



SWEDISH
LIFE CYCLE
CENTER

STAGE 8

SWEDISH LIFE CYCLE CENTER SUMMARY REPORT

A successful stage is completed

This summary report gives an overview of Swedish Life Cycle Center, and our impact and activities towards our vision *Credible and applied life cycle thinking globally*. Stage 8, run from January 2016 to December 2018, has been characterized by inclusiveness through a wider collaboration platform and networking activities with an ambition to reach out to a wider community.

The center's contribution to sustainable development is visible in various research projects, expert groups, working groups, communication and networking activities. Activities to highlight are for instance the new project Swedish platform for the life cycle perspective (funded by the Swedish Energy Agency), strengthened collaboration with government



agencies, influence on various national and international initiatives, closer academic collaboration, more education activities, and a research project which influenced a new ISO standard.

These and other highlights from the stage are summarized in this report, focusing on collaboration, utilization and research. During stage 8, the center has been externally reviewed and this report will present some of the results and added value of the center.

During the past stage, Elisabeth Olofsson resigned after 10 years as chair for the Board and handed over to Lars Mårtensson (Volvo Trucks), who has led the Board since two busy years.

It has been three years of successful collaboration including almost 400 professionals working for our vision *Credible and applied life cycle thinking globally*. We would like to thank all partners for these years! We are looking forward to stage 9 and welcome new organizations and professionals in the coming stage.

Best Regards / Sara Palander
Director, Swedish Life Cycle Center



AMPERE
IAVSD

*Transparency, openness,
credibility, science and
cross-sector solutions.*

- Our values and principles, on which we build our work.

About Swedish Life Cycle Center - an introduction

Swedish Life Cycle Center is a center of excellence and a joint collaboration platform for academia, research institutes, industry and government agencies – fostering competence building and knowledge exchange in the advance and application of the life cycle field.

The societal challenge and the life cycle perspective

We are collectively facing immense challenges with unsustainable consumption and production systems which lead to an increased burden on the environment and on society. A better understanding of the life cycle perspective is a key to achieving sustainable solutions (environmental, social and economic). In our global world, decisions rarely only make an impact within a country's national borders or in a company's own production. Society consists of a chain of organizations and individuals, moving resources. The only way to address sustainability issues on a long-term basis is with a holistic life cycle perspective, which aims for resource efficiency and minimized environmental and social impacts without suboptimal solutions, while also creating new business opportunities and innovations.

A life cycle perspective

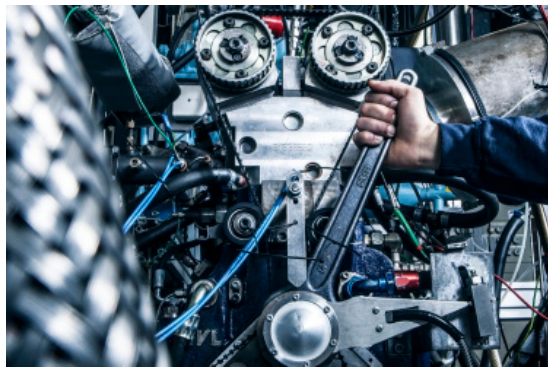
One of the advantages of a life cycle perspective is the focus on different parts of consumption and production systems and the links between them.



It highlights the fact that actions at one end of the value chain also affect other parts of the chain. With a life cycle perspective, sub optimization can be avoided, and optimizations made in value chains are

encouraged. In other words, a life cycle perspective is necessary for real sustainable improvements.

To address major societal challenges in a comprehensive manner, the life cycle concept provides a means of increasing efficiency, reducing environmental and societal impacts and conserving resources. All processes are covered – from raw material acquisition to the end-of-life and next life of a product, via production and the use phase. Both physical and monetary flows are covered within the life cycle concept, which illustrates how the entire chain of actors work together to create products and services.



Vision, mission and organization

Our mission is to work for the integration of the life cycle perspective into processes and decision making in industry, government policy and other parts of society, developing products and services with increased resource efficiency that enhances sustainable consumption and production patterns. This should open up possibilities of working towards a more circular economy and meet common sustainability challenges and sustainable development goals.

*“ Credible and applied
life cycle thinking globally.”*

- Our vision

Swedish Life Cycle Center has its organizational affiliation at Chalmers University of Technology. Host department changed during stage 8 from

Gothenburg Centre for Sustainable Development (GMV) to Technology Management and Economics (TME). Production is the host area of advance at Chalmers.

Partner constellation and areas of focus have varied since the center was founded in 1996 but the focus on applied life cycle thinking has remained at its base. Stage 8 included 15 partners representing three universities, two research institutes, nine industry partners and one government agency. Swedish Life Cycle Center also hosted a collaboration platform for seven government agencies.

The center is partner driven and ensures a neutral

platform and an inviting meeting environment where each partner is equal. The collaboration is regulated in a main agreement for partners, includes confidentiality aspects promoting transparency and an open and trusting dialogue between all.

The broader role

Swedish Life Cycle Center has a broader role, i.e. its ability to identify common needs, projects and partner constellations and also its connection and inspiration to research projects managed outside of the center (even when originally initiated by the center). In many cases the center also acts as a national body for life cycle related issues and gives support and input to government and funding agencies.



Our contribution to sustainable development 2016-2018

During stage 8 the center has run eight research projects, organized two expert groups and seven working groups. Expert groups manage specific tasks or give strategic advice and influence other initiatives. Working groups address hands-on issues, methodologies, new research questions and joint strategic intelligence – thereby building competence and exchanging knowledge between experts.

Influenced new ISO standard

Monetary valuation of environmental impact has gained increased importance as a basis for decisions in sustainability issues (easy to use and data are especially valuable in the occurrence of goal conflicts). The field has been addressed within the center for several years, e.g. through development of the Environmental Priority Strategies (EPS) method, developed by several center partners and used by players in Sweden and internationally. Within the working



Bengt Steen (Professor Emeritus, Chalmers), Project Manager for the research project Development of methodology to communicate environmental damage cost data.

group *Get the prices right* various research projects have been initiated as well as collaboration with international stakeholders. Through SIS: Swedish Standards Institute, the group initiated the international standard ISO 14008 – *Monetary valuation of environmental impacts and related environmental aspects* and in 2016 more than 30 international experts were gathered in Gothenburg. There is a close connection between ISO and Swedish Life Cycle Center. SIS runs the international ISO secretariat and the convenor of the process is also chairman of the

center working group *Get the prices right*. Thanks to new knowledge from the recently completed research project *Development of methodology to communicate environmental damage cost data* the standard is now approaching launch. The center and its experts have been recognized internationally through publications and have been invited to discussions and presentations in both national and international contexts.

“ The working group *Get the prices right* has been effective in bringing the standard forward within the time frame of the project, appreciated within ISO.”

Jimmy Yoler, SIS & secretary for the ISO 14008 group

Increased impact of life cycle information

Within the area of life cycle management the center project *Adapted decision support for increased energy efficiency in value chains* aimed to facilitate for various functions of a company to achieve better environmental performance through impacting decisions and actions throughout the company.



Emma Rex (Senior Researcher and Group Manager, RISE), Project Manager for the research project Adapted decision support for increased energy efficiency in value chains.

The project was a result from an earlier project within the center and has been used as a platform for sustainability managers to meet and discuss similar issues among different cross companies. The project has been highlighted by partners to have provided

valuable input in their internal work and it generated a guide on how to introduce the life cycle perspective in environmental management systems – something which is already being used by one of the partners in workshops on ISO 14001:2015 Environmental management systems.

With funds from Swedish Energy Agency

A common platform for knowledge building and collaboration is crucial to spread and develop life cycle thinking globally. During stage 8 the center has increased its collaboration and outreach with its extended network, including government agencies, small & medium sized enterprises and other industry sectors, as well as increased the dialogue with funding agencies.

“ Thanks to Swedish platform for the life cycle perspective it is possible to gather a crucial knowledge base within the life cycle field.”

Susanna Widstrand, Research Administrator
Swedish Energy Agency

In January 2017, the center was granted funding from Swedish Energy Agency for the *Swedish platform for the life cycle perspective*, to continue strengthening national collaboration and engaging more organizations in applying the life cycle perspective in decision making. The platform has made it possible to put resources in involving and informing actors also outside the partner community, e.g. webinars and co-arrangements, but also strengthening existing collaborations, e.g. between the partner universities. The platform project will run until May 2020.

Government agencies in close collaboration
The interest in life cycle thinking among government agencies is increasing. A need for collaboration on life cycle thinking was identified by the Swedish Environmental Protection Agency. A formalized collaboration was set up in 2016 involving a recurrent dialogue to increase the collaboration for sharing knowledge and experiences on a variety of topics e.g. LCA data, Environmental Product Declarations (EPD) and Product Environmental Footprint (PEF). The group also initiated the public seminar *Sustainable procurement – the*

role of life cycle perspective, held in 2018.

“ The center gathers academia, industry AND authorities at the same table. That is unique!”

Lars-Gunnar Lindfors, Senior Advisor IVL

Environmental footprint process – important initiative to influence

The center expert group *Environmental Footprint* has over the years followed and been part of the development of the EU Product Environmental Footprint (PEF) and Organization Environmental Footprint (OEF) process and provides expert support and advice



Elin Eriksson (Director Organisations, Products and Processes, IVL) at PEF seminar in May 2018.

through the Swedish EU representatives. The process aims to develop a harmonized methodology for calculation of the environmental footprint of products, services and organizations based on transparent methodologies. Partners have, through the center,

“ Swedish Life Cycle Center sees beyond national and industrial borders. With its unique working groups, the center can affect the international development in the life cycle field.”

Elin Eriksson, IVL & Chair for the EF Expert Group

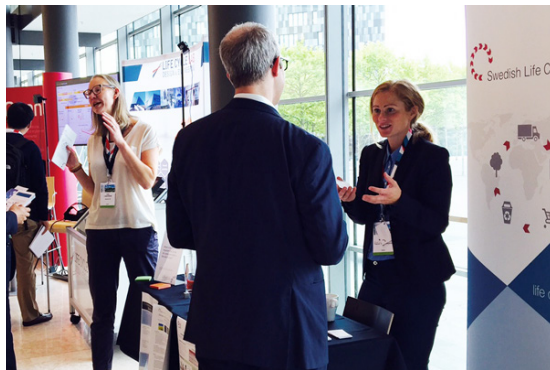
direct access to the Steering Committee and the Technical Advisory Board (the former represented by Swedish Environmental Protection Agency and

the latter by IVL Swedish Environmental Research Institute – both active in the center expert group, chaired by IVL).

In 2017 the center arranged a Nordic workshop together with the *Nordic Environmental Footprint Group* of the *Nordic Council of Ministers*, gathering hundreds of LCA experts and practitioners. This was a successful way of collecting experience and knowledge input on the methodologies to bring to the EU Commission. In 2018 a seminar was organized to provide Swedish organizations with latest news from the EU final conference of the pilot phase as well as updates on the transition phase. Environmental Footprint methods have been tested 2013-2017 and based on the results the European Commission will propose how to use them in policies.

International presence

In 2017 the center became a member of the new *United Nations Environment Life Cycle Initiative Strategy* – a way to further influence the global life cycle development. The center holds a strategic partnership with *Forum for Sustainability through Life Cycle Innovation (FSLCI)*. The center has also supported the



Exhibition at LCM2017: Lena Landström (Environmental Advisor, Vattenfall) & Anna Wikström (Technical Secretariat).

strategic development of the *Sustainable Development Solutions Network Northern Europe (SDSN-NE)*, the *UN Environment Life Cycle Initiative* and the national work for the *UN Environment 10 Years Framework Programme on Sustainable Consumption and Production*. In all of these, *Agenda 2030*, *circular economy* and *Sustainable Development Goals* are in focus. The center has been represented at several national and international conferences and workshops, e.g. *National workshop on Sustainable Consumption*, *SDSN-NE launch*, *Life Cycle Management 2017*,

Indian Life Cycle Management Conference 2017, *Life Cycle Innovation Conference 2018*.

LCA data - accessible and transparent

Several steps were taken during stage 8 towards making LCA data more accessible and transparent



Network Conference about LCA data, 2017: Christoffer Krewer (LCA expert & Project leader, RISE) is engaged in the group Data Strategy.

globally, as well as working for a national LCA data infrastructure. The project *National data strategy for sustainable innovation* was managed and coordinated by the center and results from the project demonstrate benefits of a common national strategy for life cycle data, where increased availability of reliable data has the potential to strengthen Swedish operation on an international market.

“ The establishment of a Data Strategy Expert Group must be acknowledged, allowing the center to contribute to UN Environment’s work towards GLAD.”

Matthias Finkbeiner, Professor at Technische Universität Berlin & one of the reviewers of the center in 2018.

During stage 8 the expert group *Data Strategy* continued, allowing the center to follow and influence *United Nations Environment’s* work towards *Global Life Cycle Access Data network (GLAD)* as well as to investigate requirements needed for a Swedish national database to be connected to GLAD in the future. In 2015, the center was invited to establish a partnership with *United Nations Environment Programme (UNEP)* with the aim to investigate in which direction the GLAD initiative should continue. The

work was e.g. presented by one of the representatives from the center partners in a workshop in Brazil 2016.

A Network Conference was held in 2017 emphasizing the importance of LCA data for sustainable consumption and production and the importance of a life cycle perspective in order to achieve *Agenda 2030*. Speakers from *UN Environment*, among others, gave the latest updates on GLAD.

Strengthened scientific quality

Close collaboration between Swedish researchers is key to securing knowledge and capacity in Sweden. In stage 8 the Board decided to establish a *Scientific Advisory Group* with the aim to strengthening the scientific quality in the center. In 2017 the center initiated the *Academy group* to increase the collaboration between academic researchers and better address questions of interest to the academic partners.

“ Swedish Life Cycle Center has been instrumental for the development and adoption of the life cycle perspective in Swedish companies and made important contributions to international standardization in the life cycle field.”

Anne-Marie Tillman, Professor at Chalmers & Chair for the Scientific Advisory Group at the center

In 2018 the group organized a symposium to gather academia to discuss methods, materials and experience from teaching LCA. Further on, the group was the focal point of the initiative for a Swedish PhD course which started in October 2018.

Life cycle thinking for a wider audience

Outreach and spreading knowledge in life cycle thinking in the society were high on the agenda during stage 8. Several projects were completed to spread examples on how organizations use the life cycle perspective for various needs and decisions, such as strategies, product development and marketing. The projects aimed at better understanding how business functions can benefit from life cycle information and give support in decision making.

Applied life cycle thinking – a two-day course for

professionals, was developed and given in 2017, in Gothenburg and Stockholm. Professionals from government agencies and companies participated.

“ The course gave me basic knowledge of the entire LCA field and an applicable understanding thanks to guest lecturers from the industry.”

Course member in Stockholm, 2017

Co-arranged activities often aim to broaden the target group to professionals not yet active in the life cycle field. E.g. the role of a life cycle perspective in environmental management was covered in a co-



Karin Sanne (Group Manager for the LCA & Environmental Management Group, IVL), one of the course leaders at the two-day course *Applied life cycle thinking* in 2017.

arrangement with SIS, and at the *Program Conference Renewable Transportation Fuels & Systems*, arranged together with *f3 Swedish Knowledge Centre for Renewable Fuels*, the center presented how the life cycle perspective is used for decision making in business and government. During stage 8, the center with its partners was invited to many conferences and seminars, both national and international, to raise life cycle thinking and circular economy on the agenda.

Addressing gaps in existing research

LCA for vehicles started as a working group in the beginning of 2017 together with the Swedish Energy Agency and the Swedish Transport Administration. The agencies had identified gaps in the existing guidelines and research of electrified vehicles and asked the center through the project *Swedish platform for the life cycle perspective* to gather a group. Due to the large national interest, the working

group includes both center partners and external actors. The initiation of the working group is an example of the center's ability to easily coordinate experts from various organizations and to act as a unique focal point for LCA in Sweden. The working group has received attention from international organizations.

“ The center is a bridge between academia and industry in making life cycle thinking and research applicable for all using LCA to support sustainable products and services.”

Susan Iliefski-Janols, Essity Hygiene and Health & member of the center Board

Arena for interactions and actions

Swedish Life Cycle Center's networking activities are invaluable cross roads for interaction between researchers and practitioners. These are highly appreciated by center partners; partly for the networking opportunity provided and partly for the topics covered (e.g. *Why invest in LCA-data?* and *The role of life cycle thinking in a circular economy*). During stage 8, 36 events were arranged such as



Network Conference and 20 Years Anniversary in Gothenburg 2016.

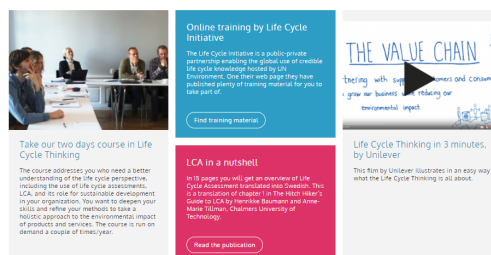
network conferences, workshops, seminars and webinars as well as contributions to national and international conferences. The activities were either internal for partners or for the center's external network. An increase of activities was possible thanks to the project *Swedish platform for the life cycle perspective*.

Communication for a greater reach

Swedish Life Cycle Center monitors the development of research, policies and application of the life cycle perspective and spread to its network in various internal channels. Outcomes from the center are distributed to an extended network of stakeholders; the news mirrors the center's activities as well as put spotlight on the global sustainability agenda.

Learn more about life cycle topics

There are plenty of Swedish and international actors that contribute to the knowledge building within the life cycle field. Below are some advice:



The new website was launched in February 2018.

Thanks to the project *Swedish platform for the life cycle perspective* the center had resources for one person dedicated to the center's communication. Several moves were made during the stage: a new graphic profile, homepage and web forum improved the possibilities to collaborate and present the center in a comprehensive way. Channels like twitter, PR and public newsletters were also developed, in order to reach out to an extended life cycle network with results and good examples.

Center of excellence

In 2018, the center was externally reviewed according to policy and guidelines for centers at Chalmers. The evaluation focused on collaboration, utilization and research during stage 8 and its operational plan.

The external reviewers expressed the importance of Swedish Life Cycle Center within Swedish organizations and its contribution to the international development of the life cycle field. They also discussed the great impact potential that the center has to penetrate in society and affect user behavior.

Finally, the external reviewers concluded that the goals for stage 8 were achieved and recommended a continuation of the center.

Voices from the external review

“The center’s excellent overall standing in the international scientific community of the field clearly justifies the continuation of this model in the coming years.”

- Matthias Finkbeiner, Professor Technische Universität Berlin
& reviewer of the center in 2018.

“An organization that brings together science, industry and government is a role model for successful implementation of life cycle thinking in society.”

“A key strength of the center is the increasing number of relevant partners from academia, industry and government agencies. This is clearly one of the success factors that contributed to the strong record of accomplishment of the Swedish LCA community.”

- Matthias Finkbeiner, Professor Technische Universität Berlin & reviewer of the center in 2018.

“Swedish Life Cycle Center has since its start been seen as a fundament and portal in the community of life cycle practitioners in Sweden.”

“The center has played an important role in the development of LCA in Sweden and globally - especially in the work with data and standardization. In addition, the centre plays an important role in the implementation of life cycle thinking and tools to be used.”

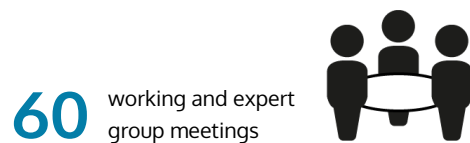
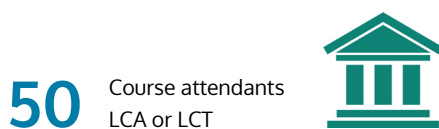
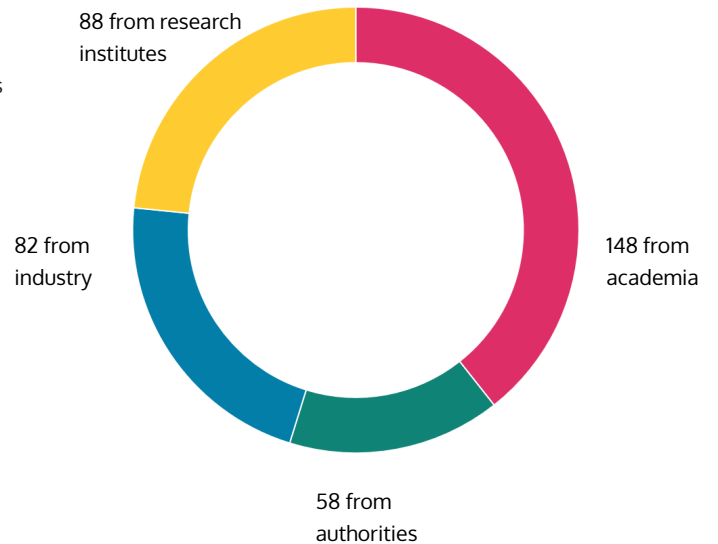
- Dag Lundén, Environmental Manager Telia Company Technology Sweden & reviewer of the center in 2018.

“By sharing best practice with the center’s industry partners we can improve our LCAs and speed up implementation.”

- Anna Widerberg, Group Manager Environmental Attribute and Material Management at Volvo Cars, in an interview for the external review.

The network in numbers

Applied life cycle thinking has always remained in focus and this has gathered experts from the partners, building a critical mass of researchers and practitioners who use the center as their common arena upon which further activities and perspectives are developed over time. Below a summary of stage 8:



Research projects

Good Examples - Inspiration to energy efficiency through the entire value chain

Project manager: Rebecka Hallén Jorquera, Anna Wikström

Funded by: Swedish Energy Agency

Support for innovative and sustainable business decisions

Project manager: Maria Lindblad, IVL Swedish Environmental Research Institute

Funded by: VINNOVA

Integration of environment and economy – economic valuation (IMP)

Project manager: Bengt Steen

Funded by: VINNOVA

National data strategy for sustainable innovation – a national research and innovation agenda

Project manager: Carl Karheiding, Sara Palander

Funded by: Swedish Energy Agency

Adapted decision support for increased energy efficiency in value chains

Project manager: Emma Rex, RISE Research Institutes of Sweden.

Funded by: Swedish Energy Agency

Development of methodology to communicate environmental damage cost data

Project manager: Bengt Steen, Chalmers University of Technology.

Funded by: Swedish Energy Agency

Swedish platform for the life cycle perspective

Project manager: Anna Wikström, Daniela Michael

Funded by: Swedish Energy Agency

Modeling of recycling

Project managers: Thomas Ekvall, Chalmers University of Technology / IVL Swedish Environmental Research Institute & Jenny Lagergren, Technical Secretariat.

Funded by: RE:Source

Working groups

Academy group

Biodiversity & land use

Dialogue group for government agencies

Get the prices right

LCA data & methodology

LCA & vehicles

Social LCA

Expert groups

Data strategy

Environmental footprint

Board 2018

Lars Mårtensson, Chairman

Lars-Gunnar Lindfors, Secretary (adj)

Anna Widerberg, Volvo Cars

Carl Karheiding, Acting Director Swedish Life Cycle Center (adj)

Elin Eriksson, IVL Swedish Environmental Research Institute

Elisabet Kock, Swedish Environmental Protection Agency

Emma Ringström, Sustainability Manager, Nouryon

Holger Wallbaum, Chalmers University of Technology

Karin Eriksson, Volvo Group

Katarina Lorentzon, RISE Research Institutes of Sweden

Larissa Strömberg, NCC Construction

Lena Landström, Vattenfall

Martin Erlandsson, KTH Royal Institute of Technology

Mats W. Lundberg, Sandvik Materials Technology

Stefano Marzola, SKF

Susan Iliefski Janols, Essity Hygiene and Health

Susanna Widstrand, Swedish Energy Agency (adj)

Torun Hammar, Post doc Energy and technology, SLU

Swedish University of Agricultural Sciences

Activities 2016

Swedish Life Cycle Center has arranged activities within utilization, innovation, research and education. Below is a selection of events arranged or co-arranged by the center and the project *Swedish platform for the life cycle perspective* (funded by the Swedish Energy Agency).

JANUARY 21

Seminar: Environmental Footprint process, Gothenburg,

JANUARY 28

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

FEBRUARY 4

Workshop: Produktions- och konsumtionsrelaterad miljödata.

FEBRUARY 11

Network conference: Gothenburg.

FEBRUARY 23

Webinar: Energy efficiency along the value chain. Emma Rex, RISE Research Institutes of Sweden.

APRIL 4

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

MAY 9

Workshop: Nationell Agenda för livscykeldata, Stockholm.

MAY 24

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

JUNE 17

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

AUGUST 24

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

OCTOBER 10

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

NOVEMBER 10

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

NOVEMBER 23

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

DECEMBER 12

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

Activities 2017

FEBRUARY 23

Workshop: Nordic workshop Environmental footprint. Co-arrangement with Nordic Environmental Footprint group (NEF) and IVL Swedish Environmental Research Institutes, Stockholm.

MARCH 24

Webinar: Putting a cost on environmental damages – a method for innovation with Lisbeth Dahllöf, IVL Swedish Environmental Research Institute.

MAY 11

Webinar: Product Environmental Footprint pilot on batteries with Claude Chanson.

MAY 17

Network conference: Why invest in LCA data?, Stockholm.

JUNE 20

Webinar: Lars Mårtensson, new chairman of the Board.

SEPTEMBER 3-6

Conference: Exhibition booth and sessions at LCM2017 (Life Cycle Management), Luxembourg.

SEPTEMBER 15

Webinar: SOCA – a database add-on for Life Cycle Sustainability Assessment with GreenDelta.

SEPTEMBER 26

Webinar: Updates on ISO 14008 with Bengt Steen, Chalmers University of Technology.

SEPTEMBER 26

Webinar: Bio based building materials with Diego Peñaloza, RISE Research Institutes of Sweden.

OCTOBER 3-4

Education: Applied Life Cycle Thinking, Gothenburg.

OCTOBER 6

Conference: LCA & vehicles, Gothenburg.

OCTOBER 25

Conference: Program conference Förnybara drivmedel och system. Co-arrangement with f3 and Swedish Energy Agency, Uppsala.

NOVEMBER 7-8

Education: Applied Life Cycle Thinking, Stockholm.

NOVEMBER 13

Workshop: Adapted decision support with Emma Rex, RISE Research Institutes of Sweden, Gothenburg.

Activities 2018

FEBRUARY 7

Seminar: Teaching LCA at universities. Arranged by the Academy Group, Gothenburg.

FEBRUARY 7

Network conference: The role of life cycle thinking in a Circular economy, Gothenburg.

FEBRUARY 14

Seminar: A Life Cycle Perspective on future capital intensive new technologies and systems. A co-arrangement with the Swedish Energy Agency.

APRIL 13

Webinar: Remanufacturing - what is it? with Erik Sundin, Linköping University.

APRIL 19

Seminar: The future for vehicle manufacturing. Arranged by working group LCA & vehicles, Stockholm.

MAY 22

Seminar: Latest news about Environmental footprint (PEF and OEF). Co-arrangement with IVL Swedish Environmental Research Institute, Gothenburg.

MAY 23

Seminar: Sustainable procurement - the role of a life cycle perspective, Stockholm.

JUNE 5

Webinar: Introduction to the EPS Enviro-accounting method with Tomas Rydberg, IVL Swedish Environmental Research Institute.

JUNE 20

Information meeting: Become a partner in Swedish Life Cycle Center.

OCTOBER 17-DECEMBER 20

PhD course: Advances in life cycle assessment, 5 HEC, Gothenburg. Organized by SLU and Swedish Life Cycle Center through a close collaboration in the Academy group.

OCTOBER 25

Webinar: Using EPS in product development with Mia Romare, IVL Swedish Environmental Research Institute, and Per Hanarp, Volvo Group Trucks Technology.

NOVEMBER 9

Seminar & workshop: LCA & vehicles, Gothenburg.

NOVEMBER 14-15

Conference: Presentation and exhibition boot at Nationell verkstad för hållbara livsstilar, Karlstad.

NOVEMBER 21

Webinar: Towards increased impact of life cycle information with Emma Rex, RISE Research Institutes of Sweden.

DECEMBER 12

Information meeting: Become a partner in Swedish Life Cycle Center.

List of publications

Adapted decision support for increased energy efficiency in value chains

Rex E, Fernqvist N, Ryding S-O, Karheiding C. (2018). Towards increased impact of life cycle information in product and service innovation. Accepted abstract/Conference presentation in the Life Cycle Innovation Conference (LCIC), August 2018, Berlin.

Rex E, Fernqvist N, Ryding S-O, Andréasson J, Dahllöf L, Karheiding C, Landström L, Ringström E, Sanne K, Widerberg A. (2018). Att införa ett livscykelperspektiv i miljöledningssystem – Inspiration, övningar och tips på tillvägagångssätt. Project report 2018:03, Swedish Life Cycle Center. Note: Report is not available in English (translation of title: Introducing a lifecycle perspective in environmental management systems – Inspiration, exercises and tips on approaches).

Rex E, Fernqvist N, Ryding S-O, Hallberg K, Ringström E, Landström L, Andréasson J, Widerberg A, Dahllöf L, Hallén Jorquera R. (2017). Tailored for decision – knowing your target group prior to adaptation. Accepted abstract/Conference presentation in the 8th International Conference on Life Cycle Management (LCM), September 2017, Luxembourg City.

Development of methodology to communicate environmental damage cost data

Steen B, Wikström A, Romare M, Lindberg J, Riise E, Rydberg T. (2018). Using monetary values of environmental impacts to support energy choices – three case studies. Project report 2018:02, Swedish Life Cycle Center.

Steen B, Hallberg K, Hanarp P, Lindberg J, Riise E, Romare M, Rydberg T, Wikström A. (2018). Communicating monetary values of environmental impacts – Case studies related to ISO DIS 14008. Accepted abstract/Poster presentation in SETAC Europe 28th Annual Meeting (Society of Environmental Toxicology and Chemistry), May 2018, Rome.

Steen B, Dahllöf L, Hallberg K, Lindberg J, Riise E, Romare M, Rydberg T, Wikström A. (2017). Managing choices of energyware by monetized impacts and resource values. Accepted abstract/Poster presentation in the 8th International Conference on Life Cycle Management (LCM), September 2017, Luxembourg City.

Isacs L, Finnveden G, Dahllöf L, Håkansson C, Petersson L, Steen B, Swanström L, Wikström A. (2016). Choosing a monetary value of greenhouse gases in assessment tools – A comprehensive review. Journal article in Journal of Cleaner Production vol. 127 (2016), pp 37-48.

Good examples – inspiration to energy efficiency through the entire value chain

Swedish Life Cycle Center. (2016). Good examples – Case studies within applied life cycle thinking. Published on One Planet Network (UN Environment 10 Year Framework of Programmes on Sustainable Consumption and Production).

Integration of environment and economy – economic valuation (IMP)

Ekvall T, Dahllöf L, Hallberg K, Hallén Jorquera R, Lindblad M, Riise E, Romare M, Steen B. (2017). Tailoring LCA results in monetary terms for decision support. Accepted abstract/Poster presentation in the 8th International Conference on Life Cycle Management (LCM), September 2017, Luxembourg City.

Steen B (2016). Calculation of Monetary Values of Environmental Impacts from Emissions and Resource Use – The Case of Using the EPS 2015d Impact Assessment Method. Journal article in Journal of Sustainable

Development vol. 9 (6), pp 15-33.

Steen B, Palander S. (2016). A selection of safeguard subjects and state indicators for sustainability assessments. Journal article in The International Journal of Life Cycle Assessment vol. 21 (6), pp 861-874.

Hallén Jorquera R, Lindblad M. (2016). Integration of environment and economy in product development gives opportunity for innovations. Project report 2016:6, Swedish Life Cycle Center.

National data strategy for sustainable innovation – a national research & innovation agenda

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A neutral platform


The partners of Swedish Life Cycle Center is the foundation. Partners contribute to activities, start cross-sector research projects, hold a seat in the Board and form the agenda of the center. Contact us if you are curious in partnership!


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Partners 2016-2018

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