

GREEN CAMPUS



Concerned SDG(s): 4, 6, 7, 9, 11
HEI name: Lappeenranta-Lahti University of Technology
Type of HEI: University



DESCRIPTION AND CHALLENGES

Lappeenranta-Lahti University of Technology (LUT University) is a pioneering science university in Finland, bringing together the fields of science and business since 1969. *Clean energy and water, a circular economy, and sustainable business and entrepreneurship* are key challenges to which LUT seeks solutions through technology and business expertise.

Figure 1 The core of strategy and mission of LUT University

Are we going to burn up everything?	Is humanity condemned to suffer from the water it has polluted?
Will waste be the grave of our future?	Will we let Europe degenerate to the world's backyard?

THE ANSWER IS: **NO.**



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SOLUTION AND BENEFITS FOR SOCIETY



“On the Green Campus, we utilise science and technology to make the world the kind of place we believe it should be”³⁸.

The Green Campus is the way of thinking and operating, in which interdisciplinary research and teaching activities are utilized innovatively in order to *decrease environmental load* and to *increase positive environmental effect*. *The Green Campus* embodies LUT University’s strong expertise in the field of *energy* and in particular research and innovations concerning *renewable energy sources*. LUT University utilizes its expertise in developing the campus infrastructure - *a solar power plant* and *a wind turbine* are just some of the examples. LUT University applies an *environmental policy* in its work: environmental issues are developed according to the targets, which are set in environmental programs, and the work is governed by an environmental management system in accordance with the *ISO 14001 standard*. LUT is also committed to develop its activity according to the basic principles of ISCN (International Sustainable Campus Network³⁵) and PRME (Principles for Responsible Management Education³⁶). LUT has made Society’s Commitment to Sustainability with the aim of becoming the best university to work in in Finland³⁷.

³⁵<https://www.international-sustainable-campus-network.org/>

³⁷<http://www.unprme.org/>

³⁸PRME LUT University, [https://intranet.lut.fi/Ohjeetjalomakkeet/LUT_PRME_SIP%202017%20\(002\).pdf](https://intranet.lut.fi/Ohjeetjalomakkeet/LUT_PRME_SIP%202017%20(002).pdf)

³⁹Green Campus guidebook, https://uni.lut.fi/en/c/document_library/get_file?uuid=9b14c345-1c2a-4755-9030-1a9099e750fc&groupId=10304



SOLUTION AND BENEFITS FOR SOCIETY

Renewable Energy

LUT University is pursuing higher degree of environmental sustainability through *defined substantial goals*. By the end of 2020, LUT aims to produce 5% of the consumed electricity with means of *renewable energy*. Overall target for the energy consumption is that it is purely from renewable energy sources. Additional goal for 2020 is that *the water consumption* would be mitigated by 20% compared to 2012. University also has its own *waste sorting point*. The Green Campus program commits LUT University to develop more environmentally sustainable way to sort waste, prolong the life span of used chemicals, increase environmentally friendly acquisitions and optimize traffic on the campus area to reduce its environmental impact.

Environmentally Sustainable Practices

For their stakeholders LUT University promotes *environmentally sustainable practices*. Computer screens and lights are advised to be *turned off* when leaving the workstation and computer should be turned off by the end of the day. *Waste sorting and recycling* is made easier with special trash bins accompanied with advisement. Printing is discouraged. Cafeterias insist on trying to take only *as much food as one can eat* and place it on single plate. *Water usage* is recommended to be done in a sparing manner. Meetings, teaching and learning are being *shifted online* in order to reduce environmental impact of transportation. Also, carpooling, public transportation, cycling and walking are promoted. In addition to *electric cars*, range of *electric vehicles* on the Green Campus also includes *electric scooters* and *electric motorcycle*, both of which the staff may use.





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Nature

Closeness to nature of the university campus is a relevant factor to bolster motivation towards environmental sustainability. In collaboration with Lappeenranta environmental authority, LUT University offers parks and natural landscape for its stakeholders. It is possible to *rent rowboat and bicycles* from the university to enjoy this setting. In addition, this area contains beehives and the produced honey can be bought from the university.

Beehives

There are six *beehives* on Green Campus. Currently between 15,000 and 20,000 bees are living in each of them. Organic honey produced on our campus can be bought in university's bookshop

Hybrid Vehicles

LUT University's completely *new type of hybrid bus* offers a substitute for conventional urban transportation. It uses only 2.5 liter sized diesel motor, which is possible due to the *powerful battery system*. Use of this type of vehicles for public transportation decreases the amount of particle emissions in the air, which is especially relevant in urban areas. *Cambus*, as it is called, is currently used in driver education and as a chartered bus.



SOLUTION AND BENEFITS FOR SOCIETY

Wind Turbine and Solar Power Plant

Environmental sustainable activities of LUT also include *wind turbine* (20kW) and *solar power plant* (51,5kW, 39kW and 106kW). The wind turbine is used as a tool to demonstrate real world work conditions for research and teaching purposes. The energy it creates is directed to laboratory at university to study electricity production and distribution networks. The electricity produced with the solar power plants is used to replace purchased electricity. The solar power plant of LUT University produces roughly the equivalent of annual consumption of electrical energy for 15-20 detached houses. Actually, *one of the largest solar power plants in Finland* is located in LUT campus. Some of the solar panels are connected to a tracker, which assures that they are always facing the sun for maximized energy production efficiency (up to 40% increased energy collection while aligned properly)³⁹.

Certificate and Awards

In 2012, the university was awarded the *WWF Green Office certificate* and is committed to fulfilling its criteria. In recognition of its expertise, LUT was awarded in the international *Sustainable Campus Excellence Award* competition as the best university in Excellence in Campus category in summer 2013.

³⁹Green Campus in figures, <https://www.lut.fi/web/en/green-campus/green-campus-in-numbers/production-figures>

