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SHiFT

*Support Systems for Sustainable
Entrepreneurship and Transformation*

Good practice collection University support for sustainable entrepreneurship

*Chalmers University
of Technology
Gothenburg, Sweden*

CHALMERS

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

The Chalmers 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.

Chalmers University of Technology – Gothenburg, Sweden

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



Good practice highlights

Chalmers Challenge Lab: an initiative where Master’s students across engineering disciplines take on big societal challenges with industry clusters, government and academia as part of their master’s thesis work. The aim of the Challenge Lab is to provide students with perspectives, methods and tools that are useful in taking on and leading challenge-driven sustainability transitions. As a preparation for the Challenge Lab students are offered an opportunity to partake in the course “Leadership for Sustainability Transitions”.

Chalmers has an integrated sustainability approach: **all students take 7.5 credit hours’ worth of classes in environment and sustainable development.**

M.Sc. in “Innovative and Sustainable Energy Engineering”: Purpose of the Nordic Master Program is to provide state-of-the-art education in the fields of conventional and renewable energy sources. As part of the joint Nordic Master’s programme Chalmers offers two of the tracks: “Geothermal Energy” and “Heat & Power Engineering”. The term “sustainable energy engineering” comprises a wide array of practices, policies and technologies (conventional and renewable/alternative) aimed at

providing energy at the least financial, environmental and social cost. A strong emphasis is placed on dealing with energy engineering tasks with due consideration of technical, environmental and socio-economic issues. Another strong emphasis is put on the innovative and entrepreneurial aspects of the energy society, especially related to how existing and new efficiency improvement innovations can be brought to the market in different countries.

Research is linked to the newly (2015) started **Chalmers Initiative for Innovation and Sustainability Transitions (CIIST).**

Chalmers Innovation offers money and experience to inventors and start-ups. There are seven experienced business coaches all with focus on fast growing technology-based start-up companies.

Chalmers University of Technology is **Climate-KIC’s first network partner in Sweden.**



Key data

Location: Gothenburg, Sweden

Founded: 1829

Number of students (2012): 10,000

Profile: The University's vision "Chalmers for a sustainable future" permeates all activities, from undergraduate education and doctoral programmes, research, innovation and collaboration, to campus development and internal environment. For thirty years, all students have taken a class in "Environment and Sustainable Development" and had the opportunity to complete their studies with a sustainability profile. The vision is linked to sustainable development as a driving force intended to have an effect Chalmers-wide in terms of education, research, and environmental management systems.

Interview with Mats Lundqvist, Ph.D.

Professor in Entrepreneurship

*Director of the Chalmers School of Entrepreneurship
Chalmers University of Technology*



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

Obviously, climate issues are urgent, and need to be dealt with. We strongly believe that people with an entrepreneurial capacity are necessary to realize a sustainable future. To bring about changes we need individuals and teams willing to search for new opportunities, try new ways and find creative solutions to difficult challenges. To us entrepreneurship is a means to combine different competencies, including sustainability- and climate-related skills. In order to implement practical solutions, a problem cannot be tackled from only one angle. So, in our world our entrepreneurial environment is a natural habitat for climate innovation.

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

The Chalmers School of Entrepreneurship was initiated in 1997 by me and Professor Sören Sjölander here at Chalmers. I'd like to point out two milestones that have been important in our development: the creation of our own incubation company in 2001 which enabled us to actually transform our ventures into viable companies; and the change of the programme into a 2-year international Master's programme fully taught in English. This allowed us to admit students with more perspectives than just the Swedish one. Sustainability is a global concern and thus must be dealt with from an international perspective.

What can other universities learn from it?

First of all, trust the students! Many questioned us, when we got started, if it was sane to have the students in the "driver's seat" so to say. But from our experience this has worked very well. Combining education with actual value creation is a great way for students to learn and at the same time see the effects of their actions become a reality.

What are your next steps/future plans?

At Chalmers we are now increasing our efforts in the area of venture creation. The University and the foundation we are owned by have made a 10-year commitment to invest in early stage start-ups stemming from Chalmers. This will hopefully lead to a better access to funding for new green innovations. In terms of our education, we are initiating collaborations with other master's programmes within Chalmers, focusing on sustainability, energy and ecology to see where we can cross-fertilize efforts across disciplines.

What has been the impact of your sustainable entrepreneurship support?

We are continuing to increase venture creations in green/clean technology as part of our portfolio. Out of more than 50 ventures, 11 have a green- or cleantech focus. Our portfolio venture Wave Tube was the final winner of the Climate Launch Pad in 2014, Europe's largest cleantech business idea competition.



Additional Information

Chalmers University of Technology:

<http://www.chalmers.se/en/>

University vision „Chalmers for a sustainable future“:

<http://www.chalmers.se/en/about-chalmers/Chalmers-for-a-sustainable-future/Pages/default.aspx>

Chalmers Challenge Lab:

<http://www.challengelab.org/>; <http://www.challengelab.org/#!/the-course/c1y99>

Chalmers School of Entrepreneurship:

<http://www.entrepreneur.chalmers.se>

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www.borderstep.org

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