

AUDIT OF THE LAPPEENRANTA-LAHTI UNIVERSITY OF TECHNOLOGY LUT

Tekijät **Håkan Wiklund, Irina Duma, Birgit Kraus, Matti Kuronen & Mirella Nordblad.**

Annikka Nurkka (ed.) Self-assessment of LUT.

Auditointivuosi **2021**, Karvin julkaisu **16:2021**

Kieli **Englanti**

ISBN **978-952-206-704-3 pdf**

2.4 LUT's examples of successful enhancement activities

- Korkeakoulun itsearviointi

Research platforms

Research platforms, introduced in 2015, aim to implement the LUT strategy, support cooperation between LUT schools, promote excellent and creative research, collaborate and network with the best possible partners at LUT, in Finland and abroad, seek out external funding actively, and increase the societal, economic and industrial impact of research. [The 2015-2020 platforms](#) have successfully enhanced internal cooperation between researchers from different units as the [Research and Impact Assessment \(RIA\) in 2019](#) showed. Based on RIA panelists' recommendations, the second internal call for proposals for LUT's research platforms was launched in 2020. The applications were sent to external evaluators, all members of LUT's RIA 2019 panel, and the applicant teams were interviewed by a group of experts led by LUT's Vice-Rector for Research and Innovation. The board made the decision to fund platforms based on the rectorate's proposal. The new platforms will start operation at the beginning of 2021.

Collaboration with companies

LUT bases its corporate collaboration on joint research activities and the commercialisation of innovations, involving students, alumni, and investor and enterprise networks. The key customer-based approach to strategic business partnerships, introduced in 2019, helps foreign and Finnish

collaborators, including firms and municipalities, to e.g. invest in jobs in Finland. Recent showcases of collaboration:

- LUT and The Switch, which is part of the Yaskawa Electric Corporation, have agreed to develop next-generation power electronics technology.
- LUT and Wärtsilä have an agreement on strategic power system modelling with the aim of understanding and developing paths towards 100% renewable energy systems.
- LUT and a group of firms and municipalities (e.g. Kemira, Neste, City of Lappeenranta) have started a feasibility study on a pilot production plant for synthetic fuel, targeting to produce carbon neutral fuels for transportation.

Commercialisation of research results

Established in 2017, the university's own business development and start-up acceleration unit [Green Campus Open \(GCO\)](#) and the investment company [Green Campus Innovations Ltd. \(GCI\)](#) support the commercialisation of research results. GCO develops new start-ups from LUT research, the LUT Group's applied research and corporate spin-offs and generates deal flow for GCI and other investors by coaching entrepreneurs in building business plans. GCI invests in new ventures mainly in LUT's profiling areas. GCO supports research teams in funding applications following the innovation process it has developed. The idea is gradually to develop the commercialisation of research results towards a working business models. [Business Finland](#) has applied LUT's process in preparing funding applications with other universities. With the help of GCO, since 2012, LUT's research teams have received more than € 20 million to turn ideas into business. LUT's success is based on its strong IPR portfolio and evidenced by a number of inventions and spin-off companies established each year.

Hyneman Center

In 2018, LUT inaugurated a rapid prototyping laboratory, the [J. Hyneman Center \(JHC\)](#). It is a well-equipped workshop for testing ideas, collecting evidence, and increasing skills and knowledge. The goal is to create new ideas and give resources to building and testing prototypes. JHC brings together students, LUT researchers and companies to solve problems in creating and testing prototypes. The proto laboratory was designed together with LUT's honorary doctor, Product Developer Jamie Hyneman, who collaborates with LUT regularly. Every year, more than 500 students take the orientation exam required before starting work at JHC. A common practice is to do assignments at JHC on LUT courses, and many theses are completed in JHC projects. Prototypes are made based on companies or students' own ideas. JHC encourages students to develop their ideas in an annual programme, and in a spring seminar, students present their ideas and prototypes. A few innovations have emerged, and prototypes made at JHC are being made commercially available.

Sustainability activities

From 2013, LUT has invested in an environmental management system, which has developed from a standard (ISO 14001) driven system to procedures that focus more on the [sustainability](#) impact of LUT students, personnel and prioritised stakeholders. According to its current strategy, LUT will take a more ambitious role in building a sustainable future on Earth. The [Junior University \(JU\)](#) is an example of responsible cooperation with external stakeholders. As a part of schools' curriculum, it teaches primary and upper secondary school students and teachers sustainability. JU activities reached over 10 000 people during the years 2018–2019. The [International Sustainable Campus Network](#) awarded JU as the best sustainable development cooperation model in 2020.