



The Swedish Life Cycle Center

Summay Stage 6

1 October 2009 – 30 September 2012

Report no 2013:2

CPM – The Swedish Life Cycle Center

CPM – the Swedish Life Cycle Center – is a center of excellence for the advance of applied life cycle thinking in industry and other parts of society. CPM has been in existence since 1996, the constellation has varied, but the focus on environmental systems analysis for more sustainable products has been preserved. CPM contributes to its goal by gathering competence and providing methods for the advance of life cycle thinking.

CPM sees improvement of the environmental performance of products and services as an important and natural part of sustainable development. The life cycle perspective is gaining increased importance world-wide in business and in society. The result is seen in the many initiatives on legislations, standardizations, handbooks etc, but also in a higher and more spread general awareness about products' and services' impact on the environment and its role for sustainable development and long term profitability. The work within CPM is characterized by close and continuous interaction between academia, applied research institutes, industry and government in the common aim of credible and applied life cycle thinking globally.

This report summarizes activities and results for stage 6 of CPM – from October 2009 to September 2012.

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Main achievements

Stage 6 of CPM was a period of strategic repositioning. It was recognized in the board that the vision and goals needed an update, and that a stronger focus was necessary on international and national presence, awareness and recognition. The area of life cycle thinking is developing rapidly with a lot of initiatives ongoing in the world. CPM partners are well recognized on an individual level, and have a lot of knowledge, but to be able to impact on the international development, a stronger emphasis is needed on broader national collaboration and more international presence. The need for activities among the partners has also shifted from large research projects to joint strategic actions and closer dialogue also on practical matters.

Updates of vision, mission and goals

An update of the CPM mission, vision and goals were made by the CPM board during stage 6, resulting in the following:

Vision

Credible and applied life cycle thinking globally.

Mission

Working with applied life cycle thinking in industry and other parts of society to improve the environmental performance of products and services, as a natural part of sustainable development.

Overall goals

1. Implement life cycle thinking in decision making
2. Secure relevant and scientifically based methods and tools
3. Reinforce the competence on applied environmental systems analysis at highest international level

Forming the Swedish Life Cycle Center

Swedish actors have long been knowledgeable and forward-thinking in the area of life cycle assessment and life cycle management. In the rapid international development of today, every single player often lack the strength and coordination to keep up to date and take action. We therefore saw a need for a broad Swedish platform on life cycle management. A platform that is able to advance knowledge and competence as well as to take a lead in the international development. Based on this, an important focus

during Stage 6 was to broaden the scope of both partners (for a wider national representation) and range of activities (covering not only research but also strategic monitoring and activities to meet short term needs). As part of this work we also changed how CPM was expressed, from “CPM - center for environmental assessment of product and material systems” to “CPM – Swedish life cycle center”.

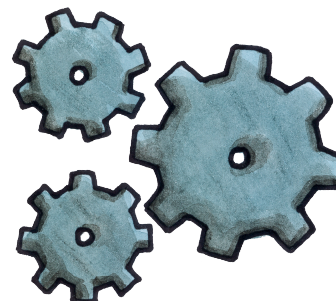
National and international recognition

The main strategic ambition during stage 6 was to create a broader national mobilization and recognition in order to get a stronger international position further on. This mobilization has occurred at many levels. We have broadened the contacts areas at Chalmers, with closer collaboration with e.g. Chalmers general management, the logistics and the production departments. We also initiated partner discussions with a range of potential new partners in CPM, and increased representation of CPM at international conferences and events.

The results are already showing on both a national and international level. KTH, SP and Vattenfall were welcomed as new partners for Stage 7. Vinnova recognized CPM as a national body for life cycle thinking and granted funding for both leading a national research and innovation agenda on life cycle based innovation, and for further strategic internationalization. Internationally, CPM was appointed hosts of the 6th International conference on Life Cycle Management to be held in August 2013. The Basque organisation IHOBÉ also ranked CPM no 1 of European centers on Ecodesign and Life cycle thinking in a survey made in collaboration with the European Commission.

Research projects

Listed below are research projects transacted by CPM during stage 6. The projects involved have ranged from demonstration projects to research projects in areas such as e.g. production and logistics.



TOSCA

The Tosca project – *Towards sustainable supply chains through a common approach for company strategic work and daily operations* - aimed to demonstrate how companies can work towards sustainable development in their value chains. TOSCA was jointly funded by the EU LIFE+ programme and AkzoNobel, SCA Hygiene Products AB and Chalmers University of Technology.

Participants

AkzoNobel Surface Chemistry

Johan Widheden, Project Manager
Emma Ringström
Karin Halldén
Sandra Bodén
Sofia Petersson
Kjerstin Ludwig
Klas Hallberg

SCA Hygiene Products

Ellen Riise
Eva Simmons
Ann-Christin Pålsson
Jenny Mattsson
Susan Iliefski-Janols

Chalmers ESA

Johan Tivander
Ulrika Palme
Bengt Steen
Anne-Marie Tillman

Aim and objectives

The main objective of the TOSCA project was to set up a website where company representatives on sustainability can gain knowledge and find examples of how other companies have tackled some of the obstacles in implementing sustainability thinking. Such obstacles include communication internally and externally, how to assess sustainability and the tools that can be used, and how to address suppliers. This knowledge was set up in a structure around organization and functions in a company as well as in a value chain perspective.

Results and main activities

The project resulted in a website where methods and examples on sustainable activities can be found. The website also provides background information and summaries on sustainable development as well as “getting started guides” on life cycle assessment, Carbon-footprint and Eco-efficiency. The website can be found at: www.tosca-life.info.



Publications and dissemination

In addition to the website, the project has resulted in publications, conference presentations and news articles.

- Martinsson, J., Peterson, S. 2011, *Implementation of sustainability objectives from a product value chain perspective*, Chalmers University of Technology report no. 2011:15, Göteborg
- Sonnen, M., 2008, *“Implementing Eco-efficiency in AkzoNobel”* Leiden University, Delft University of Technology & Erasmus University Rotterdam, Göteborg
- Tegstedt, F. 2010, *Eco-efficiency assessment of production of bleaching chemicals for the Elemental Chlorine Free, ECF, pulp industry*, Chalmers University of Technology report no. 2011:2, Göteborg
- Palme, U. 2011, *Report on Social aspects in work towards sustainable supply chains*, TOSCA project report Chalmers University of Technology
- Presentations at
 - *LCM2009* in South Africa
 - *LCM2011* in Berlin
 - *LCA XI* in Chicago
 - *4th ICIS World Purchasing Summit* in Boston
 - *Embedding Sustainability Requirements into Supplier Selection* in London
- Press cuttings in
 - *Process Nordic*, nr. 11, November 2008
 - *Stenungsundstidningen*, 10 March, 2009
 - *Miljö & Utveckling*, December, 2011
 - *Kvalitetsmagasinet*, December, 2011
 - *Universum Global*, Fall, 2011
 - *OneWeb* (AkzoNobel), Spring, 2011
 - *SCA news*, December, 2008

Environmentally strategic product and production development

Environmentally strategic product and production development aims to develop a strategic approach in the production development so that environmental issues are integrated in a proactive and systematic way into strategic decisions. The project is funded by Chalmers Area of Advance – Sustainable Production Initiative. Participating partners are Environmental System Analysis at Chalmers University of Technology, ABB, SKF and Volvo Technology. The project will continue until the end of 2014.

Participants

Chalmers ESA

Anne-Marie Tillman

Jutta Hildenbrand

ABB

Håkan Hultgren

Lennart Swanström

SKF

Martin Friis

Birger Löfgren

Volvo Technology

Henrik Kloo

Aim and objectives

The project investigate production development projects with regards to environmental information included in the decision making. The aim is to support especially production development by contributing environmental parameters that match information demand. As an important prerequisite to do so, the project plans to contribute a description of the existing organizational and operational structure for decision making to identify available knowledge and knowledge gaps.

Results and main activities

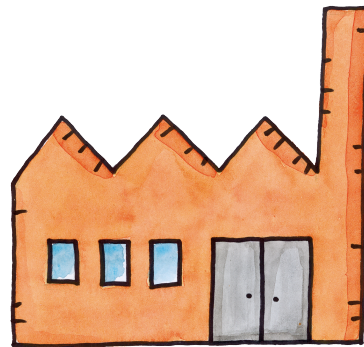
The project is carried out by using interview and document studies for cases in each participating company. To accomplish this, three (pre-) case studies with different decision contexts covering the adaption of a production to a new product design, a re-localization of a production site and the capacity enlargement of an existing production site have been chosen. For all three cases, experts from different fields within the companies are interviewed to understand their role in the development project and to understand the general structure of the development. Among the expected results is a description of the procedures that are currently followed in development projects. The extent to which environmental information is handled in different production development stages is described. From this, conclusions and recommendations for the environmental assessment of development projects will be derived. During interviews, time constraints in development projects and the organizational distance between life cycle specialists and operations as well as costs have been stated as barriers to include a life cycle perspective. Life cycle specialists are seen as a staff function (corporate research, center function) in the company and outside of production/operation.

Potential benefits of a life-cycle perspective are not highlighted in a way that makes them attractive enough to compensate uncertainty about future development. The role of specialists in a production development is not clear.

Consideration of local environmental effects on the other hand is well covered in operations, with defined routines and responsibilities. Local representatives for environmental issues have double functions and are operators in the production process. Cause-effect chains from emissions to environmental damages are acknowledged. Material losses are identified and monitored for cost and quality considerations e.g. by quality representatives. An immediate connection to environmental concerns like resource use or energy use is not established.

Publications and dissemination

- Presentation at the Conference *Greening of Industry Network (GIN)* 2012-10-24 in Linköping, Environmentally strategic product and production development.
- Planned publication of conference paper in *Journal of cleaner production* (invitation for potential publication in the GIN2012 Special Volume)



Analysis tool for calculating environmental impact and efficiency of transport systems

The project “*Analysis tool for calculating environmental impact and efficiency of transport systems*” is conducted by IVL, Chalmers logistics and transport, AB Volvo, SCA, ABB, AkzoNobel and SKF. The project is financed by VINNOVA and aims to develop a tool for concurrent studies of logistic costs and environmental impact from freight transport systems. The project will continue until the end of 2013.

Participants

IVL

Erik Fridell, project leader
Martin Jerksjö
Christina Wolf
Jenny Westerdahl,

Chalmers Logistics and Transportation

Dan Andersson, co-project leader
Vendela Santén
Arni Halldorsson

AB Volvo

Lisbeth Dahllöf
Cecilia Gunnarsson
Tommy Rosgardt
Sofia Ohnell

SCA

Susan Iliefski-Janols
Mats Lagerholm
Matilda Sjölin

ABB

Lennart Swanström
Per-Anders Thunell

SKF

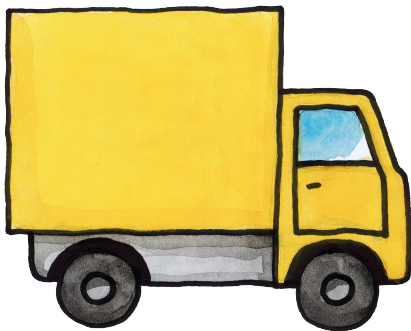
Eva Nordström
Maria Ydkvist

AkzoNobel

Sara Tollin
Emma Ringström

Aim and objectives

It becomes increasingly important to analyze the impact and effectiveness of freight transport systems in one context. This project is developing a tool that is used to analyze freight transportation with the aim of practical improvement of transport system performance. The tool provides estimates of 1) transport efficiency, flexibility, productivity (expressed as total logistics cost), and 2) environmental and other external interference (expressed as external costs). The tool addresses all modes of transport and a wide variety of parameters besides CO₂ emissions. An important part of the project is the development of concrete results regarding environmental and logistics cost for



different scenarios. Especially interested is to use this tool in various case studies to study when there are conflicts or synergies between environmental and logistical efficiency. A challenge in the case studies is to get the data needed for the calculations. The case studies include typical purchase situations of logistics services, analysis of transport projects and analysis of logistics at the strategic level.

Results and main activities

The tool is currently under beta-testing. It includes a number of novel features such as calculation of external costs for different regional types and transport modes, calculations of logistics efficiency including valuation of transport times and delay risks, initial evaluation of infrastructure and calculation of uncertainties in all resulting values etc. A number of case studies have been undertaken in collaboration with the partner companies.

Publications and dissemination

- Halldorsson, A., Andersson, D., Fridell, E. 2009, *Assessing effectiveness and environmental impact of freight transportation chains*, in manuscript
- Santén, V., Westerdahl, J., Fridell, E. 2012, *Case study at ABB*, CPM-report no. 2012:2 Chalmers University of Technology, Göteborg
- Santén, V., Andersson, D. *The total logistics cost concept*, in manuscript
- Wolf, C. *Case study for SCA*, Internal report
- Wolf et al, 2011, *Effect measurement of (goods) transport noise*, CPM-report no. 2011:2 Chalmers University of Technology, Göteborg

Life Cycle Based Innovation

CPM was selected by VINNOVA to develop a research and innovation agenda on how Swedish actors through a life cycle perspective can strengthen their competitiveness, attractiveness and global leadership. The agenda work started fall 2012, and will continue until March 2013.

Participants

The following people are part of the “executive committee” of the project:

Chalmers

Emma Rex, CPM (project leader)

Sara Palander, CPM (communication)

Anne-Marie Tillman, ESA

KTH

Åsa Moberg (assistant project leader)

Elisabet Ekener Petersen

Göran Finnveden

SP

Johanna Berlin

IVL

Elin Eriksson

AkzoNobel

Klas Hallberg

Volvo

Carin Ström

Swedish EPA

Elisabet Kock

Aim and objectives

The aim of the process was to create an agenda that described how Sweden could be established as a leading nation in applying life cycle thinking as a basis for innovation which could strengthen the academic and business competitiveness, attractiveness and global leadership. Swedish actors have long experience of life cycle thinking and have been working together for a long time to establish the life cycle perspective in decision-making at national and international level. The agenda is developed to strengthen Swedish actors and increase the industrial and academic competitiveness by being a forerunner in working with sustainable production and consumption systems.

Results and main activities

The agenda work is focused on creating a broad national dialogue, and has so far involved active contribution from about 50 different organizations.

Publications and disseminations

The project will result in a public national innovation and research agenda for life cycle based innovation by 2013.

EPS in design

The project aims to integrate the EPS methodology in the product development software used in the department of product development. The project is funded by Chalmers Area of Advance – Sustainable Production Initiative. Participating partners are the divisions of Environmental System Analysis and Product development at Chalmers University of Technology. The project will continue until the end of 2014.

Participants

Chalmers PPU

Candy Hung

Andreas Dagman

Rickard Söderberg

Kristina Wärmefjord

Lars Lindkvist

Chalmers ESA

Johan Tivander

Bengt Steen

Aim and objectives

The project aims to integrate the EPS methodology in the product development software used in the department of product development

Results and main activities

Software allowing the use of EPS for eco-design in connection with tolerance optimization in product development

Publications and disseminations

- Hoffenson, Steven; Dagman, Andreas; Söderberg, Rikard: *A Multi-objective Tolerance Optimization Approach for Economic, Ecological, and Social Sustainability*. 20th CIRP International Conference on Life Cycle Engineering (LCE),
- Steen, B. *LCA in design – a learning tool*, available free at <http://lifecyclecenter.se/tools-data/lca-in-design/>

The software developed has been used in education of engineers.

The ESA Database Project

The aim of the ESA Database Project was to make LCI data produced at ESA available online at the CPM LCA Database and to facilitate future online publishing. The project was funded by Swedish Research Council, VR.

Participants

Chalmers

Filippa Fuhrman

Johan Tivander

Katarzyna Iwanek

Aim and objectives

When assessing the environmental impact of technical systems for e.g. the purpose of technique or product development, system research, teaching or policy making, there is a need for environmental data on the technical processes of the systems. The purpose and goal of the ESA Database Project was to make LCI data produced at ESA, from 1990 to 2010, available online at the CPM LCA Database and to facilitate future online publishing. During the project, 162 process data sets have been published online, an increase of 30 % of processes in the database.

Results and main activities

Technical improvements of the software and the website interface have been made throughout the project and a start-up method for future documenting and publishing at ESA has been made, containing the ESA DBP Quality Criteria, relevance directions and the description of the documenting and reviewing procedure. The project ran from March 2009 to March 2011 and is a part of a large research investment made by the Swedish Research Council, which aims at making an ample amount of environmental and climate data open available in a national database on the Internet – the ECDS (Environmental and Climate Database Sweden). A link to the CPM LCA Database is consequently registered in the ECDS.

Publications and dissemination

- Fuhrman, F., Iwanek, K., Tivander, J. 2011, *ESA Database Project – making existing and future LCI data available online at the CPM LCA Database website*, CPM Report No. 2011:1 Chalmers University of Technology, Göteborg

Information systems for resources in value chains and recycling

This project was a pre-study to explore possibilities to create an information system to track valuable as well as hazardous material in value chains and recycling. The project was funded by VINNOVA and the project team consisted of IVL, Chalmers, AB Volvo, and STENA Metall. ABB, AkzoNobel, SCA, SKF contributed through participation in workshops during the project.

Participants

IVL

Tomas Rydberg, project leader
Hanna Ljungkvist
Anders Björk

Chalmers ESA

Bengt Steen
Johan Tivander

CPM

Emma Rex
Sara Palander

AB Volvo

Lisbeth Dahllöf

STENA Recycling/Stena Metall

Mats Tarring
Märta Bergfors

Aim and objectives

Several national and international institutions have long emphasized the need for efficient material cycles and increased resource efficiency. Product developers, sustainability analysts, the recycling industry and authorities are those who have the greatest ability to contribute to increased resource efficiency. Today, these actors work relatively separate. This project aimed to develop an information system which supports the communication between the actors and give them possibilities to increase resource efficiency and improve economy. The main aims of the system was to (1) reduce business costs to manage environmental information requirements in the value chain, and (2) make recovery profitable and efficient and also increase access to and use of recovered materials. Product developers need tools for assessing end-of-life sceneries for product concepts on different markets and to assess how the future market for recycled material may look like. The recycling industry needs to be prepared in time and know which products that will be introduced to the market and turn up in the material flows they handle. Government organizations need information to monitor their goals and targets as well as develop their regulations. Companies also need help in answering a number of questions about their products contents they are faced with. The information system was developed in parallel with a number of case studies, where it was used for business development through product development and development of new recycling processes.

Results and main activities

The main objective has been to outline a business plan, by analyzing the market, competitors and needs, within and across business sectors and in society, by outlining product concepts, and start establishing an organization in which to advance the development. The analysis has highlighted that there are several initiatives that might serve as partial solutions. A challenge as well as an opportunity in order to pursue the project idea was therefore to integrate these partial solutions. In parallel with developing the system, a multitude of services could be developed. In the project, we have selected some core services, for further development. These include information sharing services, integrating product composition information into internal business systems, requirement fulfillment reporting, and independent testing. Concurrent system and service development is regarded a key success factor. The project team has identified some key competencies required for the continued development. An application was submitted to VINNOVA for continued work, but his application was not granted funding.

Publications and dissemination

- Rex, E., Palander, S., Steen, B., Tivander, J., Rydberg, T., Stensson (Ljungkvist), H. 2012 *Resursintelligens - Affärsutveckling genom informationssystem för resurser i värdekedjor och kretslopp*, CPM Report No. 2012:1, Chalmers University of Technology, Göteborg, Sweden, 2012

Working groups

The need for exchange of knowledge and information of more practical character is of high value among CPM partners. The CPM partners came up with the idea of starting smaller working groups to enhance these unique possibilities of collaboration with others sitting with the same issues, thoughts, or interest etc. Working groups in CPM started within different areas, depending on interest and upcoming initiative.

CPM working groups normally starts without any external funding. The CPM secretariat supports the upstart process, the coordination and communication, and participating partners do so in kind. Each working group has appointed one responsible person, who will chair the meetings and do all the preparation work. Meetings are held between two and nine times per year through web, phone or physical meetings. The aim of working groups is varying and is set by the participants, but may include;

- Short-time issues
- Identify further research needs
- Prepare for applications
- Strategic intelligence
- Joint understanding on issues
- Direct feedback on ongoing projects within different organizations
- Knowledge building

During stage 6 CPM started three working groups; ILCD-handbook, Get the prices right and Data & Databases.



ILCD-handbook

The International Reference Life Cycle Data System (ILCD) Handbook was published 2010 by JRC on behalf of the European Commission. The handbook is a summary of existing methods and provides good practice method guidance for LCA in policy and business. The aim of the handbook is to support public and private sector dealing with environmental decision related to products, resources and waste management.

Aim of this working group

“Interpret and better understand the ILCD-handbook related to your work.”

Activities

- Reading circles during October 2011 with 15 participants within different organizations.
- Workshop: the ILCD-handbook in practice, in September 2012 with 20 participants.

Chairs

Birger Löfgren, SKF

Andreas Emanuelsson, SIK



Get the prices right

At the UN Rio conference 1992, the “polluter pays principle” was spread over the world. It was accepted by many governments that external costs due to environmental impacts should be reflected in the price of a product. During the EU IPP initiative (IPP = integrated product policy) the policy statement was changed to “get the prices right”, probably to give it a

more positive tone and to acknowledge that there are positive externalities too, especially when changing to a sustainability approach. But what are right prices? CPM has through the EPS methodology knowledge within the area and therefore has a unique opportunity to contribute to knowledge and influence what "right prices" are internationally.

Aim of this working group

Build up knowledge within the area of external costs, damage costs and monetization and also be prepared for new requirements and upcoming policies and know how to reduce these costs.

Activities

Five meetings have been held

- Two master thesis:
 - Ligander, R., Rimark, F. 2012, *Media coverage market power and internalization of external costs*, University of Gothenburg project no. 2012:54, Göteborg
 - Sävström, A. 2012, *Integrating environmental aspects into management accounting practices*, CPM-report 2012:3 Chalmers University of Technology, Göteborg
- Discussion meeting with the organization "True Price"
- Started an FP7 application process
- Started mapping existing methods and initiatives



Chairs

Bengt Steen, Chalmers/ESA
Sara Palander, CPM

Data & Databases

Data and data handling has always been a topic within CPM, and during the last year our database was updated with 150 new data. Discussion about how to handle data has again been a topic in our platform. Due to the ILCD-handbook, the interest and discussion has increased.

Aim of this working group

Utilize our earlier work with database format and data quality. Also disseminate information about data, databases and its quality. Address issues related to data and data quality of relevance for LCA practitioners.

Activities

Seven meetings have been held. Topics covered in this group:

- Practical handling of data from a user perspective
- Collaboration with suppliers and customers, and usage of results
- How to influence data suppliers
- The use of i-report

Chairs

Ulrika Överstam, ABB
Jennifer Davis, SKF
Sara Palander, CPM

Capacity building and dissemination



CPM builds capacity at many levels. During stage 6, CPM has been involved in professional training, higher education and arrangement of a number of events. The homepage have been renewed and various ways of connecting with the members have been tested.

Professional training in Applied LCT

Applied life cycle thinking was designed as a 2-day training program for professionals, developed by CPM and Chalmers Environmental Systems Analysis in collaboration with SKF and Naturvårdsverket. The program was developed as a response to a need among the partners and aimed to create an overall understanding of life cycle assessment, life cycle management and life cycle thinking. All this with the intention to display how these approaches can be applied in the everyday work of each participant. Naturvårdsverket did for example use the education to build their own life cycle analysis specialist competence.

The training program was given from December 2010 to January 2011 and was attended by 15 participants.

CPM representation in higher education

Both CPM administration and partners have been active holding guest lectures in higher education, for example in the following courses at Chalmers:

- Environmental management
- Environmental systems analysis
- Life cycle assessment (thematic lectures and industry case studies in the LCA main course and introductory lectures for students in design, production and IT)

Student Theses

CPM has been actively involved in a number of student theses during Stage 6:

- Karlsson, I. 2010, *Development of operational indicator framework for monitoring and controlling environmental impact from freight transport at*

ABB (supervision from Vendela Santen) Chalmers University of Technology report no. E2010:075, Göteborg

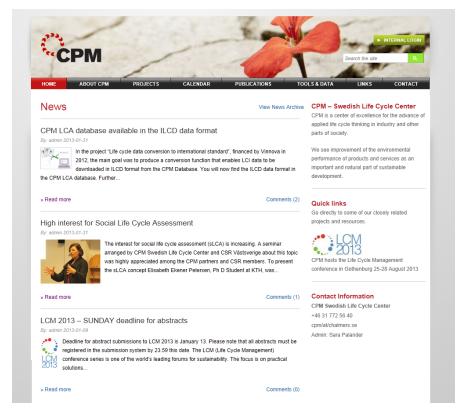
- Xing Lan, Yu Liu, 2010, *Life Cycle Assessment of Lawn Mowers – Two Movers' Case Studies*. Report - Department of Environmental Systems Analysis, Chalmers University of Technology, ISSN 1404-8167; nr 2010:11 (Supervision by Emma Rex)
- Gullbring, A-S., Nilsson H., (2010) *Fluffets väg – Miljömanagement i en produktkedja*. Företagsekonomiska institutionen, Handelshögskolan vid Göteborgs Universitet (Supervised by Henrikke Baumann)
- Hansson, S. & Persson, I., 2012, *Environmental Assessment of a Golf Course*, CPM report no. 2012:5, Chalmers University of Technology, Göteborg (Supervision by Ulrika Palme)
- Ligander, R., Rimark, F. 2012, *Media coverage market power and internalization of external costs*, CPM report no. 2012:4, School of Business, Economics & Law, University of Gothenburg, Göteborg (Supervision through School of Business, Economics & Law)
- Sävström, A. 2012, *Integrating environmental aspects into management accounting practices*, CPM-report no. 2012:3 School of Business, Economics & Law, University of Gothenburg, Göteborg (Supervision through School of Business, Economics & Law)

Introduction of news letters

During stage 6, we have experimented with different formats of newsletters to interested members of the partners. By end of Stage 6 the newsletter was sent out by mail to about 160 people about 6 times a year.

New homepage

During Stage 6 we made a total remake of the CPM webpage, with the aim of making it more dynamic, interactive and easier to administrate. The new page was created in WordPress.

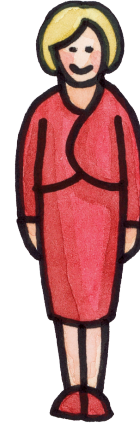


Old and new homepage of CPM

Together with the TOSCA project, a web forum for interactive discussions were also set up, but not yet launched on a broader scale.

Illustration portfolio

An illustration portfolio, like a CPM clip art bank, was developed together with the external consultant Juhanni Karlsson (see illustrations in this document). The pictures are free to use for publications by the CPM projects and activities.



Workshops and seminars

During stage 6, CPM has arranged and contributed to a number of seminars, workshops and events. These have been done both internally and externally.

Internal seminars, workshops and conferences

Arrangement of internal seminars, workshops and conferences

- CPM kick-off stage 6, November 2009
- Carbon footprint, June 2010
- Supply chain management, June 2010
- CPM network conference, May 2011
- Get ready for LCM, October 2011
- Reading circle on ILCD handbook, October 2011
- Partner meetings prior to stage 7: November 2011
- TOSCA purchasing workshop, November 2011
- “Drawing the map” business intelligence, February 2012
- Second partner meeting prior to stage 7: March 2012, at Vattenfall, Stockholm
- Operational plan, May 2012

Along with the above, a number of project and working group meetings have been held.

Public seminars, workshops and conferences

Arrangement of public seminars, workshops and conferences

- Carbon footprint, Stockholm, fall 2010. Arranged together with IVL.
- Transport seminar, fall 2010. Arranged together with Northen Lead.
- EPS at School of Business, Economics & Law, University of Gothenburg, spring 2011 (Bengt)

Contributions at external arrangements

CPM administration and partners have participated in a number of national conferences and seminars. CPM has also specifically been invited to contribute to a number of external arrangements, some examples being:

- AB Volvo internal education 2009 (Emma Rex)
- Forsgården golf, Miljöseminarium at Kungsbacka GK 2010 and 2012 (Elisabet Olofsson, Klas Hallberg, Sara Palander, Katarina Gårdfeldt)
- AGS Annual meeting 2011 at Chalmers University of Technology 2011 (Sara Palander)
- Inauguration of the Chalmers Production Virtual Laboratory 2011 (Emma Rex, Bengt Steen, Johan Tivander)
- Inauguration of the SKF University Technology Center 2012 (Anne-Marie Tillman)
- IMS workshop (Emma Rex sub-theme workshop leader)
- Chalmers sustainability day 2011, 2012

International activities

CPM has been active internationally during stage 6 through both attendance on international conferences and international collaboration. A number of CPM partners have also been active in standardization work of e.g. eco efficiency (Bengt Steen), carbon footprint (Ellen Riise),

International collaboration

- Selected by IHOBE (Spain) as preferred partner, 2011. During 2011-2012 Sara Palander and Bengt Steen were assisting IHOBE to build up a “second CPM” in the Basque Ecodesign Centre.
- Sara Palander and Bengt Steen represented CPM during European Ecodesign workshop, nov 2011.
- Emma Rex and Klas Hallberg, new members of the international LCM committee.
- Visit from New Zealand, Sarah McLaren, Director of New Zealand LCM center, nov 2009.



Host of the LCM conference 2013

Gothenburg is well known for its close collaboration between research institutes and companies in the area of LCM and the idea of having a LCM conference in Gothenburg have been discussed several times. A bid for LCM 2013 was prepared and accepted during spring 2010.

International conference participation

CPM partners continuously participate in international conferences. Below some conferences with explicit representation of CPM are listed.

- LCM 2009, Cape Town (Best contribution award was given to Emma Rex with a presentation including the way of working in CPM).
- SETAC Europe annual meeting 2010, Seville
- SETAC Europe annual meeting 2011, Milano
- LCM 2011, Berlin
- SETAC Europe annual meeting 2012, Berlin

Center administration

Board meetings

Stage 6 has resulted in 12 board meetings. We have also experimented with the forms of the meetings, and introduced the possibility to in some cases participate via telephone or video representation.



Board members

CPM

Elisabet Olofsson, chair
Emma Rex (adj)
Sara Palander (adj)

Chalmers

Bengt Steen (adj, secretary)
Rickard Söderberg, PPU
Katarina Gårdfeldt, GMV

IVL

Lars-Gunnar Lindfors
Elin Eriksson (substitute)

Naturvårdsverket

Eva Ahlner
Sofia Ahlroth (substitute)

ABB

Lennart Swanström
Ulrika Överstam (substitute)

AkzoNobel

Klas Hallberg
Karin Sanne (substitute)

SCA

Susan Iliefski Janols
Ellen Riise (substitute)

SKF

Martin Friis
Birger Löfgren (substitute)

Volvo Group

Lisbeth Dahllöf
Maria Walenius-Henriksson (substitute)

Partners

When entering stage 6 we were happy to welcome SKF as a new full partner in CPM. During the course of the stage, further dialogue were also held with an extended network, resulting in three more partners for Stage 7.

Partners during all of stage 6 were: Chalmers, IVL, ABB, AkzoNobel, AB Volvo, SCA, SKF and Swedish EPA. In parallel to these partners, collaboration agreements for information exchange were also signed with Ihobe, SP and KTH.

People

The number of active people in CPM has increased during Stage 6, both in terms of people involved at the partners, and in terms of the technical secretariat that has extended from one part time director until two full time employees (director and project manager).



Active participation among partners

CPM is an immaterial organization with its human resources spread among the partners. The number of active members in Stage 6 was about 90, with a fruitful distribution in gender (54% women) and age (24 – 70 years).

Personnel at the secretariat

The following have been working at the technical secretariat:

- Emma Rex new director after Peter Lysell (maternal leave Nov 2010-August 2011).
- Sara Palander, project manager from October 2010.
- Bengt Steen, deputy director Oct 2010 - Sept 2011.
- Elisabet Olofsson, chairman and consultant during all of Stage 6