 1990 the intellectual and academic underpinning of KTU has broadened to provide a full programme of academic studies and research that provide contemporary education and development across a wide range of subject disciplines. These include computer sciences, social sciences; management, business, economics, administration, finance and accounting, educational studies, sociology, political studies and humanities; linguistics, media studies, music, history and theory of arts, as well as its longstanding provision in natural sciences and engineering. In 2000 the Faculty of Humanities was opened to extend the vision of a dialogue between the humanities and technological science and creativity. This is a novel and important development that broadens the underpinning of science and technology in ways that create new academic field partnerships and develop new approaches to study and research. More recently this has extended further to respond to the demand for research and study programmes in biomedical sciences, biomedical engineering, sports engineering and biotechnology.
16. In the past three years The University underwent significant change with the development of its Renewal Programme. This established a series of major projects that sought to re-engineer organisational structures, realign the estate and raise its external research profile through an ambitious and dynamic development of the KTU Science and Technology Centre at Santaka Valley. Other developments have also attracted high investment in research including Nemunas Valley Centre.
17. As part of the Renewal Programme there was a major structural reorganisation in 2013. Since January 2014 the University operates through 9 Faculties, 9 Research Institutes and 20 Business and Administration Units. The decision making structure was developed to support this structure and operates through Governing Council, Rectorate and Senate. Student Council, Business Council,

Academic Ethics Committee and a range of other committees, public enterprises and the KTU trade union support the overarching decision making committees.

18. The process of renewal is a continuous cycle of development and the Team learned that there is an intention to reduce the number of functional and administrative units further and in the medium term bring research and teaching together even more closely. The formation of subject clusters has supported this process to bring together staff from Departments and Institutes together across subject fields to support research projects and underpin research based teaching.
19. KTU has 10,916 students including 7912 following undergraduate studies, 2652 postgraduate students and 352 Doctoral students. Currently there are 566 foreign students studying at KTU. It is notable that KTU is one of the few universities in Lithuania that has exceeded its recruitment targets. While the number of students has declined in the last 10 years, matching the national demographic trend, the current student numbers are stable and can be maintained with a small increase planned towards 2020.
20. KTU offers studies in the areas of technology, natural sciences, social sciences, humanities and art. KTU provides 64 undergraduate programmes and 73 graduate programmes. 17 research fields offer doctoral studies. All postgraduate studies are available in English or Lithuanian languages.
21. KTU has 2740 staff comprising 2614 full time equivalent posts. 1011 are employed in teaching posts and 163 are senior research posts.
22. Three key decision-making bodies manage the University: The University Council, the Senate and the Rector's Office referred to in this report as the Rectorate. The Rectorate is the senior management team of KTU and includes the Rector, 3 Vice Rectors, Deans of Faculty, Directors of Institute and Heads of central functions such as Human Resource, Finance, Infrastructure, Strategic Planning and Quality, Marketing and Communications, IT.

### III. STRATEGIC MANAGEMENT

#### Strategic Planning

23. The University is ambitious in its vision to become an internationally leading research and academic institution that positions KTU amongst the top Universities in Europe. This is an ambitious intention that is intended to inspire and motivate staff and students while guiding investment to support academic excellence in teaching and research.
24. The University has a Strategic Plan that identifies the University's direction from 2012-2020. The plan was developed through extensive consultation both inside and outside of the University. The final draft of the plan was formulated by the University Rectorate and was submitted to the University Council and approved in February 2012. The strategic plan is derived from the core mission of KTU and the State level strategy "Lithuania Progress Strategy 2030". The Strategic Plan confirms that the mission of KTU is intended to support the creation and transfer of knowledge, sustainable development and growth in the region and provide an open and creative environment that inspires talented leaders and individuals. KTU is clear in its commitment to support the regional and national agenda and to create opportunities for employment, economic growth and to support sustainable development through enduring partnerships. This is underpinned by developing commercial and scientific partnerships that play an active part in the life of the City of Kaunas.
25. The Strategic Plan is congruent with the KTU mission and also the strategic documents of national policy for research and academic study. The plan is underpinned by the principles of the European Higher Education Area and the European Research Area. The strategy is based on an analytical approach that takes account of the Lithuanian context of higher education. The plan is supported by five strategic activities:
- The development of students' competences for their self-expression and successful career development
  - Secure internationally acknowledged technology and knowledge development and transfer
  - Activities focused on human well-being and sustainable development of the State
  - Sustainable development of the University ensuring the quality and efficiency of its activities
  - Developing and fostering the University's academic environment and infrastructure
26. The plan is supported by operational objectives for the strategic activities and a number of performance indicators that include some measureable targets. Each Faculty and Institute develop

action plans to contribute to the delivery of the University's strategic activities. The Rectorate and the Senate approve these action plans as part of the annual review and report process.

27. The objectives generate action plans at Central, Faculty and Departmental levels. Additionally the 33 Renewal Programme projects each generate a number of objectives. This results in a highly complex matrix of objectives across a large number of strategic and operational priorities in addition to the longer-term objectives for each Faculty and Institute.
28. The Strategic Plan has been developed in partnership with all stakeholders. The Team learned of extensive consultation with external partners who confirmed their understanding of and commitment to the strategic direction of KTU. A full SWOT analysis was undertaken in partnership with external partners.
29. KTU intends to become an international leading research based University that has a world-class reputation across a number of areas. There is an intention to promote world-class scientific research, play a major role in the commercial and industrial base of the region and ensure that students have high quality learning environments that support the highest level of skill development. This is clearly defined in the strategic plan with measurable goals and performance indicators.
30. Initially the Team found it difficult to understand the relationship between the Strategic Plan, the Renewal Programme and the wider goals of Institutes and Faculties. KTU clarified this and explained the key role of the Renewal Programme in relation to the strategy. The external environment is changing very rapidly. The Renewal Programme is a responsive operational plan that supports rapid action in relation to specific challenges and thus complements the longer term strategic plan. There have been thirty three renewal projects in the past two years and these support key actions examples of which include; selling some of the university estate to support renewed investment, redesigning study programmes to meet the market need, improving the curriculum management system, restructuring academic units, developing a new mentoring system, modernising the academic information system and developing new research facilities.
31. The strategic plan is reviewed annually and reports are made to the University Council, The Senate and the Rectorate. There is a monitoring programme to ensure that operational targets are met and the Faculty and Research Institute plans are overseen by the Vice Rectors.
32. The Team came to the view that the Strategic Plan, supported by action plans and the Renewal Programme are robust and form a sound basis for the strategic leadership of KTU. The Strategic Plan has validity in the context of external drivers, the key purpose of KTU, its resources and its current capability and capacity. The Team also took some time to understand and discuss the large number and complexity of objectives, targets, measures and outcomes. While recognising the

sophistication of the planning process there is a danger that staff can lose focus on priorities in the Strategic Plan. Some objectives are measurable and quantifiable, others are less focussed. In the area of external partnerships there appear to be few measurable objectives and no quantitative targets. The Team came to the view that KTU could review this complex range of objectives to ensure that the focus is clear and that there is a distinction between strategic targets and operational goals. Some of the performance measures could be strengthened, for example in relation to the development of commercial partnerships. Additionally some measures could also provide a more qualitative base for assessing the outcome of objectives such as those in relation to the development of a research culture.

33. The monitoring of strategic outputs is supported by a range of tools including systematic review of Faculty reports and the annual reports from Research Institutes. This reporting is supported by effective ICT systems that manage data collection and reporting. The data reports are scrutinised by the senior management team as well as informing the reporting and monitoring system.
34. Currently there is a systematic approach to “upward reporting” within the management systems of KTU. The Vice Rectors have oversight of reports from the Faculties and Research Institutes. In the absence of formal appraisal and evaluation systems this monitoring and review process operates as an “intelligent conversation” between the Deans/Heads of Institute and the Vice Rector. The Team would encourage KTU in its intention to develop further and enhance its performance management to support the Vice Rectors and the Faculty Heads in realising the strategic objectives. To this end the annual reporting cycle could have a stronger analytical and evaluative underpinning to support the development of staff in meeting strategic goals and identify challenges and obstacles that may be encountered.
35. KTU information systems provide adequate information on the implementation of the Strategic Plan. This information is made available to the University Council, Business Council (an advisory Board for the Rector) staff, students and external stakeholders. The Plan is published electronically and is made available for the general public.
36. The Team believes that KTU has an effective process for strategic planning that is inclusive and well-led at all levels of the organisation. A Business Council has been formed to provide robust and critical feedback to the Rector in ways that support strong development of external partnerships and continued evaluation of the strategic direction of KTU.
37. The University currently operates through a large number of Faculties, Departments, Institutes and Research Clusters. The reduction of operational units in 2014 is yet to be evaluated but anecdotal evidence suggests that this streamlining has been valuable in bringing together research and

teaching activity. The large number of functional units adds complexity to the organisation and decision making structures of KTU.

38. The Team recognised that the restructuring undertaken in 2014 was important in streamlining the organisation and enhancing communication. The Team strongly supports the view of the senior management that this process needs to continue with further reduction in the number of operational units. This is likely to create a more unified and efficient structure. KTU is encouraged to evaluate the reorganisation undertaken within the 2013-2014 Renewal Programme and continue this process to secure an even close relationship between teaching and research.
39. The Team learned of the Kaunas strategy to merge its major universities and re-establish the University of Lithuania in Kaunas. This project has stalled somewhat as there was little support from the State given the pressure of the current economic climate. KTU is, however, working closely with others on a range of initiatives such as those in the medical technology fields. There remains an opportunity for KTU to explore with other higher education institutions the possibility of collaboration in ways that support further efficiency. This could include shared services, consortia arrangements for procurement of recourse and estate, merger or strategic partnerships to create economies of scale. The Team encourages KTU to continue with its intention to build further partnerships in Kaunas to release resources for teaching and research wherever possible.
40. **In summary** the strategic-planning climate at KTU recognises the challenges of the changing demographic patterns of the region and of Lithuania. The University has made assumptions about a gradual decline in student numbers that will be buffered by an increase in international student numbers. The university has exceeded its goals and has increased its student numbers in spite of the demographic change and considerable competition from other higher education institutions. This reflects the strong leadership that has responded to change and focused on key priorities that provide very high quality research environments and strong support for students during their study programmes.

### **Quality Assurance and Academic governance**

41. The University has an internal quality assurance system that matches the requirements of its external accreditation, the European and National benchmarks and the Ministry of Education and Research requirements. The organisational structure is highly devolved and responsibility for quality management is located within the Faculties. This ensures that staff in the Faculties and Departments take responsibility for assuring the quality of academic programmes and is a strength of KTU. There is a well-defined system of quality management that is described in a quality

handbook and a set of university regulations. Students understand what is expected of them and have a useful point of reference in the regulatory handbooks provided for them.

42. New study courses are developed in cooperation with all stakeholders drawing on the views of students and external partners. Two study programmes, for example, have high quality external recognition through QUESTE-SI. Study programmes meet the European and national qualification standards. Each programme has a programme specification and is approved through an institutional process of accreditation.
43. The University Council understands its responsibility for academic governance and receives regular reports. Members of the Council who met the Team were able to give a robust account of their role and examples of critical review and development undertaken by Governors. Senate is responsible for ensuring that appropriate processes have been followed and oversees the management of academic quality within Faculties and Institutes. Senate receives annual reports from Deans of Faculty and the Heads of Institutes. These reports are supported by student achievement data in assuring the management of quality assurance. The decision-making in central committees of the University is robust and clear. The Academic Studies Committee is a key committee of Senate that retains a rigorous oversight of the operation and standard of academic study programmes.
44. There is a clear distribution of decision-making responsibility between the centre and Faculty levels at KTU. There is a close working relationship between the Rectorate, Faculties and Institutes. All of the central major decision making committees involve students and staff of KTU. KTU has central committees and Faculty Boards that maintain oversight of academic programmes. There is evidence of careful scrutiny of programmes. Students are represented on Faculty Committees and at the KTU Study programme Committee. These committees appear to be rigorous and ensure that the academic regulations and quality assurance processes operate effectively. One of the Faculty Committees maintains oversight of the quality of interdisciplinary studies where a study programme is provided by two departments.
45. Assessment is managed carefully to ensure that students understand the criteria and that assessment systems are fair and free from cheating. The process of marking and grading work is systematised and meets the requirements of the national regulatory framework. There is no tradition of external examiners in developing and enhancing assessment systems. KTU may wish to consider whether establishing an external examiner system could provide an additional support for the development of assessment systems. This may raise the awareness of assessment approaches more widely in technology and sciences in the Lithuanian Academy.
46. The new organisation of Faculties and Institutes has brought together the research and study functions through the formation of academic field clusters. This supports the widest participation of

academic staff in teaching and in research. The Team would affirm support for this integration between research and evidence based teaching and learning.

47. The approach to pedagogy in the curriculum has changed in the last five years. KTU recognises the changing needs for student support and a student-centred approach to teaching and learning. Student-centred approaches support individual directed study and problem solving approaches. This locates the subject discipline in the real world and accommodates learning from placements and real-world projects. Students who met the team commented on these changes and welcomed the student focus of the curriculum. Alumni and employers also commented on the strength of such an approach that supports the transition into work.
48. The Team learned from students and staff of examples of good practice in supporting students and ensuring that they are informed about their study programme requirements. Some Departments use the Moodle learning management system extensively; some provide additional support and tutorial guidance. Some Faculties complement the student evaluation surveys with “round table discussions”. KTU should explore ways of identifying such good practice in ways that ensure it is disseminated more systematically. Additionally dissemination of learning from challenges and things that have not worked well could be used to enhance organisation learning and improve the quality of the student learning experience.
49. There is a formal structure to maintain oversight of doctoral study programmes through the KTU Doctoral studies committees for fields of science. There is regular assessment of doctoral work and the Research and Development Committee of Senate ensures that processes are followed properly and that students are progressing through their programmes of study. Doctoral Committees at Faculty level oversee the operational progress of doctoral programmes and account to the Senate Research and Development Committee. Students are also represented in the Faculty and Senate Research Commissions.

### **The Student Voice**

50. Students play a major role in their contribution to quality assurance at KTU. The University actively seeks the views of students through an annual survey. The findings of the student survey are used to inform programme development and actions at senior level in the University.
51. The Student Council of KTU takes an active role in identifying issues and feeding into the major committees of KTU. Students are articulate, well organised and value their representative role on all of the decision making committees including Governing Council and Senate. Students who met the Team were impressive in their understanding of the strategic direction of the university and were able to give a clear account of issues that had been raised and changes that have been made.

52. Students are represented on all of the major decision making bodies of KTU including University Council, Senate and Faculty Committees. They take this role seriously and make an active contribution to meetings and give feedback through bulletins and participation in Faculty meetings.
53. Research students also have representation on the Research and Development Committee of Senate and Faculty Level Doctoral Committees. The doctoral students who met the Team are highly motivated and well able to assert their views in ways that secure change and support from the university.
54. Students are able to meet the Rector and members of the Senior Management Team by appointment and the Rector organises periodic meetings to hear the views of students. They commented on the support given to students from the Rector and felt that their concerns were taken seriously.
55. The Team came to the view that students have a strong voice at KTU. They are well represented and their views are treated with respect. KTU actively seeks to involve students and their contribution is noticeable.

### **Human Resource Management**

56. KTU has a Human Resource Strategy that seeks to ensure that the capacity and capability of its staff meet the requirements of the institution. The SER states that current balance of staff is about 43% academic staff and 57% administrative staff. The Team learned that the balance described is slightly misleading as 9% of the administrative staff are technical and professional staff engaged in the support of teaching and learning. A number of administrative resources are part of the planned outsourced staffing that offers general campus support, like sport, library, printing and publishing and domestic services. Future plans include the reduction of personnel by acquiring some of the services of the organizations providing them. Additionally there is a significant short term resource employed in the projects.
57. The Team recognises the current position is part of a transition within the Strategic Plan of KTU. The Team encourages the University to continue to secure a strong balance of academic staff supported by a highly efficient administrative workforce. Greater collaboration with other educational institutions may support further efficiency savings in core support services as indicated above.
58. Currently KTU does not have a staff development strategy but this is being developed and will be implemented in the next academic session. Considerable development is provided for staff including support for higher degree studies, research sabbaticals and extensive conference attendance inclusion international events. The University is moving away from traditional didactic approaches and a development programme to support more student focussed teaching is underway.

The Team would suggest to the University that a more formal system of Peer Observation of Teaching might support its plans to enhance teaching activity and support problem based learning and directed study for individual students.

59. New research posts are being established. Scientists currently make up about 15% of academic positions. KTU has been a national leader among public universities in developing a job evaluation system to support a more systematic approach to attracting highly skilled academic staff. The system designed by KTU involved a survey of 14 universities and is regarded as an important tool nationally that was developed at KTU.
60. There is not a formal appraisal system but academic staff undergo an attestation process every five years. This requires affirmation of development and competence. There is an assumption of teachers being qualified to the level “X+1” - meaning that they should hold at least one qualification in advance of their students. To this end there is strong support for staff to upgrade qualifications where appropriate and a large number of non-PhD teaching staff follow doctoral programmes to secure higher qualifications. This includes opportunities for academic exchange and mobility.

### **Risk and Change**

61. KTU undertakes risk analysis to ensure its stability and sustainability. This has underpinned the Renewal Programme that takes action in areas perceived to be of some risk. The university is not risk averse but it is risk aware. It may be helpful for KTU to share its approach to risk with other institutions in Lithuania to help others understand the planning climate and how to respond to major risk such as demographic change and adverse economics.
62. The University has been successful in maintaining recruitment to its programmes and the current academic portfolio of study programmes and research is very diverse. KTU may wish to consider whether it can continue to support such a broad range of activity and possibly explore ways of consolidating its portfolio a little. This might reduce the range of themes a little but could help to ensure the student:staff ratio does not become too low and prevent an over- diversification of research facilities.

### **Learning Resources**

63. MOSTA evaluated the learning resources of the University in August 2014. KTU met the broad indicators used in the MOSTA methodology and the efficient use of funds allocated from the State Budget was assessed positively.

64. Students who met the Team confirmed their positive learning experience and spoke highly of the resources available. Students noted, however, that there is considerable pressure of the IT facilities which are located in the library and welcomed the plans to introduce the wireless cloud across all areas. They confirmed that library and technical resources meet their study requirements. Students spoke warmly of the support they receive from academic staff and in particular the considerable support from their Professors.
65. Doctoral students commented very positively on the journal resources and online collections available to them. Students have access to a wide range of laboratory facilities that are equipped with up-to-date equipment.
66. The Team had the opportunity to visit some of the facilities of the University. This confirmed that the resources were congruent with the level of studies being undertaken. There are a range of teaching and performance facilities that support all levels of study. Specialist facilities that are located in Santaka Valley are outstanding. Santaka offers the KTU Science and Technology Centre and the Business Centre. This facility is able to employ 350 staff when fully operational and offers 9 thousand square meters of space and is equipped with 26 million Euros of specialist research equipment. These resources were considered, by the Team, to be amongst the best seen in any university and capable of supporting outstanding research activity. The standard of most of the other teaching and research resources, which were visited by the Team, was considered to be of excellent quality. There is room for improvement in some facilities such as the robotics laboratory and this is recognised by KTU and forms part of the estate strategic development.
67. KTU is engaged in a major development of its estate. This is intended to support new approaches to pedagogy and rationalise some of the current estate. Five buildings are to be sold and others are being re-equipped to support online learning and other modern laboratory research and study. There is a need to continue with the development planned to improve the information systems that support management decision-making. This is part of the KTU Renewal Programme and is yet to be completed.
68. The Team observed that there is a robust estate strategy that supports leading research activity and offers a good learning environment for students. The continued development of the estate is supported to ensure that all areas are upgrade to equally high standards.

### **Finance and Budgets**

69. KTU has a well-developed financial plan that is logical and rational with a clear system for budget management and financial decision making. The University recognises the need to continue to

identify efficiency management and is planning to continue to make closer alliances and mergers between its internal departmental structures.

70. The University recognises the need to develop strategic partnerships with other universities and is planning closer cooperation with other higher education institutions in Kaunas. The move to establish a merger of four institutions to re-establish the University of Lithuania has been slowed by a limited response from the Lithuanian Ministry for Education and Science but it is hoped that close alliances will continue to be built. The Team would support KTU's plans for further activity to explore ways in which efficiency through partnership, federation or merger could be created. The Team recognised the impetus that could be achieved through greater support and encouragement from the State agencies.
71. KTU is highly successful in attracting external funding. Moreover the EU Framework 7 and private funding initiatives have secured significant funding including the resource that developed the Santaka Valley Centre. This has been successful and has been enhanced by the KTU approach to full costing models of finance. While there is evidence of good financial planning, the Team suggests it might be strengthened further by KTU reviewing its planning assumptions, and contingencies. This would support financial planning in the context of a decline in key income sources such as EU structural funds and external commercial sponsorship.

### **Academic Ethics**

72. KTU has put in place systematic procedures to ensure adherence to academic ethics. There is a University Ethics Committee that oversees academic practice. The Team learned that this is an active committee addressing academic behaviour in study programmes and in research. Plagiarism is managed through good information and a robust response to malpractice is evidenced. The Team is confident that KTU is compliant with the national requirements for the management of academic ethics.

### **Summary of findings: Strategic Management**

73. The panel came to the view that there is a clear strategic planning process that is inclusive and reflects the University's mission, vision and strategic direction for the coming five years. The plan takes an account of the State requirements as well as the European academic infrastructure. The Strategic Plan is compliant with all of these requirements. The Team believes that the leadership of KTU is robust, enabling and clearly focussed on the strategic priority of the institution.
74. Quality assurance systems are in place to ensure control of academic standards and the quality of the student learning experience. The Team came to the view that there is evidence of good practice

that could be shared to strengthen and enhance the student learning experience across all departments.

75. The management of staff, learning resources and finance at KTU is robust and linked to the strategic priorities. The Team was impressed with some of the facilities which were visited and staff and students were very positive about the research and teaching climate at KTU.

**Judgement: The area of strategic management is given a positive evaluation.**

## **IV. ACADEMIC STUDIES AND LIFE-LONG LEARNING**

### **Academic Planning**

76. The Review Team explored academic studies and life-long learning approaches at KTU with reference to the criteria set out in the Institutional Review Methodology and considered the University to be in compliance with the requirements for Lithuanian higher education and harmonization with the principles of the European Higher Education Area.
77. The programmes at KTU offer qualifications at undergraduate, postgraduate and doctoral level that are awarded and delivered in accord with requirements of a programme specification. The Team noted that the programmes and life-long learning provision offered were compliant with the University's mission and also contributed to meeting the needs of the regional economy and social and cultural development. Programmes offered are subject to external accreditation by SKVC and are fully compliant with national standards and the European Framework for Higher Education Qualifications.
78. Study programmes reflect the engineering and science strengths of KTU but also broaden the portfolio to reflect the social sciences, arts and humanities in relation to the technological focus of KTU. There is an intention to extend the portfolio of interdisciplinary studies and research to reflect the entrepreneurial and social base of technology in modern Lithuania.
79. The academic portfolio has been expanded to reflect the changing demands of students and employers. New programmes have been developed in partnership with employers and reflect a strong skill base supported by work placements and in-company projects. Programmes are overseen by the Academic Studies Committee that ensures they continue to comply with University regulations and quality requirements.

### **Lifelong Learning**

80. Lifelong Learning is part of the University mission. At KTU lifelong learning means continued academic development through a continuum from school through undergraduate studies to a range of post graduate opportunities including full doctoral programmes. There is a commitment to life-long learning that is comprehensive and imaginative. There are formal, non-formal and informal programmes offered to meet the needs of the community as well as the career aspirations of University graduates. Distance learning has increased and is facilitated by new IT installations and online support. Study programmes are overseen by committees one of which has particular responsibility for cross disciplinary activity. The University also plays an active part in the Children's University and offers support in schools and colleges.

81. The facilities for lifelong learning including online support and blended learning are extensive and continue to be developed. The Open Access Centre provides a common portal to support ease of access to University services and study programmes. This is widely used and a strong support to recruit students to a wide range of courses. Elements/modules of courses may be undertaken as standalone courses for the purposes of continuing professional education and receive academic credit. Advice and support for students studying these short courses are able to access support through the Open Access Centre. This is a unique facility and the Team is of the view that the services to support lifelong learning are exemplars.
82. The University seeks to monitor graduate employment and uses national monitoring data. The Team suggests that this could be enhanced to support stronger understanding of the careers of KTU graduates which could help to raise the profile of the University more widely. A local system of monitoring first destination data of graduates could be supported by further oversight by the Alumni Association. This is a relatively new organisation but has impressive leadership and there is considerable commitment from the Rector to support the Alumni Association as an independent support for KTU graduates.
83. KTU meets the requirements of the European Higher Education Area in relation to lifelong learning. It is compliant with European strategies as well as the Bologna process. Study courses correspond to the EHEA and the Lithuanian qualifications framework. KTU supports a large range of international exchange. Study programmes are enhanced through study-abroad opportunities that are generally, though not exclusively welcomed by students. There is support for incoming students, especially in language support.
84. There is a close relationship between the study programme and working practice in companies and industry. Since 2012 semester projects have been introduced in 38 first cycle programmes. The majority of these are linked to applied studies or work placements. This supports the close relationship between skills development and applied research in the curriculum. External partners have provided a considerable amount of equipment and resource and KTU makes this available to partners as well as underpinning study programmes. External partners help to identify new study programmes and also support the acquisition of international funding for study programmes. These relationships are significant and help to attract research students to KTU. Industrial and commercial partners offer themes for student projects. This supports placements and internships that extend the skill base of students and enhances employability.
85. Each student has an individual learning plan. To reduce attrition and failure KTU has put in place an academic mentor for each student. This is a unique mentoring system that supports students in a range of ways. This includes a lead mentor who is the named Academic Advisor

and is supported by academic advisors, career mentors, research mentors and personal tutors. These staff are prepared and trained for their roles. In 2013 the first Academic Advisors undertook an 18 hour programme of training. In 2014 91 Academic Advisors and 44 career mentors were approved. This structured approach to student support is relatively new and plays an important part in the retention of students and support for those with specific needs.

86. There has been a significant increase in the number of courses studied through flexible and distance learning. This has been underpinned by the development of the IT systems through the Renewal Programme. Students use MOODLE and MOOCs to access learning and many resources and publications are available electronically.
87. KTU has established an Academic Support Service that provides a range of services to enable students to continue with their studies. This includes a psychological counselling service and specialist support for students with specific learning difficulties. The student opinion survey has confirmed that the vast majority of students believe these to be essential services.
88. The Department of Student Affairs oversees the range of student support services. Additionally this Centre runs the Children University for young children and a Schoolchildren University for teenagers. This exposes schoolchildren to scientific developments and adds to their general education. In this way young people in Kaunas are supported in building a relationship and raising their aspirations with KTU.
89. The Team is of the view that the University has well-structured programmes supported by a wide range of student services to enable students to complete their programme of study. This includes a well-organised system of mentoring and academic tutoring.

### **Student Numbers**

90. The University predicts that student numbers will remain reasonably stable in the short term with the possibility of only a small decline. It is anticipated that in the longer terms numbers will rise slightly and stabilise at round 14000 students.
91. The Deans of Faculty review academic plans every year with the Vice Rectors. There is not an overarching teaching and learning strategy but Faculties produce operational plans for the year ahead. The Study Programme Committee oversees programmes to ensure appropriate resource is available to develop study programmes effectively. The Team suggests that the large number of study programmes is regularly reviewed to ensure that courses do not become inefficient.
92. Currently there are low student numbers on some programmes and the Team explored this with the University managers and teaching staff. This is carefully managed and KTU does not

support courses which are pedagogically non-viable. Many courses share modules and the average student cohort is around 16.

93. Student retention has been a priority and the numbers of students who withdraw is similar to other Universities. Most of the student attrition arises from students who fail their course of study. This has been reduced by the support from intensive mentoring described above. KTU should evaluate the new mentoring system to understand its effect on student numbers and reducing student drop out. This could be shared as an exemplar nationally.

### **Alumni & Graduates**

94. The Team welcomed the opportunity to meet former graduates and alumni who reported positively on their experience as a student at KTU. Graduate employment was significantly enhanced by the academic experience gained at the University. The Alumni who met the Team confirmed their pride in their continued association with their faculty at KTU. They had many ideas of how to promote and develop the University. Former students gave examples of the transformational impact of their study programme at KTU and included some who have been highly successful in establishing their own businesses and reaching a national profile within their companies. KTU has supported the establishment of an independent Alumni Association that has the possibility of making a major contribution to KTU. The Team came to the view that the Alumni, as well as other external stakeholders should be used more effectively to contribute to the central strategic development and operation of KTU. The opportunity to meet with the senior layer and explore wider engagement with Alumni would be welcomed and Alumni spoke highly of the support from the Rectorate. The Team suggests that a more systematic approach to engaging Alumni might be of strategic value to KTU.
95. Data management at KTU is under development and the management information system is being upgraded as part of the Renewal Programme. Data is collected and key information is reported through the annual reporting system. The development of more sophisticated tools to map the student journey might support the University in managing key performance areas such as reducing student dropout, internationalisation of the study programme, patterns of course construction and graduate destinations. This data might include long-term career mapping, more detailed information on students who withdraw from their study and a more systematic process that compares data across the University and beyond.
96. In 2013, 2568 students participated in non-formal programmes. Many of these programmes are designed to meet the specific needs of a business company or the municipality. These programmes offer continuing professional education and support postgraduate students in

continuing to learn through a range of flexible opportunities. Participants could also contribute to alumnus development and support the external profile of KTU.

### **International studies and internationalisation**

97. Internationalisation is broad and generic. It includes participation and membership of international organisations and networks, bi-lateral cooperation and academic exchange the development of programmes delivered in English and academic exchange through ERASMUS.
98. KTU has a strategic goal to expand its international activity. 5.2% of the student body is recruited from outside of Lithuania. Incoming students are from 40 countries and come to KTU for study courses or for research internships. Most of these students come from countries within the EU and Turkey as part of exchange through the ERASMUS programme. A small number come from Southeast Asia and Africa. The University offers 39 programmes in foreign languages, mainly English. KTU is intending to increase its international students significantly and is currently exploring Georgia, Middle East and India to support the additional recruitment of international students.
99. KTU staff are active in visiting other institutions of higher education to participate in conferences, seminars, traineeships and project meetings. There is a strategic priority to extend the international mobility of staff as described above. Resources are available to support staff undertaking academic exchange and to welcome visiting professors to KTU.
100. The approach to internationalisation at KTU is strategic and planned. Staff are supported to meet objectives that include international mobility. KTU has 71 bi-lateral agreements that support staff exchange and these support considerable activity in the ERASMUS thematic network projects. In 2014 KTU organised an International Staff week that provided a range of workshops, discussions and advice on international exchange programmes. The list of activity and achievement in international participation is considerable and has contributed to the development of some world class research and teaching in areas of particular strength at KTU.
101. Staff exchange with international Universities is supported at KTU. The number of outgoing faculty has declined by 39% due to access to funding and bursaries available nationally. KTU has continued to offer support where possible.
102. KTU is very eager to attract international academic staff and has invested in a reward package to attract research staff from world class institutions. There is evidence of increasing numbers of international faculty although this remains relatively small. The Team concluded that KTU could do considerably more to raise its profile within Europe and strengthen its

external profile outside of Lithuania. The University has considerable strengths which, the Team believes are underplayed and not widely known in the European Academy.

103. The university has a large number of agreements with other higher education institutions both within Lithuania and internationally. Currently there are 314 agreements in place, 243 of which support ERASMUS exchange. The University has in place processes for selecting partners and uses quality criteria to ensure the strongest placements for its exchange students. While the number of incoming students has continued to increase steadily there has been a decline in the number of students taking up exchange opportunities outside of Lithuania. This is partly due to economic pressures of employment and family commitments. Students who met the Team talked about the value of their exchange opportunities. At the time of the review, for example, one student was awaiting final confirmation of the award for a placement in one of the most renowned Ivy League Universities. This had been secured through intense competition. Other students talked about the challenges of leaving family and work but noted an intention to continue to seek opportunities in subsequent study. There appears to be a culture that values and supports international student exchange at KTU.
104. The Team concluded that there has been considerable activity to strengthen the international goals of KTU. The University should improve its marketing to extend beyond the distribution of written information. The use of other media including broadcast media may help to raise the profile more effectively across the Baltic. One comment heard during the review summarised this saying “If I had known about what KTU has to offer I would have taken my first degree here, I would have even learned Lithuanian”.

### **Management of Quality and Standards**

105. Each study programme is managed through the KTU programme management system and has a Faculty level Study Programme Committee. New programme committees have been implemented in 2014 and one of these committees is responsible for the oversight of multidisciplinary programmes. Programmes are developed according to a standard format, and are presented to the Central Study Programme Committee for approval with a detailed programme specification. This includes learning outcomes linked to programme content, learning facilities, teaching resource and assessment requirements.
106. A handbook of regulations is provided for staff and students. This details the orders and procedures that regulate study programmes at KTU. The information is detailed and technical and explains all of the requirements including the curriculum regulations, appeals and complaints procedures, assessment procedures and the management of academic misconduct.

Students who met the Team were very positive about their study experience and spoke at length of the considerable support from their teachers.

107. The programme management system includes discursive mechanisms by which committees discuss the study programme quality, student progression and achievement and the management of quality and standards. These discussions inform the further development of the academic portfolio of KTU.
108. During discussion with staff it became apparent that there are some good practices developing in relation to the management of quality within Faculties. For example there are a variety of additional mechanisms developing in Faculties and Departments to secure student feedback and also some examples of innovative uses of technology to support independent study. While these may be subject specific, the Team is of the view that KTU could strengthen further the mechanisms by which it systematically disseminates good practice across the institution and alerts colleagues to challenges and weaker practice. This could be through pedagogical seminars or a conference or through bulletins and quality “alerts”. Whatever mechanisms are used, the Team believes that there is a need to reduce the variability across Faculties to support the best practice throughout the University.
109. The Team is confident that programmes at KTU meet the required standards and quality assurance is in place to take active and deliberative steps to improve the quality of the student learning experience.

### **Student engagement in quality assurance**

110. Students are represented on all major decision making committees in the University, including the Senate and its major committees. Students were involved in the consultation about the Self-Evaluation Report and the Strategic Plan. There is a strong commitment in KTU to involve students and annual surveys are used to gain feedback and to enhance the student experience. All faculties also use round table discussions and other types of meeting to secure feedback from students.
111. Students have regular opportunities to give feedback on their study experience. The Faculties take student feedback seriously and there were examples given by students of change as a result of student feedback.
112. Students are required to undertake final projects that are supervised through the University and many are located in work-based enquiry. All students undertake an internship and some have additional placements to meet specific needs. Students value these placements and there is a direct link between placements and career destinations for many students.

113. Students have a wide range of clubs, societies and facilities funded by KTU. The Student Council ensures that key issues are raised and discussed. Students confirmed that they play an active part in Senate, Council and Faculty committees. The Team noted the extensive involvement of students in decision making at KTU.

**Summary of findings: Studies and Lifelong learning**

114. In summary, the Review Team found great strength at KTU in relation to the standard and quality management of academic studies. The University devolves responsibility for the management of quality and academic standards to the Faculty level. This works well and is subject to robust oversight by the committees of Senate. Students are highly positive about their study programme. There is evidence from students and external partners that KTU produces graduates who are distinctive in their skill base and fitness for working in companies and industry. The achievements of KTU in relation to technological higher education are impressive. KTU possibly underplays this in promoting itself outside of Lithuania. The Team believes that a stronger improved impact analysis would assist the University in demonstrating its considerable achievement more widely in Lithuania and abroad.

**Judgement on the area: academic studies and life-long learning is given a positive evaluation.**

## V. RESEARCH AND ART ACTIVITY

115. KTU is a scholarly institution and provides high quality study programmes and a portfolio of research that is highly regarded. Some research at KTU is of a world leading standard. There is a commitment to underpin teaching by research based evidence and thus create a comprehensive culture of research and scholarship across KTU. KTU has developed a research strategy that focuses investment and activity to achieve its core aim of achieving high quality, internationally recognised research that is sustainable and financially viable.

To this end KTU has identified five research priorities:

- Develop research in physical, biomedicine, technology, social sciences and humanities as well as inter-and trans-disciplinary scientific research of high international level
- Develop knowledge that makes a significant impact on the society and the economy
- To ensure the high international level publishing of University's research journals and the quality of the University researchers articles
- Ensure the recruitment and education of talented and motivated Lithuanian and foreign doctoral students and postdoctoral researchers
- To create conditions for the University doctoral study field committees to establish a high international level school of doctoral studies attractive to all stakeholders

116. The intention is to support KTU becoming a research intensive University with a reputation that extends beyond Lithuania. There is an investment plan to support these objectives. The Team believes that while ambitious the University has a clear sense of priority and a direction of travel to secure its research objectives through building a strategy with challenging goals that will be reviewed and developed.

117. The research activity complies with the mission of KTU and the principles within the strategic documents. These reflect the national priorities and the requirements of the European Research Area. The research endeavour also meets the needs of regional and city partners in Kaunas. The Team learned of many examples of research that are undertaken in partnership with companies and local industry. This enhances the provision of engineering and sciences employment in the region.

118. The University has a clear strategy for research with strong leadership provided at Vice-Rectorate level, in Faculties and through the leadership of Research Institutes within the

prioritized research clusters. The range and level of funding secured, research activity and scientific outputs are impressive and reflect the highest standard in Lithuania.

119. There is a strong commitment at all levels to increase the research activity and scientific output of KTU. The ambition is significant and while the Team challenges the KTU vision for world class status within five years, it is possible that this ambition may be realised in medium to long term with sustained investment and strategic focus. Too many researchers, however, the vision is seen as inspiring and supports them in their goals.
120. Research activity is located in the faculties and 9 Research Institutes. These have achieved a considerable level of funding resulting in the KTU Science and Technology Centres at Santaka and Nemunas Valleys. KTU has also devised a series of research clusters based on broad subject disciplines that brings together colleagues across Faculty boundaries. This creates research groups that focus on specific themes or projects.
121. There are a number of quantifiable targets for research that include publication, citation and investment indices. These enable KTU to measure its progress in research activity and to be assured of continued success. The underpinning objective is to create a dynamic research culture that supports the increasing research portfolio of high quality outputs. Some objectives that are more qualitative may help KTU to evaluate its progress in establishing an institution-wide culture of high level research and scholarship.
122. KTU has attracted funds from the EU Structural Fund as well as European Framework 7 funding for specific projects. Increasingly KTU is becoming a leader in EU funded projects and not solely a participant. Regional partners offer considerable funding and support for research and development at KTU. Less developed are the research funds from trans-global business sources. The Business Council established by the Rector may help to offer advice and support in this area. Although small and medium sized enterprises are a key focus for KTU, the larger scale collaboration with industry will also help to raise the profile of KTU and support multi-national commercial collaboration.
123. KTU complies with regional and national priorities and is able to support young researchers across a wide range of subject disciplines. There is a considerable amount of technical facility provided from external partners including advice, equipment and laboratory facilities. Partnerships are business-like and operate on a formal contractual basis. As indicated above there is a high level of mobility for researchers especially in relation to the numbers of outgoing staff.
124. KTU has measures of impact for its research activity that are derived from a range of sources including the formal research outputs from major programmes but also through applied

research and community partnerships. The importance of these latter research programmes might be enhanced by the inclusion of some measurable targets for community engagement and applied research in the KTU plan.

125. KTU makes a significant impact on the national research profile through its link with national and regional priorities reflected in the Santaka and Nemunas Valleys Centres. Laboratories and facilities have been opened up to community partners and provide an important resource for the community. The Team is of the view that KTU is the leading technological research centre in Lithuania and possibly in Europe in some specialist areas.
126. The Team recognises that KTU has many research strengths some of which are world class. The ambition to become a research-intensive university producing world-class outcomes within five years is over-ambitious, in the view of the Team. There is evidence however of a trajectory that already embraces world class performance in some areas of strength. Given the current position KTU is encouraged to maintain its sustained investment to reach the critical mass and quality of scientists required to realise this ambition.
127. Research funding is stable and sustainable, and has increased considerably in last years. Researchers have attracted a large number of research grants and some are internally significant securing multi-million Euro funding streams. There is innovative use of partnerships and some projects have been secured through partnership bidding with external companies. However, the fact that yearly support from some instruments fluctuates considerably may affect unfavourably the implementation of long-term research strategies. As indicated above KTU may wish to consider planning assumptions that model changing funding streams from the EU programmes or reductions from science and business in the case of changing economics.
128. KTU has put in place a range of mechanisms to oversee research degree performance as outlined previously. KTU Doctoral studies committees for fields of science appoint doctoral supervisors and ensure that there is a rigorous research training to underpin doctoral studies. There is a clear regulatory framework for postgraduate study and mechanisms to monitor and supervise progression and completion of research degree programmes. Students who met the Team confirmed these arrangements and the support network that is in place. Doctoral students generally have a work space and facilities to complete their research. It is not compulsory for them to undertake teaching duties. Those who teach are given pedagogical support and mentorship.
129. There is considerable evidence of the impact of academic, social and business partners on research activities. Employers support projects by identifying themes and providing opportunities for research. This produces partnerships whereby academic and research activities

are developed together to the benefit of local partners and students. Students who met the panel confirmed the applicability and considerable value of their projects undertaken in partnership with businesses and companies.

130. Researchers international mobility also strengthens research opportunities and supports the development of new initiatives in the region and nationally. The research partnerships developed internationally are thus able to make a direct contribution to the development of research in Lithuania.
131. KTU has a research strategy that addresses the priorities of the National research agenda as well as the priorities of the European Research Area. The University has developed some research specialties in science and engineering that are playing a leading part in contributing to the European research agenda. This is reflected in the considerable funding attracted by KTU that has led to the development of leading research facilities in Lithuania. KTU has a strategy for development that is so closely aligned to national and European priorities it is becoming a leading partner in a number of major Europe wide projects.

#### **Summary of Research and Arts Activity**

132. KTU is ambitious and has a significant external profile in relation to its research endeavours. It has a culture that promotes and supports academic research and builds major partnerships to support collaborative research with external stakeholders.
133. The research culture that underpins a research intensive University is located within the Faculties and Research Institutes at KTU. Qualitative measures included in the strategic plan may support the University is evaluating its wider progress to become a research intensive university across Faculties as well as in research units.
134. Research and art activities play an important part of the academic life at KTU. There is a strategic commitment to develop the highest quality outputs. Investment is made to support the development of staff skills and achievements. There is evidence of a research culture that is scholarly and reflects culture of a research intensive university that is ambitious to extend its research base outside of the national field.
135. Research students are well supported and the academic oversight of research activity meets all of the requirements of national and European standards and frameworks.

**Judgement on the area: the area of research and art activities is given a positive evaluation.**

## VI. IMPACT ON REGIONAL AND NATIONAL DEVELOPMENT

136. One of the five strategic priorities for KTU is that it participates actively in the city, region and country's development. KTU wants to make an impact that supports the city in developing the most highly skilled workforce and prides itself in belonging to Kaunas as a "City of Learning". KTU wants to be close to its partners in creating an environment that supports sustainable development in the region and makes an impact on the national academy.
137. KTU is strongly rooted in the region and makes a significant impact to regional growth and development. External partners explained that this is so important to Kaunas that any threat to the viability of the University is also a threat to the local economy. One employer said "quite simply, without KTU we would not be here..." and reflects the view of the external partners who met with the Team. Business companies and industrial organisations generate many projects with KTU and these projects address some of the key issues for Kaunas and beyond. The most obvious example is the Technology and Science Centre at Santaka where there is a business incubator that supports considerable development. One comment heard during the review summarised the excitement of these developments "I never thought I would see facilities like this in a Lithuanian University, it is fantastic.." The business partners who met the Team indicated that KTU graduates are preferred applicants due to their technical skill, positive attitude and their ability to learn quickly and adapt to the work situation effectively.
138. Business start-up and incubation make an important contribution to small and medium size enterprises in Kaunas. One young business leader commented "I never thought I could do this, I have my own business and thanks to KTU I am living my dream.." These comments reflect the spirit of the discussions with external stakeholders and alumni. There is considerable pride in the achievement for the City and the nation from KTU.
139. The University has undertaken more than 600 projects in partnership with external partners, often drawing on international funding. The output is considerable and makes a significant contribution to the economy of Kaunas. In the past three years this growth in internally funded projects has seen this income making up a significant part of the KTU financial plan. KTU has been able to maintain a steady funding flow from these projects with external partners regionally and nationally.
140. The university hosts major conferences and exhibitions such as TECHNORAMA which presents major innovation in technology and science. This raises the profile of Kaunas and the city region. KTU is encouraged to raise this profile further and enhance marketing activity that ensures it is known more widely in Europe and beyond.

141. KTU conducts regular meetings with the business and State stakeholders and supports the external partnership network and the alumni network. There is some evidence of a continuous bi-directional information and feedback exchange and identification of the new cooperation opportunities both in terms of science research and better employment of the students. While KTU has a national reputation the Team came to the view that this could be considerably strengthened to ensure that all major employers are aware of the major contribution made by KTU to company development through the opportunities presented in its research and development projects. The Team believes that there is an urgent need for KTU to undertake renewal of its public relations and marketing activity to position itself effectively in the national profile.
142. KTU plays a part in the cultural life of Kaunas. There has been important work on the revival of Lithuanian heritage, especially in the region, and includes a range of social and cultural projects. These contribute to the promotion of the regional identity. The external partners who met the panel noted that these social and cultural projects are important in raising the profile of the regional identity and in turn support the retention of skilled workers in the region.
143. KTU staff are actively engaged in regional and national public affairs. KTU staff have been involved in approximately 500 professional activities at regional and national and Baltic level that cover editorial boards; expert active participation in professional and scientific associations and groups. The University is very proud of its regional standing and has a number of examples where recognition has been gained for its national work that has secured significant financial investment from employers and companies regionally and nationally.
144. KTU identifies itself as a “green university” and seeks to support the environment through education, research and practice within the campus. The University also makes a leading contribution to sustainability initiatives in Kaunas. In this way KTU indicates its environmental credentials and role models good practice in the region.
145. The Strategic Plan has no quantifiable and measurable objectives that relate to the regional and national impact of KTU. The Team concluded that the impact of the University is significant and would be enhanced by the establishment of smart strategic objectives that are quantifiable and measurable which would strengthen the University in building its external profile. This would highlight the technological and scientific potential of KTU, which the Team believes is significant.
146. Academic programmes focus on knowledge and skill that prepares students academically and reflects wider priorities in supporting regional and national development. This supports

post graduate research as well as enabling students to gain employment and make a significant contribution to the development of companies, businesses and industry. The selection of final graduation projects is supported closely by business and social partners who are involved in identifying themes, supervising practical training and in some cases providing facilities for research and development. Study Programmes include a placement that provides students with training practice. In this way the study programmes provided by KTU develop skills and provide a base for ensuring students understand the application of their knowledge.

### **Summary of Impact on Regional and national development**

147. There is considerable evidence of the contribution that KTU makes to the region and nationally. The University plays a significant role in the business and industrial life of the region. The University is unique in its mission and plays an important part in the regional and national associations that bring together researchers and industries across the technological and scientific academy in Lithuania. The Team came to the view that the impact assessment and measurement of its activities could be strengthened to reflect the significance of KTU as an institution.
148. The development of measurable, quantifiable objectives related to regional and national impact would strengthen the external profile of KTU. There is considerable opportunity to widen its profile nationally and enable all companies in the region and nationally to understand the singular and significant contribution to the national economy.
149. KTU is highly dependent on EU Structural Funding allocation for its research and development infrastructure that makes an important contribution to regional and national development. The need to consider planning assumptions that address the potential reduction of this income stream is identified above. Reduction in EU Structural Funds, or Research Framework Programme funds would have an impact on KTU's ability to continue its high level of investment in external partnerships.
150. The University should express its regional impact goals more clearly and communicate these more effectively. In short KTU is much better than its impact profile would suggest – it sells itself short and underplays its significance.

**Judgement on area: impact on regional and national development is given a positive evaluation.**

## **VII. GOOD PRACTICE AND ENHANCEMENT RECOMMENDATIONS**

### **Commendations/best practice**

The Review Team found many examples of good practice at KTU that define the university and could inform the wider academy in Lithuania. Particular attention and commendation is drawn to the following features of excellence and best practice at KTU:

#### **(Strategic Management)**

- Effective leadership at KTU is enabling, inclusive and is supported by a strong management team with a clear sense of purpose and direction. The estate strategy illustrates this in its focus on new approaches to learning resulting in major decisions that have been taken to support the disposal of some assets and the redesign of other areas that are likely to enhance the student experience
- The Renewal Programme that has made a major impact on the development of KTU and enables rapid response to external factors. In particular the restructuring of the University has resulted in an increasing partnership between academic studies and research.
- In the face of considerable challenge KTU has maintained the stability of its student numbers and has recruited slightly above target in recent years
- Students have a voice at KTU. Their views are taken seriously and student representation at all levels is supported and is effective. There is consistent pride amongst students, external partners and alumni in the association with KTU. These stakeholders are excellent ambassadors for the university

#### **(Academic Studies and Lifelong Learning)**

- Student support services are well organised and offer highly professional support that is highly valued by students. There is a unique mentorship scheme with a team of advisors, mentors and support led by the student's academic advisor
- Administrative and technical support at KTU is highly professional and supports the development of facilities and systems that support the student learning experience
- Doctoral programmes have rigorous processes to assure standards and to enhance the quality of student experience.

### **(Research and Art Activities)**

- KTU has developed a number of research areas with world class status. This has resulted from a focussed strategy, continued investment and an ability to attract leading academics into the Research Institutes
- Research laboratories and facilities at the KTU Technology & Science Centre, Santaka Valley are outstanding and possibly represent the best seen in Lithuania. Teaching laboratories are also well developed and supported by donation from external partners

### **(Impact on Regional and National Development)**

- KTU is a highly enterprising university that supports ideas, innovation and enables development that results in high levels of achievement. The partnerships with employers, commerce and industry are impressive and make a significant impact on employment, student learning and the funding flow to KTU and its partners
- The business start-up and business incubator facilities are excellent and make a major contribution to the development of small and medium sized enterprises in the region and nationally.
- KTU systems are influencing other organisations, in particular the salary mapping tool developed at KTU and being utilised more widely
- KTU plays a vital part in Kaunas in being the region's major provider of a high level technological workforce. This contribution is complemented by a wider range of activities including the involvement in the Children's university and extensive student project work in companies

## **Recommendations for KTU, SKVC and the Ministry**

### **Recommendations for KTU**

The Review Team found that KTU has established effective systems to ensure the standards and quality of its academic awards (including research and taught programmes). As the University moves forward the Team recommends the following actions to support the achievements of its future goals.

The Review Team recommends that KTU should:

### **(In relation to Strategic Management)**

- develop further and enhance its performance management to support the Vice Rectors and the Faculty Heads in realising the strategic objectives
- continue the process of renewal in relation to the realignment of the organisational structure at KTU. More specifically the work to bring together Faculties and Institutes should continue to ensure that research and teaching are in close alignment and structures can operate with maximum efficiency
- consider the development of further collaboration with other institutions in Kaunas to support teaching, research and administration in ways that create economies of scale and release academic resource. These could be through strategic alliances, consortia, federation or merger or other forms of partnership.
- consider whether, given the complexity of the organisation, the range of initiatives and the changing external environment, there is a need to review the way in which strategic objectives are developed to support achievement in a manageable way.
- review the investment strategy that supports internationalisation to support more rapid development and support medium and long term plans as well as short term exigencies.
- complete work to establish an overarching Human Resource strategy that identifies workforce development, staff plans and performance management

**(In relation to Academic Studies and Lifelong Learning)**

- continue to develop and expand student centred teaching and learning that is highly valued by students, whether through peer observation of teaching, problem based curriculum or applied research and enquiry.
- review approaches to the management and enhancement of quality to ensure a systematic approach to dissemination of good practice and sharing weak practice to reduce variability in practice across Faculties

**(In relation to Research and Art Activities)**

- review the way in which KTU ambitions to become a world class research institution can be supported by a long term investment plan with realistic goals and key performance indicators of research culture as well as research outputs.
- find ways of increasing the number of international projects in which KTU is the lead organisation

### **(In relation to Impact on Regional and National Development)**

- establish measurable targets and performance indicators that can strengthen the way in which KTU understands its regional and national impact
- take urgent steps to improve the marketing activity that promotes the University both inside and outside of Lithuania. More particularly KTU should consider the way in which it presents itself to ensure that potential European students understand the strengths of KTU and global companies see KTU as a potential partner.

### **Recommendations for the Ministry of Education and Research**

- In the light of the national priority to develop world class research status in some Lithuanian Universities, the Ministry may wish to review its investment strategy in research activity to accelerate research progress and attract a greater number of international professors and doctoral students. This might support a more realistic output that enables at least one University to achieve world class status within five years

### **Recommendations for SKVC**

- More detailed guidance on the development of the SER, especially in relation to institutional decision making could clarify more effectively the relationships within highly complex institutions such as KTU. This would support the identification of strengths as well as areas for development.
- Embed enhancement-led quality review at institutional level that supports the development of quality systems. Where institutions are in full compliance with national and European requirements, this would support self-reflection and criticism that enhances the educational provision locally and nationally

## VIII. JUDGEMENT

**Kaunas University of Technology is given a positive evaluation.**

Grupės vadovas:  
Team leader: Professor Dr. Erich Hoedl

Grupės nariai:  
Team members: Asnate Kazoka  
Aleksej Kovaliov  
Professor Peeter Normak  
Professor Ingegerd Palmer

Vertinimo sekretorius:  
Review secretary: Professor Sue Frost

## ANNEX. KAUNAS UNIVERSITY OF TECHNOLOGY RESPONSE TO REVIEW REPORT

Kaunas University of Technology management team would like to express gratitude for the institutional review process and feedback. Institutional Review report has addressed a number of key issues and has made strong recommendations for further development.

KTU welcomed the opportunity to response to the Review report and provide some amendments:

Paragraph	Amendments
18. The process of renewal is a continuous cycle of development and the Team learned that there is an intention to reduce the number of functional units further and in the medium term bring research and teaching together even more closely. The formation of subject clusters has supported this process to bring together staff from Departments and Institutes together across subject fields to support research projects and underpin research based teaching.	18. The process of renewal is a continuous cycle of development and the Team learned that there is an intention to reduce the number of functional <b>and administrative</b> units further and in the medium term bring research and teaching together even more closely. The formation of subject clusters has supported this process to bring together staff from Departments and Institutes together across subject fields to support research projects and underpin research based teaching.
22. Three key decision-making bodies manage the University: The University Council, the Senate and the Rector's Office referred to in this report as the Rectorate. The Rectorate is the senior management team of KTU and includes the Rector, 3 Vice Rectors, and Deans of Faculty and Heads of central functions such as Human Resource, Finance and Estate.	22. Three key decision-making bodies manage the University: The University Council, the Senate and the Rector's Office referred to in this report as the Rectorate. The Rectorate is the senior management team of KTU and includes the Rector, 3 Vice Rectors, Deans of Faculty, <b>Directors of Institute and Heads of central functions such as Human Resource, Finance, Infrastructure, Strategic Planning and Quality, Marketing and Communications, IT.</b>
31. The strategic plan is reviewed annually and reports are made to the University Council, The Senate and the Rectorate. There is a monitoring programme to ensure that operational targets are met and the Faculty plans are overseen by the Vice Rectors.	31. The strategic plan is reviewed annually and reports are made to the University Council, The Senate and the Rectorate. There is a monitoring programme to ensure that operational targets are met and the Faculty <b>and Research Institute</b> plans are overseen by the Vice Rectors.
34. Currently there is a systematic approach to "upward reporting" within the management systems of KTU. The Vice Rectors have oversight of reports from the Faculties. In the absence of formal appraisal and evaluation systems this monitoring and review process operates as an "intelligent conversation" between the Deans/Heads of Institute and the Vice Rector. The Team would encourage KTU in its intention to develop further and enhance its performance management to support the Vice Rectors and the Faculty Heads in realising the strategic objectives. To this end the annual reporting cycle could have a stronger analytical and evaluative underpinning to support the development	34. Currently there is a systematic approach to "upward reporting" within the management systems of KTU. The Vice Rectors have oversight of reports from the Faculties <b>and Research Institutes</b> . In the absence of formal appraisal and evaluation systems this monitoring and review process operates as an "intelligent conversation" between the Deans/Heads of Institute and the Vice Rector. The Team would encourage KTU in its intention to develop further and enhance its performance management to support the Vice Rectors and the Faculty Heads in realising the strategic objectives. To this end the annual reporting cycle could have a stronger analytical and evaluative underpinning to support

of staff in meeting strategic goals and identify challenges and obstacles that may be encountered.	the development of staff in meeting strategic goals and identify challenges and obstacles that may be encountered.
42. New study courses are developed in cooperation with all stakeholders drawing on the views of students and external partners. Two study programmes, for example, have high quality external recognition through QUESTE-IS and EQUIS. Study programmes meet the European and national qualification standards. Each programme has a programme specification and is approved through an institutional process of accreditation.	42. New study courses are developed in cooperation with all stakeholders drawing on the views of students and external partners. Two study programmes, for example, have high quality external recognition through <b>QUESTE-SI</b> . Study programmes meet the European and national qualification standards. Each programme has a programme specification and is approved through an institutional process of accreditation.
49. There is a formal structure to maintain oversight of doctoral study programmes through the KTU Research Commissions. There is regular assessment of doctoral work and the Research and Development Committee of Senate ensures that processes are followed properly and that students are progressing through their programmes of study. Doctoral Committees at Faculty level oversee the operational progress of doctoral programmes and account to the Senate Research and Development Committee. Students are also represented in the Faculty and Senate Research Commissions	49. There is a formal structure to maintain oversight of doctoral study programmes through the <b>KTU Doctoral studies committees for fields of science</b> . There is regular assessment of doctoral work and the Research and Development Committee of Senate ensures that processes are followed properly and that students are progressing through their programmes of study. Doctoral Committees at Faculty level oversee the operational progress of doctoral programmes and account to the Senate Research and Development Committee. Students are also represented in the Faculty and Senate Research Commissions
56. KTU has a Human Resource Strategy that seeks to ensure that the capacity and capability of its staff meet the requirements of the institution. The SER states that current balance of staff is about 43% academic staff and 57% administrative staff. The Team learned that the balance described is slightly misleading as 9% of the administrative staff are technical and professional staff engaged in the support of teaching and learning. A number of administrative resources are part of the planned outsourced staffing that offers general campus support and domestic services. Additionally there is a significant short term resource employed in the renewal projects, particularly in the redesign of the IT system and the completion of the estate strategy.	56. KTU has a Human Resource Strategy that seeks to ensure that the capacity and capability of its staff meet the requirements of the institution. The SER states that current balance of staff is about 43% academic staff and 57% administrative staff. The Team learned that the balance described is slightly misleading as 9% of the administrative staff are technical and professional staff engaged in the support of teaching and learning. A number of administrative resources are part of the planned outsourced staffing that offers general campus support, <b>like sport, library, printing and publishing and domestic services. Future plans include the reduction of personnel by acquiring some of the services of the organizations providing them. Additionally there is a significant short term resource employed in the projects.</b>
59. New research posts are being established. Scientists currently make up about 10% of academic positions. KTU has been a national leader in developing a job evaluation survey to support a more systematic approach to attracting highly skilled academic staff. The system designed by KTU involved a survey of 14 universities and is regarded as an important tool nationally that was developed at KTU.	59. New research posts are being established. Scientists currently make up about <b>15%</b> of academic positions. KTU has been a national <b>leader among public universities in developing a job evaluation system</b> to support a more systematic approach to attracting highly skilled academic staff. The system initiated by KTU involved a survey of 14 universities and is regarded as an important tool nationally.
60. There is not a formal appraisal system but	60. There is not a formal appraisal system but

<p>academic staff undergo an attestation process every three years. This requires affirmation of development and competence. There is an assumption of teachers being qualified to the level “X+1” - meaning that they should hold at least one qualification in advance of their students. To this end there is strong support for staff to upgrade qualifications where appropriate and a large number of non-PhD teaching staff follow doctoral programmes to secure higher qualifications. This includes opportunities for academic exchange and mobility.</p>	<p>academic staff undergo an attestation process every <b>five years</b>. This requires affirmation of development and competence. There is an assumption of teachers being qualified to the level “X+1” - meaning that they should hold at least one qualification in advance of their students. To this end there is strong support for staff to upgrade qualifications where appropriate and a large number of non-PhD teaching staff follow doctoral programmes to secure higher qualifications. This includes opportunities for academic exchange and mobility.</p>
<p>110. Students are represented on all major decision making committees in the University, including the Senate and its major committees. Students were involved in the consultation about the Self-Evaluation Report and the Strategic Plan. There is a strong commitment in KTU to involve students and annual surveys are used to gain feedback and to enhance the student experience. Some faculties also use round table discussions and other types of meeting to secure feedback from students.</p>	<p>110. Students are represented on all major decision making committees in the University, including the Senate and its major committees. Students were involved in the consultation about the Self-Evaluation Report and the Strategic Plan. There is a strong commitment in KTU to involve students and annual surveys are used to gain feedback and to enhance the student experience. <b>All</b> faculties also use round table discussions and other types of meeting to secure feedback from students.</p>
<p>128. KTU has put in place a range of mechanisms to oversee research degree performance as outlined previously. The Research Commissions appoints doctoral supervisors and ensures that there is a rigorous research training to underpin doctoral studies. There is a clear regulatory framework for postgraduate study and mechanisms to monitor and supervise progression and completion of research degree programmes. Students who met the Team confirmed these arrangements and the support network that is in place. Doctoral students generally have a work space and facilities to complete their research. It is not compulsory for them to undertake teaching duties. Those who teach are given pedagogical support and mentorship.</p>	<p>128. KTU has put in place a range of mechanisms to oversee research degree performance as outlined previously. <b>KTU Doctoral studies committees for fields of science appoint</b> doctoral supervisors and ensures that there is a rigorous research training to underpin doctoral studies. There is a clear regulatory framework for postgraduate study and mechanisms to monitor and supervise progression and completion of research degree programmes. Students who met the Team confirmed these arrangements and the support network that is in place. Doctoral students generally have a work space and facilities to complete their research. It is not compulsory for them to undertake teaching duties. Those who teach are given pedagogical support and mentorship.</p>

Strategic Planning and Quality Director

Solveiga Buoziute