Sustainability and Pandora's box

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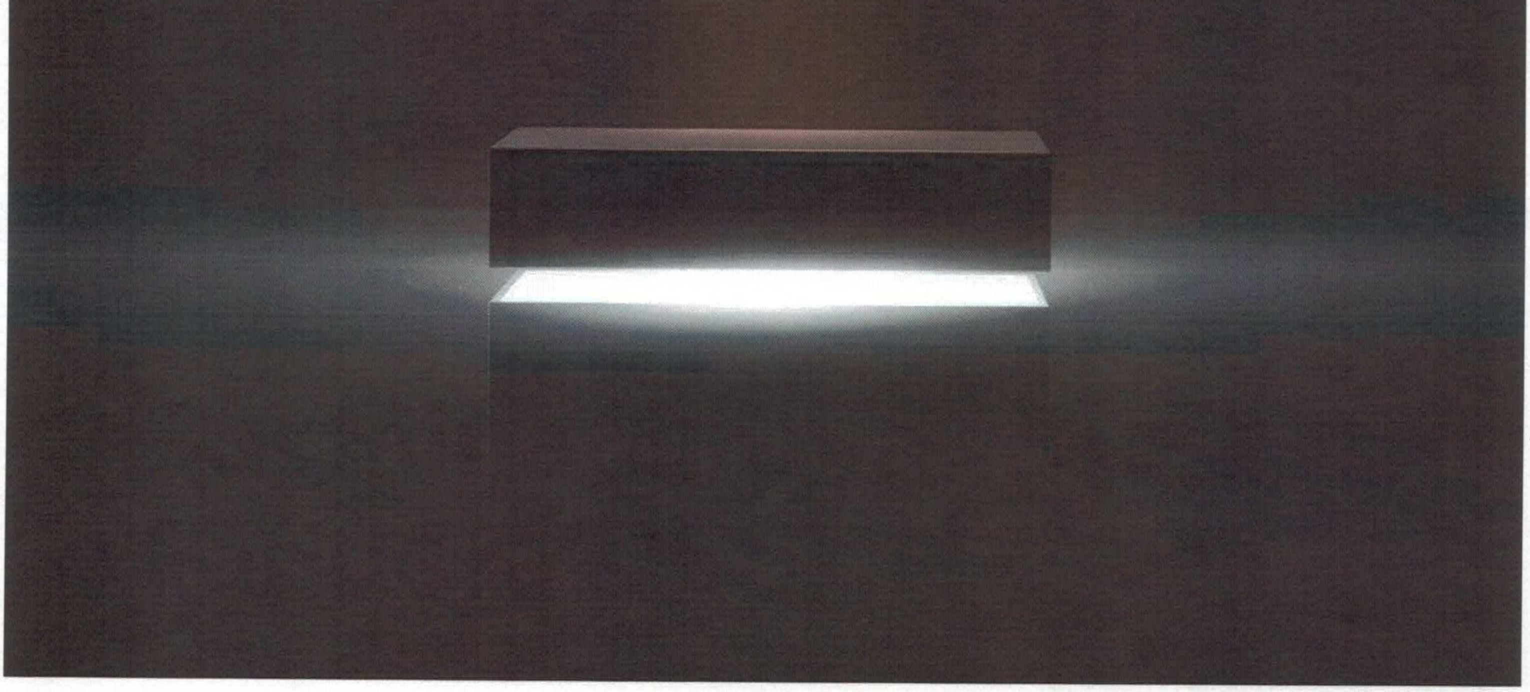

There can hardly be a day goes by when we don't read or hear the words 'sustainable' or 'sustainability' but what do those words actually mean on a level that is relevant to companies in the lubricants industry? Even accelerated by the pandemic the European Union's plans for post-pandemic economic recovery are based on a philosophy of "rebuild better and greener." The goal is to achieve a carbon-neutral economy by 2050.

NaSch Initiative of VSI

Already in 2016, the VSI (Verband Schmierstoffe-Industrie e.V. / German association for lubricants manufacturers) set up a sustainability taskforce (VSI NaSch) consisting of 6 member companies to set up and define sustainability aspects and key figures of carbon footprint of products targeting to implement a branch standard. At that time, the focus was mainly at own production site and basic formulations.

Now in 2021, the VSI NaSch group is working in close collaboration with the UEIL Sustainability Committee on a sustainability concept for the European lubricants industry.

What are the topics and challenges we are dealing with?

First and foremost, we need to make sure that we all have the same understanding of the same wordings and phrases! Then we have to agree on methodology and data sources we are using – this process is well under way, but still needs time...

Sustainable Benefits – lubricants are part of the solution!

Lubricants reduce friction, heat and wear and tear between mechanical components: Reduced energy consumption and increased equipment lifetime saves resources and reduces greenhouse gas.

High performance lubes require higher effort in pre chain values (for example PAO instead of simple Group I base oil) and eventually in production, but the higher specific carbon foot print in most of those cases pays back in use phase by: longer drain intervals, reduced lubricant consumption and longer engine life time; the most significant effect is energy saving in operation. Even just 1% energy saving can mean a 100-fold saving in manufacturing cost!

So if we agree on realistic and reliable GHG default figures for model formulations we are fine with that approach as we save much more in operation as we need for production? This was the first NaSch approach four years ago, but:

The European Green Deal and other legal and society driven requirements will have a strong impact on the European Lubricants industry – fixing any default values for certain materials in pre chain or product is an important first step, but without any room or rules for better individual figures it would block innovations and discriminates against those who are performing better.

Furthermore OEMs starts to require LCA (life cycle analysis) from their suppliers and carbon footprint becomes one relevant element in the procurement and tender process of companies.

These requirements demand clear, transparent and unified methods to calculate carbon footprint. Such a standard however does not exist and companies have started to determine their own CO_2 footprint for their products. Without harmonised calculation schemes this will result in various incomparable figures with enormous need for justification and explanation between the parties. It can even create unfair competition and demand for disclosure of formulations!

This can be called the Pandora box!
In taking a holistic view of the resources (raw materials), processes, manufacturing, distribution, use phase and end of life of lubricants we realise the complexity of this exercise – but solutions are possible – in terms of a joint data bank system:

Organised and harmonised by the involved associations among the whole value chain it is possible to develop the rules and create the data needed for such system – the data base should be handled and updated by a non-profit legal entity being controlled and certified. The system allows the easy approach by using default values for any process step. Innovations are promoted by validated figures, demonstrating the better performance. Such system creates transparent, reliable and accepted values – financed by all participating stakeholders and for sure much less expensive than several individual calculations based on different commercial data bases and studies – creating "Babylonian Language Confusions" and even stricter requirements from politics and customers.