

Streamlined Life Cycle Analysis (SLCA)

Assessing the sustainability of products

More and more companies are faced, not with the question of *should* we address sustainability, but 'where should we start?'. When it comes to products, one way to answer this is to use a Life Cycle Analysis tool (LCA). But the highly detailed nature of these tools means that they are expensive, time consuming and are often limited in their application. Streamlined LCAs (SLCA) are the answer to this situation. They are a much quicker and cheaper approach to assessment that allows companies to identify 80% of the issues in a fraction of the time.

The Natural Step (TNS) and Forum for the Future have developed an SLCA tool based on the internationally recognised TNS system conditions for sustainability set against the lifecycle stages of a product. As a rapid but still rigorous alternative to LCAs, the Forum/TNS SLCA is both an assessment and a communication tool. It identifies the major issues in relation to a product or process in a qualitative manner, allowing key aspects identified to be strategically explored in greater quantified detail as necessary.

Questions underpinning each life cycle stage are carefully directed to help product teams think innovatively about sustainability challenges. The answers result in a qualitative colour-coded matrix that communicates sustainability impacts to non-experts and benchmarks progress towards full sustainability.

	RAW MATERIALS	PRODUCTION	PACKAGING AND DISTRIBUTION	USE AND PERIPHERALS	END-OF-LFE
SC1: Scarce materials taken from the earth	Red	Red	Red	Red	Yellow
SC2: Man-made persistent materials	Red	Yellow	Yellow	Yellow	Yellow
SC3: Degradation of nature	Red	Red	Red	Red	Blue
SC4: Meeting people's needs	Blue	Green	Blue	Green	Yellow

Key					
Good	Quite Good	OK	Quite Bad	Bad	Don't Know
All answers positive. System condition met.	Mostly positive responses. System condition mostly met.	Some positive responses. System condition on the way to being met.	Mostly negative responses. System condition mostly not met.	All answers negative. System condition not met.	Insufficient knowledge to make reasonable judgment.

The SLCA tool creates a five by four matrix with each square representing the adherence to the system conditions against each life cycle stage. Underpinning each square is a series of questions to ascertain the key impacts of the paint life stage for each of the system conditions. The questions are designed to be answered in a 'yes' or 'no' manner.

The SLCA has been developed with a focus on 'designing out' unsustainable aspects throughout the whole life cycle. This is a more strategic and systematic approach, as opposed to a focus on simply minimising the known negative impacts. It reduces the chance that by creating a 'solution' in one part of the system that problems are simply transferred somewhere else or that entirely new and unforeseen problems are being unintentionally created. It is of little use to create an assessment tool focusing on only one point in the life cycle of products if the solutions generated problems elsewhere in the rest of the supply chain.

- Quicker and cheaper than a full life cycle analysis (LCA)
- Reveals approximately 80% of the impacts over the complete life cycle of any product within an afternoon's workshop.
- Causes product teams to think systemically about a product and provides a way to judge whether or not an innovation is truly more sustainable or not.
- Communicates sustainability impacts to non-experts.
- Benchmarks progress towards full sustainability.



"To underpin our drive for sustainable development we are using the SLCA to help us understand the issues we face in moving towards more sustainable products." Dr Phil Taylor, Paints Research Associate.

The SLCA was used to develop strategies to improve the sustainability of paint for ICI and won the ICI Chief Executive's Leadership Award for Sustainability for Product Stewardship. The SLCA tool defined specific projects to reduce the emissions (solid, liquid and gaseous) profile of paint across its complete life cycle. It has also become a filter that will be built into ICI Paints innovation stage-gate process.

The SLCA matrix was used as a structured framework to identify sustainability issues for key ingredients with the food team at Prêt a Manger. The process aimed to show areas of concern across the lifecycle and identify knowledge gaps.

"We found using the SLCA tool invaluable. It was an easy to use and informative method by which to determine the sustainability pitfalls along the food supply chain. It has helped clarify provenance issues, as well as making the decision making much more informed - a great tool." Nicki Fisher, Sustainability Manager, Prêt A Manger



The Natural Step (TNS) is an international sustainable development charity. TNS provides a simple science-based tool for analysing the complex issues associated with sustainable development. The Natural Step Framework (that Forum for the Future holds the license for within the UK) provides a straightforward way of identifying and analysing issues. It also provides a means of developing practical solutions - for companies, government bodies and policy-makers.

Forum for the Future - the UK's leading sustainable development charity - works in partnership with leading organisations in business and the public sector. Our vision is of business and communities thriving in a future that is environmentally sustainable and socially just. We believe that a sustainable future can be achieved, that it is the only way business and communities will prosper, but that we need bold action now to make it happen. We play our part by inspiring and challenging organisations with positive visions of a sustainable future; finding innovative, practical ways to help realise those visions; training leaders to bring about change; and sharing success through our communications.

For further information:

Ben Kellard, b.kellard@forumforthefuture.org.uk +44 (0)20 7324 3692