

Innovation in Sustainability for a Better Tomorrow

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**Quaker
Houghton™**

Sustainability adoption accelerates driven by stricter regulations, customer demand and companies pushing sustainability as a differentiation



Regulations

Many important regulations enforced in last decade, e.g.:

- EU Green Deal and Paris Agreement to reduce GHG emissions
- REACH & CPL to shift away from hazardous substances
- European CBAM

Further tightened regulations expected in coming years



Customer demand

Customer demands are causing **ripple effects through value chains** affecting suppliers and sub-suppliers

For example, Auto OEMs increasing **focus on sustainability are quickly putting pressure on their suppliers**



Sustainability as differentiation

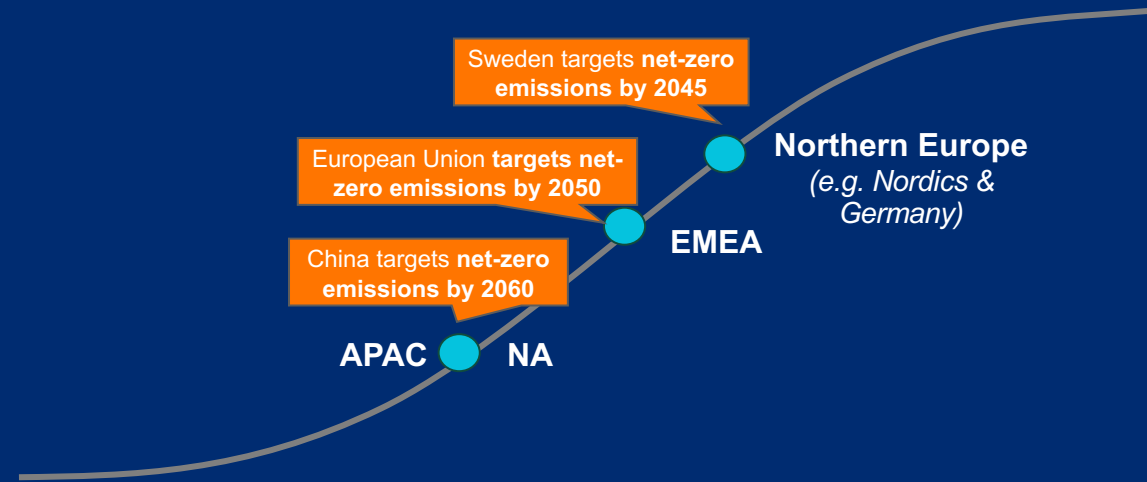
Potential to differentiate through sustainability due to increased demand from customers and public attention

Competitive advantage driver by being early in gaining experience and securing critical assets and capabilities



Adoption Rates

Europe and Northern Europe are regional front-runners in sustainability transition,
NA and APAC following



Pace of adoption

- **EMEA:** EU is strictly adhering to Paris Agreement and has emission trading schemes (ETS) – stricter regulations expected on GHS hazards, e.g. trade tax on carbon
- **NA:** US without nationwide carbon tax or ETS but implemented in some states – recently announced to re-join Paris Agreement
- **APAC:** China to become carbon neutral by 2060 in recent announcement – majority of countries in APAC do not have carbon regulations
- **Automotive industry** are leading in sustainability partly due to increasing expectations from the end-customers but also due to targeted regulations (e.g. as part of EU Green Deal)
- **Other industries** are expected to accelerate adoption as regulations are being enforced (e.g. regional carbon taxes, trade taxes, increased price on emission rights)

GHG Emission Basics

Scope 1

Emissions from **assets owned or operated** by the company

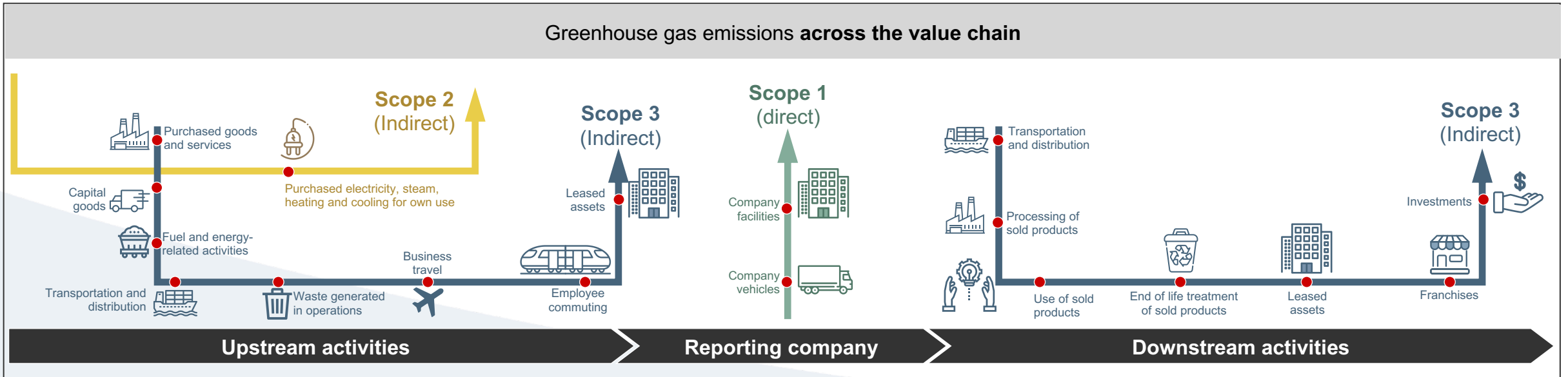
Scope 2

Emissions from **purchased electricity and fuel**

Scope 3

Emissions from **all other value chain activities and end use of produced products**

Increasing difficulty to address










Customers frequently mentioned GHG emissions, water usage, circularity and hazardous components as part of sustainability

E 
Environment
Living within our planetary boundaries

S 
Social
Committing to equitable outcomes

G 
Governance
Demonstrating responsible conduct

Most mentions by industrial fluid customers

 GHG emissions Reducing & offsetting GHG emissions contributing to climate change	 Hazardous substances Sensitively using and treating toxic products and waste , incl. chemical and technology pollutants	 Material use, waste & circularity Responsible sourcing and use of resources , incl. product, packaging, and food lifecycles - reduce, reuse, recycle	 Water stewardship Sensible water use, water quality, and watershed management	 Air quality Lowering pollutants impacting air quality and atmospheric integrity	 Land and ocean use Ensuring long-term sustainable land and ocean use , incl. land/ ocean change (e.g., deforestation), sound utilization practices	 Biodiversity & ecological welfare Protecting and enhancing natural ecosystems and living organisms; upholding animal welfare
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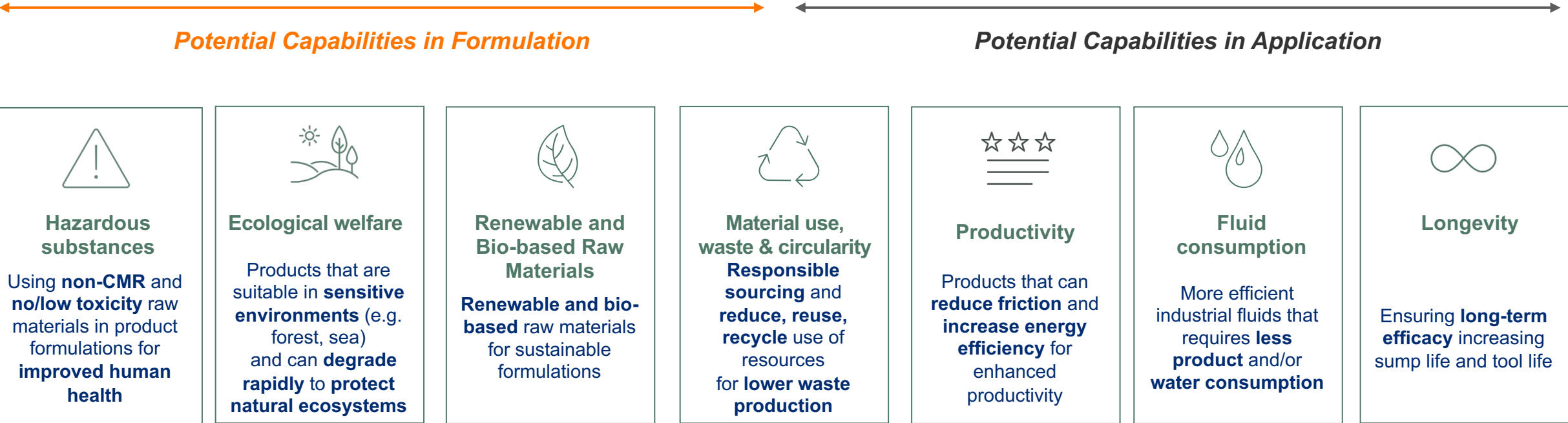
Wave 1: Leading

 GHG emissions Reducing & offsetting GHG emissions contributing to climate change	 Hazardous substances Sensitively using and treating toxic products and waste , incl. chemical and technology pollutants	 Material use, waste & circularity Responsible sourcing and use of resources , incl. product, packaging, and food lifecycles - reduce, reuse, recycle	 Water stewardship Sensible water use , water quality, and watershed management	 Air quality Lowering pollutants impacting air quality and atmospheric integrity	 Land and ocean use Ensuring long-term sustainable land and ocean use , incl. land/ ocean change (e.g., deforestation), sound utilization practices	 Biodiversity & ecological welfare Protecting and enhancing natural ecosystems and living organisms; upholding animal welfare
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Wave 3: Complying

Wave 2: Aspiring

There are several potential capabilities –in formulation and application – that Quaker Houghton can use to support customers deliver on their sustainability agenda



The potential for sustainable innovation in industrial fluid is broad, and sustainability agendas will vary slightly across industries and geographies.



Sustainability Is **Core** To Our Business









See Beyond™

Social. Economic. Environmental Progress.

How We **Enable** Our Customers To Achieve Their Ambitions



	Responsible Suppliers	53	EcoVadis rating, better than 61% of companies assessed
	Waste	21k	metric tons of waste avoided or reduced at QH FLUIDCARE™ customer locations
	Water	50%	water consumption reduction at one automotive customer*, by converting from a competitor solution
	Energy	41%	reduction in gas consumption at one beverage customer* while using our ambient temperature cleaner
	Human Health	44%	reduction in consumption of MBM** across EMEA
	Carbon Footprint	7%	of raw materials are re-refined, and 25% are renewable

*In application benefit may vary based on customer set up

**MBM - Methylenebismorpholine. This raw material is a formaldehyde - releasing biocide labeled as a Category 1 carcinogen.

How We **Strengthen** Our Sustainable Business Practices



Innovating

2030 Goals*

100%

of finished goods not classified as CMR

Highlights

97.8%

finished goods not classified as CMR hazards representing 97.8% of our portfolio



Protecting

CARBON NEUTRAL

In our operations (Scope 1 and 2)

52%

of global electricity is sourced by renewable or zero carbon energy



Empowering

0 serious injuries

40%

reduction in TRIR from 2020-2022, well below industry standard



Sourcing

75%

of suppliers that exceed our performance threshold

30%

of our palm oil is fully segregated through the RSPO

*An extensive list of goals can be found at [quakerhoughton.com/sustainability](https://www.quakerhoughton.com/sustainability).

RSPO: Roundtable on Sustainable Palm Oil

TRIR: Total recordable incident rate

CMR: Carcinogenic, mutagenic and reprotoxic hazards

Corporate Strategy

How Will We Measure Success

Short-term



- Implement green chemistry guidelines globally
- Establish the baseline for usage of CMR, fossil-based, and renewable raw materials
- Implement a data management platform for waste at QH partner locations
- Implement a global sustainability supplier assessment tool
- Source fully segregated Palm Oil for 50% of our global supply

Long-term



- Achieve 100% of finished goods in our portfolio not classified as Carcinogenic, Mutagenic, or Reprotoxic (CMRs)
- Reduce our use of fossil-based raw materials by 30%
- Eliminate 45,000 metric tons of waste at QH FLUIDCARE™ partner locations
- Achieve 75% of total direct spend with suppliers that exceed our sustainability performance threshold
- Source fully segregated Palm Oil for 100% of our global supply

Acknowledgements

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 - 6th International Metalworking Fluids Conference (Atlanta, USA; Jan. 2024)

Thank You!

Questions?