

No	Company			Experience	
	Field	Size ¹	Description	Relevant	Further
2	Consulting	5	Consultant	13 years	Manufacturing Excellence Assessor

¹k = 1,000

Similarities and Differences - Overlaps and Deviations in Terms of Objectives, Methods and Underlying Philosophy

Important overlaps between LM and CE are the reduction of resource consumption. Corresponding design, be it in the context of LM or CE, favors implementation. Platform strategies (even for small-scale production) can be successful. Manufacturing must be considered and balanced over the entire product life cycle as well as the entire supply chain. The return of raw materials is complex and should therefore not necessarily be carried out back to best-cost countries. Lean excellence companies that have almost no buffers left (JIT) need a high level of supply security, which can be influenced by war, political influence or pandemics. Multi-sourcing across different regions is therefore all the more important to counter these risks. Remanufacturing, for example, should take place elsewhere than production. Decentralization of production structures to the end of life (EOL) location.

New machines often offer potential for saving resources (electricity, water) in addition to production potential. Less water consumption in production also means less treatment and wastewater.

Differences between CE and LM lie in the focus on reuse and process improvement (often towards cheaper).

Not too long ago, cost and throughput time were still considered key in LM. However, lean, green and digitization are increasingly associated with image. Raw material reduction is a new topic here, with the CO2 tax certainly being a good tool. Thus, the objectives of LM and CE are becoming closer.

A few years ago, LM was still cost/throughput time; Lean Green Digital as a result of image efforts, raw material reduction is a new topic, CO2 tax is a thought. Target is approaching.

The conflict between CE and LM goes hand in hand with what I base the optimization on. Growth according to the old economic principle leads to a conflict between LM and CE. Extending the product life cycle can only be achieved with additional effort and will, and new business models currently only account for a small proportion of business. In addition, GDP could decline if less is produced and new value creation does not occur to the same extent.

Synergy Effects and Target Conflicts - Interactions and Results in the Joint Implementation of CE and LM

The refurbish concept is rather locally located and product development should be designed accordingly so that the core function of the product remains usable for a long time or can be easily maintained. In this context, updating components can also prevent obsolescence. For example, with batteries or mobile phones, corresponding activities are conceivable. Many identical parts promote the reuse of parts for the purpose of remanufacturing. This would additionally support LM concepts such as the milkrun and reduce the proportion of C-parts. It would also be advantageous if spare parts for a product could serve as components for other products.

Examples of energy saving show that green improvement measures can be worthwhile. Remanufacturing and Reduce are established strategies in practice and already fit in with a somewhat extended LM concept. This is particularly evident with plastic.

In principle, CE and LM can offer synergy in marketing. It inspires customers and can influence purchase decisions. Conflicts arise here from the fact that the customer is often unable to make an informed decision, as sustainability information is not listed on products (Nutriscore for sustainability would be an idea).

The possible loss of prosperity as a result of less sales (e.g. fewer new cars are sold because existing cars are used for longer) must be considered, because less production also means less tax revenue under certain circumstances. However, modern value creation basically takes place primarily in development and sales; production is only a means to an end. In addition, decentralized R-strategy approaches also create new opportunities for innovation and growth. One approach can be seen with some OEMs, who want to increasingly serve the luxury car market in the future and less the middle class.

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Further Thoughts on Strategies, Methods and Tools

Value stream analysis is also relevant for CE, as KPIs can be transferred to corporate goals (e.g. profit). Less storage space due to less demand for new products.

In the context of SPC, smart analyses can identify potential. Because manual re-recording with increasing data volumes is becoming increasingly impractical. The proportion of investments by companies in quality could be higher, because LM benefits from good data availability. Further use of this data in the context of the further development of products and processes offers a lot of potential for better products and less waste in the future.