LAB University of Applied Sciences

Report on Sustainability 2022

Contents

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LAB University of Applied Sciences, 2023

LAB in figures 2022

2020
LAB established

9400
students

1611
publications

70.6
million euros in funding: Ministry of Education and Culture € 54 million, supplementary funding € 16.6 million

74%
of graduates graduate on time

550
staff members

35
programmes that award Bachelor's degrees

18
programmes that award Master's degrees

1503
completed Bachelor's degrees

337
completed Master's degrees

94%
of graduates are employed within 5 years of graduating

87
nationalities at 2 campuses

Read more about studies in LAB:

Foreword by the Rector

A sustainable future is our shared future

2022 was yet again an exceptional year in a series of exceptional years. In addition to recovering from the pandemic, there was Russia's offensive war in Ukraine and these together created great uncertainty around the world. In spite of the acute energy crisis, the implementation of the green transition at even an accelerated pace is in all our interests. At LAB University of Applied Sciences we focused on creating a new normal that will suit all of us. Strategic development, corporate cooperation and internationality all took clear steps forward.

We take sustainability and responsibility work seriously, and want to be trendsetters and an example to the rest of society. Our sustainability work is guided by the Arene programme for sustainable development and responsibility and the UN Global Compact corporate responsibility initiative. By committing to these, we aim to continuously develop our activities so they are more responsible and to promote sustainable development in cooperations with stakeholders.

The UN Global Compact obliges us to act responsibly by binding us to respect and implement the Ten Principles on human rights, labour rights, the environment and fighting corruption in all our activities. We promote the UN's Sustainable Development Goals in all our activities, including studies, RDI activities and stakeholder work on our campuses.

We want every LAB graduate as a highly educated professional to be able to promote sustainability and responsibility in their work. Sustainability and responsibility are taken into consideration in all RDI projects with our partners. We report and communicate yearly on our progress. This report outlines out development during 2022.

In 2022, we prepared our own sustainable development policy. In addition, we participated in Arene's sustainability work the aim of which is to increase sustainability at Finland's universities of applied sciences. Sustainability work at LAB is developed by the quality and sustainability work steering group, which meets regularly. We want to oblige the entire LAB community to commit to this work. Over the past year, we engaged our staff in the preparation of a Climate Action Plan, we conducted a self-assessment on our level of sustainability integration, and we organised workshops on our campuses, the aim of which was to find means for shrinking one's own carbon footprint.

I believe that in the future, people will view our activities with great pride. Although humanity has succeeded in destroying the Earth and weakening its capacity, we were able to initiate a change for the better. The change begins from each of us as individuals and a work community. LAB is this change.

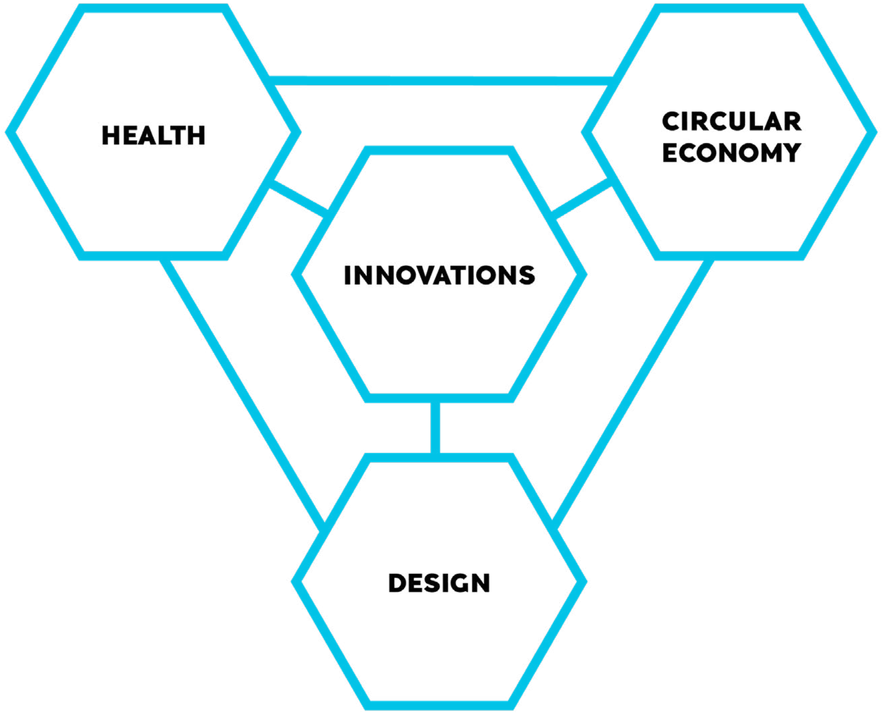
Turo Kilpeläinen
Rector of LAB University of Applied Sciences
Chair of Arene's working group on sustainability and responsibility

LAB strategy 2030

The Best of Both Worlds

The best of both worlds: studies and work. LAB University of Applied Sciences is a higher education institution, specialising in innovation, business and industry. It operates in Lahti and Lappeenranta, Finland, and also online. We offer education in five fields: health care and social services, technology, business, hospitality and design, fine arts and visual communication.

Our strengths include the circular economy, design, innovations and health. We have 9400 students and 550 teachers and RDI experts, which makes us the sixth largest university of applied sciences in Finland.



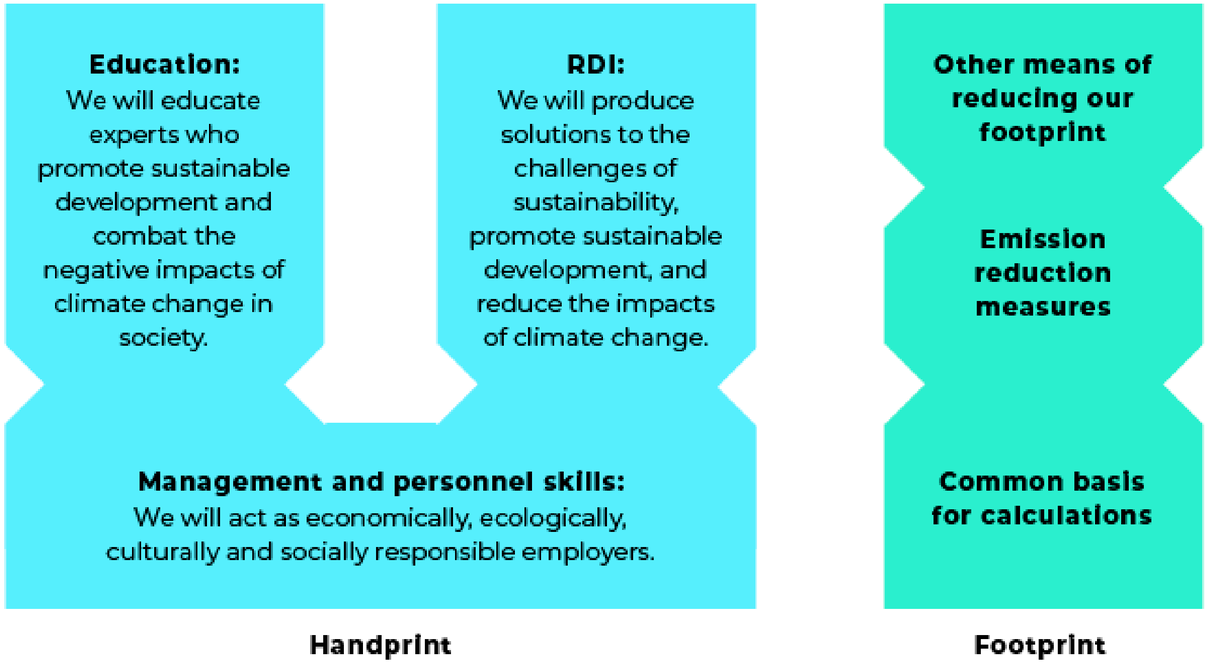
Sustainability at LAB

LAB promotes sustainability and responsibility in education, research, development and innovation (RDI) activities, stakeholder cooperation and its operating methods in everyday life on the campuses. LAB enacts positive reforms in business and industry by educating experts who work to identify responsible actions and promote sustainable development.

- LAB's Strategy 2030 aims to build a better working world through key competencies: circular economy, innovations, design and health. During 2022, the growth platforms for our areas of strength launched their activities and they will help to strengthen our strategic profile.
- We have published the Climate Action Plan 2022–2030, which will help us reduce our emissions and get us closer to our goals of being carbon neutral in 2025 and carbon negative in 2030.
- LAB is committed to all 17 goals in the UN 2030 Agenda for Sustainable Development and has selected seven SDGs in particular to focus on.
- At the beginning of 2022, the Ministry of Education and Culture granted LAB University of Applied Sciences responsibility for organising an education in electrical and automation engineering. The new degree programme is a response to the regional labour shortage in electric transport and industry in particular in Päijät-Häme, but also elsewhere in Finland. The electrification of transport, sustainable energy solutions and the modernisation of industrial activities will require expertise in electrical and automation engineering.

- The Happiness through Health project allows participants to try different sports, move about during breaks and participate in measurements both remotely and on campuses. It also provides social welfare, e.g., a literature circle, a knitting circle, stress management and mindfulness.
- Our investment strategy takes responsibility targets into consideration. In 2022, the carbon footprint of LAB's investment portfolio fell around 12 per cent and was thus at a much lower level than the benchmark index.
- LAB makes use of Hansel Ltd's framework arrangements in a large part of its procurements. Notably, these take the exercise of labour rights and human rights, as well as the promotion of decent work, into consideration.
- The joint accessibility plan for LAB University of Applied Sciences and LUT University compiles the accessibility work implemented in various activities, a report on the status of accessibility and the objectives and measures for promoting participation in accessibility and diversity in 2022–2024. The implementation of measures are monitored by the quality and suitability work steering group as part of the UAS's annual monitoring and development.
- Partial remote work and distance learning reduce mobility-related costs and emissions. Even after the COVID-19 pandemic, a significant share of conferences and meetings are held partly online with remote tools.
- The LAB Annual Report includes all the events during the 2022 financial year that are most important from the perspective of development of activities and performance.

Sustainability in education and RDI activities



Source: Arene. Aspects of increasing the handprint and reducing the footprint of universities of applied sciences.

Commitments

- The UN Global Compact and the 10 principles, human rights, work, environment, anti-corruption
- The Commitment 2050 in the education of registered nurses, public health nurses and paramedics
- The Rectors' Conference of Finnish Universities of Applied Sciences Arene, Programme for sustainable development and responsibility of universities of applied sciences
- Our activities are also guided by the Ministry of Education and Culture's sustainable development policies that encourage strengthening sustainability targets in all education and stakeholder activities.

LAB and the UN Global Compact's Ten Principles

LAB is involved in the UN Global Compact, which is the world's largest corporate responsibility initiative. In this initiative, organisations commit to promoting human rights, environmental protection and a global economy that advocate sustainability and engagement through the ten principles.

We have compiled information on our progress in achieving the Global Compact's Ten Principles on the renewed Communication on Progress reporting platform.

Examples of LAB's actions in 2022 regarding the 10 principles:

- LAB has renewed its equality plan and aims to make the community more equal and inclusive. Key areas in the Equality and Non-discrimination Plan include: identification of and intervention in discrimination, assessment of the equality impacts of activities and practices, implementation of measures to promote equality and increase inclusion.
- LAB's organisational structure, board of directors and advisory board are transparent. LAB consults its student union in decision making.
- LAB's code of conduct instructs us to treat all employees equally and fairly and to accept no discrimination, bullying or harassment in our community. We value our employees and uphold their respectful and equal treatment.
- Starting from 2023, we started building equality training for our staff.
- According to our procurement plan, we implement our procurements as economically and in the most organised manner possible, and as appropriate packages in which the viewpoints of both lifecycles and the environment are taken into consideration. The precondition for all procurements is that the item or service to be procured is necessary.
- LAB has suspended collaboration with Russian and Belarusian organisations and will make no new commitments nor initiate new collaboration projects with Russia or Belarus. LAB has offered and will continue to offer study opportunities for people fleeing the war in Ukraine until December 2023.

LAB's Sustainable Development Goals

In line with our strategy, we focus on influencing the following UN's sustainable development goals in particular:

SDG 3: Good health and well-being

SDG 8: Decent work and economic growth

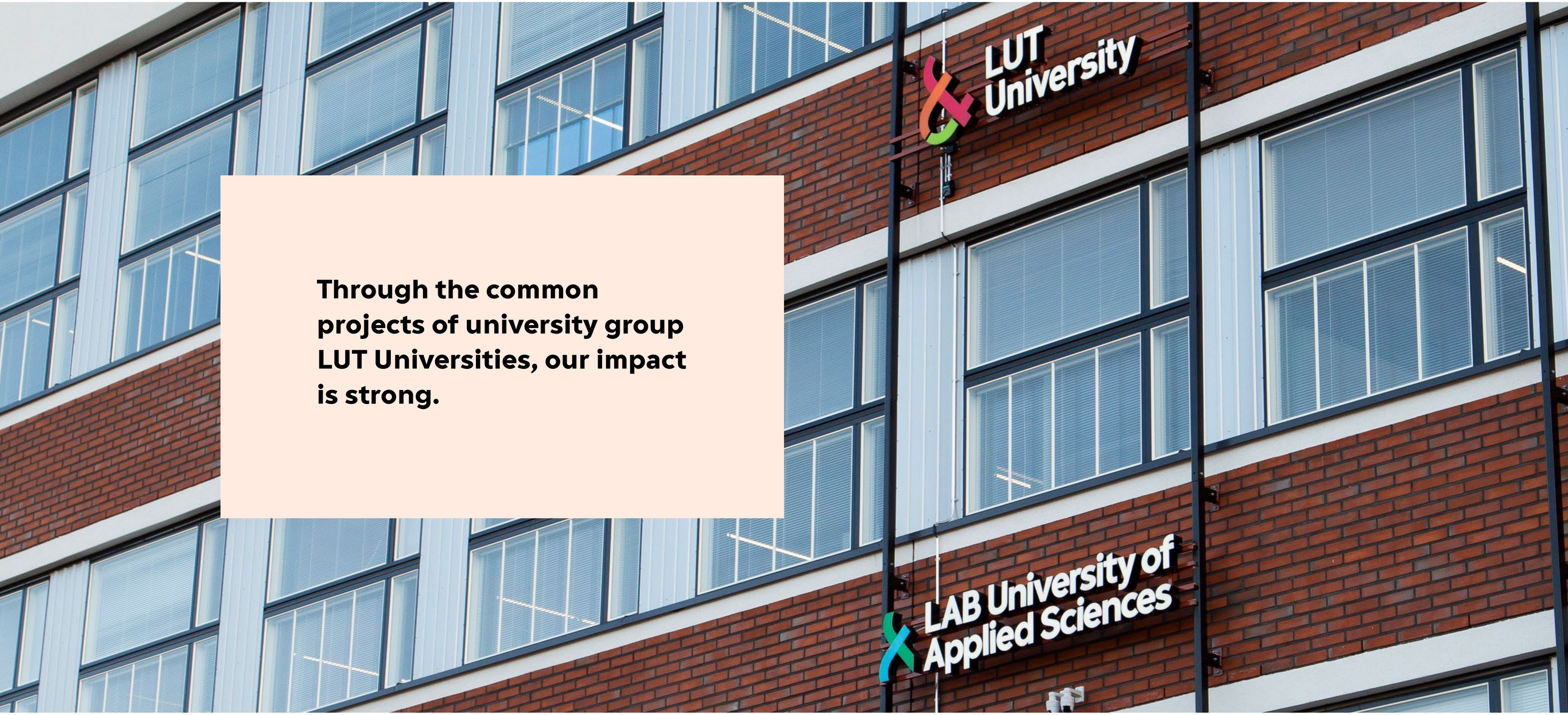
SDG 9: Industry, innovation and infrastructure

SDG 11: Sustainable cities and communities

SDG 12: Responsible consumption and production

SDG 13: Climate action

SDG 17: Partnerships for the goals



Through the common projects of university group LUT Universities, our impact is strong.

Strategic SDGs promoting sustainability

LAB University of Applied Sciences is building a more sustainable future together with its partners. We create new technological solutions, promote the business of circular economy, develop the low-carbon economic structure of regions and promote the well-being of people and the environment.

- Through our recruitment services, businesses can reach 9400 LAB students.
- Through close cooperation with business and industry, LAB links the needs of society to educational content and to research, development and innovations activities.
- LAB is piloting new operating methods with the most potential for further processing.
- Sustainability and responsibility are cross-cutting themes in all areas of key competencies in our RDI activities:

Circular economy – We will enable a national transition towards a carbon-neutral circular economy.

Design – Our solutions will support new value creation for businesses.

Innovations – We will make new openings that are worth discussing.

Health – We will develop innovative and impressive solutions to promote overall well-being.

Examples of SDGs in LAB's RDI and education:

Good health and well-being

Examples of SDG 3 in RDI and education:

- LAB WellTech produces new ideas, develops and tests product templates and innovations for health and social services, using technology and machine vision.
- Understanding of aseptic and infection prevention is important for all health care sector students.
- The international degree and programmes intended for immigrants help import effective procedures in health care into immigrant communities in Finland and globally.
- LAB started a Master's degree programme, which aims to solve the challenges related to the immobility of the population.
- LAB and LUT donated 10,000 euros to charity for Christmas 2022, which was predominantly intended for supporting the victims of the war in Ukraine and the mental health work of young people.
- The LULU project has improved accessible nature tourism in South Karelia.

Decent work and economic growth

Examples of SDG 8 in RDI and education:

- The SafeInLog project enhances the work safety and well-being at work for intralogistics actors at SMEs.
- The STEPS project seeks solutions that will help young people aged 18–29 find their career or study path.
- A new kind of operating model was developed in the eSport Kipinä project, which aims to solve the problem of marginalization by activating those who are at risk of it.
- The OSKE LAB project aims to raise the employment rate of immigrants in the Päijät-Häme region. Project services are beneficial for highly educated immigrants, current students with an immigrant background, and those interested in a higher education.
- The Roleplay project has developed experiential pedagogy for promoting gender equality in education and career choices.
- LAB offers free-of-charge study opportunities for those fleeing the war in Ukraine.

Industry, innovation and infrastructure

Examples of SDG 9 in RDI and education:

- The laboratory of circular economy helps develop processes of material cycles.
- The Material Circulations of Textiles and Plastics research team studies and develops sustainable technologies and processes that will keep raw materials circulating and reduce their carbon footprint.
- The MekaDigi project develops high-quality tools that are suitable for teaching mechanics remotely. It also aims to reduce the risk of exclusion and the interruption of studies.
- LAB is one of the leading actors in Finland in the fields of environmental technology and circular economy. The different viewpoints of a circular economy are considered in all teaching.
- The RAPA project developed new types of processing methods to increase the value chain for construction and demolition waste reject and create new products.
- LAB organises online courses to respond to the shortage of labour in the construction and demolition industry and the need to develop circular economy skills.

Sustainable cities and communities

Examples of SDG 11 in RDI and education:

- The aim of the Sustainable Service Housing Ecosystem project is to build a long-lasting cooperation and regional ecosystem to develop sustainable living.
- Our development project, commissioning wooden apartment blocks, promoted carbon-neutral construction. The project created a guide for the development of procuring a wooden apartment building.
- The Luontokohteiden kulttuuriperintö eläväksi project collects cultural heritage related to natural sites and develops marketable products around these.
- At LAB, teaching draws attention to responsible solutions in urban planning. Design based on data models decreases the amount of waste materials; we make an effort to consider recycling and reuse when it comes to materials.
- The CB-SAFE project has developed border safety and security by increasing security awareness at border crossing points for passengers and improving the performance of rescue professionals by building a virtual training platform.
- The Steps to prepare for climate change project improves climate change preparedness and adaptation in the municipalities of Päijät-Häme and supports the implementation of practical preparedness measures in the municipalities.

Responsible consumption and production

Examples of SDG 12 in RDI and education:

- The CECI – Citizen Involvement in Circular Economy Implementation project promotes the inclusion of citizens in circular economy, with a special focus on solutions for the sharing economy.
- The Textiles into Circulation 2.0 project aims to develop a circular economy business model through material recycling in the Päijät-Häme region. The project pilots the operating model for separate collection of end-of-life textiles and studies the quality and composition of the collected textiles.
- As member of the FINIX consortium, LAB is accelerating societal change towards a resource-wise textile system by means of interdisciplinary co-creation, new technologies and circular business models.
- As part of the Viljaklusterin Pilot Plant project, a new development environment will be built on the Lahti campus. The upcoming operating environment will enable the testing and development of plant-based foods in cooperation with companies.
- The Digital & Sustainable Fashion Showroom project's main goal is to create sustainable solutions operations as part of the development and growth of clothing companies under the pressures of change brought about by the pandemic and climate change. The focus is on mapping and developing digital and virtual opportunities for companies.
- The Coaching for Responsible and Effective Products project aims to develop the resilience and skills of companies and entrepreneurs in finding new environmentally responsible business opportunities.

Climate actions

Examples of SDG 13 in RDI and education:

- The HITU project maps risks related to global warming in the countryside of Kanta-Häme and in the Päijät-Häme area. It also prepares programmes of measures in preparation for climate risks.
- The SaMaRa project researched the conditions for the profitability of biogas production and did pilots on the reclamation of carbon dioxide in biogas processes.
- Students of energy and environmental engineering help companies in their work related to the environment and climate responsibility in the Päijät-Häme climate partnership operating model.
- The main areas of the Erasmus Mundus joint degree programme, Master in Urban Climate and Sustainability, include climate change in cities and its effects, as well as mitigating climate change and adapting to it.
- The aim of the HIUKKA 2.0 project is to research the possibilities of replacing plastic-based materials with hair and other organic fibres and improving knowledge on business in accordance with the principles of the circular economy.
- The Climate Action Plan helps us reduce our emissions and get us closer to our goals of being carbon neutral and carbon negative.

Partnerships for the goals

Examples of SDG 17 in RDI and education:

- **International level:**
  - The BIOREGIO project promoted bio-based circular economy in six EU countries.
  - As part of the Global Citizenship and Diversity Management Skills in Higher Education project, LAB produces a module and trainer materials on the following topics: managing a diverse workplace, consuming and travelling responsibly and global citizenship.
  - The strategic partnership between LAB University of Applied Sciences and Avans University of Applied Sciences strengthens education, research, development and innovation cooperation.
- **National:**
  - LAB's projects RAMPO and Story of Plastic – From Waste to Product are part of the Finland's Plastics Roadmap, which aims for a breakthrough in the circular economy of plastics by 2030.
  - LAB, as a part of the Climate University, offers open courses in themes of climate change and sustainability.
- **Regional:**
  - The NICCoLLa project produced courses that strengthen the utilisation and development skills of technology and ICT solutions in health care and social services.
  - The MINT project has created an operating model for an innovation and trial ecosystem between municipalities, businesses and higher education institutions.

Sustainability in stakeholder cooperation

Together with our partners, we will create new technological solutions, promote the business of circular economy, develop the low-carbon economic structure of regions and promote the well-being of people and the environment.

- Together with the campus cities of Lappeenranta and Lahti, we promote a clean environment and sustainable society.
- LAB participates in the activities of the JunnuYliopisto youth university in Lahti. Their activities include water research, circular economy solutions, robotics and carbon footprints.
- LAB and LUT's Junior University activities include cooperation with schools during school hours, club activities during leisure time, science camps and different science and technology events.
- In cooperation with the environmental sector in Lahti and higher education institutions focusing on sustainable development, we have built a range of studies with an environmental theme.
- The LAB and LUT student unions KOE and LTKY organised Sustainability Days on the Lahti and Lappeenranta campuses in November.
- Solutions.now is a co-organised course where students can put their expertise in sustainability and climate change into action by offering solutions for real-life challenges presented by companies.
- Lahti Science Day was organised in November 2022.
- The TyöMAA – Mathematics in Working Life course highlights the various possibilities and different fields where maths is needed especially for young people.
- The aim of the Coaching for Responsible and Effective Product and Service Development project is to develop the resilience and skills of companies and entrepreneurs in finding new environmentally responsible business opportunities, and to develop their already existing business so it is more environmentally responsible.
- LAB's business accelerator StartHub, which operates on the Lahti campus participates in Kasvu Open's programme, Carbon Neutral Industry. It offers free sparring for industrial companies in Häme that aims for more responsible business.
- The aim of the Communal Entrepreneurship Education for Zambia project is to clarify the operational environment of the local entrepreneurial and technical competences education as well as research on impacts of electrification and digitalisation of rural communities and the impact to the livelihood of those communities. The goal is to establish relationships between the key personnel of the educational organisations and get familiar with the current operational model of the entrepreneurial and technical engineering education and research in Mulungushi University.
- Together with other Finnish universities of applied sciences, LAB is preparing measures to support the circular economy transition of companies through a well-organised offer of services and coordinated network cooperation.

Networks

- Ellen MacArthur Foundation's profiled universities in circular economy
- Greenreality Network Lappeenranta
- Climate partnership concept in Päijät-Häme
- The Netfas network speeds up the transition of the textile and fashion industry towards a circular economy
- The LIMOWA logistics network promotes the competitiveness of its members
- The Service Design Network promotes cooperation and competence in service design extensively across all sectors
- The Telaketju network promotes sustainable manufacturing, use and recycling of textiles
- UArcticCircular Economy Thematic Network
- Climate University

Sustainable campuses

LAB is committed to making its campuses carbon neutral in 2025 and carbon negative in 2030.

- The Climate Action Plan outlines our actions to reduce our emissions. Climate change mitigation, carbon neutrality in 2025 and a carbon negative higher education institution in 2030 are LAB's strategic choices.
- LAB is committed to carrying out a carbon footprint calculation annually with the jointly developed ARENE calculation model and to monitoring the development of LAB's carbon footprint.
- The Lahti campus at ISKU Center is heated with geothermal power, and its electricity is produced with solar panels that have been placed on the building.
- All the electricity purchased for the Lappeenranta campus is carbon neutral.
- We utilise the working and learning spaces on our campuses efficiently in cooperation with LUT University. We also share a common facilities reservation system.
- The food service providers on our campuses aim for sustainability. The Compass Group operating on the Lahti campus aims to be carbon neutral in 2030.
- Kampusravintola, which operates the campus restaurants on the Lappeenranta campus, actively promotes the sorting and reduction of biowaste. Food is cooked in batches according to the demand. There are scales to monitor biowaste volumes, and people returning dishes get immediate feedback. Vegetarian food is served in the buffet daily.
- Food left over from lunch is sold on campuses at cheap rates.
- The lights in learning and meeting facilities on the Lahti campus are controlled by motion sensors, which ensure that our electricity consumption is minimised.
- On the Lappeenranta campus, LUT University shares the costs of city bikes annually.
- Energy consumption and areas in which energy could be saved were discussed and practical tips were actively developed at an information and question event for the staff.
- The Sustainable Horizons project promotes interaction between universities and society supporting sustainability and regional impacts. The project also contributes to sustainability actions at campuses.
- Carbon footprint and food waste are taken into account of the planning stage of the campus teaching restaurants' pop-up events. Areas of focus when purchasing raw materials include low logistics costs, minimal packaging waste and giving priority to local producers.

Carbon footprint

Carbon footprint calculation includes emission from the following:

- Travelling, including flights, car traffic, journeys in the university's own cars, public transport, rental buses, maritime travel, hotel nights.
- Buildings, including heating, electricity consumption, cooling, water, waste management, new construction, renovation and space alteration projects, maintenance repairs, use and maintenance, upkeep of outdoor areas, cleaning.
- Procurements, including IT equipment, IT expert services, telecommunications services, laboratory equipment and supplies, laboratory chemicals, furniture, food and coffee catering and all other procurements.
- The calculations do not include any categories based on individual choices, such as meals on campus and commuting.

Carbon footprint 2022

- LAB's total carbon footprint in 2022 was 7,144 tons of carbon dioxide equivalents (tCO_2eq).
- Emissions from procurements account for 6,418 tCO_2eq (90%), emissions from buildings account for 191 tCO_2eq (3%), and emissions from travel account for 535 tCO_2eq (7%).
- The results of the 2021 and 2022 carbon footprint calculations are not fully comparable, as more categories are included in the 2022 calculation than in the calculation for the previous year. This is particularly reflected in the size of the carbon footprint stemming from procurement.
- LAB's strategic target is building higher education institution partnerships that support international growth. Travel for the purpose of promoting this target has naturally increased after the COVID-19 pandemic. Flight kilometres, hotel stays and paid kilometre compensations for using one's own car have all grown significantly from 2021.

Travel:
Total 535 tCO_2eq

- In 2022, there was 475% more flight kilometres than in 2021. The amount of kilometre adjustments paid also increased significantly, by around 56%.
- In 2021, emissions from travel were 127 tCO_2eq, an increase of 320%.
- One area for improvement is the replacement of existing vehicles with more fuel-efficient alternatives. This measure is included in our Climate Action Plan. This would allow emissions to be reduced by up to 6,5 tCO_2eq.

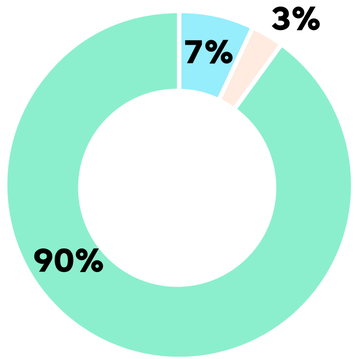
Real estate:
Total 191 tCO_2eq

- In 2021, emissions from real estate amounted to 245 tCO_2eq, with a decrease of around 22%. Heat consumption on campuses was smaller in 2022 than in 2021.
- This calculation includes the Lappeenranta campus (9,000 m^2, independently owned) and, the Lahti campus on the Mukkulankatu (24,000 m^2, rented) and the Niemenkatu premises (3,000 m^2, rented) in Lahti.
- The emissions factors for district heating are those reported by local energy companies (Lappeenrannan Energia and Lahti Energia).
- District heating production in our campus cities:
  - Most of the district heating provided by Lappeenrannan Energia is produced as combined heat and electricity in a biopower plant. In 2022, the share of biofuels as district heating energy sources was 64,30%. The specific emissions of carbon dioxide from district heating produced by Lappeenrannan Energia in 2022 were 75 gCO_2/ kWh. Lappeenranta's energy target is to be carbon neutral by 2026.
  - In Lahti, district heating is mainly produced in a new bioenergy plant and a gas-fired power plant using recycled fuels. In 2022, the share of renewable energy sources in district heating production was 86,5%, with specific emissions of 54 gCO_2/ kWh. Lahti's energy target is to be carbon neutral in 2025.

- The electricity purchased by LAB is of guaranteed origin and comprises 100% renewable energy (VENI Energia). This significantly reduces LAB's annual emissions.
- Electricity is included in the Lahti campus' rent, and the ISKU Center uses 100% renewable green energy in all its locations. The Lappeenranta campus also only uses renewable electricity.
- After the past few exceptional years, the return to campuses has increased consumptions, and the increase in general costs is also apparent in expenses. In addition to the consumption of electricity (+10%) and water (+24%), waste management costs rose (+25%). More attention must be focused on consumption behaviours and reducing waste, as well as the successful sorting of waste.

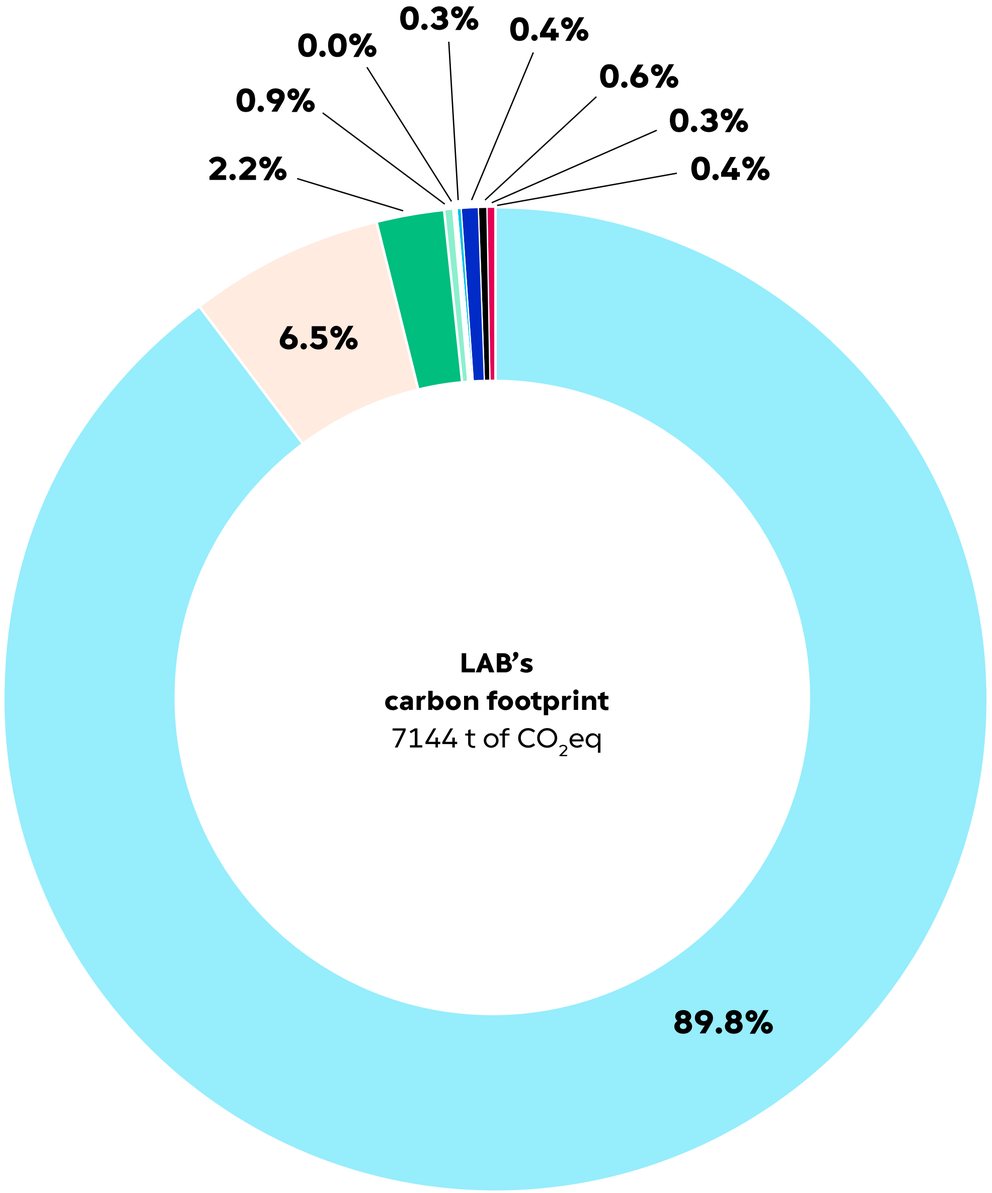
Procurements:
Total 6,418 tCO_2eq

- The calculation of the carbon footprint associated with purchases is based on euros spent.
- The 2021 carbon footprint for procurements was 601 tCO_2e, and the calculation included fewer procurement types in the “Other procurements” category. The carbon footprint cannot be compared to this extent.
- Procurement of laboratory equipment, supplies, chemicals, written materials and documentation, occupational healthcare, and other uncategorised procurements are included in the category ‘Other procurements’.
- In 2022, 150,000 euros more were used for food and coffee than in 2021. The number of events and seminars held on campuses has increased after the COVID-19 pandemic, and life on campuses is becoming active once more.
- Also, 180,000 euros more were used on furniture than the year before. After the pandemic the furnishings in the teaching and staff facilities have been renewed, and more furnishings suited for Teams meetings and remote teaching, such as Framery meeting pods, have been procured.
- Procurements form the majority of LAB’s carbon footprint. Attention must be focused on how environmentally friendly procurements are, on the emissions of suppliers and on ensuring that procurements are only made for actual needs.



LAB’s emission distribution

Emissions
travel 7%
real estate 3%
procurement 90%



LAB's carbon footprint in 2022:
7144 t of CO_2eq

A more detailed breakdown of emissions:

Emission distribution	of CO_2eq	
Procurements	6417.9	89.8%
Flights	466.8	6.5%
Heating	156.7	2.2%
Fleet vehicles	6.5	0.9%
Electricity	0.0	0.0%
Water use	1.9	0.3%
Construction and other buildings maintenance	29.8	0.4%
Passenger cars (mileage/ kilometre-adjusted business trips)	43.5	0.6%
Hotel accommodation	18	0.3%
Waste management	2.6	0.4%
Total	**7144**	

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