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SHiFT

*Support Systems for Sustainable
Entrepreneurship and Transformation*

Good practice collection University support for sustainable entrepreneurship

*Lappeenranta University of
Technology (LUT)
Finland*



LUT
Lappeenranta
University of Technology

Good practice collection

SHIFT (“Support Systems for Sustainable Entrepreneurship and Transformation”) is a unique research project and is funded through the EU programme ECO-INNOVERA: www.eco-innova.eu. SHIFT’s main goal is to enable universities, incubators, business development organizations, financial institutions and other relevant actors to support eco-innovation and sustainable entrepreneurship more effectively. On the basis of thorough empirical analysis of the status quo and the identification of good practices world-wide, concrete and realistic recommendations have been developed for policy makers and actors of the support systems: www.shift-project.eu

Lappeenranta University of Technology is part of a selection of good practice examples the Borderstep Institute has collated in the context of the SHIFT project to highlight exemplary activities of higher education institutions (HEIs) in Finland, Germany, Sweden, the United Kingdom and the USA that have successfully integrated sustainability in their respective entrepreneurship support system.

Lappeenranta University of Technology – Finland

Characterization: Technical university with a strong focus on entrepreneurship and sustainability



Good practice highlights

Certified ISO 14001 environmental management system (EMS); strategy 2020 is based on sustainability; entrepreneurship is strongly related.

Professorship in “Environmental Economics and Management” and Department of Environmental Technology (at the LUT School of Energy Systems): enable the integration of sustainability and entrepreneurship/ innovation in teaching and research.

Master’s programme in “Strategy, Innovation and Sustainability”: develops advanced competencies in the intersection of strategic management and innovation; looks at sustainability issues both as challenges and an opportunities for value creation.

Doctoral Programme in “Environmental Technology”: Goal of the programme is to identify and develop environmentally friendly and cost-effective solutions that are sustainable from both the societal and individual perspective and that equally meet the needs of business, communities and society.

Concentration in “Sustainable Technology and Business” (as part of the Master’s programme in “Energy Technology”): Students learn both technological solutions and business methods to put their own innovations into practice. The studies consist of a group-orientated real-life project, incl. project planning, budgeting, communications and stakeholder management.

Institute of Energy Technology (“LUT Energy”): largest energy research and education organization in Finland; includes research on Energy Technology, Electrical Engineering and Environmental Technology; Environmental Technology research areas include Lifecycle Modelling, Waste Management, Sustainable Community, Transition Management, and Environment and Business.

Green Campus Innovations: The market-driven business model of Green Campus Innovations includes incubation, acceleration and seed investment activities and helps commercialize university research.



Key data

Location: Lappeenranta, Finland

Founded: 1969

Number of students (2015): 6,500

Profile: Lappeenranta University of Technology (LUT) has developed Key Performance Indicators (KPIs), a scorecard and other guiding principles which refer to sustainability or entrepreneurship. It describes itself as a pioneering science university, bringing together the fields of science and business. LUT works across scientific and departmental boundaries. Its focus is on demanding topical issues, such as the mitigation of climate change and the continuous availability of clean water and energy. Its expertise in energy is reflected in the Green Campus, a unique research and study environment.

Interview with Dr. Lassi Linnanen

*Professor of Environmental Economics and Management
Lappeenranta University of Technology (LUT)*



Why did your university/business school start to support sustainable entrepreneurship and/or eco-innovation endeavours?

There is strong history at LUT in the domain of environmental protection. It started in the early 70s with the measurement of industrial emissions in Finland which was part of the energy technology department. Other environmental technologies – such as water quality in addition to emission control – were added later. In the 90s a minor in environmental technologies was introduced. Around 2000 it became an independent programme in environmental technologies. When I joined LUT there was a trend in systems analysis and lifecycle assessment. I was selected for the new professorship in “Environmental Economics and Management” because of my dual background in environmental management and as an entrepreneur. Prior to that there were no internal capabilities combining environmental technology with entrepreneurship. I helped to integrate both domains as one aspect of the environmental technology programme. So the overall trend started quite a while ago. Aside from the new chair it has been an evolution rather than a particular event that led to the combination of sustainability and entrepreneurship over time.

Who initiated your programmes, what were the milestones of their evolution?

The evolution started in the 70s with the establishment of the previously mentioned professorship in “Environmental Economics and Management” in 2005 as an important milestone. I have been adding some relevant courses, so have my colleagues. These courses strongly focus on “learning-by-doing” which is the basis for innovation. Students also learn something about entrepreneurship when they have to solve real life problems based on fairly large projects! That’s one new element which I established. It has been an incremental process with new elements having been added to the programme over time.

What can other universities learn from it?

Our approach has focused on cross-disciplinary learning. You can’t deal with this domain from one perspective only but instead from multiple perspectives. It’s about solving mankind’s grand challenges. In order to create something valuable, you have to tolerate different perspectives. You have to be able to link different types of people and competencies. That way you can apply thinking rooted in sustainable innovation.

What are your next steps/future plans?

We have a history of spin-offs from energy technologies. We are looking for climate neutral solutions. There is a nexus of energy security, climate change, water and food security. We would like to improve our understanding of food and water systems including infrastructure needs. This increases the overall complexity of teaching and research. We would like to ask the right questions and expand our knowledge in different contexts accordingly. To solve these interconnected challenges we have to create more appropriate frameworks.

What has been the impact of your sustainable entrepreneurship support?

Since 2002 there have been 10 university spin-offs. All of them focus on business ideas in the environmental or sustainability domain. Hundreds of students have benefited from entrepreneurial sustainability programmes overall. The order of magnitude has been particularly high with our course in “Sustainable Innovation and System Transition” which involved a real-life project. We run the course with a cap of 20 students once a year. We are in our fourth year now. There have been 4 to 5 journal articles in the area of sustainable entrepreneurship so far.



Additional Information

Lappeenranta University of Technology:

<http://www.lut.fi/web/en/>

Department of Environmental Technology:

<http://www.lut.fi/web/en/school-of-energy-systems/research/environmental-technology>

International Sustainable Campus Network (ISCN):

<http://www.lut.fi/web/en/green-campus/measures/ISCN>; <http://www.international-sustainable-campus-network.org>

Nordic Sustainable Campus Network (NSCN):

<http://www.lut.fi/web/en/nscn2014>

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www.borderstep.org

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