

Swedish Life Cycle Center

Annual report 2016



Swedish Life Cycle Center report no. 2017:1

Welcome to the 2016 annual report

2016 was the first year of stage 8, a year which has strengthened the center's national representation through Sony Mobile as new partner, a start up process to increase the collaboration with Swedish authorities and a closer collaboration with Swedish Energy Agency through the project "Swedish platform for the life cycle perspective" which aims for a joint national collaboration to engage organizations to apply a life cycle perspective. During 2016, Swedish Life Cycle Center celebrated 20 years of collaboration and one focus for the year has been monetary valuation. This annual report will give an overview of Swedish Life Cycle Center and its contribution to the vision; credible and applied life cycle thinking globally.

The Board and the Technical secretariat would like to thank all partners and participants who have been actively involved in the Swedish Life Cycle Center during 2016. We look forward to continued cooperation in 2017.

Best regards

Sara Palander, Director Swedish Life Cycle Center

Carl Karheiding, Deputy director Swedish Life Cycle Center

About Swedish Life Cycle Center

Swedish Life Cycle Center is a center of excellence for the advance of applied life cycle thinking in industry, policy and other parts of society. The center was founded in 1996 and is a joint collaboration platform for universities, industries, research institutes and government agencies for competence building and exchange of experience to move the life cycle field forward.

Partners in 2016: AkzoNobel, Chalmers University of Technology (host of the Center), IVL Swedish Environmental Research Institute, KTH Royal Institute of Technology, NCC Sverige, SCA, SKF, SLU Swedish University of Agricultural Sciences – Department of Energy and Technology and Department of Biosystems and Technology, SP Technical Research Institute of Sweden, SonyMobile, Swedish Environmental Protection Agency, Vattenfall, Volvo Car Group and Volvo Group. Our values and principles, on which we build our work on, are:

Transparency, openness, credibility, scientifically based and cross-sectoral solutions.

2016 in numbers

14 partners

320 professionals in network

4 research projects

2 administration projects

4 workgroups: LCA Data & Methodology, Economic valuation, LCA Biodiversity & Land use, Social LCA

1 expert group: Environmental footprint

136 people involved in working groups and expert groups

22 working and expert group meetings

12 seminars, workshops and webinars

2 network conferences

7 center publications

6 newsletters

Become a partner?

If your organization or you are interested to take part in the center or contribute in our activities, you are welcome to contact the Swedish Life Cycle Center Technical secretariat.

Contact and more information

lifecyclecenter@chalmers.se | www.lifecyclecenter.se

OUR CONTRIBUTION TO SUSTAINABLE DEVELOPMENT AND HIGHLIGHTS FROM 2016

A meeting place to share and create best practice - 20 years of collaboration

Swedish Life Cycle Center celebrated its 20th anniversary on November 23rd, by arranging the conference "From thinking to action - Life cycle thinking in retrospect and future impact on research, industry and society" in Gothenburg.

The conference gathered 80 participants from 35 organizations to take part of presentations from partner organizations, which gave an insight in their 20 years long journey and panel discussions with represents from partner organizations, non-partner organizations and authorities.

During the day the newly founded Scientific advisory group were introduced and shared some of their insights for the future development in the field. Dr. Rana Pant from Joint Research Center, European comission, gave the audience an update and background around the Product Environmental Footprint process (PEF). Sven- Olof Ryding from the Swedish Environmental Protection Agency gave an update about UNEP's work with Global Lifecycle Access Database Network (GLAD).

The conference also provided an open arena for old and new members to interact and socialize.

Dialogue with authorities

During 2016 the work towards a collaboration with and between Swedish authorities on the life cycle field began. The collaboration includes the Swedish Environmental Protection Agency, Swedish National Board of Housing, Building and Planning, Swedish transport administration, Swedish Board of Agriculture, National Agency for Public Procurement and Swedish Energy Agency. A letter of intent has been developed to formalize the collaboration with the Swedish Life Cycle Center and its partners.

Inspiring examples showing how the life cycle perspective is applied in different organizations

The project "Good examples – inspiration to energy efficiency through the entire value chain" aimed to develop knowledge about how Swedish organizations from different sectors of the society are using the life cycle perspective. The project sought to contribute to increased motivation and inspiration among organizations to see the possibilities with an introduction of the life cycle perspective as an enabler for innovation and competitiveness, and to achieve energy efficiency through the entire value chain.

The results show that by using the life cycle perspective the participating organizations have been able to reduce their energy use and hence also their climate impacts, and been able to make financial savings.

The project involved Göteborgs Stad, Löfbergs, Modexa, Oatly, Sollentuna kommun, Telia, Trafikverket, Volvo Cars Corporation and Volvo Group. This project was funded by the Swedish Energy Agency.

International collaboration towards consensus on monetary valuation

In February, the work for the new ISO standard "14008 - Monetary valuation of environmental impacts and related environmental aspects — Principles, requirements and guidelines" started. The international working group with over 30 experts were gathered in Gothenburg, at Chalmers University of Technology, to kick off the work towards a common language and an international guideline in the field of monetary valuation. The international secretariat is based at the Swedish Standards Institute and the chair is Bengt Steen from Chalmers University of Technology. This is a result from the work within the Swedish Life Cycle Center and its partners with external funding from VINNOVA Sweden's innovation agency and Swedish Energy Agency.

Communicating environmental damage cost

Bengt Steen, Chalmers University of Technology, has initiated the project "Development of methodology to communicate environmental damage cost data" that will be conducted 2016-2017 and is funded by the Swedish Energy Agency. The project will include case studies of energy decisions with sensitivity analyses to determine which parameters are most important; a study of how different presentations are understood; and participation in international harmonization process, mainly the ISO 14008.

Board members and deputy board members

Chair:	Elisabet Olofsson	SKF:	Stefano Marzola, Mats Berglund
Secretary:	Lars-Gunnar Lindfors (adjunct)	SLU:	Serina Ahlgren, Johanna Spångberg
Director:	Sara Palander (adjunct)	SonyMobile:	Johan K Holmqvist
AlzoNobel:	Klas Hallberg	Swedish EPA:	Elisabeth Kock, Eva Ahiner
Chalmers:	Holger Wallbaum, Henrikke Bauman	SP:	Katarina Lorentzon, Johanna Berlin
ML:	Elin Eriksson, Karin Sjöberg	Vattenfall:	Lena Landström
KTH:	Miguel Brandão, Anna Björklund	Volvo Cars:	Axel Edh, Birgitta Kinton Kåmark
NCC:	Larissa Strömberg	Volvo Group:	Lisbeth Dahlföf, Simon Andersson
SCA:	Susan Ilieski Janols, Ellen Riise		

Life cycle assessment data on a national and international level

The work towards a Swedish LCA database continued via the project "Life Cycle Assessment Data - a prerequisite for sustainable innovation". The national research and innovation agenda demonstrates the benefits of a common national strategy for life cycle assessment data (LCA data). Increased availability of reliable LCA data has the potential to strengthen Swedish operation on an international market, where access to open LCA data enhances the possibilities for all companies to evaluate their products and processes and more environmental assessments may be conducted. The agenda focuses on the need and abilities of a national LCA database and is intended to support initiatives that work in that direction.

The center has followed and influenced UNEP's work towards Global Life Cycle Access Data network (GLAD). In 2015, Swedish Life Cycle Center was asked by United Nations Environment Programme (UNEP) to start up a partnership with UNEP to initiate a process to see in which direction this initiative should continue. This work has been managed in 2016 through Johan Tivander (Chalmers University of Technology), Christoffer Krewer (SP Technical Research Institute of Sweden), Raul Carlson (earlier involved in the center) and Sara Palander (Swedish Life Cycle Center) together with the international working groups. Christoffer Krewer was invited to a GLAD workshop in Brazil in April to present this work. Llorenç Mila I Canals (UNEP) is project manager for the overall process and Sven-Olof Ryding (Swedish EPA) represents Sweden in the Steering Committee.

Scientific Advisory Group strengthens the center

In the beginning of 2016 the Scientific advisory group was initiated within the center. The Scientific advisory group consists of Prof. Ann-Marie Tillman (Chalmers) who will chair the group with support from Prof. Emeritus Björn Frostell (KTH) and Dr. Niclas Ericsson (SLU). The Scientific advisory group aims to strengthen the scientific foundation and give scientific advice to the Swedish Life Cycle Center Board.

Sony Mobile Communications new partner in the center

In August 2016 Sony Mobile Communications became a new partner in the Center. Johan K Holmqvist is a new member of the board and represents Sony Mobile Communications.

Thank you Elisabet!

After 10 years as Chair of the Swedish Life Cycle Center's Board and 20 years of involvement in the center, Elisabet Olofsson decided to resign in December 2016.

We would like to thank Elisabet for her long commitment and engagement in the center. We are grateful for her ability to build a strong community among partners. She is a real inspiration and an enthusiast! We wish her the best for the future.



Elisabet Olofsson, former chair of Swedish Life Cycle Center 2006-2016

Partners



Networking activities

Seminar: Environmental Footprint process. Gothenburg, January 21.

Seminar: Livscykelanalys & livscykelperspektiv – att mäta miljöpåverkan. Co-arrangement with SIS, January 28.

Workshop: Produktions- och konsumtionsrelaterad miljödata. February 4.

Network conference: Gothenburg, February 11.

Webinar: Energy efficiency along the value chain. Emma Rex, SP. February 23.

Webinar: Do methodological choices really matter in the life cycle assessment of bioenergy systems? Miguel Brandaó, KTH. April 4.

Workshop: Nationell Agenda för livscykeldata, Stockholm. May 9.

Webinar: How life cycle perspective is introduced in education at undergraduate studies at KTH. Anna Hedlund-Åström, KTH. May 24.

Webinar: Environmental Footprint-processen, EPD och globalt nätverk för LCA-databaser. Cecilia Mattsson, Naturvårdsverket, Kristian Jelse, EPD International and Sven-Olof Ryding, Naturvårdsverket. June 17.

Webinar: Water footprint – Standards, methodologies and application. Felipe Oliveira, IVL. August 24.

Workshop: Kick-out workshop for IMP and kick-in for "IMP 2". Gothenburg, October 10.

Workshop: Life Cycle Sustainability Assessment. Co-arrangement with IVL. Gothenburg, November 10.

Network conference: From thinking to action - Life cycle thinking in retrospect and future impact on research, industry and society. Gothenburg, November 23.

Webinar: Methodology to evaluate the social impacts of ICT services. Tomoko Tanaka, Orange Group. December 12.

Research projects

Integration of environment and economy in product development gives opportunity for innovations. Project managers Bengt Steen, Chalmers University of Technology, and Maria Lindblad, IVL Swedish Environmental Research Institute. Funded by VINNOVA Sweden's innovation agency.

Adapted decision support for increased energy efficiency in value chains. Project manager Emma Rex, SP Technical Research Institute of Sweden. Funded by Swedish Energy Agency

Support for innovative and sustainable business decisions. Project manager: Maria Lindblad, IVL Swedish Environmental Research Institute. Funded by VINNOVA

Good examples – inspiration to energy efficiency through the entire value chain. Project managers: Sara Palander, Anna Wikström, Rebecka Hallén Jorquera, Swedish Life Cycle Center. Funded by Swedish Energy Agency.

National strategy for development of energy production related environmental data for sustainable innovation – A national research and innovation agenda. Project managers Sara Palander and Carl Karheiding, Swedish Life Cycle Center. Funded by Swedish Energy Agency.

Development of methodology to communicate environmental damage cost data. Project manager: Bengt Steen, Chalmers. Funded by: Swedish Energy Agency.

National strategy for development of energy production related environmental data for sustainable innovation – A national research and innovation agenda. Project managers Sara Palander and Carl Karheiding, Swedish Life Cycle Center. Funded by Swedish Energy Agency.

Development of methodology to communicate environmental damage cost data. Project manager: Bengt Steen, Chalmers. Funded by: Swedish Energy Agency.

List of center publications

2016:1 Swedish Life Cycle Center Annual report 2015 (Sara Palander, Swedish Life Cycle Center Technical secretariat)

2016:2 Swedish Life Cycle Center summary report stage 7 (Sara Palander and Anna Wikström, Swedish Life Cycle Center Technical secretariat)

2016:3 Operational Plan – Stage 8 (Sara Palander and Anna Wikström, Swedish Life Cycle Center Technical secretariat)

2016:4 The extended role of life cycle networks (Sara Palander, Swedish Life Cycle Center Technical secretariat, Emma Rex, SP Technical Research Institute of Technology)

2016:5 Life Cycle Assessment Data – a prerequisite for sustainable innovation (Carl Karheiding and Sara Palander, Swedish Life Cycle Center Technical secretariat, Johan Tivander Chalmers University of Technology, Christoffer Krewer SP Technical Research Institute of Technology)

2016:6 Integration of environment and economy in product development gives opportunity for innovations (Rebecka Hallén Jorquera, Swedish Life Cycle Center Technical secretariat, Maria Lindblad, IVL Swedish Environmental Research Institute of Technology, Bengt Steen, Chalmers University of Technology, Ellen Rise, SCA, Lisbeth Dahlöf, IVL Swedish Environmental Research Institute of Technology, Klas Hallberg, Akzo Nobel)

2016:7 Goda Exempel – inspiration till energieffektivisering genom hela värdekedjan (Rebecka Hallén Jorquera and Anna Wikström, Swedish Life Cycle Center Technical secretariat, Kristian Jelse, IVL Swedish Environmental Research Institute of Technology/EPD international)