

# LCM 2013

## - Perspectives on managing life cycles

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The life cycle approach holds great opportunity for environmental, and more broadly, sustainability, work. Through its systemic cradle-to-grave approach it reduces risks of sub-optimisation and problem shifting from one part of the life cycle to another or from one type of impact to another. It brings new insights about how action in one part of the life cycle may give effects far upstream or downstream the product chain, perhaps in vastly distant geographical locations. In this respect it is an empowering concept, which brings new opportunities for influence, beyond organisational or national borders. Many different types of actors, consumers as well as producers and policy makers, hold the potential to render product chains more sustainable. And yet, none of them fully control the chain.

It is no easy task to make use of these new insights and opportunities of influence in practical work. The management of life cycles implies a new logic for governance, focusing the purposive flow of material instead of the nation or the company. Furthermore, it is not enough to understand the physical material flow and the physical relationships in the life cycle. It must also be understood how the actors managing the physical flow between them organize the flow.

To achieve life cycle action many different scientific perspectives need to be placed on the material flows which constitute the production and consumption of the world. The 2013 international conference on life cycle management invites social scientists and engineers/natural scientists to try and bridge the gap between them and use their different perspectives to create a richer understanding of how product life cycles may be managed sustainably. Contributions are invited under three subthemes, in themselves constituting different perspectives on the management of life cycles for sustainable value chains.

#### **Local versus global perspectives in life cycle work**

Product life cycles stretches all over the globe. And yet, action may often only be taken more locally, within a production site, a company, a nation or a settlement. The relationships between local and global perspectives constitute one of the sub-themes of the conference.

#### **Roles and responsibilities in product life cycles and value chains**

The role play between producers, consumers and policy makers is a key to the sustainable governance of life cycles. Of particular interest is ways for them to share the responsibility in a meaningful way.

#### **Conceptions of sustainable product life cycles and value chains**

In our world with a growing population with increasing material expectations, sustainable production and consumption patterns are crucial. There are many theoretical and practical approaches to this issue. The third

sub-theme addresses how sustainable product life cycles may be conceived of, and how the different perspectives may complement or conflict to each other.

**Main topics:**

[BUSINESS STRATEGIC WORK](#)  
[EXTERNAL DRIVERS FOR LCM](#)  
[GLOBAL RESOURCE EFFICIENCY](#)  
[MARKETING, INFORMATION AND COMMUNICATION](#)  
[PRODUCTS AND PRODUCTION](#)  
[RESEARCH METHODS AND REFLECTIONS](#)  
[ROLES AND RESPONSIBILITIES](#)  
[EXHIBITION – Taking life cycle thinking home](#)

## Business strategic work

### Business strategy and LCM

Life cycle management implies a new way of thinking, from managing a single organization to coordinating and motivating change in a net of actors in order to make improvements in a life cycle perspective. This perspective challenges the traditional role and scope of actions for many managers, and calls for new strategies from micro scale motivation to entirely new business models, incentive structures or types of collaboration. This session welcomes contributions on the broad scale of business strategy to enhance profitable and enduring life cycle thinking in industry. It encourages examples and experiences of existing initiatives as well as theoretical discussions and visionary suggestions.

**Format:** Oral session and posters

### Metrics behind management of supply chains

Sustainability has become of strategic importance to organizations, as it can help achieve competitive advantage, growth, efficiency, and financial strength. An important pre-requisite is that, organizations must measure all dimensions of sustainability, environmental, economic and social, in a pragmatic way. In theory this can be covered using environmental and social LCA, but making individual LCA studies for this type of management support is not very effective or flexible.

The challenge for companies is to develop a pragmatic, agile, yet sufficiently robust management system to monitor, assess and improve the sustainability performance of the supply chain, the use phase and end of life phase. Such a system is shaped according to the strategic goals of the company, and can thus differ from case to case, yet they share common requirements regarding robustness, transparency credibility etc.

This session briefly presents real examples that have been or are about to be implemented by companies. The aim is to share experiences and practical challenges.

**Format:** Oral session and posters

### Panel: Management of green product portfolios

An increasing number of companies have established green product portfolios. The portfolios include products that are claimed, by the company, to have superior environmental performance. The portfolio's economic development, in terms of e.g. total sales, can be followed and targeted. One of the logics behind green portfolio management is to show internal and external stakeholders that it makes business sense to be green.

Green portfolio management can be seen as a new generation of corporate environmental management. Whereas conventional environmental management many times is driven by regulatory requirements and cost reductions, green portfolio management is driven by market needs and revenue. Portfolios can be applied in many ways. It can be used to drive green innovation internally, as basis for communication to corporate level stakeholders (e.g. shareholders and NGOs) as well as to be used in customer relations.

This session will be arranged as a panel discussion combining practical and academic knowledge related to the management of environmental product portfolios. The practical experiences of several international companies will be put in relation to the broader academic foundation of life cycle management. Several issues are relevant: What is the process and criteria for selecting which products to put in the portfolio? How can you work with internal and external targets related to the portfolio? How can the credibility of environmental claims related to the products in the portfolio be established? How can you work with external partners?

In addition to the panel discussion, a lunch session will be arranged on how the environmental burdens and benefits of green product portfolios can be calculated and communicated in a valid, yet feasible, way.

**Format:** Panel discussion.

## External drivers for managing life cycles

### Application of life cycle approach in environmental policy

The life cycle approach is gaining an increased acceptance and relevance in environmental policy making within the EU and worldwide. Examples of existing policy instruments that are based on a life cycle approach are Green Public Procurement, the EU Eco-Design Directive, Environmental Labeling and official indicators to follow global environmental impacts of different product groups, trade and consumption activities.

For further and more effective implementation, robust methods and reliable data are required to assess the overall environmental performance of products, their market penetration and to monitor progress. Such methods also need to be cost-effective and easy to apply, for policy makers and for industry. Data on products and related environmental impacts required and collected under different tools should be shared as much as possible.

When possible, the use of European harmonized standards, ideally based on International standards should be explored, thereby ensuring increased coherence of policy instruments, lower cost for industry and good relations with third countries and their manufacturers.

This session will focus on the **application** of the recently proposed EU LCA methodology and other life-cycle based methodologies as a basis for public policy interventions and decisions. Expected outcome is an increased common understanding about the applicability of LC-methodologies for different types of policy instruments in environmental policy making.

**Format:** Oral session and posters

### LCM and the financial community

How actors in the financial community evaluate a company is vital for the company's future profitability. The financial community influence the cost of accessing capital through investments and loans, and consequently, how actors in the financial community evaluate a company is vital for the company's future profitability.

What environmental and social aspects are considered by analysts and how those aspects are assessed is of interest for the companies being assessed. It is important to know how corporate external sustainability reporting is being reviewed by the financial community. Do the companies understand what kind of information the analysts seek and what the investors actually use in their decision making? Also, do actors in the financial community understand what aspects that are considered fundamental within the assessed industries and how the assessed company measure and steer its sustainability work?

This session seeks to elaborate on organizational aspects relating to responsible funds' investment issues concerning communication obstacles – such as information asymmetries between actors from the assessed companies, accountancy firms, analysts and investors. How do cultural and educational differences as well as incentive structures influence the choice of companies within this investment value chain?

**Format:** Oral session and posters

## Management of chemicals

Chemicals management is high on the international political agenda and a number of initiatives are underway. Among them the prominent Strategic Approach to International Chemicals Management (SAICM) under the auspices of the United Nations, and the European legislation on Registration, Evaluation, Authorisation and Restriction of Chemical substances (EC 1907/2006). Discussions are also underway in the USA to reform the Toxic Substances Control Act (TSCA). A necessary interdisciplinary scientific contribution regarding effective and reasonable approaches is needed and the development of sound conceptualizations along with research strategies and empirical studies can provide important inputs to the ongoing policymaking.

This session therefore invite scientific contributions from a wide field of research disciplines in order to illuminate various existing research where the product chain/life-cycle perspective, including actors and their interplay, plays an important integrative role. We foresee contributions dealing with information generation and flow, the handling of national and international relations in product chains, the importance and function of national chemicals management strategies, trade regulations, voluntary agreements and other kinds of hard or soft law. Furthermore is research on the construction of information systems, in a wide sense, of importance for the development of knowledge regarding contents of hazardous substances and the emission and exposure associated to consumer products.

**Format:** Oral session and posters

## Preparing for right prices

Internalization of external costs in product prices is a well established policy. How does this work in practice?

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.

The session welcome contributions on how this principle is applied in practice and how companies prepare or can prepare for future costs and financial risks from application of the “get the prices right” policy. Questions like: *How does industry prepare for future costs? What are right prices? How to measure internalization?* and *Which external costs may be expected the next 5-10 years?* are examples of topics that is of interest.

**Format:** Oral session and posters

## Global resource efficiency

### End of life management

The analysis of various aspects regarding the End of Life of goods and services is a fundamental point of view to fully understand the potential environmental and economic benefits coming from closed cycles of resources. This includes several issues that concern both purely technical aspects and management aspects which strongly influence the pathway of the end of life of products/materials leaving the production and consumption system.

End of life management plays a crucial role for boosting the closing loop of materials, even more important is the growing attention in the European Union about raw materials scarcity.

Main strategy documents of UN, OECD and EU on sustainability point out on the need to implement a “green economy” which is substantially different from “greening” the present production/consumption systems. In that sense EoL Management could offer an effective methodology to improve the whole production and consumption chain, by analysing how production and use phases can influence the EoL phase.

Moreover, LCA focused on the EoL chain could offer a suitable tool to examine and systematize the possible downgrading of materials by the end of life up to their potential reuses.

**Format:** Oral session and posters

## Food waste in a value chain perspective

Food waste is a topic with increasing interest all over the world, as a substantial amount of food that should have been eaten, ends up as waste from different parts of the value chain of food. This represents a resource problem, an environmental problem, an economic problem and a moral challenge for the modern society.

In this session we want to focus on methodologies to assess food waste in the society, how to prevent food waste through changes in behavior and knowledge, through technological innovations and better life cycle management of food. We welcome both studies of specific product groups as well as a broader specter of food products. Studies can be on single stages in the value chain (e.g. primary production, food processing, retail shops or food consumption, or on the whole value chain. A more limited focus on a single stage should however be related to life cycle management and a supply chain focus.

**Format:** Oral session and posters

## Governance of critical materials

Materials may be “critical” for several reasons. The EU and the US have identified materials of both supply risk and of future economic importance to electronics and emerging low-carbon technologies. Conflict resources originate from areas of severe political and humanitarian crisis.

Material-related risks need to be handled at many levels. Nations need to implement supportive policies. Industries need to consider product chain approaches, technical substitution and recycling opportunities.

Life cycle management, as a field of study and practice, is well positioned to characterize and address the problems of critical materials. We invite proposals addressing LCM theory, methods and practice for governance of critical raw materials. This includes, but is not limited to:

- Product chain partnerships and integration
- Approaches for information on content, design and origin (material declaration databases, B2B certification, information for recycling)
- Take-back and product service systems, remanufacturing
- Materials recycling
- Sustainable product design and technical substitution
- Characterizing of life-cycles and flows (LCA and MFA)

We encourage proposals related to traceability and certification of e.g. pharmaceuticals and food, which could provide important learnings for the governance of critical materials. Increased exploitation of primary resources, consumer programs and consumer labelling are outside of the scope.

**Format:** Oral session and posters

## Management of natural resources (abiotic and biotic)

The way natural resources are managed can have a profound effect of the sustainability of using them. Since all production either directly or indirectly depends on the use of natural resources, their sustainable management represents the basis for any type of sustainable production. This is even more important for products where early life cycle stages are of major importance such as products of agricultural production, fisheries and forestry. Management of abiotic resources like minerals and water can likewise be very important in determining the environmental performance of products and presentations in this area are also invited. The intention of the session is to illustrate how LCA can be used as a tool for private or public policy-making in the areas of biotic and abiotic resource use and both oral or poster presentations in the field are invited.

**Format:** Oral session and posters

## Workshop: Biodiversity and ecosystem services in LCM – methods and values

The present high rate of biodiversity loss has been pointed out as a major threat to functioning ecosystem services and hence to human welfare. Due to their complexity, the large uncertainties involved, and their largely qualitative features, biodiversity and ecosystem services are issues that are difficult both to assess and communicate, which is reflected in a shortage of studies reporting on these aspects as compared to those reporting on for example GHG emission. The importance of biodiversity and ecosystem services is however increasingly recognized in business, and the last 10 years has seen a remarkable increase in the number of studies published on these issues, both in general and related to management. Biodiversity and ecosystem services are directly or indirectly crucial for most industries in terms of e.g. resource supply – and are furthermore value laden issues of potentially high importance in marketing. There is hence a need for tools, methods and practices within industry to assess and communicate these issues and the values related to them within companies as well as along product chains.

**Format:** Workshop and posters

## Marketing, information and communication

### Current developments in life cycle based labelling and declarations

Ecolabels and environmental product declarations are voluntary schemes and can be used by companies to communicate about the environmental performance of their products. They are often referred to as type I and type III labels and declarations respectively with reference to the ISO 14020-series. This means that they consider all relevant environmental aspects are life cycle based and third party verified. Both types share the same goal as defined by ISO *“...through communication of verifiable and accurate information that is not misleading on environmental aspects of products and services, to encourage the demand for and supply of those products and services that cause less stress on the environment, thereby stimulating the potential for market-driven continuous environmental improvement.”*

Today many different labeling and declaration schemes are developed. The main focus of the session will be on current developments in this area and especially on experience from companies using ecolabels and environmental product declarations in their B2C and B2B communication. Presentations of other aspects related to the use of ecolabels and environmental product declarations are also welcomed, but presentations with focus on application will be preferred.

**Format:** Oral session and posters

### Sustainability data exchange

Recent years has seen legislation focus increasingly on substance- and material content in products, originating from an intensified discussion on chemical/toxicological hazards in society. REACH, the Toys Directive, the upcoming Biocide Directive and many additional policy initiatives create a growing need for communication of content information along the supply chains of most industrial sectors. Rising metal prices, the issue of resource scarcity and resulting responses such as the EC initiative “Strategy 2020 – A resource-efficient Europe” and the discussion on rare earths, are other drivers for companies to put more efforts into data exchange along their supply chains. This is not a trivial task, given the complex and global operations of most producing companies, but there are examples of success in some sectors.

Within the car industry, the development and later enforcement of the ELV directive lead European vehicle manufacturers to cooperate in development of the International Material Data System, IMDS. Similar systems have been developed for the electronics industry, and other sectors are following. The challenge for system providers is to build flexible solutions that comply with current needs and have the ability to be adjusted to future demands, whether they come from new and updated legislation, specific branch initiatives or the agenda of other societal stakeholders.

Important topics for contributions to this session discussion are, among others:

- Data availability and trust in the supply chain

- Secrecy and IP arrangements for data exchange
- How to develop flexible systems for future needs

**Format:** Oral session and posters

## The role of communication in LCM

Communication is a vital facilitator for collaboration and shared responsibility between actors in a product value chain, and is a key tool of Life Cycle Management. It is also central for making a whole organization apply Life Cycle Management. This session will address for example:

- *Communication to consumers:* How to reach the consumers without confusing them with too much or contradicting information or providing too little information for sound decisions? How can communication be used to educate the consumers and who are the appropriate actors to communicate to the consumers?
- *Communication between actors in the value chain:* How can communication be used to stimulate collaboration with actors in the value chain? How to balance knowledge sharing and insights to innovations, with risk to expose company intellectual capital?
- *Internal communication:* How can senior managers best motivate employees to adopt Life Cycle Thinking and to encourage it in innovation? What training is required? How to best set up communication paths for information sharing between functions in a larger company in order to make Life Cycle Management operational?

**Format:** Oral session and posters

## Round table: Current developments in life cycle based labeling and declarations

Round table discussions in relation to the session “Current developments in life cycle based labeling and declarations”, as described above.

**Format:** Round table

## Research methods and reflections

### Broadening the scope of life cycle approaches

Life cycle sustainability assessment (LCSA) is an upcoming area of life cycle studies. Recently, the International Society of Industrial Ecology (ISIE) has launched a topical Section on LCSA, the UNEP-SETAC life cycle initiative dedicated a Working Group to the topic, and the International Journal of Life Cycle Assessment decided to dedicate a special section to this subject. LCSA has thus quickly become a very popular topical area, which is also reflected by the number of Journal publications addressing this topic. Despite the fact that there are still many questions related to the concept of LCSA, first LCSA applications have started emerging.

LCA is thus evolving into LCSA, which appears to be a trans-disciplinary framework for integration of models rather than a model in itself since practitioners of LCSA apply a plethora of disciplinary models.

This session invites abstract addressing experiences with the application of case studies and development of methods integrating environmental, economic and social assessment of life cycle systems. Both qualitative and quantitative applications and methods are welcomed. Particularly welcome are abstracts addressing the relation between sustainability questions addressed and models adopted. How do life cycle sustainability questions steer the development and implementation of related concepts and approaches such as industrial ecology, industrial metabolism, systems thinking, environmental damage costs and social cost assessment, and how do these questions steer the selection of appropriate models and methods (like LCA, LCC, Social LCA, Environmentally Extended Input Output Analysis, Material Flow Analysis, Cost Benefit Analysis, Eco-Efficiency Analysis, etc.). Abstracts on combinations of life cycle concepts with methods such as agent based modeling, optimisation techniques etc. are also highly welcomed, particularly when covering all three dimensions of sustainability.



**Format:** Oral session and posters

## Does research matter? – The role of LCA and LCM tools in public policy-making

It is hardly questionable that public policy-making is key to induce and manage transitions to environmentally more sustainable production and consumption systems. Neither would few question the importance of science-based environmental assessments as an important input in societal debates on desirable directions of development. Nevertheless, it is far from clear how and to what extent environmental assessments are considered when public policy is formed. In this session we seek to discuss a number of questions related to the use of formal environmental assessments in policy processes. How are different types of environmental assessments used by different policy actors to learn, find arguments, form opinions and justify decisions? How do the organization of policy making affect the utilization of environmental assessments? Are there important differences between countries? How are arguments obtained from environmental assessments weighted against other objectives in policy-making and affected by the political power of stakeholders? To what extent are slower and more elusive learning processes more important than the direct use of research results?

**Format:** Oral session and posters

## LCA critical review

Environmental managers and government policy makers are becoming increasingly aware of the need to follow the holistic approach of Life Cycle Assessment (LCA) to move us in a strategic direction towards environmental sustainability. Along with this increasing realization has been an explosive growth in the number of LCA studies being conducted. The LCA community is now faced with the serious challenge of meeting the growing demand for the review of LCA data and reports. Complicating this issue is the lack of a standardized review process. Although it has long been realized that critical peer review (CPR) is important and an essential component of LCA, there is no clear procedure or rule-book as to what makes for good critical review. In order to maintain the credibility of LCA methodology as a viable environmental management tool, clearer guidance for conducting CPR is needed. In addition, the demand for CPR is increasing faster than the supply of available, qualified experts to serve as technical reviewers. This panel session will discuss these issues along with the role of practitioner certification, the conduct of quality reviews of LCA datasets and databases contained in publicly available reports and journal articles, and how to approach reviewing LCA methodology and applications.

Presentations on the following topical areas will be considered for inclusion in this session:

- Procedures and best practices for Critical Peer Review (CPR)
- Theory of CPR and comparison to other similar to assurance processes , such as
- Qualifications and accreditation of reviewers
- Growing the pool of qualified reviewers
- Assessing and evaluation the quality of CPR (speed, depth, etc.)
- Experiences and case studies in CPR
- CPR needs in developing eco-labels and product category rules (PCRs)
- Uses and consequences of CPR

**Format:** Oral session and posters

## LCM and decision making – what we have learnt

LCM is an effective management system, drawing upon the over-arching framework of Life Cycle Thinking, and supported by a strong business case and a strong corporate governance and responsibility focus. The management system is populated by various systems and procedures, tools and metrics, and supported by relevant data, information and knowledge insights. The way in which all of these contributions come together should be aligned with business decision making processes – across entire value chains; within procurement, processing and manufacturing; covering product sales and end-of-life management; in service delivery; and in nurturing institutional and stakeholder relationships.

This session has two objectives:

- 1) To make explicit the beneficial lessons from available LCA studies and demonstrate how such knowledge and



information can be used to inform product design, material selection, supplier evaluation and end of life management. *The value of this articulation should be to educate audiences to better inform decision and policy making across consumer clusters and value chains.*

2) To discuss what tools other than LCA are useful for LCM-based decision making. *The value of this articulation is to educate audiences that a tool box is needed to ensure the full range of sustainability information is available.*

Contributors are invited to address either of these topics with specific examples from different consumer clusters and decision contexts, including amongst others

- a) a product and value chain focus
- b) a systems design focus
- c) a go to market focus
- d) a policy focus
- e) a technology focus

Given the LCM 2013 sub-theme of “local versus global perspectives”, contributions which address geo-political issues in LCM based decision making are particularly welcome.

**Format:** Oral session and posters

## Roles and responsibilities for different actors

### Exploring challenges and opportunities of LCM and LCA for the industry

Today, industry faces changing consumer demands, stricter legal frameworks, and greater public awareness concerning the environmental performance. The demand for this information is growing rapidly as for more and more customers this information becomes decisive regarding their buying decision and this applies equally to B2B and B2C relationships. Also, a transparent and comprehensible declaration on environmental impacts of business or production processes helps to increase public confidence. Thus, life cycle management is an important marketing topic for the industry including the requirements resulting from questions of labeling. An important stakeholder is a continuously growing critical community, powered by global communication structures. Information on environmentally-friendly or harmful products or production processes spread faster than ever and, more important, globally. This leads to the process of life cycle assessment itself with its challenges and chances. As numerous best practices prove, there is a leverage effect of assessing the environmental impact and a growth in productivity by optimizing processes across the whole supply chain. By its broad approach the session will embrace different perspectives in order to map the challenges the industry has to face and the chances the topic offers.

**Format:** Oral session and posters

### Roles and responsibilities in building and construction

As normally planner (architects and engineers) are in the limelight, this session is specifically aiming at building material and building technology producer and supplier as well as political decision makers, like national or local authorities, to present their approaches and efforts to life cycle wide optimized buildings respectively building stocks. The term building is used in its broader sense, covering the existing building stock, replacement buildings as well as new constructions. In the centre of interest might be the functional unit from a building material/buildings technology and the added value of a new product in comparison to competitive products or the LCA-based ecological impact of a specific political measurement for single buildings or the entire building stock.

**Format:** Oral session and posters

### Roles and responsibilities in the mobility sector

Within this session the environmental, social and economic impacts of different transport modes: air transport, automobile, train and water transport including the herewith linked supply chains will be analyzed.

Automobiles, planes, trains and ships represent industries with a very long and complex supply chain. Additionally legal regulations focus mostly on the use phase of these products. Therefore one important focus is to demonstrate how transport and the herewith linked products can be optimized over the entire life-cycle and which contribution can be achieved by which actor in the value-chain.

Another focus is the interaction of different transport modes and the optimization of the entire transport system. This can be achieved only with a close cooperation of all actors.

**Format:** Oral session and posters

## Round table: Exploring challenges and opportunities of LCM

Roles and responsibilities in industry – round table discussions on challenges and opportunities when responsibility is considered using a life cycle perspective. In many industry sectors global perspectives are important and major impacts are often taking place in other locations than where end-products are actually used. The roles and responsibilities of industry in relation to these supply chains are of key concern in order to enable most efficient actions for sustainable development and also for industry credibility and image. How is this handled today? Which are the obstacles and difficulties? Which are the benefits and success stories? In round table discussions we will raise and discuss this relevant topic.

**Format:** Round table

**Please note** that we do not call for traditional abstracts for this round table. It is however possible to send in suggestions of issues to discuss. [Register](#) and write your topic and/or question including a short motivation as “abstract”.

## Sustainable product chains – the role and responsibilities of retailers

It is often argued that retailers have an important role in promoting sustainable production and consumption as they occupy a position of “gatekeepers” between producers and consumers. Retailers can exercise influence in the product chain through decisions about assortment in their stores (choice editing), but also through exerting influence both upstream on producers and downstream, on consumer choices and behaviour patterns.

For this session we invite contributions that explore and analyse any of the following:

- Current uptake of life-cycle approaches into strategic and operational decisions in the retail sector.
- Drivers and barriers to a further uptake of life-cycle considerations in decisions related to:
  - sourcing and supply
  - assortment
  - promotion and marketing
  - Private, and public, tools or measures that motivate or facilitate the integration of life-cycle approaches in retailers’ decision making.
  - The assumption of retailer leverage, and the constraints at play in this context.

**Format:** Oral session and posters

## Trade associations – drivers for LCM?

A trade association, also known as an industry trade group, business association or sector association, is an organization founded and funded by businesses that operate in a specific industry. A trade association champions the industry’s achievements and the benefits of its products through participation in public affairs and making expert and constructive contributions on behalf of the industry. They usually provide a comprehensive range of services and supplies to their members with the information and data necessary for the industry to enhance the industry goals and performance.

Trade associations today can also have a very active role in supporting its member companies in environmental and sustainability issues with different approaches such as lobbying in various areas that influence its member companies. With common activities it can motivate and drive development in the sustainability area. In this session there will be a possibility for trade associations or companies within such an association to present case

studies on important issues including handling of environmental data, input to green public procurement and environmental labeling

**Format:** Oral session and posters

## Sustainable production, product development and design

### Innovation and product development

Product design has from the early nineties been seen as key to more sustainable consumption and production and many efforts have been made towards green product design. Tools and work procedures have been invented and sometimes implemented, products have been redesigned, product strategies chosen and even whole business concepts based on green products.

We invite contributions dealing with theory, practice and experience on how sustainability can be addressed in product design. Topics include, but are not limited to:

- Experience from practice on sustainable product design
- Drivers and barriers to green product design
- Tools such as metrics and work procedures for sustainable product design, and in particular experience from the use of such tools

**Format:** Oral session and posters

### PechaKucha: Ecodesign

Design is one of the most powerful incentives when buying new products today. Based on trends, shapes, colors, functions, brands... and now environment, design is totally included in our lives. How to build a new economy based on sustainable development? How to respond to all human needs worldwide, and escape the socio-cultural domination of esthetics and mass consumption? How to integrate the consumer as a designer in the process of production of goods?

This session will be a workshop based on the PechaKucha principles, and explore the reality of Ecodesign worldwide. Submitted PowerPoint-slides will be collected by the chairs and classified by categories or themes. One expert panel will go through the slides and the products from an ecodesign perspective. The audience will react on the presented ecodesigns and in the end come up with the best ecodesigned product.

**Format:** Workshop based on PechaKucha

**Please note** that we do not call for traditional abstracts for this round table. We call for one slide (one picture of one product, maximum three sentences) about the best known ecodesigned product. It could be your own designed product or other design product that you know about. [Register](#) and submit your contribution under the heading "Ecodesign workshop". Deadline for contributions are March 28, 2013.

### Sustainable production

More sustainable industrial production is closely related to resource efficiency in production processes. Furthermore, increased resource efficiency through reuse and recycling requires the use of knowledge from the production field, e.g. to achieve remanufacturing of products and secondary materials of high quality.

We invite contributions dealing with theory, practice and experience on how sustainability can be addressed in production processes and incorporated in the management of production. Topics include, but are not limited to:

- How to simultaneously deal with social, economic and ecologic aspects in the management of production
- The challenge to incorporate a life cycle perspective in decision making related to production, while still

addressing the local concerns entailed by pollution prevention strategies

- Metrics for sustainable production
- Procedures for incorporating sustainability aspects in production management

We also invite contributions on how knowledge from the production field may be applied in end-of-use activities, such as disassembly, remanufacturing, reverse logistics.

**Format:** Oral session and posters

## Taking life cycle thinking home - Packaging as Mean of Consumer Information



LCM 2013 like to invite the creative potential in schools, universities and companies to design packaging and products that increase consumer awareness and behavior in line with life cycle thinking.

Packaging and product design can provide a function of communication, we seldom assess in LCAs. There is a lot of space that can provide information e.g. on the content of the pack, environmental labeling or even environmental performance. In some countries the space is even used for societal communication like photos of lost children. However, the space available offers a stage for more. As a part of managing everybody's everyday life cycles, bringing knowledge to those interested is a challenging, but useful task. Packaging and product design could be used to make life cycle thinking easier to grasp and apply for the general public, by raising awareness or even changing behavior in favor of social, economic or environmental improvements in a life cycle perspective. Ideas could include how to further "known" messages like how the product shall be recycled, but also add new ones like: "Environmental burden from food loss – empty your package completely!" or "Insulate your homes to inhibit global warming".