

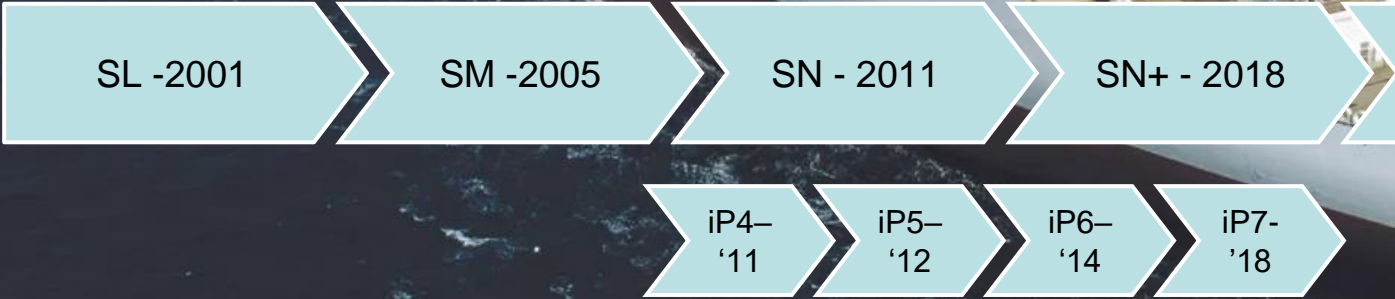
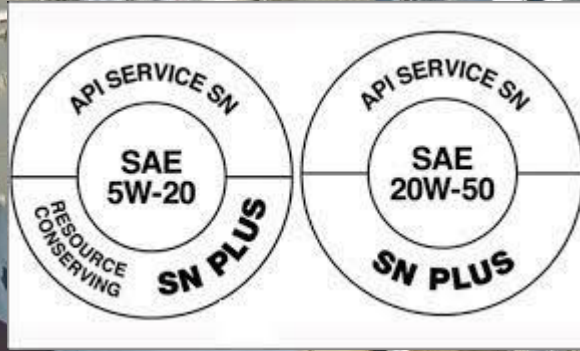
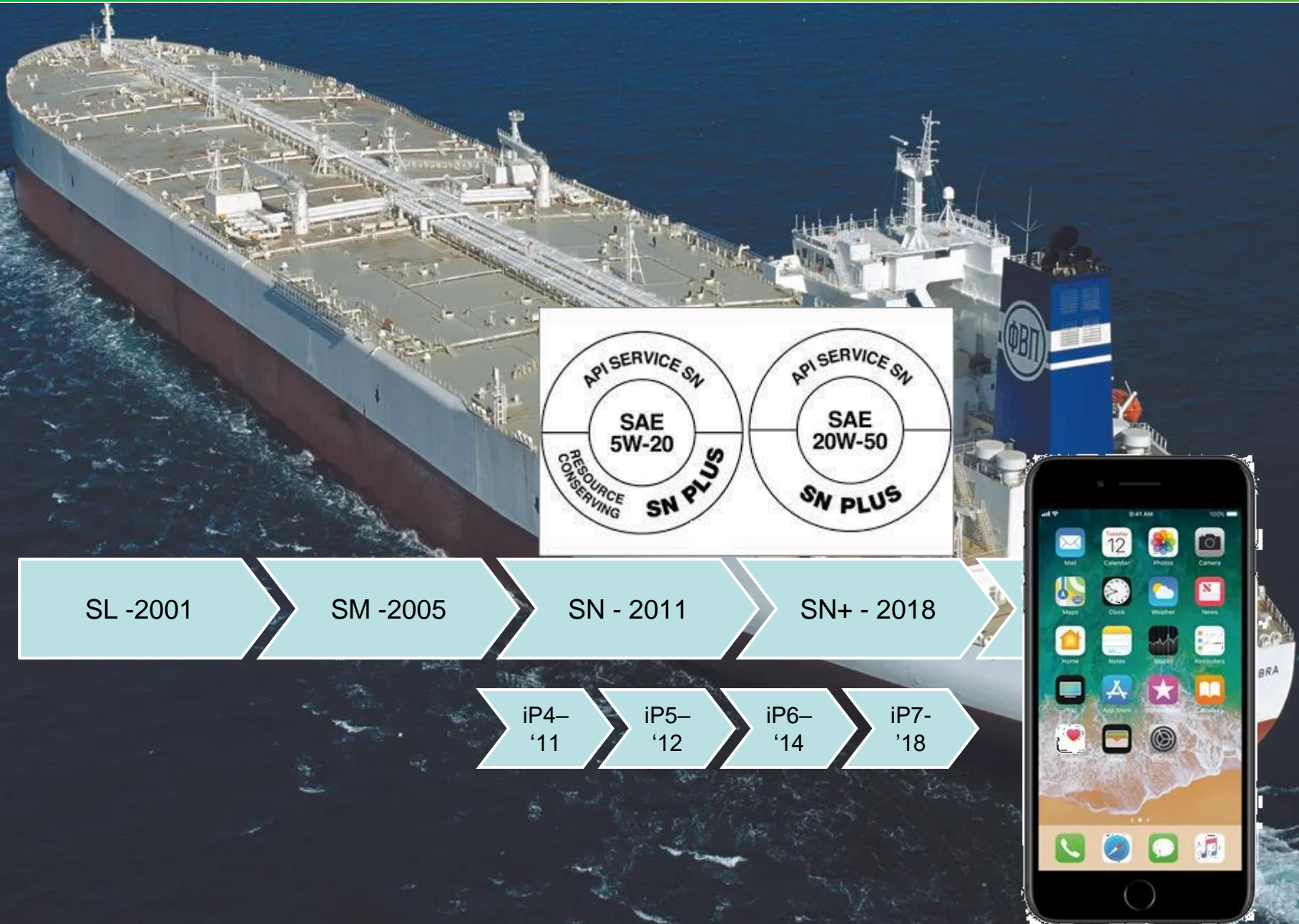
# NOVVI

Improved Performance Delivering a  
Low Carbon Future Through  
Extraordinary Innovation

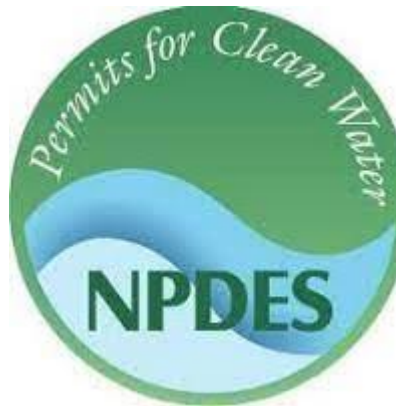
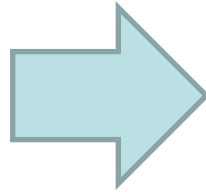


**A Panel as Part of the UEIL Virtual  
Congress  
21 October 2021**

# LIKE A VLCC, THE OIL INDUSTRY TAKE A LONG TIME TO TURN



Renewable/  
Sustainable

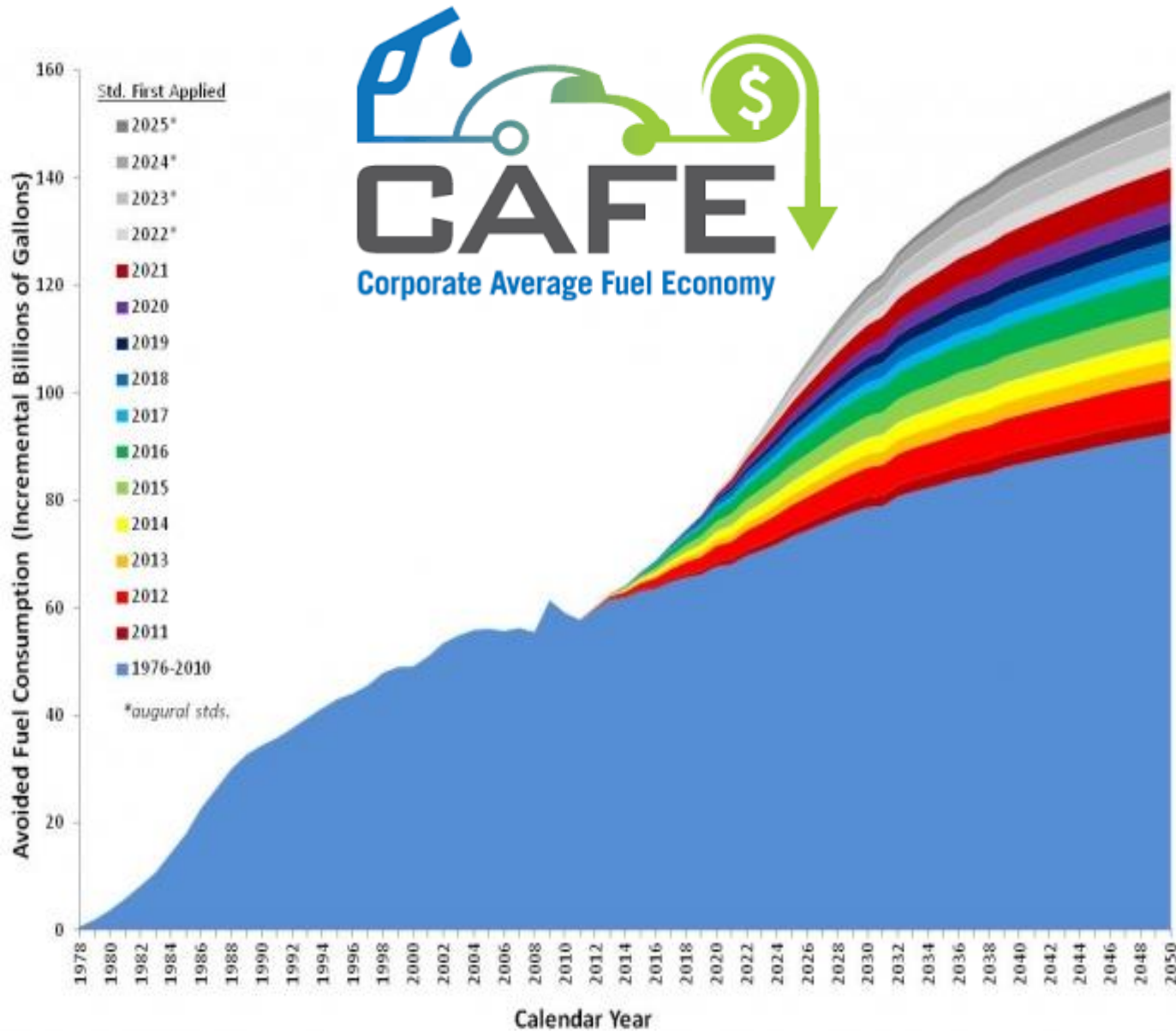


US EPA VGP

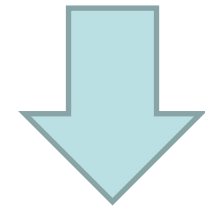
## UEIL 2021 Survey – Top Five Drivers for Sustainability Strategy

1. Brand image & Strategy
2. Company Ethos /Value
3. Regulation/ Legislation
4. Customer Pressure
5. Leadership

# SUSTAINABILITY IS NOT A NEW DRIVER



1 gal Gasoline =  
~20 lbs. CO2



80 Billion Gal

725 Million MT  
CO2 Avoided  
by CAFE  
Since 1978

# SUSTAINABILITY PLUS IMPROVED PERFORMANCE IS KEY

By 2040, GM plans to achieve carbon  
Neutrality in global products, operations  
- 01.28.2021

FUCHS to be CO<sub>2</sub> neutral  
globally by 2020  
- 01.09.2020

Shell announces largest carbon neutral  
programme in lubricants industry  
- 02.24.2021

TOTAL adopts new climate  
ambition to get net zero by 2050  
- 5.05.2020

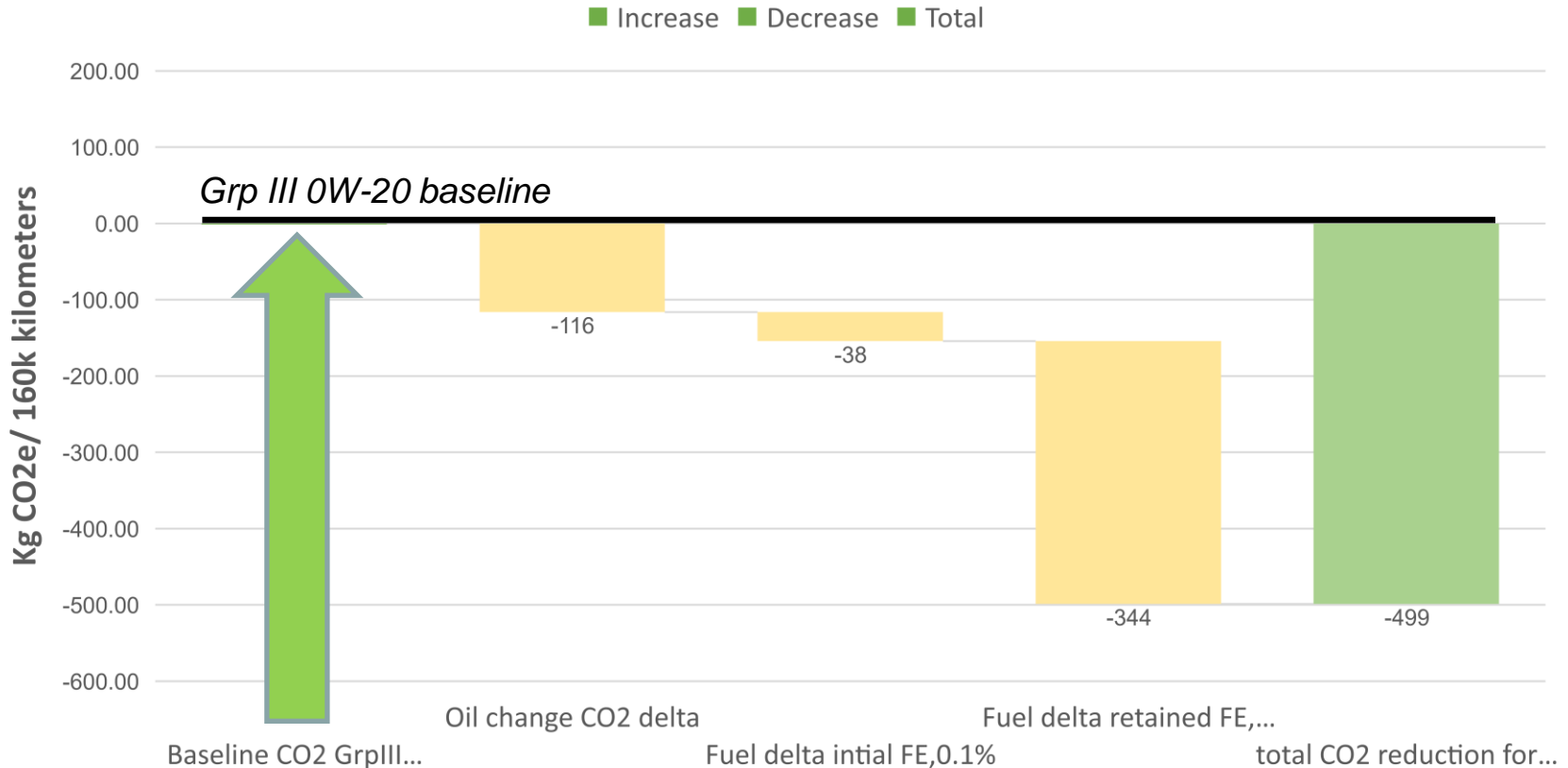
Pace of corporate carbon goals  
accelerating despite  
**LACK OF OPTIONS**  
in lubricants market

**OPTIONS SHOULD BE  
ABOUT PERFORMANCE,  
BEFORE COMPOSITION**

# EXAMPLE: TOP-TIER PERFORMANCE ENABLES SUSTAINABILITY CLAIMS

## CO<sub>2</sub>e Reduction of 0W-20 formulated PCMO with SynNova<sup>®</sup> vs Grp III in a 0W-20 engine oil, over 160K Miles.

GHG kg CO<sub>2</sub>e/ 160k kilometers using SynNova 0W-20



- Fuel economy benefits from 100% SynNova are explanatory examples not actual measurements.
- Potential FE benefits of SynNova supported by Mod Seq VII F study in: [US20210047577A1](#) Chevron USA inc.



- Obstacle: Industry Moves Slowly
- Opportunity: VGP & ECOLABEL leading to changes in strategy and company ethos
- Opportunity: Sustainability has roots in fuel economy
- Opportunity: Performance leads sustainability
- Opportunity: Shift focus from composition to performance

# KEY OBSTACLE (and opportunity): PERFORMANCE, NOT COMPOSITION

stability in extreme conditions



energy efficiency & wear protection



environmentally acceptable lubricants



SynNova<sup>®</sup> SSBO  
**FUTURE PROOFS**  
your business today

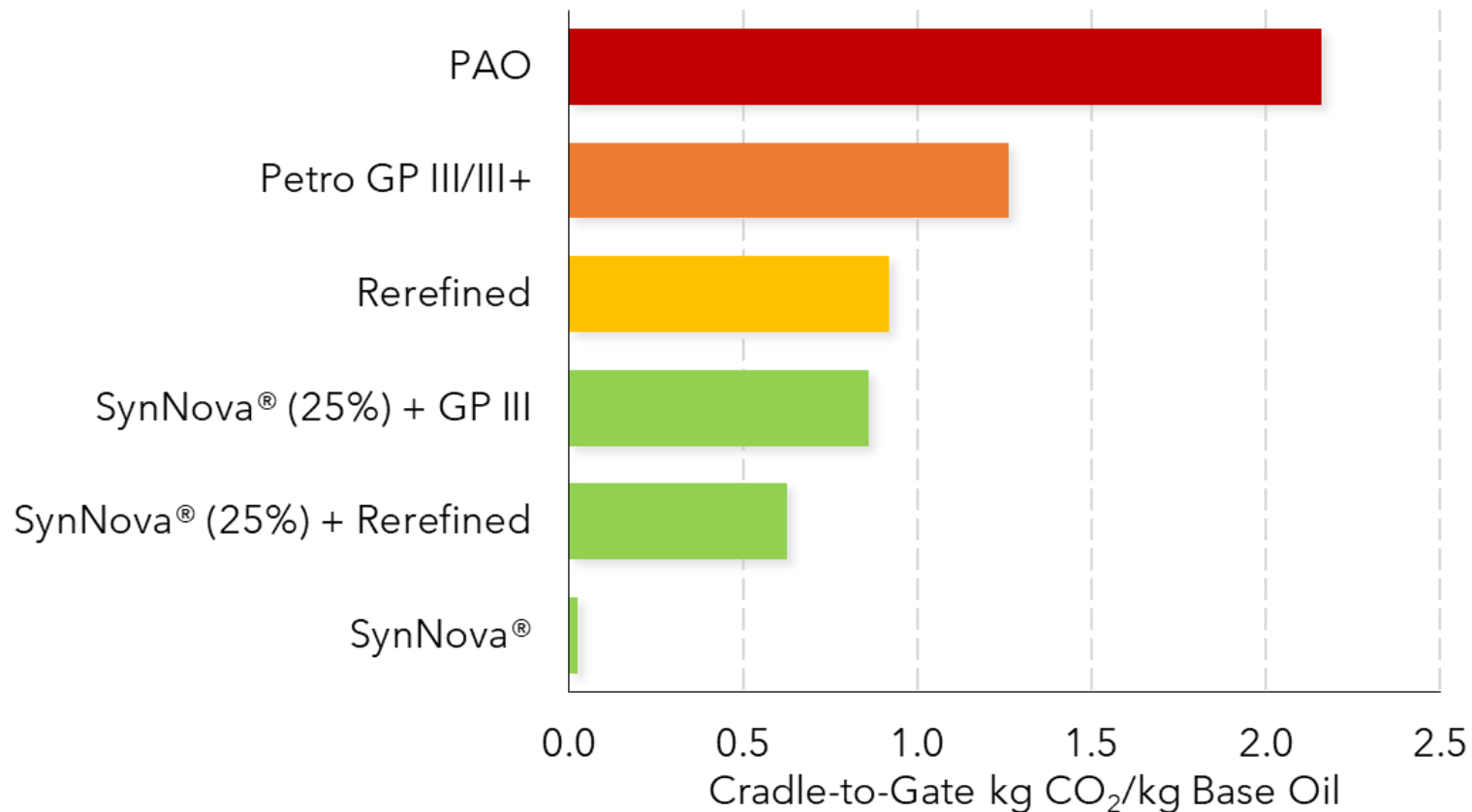
... a sustainable alternative,  
without compromise



# NOVVI IS OFFERING A SOLUTION WITH ITS TECHNOLOGIES

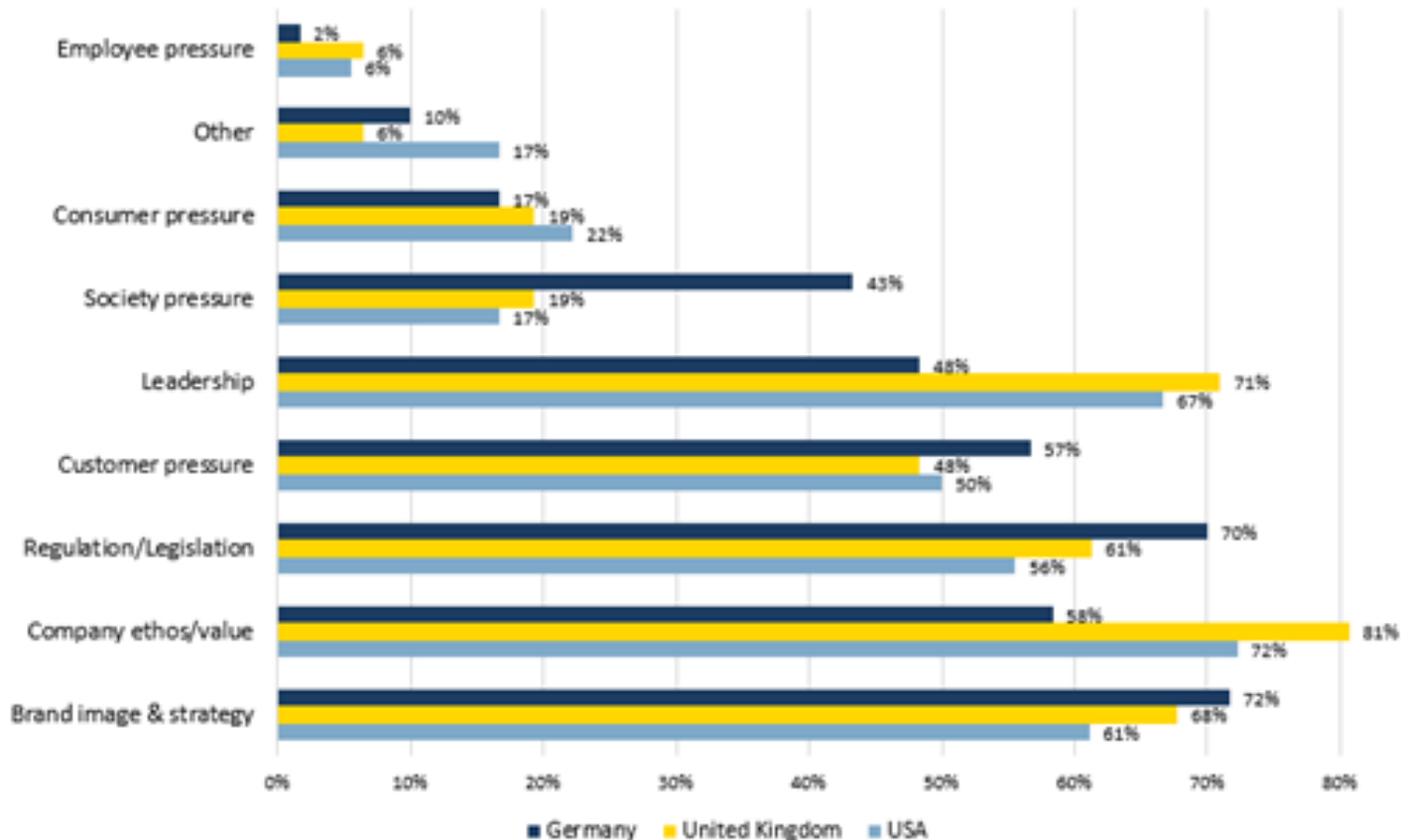
## Novvi Brings The Only Carbon Neutral Engine Oil Solution

CO2 Emissions for **Fully Formulated** 0W-20 Engine Oils Using Same Additive Package and Treat



# Appendix- Sourced from UEIL 2021 Sustainability Survey

What were or could be the drivers for implementing a sustainability strategy in your organization? (select max. five)



# Draft Agenda

- Lubricants industry is slow to change as a default -using any API Engine Oil category upgrade as an example
- In early go-to-market efforts by Novvi focused on sustainable/renewable, customers often answered 'if more expensive, we will wait for the regulations'
  - Exceptions were US EPA VGP, EU ECOLABEL and other similar schemes across the EU
- For the last 25+ years CAFE – better FE is really lower carbon footprint – has driven lube industry change and again that pace is glacial
- Now, latest products have superior performance plus sustainability claims; at the same time that sustainability has become much more central to businesses globally
  - So it is not the regulatory environment, per se, that is drive all of the change but public pressures plus legislators and regulators
- So now, the key to 'bio-base lubricants', is to stop thinking about composition and start thinking about what they can do for your business
  - The important work now is finding the products and applications where value of the new base oils are can be unlocked

