

ATC

Key Trends in the European Additive Industry

UEIL Congress 2021 - “From business resilience to sustainable growth –
Re-imagining the future of the lubricants industry”

21 October 2021

Dr Ian Field – ATC Secretary General



Introduction to ATC



ATC Objectives

- Gathering information on developments of a technical and/or regulatory nature which concern the application of additives in fuels and lubricants
 - Develop and consensually agree on additive industry positions
 - Share with other industry groups and regulatory and other technical stake holders
- Participate in technical testing, test development or other research work
- Ensure that products and technologies are demonstrated to be "fit for purpose", by funding the CEC
 - Play an active part in the management and strategic direction of CEC
- Collaboration with the petroleum and automotive industries
 - Optimal provision of service fluids, fuels and lubricants
 - Mitigation of identified or anticipated problems
 - Compliance with present and future environmental regulation
- Ensure communications with appropriate national and international industries' technical groups

Full Members



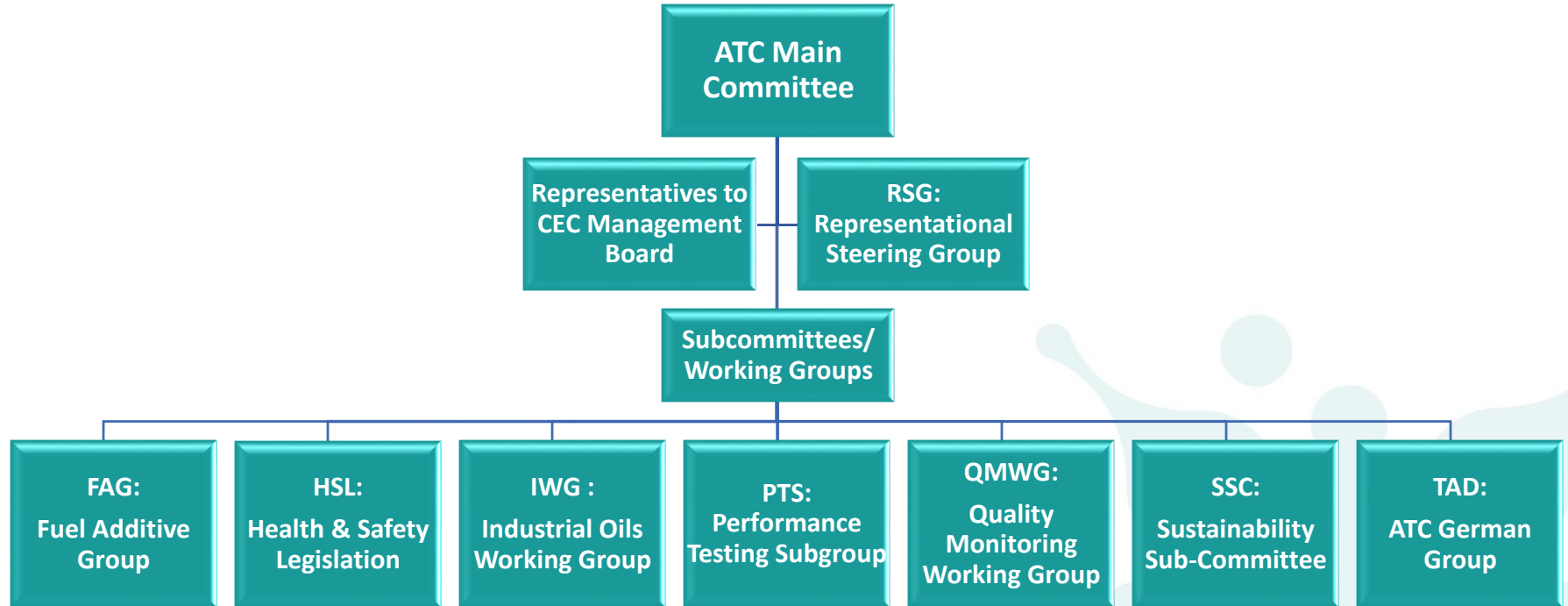
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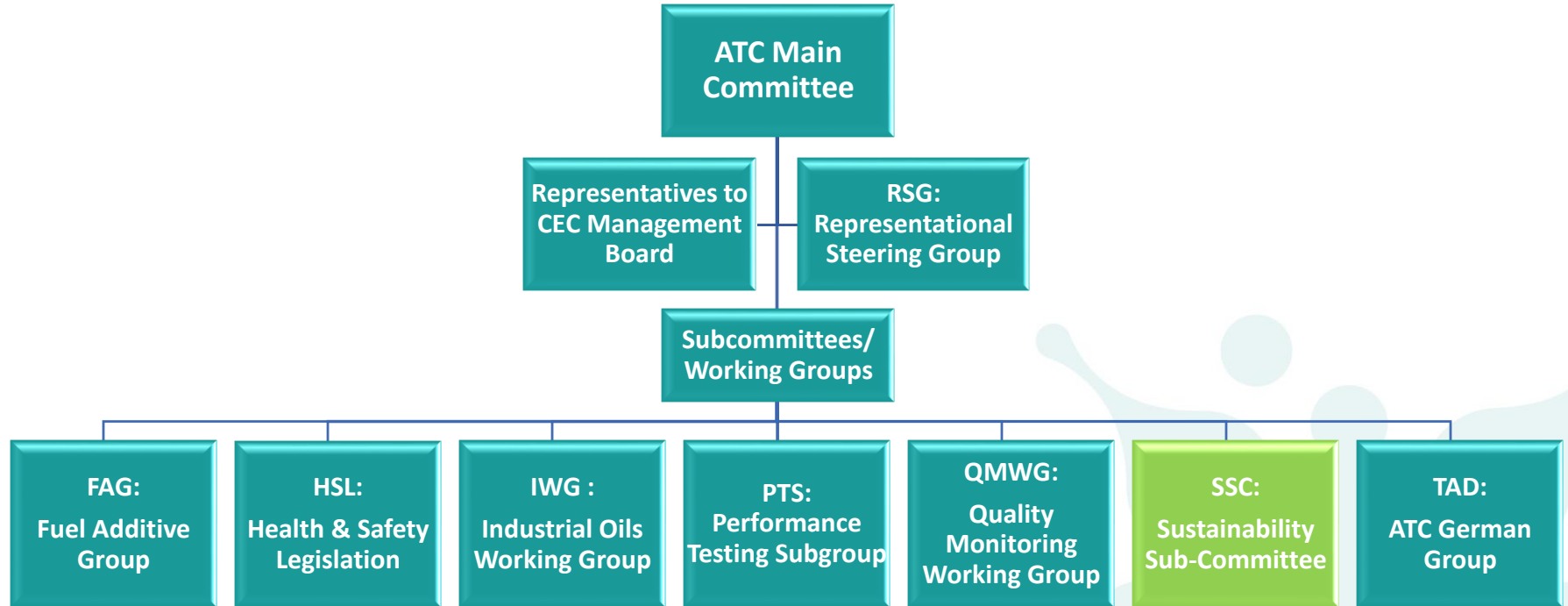
Associate Members



ATC Organisation

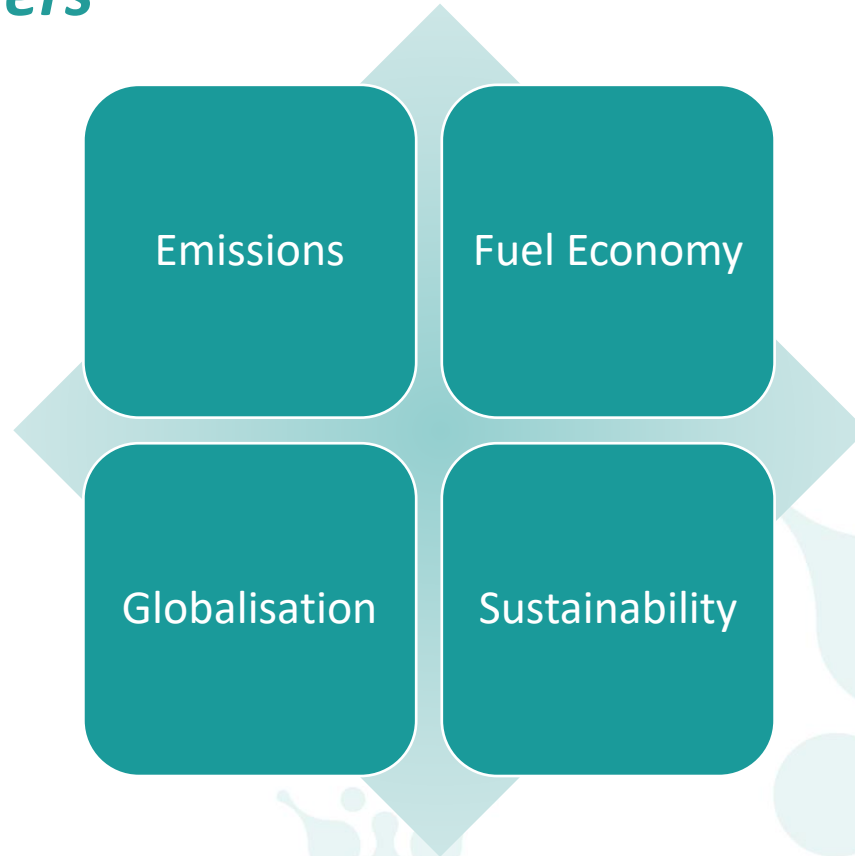


ATC Organisation

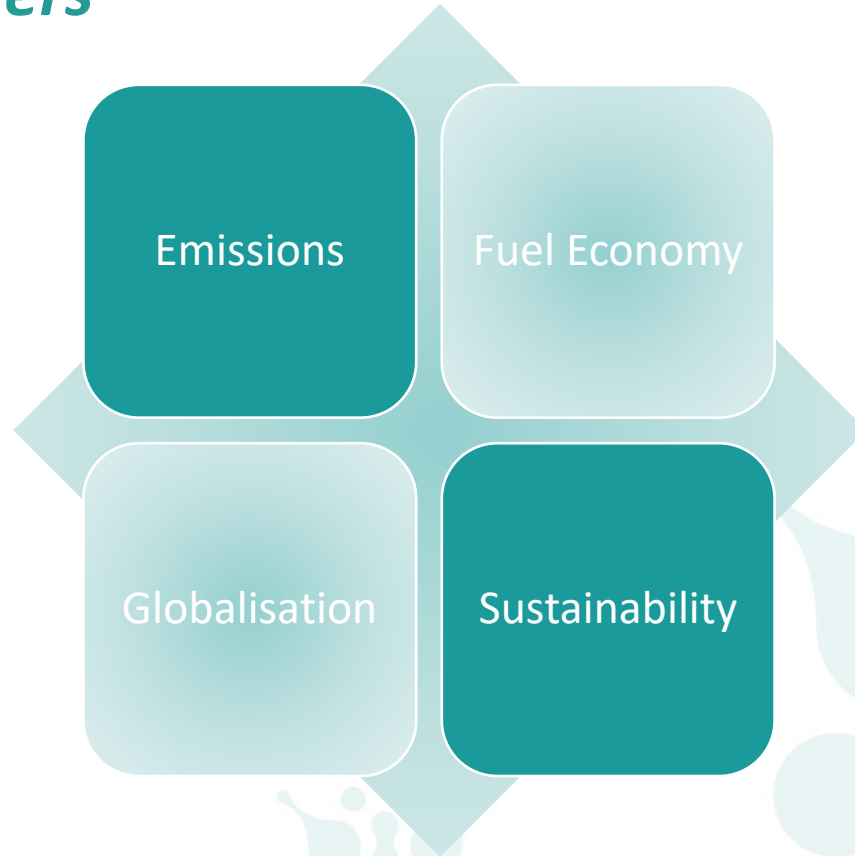


Industry Drivers

Industry Drivers

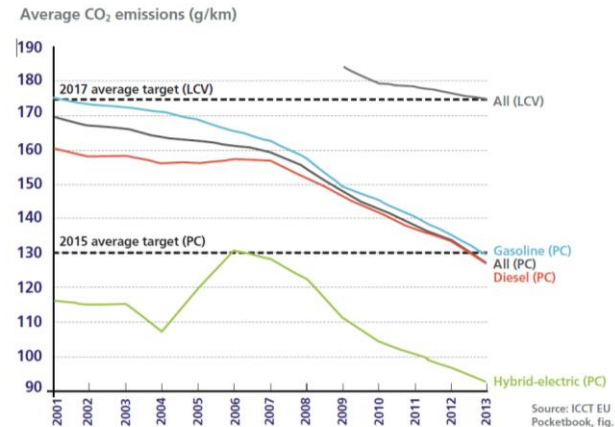
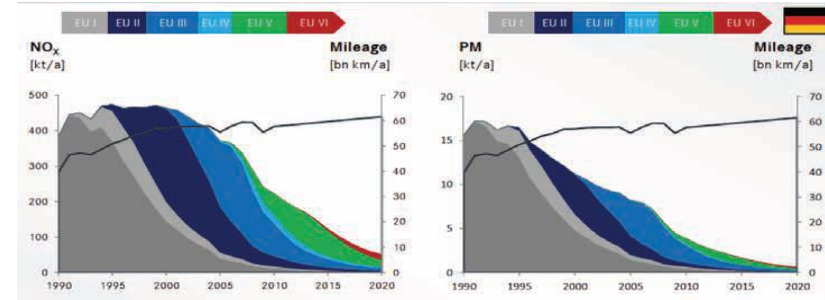


Industry Drivers



Additives as Enablers

- Lubricant additives have enabled OEMs to achieve the emissions reductions needed in moving from Euro I to Euro VI engines
 - Significant reduction in damaging pollutants
- As Fuel Economy requirements have become more severe lubricant additives have enabled
 - Lower viscosity oils
 - Friction modified oils
 - Engineering changes to lower friction in engines
- Additives enable longer oil drain intervals by improved oil protection
 - Significant oil consumption reduction
 - Less waste oil



Emissions – Euro 7

- European Commission drivers for update of Euro 6/VI
 - Too complex
 - Out of date
 - Lack of real world emissions data during testing and during vehicle lifetime
- Three Euro 7 policy options under consideration, formal proposal 2025?

	Option 1 Narrow revision	Option 2 Wider revision	Option 3 Comprehensive revision
Objective	Remove complexity	In addition add stricter limits	In addition add real world emissions monitoring
Changes	Align emissions standards for all vehicle and simplify tests	Tighter limits and limits for additional pollutants (e.g. CH ₄ , NH ₃ , N ₂ O)	Monitor in-service emissions via OBD, in-service conformity surveillance and testing
Outcome	Decrease compliance costs	Increased compliance costs, impact on powertrain platform choice	Increased compliance costs, impact on powertrain platform choice

Sustainability – EU Green Deal

Provides an action plan to:

- cut pollution
- provide clean, affordable, secure, energy
- boost efficient use of resources
- move to a clean, circular economy
- sustainable and smart mobility



Sustainability – ATC Response

- Formed Sustainability Sub-Committee September 2019
 - Objective to provide a forum allowing sharing of information and development of common tools and methodologies
- Initiate communications with appropriate organisations to encourage alignment
 - UEIL, ATIEL, ACEA, Cefic, ACC, others
- Identified common UN Goals
- Data gathering exercise on tools and methodologies available for sustainability reporting for application to additives in fuels and lubricants
 - Agree on Sustainability metrics, LCA
 - Aim to share with other industry groups and other stakeholders
- Developing position papers on key CSS issues
 - Essential uses
 - SSbB

Sustainability Impacts

Chemicals Strategy for Sustainability – CSS

ECHA: ‘The Commission’s strategy provides an action plan to:

- Ban the most harmful chemicals in consumer products – allowing those chemicals only where their use is essential
- Pay attention to the cocktail effect of chemicals when assessing chemical risks
- Phase out per- and polyfluoroalkyl substances (PFAS) in the EU, unless their use is essential
- Boost investment and innovative capacity for the production and use of chemicals that are safe and sustainable by design throughout their lifecycle
- Promote the EU’s supply and sustainability of critical chemicals
- Establish a simpler “one substance, one assessment” process for assessing the risks and hazards of chemicals
- Play a leading role globally by championing and promoting high chemical safety standards and not exporting chemicals banned in the EU.

<https://echa.europa.eu/en/hot-topics/chemicals-strategy-for-sustainability>

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Essential Uses

- The CSS seeks to achieve protection by removing chemicals of concern from the market and allow their use only when proven to be “essential for society”
 - Would allow the continued use of such substances of concern, only when necessary for health, safety or for the functioning of society and if there are no suitable alternatives that are acceptable from a health & safety perspective
- Moves from a risk-based to hazard-based assessment of substances
- Establishing what constitutes an Essential vs a Non-Essential Use will be complex, subjective and likely to vary over time
- Potential substitution with less hazardous substances but which come with sustainability downsides for the whole life-cycle
- The transport sector and the production of renewable energy are essential industries
 - Lubricants and lubricant additives must be deemed to be essential to the proper functioning of the economy
- Additives also contribute to the sustainability goals of the Green Deal and CSS
- ATC has prepared a position paper on “Essential Uses”
- Need a consistent response from the whole lubricant supply chain

Mixture Assessment Factors – MAF

- Under CSS, the European Commission plans to put a system in place that covers the combination effects of unintentional chemical mixtures
- The concept of a Mixture Assessment Factor (MAF) launched to address the complexity linked to regulating an almost infinite number of possible combination of chemicals
- Clear implications for additive packages and for the mixing of different lubricants
- ATC and ATIEL working on position and actions
 - Cefic and others have prepared positions
 - FEICA published a [leaflet](#) with details about the MAF concept and its consequences

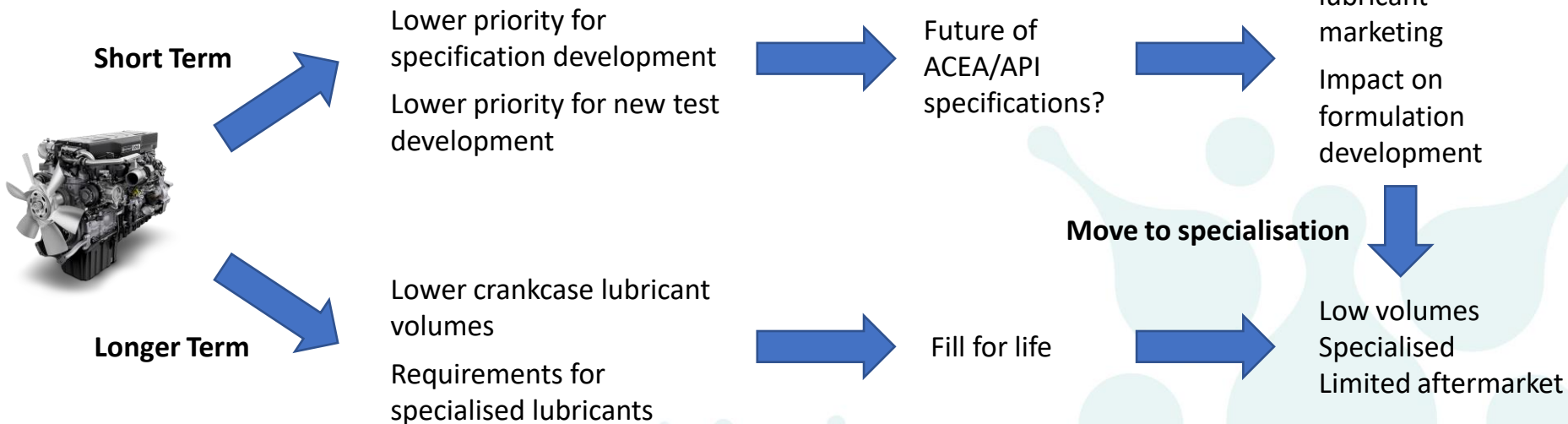
Safe and Sustainable by Design – SSbD

Concept designed to foster innovation within the European Chemical Industry

- The EU aims to define the criteria for SSbD during 2022
- ECHA will actively contribute to developing criteria for chemicals that are safe and sustainable by design
- The chemical industry supports the concept of safe and sustainable by design but remains highly concerned about how SSbD will be defined
- The criteria must be pragmatic and proportionate in order to drive changes in the short-, medium- and long-term
- The criteria must be applied in a way that enables the transition to a more sustainable future
- The criteria must not lead to ‘regrettable substitutions’
- There are no short cuts to a greener Europe, we will still have to operate within the framework of REACH and CLP
- A holistic approach must be followed – LCA must become the norm when designing new substances and understanding their impact on the environment and society

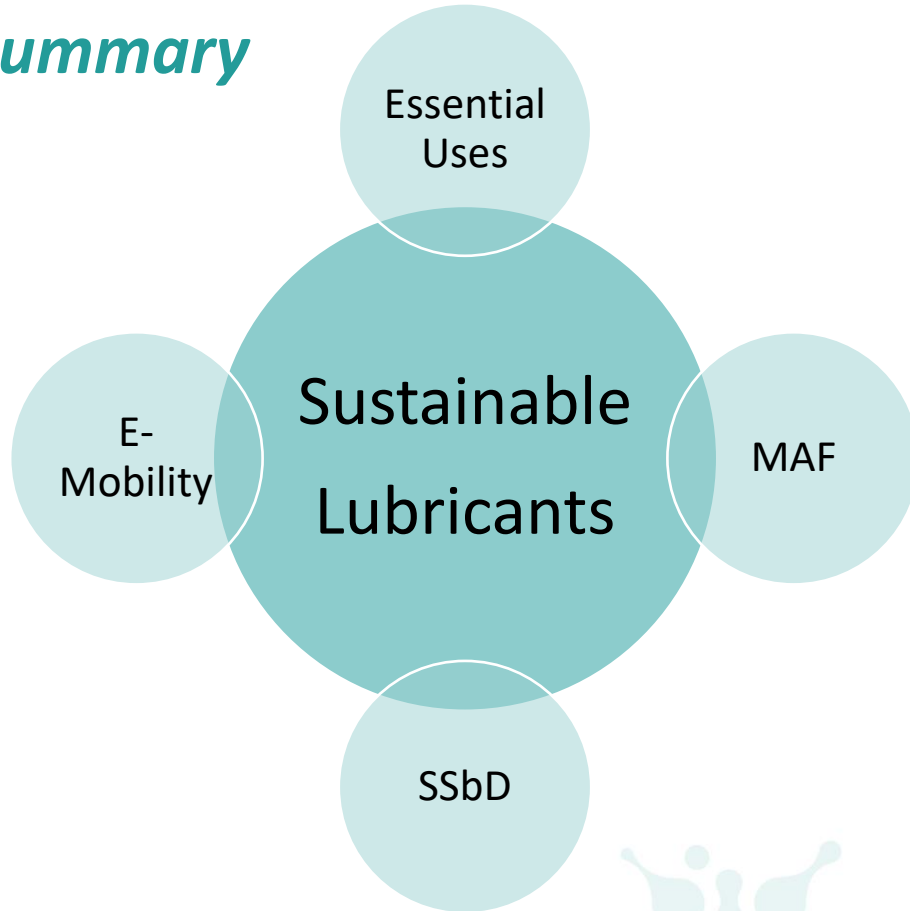
E-Mobility – Impact for OEMs

- Main OEM focus is on electric powertrains, ICE development is a lower priority



Summary

Summary



- We are moving into a period of very rapid change
- Need for cooperative effort across the entire supply chain

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