

UEIL Sustainability Committee – An Overview



UEIL has established a Sustainability Committee, with the intention of providing guidance to define, develop and measure sustainability in the European lubricants industry, to address misconceptions on the industry's sustainability capacities, and to take part in the ongoing discussions on sustainability at EU and international level.

With a clearer strategy on sustainability, UEIL could be more proactive in defending the reputation of the sector on this matter, showcase the value it brings to the environment, society and governance, and lead the whole lubricants value chain to become more sustainable.

A Sustainable Lubricants Industry

In March 2019, the UEIL Board set up a Sustainability Task Force under the leadership of Apu Gosalia (FUCHS) to develop and define exactly what sustainability means for the European lubricants industry, in words that are simple and easily communicated within both our industry and to external stakeholders.

Task Force member companies: BASF, Blaser Swisslube, Bosch, Croda, Evonik, FUCHS, Itelyum, Lanxess, Neste, Nowal Chimica, Nynas, Q8, RS Clare and Yacco.

For those of us who work in the lubricants industry and those industries that use our products, it is clear that the world as we know it today would not exist but for the use of lubricants. It is fair to say that few in our global society pay much attention to lubricants and the role that they play. It is only when things go wrong that lubricants are belatedly appreciated.

As an industry we drive growth and innovation. We care about our impact on people and the environment, but also our economic impact; the 3 pillars of sustainability. It is with this in mind that the Task Force came to define sustainability in the context of lubricants as:

Lubricants created by innovative businesses enabling the use of safe, resource saving technologies and processes which reduce the burden on the planet, local environments and benefit people and society.

Reflecting the uniqueness of the lubricants industry, the Task Force identified three priority sustainability pillars:

- **Environment**
- **Health and Safety**
- **Society and Economy**

<p style="text-align: center;"><u>Environment</u></p> <ul style="list-style-type: none"> • Carbon Footprint • Product Recyclability • Product Renewability • Energy Efficiency • Leakage • Sourcing of Water and Raw Material Use • Waste Management and Packaging 	<p style="text-align: center;"><u>Health and Safety</u></p> <ul style="list-style-type: none"> • Toxicity of Products • Good Practice • Health and Safety Guidance (Safe handling of products, etc) 	<p style="text-align: center;"><u>Society and Economy</u></p> <ul style="list-style-type: none"> • Giving Back to Communities • Employment • Economic Assets • Business Ethics • Digitalisation
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As an industry we must be living proof that we are more than just words and that there is a real-world benefit from the application of lubricants and the way in which we operate. Taking the 17 United Nations Sustainable Development Goals (SDGs) as its point of reference, the Task Force identified 4 SDGs which the Lubricants Industry already contributes hugely and will do so increasingly in the future.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 	Ensure sustainable consumption and production patterns
13 CLIMATE ACTION 	Take urgent action to combat climate change and its impacts	17 PARTNERSHIPS FOR THE GOALS 	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Each Task Force member company was asked to select their top 5 priority goals (SDGs). The 4 most highly rated SDGs were chosen based on the combined input of all 14 industry representatives.



UEIL Sustainability Committee

Having met its objectives, the Task Force was replaced in June 2020 by a Sustainability Committee and is now chaired by Dr Christine Fuchs (VP Global R&D at FUCHS PetrolubSE).

The UEIL Sustainability Committee is comprised of representatives from National Lubricant Associations, companies who were originally Task Force members along with some special advisors.

ATC, ATIEL, Avia-Bantleon, Blaser Swissslube, BVA, CSNIL, EKO ABEE, Fedechimica – Gail, GEIR, LAB, LPC, Nynas, Opet Fuchs, POPiHN, Tayras, UKLA, UNITI, VSI, VSN and VSS. Additional advisors will be introduced as and when required.

Objectives and Structure

External objectives

- Profile UEIL as a responsible representative of the lubricants industry in the sustainability and legislative debate
- Leverage the work of the Committee to reach out and influence EU-Brussels stakeholders about the industries sustainability initiatives

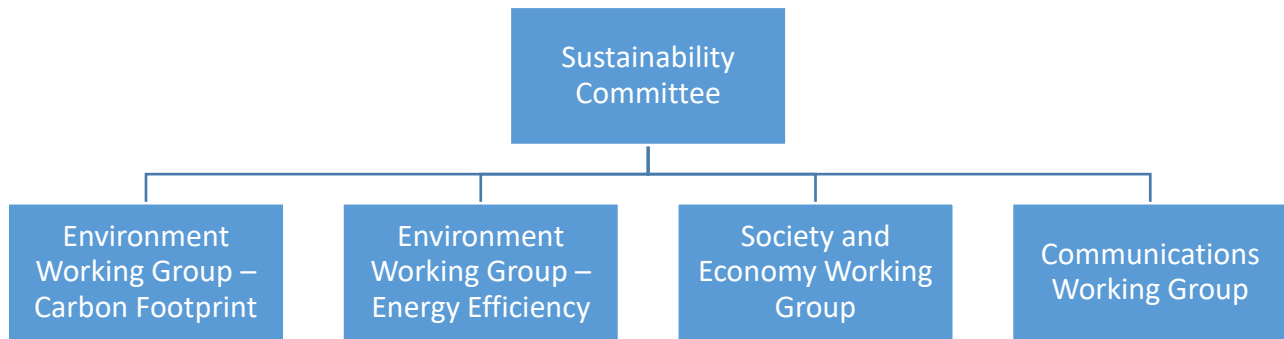
Internal objectives

- Increase the awareness of sustainability and the need for good practice within the industry itself
- To direct and align UEIL members' sustainability efforts, especially by providing practical guidance to SME member companies

To deliver against these objectives, the UEIL Sustainability Committee has overseen the formation of two environmental working groups (Carbon Footprint and Energy Efficiency) and a Society and Economic working group (including Product Recyclability). The working groups have been established against a background of life cycle assessment (LCA) and the principles of a circular economy.

The UEIL Committee has also formed a Sustainability Communications Working Group.

It should be noted that the existing UEIL Health and Safety Group and GEIR are closely aligned with the Sustainability Committee and working groups.



Environment Working Group – Carbon Footprint

The carbon footprint working group consists of two subgroups: “Subgroup Pre-chain”, focusing on raw materials, and “Subgroup Production & Logistics” with a focus on the carbon footprint from gate supplier to door final customer (first-tier).

The Pre-Chain Subgroup will analyze and provide a calculation scheme to enable members to provide information regarding their carbon footprint on raw materials.

The Production & Logistics Subgroup will elaborate and provide UEIL members with a hands-on approach (tool-box, checklist, etc) to measure and reduce carbon footprint along their Supply Chain.

Both groups intend to ensure the CO₂ footprint calculation follows globally-accepted standards based on an acceptance by relevant stakeholders (OEM’s, ATIEL, ATC, key customers and their associations), legislative rules and internationally accepted standards.

Environment Working Group – Energy Efficiency

The energy efficiency working group will highlight the in-use benefits of lubricants in multiple applications through the collection of case studies and testimonials. The working group will advise on test methods and define guidelines for measuring energy efficiency of lubricants, product lifetime improvements and other performance benefits.

Society and Economy Working Group

The society and economy working group will:

- Define the economic value chain and circular economy for the lubricants industry
- Identify and communicate the needs of the lubricants industry through surveys
- Develop an action plan to respond to the needs of members
- Identify and communicate on different corporate reporting schemes which can be used by member companies
- Provide advice and information on product recyclability, waste management and circular economy
- Provide advice on corporate KPIs (including sustainability strategy development)

Communications Working Group

The communications working group will oversee the development of a UEIL Sustainability manifesto and communications tool-box.



Background

1. Life-Cycle Assessment (LCA)

Life-cycle assessment (LCA) is a process of evaluating the effects that a product has on the environment over the entire period of its life thereby increasing resource-use efficiency and decreasing liabilities. It can be used to study the environmental impact of either a product or the function the product is designed to perform.

LCA's key elements are: (1) identify and quantify the environmental loads involved e.g. the energy and raw materials consumed, the emissions and wastes generated; (2) evaluate the potential environmental impacts of these loads; and (3) assess the options available for reducing these environmental impacts.

Source: <https://www.eea.europa.eu/help/glossary/eea-glossary/life-cycle-assessment>

When conducting LCAs, an organization or a group of stakeholders will define which impact categories they wish to assess. The most commonly assessed category is carbon dioxide or greenhouse gas emissions expressed as carbon dioxide equivalents but other examples may include (but are not limited to) water and land use.

1.1. Scope 1, 2 and 3 Carbon

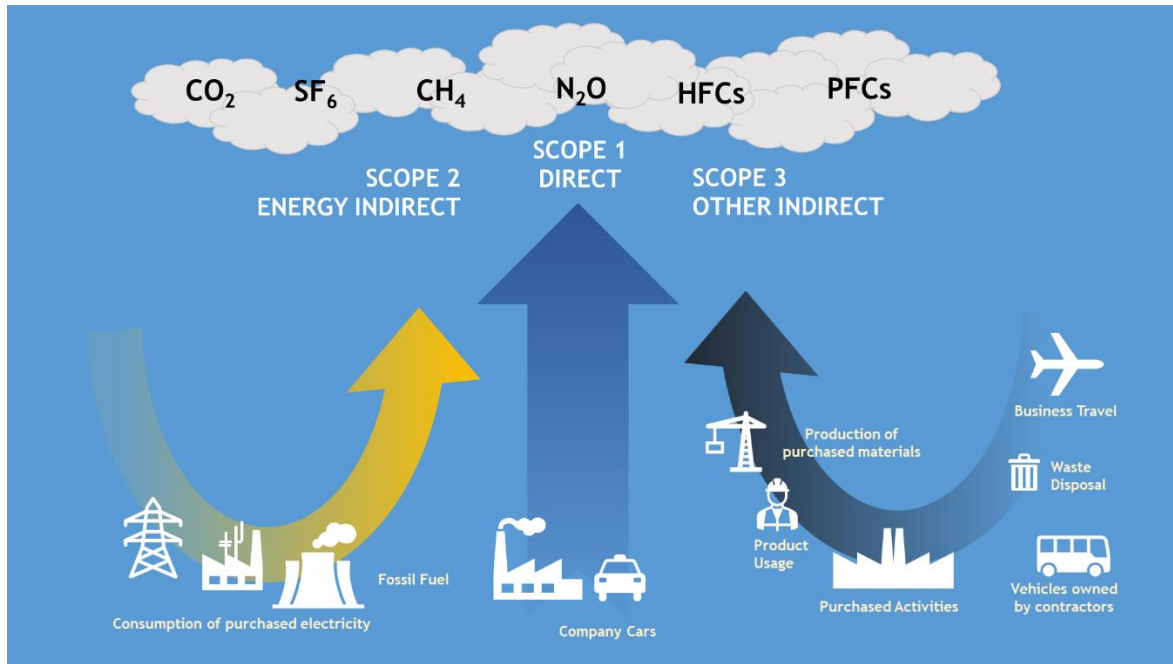
Organizations from across the world are measuring and reporting on their carbon footprint, that is, the total amount of greenhouse gases that are generated through their actions. Greenhouse gases include carbon dioxide, sulphur hexafluoride, methane, nitrous oxide, hydrofluorocarbons and perfluorocarbons.

By understanding where carbon and other greenhouse gas emissions are coming from, organizations can measure and identify priority areas for action.

Carbon is considered under three 'scopes':

- Scope 1: direct emissions from owned or controlled sources
- Scope 2: energy indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed
- Scope 3: other indirect emissions that occur in a company's value chain.

Scope 1 (Direct emissions from owned or controlled sources)	Scope 2 (Energy indirect emissions from the generation of purchased energy consumed)	Scope 3 (Other Indirect)
Fuel combustion Company vehicles Fugitive emissions	Purchased electricity, heat, steam and cooling	Purchased goods and services Business Travel Use of sold products Transportation & distribution (up- and down-stream) Waste disposal Investments



Source: <https://www.carbontrust.com/resources/briefing-what-are-scope-3-emissions#:~:text=Scope%201%20covers%20direct%20emissions,in%20a%20company's%20value%20chain.>

1.2. The Circular Economy

As a global society we have applied a principle of taking raw materials out of the ground and growing and harvesting certain crops, using them to manufacture goods and provide services, before we then discard them. This action describes a linear economy of make, use, dispose. A circular economy is based on the principles of phasing out waste and pollution, ensuring products and materials are in use for as long as possible, and regenerating natural systems.



In taking a holistic view of the resources (raw materials), processes, manufacturing, distribution, use phase and end-of-life of lubricants, it is possible to imagine how the lubricants industry can adapt to the principles of a circular economy, minimizing our impact on the environment whilst maximizing our impact on society and creating economic value.

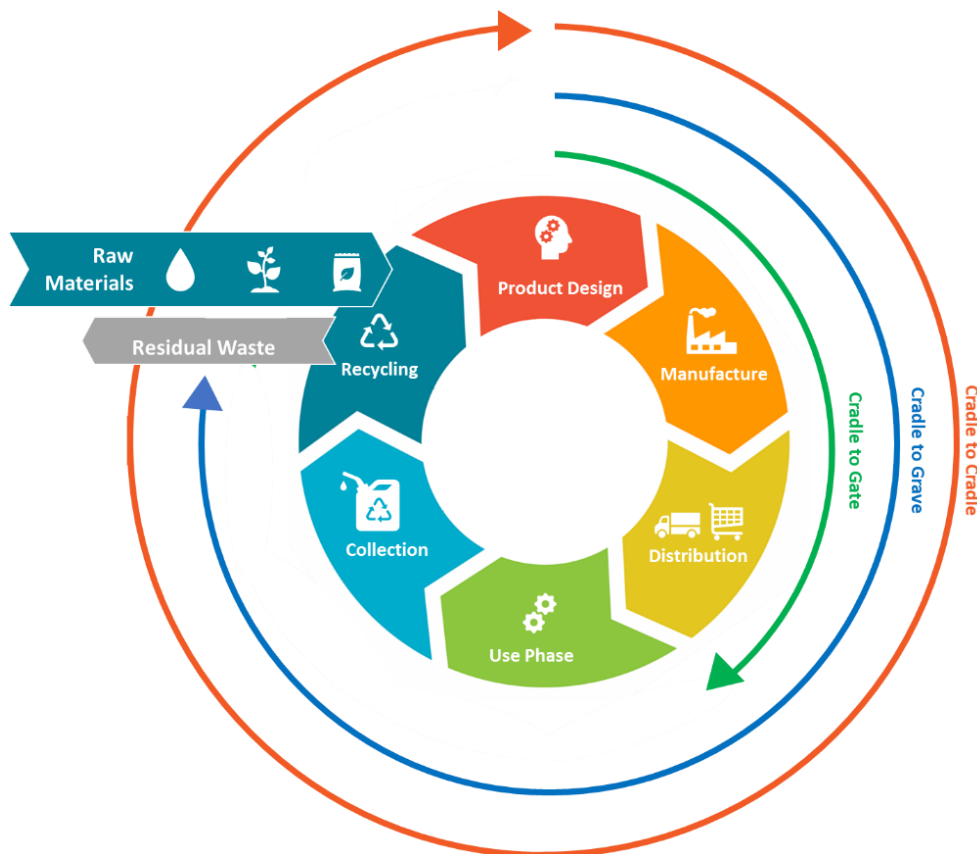
1.3. Product Life Cycles

Three scopes or boundaries are considered important when describing product life cycle:

Cradle to Gate: a partial assessment of a product life cycle from resource extraction to the factory gate, appropriate for B2B products.

Cradle to Grave; a complete assessment of a linear product life cycle from resource extraction to end-of-life disposal, appropriate for B2B and B2C products.

Cradle to Cradle; a complete assessment of a circular product life cycle, where the product at the end of its useful life is regenerated into the original raw material or product or is re-purposed. An appropriate methodology for B2B or B2C products.





1.3.1 Product Carbon Footprint

A life cycle product carbon footprint is a measure of all greenhouse gas emissions generated by a product, from extraction of raw materials through to end-of-life and is expressed as carbon dioxide equivalents (CO₂eq). It is most usually an expression of the negative environmental impacts resulting from the manufacture of a product but there are exceptions depending on the sources of raw materials. For example, raw materials derived from crops may have a positive environmental impact based on CO₂ adsorption being greater than GHG emissions resulting from the manufacture of a product.

1.3.2. Product Carbon Handprint

A product carbon handprint describes the positive environmental impact of the product in use throughout its lifetime.

Lubricants are products which reduce friction, heat, and wear and tear between mechanical components that come into contact with each other. The positive environmental benefits that end-users and consumers expect to see can be described in terms of reduced energy consumption, reduced emissions, increased equipment lifetime, longer drain intervals, reduced lubricant consumption and reduced human and environmental impact.

1.4 Sustainable Benefits from Lubricants

Through the assessment of product carbon footprints and product carbon handprints, organizations can measure their negative and positive impacts relative to a base line product. As a simple example, we can think about the benefit of using friction modifiers (FM) in engine oils to reduce friction, which leads to a reduction in fuel consumed per kilometer travelled and thereby reduces GHG emissions. Whilst CO₂ is emitted when manufacturing a friction modifier, the benefit 1kg of FM brings in reducing exhaust emissions can be enormous, measurable in tonnes of avoided CO₂eq per average vehicle and miles driven by European consumers.

Approved methods of calculating avoided benefits combined with third party verification are a must if we are to be deemed as credible when presenting the benefits of base oils, performance additives and lubricants.

It is only through an understanding of the impact of lubricants on a system that organizations can innovate and provide a positive contribution to climate change.

The European Lubricants industry has a track record of applying principles of circular economy. For example, re-refining used automotive lubricants to generate new hydrocarbon base oils which can then be used in the manufacture of fresh lubricants. However, we can expect that legislators and consumers will expect greater contributions in the future, not least through the implementation of the EU's European Green Deal. There is no doubt that this will lead to greater innovation in both the design and technology needed in lubricants to ensure new technology runs efficiently and effectively, with the most striking example being mobility and the electrification of the powertrain.



1.5. Standards for LCA

Current industry standards for conducting product life cycle analysis include ISO 14040 and ISO 14044.

Complete product life-cycle assessments are only possible when all stakeholders within the supply chain collaborate.

2. The Sustainability Journey

Some organizations and companies are well on their way in developing and implementing their sustainability strategies. For others the journey is just beginning. The thought of developing a sustainability strategy can seem daunting but it should be remembered that organizations and companies are free to define their own route-map.

At an environmental level, being more sustainable could simply mean using fewer raw materials, reducing energy consumption, using renewable energy, creating less waste, using more recycled materials and / or the design of new lubricants which provide health or environmental benefits.

At a society and economy level, it can be simple acts of kindness in local communities or on a global level, whilst developing and maintaining excellent corporate governance for the benefit of employees and other stakeholders. Organizations and companies can choose what is important to themselves and to their stakeholders.

Additional Notes:

Referenced in preparing the brief document:

<https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy>

Carbon footprint *: The sum of GHG emissions and removals in a product system expressed as CO₂ eq. and based on an LCA using the single impact category of climate change (ISO 14067: 2018).

Carbon handprint*: An indicator of climate change mitigation potential. Describes the GHG emission reduction in a customer's activities that occurs when the customer replaces a baseline solution with a handprint solution.

Footprint*: An LCA-based metric that describes the potential negative environmental impacts of a product system. Limited to a specific environmental theme or impact category. For example, carbon footprint (climate change impacts) (ISO 14067) or water footprint (water-related impacts) (ISO 14046).

Handprint*: An LCA-based metric that describes the potential positive environmental impacts of a customer's (or customers') activities achieved by replacing a baseline solution with a handprint solution.

* Pajula, T., Vatanen, S., Pihkola, H., Grönman, K., Kasurinen, H., & Soukka, R. (2018). *Carbon Handprint Guide*. VTT Technical Research Centre of Finland.

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