

Organizing sustainable product chains: LCM in practice

A world of product chains - and of actors

Today's global world is swamped with products of all sorts and usages. All products need material and therefore go through certain production stages (raw material extraction, production, distribution, use, end of use) and together these stages make up a product chain. These stages are usually not managed by one company alone, but of several involved companies, often geographically far apart from each other (figure 1).

Life cycle management (LCM) – to strive for environmentally sustainable product chains

LCM means to strive for decreased environmental load related to a product during its life cycle - to strive for sustainable product chains. Literature provides a wide range of definitions, but the common denominator is environmental consideration that stretches the traditional focus on individual actors to instead a holistic product chain perspective. A company can have several environmental initiatives, but it does not automatically mean LCM (figure 2). LCM is to have a holistic environmental perspective, realizing that actions and activities are related.

Literature provide a lot of tools, but lacks focus on practical difficulties

LCM literature provide a lot of tools and normative prescriptions of what LCM is, but not much is found about the actual practical difficulties of achieving LCM, nor on how companies work with LCM in practice. The **aim** of this study is to describe how LCM is enacted in actual practice in one large multinational corporation with explicit LCM intentions.



Figure 2. Separate environmental initiatives within a company does not necessarily lead to LCM, but rather their connection to each other

Conclusions

- LCM not as straightforward in practice as in theory.
- More research should focus on practice of LCM in order to identify practical problems and turn these into opportunities to act differently.
- LCM is not in the hands of one actor but instead depends on the actions of several actors in a product chain – requires further studies.
- A vast amount of global product chains to be managed – a need to study a selection of these to see how they actually connect to the company's overall LCM strategy.

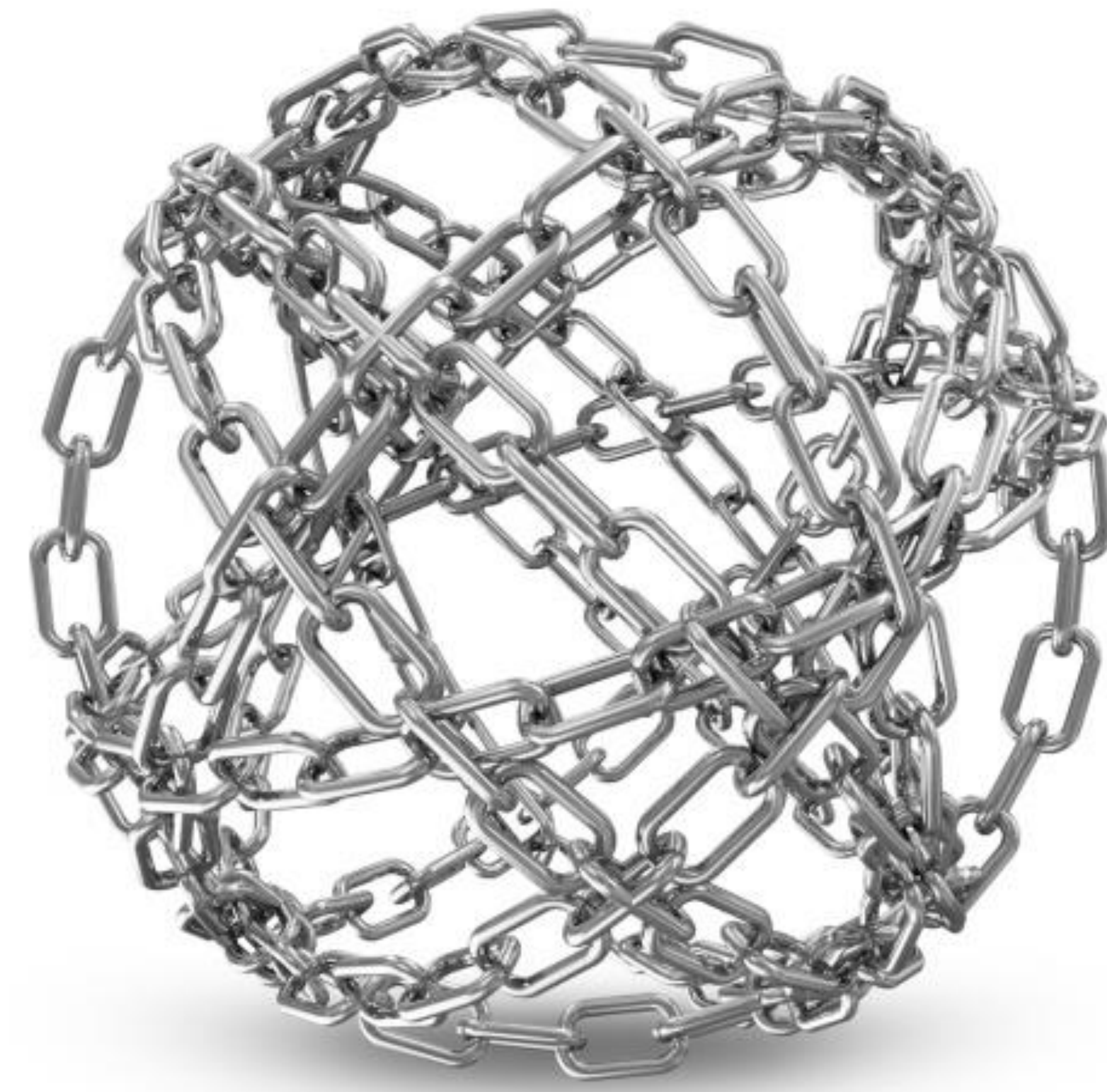


Figure 1. Today there are infinite number of product chains with a global reach. How to manage them all sustainably?

LCM in practice – initiatives and difficulties

The studied company has several environmental initiatives focusing on different environmental aspects and on different parts of the product chain; **environment health and safety** (internal management systems, policies, regulations), **design for environment** (internal green design parameters and product development), **life cycle thinking** (internal integration of environmental concern into business processes), **emission strategy** (main focus on in-house activities and upstream actors, emission reduction), **accountable chain management** (supplier focus, codes of conduct, environmental/energy management systems), **sustainability product portfolio** (customer oriented, portfolio of 'greener' products and services), **end-of-use management** (remanufacturing, reuse, refurbishment).

These environmental initiatives can be said to be linked along a generic product chain and enact LCM (figure 3). But difficulties related to LCM in practice are also identified, some of them are:

- Top management support considered high, but **everyday activities** is still considered to lack a self-going concern for environmental issues.
- Environmental concern is one of several important aspects within the company. This means **prioritization** between issues occur and environmental aspects is considered to too often fall behind in this process.
- Even though many see great opportunities for the sustainability portfolio, there is as well an skepticism that greener products have a hard time competing with lower priced products on the market.

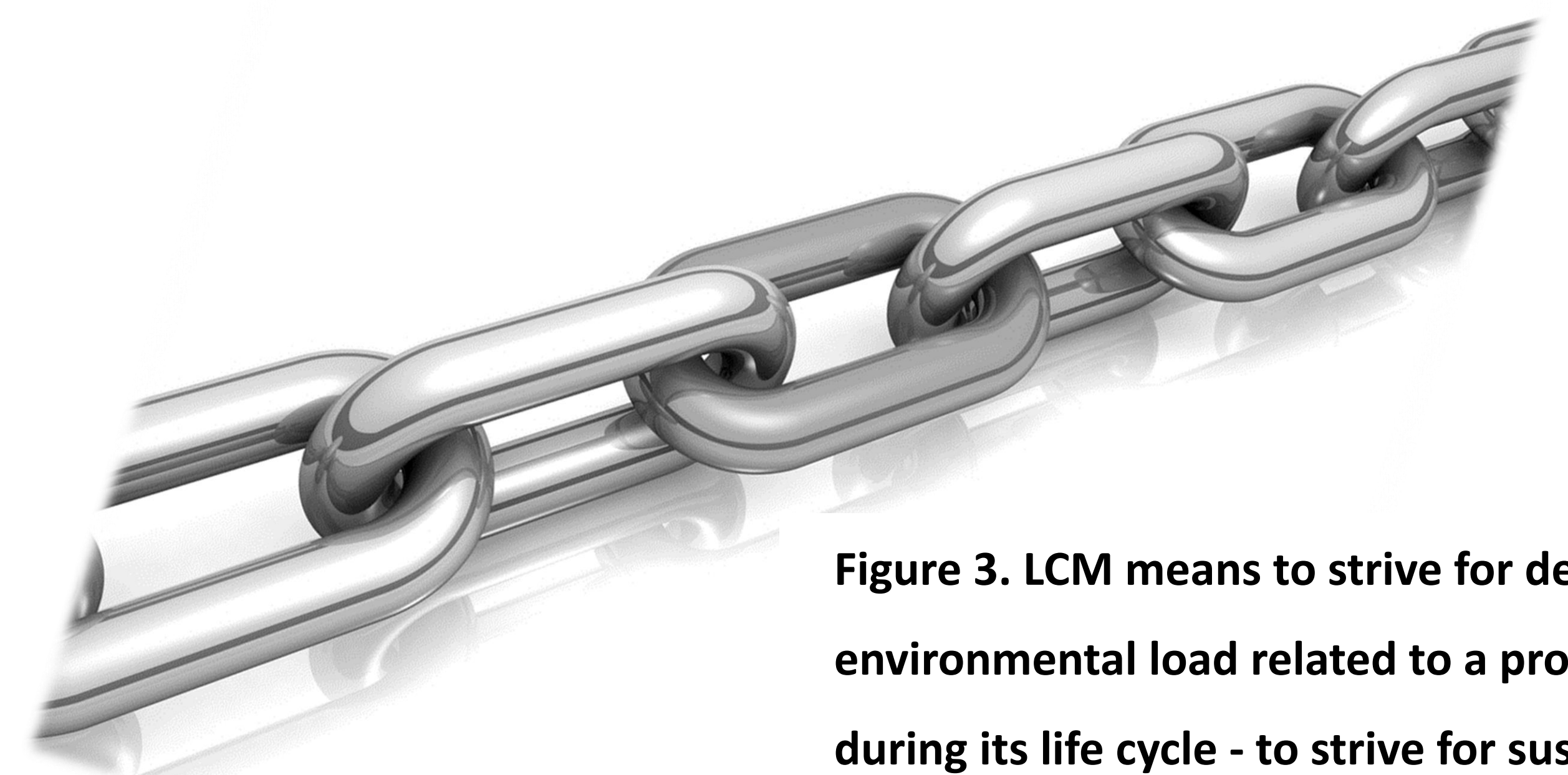


Figure 3. LCM means to strive for decreased environmental load related to a product during its life cycle - to strive for sustainable product chains

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