



# Social responsibility report

2015–2017

1st July, 2018

**To our stakeholders:**

Kaunas University of Technology (KTU) is operating in a sustainable and responsible manner; it promotes the culture of integrity and transparency, respects human rights, is responsible for the welfare of its employees, protects the environment, supports and actively participates in social initiatives.

These are the key components of the idea of sustainable University that we create and implement in a joint effort. We aim to conduct activities based on the sustainable development principles everywhere and all the time: while studying, teaching, and developing knowledge and innovations, in relationships with our partners, in development of infrastructure and environment.

However, we are not only interested in the future of KTU; we also feel responsibility in terms of society, our city and country. We are not indifferent to the modern challenges and problems; we try to contribute to the search of sustainable solutions. Moreover, we understand the biggest and most significant changes begin with us; therefore, we are not afraid to change and improve.

Our progress while implementing the idea of sustainable University within the last three years, our achievements and goals are presented in the second KTU Social Responsibility Report that we present to you.

Sincerely yours,  
Vilius Mackonis  
Director of Corporate Relations,  
Kaunas University of Technology



Kaunas University of Technology (KTU) Social Responsibility Report 2013–2014 was submitted in accordance with the UN Global Compact Principles. Sustainable development principles and Global Compact Principles are too abstract for the assessment of KTU sustainability. Aiming to indicate specific yearly achievements of the University and assess its activities of social responsibility, the systems of three indicators were merged in the comparative analysis: United Nations' Global Compact Principles, United Nation's 17 Sustainable Development Goals and Global Reporting Initiative.

While preparing KTU Social Responsibility Report 2015–2017, the system of indicators was divided in the following main components: cooperation with interested parties, economic responsibility, social responsibility, environmental responsibility, integration of sustainable development principles in the study programmes provided by KTU.

Systems of indicators are better adapted for business entities, not enough focus is on the performed scientific research and integration of sustainable development principles of the proposed programmes in the delivered modules, therefore additional indicators relevant to the University were applied in preparation of this report: development of competences during studies, application of sustainable development principles in the provided study programmes. The system of indicators composed in preparation of KTU Social Responsibility Report 2015–2017 allows assessing the process of monitoring of the University's sustainable development, and application of sustainable development principles.

## **Cooperation with interested parties**

One of the sustainable development criteria is cooperation with local and international companies, organisations, public institutions and institutions of higher education. KTU cooperation with external companies reduces the gap between research and other activities. Contracts with business companies, organisations, public and private institutions indicate research integration in business and business integration in research. Cooperation between business community and University is mutually beneficial – companies receive the best research-based solutions and University can apply theoretical knowledge in practice.

KTU signed 355 cooperation agreements in 2015–2017: 142 in 2015, 162 in 2016 and 51 in 2017. Cooperation agreements are signed with private companies, libraries, Lithuanian and foreign educational institutions, municipalities and companies operating in other areas. University signed 205 joint venture agreements regarding participation in national and international projects, clusters and consortiums. 57 joint venture agreements are signed in 2015, 88 in 2016 and 60 in 2017. Most of them, almost 69 %, are made with Lithuanian and foreign universities and schools of higher education.

Joint projects strengthen cooperation between the parties; they try to solve global problems. In total, 560 cooperation agreements were signed with institutions of higher education (foreign and Lithuanian), public authorities, public institutions, business companies, associations and natural persons during the analysed period.

## Economic responsibility

University's economic responsibility reflects the ration of KTU operating income, expenses and created value in the context of sustainable development.

### Funding

KTU provides annual activity reports reflecting the economic aspect. University divides funding in three categories: state subsidies, outsourced research and other. According to the data of 2017, KTU income is 48 587 thousand € (see figure 1a); income decreased almost by 1 % in comparison to 2016; it is decreased by 19.26 % in comparison to 2015 (see figure 1b).

#### **KTU income in 2017, thousand €**

- State
- Outsourced research
- Other

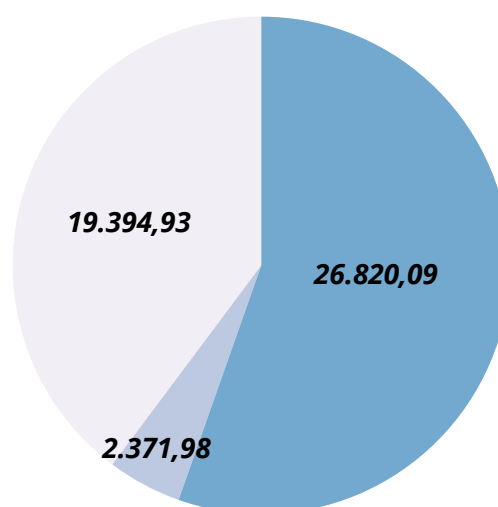


Fig. 1a. KTU income in 2017

<sup>1</sup> Note. Funding transferred to the third countries is not included in the income

<sup>2</sup> Note. All University's income (except for **State subsidies** and **Outsourced research**) are provided in the section **Other**

State funding was similar according to the data of a three-year period; income from the outsourced research was similar in 2015 and 2017, while it was 16 % lower in 2016. Funding categories as Other followed a downward trend.

#### KTU income, thousand €

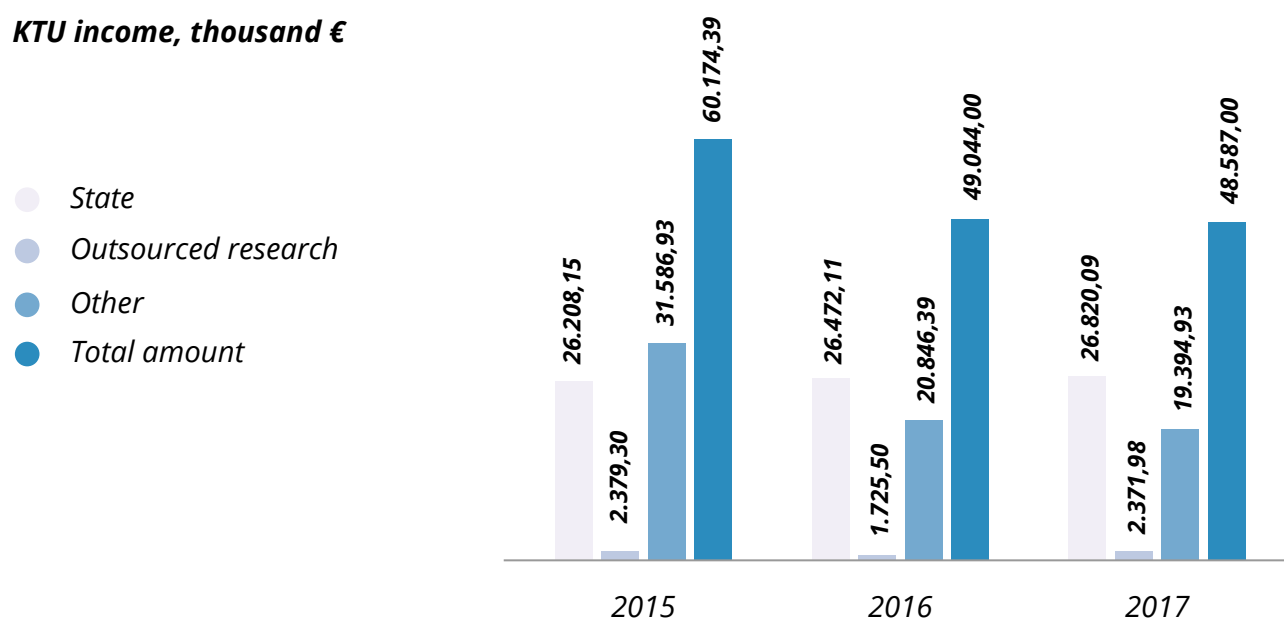


Fig. 1b. Breakdown of KTU income in 2015–2017

<sup>1</sup> Note. Funding transferred to the third countries is not included in the income

<sup>2</sup> Note. All University's income (except for **State subsidies** and **Outsourced research**) are provided in the section **Other**

Dynamics of KTU income indicates that demand for outsourced research increased in 2017. This indicator reveals the improvement in implementation of one of KTU objectives – promotion of cooperation with companies and public institutions. However, funding of outsourced research was lower in 2016; therefore assessment of achievements in this objective requires monitoring of the next years 2018 and 2019.

## Expenses

Each year, University allocates the received funds according to the categories indicated in figure 2. The largest part of expenses, approximately 59.05 % of all expenses, is allocated for remunerations of the employees. According to the provided data, expenses “Other” decreased by 58.16 % in 2016, in comparison to 2015; while the amount of “Other” expenses in 2017 was similar to 2016.

### KTU expenses, thousand €

- Remuneration of the members of KTU community
- Business trips
- Scholarships (SF and SNF, 1-3 cycles)
- Infrastructure updates
- Other

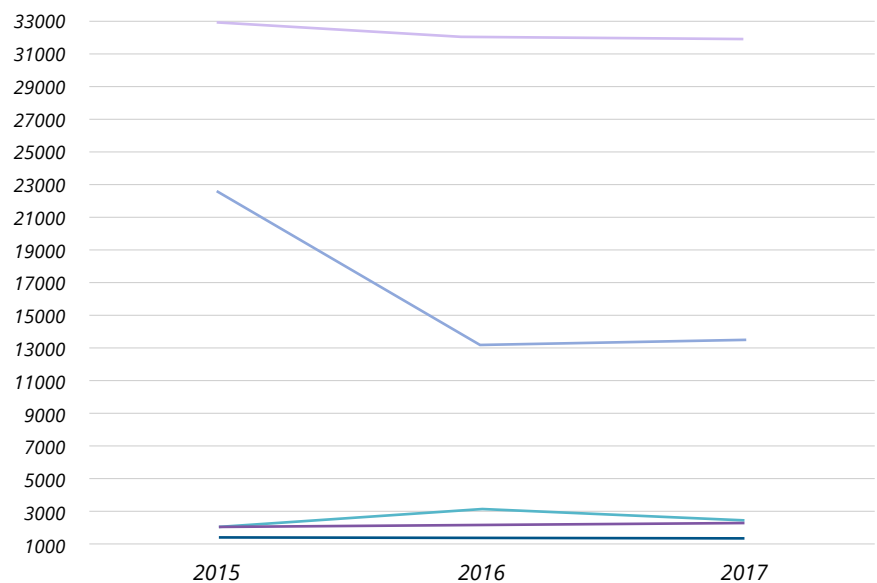


Fig. 2. Total KTU expenses 2015–2017

<sup>1</sup> Note. Funding transferred to the third countries is not included in the income

One significant indicator specified in the UN Global Compact Guidelines (indicators LA.3 b, c, d, e), UN SDG goal 8 and GRI indicator 201-1, is employees' remuneration (see figure 3). According to the provided data, total remuneration of all employees in 2016 was lower, in comparison to 2015 and 2017. General average remuneration of all employees in 2016 decreased by 6.69 %, in comparison to 2015, but it increased by 6.77 % in 2017, in comparison to 2016. Remuneration of senior and chief researchers was highest in 2015, while average remuneration of professors, junior employees, researchers, associate professors, lecturers and assistants was highest in 2017.

**Average remuneration of lecturers and researchers, €/month**

- Professor
- Chief researcher
- Senior researcher
- Junior researcher
- Researcher
- Associate professor
- Lecturer
- Assistant

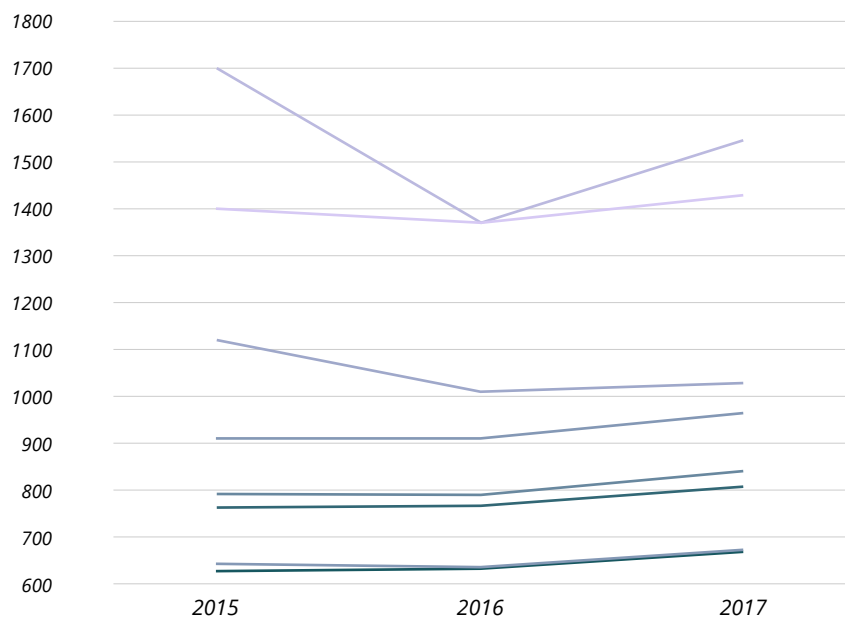


Fig. 3. Average remuneration of KTU lecturers and researchers in 2015–2017



KTU motivates students' pro-activeness during studies and their social activities. Changes in the system of scholarship award provide a possibility of studies not only to the students with very good and excellent academic performance, but also to the socially active ones. Procedure for award of talent scholarship depends on the average of the last semester and additional points are provided according to the significance of activities. Writing of scientific papers, participation in scientific conferences, University's promotion during social events, etc. are classified as additional activities. Twice per year KTU announces competitions for Parton scholarships and Alumnus scholarships.

Stipulated procedure for scholarship award motivates KTU students to focus on their academic achievements as well as actively cooperate with local and international communities. The amount of scholarship for one student in 2017 was the biggest, in comparison to previous years (see table 1).

<b>Year</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	
<i>Amount from the scholarship foundation for one state-funded (Sf) student</i>	97,71	96,34	109,30	<b>€ / year</b>
<i>Support of social partners (including Alumni) for one student</i>	9,29	11,68	11,09	<b>€ / year</b>

Note. Sf – State-funded.

Table 1. Average amount of KTU scholarship for one state-funded student.

While analysing KTU economic responsibility, it is important to assess the indirect economic impact at national and international level. Aiming to mitigate economic and social exclusion, University provides financial support to socially disadvantaged students (see table 2). According to the provided data, the amount of socially disadvantaged students made 3.92 % of all KTU students in 2015, 4.07 % in 2016, and 3.26 % in 2017.

<b>Year</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<i>Amount of socially disadvantaged students</i>	411	416	320
<i>Amount of students with physical disabilities who receive financial support</i>	50	34	37
<i>Amount of orphan students who receive financial support</i>	11	7	2
<i>Amount of students from large families who receive financial support</i>	No data	No data	No data

Note. All types of disability, capacity limited to 45% and less

Table 2. Statistics of KTU socially disadvantaged students



This indicator can be assessed in two ways: even though the decrease of socially disadvantaged students is a positive result, it is difficult to assess if this situation is factual at both, University's and Lithuanian level.

### **Projects**

KTU implemented a number of projects in various areas in 2015–2017. Indicators of three systems indicate the importance to assess the number of newly created work places and job positions – UN Global Compact MA.7, UN 1 SDG, GRI 203-2 indicators, infrastructure upgrades – UN Global Compact LA, UN 8 SDG, GRI 203-1 indicators, green procurement – UN Global Compact, UN 12 SDG, GRI 308-1 indicators.

### **Amount of newly created job work places / job positions**

While analysing integration of sustainable development in KTU, it is important to assess the University's contribution to the issue of poverty reduction. University creates additional work places during cooperation with other institutions and performance of outsourced projects: 39 in 2015, 17 in 2016, and 23 in 2017. However, there is no collected data on the attracted investments.

## KTU Sustainable Mobility Plan 2014–2020

KTU Sustainable Mobility Plan 2014–2020 was prepared in 2014. The vision of this plan is to create a sustainable mobility of KTU community that would be expanded to Kaunas city later on. Areas of activities and objectives were indicated (see table 3). This plan indicates short-term, long-term and internal measures for implementation of the set objectives of KTU mobility.

<b>Priority areas</b>	<b>Objectives</b>
<i>Breakdown of trips to work/studies</i>	<i>Reduce the amount of people travelling to work/studies by car, by choosing other ways of travelling. Reduce the amount of people travelling to work/studies by car alone. To encourage employees to use car-sharing services. To promote biking to/from the University.</i>
<i>Reducing of the impact on Kaunas transport system</i>	<i>To choose smaller cars for a trip to work/studies. To encourage the use of less polluting cars. To promote ecological driving. To encourage to choose public transport or bicycle instead of the car, and to reduce congestion in the streets of the city.</i>
<i>Filling of the parking lots</i>	<i>To issue permits for parking in the centre according to the distance between work / studies and place of residence. To construct parking lots in the Student Campus and surrounding areas.</i>
<i>Environmental impact</i>	<i>To reduce CO2 emission caused by the private cars of the community's members. To reduce noise level in Studentų street.</i>

Source: (KTU Sustainable Mobility Plan 2014–2020)

Table 3. Priority areas and objectives of KTU Sustainable Mobility Plan 2014–2020

This indicator is relevant to KTU, because promotion of sustainable mobility in the Student Campus encourages Kaunas city to join and cooperate in creating a sustainable city. Several set objectives were implemented in 2015–2017 (see table 4). According to the data of table 12, only a few of the set objectives were implemented in three years. Mostly attention was focused on construction of bicycle storage facilities.

<b>Years</b>	<b>Implemented objectives</b>
2015	<ol style="list-style-type: none"> <li>1. Additional parking lot is constructed at the Faculty of Mechanical Engineering and Design</li> <li>2. 1100 m<sup>2</sup> pedestrian walkways renovated at the Student Campus</li> <li>3. 3 long-term bicycle storage facilities are constructed</li> <li>4. 12 bicycle storage premises are constructed at the dormitories</li> </ol>
2016	<ol style="list-style-type: none"> <li>1. Car-sharing station (City Bee) opened at the Student Campus</li> <li>2. 2 long-term bicycle storage facilities are constructed</li> <li>3. 2 bicycle-sharing stations are constructed at the Student Campus and Student Square</li> <li>4. Kaunas city renovated the stops of public transport</li> </ol>
2017	–

Table 4. KTU mobility objectives implemented in 2015–2017

## Infrastructure

Most of the University's faculties are in Kaunas city, however, there is one faculty in Panevėžys – Panevėžys Faculty of Technologies and Business. According to the data of 2015-2017, the number of the University's buildings decreased, as well as the area of the jointly managed KTU land (see table 5).

<b>Year</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<i>Amount of KTU buildings, units</i>	167*	155*	143*
<i>Area of the land managed by KTU, m<sup>2</sup></i>	605616*	602235*	581099*

Table 5. Statistics of KTU buildings and area of the managed land in 2015–2017

Decrease in the amount of KTU buildings and area of land is related to the sales of building.

Improvement of infrastructure includes improvement of the infrastructure itself as well as other important aspects: additionally created work places or support for local business at the level of city or country, attracted investments, improved environmental indicator. Projects implemented by KTU (see table 6) are focused on reduction of the environmental impact: two charging stations for electric vehicles are constructed, it is planned to install solar panels, etc.

<b>Years</b>	<b>Implemented projects</b>
2015	1. One charging station for electric vehicles is constructed at the Student Campus.
2016	1. Project is prepared for solar panels and geothermal heating to be installed in the building at Studenty g. 48. Funding agreement is signed; estimated amount of investment – 1 million €. Project will be implemented in 2018–2019. 2. One more charging station for electric vehicles is constructed at the Student Campus.
2017	1. Works are carried out for the project of 2016 specified in paragraph 1. Designing stage.

Table 6. Projects implemented by KTU in 2015–2017 for development of the sustainable infrastructure

This indicator is particularly relevant for the assessment of KTU contribution to the infrastructure development, involvement of the local businesses and prompting of the local economic growth.

## Green public procurement

Environmental Protection Agency (EPA) provides the following definition of green procurement: "[...] public procurement when contracting authority includes at least minimum environmental criteria in the conditions of public procurement, choosing goods, services and works (hereinafter referred to as product) not only according to their price and quality, but also their reduced environmental impact in one, several or all stages of the product's life cycle, thus prompting to create more environmentally friendly products." KTU also conducts green procurement (see table 7).

<b>Years</b>	<b>Green procurement conducted</b>
2015	<ul style="list-style-type: none"><li>• "Stationery", 61 267.57 €.</li></ul>
2016	<ul style="list-style-type: none"><li>• "Stationery", 11 301.78 €.</li><li>• "Office paper", 27 901.87 €.</li></ul>
2017	<ul style="list-style-type: none"><li>• "Hire of passenger transport with a driver", 39960 €.</li></ul> <p><i>Procurement for 3 years.</i></p> <ul style="list-style-type: none"><li>• "Stationery", 10 654.59 €.</li><li>• "Stationery", 11 511.65 €.</li><li>• "Stationery", 12 899.69 €.</li></ul>

Table 7. Green procurement conducted by KTU in 2015–2017

According to the data of table 7, the amount of KTU green procurement is increasing. Green procurement is based not only on financial advantages (competition's winner is the supplier proposing the lowest price), but also on environmental aspect – University promotes and supports environmentally friendly business, and prompts business to search for new solutions that are environmentally friendly.



## **Summary**

Economic aspect of KTU sustainable development received quite a positive assessment. Four SDG goals are focused on the University's economic responsibility.

University is an institution of higher education; therefore, the largest part of income is from the state subsidies, and income from the outsourced research makes a sufficiently small part of income. Several tasks of 8 SDG goal – suitable employment and economic growth – are focused on the growth of gross domestic product (GDP). KTU can use the possibilities of the outsourced research more, create more work places, involve students in research activities and create a better GDP of Lithuania. KTU partially implements 8 SDG goal, because it is responsible of its employees' working environment and safety. Although there is no data on accidents collected, all employees get acquainted with the rules of occupational safety. KTU is also concerned about the students' occupation and offers extracurricular activities.

KTU implements 9 SDG goal – industry, innovation and infrastructure – partially. Projects for infrastructure improvement are prepared each year. KTU mobility plan is prepared and it should be implemented completely by 2020. KTU students are encouraged to relate their course papers with activities of an actual company. As mentioned above, KTU could maintain a more active cooperation with industrial companies, propose innovative solutions and create sustainable society for a more efficient implementation of 8 SDG goal.



### **Summary (continued)**

University employs persons according to the specified criteria, for example, level of competence, field of scientific research, but not according to their gender or age. Remuneration depends on the volume of works and tasks. Therefore, KTU insures social and economic equality. KTU implements several tasks for achievement of 12 SDG goal – responsible consumption and production. One of the examples – successfully implemented green procurement.

University does not record certain data; therefore it is rather difficult to assess its economic responsibility with consideration to various areas. It is planned to include more indicators of economic responsibility reflecting the University's social responsibility in the system for planning and assessment of the University's performance in the future. However, present data indicates that the principles of economic responsibility are rather successfully introduced in KTU activities.

## Social responsibility

Indicators in the area of social responsibility indicate the principles used by the University for employment, its responsibility for the entire KTU community, insurance of safe working conditions and environment. Social responsibility includes the aspect of discrimination, development of work atmosphere, the issues of students' occupation and academic integrity.

Assessment of the University's social responsibility involves an important aspect – insurance of equal opportunities. The average age of KTU employees – 43.64 years; average age of female employees is 42.73 years, male employees – 44.55 years. In total, KTU had 2405 employees (1329 female and 1076 male) in 2015, 2294 employees (1269 female and 1025 male) in 2016 and 2112 employees (1147 female and 965 male) in 2017. Average age is similar in 2015–2017. However, it is important to assess the breakdown of employees according to the age groups (see figure 4). According to the provided data, it is noticeable that even though a number of employees decreased from 2015 to 2017, breakdown of employees according to the age groups is similar – majority of employees are in the category of 35 and below, and the least amount of employees is in the group of 65 and above.

**Amount of KTU employees according to the age group, unit**

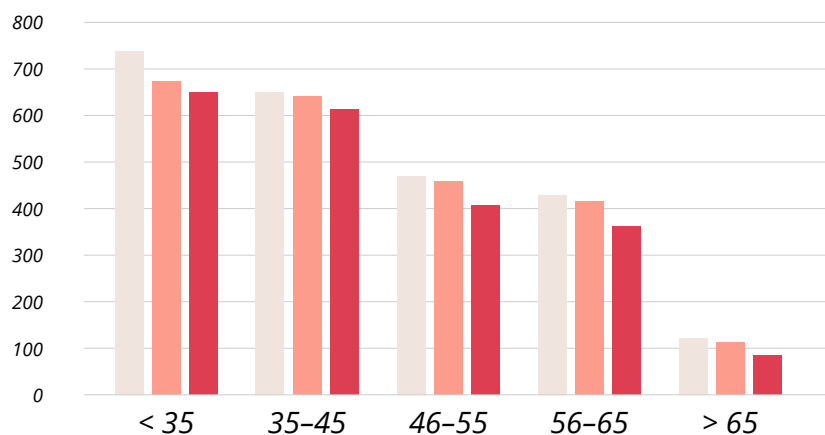


Fig. 4. Breakdown of KTU employees according to the age group in 2015–2017

UN Global Compact LA.5 d, SDG 5, GRI 405-1 indicators define that any discrimination on the grounds of gender, age or other kind of discrimination is intolerable. Breakdown of managing positions according to gender is approximately equal at KTU, except for a position of the heads of institutes. In 2017, Dean's position was taken 66.67 % by men, Vice-Dean's – 55.56 % women, heads of offices, and other managers – 55.29 % by men, heads of institutes – 75 % by men. 6 out of 8 positions of the head of institute at KTU are taken by men. However, the number of women in this position increased from 2015 to 2017. In 2017, 9.42 % of all female employees of KTU had managing positions; 13.99 % of male employees had managing positions.



### **Occupational safety**

KTU provides occupational safety training to the employees yearly, each newly employed KTU employee is provided occupational safety instructions on the first day of work. University does not keep statistics on the accidents; these data are collected by the State Social Insurance Fund Board at the Ministry of Social Security and Labour (SODRA); however, it is not possible to distinguish the number of individual accidents due to the technical specifications of the developed system.

### **Psychological support**

KTU provides the members of its community with services of the University's psychologist since 2016. KTU students receive the contacts of KTU psychologist in their newsletter once per month. The number of people who use these services has been increasing since March 2016. Society becomes more aware that psychological support is as important as treatment of physical illnesses.

Quantitative value of this indicator does not indicate if all students who need help seek for it, but insurance of the services of psychologist to the members of KTU community indicates that society's emotional welfare is important.

### Infrastructure improvement for people with disabilities

KTU develops and improves infrastructure for the community's members with disabilities. In 2015–2017, KTU implemented several projects enabling a better mobility of the persons with disabilities within the University's territory (see table 8).

<b>Years</b>	<b>Improvements of infrastructure</b>
2015	<i>Parking spaces for transportation of disabled persons were marked in the Student Campus</i>
2016	<i>KTU chambers without a comfortable lift were provided with equipment for riding a wheelchair up and down the stairs</i>
2017	<i>Lift was installed at Studenty str. 48</i>

Table 8. Improvements of infrastructure for the persons with disabilities performed in 2015–2017

Installation of lifts and equipment for riding up and down the stairs facilitate the mobility of the community members with disabilities and allows them to reach the classroom without any additional assistance.



### **Extracurricular activities**

KTU encourages the members of its community to be involved not only in academic activities; it also proposes various extracurricular activities for creative expression, relaxation and development of other skills, as well as takes care of one's mental and physical health. University proposes a selection of sports, art societies, activities of the Student Union, etc. Students of the modern world experience stress at work and studies. One of SDG goals – good health and welfare – defines that organisation has to be responsible for its community's welfare. KTU opened its sports club on 10 November 2017; it provides a possibility to engage in various kinds of sports for the students, employees and their family members free of charge. University also offers other activities: biking and hiking club, meetings of scientific community, etc.



## Academic integrity

KTU aims to insure transparency of its activities. Programme of academic integrity encourages students to perform their works honestly and respect the work of other students.

***University applies the following measures to insure the honest work of students:***

- Code of Academic Ethics and active Board of Academic Ethics that examines violations of academic ethics;
- Procedure for organisation and performance of the assessment of study modules; it stipulates that all examinations are conducted with invigilators (students can also be invigilators), active Assessment Monitoring Commission that periodically visits examinations;
- Procedure for plagiarism detection in the students' written works; all written works of the semester and final degree works are verified under this procedure;
- Email "Report" ("Pranešk") created by students that is used to report information about the noticed violations of academic ethics and cases of cheating.



***Students are informed about the compliance with academic ethics in the following ways:***

- Students, who sign a learning agreement and a declaration of academic integrity, undertake to comply with academic discipline, Code of Academic Ethics and procedures established in other internal legal acts of the University, perform their tasks individually and honestly;
- Before the beginning of their studies, during the introductory week at the end of August, first year students are given a lecture on the standards of academic ethics applied at the University and correct preparation of works;
- During their final semester, students have to attend the training on copyrights, plagiarism prevention, correct quotation and related topics organised by the library.

***Plans:***

- To offer a new module including the topic of academic writing, requirements for quotation and correct preparation of works;
- University's methodological guidelines for preparation of written works mandatory to all students; a separate chapter of the guidelines provide detailed information on the use of sources in written works.

***KTU records violations of academic integrity:***

- 18 students, approximately 0.17% of all students, were found in violation of the principles of academic integrity in 2015;
- 21 students, approximately 0.21 % of all students, were found in violation of the principles of academic integrity in 2016;
- 8 students, approximately 0.08 % of all students, were found in violation of the principles of academic integrity in 2017.

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Percentage of the recorded cases is not high in the last year, however, monitoring of the next year will allow assessment of the situation's improvement, aiming to implement the task of becoming the University with 100% academic integrity.



## Summary

Social responsibility is the most widely analysed component of sustainable development. 8 out of 17 SDG goals are intended for the analysis of the University's social responsibility. Gender equality, monitored level of employee satisfaction, integration of the members of KTU community with physical disabilities, psychological support, extracurricular activities for students, academic integrity are the key indicators analysed in 2015–2017.

Breakdown of KTU employees according to their gender and age was similar each year. Management positions are taken equally by men and women; currently the number of men is slightly higher, but this indicator is good. 5 SDG goal – gender equality – is implemented sufficiently well. Assessment of age would be a little bit different: the number of persons under 35 working at KTU is 7 times the number of employees in the age group of 65 and above. KTU partially implements 1 SDG goals - reduce poverty. New work places are created each year due to the project activities.

Academic integrity is a very significant indicator to KTU, as an institution of higher education. University insures honesty during examinations; in case of the issues of ethics, people can apply to the Board of Academic Ethics. KTU encourages students to be active participants of the campaign of academic integrity – invigilators at the examinations can be KTU employees, as well as students. This indicator is improving each year – the number of students, who are dishonest during examination of preparation of written works, decreases.

# Environmental responsibility

University aims to reduce the use of natural resources, to increase the energy efficiency and use of energy from renewable sources of energy, to reduce the emissions promoting climate change, and to encourage sorting of waste.

KTU announces and publishes information in the areas of climate change mitigation, adaptation, its impact reduction and early warning. According to the data, the number of announcements to the public is increasing each year: 59 in 2015, 75 in 2016, and 81 in 2017. The increasing number of announcements indicates that this topic is relevant to the University's community. However, the public is influenced not only by the announcements, but also by the work performed.

## Energy

Resources of the used energy and natural resources are an important indicator. KTU receives electricity and thermal energy from Kaunas city energy networks. In total, KTU used 24897.81 MWh of electricity and 44431.73 MWh of thermal energy in 2015–2017. Yearly breakdown of energy use is provided in figure 5.

**Quantity of the energy used, MWh/m.**

- Electricity
- Thermal energy

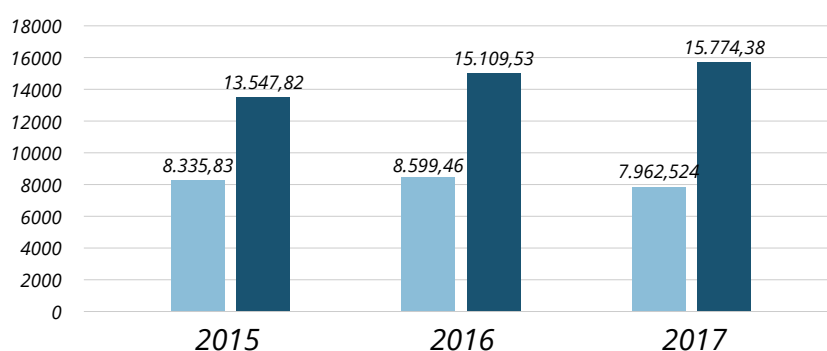


Fig. 5. Quantity of the energy used by KTU in 2015–2017

However, assessment of the energy use in the University's activities includes not only the sums of numbers, but also the occupied area (see figure 6). Figure 6 provides data of the average use of energy to heat or illuminate 1 m<sup>2</sup>.

**Quantity of the energy used  
in one year, MWh/m<sup>2</sup>**

- Electricity
- Thermal energy

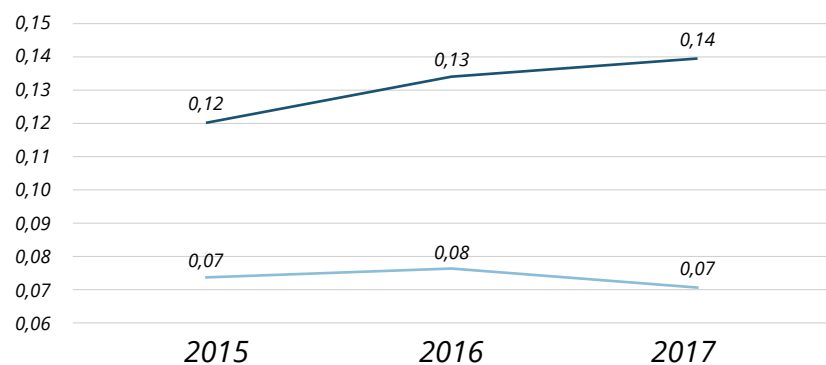


Fig. 6. Quantity of the energy for 1 m<sup>2</sup> used by KTU in 2015–2017

Quantity of the used thermal energy depends on the duration of the heating season in Lithuania. According to the data of the Lithuanian Hydro meteorological Service at the Ministry of Environment, the average air temperature during the heating season of 2017 was lower than 2015 and 2016 (Lithuanian Hydro meteorological Service at the Ministry of Environment, 2018). Another important indicator in assessment of the quantity of thermal energy – internal temperature of premises. University does not collect data on the internal temperature of premises, however, while assessing the reasons of the increased quantity of the used energy, it is important to notice if the internal temperature is similar each year.

## Water

UN Global Compact EN.5 c, d, e, JTO 6 SDG, GRI 303 indicators assess the organisation's actions related to consumption, storage, use of and access to water. KTU has access to the used water from Kaunas city water networks. 354101 m<sup>3</sup> of water was used in three years: 115271 m<sup>3</sup> in 2015, 119150 m<sup>3</sup> in 2016, and 119680 m<sup>3</sup> in 2017. It is important to assess the use of water for one member of KTU community, because number of the persons constantly changes (see figure 7).

**Average quantity of water used by one person per year, m<sup>3</sup>**

● Quantity of water

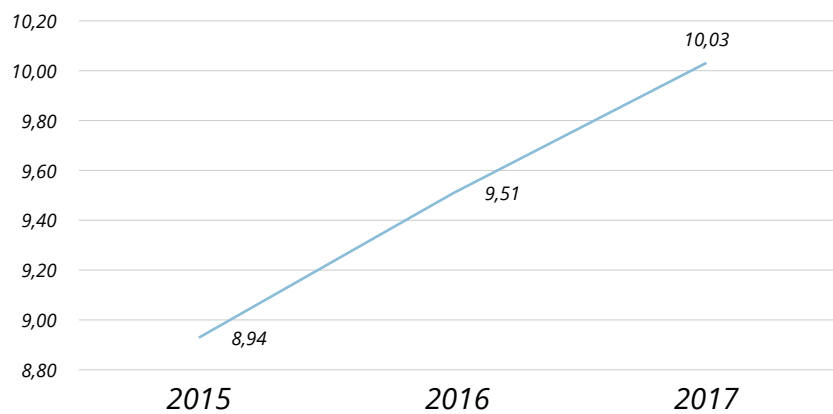


Fig. 7. Average quantity of water in m<sup>3</sup> used by one person at KTU in 2015–2017

Quantity of water used by one member of KTU community increased by 12 % in 2017, in comparison to 2015, and by 5.5 %, in comparison to 2016. The data of this indicator is worse each year, therefore KTU should focus on the problem of water use, analyse possible problems in detail and develop and strategy for efficient use of water resources.

## Waste

Members of KTU community are encouraged to sort the waste of secondary raw materials. Trash bins for paper, plastic and mixed waste are available at the University's premises. There are 600 boxes for collection of paper and plastic secondary raw materials in KTU territory and University's departments since 2016.

According to the received data, KTU community is sorting plastic and paper waste. There were 6.32 t of plastic waste collected in 2015, 6.23 t in 2016, and 6 t in 2017. There was twice as much paper waste sorted: 13.2 t in 2015, 13.5 t in 2016, and 13.8 t in 2017. For an adequate assessment of the contribution of KTU community to the waste sorting, it is important to assess the quantity of the sorted raw materials for one person (see figure 8).

### **Average amount of raw materials sorted by one member of KTU community, kg**

- Plastic
- Paper

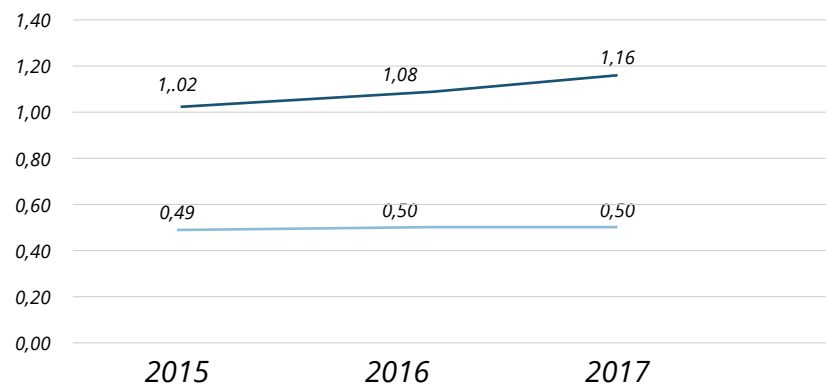


Fig. 8. Average amount of sorted raw materials for one person at KTU in 2015–2017

Received data indicates the largest average quantity of sorted waste in 2017.



Even though KTU sorts only two fractions, it does try to reduce the negative environmental impact. Handkerchiefs and toilet paper made from recycled secondary raw materials are used at the University. Employees and students are encouraged to use the paper manufactured from the recycled paper. Students of the Institute of Environmental Engineering print their final degree project on recycled paper without the use of plastic and metal fastening components.

### **Assessment**

KTU was awarded a certificate by “ANP Archyvo naikinimo paslaugos” for collection and transfer for destruction and recycling the amount of paper allowing saving 10 trees.

### **Climate change**

University's direct activities do not impact climate change, but business trips that produce emission, use of electricity for illumination of premises, and use of thermal energy for heating of premises has a negative environmental impact. UN Global Compact EN.3, JTO 13 SDG, GRI 305 indicators assess the organisation's direct and indirect impact on climate change.

## Electricity

Generation of electricity produces emissions of carbon dioxide. Carbon dioxide (CO<sub>2</sub>) causes climate change. University uses electricity in its activities; therefore it has indirect impact on greenhouse effect. Figure 9 provides a formula for assessment of the amount of CO<sub>2</sub> emissions caused by the electricity used in KTU activities.

$$m (CO_2) = E * koef, if$$

$$m = t$$

$$E = MWh$$

$$Coef. = 0.516 \text{ t CO}_2 / MWh$$

Fig. 9. Formula for calculation of indirect CO<sub>2</sub> produced in electricity generation

- In 2015 – 4 301.288 t/CO<sub>2</sub> were produced due to the electricity used in KTU activities;
- In 2016 – 4 437.321 t/CO<sub>2</sub> were produced due to the electricity used in KTU activities;
- In 2017 – 4 108.662 t/CO<sub>2</sub> were produced due to the electricity used in KTU activities;





### **Journeys of KTU community**

Journeys of KTU community are categorised in three important indicators that specify the distance travelled by KTU students and employees each year. There is only one indicator for comparison of the results of three years – amount of kilometres travelled on business trips per year. Other indicators (data on the students' journeys home and data on the kilometres of flights on business trips) are not collected. There is another important indicator for assessment of the indirect emissions of carbon dioxide – the type of energy source used in the cars.

According to the data recorded by KTU, the maximum, average and minimum environmental impact cause by business trips can be assessed according to the energy source used in the car.

Presumption No. 1 – the distance travelled while using diesel is specified in table 9.

Presumption No. 2 – the distance travelled while using petrol is specified in table 9.

Presumption No. 3 – the distance travelled while using liquefied gas is specified in table 9.

Average amount of 6 l / 100 km of fuel is applied to all three presumptions.

<b>Year</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>km / year</b>	120167	133679	95240
<b>km / 1 KTU employee</b>	49.97	58.27	45.09
<b>l of fuel / year</b>	721002	802074	571440
<b>t / m petrol</b>	562.38	625.62	445.72
<b>t / m petrol</b>	609.25	677.75	482.87
<b>t / m liquefied gas</b>	418.18	465.2	314.04

<sup>1</sup> Note. Density of petrol is 0.78 kg / l, in 15 °C temperature.

<sup>2</sup> Note. Density of diesel is 0.845 kg / l, in 15°C temperature.

<sup>3</sup> Note. Density of liquefied gas is 0.58 kg / l, in 15°C temperature.

Table 9. Distance travelled by car by KTU community in 2015 – 2017



Using the formula provided in figure 10, the emission of CO<sub>2</sub> in 2015–2017 was calculated according to the type of the used energy source.

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$$m (CO_2) = m * coef, if$$

$$m = t$$

$$coef. (petrol) = 3.25 \text{ t } CO_2 / unit$$

$$coef. (diesel) = 3.17 \text{ t } CO_2 / unit$$

Fig. 10. Formula for calculation of indirect CO<sub>2</sub> gas, using fossil fuels as the cars' energy source (Regarding the approval of the Guidelines for the Use of the Funds of the Special Climate Change Programme, 2010).

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**Indirect CO<sub>2</sub> emission in tonnes due to the energy used for business trips by KTU community in 2015–2017, t CO<sub>2</sub>**

- Petrol
- Diesel
- Liquefied gas

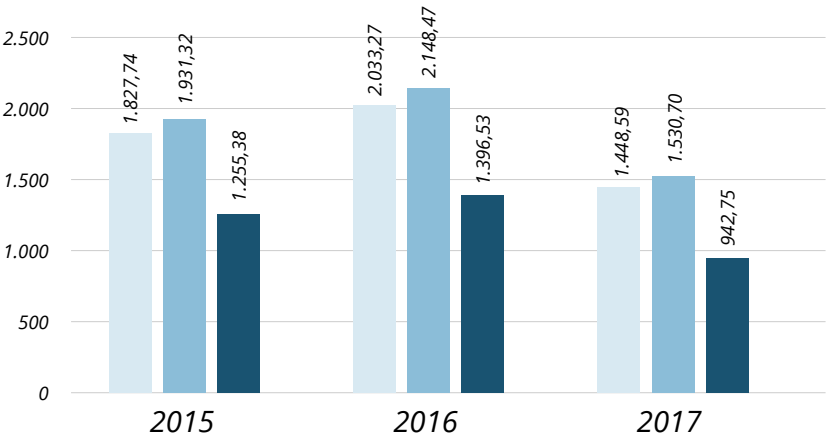


Fig. 11. Indirect CO<sub>2</sub> emission in tonnes due to the energy used for business trips by KTU community in 2015–2017

Performed calculations allow assessing the maximum and minimum emission of carbon dioxide per year. If members of KTU community use the cars using only diesel to go on business trips, the emission is maximum, if the cars using only liquefied gas, CO<sub>2</sub> emission is minimum. However, there is no sufficient data to identify and calculate the environmental impact of KTU community’s trips in 2015–2017.

**Projects** One of the tasks of the projects implemented by KTU is to reduce the negative environmental impact. Energy efficiency enabling projects were implemented in 2015–2017; KTU joined the project implemented in Kaunas city – collecting of coffee grounds and using them to generate electricity.

### **Energy efficiency**

Projects implemented by KTU:

- 2015 – additional information signs about energy saving are put next to electricity switches.
- 2016 – Renovation project is prepared for the building at Student str. 48: installation of solar panels, using of geothermal energy for the building's heating.
- 2017 – works of the above mentioned project of 2016.

**Coffee grounds** The project “Coffee for Christmas lights” (“Kava, virstanti į Kalėdų šviesą”) was implemented in Kaunas city in 2017. KTU joined this project. More than 15 tonnes of coffee grounds were collected and used for the generation of electricity during this project. The energy from coffee grounds was used for the illumination of Kaunas city's Christmas tree and decorations.

### **Electric vehicles**

One charging station for electric vehicles is constructed at KTU Student Campus. Quantity of electricity for electric vehicles was 3.795 MWh in 2015, 2.83 MWh in 2016, and 4.976 MWh in 2017. All this energy was received from Kaunas city networks who state that all energy is currently generated from biofuel.



## Summary

KTU encourages its community to join the environmental conservation initiatives of the University, Kaunas city and entire Lithuania. University aims to contribute to the implementation of sustainable development goals, reduction of greenhouse gas emissions and use of water, encourages a more efficient use of electricity and thermal energy, and introduces the culture of sorting and waste reduction.

University mostly responds to 6 – clean water and hygiene – and 13 – minimising of the impact of climate change – SDG goals. According to the data of 2015–2017, KTU has successfully reduced the use of electricity, however, the use of thermal energy has increased recently. Projects for installation of solar panels for generation of green energy and install geothermal heating in the building at Studentų str. 48 are scheduled for 2018. Green energy generated by KTU should minimise the University's negative environmental impact. Design of this project is being implemented now. University understands the importance of the use of natural resources.

The use of water has also increased in the recent years. 6 SDG goal specifies not only the significance of the use, but also the quality of the water that is returned to the ecosystem after its use. Currently, waste water is still returned to the city's networks. However, one of the tasks set by KTU is to increase the number of scientific research on the topic of the improvement of waste water and to search for innovative solutions for the improvement of the quality of waste water. There were no projects related to the improvement of water quality and its efficient use implemented in 2015–2017.

### **Summary (continued)**

Sorting is one of the key actions performed at KTU aiming to minimise the negative impact caused by the generated waste. According to the results of three years, the quantity of sorted paper for one person has increased with each year. The amount of sorted plastic for one member of KTU community was similar in 2015–2017. All other fractions, for example, glass, were not recorded, although their containers are available in KTU territory. KTU activities also generate hazardous waste of electrical and electronic equipment that were not recorded last year.

Negative impact on climate change by KTU is caused by its indirect activities. Used electricity, thermal energy, energy used for cars on business trips are the key actions causing the University's negative environmental impact. It is difficult to compare and assess which factors make the biggest impact due to the insufficient amount of data. According to the available data, the biggest impact on climate change is caused by the used electricity. However, the amount of the used fuel is only assessed according to the distance travelled by cars, Journeys by air transport and students' journeys home were not included in the analysis, because KTU does not collect these data.

## Integration of sustainable development principles in the study programmes provided by KTU

KTU consists of 17 academic departments – 9 faculties and 8 institutes (see figure 7) – and 35 non-academic departments (administration, service divisions).

The number of students at KTU has been decreasing in the last years – in three years, number of students of KTU decreased by 6.45 % (see figure 12). Decreasing number of students may be influenced by demographic decrease of the Lithuanian population, decreasing number of people entering schools of higher education, and increased emigration. According to the data provided by the Association of Lithuanian Higher Education Institutions (LAMA BPO), the total number of the candidates to all local schools of higher education in 2017 was smaller than it was in 2016.

### **Number of KTU full-time students, unit**

● Number of KTU full-time students, unit

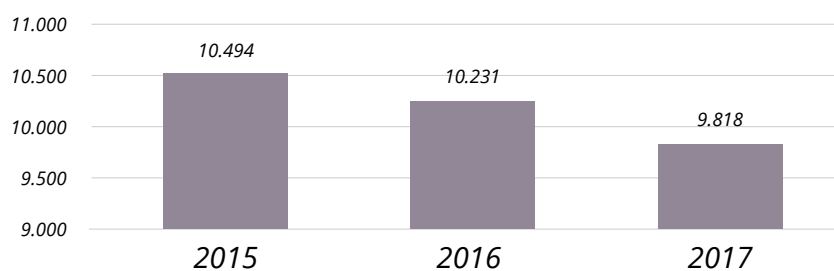


Fig. 12. Number of KTU full-time students in 2015–2017



The biggest number of candidates in 2015–2017 wanted to enter KTU first cycle studies. Almost 73% of all students wanted to enter the first cycle studies in 2015 and 2016, while in 2017 – almost 74 % of all students (see table 10). The smallest part was the students who chose professional studies, less than 1% of all students in 2015–2017.

<b><i>Students</i></b>	<b><i>2015</i></b>	<b><i>2016</i></b>	<b><i>2017</i></b>
<b><i>Number of students</i></b>	10494	10230	9818
<b><i>Of them in the first cycle</i></b>	7620	7450	7230
<b><i>Of them in the second cycle</i></b>	2502	2398	2190
<b><i>Of them in the integrated studies</i></b>	0	31	49
<b><i>Of them in the professional studies</i></b>	37	28	32
<b><i>Of them in the third cycle</i></b>	335	323	317

Source: (KTU Activity Report 2017)

Table 10. Breakthrough of students according to the study cycles, who entered the University in 2015–2017

Indicator – number of full-time students – is relevant not only for monitoring of the trends in changes of the number of students; it is also focused on the issue of gender equality. According to the data of recent years, the number of male students at KTU remains unchanged, while the number of female students decreases proportionally (see figure 13).

**Number of KTU full-time students, according to the gender, 2015–2017**

- Women
- Men

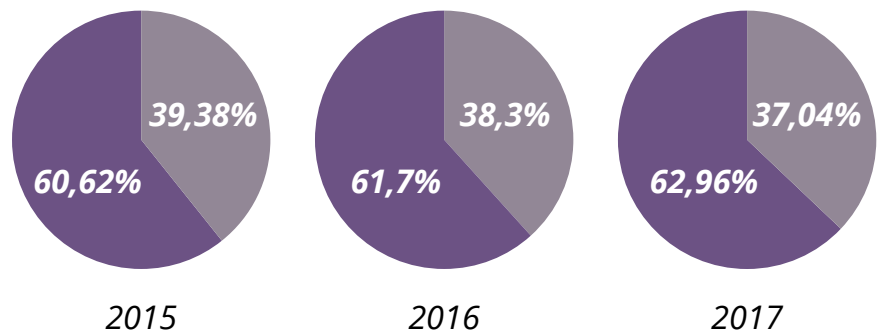


Fig. 13. Number of KTU full-time students according to the gender in 2015–2017

Number of international students, numbers of leaving and arriving exchange students are similar in all analysed years. However, number of the students arriving under the international exchange programmes is bigger in 2015–2016 (see figure 14).

**Number of students leaving and arriving under exchange programmes, unit**

- Left
- Arrived

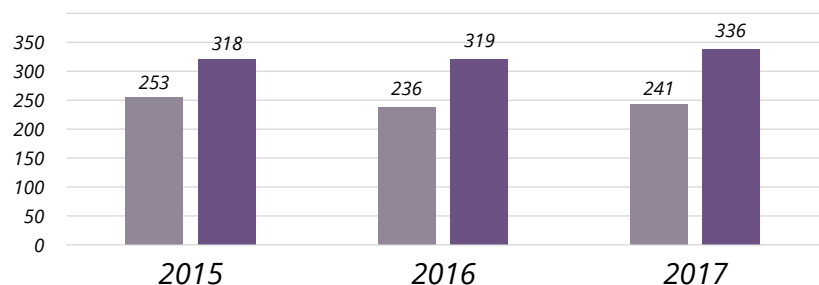


Fig. 14. Number of students leaving and arriving under the exchange programme in 2015–2017

However, the number of KTU students leaving to study at the foreign universities for one or two semester is not big. Only 2.41 % of students used the opportunity to leave under the exchange programme in 2015, 2.31 % of students in 2016, and 2.45 % of students in 2017.

It is particularly relevant for the University to assess the application of sustainable development principles in the provided study programmes. However, systems of indicators – UN Global Compact and GRI – do not analyse this aspect and do not include it as a relevant indicator. System of indicators of UN 17 SDG goals is mostly focused on the quality of education and integration of sustainable development principles in the provided modules. Therefore, the system of indicators for KTU is made with distinguished indicators assessing a number of the offered programmes, how many students enter which study cycle, how offered programmes and modules reflect sustainable development principles and 17 SDG goals set by the UN (see figure 15).

<b><i>Study programmes</i></b>	<b><i>2015</i></b>	<b><i>2016</i></b>	<b><i>2017</i></b>
<b><i>Number of the study programmes</i></b>	149	148	144
<b><i>Of them in the first cycle</i></b>	60	61	60
<b><i>Of them in the second cycle</i></b>	71	67	64
<b><i>Of them integrated</i></b>	0	1	1
<b><i>Of them professional</i></b>	1	1	1
<b><i>Of them in the third cycle</i></b>	17	18	18
<b><i>Of them taught in English</i></b>	63	61	66

Source: (KTU Activity Report 2017)  
Note. Provided study programmes with at least 1 student in the programme

Table 11. Number of the programmes offered by KTU in 2015–2017

## Interdisciplinarity

KTU offers 48 interdisciplinary programmes that include development of the competences of the key speciality as well as additional development of general competences. University offers its students interdisciplinary studies in accordance with the monitored trends of business, industry and research. For example, KTU student can choose a programme MA+ that develops an inter-field expert, or he/she can choose to become the expert in the field of studies. University announced the priority competences to be developed during studies in 2017 (see table 12).

### ***Developed competences of the field during studies***

<b><i>General competences</i></b>	<i>Entrepreneurial and civic</i>
	<i>Creative</i>
	<i>Communicative</i>
	<i>Solving problems</i>
	<i>Thinking critically and analysing</i>
<b><i>Character</i></b>	<i>Pro-active</i>
	<i>Brave and responsible</i>
	<i>Reasonable</i>
	<i>Determined and ambitious</i>
<b><i>Literacy</i></b>	<i>Pro-active</i>
	<i>Brave and responsible</i>
	<i>Reasonable</i>
	<i>Determined and ambitious</i>

Table 12. Competences developed during the modules provided by KTU

University aims for all students to acquire the above-mentioned competences and comply with the market requirements by 2020.



## **UN SDG 4 – education of good quality**

KTU sustainability goal in 2017 is to be committed and aim to contribute to the United Nations Sustainable Development Goals. Each KTU department and community expresses organisational commitment to one or several SDG goals. UN 4 SDG goal aims to insure education of good quality irrespective of nationality, race, gender, and age. University aims to integrate (award scholarships, invite to study) the students of developing countries in the study and research programmes that are globally important and relevant: information communication technologies, technical, engineering. Also, it aims to ensure for all studying persons to acquire knowledge and skills required for promotion of sustainable development, including education on the issues of sustainable development and sustainable living, human rights, gender equality, peace and promotion of non-violent culture, diversity of global citizenship and cultures, and cultural impact on sustainable development, till 2030.

### **Programmes**

University's students acquire knowledge, skills and understanding for their contribution to the creation of sustainable future – one of KTU tasks for introduction of SDG. Introduction of sustainability principles during studies is one of KTU tasks; therefore, in accordance with the set KTU tasks and goals, UN 17 SDG goals should be integrated in all offered programmes from 2018. This indicator, which also reflects UN 4 SDG goal, can be assessed in the future by comparing the offered programmes and assessing how KTU integrates sustainable development principles in the academic activities.

It is planned to assess the study programmes' contribution to implementation of SDG17 from 2018. One of the Master's study programmes is selected for assessment in 2017. This programme prepares engineers for sustainable development and was assessed as the best study programme according to QUESTE-SI assessment system. Sustainable Management and Production study programme offers 21 modules that comply with at least 5 UN SDG goals; module "Environmental Policy, Law and Economics" complies with all 17 sustainable development goals (see figure 15). In comparison to all the provided modules, the above-mentioned programme complies with 5 SDG goal (5 modules) least of all, while 4 (education of good quality), 6 (clean water and hygiene), 9 (industry, innovation and infrastructure) and 12 (responsible consumption and production) goals are integrated in all offered modules.

1. Reduce poverty
2. Reduce hunger
3. Good health and well-being
4. Education of good quality
5. Gender equality
6. Clean water and hygiene
7. Available and clean energy
8. Decent work and economic growth
9. Industry, innovation, infrastructure
10. Reduce inequalities
11. Sustainable cities and communities
12. Responsible consumption and production
13. Minimise the impact of climate change
14. Life below water
15. Life on land
16. Peace, justice and strong institutions
17. Partnership for the goals

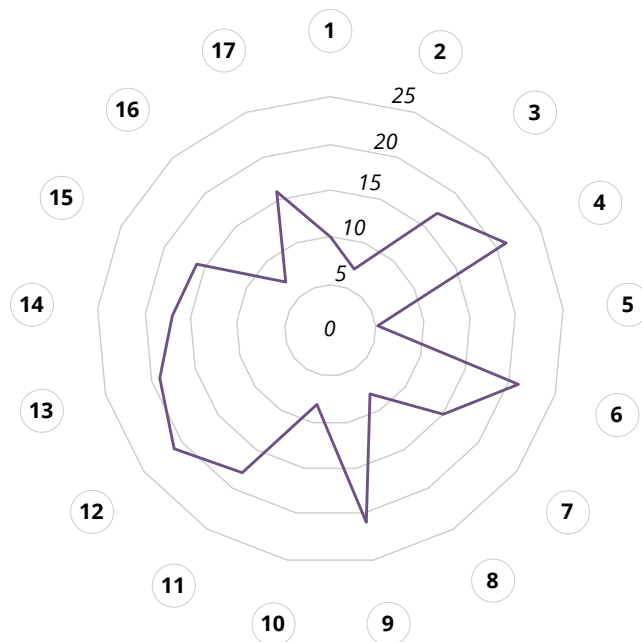


Fig. 15. Integration of UN 17 SDG goals in the modules provided in KTU programme Sustainable Management and Production

## Projects and initiatives

KTU green university has been encouraging KTU community to implement sustainable development initiatives, to follow sustainability guidelines and conduct activities contributing to the implementation of KTU sustainable development principles for the last six years.

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### ***Green Idea of the Year***

Green Idea of the Year is an annual competition assessing how implemented projects and initiatives encourage ecological and sustainable thinking. KTU community actively participates and offers green ideas that are assessed in this competition.

### ***4Ratu***

In September 2016–March 2017, KTU organised a secondary design competition 4RATU. The goal of this initiative is to encourage sustainable use and re-use of things by creating new products creatively and responsibly. Participants of the competition – groups of students who created new products on one of the assigned topics: accessories, interior/ exterior object or interior. All competition's participants had advisors: KTU scientists and external partners.

***“Waste reduction initiative” organised by the European Union (EU)***

KTU community joined the Waste Reduction Initiative annually organised by EU:

- Topic of the information event organised in 2016 – “Zero-waste Consumption and Production”. The week of the event at KTU included the campaign “Enjoy the Coffee, not the Cup” encouraging using reusable cups instead of disposable cups. This campaign was awarded by the Ministry of Environment of the Republic of Lithuania, as the best waste reduction event in 2016.
- In 2017, the event’s topic was “Give a New Life”. It was initiated by the international group of KTU students and encouraged to repair clothes as an alternative to Black Friday. Tailor shops offered discounts to the people who brought their clothes for repair during the week of the event. The whole week the team was posting good international practices in social networks, sharing advice on how to give a new life to (extend the use of) your favourite things.

***Annual events***

- Each year KTU community joins the campaign “Let’s do” (“Darom”);
- University’s event “Earth Day with KTU” which aims to introduce ecological ideas to students and pupils;
- Organised thematic events on the occasions of Renewable Energy Day, Car Free Day and Earth Day;
- “Plastic Free July”;
- KTU organises an event of social innovations ChangeMakers’ON which activities are focused on SDG17 from 2017.



### ***Social projects***

University's community actively organises and participates in the events of social initiatives:

- Campaigns of blood donation;
- "Fulfilment Campaign" ("Išsipildymo akcija");
- "Pie Day" ("Pyragų diena");
- Students of KTU "GIFTed.com" programme taught computer literacy to the seniors;
- "Let's Decorate Kaunas" ("Papuoškime Kauną") – banks of the river Nemunas were decorated during this campaign;
- Replanting of the mountain range at the Curonian Spit after the fire;
- "Journey of Things" ("Daiktų kelionė") – sharing of things with socially excluded people;
- 22 students' social initiatives, 37 visits to orphanages, animal shelters, and other institutions, 5 campaigns of blood donation at KTU were implemented in 2016.

**Awards** KTU received “The Most Economic Fox” (“Ekonomiškiausia lapė”) award at the competition “PR Lapės 2015” for a long-term environmentally-friendly and economic initiative. This initiative was integrated in general communication and strategy of KTU.

- The team of the Faculty of Civil Engineering and Architecture of Kaunas University of Technology (KTU SAF) was awarded the first prize for the vision of Elektrėnai amusement park “Children’s World” (“Vaikų pasaulis”) at the competition “Smart City II” (“Išmanusis miestas II”) organised by “Structum”.

- EVF dr. Živilė Stankevičiūtė received the first prize by the Baltic University Programme (BUP) for the best doctoral dissertation of 2015 “Sustainability dimension in the organisation’s human resource management”.

- KTU team cycled 5 572 km in the European Cycling Challenge 2016 and was the best among the educational institutions of Kaunas. It was the second team among all teams from Kaunas.

- Akad. prof. habil. dr. J. K. Staniškis became the member of the team of independent experts, appointed by the United Nations (UN) that will prepare the Global Sustainable Development Report for the UN every four years.

## Summary

KTU mostly focuses on the quality of the provided programmes. University recommends its students to cooperate with businesses during studies. The goal of such recommendation is to show that research and business are not two separate worlds. On the contrary, they are closely related. Cooperation with businesses provides students with practical experience and they make contacts that could be useful in the future. University aims to follow sustainable development principles. KTU will integrate UN 17 SDG goals in the modules of the provided programmes from 2018. Application of sustainability principles in the study programmes will raise awareness of all students and lecturers of the global social, environmental and economic problems. Interdisciplinary education develops social specialists.

University encourages its community to be active in both academic, and project activities. KTU students and lecturers participate in the University's, national and international projects which aim to create a sustainable University. Besides the awards received at the competitions, the winners are also recognised by the University's community – they are awarded certificates of appreciation and scholarships. KTU audit assessed that University offers a wide range of projects to its students (Kaunas University of Technology Audit Report, 2018). Projects provide a possibility for the students to apply the knowledge acquired in the modules in practice.

During the implemented projects KTU tries to follow sustainability principles, integrates 17 SDG goals in the modules of the provided programmes, cooperates with Lithuanian and foreign universities, business companies, public institutions and organisations.

